



# Field Engineering Programming System General Information

IBM Internal Use Only

ZZ25-0511-6

PREFACE

This booklet contains information necessary for preparing Program Services Activity Reports (PSARs), for Program Products and Programming Systems, and is primarily intended for use by FE Programming Systems Representatives.

This booklet is organized in three sections.

Section 1 - contains a current list of programs, ID numbers, service classifications, FE service numbers, mailing addresses, PLM listing, and current release information. This section will be updated to reflect new programs as they are released as well as changes in programming service classifications.

Section 2 - consists of General Programming System Memorandums (PSMs). The updates will be handled on an as required basis.

Section 3 - consists of documentation requirements when:

1. Referring calls to the Field Support Call Management Queues and,
2. For identifying what material must be submitted with each APAR.

Since these three sections are being updated independently of each other, two different TNL number sequences will be used.

Seventh Edition (November 1978)

This is a reprint of, and incorporates TNL ZZ25-0533-0. This does not make ZZ25-0511-5 obsolete. This edition of ZZ25-0511-6 which is now classified for IBM Internal Use Only, contains all of the material formerly found in G229-2228-21.

G229-2228 will continue to be printed in abbreviated form for general distribution.

A form for reader's comments is provided at the back of Section 1 and Section 3. If the form has been removed, comments may be addressed to IBM Corporation, Department H83, Building 947, PO Box 390, Poughkeepsie, New York 12602. Comments become the property of IBM.

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 BY TNL : ZZ25-0518-17

THE FOLLOWING FIELD ENGINEERING FIELD SUPPORT LOCATIONS ARE RESPONSIBLE FOR PROCESSING FESERS FOR CLASS 'A' AND 'SCP' PROGRAMS:

SUPP. CODE	LOCATION	SUPP. CODE	LOCATION
01	ENDICOTT	27	BOCA RATON
02	POUGHKEEPSIE	62	HURSLEY
03	KINGSTON	63	LA GAUDE
10	ROCHESTER	64	BOEBLINGEN
11	AUSTIN	65	NORDIC LABS
13	SANTA TERESA	66	UITHOORN
23	RALEIGH		

\*FOR FESER MAILING ADDRESSES, SEE PAGE 1-13  
 THE FOLLOWING DP/GSD SUPPORT LOCATIONS ARE RESPONSIBLE FOR SUPPORTING CLASS 'B' PROGRAMS AS INDICATED:

SUPP. CODE	LOCATION	SUPP. CODE	LOCATION
BR	BOCA RATON	PR	PARIS
CH	CHICAGO	RO	ROCHESTER
CR	CROYDON	ST	STUTTGART
LA	LOS ANGELES	SN	SINDELPHINGEN
MP	MENLO PARK	WA	WASHINGTON
PA	PALO ALTO	WP	WHITE PLAINS
PK	POUGHKEEPSIE		

THE FOLLOWING HAS BEEN ADDED TO ASSIST YOU IN CROSS-REFERENCING THE SYSTEM PREFIX WITH AN OPERATING SYSTEM:

5652 - OS/VS1	5662 - OS/VS1 SE
5654 - VM/370	5664 - VM/370 SE
5655 - OS/MVS	5665 - OS/MVS SE
5656 - DOS/VS	5666 - DOS/VSE
5701 - SYS/3 MOD 10 CARD SYS	5736 - DOS-DOS/VS PP
5702 - SYS/3 MOD 10 DISK SYS	5740 - OS/VS PP
5703 - SYS/3 MOD 4 AND 6	5741 - OS/VS1
5704 - SYS/3 MOD 15 (A,B,C)	5742 - OS/SVS
5705 - SYS/3 MOD 12	5744 - OS/VS AND SYS/7
5707 - SYS/7	5745 - DOS/VS & DOS/VSE
5718 - SYS/7	5746 - DOS/VS & DOS/VSE PP
5719 - SERIES 1	5747 - DOS/VS AND SYS/7
5719 - SERIES 1	5747 - DOS/VS, DOS/VSE & SYS/7
5725 - SYS/32	5748 - OS/VS PP
5726 - SYS/34	5749 - VM/370 & VM/370 SE
5734 - OS/VS PP	5752 - OS/MVS & OS/MVS SE
5735 - NCP	5760 - 8100
	5799 - PSHRPQ/PRPQ

\*\*\*\*\*  
 \* THE PROGRAM ID LISTINGS IN THIS MANUAL ARE SORTED BY \*  
 \* COMPONENT ID. ADDITIONAL SORTS OF THESE LISTINGS CAN \*  
 \* BE OBTAINED BY USING A FILE, FESNX, ON THE FE MIS \*  
 \* SYSTEM. THIS FILE WAS IMPLEMENTED IN 1980 AND CON- \*  
 \* TAINS THE SAME INFORMATION THAT IS PROVIDED IN THE \*  
 \* PROGRAM ID LISTINGS FOUND IN THIS MANUAL BUT IS UP- \*  
 \* DATED WEEKLY. \*  
 \* EACH BRANCH AND REGION OFFICE SHOULD OBTAIN ACCESS TO \*  
 \* THE FESNX FILE IN MIS VIA FORM Z150-0161. MORE DE- \*  
 \* TAILED INFORMATION ABOUT THE FESNX FILE CAN BE OBTAIN- \*  
 \* ED BY ORDERING THE "FESNX USERS GUIDE" (Z225-0579). \*  
 \* EXAMPLE: \*  
 \* MAIL FESNX ZZ COMPID FESN REL PID1 ADATE CNAME \*  
 \* APAR LETTER CDATE SEQUENCE XXXX NO/LIMIT \*  
 \* XXXX = FIELD SELECTED FOR SEQUENCING. \*  
 \*\*\*\*\*

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IMPORTANT: BEFORE USING THIS CHART REFER TO THE APAR MAILING PROCEDURES  
 IN SECTION 2.

CHART A: APAR SUBMISSION TO EUROPEAN APAR PROCESSING CENTERS  
MAIL ADDRESSES BY MAILING METHOD

MAIL TO ADD.	SHIP CODE	INTERNATIONAL ON DEMAND EXPRESS MAIL	NEXT DAY SERVICE EXPRESS MAIL B LABEL	BUSINESS REPLY LABEL MAILING ADDRESS AND FORM NUMBER
F	2F1	N/A	IBM CORP. (APAR 2F1) DP REGION 2 APAR RECEIVING CENTER 153 E. 53RD STREET NEW YORK, NY 10022	IBM CORPORATION APAR RECEIVING CENTER 44 SOUTH BROADWAY WHITE PLAINS, NY 10601 (LABEL FORM G229-3571)
G	1G1	N/A	IBM CORP. (APAR 1G1) DP REGION 2 APAR RECEIVING CENTER 153 E. 53RD STREET NEW YORK, NY 10022	SAME AS ABOVE ADDRESS (LABEL FORM G229-3571)
H	4N2	IBM LABORATORY ATTN:CP5G- APAR PROCESSING P.O. BOX 24 UITHOORN, THE NETHERLANDS	IBM CORP. (APAR 4N2) DP REGION 2 APAR RECEIVING CENTER 153 E. 53RD STREET NEW YORK, NY 10022	SAME AS ABOVE ADDRESS (LABEL FORM G229-3571)
S	5S5	N/A	IBM CORP. (APAR 5S5) DP REGION 2 APAR RECEIVING CENTER 153 E. 53RD STREET NEW YORK, NY 10022	IBM WORLD TRADE CORP. WORLD TRADE DIST. CENTER, BLDG. 306 ATTN: RECEIVING DEPT. E. FISHKILL FACILITY ROUTE 52 HOPEWELL JUNCTION NY 12533 (ADDRESS FOR CARTONS ONLY) (LABEL FORM G229-3225)

1  
2

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MAIL TO ADD. S (COM'T)	SHIP INTERNATIONAL ON DEMAND CODE EXPRESS MAIL	NEXT DAY SERVICE EXPRESS MAIL B LABEL	BUSINESS REPLY LABEL MAILING ADDRESS AND FORM NUMBER
			IBM CORPORATION APAR RECEIVING CENTER 44 SOUTH BROADWAY WHITE PLAINS, NY 10601 (ADDRESS FOR ENVELOPES WEIGHING UP TO 4 LBS) (LABEL FORM G222-3571)
CB 506	IBM U.K. LABS CPSG MP 204 HURSLEY PARK WIRCHESTER SO212JN HAMPSHIRE, ENGLAND	IBM CORP. (APAR 506) DP REGION 2 APAR RECEIVING CENTER 153 E. 53RD STREET NEW YORK, NY 10022	IBM CORPORATION APAR RECEIVING CENTER 44 SOUTH BROADWAY WHITE PLAINS, NY 10601 (LABEL FORM G229-3571)
AS 6A8	N/A	IBM CORP. (APAR 6A8) DP REGION 2 APAR RECEIVING CENTER 153 E. 53RD STREET NEW YORK, NY 10022	IBM WORLD TRADE CORP. WORLD TRADE DIST. CENTER BLDG. 306 ATTN: RECEIVING DEPT. E. FISHKILL FACILITY, ROUTE 52 HOPEWELL JUNCTION, NY 12533 (ADDRESS FOR CARTONS ONLY) (LABEL FORM G229-3225)
			IBM CORPORATION APAR RECEIVING CENTER 44 SOUTH BROADWAY WHITE PLAINS, NY 10601 (ADDRESS FOR ENVELOPES WEIGHING UP TO 4 LBS) (LABEL FORM G229-3571)

NOTE: THE USE OF INTERNATIONAL LETTER AIRMAIL FOR EUROPEAN IBM APAR PROCESSING CENTERS - DIRECT FROM THE ORIGINATING LOCATION IS NOT RECOMMENDED.

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OLT APAR MAILING LIST

THIS LIST PROVIDES THE COMPONENT IDENTIFICATION NUMBERS USED IN CONJUNCTION WITH THE AUTHORIZED PROGRAM ANALYSIS REPORT (APAR), LOCATION "N" ON THE FORM. THE ID NUMBERS REFERENCE THE MAJOR OLT "FAMILY" AND ARE LISTED NUMERICALLY. ENTER RUN NAME AND VERSION LEVEL IN LOCATION "S". THE FIRST WORD OF THE ABSTRACT SHOULD CORRESPOND TO THE SYMPTOM CODE, ALSO INCLUDE THE OP SYSTEM RELEASE LEVEL IF NOT OPERATING UNDER OLTSEP. AN ADDRESS CODE IS LISTED BESIDE EACH COMPONENT IDENTIFICATION NUMBER WHICH REFERENCES THE APAR MAILING ADDRESS.

COMPONENT	MAIL_ADDDR.	COMPONENT	MAIL_ADDDR.
OLTS0200A	BD	OLTS2820A	BD
OLTS0370A	BJ	OLTS2821A	AN
OLTS1012A	BD	OLTS2826A	CM
OLTS1030A	X	OLTS2835A	ED
OLTS1050A	X	OLTS2841A	ED
OLTS1060A	X	OLTS2845A	X
OLTS1231A	AQ	OLTS2848A	X
OLTS1255A	AN	OLTS2947A	BK
OLTS1270A	DL	OLTS2955A	AH
OLTS1275A	DL	OLTS2970A	AD
OLTS1285A	AQ	OLTS2972A	AD
OLTS1287A	AQ	OLTS2976A	X
OLTS1288A	AQ	OLTS3155A	BH
OLTS1403A	AN	OLTS3158A	BH
OLTS1404A	AN	OLTS3165A	BJ
OLTS1419A	AN	OLTS3168A	BJ
OLTS1442A	AQ	OLTS3210A	AN
OLTS1443A	AN	OLTS3215A	AN
OLTS1445A	AN	OLTS3270A	AD
OLTS2150A	EJ	OLTS3271A	AD
OLTS2245A	BB	OLTS3330A	BD
OLTS2250A	AD	OLTS3331A	BD
OLTS2260A	X	OLTS3340A	BD
OLTS2265A	X	OLTS3350A	BD
OLTS2301A	BD	OLTS3410A	CD
OLTS2303A	BD	OLTS3420A	CD
OLTS2305A	BD	OLTS3505A	AQ
OLTS2311A	BD	OLTS3525A	AQ
OLTS2313A	BD	OLTS3540A	AQ
OLTS2314A	BD	OLTS3670A	X
OLTS2321A	BD	OLTS3700A	X
OLTS2400A	CD	OLTS3704A	X
OLTS2495A	BG	OLTS3705A	X
OLTS5201A	AQ	OLTS3735A	X
OLTS2520A	AQ	OLTS3811A	AN
OLTS2540A	AN	OLTS3830A	BD
OLTS2596A	AQ	OLTS3831A	BD
OLTS2671A	BC	OLTS3850A	Q
OLTS2700A	X	OLTS3880A	BD
OLTS2701A	X	OLTS3881A	AQ
OLTS2702A	X	OLTS3886A	AQ
OLTS2703A	X	OLTS3890A	AN
		OLTS3945A	BB
OLTS2715A	X	OLTS4640A	AN
OLTS2740A	X	OLTS50100	BV
OLTS2741A	X	OLTS5098T	BV
OLTS2760A	X	OLTS5998B	BV
OLTSSEPCC	BG	OLTS77700	X
OLTSSEPDT	BG	OLTS505BP	BG
		OLTSWINCO	BG
		<u>NST APAR MAILING LIST</u>	
NST2NSTCP	AA	NST2UPDTE	AA
NST2IODRV	AA	NST2EPAGE	AA
NST2PGENX	AA	NST2CPROC	AA
NST2PATDT	AA	NST2EMPMT	AA
NST2IOCHD	AA	NST2UDASD	AA

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APAR MAILING ADDRESSES

- E- DELETED - SEE (CB)
- F- \*EUROPEAN LOCATION, SEE CHART A FOR MAILING ADDRESS BY MAILING METHOD
- G- \*EUROPEAN LOCATION, SEE CHART A FOR MAILING ADDRESS BY MAILING METHOD
- H- \*EUROPEAN LOCATION, SEE CHART A FOR MAILING ADDRESS BY MAILING METHOD
- Y- IBM CORPORATION  
 APAR PROCESSING  
 DEPT. 772  
 1133 WESTCHESTER AVE.  
 WHITE PLAINS, N. Y. 10604  
 -NO PREPAID MAILING LABEL-
- O- IBM CORPORATION  
 APAR PROCESSING  
 P.O. BOX 1900  
 BOULDER, COLORADO 80302  
 -NO PREPAID MAILING LABEL-
- R- IBM CORPORATION  
 APAR PROCESSING  
 LOS ANGELES DEVELOPMNT CENTER  
 1930 CENTURY PARK WEST  
 LOS ANGELES, CALIFORNIA 90067  
 -NO PREPAID MAILING LABEL-
- S- \*EUROPEAN LOCATION, SEE CHART A FOR MAILING ADDRESS BY MAILING METHOD
- T- DELETED AUGUST 1978
- U- DELETED AUGUST 1978
- V- IBM CORPORATION  
 APAR PROCESSING  
 WASHINGTON DEVELOPMENT CENTER  
 11141 GEORGIA AVE.  
 WHEATON, MARYLAND 20902  
 -NO PREPAID MAILING LABEL-
- X- IBM CORPORATION  
 APAR PROCESSING  
 DEPT. G62, BLDG. 061  
 RESEARCH TRIANGLE PARK, N. C. 27709  
 -NO PREPAID MAILING LABEL-
- AA- IBM CORPORATION  
 NST COORDINATOR  
 DEPT. B44, BLDG. 707  
 P.O. BOX 390  
 POUGHKEEPSIE, N. Y. 12602  
 -NO PREPAID MAILING LABEL-
- AB- DELETED DECEMBER 1979
- AC- DELETED APRIL 1979
- AD- DELETED MAY 1979
- AE- IBM CORPORATION  
 SFRIES/1 APAR CONTROL  
 P.O. BOX 1328  
 BOCA RATON, FLORIDA 33432  
 -NO PREPAID MAILING LABEL-
- AF- IBM CORPORATION  
 APAR PROCESSING  
 DEPT. 23E, BLDG. 203  
 P.O. BOX 1328  
 BOCA RATON, FLORIDA 33432  
 -NO PREPAID MAILING LABEL-
- \* - WORLD TRADE LOCATIONS SHOULD NOT MAIL APARS TO THESE ADDRESSES. REFER TO WORLD TRADE GENERAL PSM NO.1 FOR PROPER APAR MAILING ADDRESSES IF YOU ARE SUBMITTING AN APAR FROM A WORLD TRADE LOCATION.



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- AG- IBM CORPORATION  
 MANAGER, DPDS SERVICE  
 DEPT. 61R, BLDG. 202  
 NEIGHBORHOOD ROAD  
 KINGSTON, N. Y. 12401
- NO PREPAID MAILING LABEL-
- AH- IBM CORPORATION  
 APAR COORDINATOR  
 DEPT. 797, BLDG. 918  
 3131 NORTH 28TH ST.  
 BOULDER, CO. 80301
- NO PREPAID MAILING LABEL-
- AJ- IBM CORPORATION  
 GEM REGION DESIGN CENTER  
 APAR PROCESSING  
 10401 FERNWOOD ROAD  
 BETHESDA, MD. 20034
- NO PREPAID MAILING LABEL-
- AK- IBM CORPORATION  
 APAR PROCESSING CENTER  
 SANTA TERESA LAB  
 555 BAILEY AVE.  
 P. O. BOX 50020  
 SAN JOSE, CALIFORNIA 95150
- PREPAID MAILING LABEL FORM NO. G229-2159-
- AL- IBM CORPORATION  
 APAR PROCESSING CENTER  
 P.O. BOX 12134  
 RESEARCH TRIANGLE PARK, N. C. 27709
- PREPAID MAILING LABEL FORM NO. G229-2160-
- AM- IBM CORPORATION  
 APAR PROCESSING  
 DEPT. 430  
 3605 HIGHWAY 52 N.  
 ROCHESTER, MINN. 55901
- NO PREPAID MAILING LABEL-
- AN- IBM CORPORATION  
 APAR PROCESSING CENTER  
 DEPT. 74F, MODULE 20  
 P. O. BOX 6  
 ENDICOTT, N. Y. 13760
- PREPAID MAILING LABEL FORM NO. G229-2236-
- AO- DELETED JANUARY 1978
- AP- IBM CORPORATION  
 SYSTEM/3 APAR CONTROL  
 DEPT. 252  
 37TH ST., HIGHWAY 52 N.W.  
 ROCHESTER, MINN. 55901
- PREPAID MAILING LABEL FORM NO. G229-4080-
- AQ- IBM CORPORATION  
 DEPT. 400  
 HIGHWAY 52 AND NW 37TH STREET  
 ROCHESTER, MINN. 55901
- NO PREPAID MAILING LABEL-
- AR- CIE IBM FRANCE - P.P.C.  
 SVE 2-2503  
 TOUR GENERALE  
 CEDEX 22  
 92088 PARIS LA DEFENSE  
 FRANCE
- NO PREPAID MAILING LABEL-
- AS- \*EUROPEAN LOCATION, SEE CHART A FOR MAILING  
 ADDRESS BY MAILING METHOD
- AT- DELETED JULY, 1979
- AW- DELETED JULY 1979 (SEE BG)
- AX- DELETED SEPTEMBER 1979 (SEE AL)
- AY- DELETED APRIL 1979

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- AZ- IBM CORPORATION  
 APAR PROCESSING  
 DEPT. 5669, BLDG. 7032-86  
 SCHWERZSTRASSE 58-60  
 7032 SINDELFINGEN, GERMANY  
 -NO PREPAID MAILING LABEL-
- BA- DELETED APRIL 1979
- BB- IBM JAPAN  
 DEPT. 811, RAS  
 1 KIRIHARA-CHO, FUJISAWA-SHI  
 KANAGAWA-KEN  
 JAPAN 252  
 -NO PREPAID MAILING LABEL-
- BC- DELETED FEBRUARY 1980
- BD- IBM CORPORATION  
 APAR PROCESSING  
 DEPT. D06, BLDG. 026  
 5600 COTTLE ROAD  
 SAN JOSE, CALIFORNIA 95193  
 -NO PREPAID MAILING LABEL-
- BE- IBM CORPORATION  
 A. DE BOER  
 RAS DEPARTMENT  
 P.O. BOX 24  
 UITHOORN, NETHERLANDS  
 -NO PREPAID MAILING LABEL-
- BF- IBM CORPORATION  
 PALO ALTO DEVELOPMENT CENTER  
 1501 CALIFORNIA AVENUE  
 PALO ALTO, CA 94304  
 ATTN: RJE WORKSTATION COORDINATOR  
 -NO PREPAID MAILING LABEL-
- BG- IBM CORPORATION  
 FIELD ENGINEERING DIVISION  
 APAR PROCESSING CENTER  
 DEPT. 79H  
 18100 FREDERICK PIKE  
 GAITHERSBURG, MD. 20760  
 -PREPAID MAILING LABEL FORM NO. G229-3572-
- BH- IBM CORPORATION  
 APAR COORDINATOR  
 DEPT. D61, BLDG. 705  
 P.O. BOX 390/BOARDMAN ROAD  
 POUGHKEEPSIE, N. Y. 12602  
 -NO PREPAID MAILING LABEL-
- BJ- IBM CORPORATION  
 APAR COORDINATOR  
 DEPT. B74, BLDG. 707  
 P.O. BOX 390/BOARDMAN ROAD  
 POUGHKEEPSIE, N. Y. 12602  
 -NO PREPAID MAILING LABEL-

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BK- IBM CORPORATION  
 APAR COORDINATOR  
 DEPT. C47, BLDG. 702  
 P. O. BOX 390/BOARDMAN ROAD  
 POUGHKEEPSIE, N. Y. 12602  
 -NO PREPAID MAILING LABEL-

BL- IBM CORPORATION  
 APAR PROCESSING  
 DEPT. 70R  
 1133 WESTCHESTER AVE.  
 WHITE PLAINS, N. Y. 10604  
 -NO PREPAID MAILING LABEL-

BM- IBM CORPORATION  
 APAR PROCESSING  
 DEPT. D82, BLDG. 706  
 P. O. BOX 390/BOARDMAN ROAD  
 POUGHKEEPSIE, N. Y. 12602  
 -NO PREPAID MAILING LABEL-

BN- IBM CORPORATION  
 APAR PROCESSING CENTER  
 DEPT. H68, BLDG. 925  
 P. O. BOX 390/BOARDMAN ROAD  
 POUGHKEEPSIE, N. Y. 12602  
 -PREPAID MAILING LABEL FORM NO. G229-3570-

BO- IBM CORPORATION  
 APAR PROCESSING  
 2800 SAND HILL ROAD  
 MENLO PARK, CALIFORNIA 94025  
 -NO PREPAID MAILING LABEL-

BP- DELETED SEPTEMBER 1978

BO- IBM CORPORATION  
 SYS/38 APAR CONTROL  
 DEPT. 434, BLDG. 648  
 1021 15TH AVE. S. E.  
 ROCHESTER, MINN. 55901  
 -NO PREPAID MAILING LABEL-

BR- IBM CORPORATION  
 APAR PROCESSING  
 DEPT. D94, BLDG. 706  
 P. O. BOX 390/BOARDMAN ROAD  
 POUGHKEEPSIE, N. Y. 12602  
 -NO PREPAID MAILING LABEL-

BS- IBM CORPORATION  
 APAR PROCESSING  
 DEPT. E52, BLDG. 707  
 P. O. BOX 390/BOARDMAN ROAD  
 POUGHKEEPSIE, N. Y. 12602  
 -NO PREPAID MAILING LABEL

BT- IBM CORPORATION  
 APAR PROCESSING  
 DEPT. 63M, BLDG. 201-2  
 NEIGHBORHOOD ROAD  
 KINGSTON, N. Y. 12401  
 -NO PREPAID MAILING LABEL-

BU- IBM CORPORATION  
 BLDG. 602  
 P. O. BOX 12134  
 RESEARCH TRIANGLE PARK, N. C. 27709  
 ATTN: APAR COORDINATOR DEPT. F38/B602  
 -NO PREPAID MAILING LABEL

BV- IBM CORPORATION  
 APAR PROCESSING  
 DEPT. 26N, BLDG. 203  
 P. O. BOX 1328  
 BOCA RATON, FLORIDA 33432  
 -NO PREPAID MAILING LABEL-

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- BW- IBM CORPORATION  
 1439 PEACHTREE STREET N.E.  
 ATLANTA, GEORGIA 30309  
 ATTN: W. W. LYONS  
 -NO PREPAID MAILING LABEL-
- BX- (VIA U.S. POSTAL SERVICE):  
 IBM CORPORATION  
 APAR PROCESSING CENTER  
 P. O. BOX 1010  
 NEIGHBORHOOD ROAD  
 KINGSTON, N. Y. 12401  
 -PREPAID MAILING LABEL FORM NO. G229-3568-  
 (APARS SENT BY ANY OTHER MEANS):  
 IBM CORPORATION  
 APAR PROCESSING CENTER  
 BLDG. 003  
 NEIGHBORHOOD ROAD  
 KINGSTON, N.Y. 12401
- NO PREPAID MAILING LABEL-
- BY- IBM CAMBRIDGE SCIENTIFIC CENTER  
 545 TECHNICAL SQUARE  
 CAMBRIDGE, MASS. 02139  
 -NO PREPAID MAILING LABEL-
- CA- IBM ITALY - PPC ROME  
 APAR PROCESSING  
 VIA OCEANO PACIFICO 71  
 ROME, ITALY  
 -NO PREPAID MAILING LABEL-
- CB- \*EUROPEAN LOCATIONS. SEE CHART A FOR MAILING  
 ADDRESS BY MAILING METHOD
- CC- IBM CORPORATION  
 SYSTEM/32 APAR CONTROL  
 DEPT. 540  
 37TH STREET AND HIGHWAY 52 NW  
 ROCHESTER, MINN. 55901  
 -NO PREPAID MAILING LABEL-
- CD- IBM CORPORATION  
 APAR PROCESSING  
 DEPT. 677, BLDG. 142  
 5600 COTTLE ROAD  
 SAN JOSE, CALIFORNIA 95114  
 -NO PREPAID MAILING LABEL-
- CE- IBM CORPORATION  
 APAR PROCESSING CENTER  
 P. O. BOX 12134  
 DEPT. 943/B637  
 RESEARCH TRIANGLE PARK, N. C. 27709  
 -PREPAID MAILING LABEL FORM NO. G229-2160-
- CF- IBM NORDISKA LABORATORIES  
 VESSLEVAGEN 3  
 S-181-09-LIDINGO  
 SWEDEN  
 -NO PREPAID MAILING LABEL-
- CG- IBM ITALIA PPDC  
 APAR PROCESSING  
 VIALE OCEANO PACIFICO 73  
 00144 ROME, ITALY  
 -NO PREPAID MAILING LABEL-
- CI- IBM CORPORATION  
 EXTN APAR PROCESSING  
 P. O. BOX 12195  
 DEPT. 997, H589  
 RESEARCH TRIANGLE PARK, N. C. 27709  
 -NO PREPAID MAILING LABEL-

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- CJ- IBM CORPORATION  
 DMS/CICS/V5 DEVELOPMENT  
 DEPT. 82R/12TH FLOOR  
 225 J. W. CARPENTER FWY., EAST  
 P. O. BOX 2750  
 IRVING, TEXAS 75062  
 -NO PREPAID MAILING LABEL-
- CK- IBM CORPORATION  
 APAR PROCESSING COORDINATOR  
 TCS-PROGRAM DEVELOPMENT  
 DEPT. 82L  
 1133 WESTCHESTER AVENUE  
 WHITE PLAINS, N. Y. 10604  
 -NO PREPAID MAILING LABEL-
- CL- IBM CORPORATION  
 APAR PROCESSING  
 DEPT. D91, BLDG. 707  
 P.O. BOX 390/BOARDMAN ROAD  
 POUGHKEEPSIE, N. Y. 12602  
 -NO PREPAID MAILING LABEL-
- CM- IBM CORPORATION  
 APAR PROCESSING  
 DEPT. 56B, BLDG. 003  
 NEIGHBORHOOD ROAD  
 KINGSTON, N. Y. 12401  
 -NO PREPAID MAILING LABEL-
- CN- IBM CORPORATION  
 APAR PROCESSING  
 TCAM IMS INTERFACE  
 DEPT. 69M/037  
 1501 CALIFORNIA AVE.  
 PALO ALTO, CALIFORNIA 94304  
 -NO PREPAID MAILING LABEL-
- CP- IBM CANADA LIMITED  
 TORONTO LAB  
 DEPT. 800  
 1150 EGLINGTON AVE. EAST  
 DON MILLS, ONTARIO M3C 1H7  
 -NO PREPAID MAILING LABEL-
- CR- IBM CORPORATION  
 APAR PROCESSING  
 DP AIDS DEVELOPMENT  
 DEPT. 902, BLDG. 005  
 P. O. BOX 390  
 POUGHKEEPSIE, N. Y. 12602  
 -NO PREPAID MAILING LABEL-
- DA- IBM CORPORATION  
 APAR PROCESSING  
 DEPT. D93N, BLDG. 203  
 P. O. BOX 1328  
 BOCA RATON, FLORIDA 33432  
 -NO PREPAID MAILING LABEL-
- DB- IBM CORPORATION  
 APAR PROCESSING  
 DEPT. 955, BLDG. 042  
 11400 BURNET ROAD  
 AUSTIN, TEXAS 78758  
 -NO PREPAID MAILING LABEL-
- DC- IBM FRANCE  
 SPECIAL ENGINEERING  
 CER DEPT. 0855  
 06610-LA GAUDE  
 FRANCE  
 -NO PREPAID MAILING LABEL-
- DD- IBM CORPORATION  
 SERIES 1 PROGRAM PRODUCT DEV.  
 2800 SAND HILL ROAD  
 MENLO PARK, CA. 94025  
 -NO PREPAID MAILING LABEL-

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DE- IBM CORPORATION  
 APAR PROCESSING  
 DEPT. 64C, BLDG. 202-2  
 NEIGHBORHOOD ROAD  
 KINGSTON, N. Y. 12401  
 -NO PREPAID MAILING LABEL-

DF- IBM CORPORATION  
 APAR PROCESSING  
 DEPT. E17, BLDG. 706-1  
 P.O. BOX 390/BOARDMAN ROAD  
 POUGHKEEPSIE, N. Y. 12602  
 -NO PREPAID MAILING LABEL-

DG- IBM CORPORATION  
 APAR PROCESSING  
 DEPT. 68F, BLDG. 653-14  
 P. O. BOX 34729  
 CHARLOTTE, N. C. 28234  
 -NO PREPAID MAILING LABEL-

DH- IBM CORPORATION  
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 APAR PROCESSING  
 DEPT. 85S, BLDG. 622  
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DJ- IBM CORPORATION  
 APAR PROCESSING  
 DEPT. Z32, BLDG. 985  
 P. O. BOX 390  
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DK- IBM CORPORATION  
 APAR PROCESSING  
 DEPT. 74C, MOD. 20  
 P.O. BOX 6  
 ENDICOTT, N. Y. 13760  
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DL- IBM CORPORATION  
 APAR PROCESSING  
 DEPT. C-20/4451  
 P. O. BOX 6  
 ENDICOTT, N. Y. 13760  
 -NO PREPAID MAILING LABEL-

DM- IBM CORPORATION  
 APAR PROCESSING  
 DEPT. G46, BLDG. 060  
 P. O. BOX 12195  
 RESEARCH TRIANGLE PARK, N. C. 27709  
 -NO PREPAID MAILING LABEL-

DN- IBM CORPORATION  
 APAR PROCESSING  
 DEPT. 57E  
 P. O. BOX 34729  
 CHARLOTTE, N. C. 28234  
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DP- IBM CORPORATION  
APAR CONTROL  
DEPT. D02H, BLDG. 007  
11400 BURNET ROAD  
AUSTIN, TEXAS 78758  
-NO PREPAID MAILING LABEL-  
DX- IBM CORPORATION  
APAR PROCESSING CENTER  
P. O. BOX 1000H  
NEIGHBORHOOD ROAD  
KINGSTON, N. Y. 12401  
-PREPAID MAILING LABEL G229-3569  
DY- IBM CORPORATION  
DOSD APAR PROCESSING  
DEPT. 76G, BLDG. 034  
1501 CALIFORNIA AVENUE  
PALO ALTO, CA. 94304  
-NO PREPAID MAILING LABEL-  
EA- IBM CORPORATION  
APAR PROCESSING  
DEPT. 66G/034 ATMS  
1501 CALIFORNIA AVE.  
PALO ALTO, CALIFORNIA 94304  
-NO PREPAID MAILING LABEL-  
EB- IBM CORPORATION  
APAR PROCESSING  
DEPT. 803/037 ATMS  
1501 CALIFORNIA AVE.  
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FESER MAILING ADDRESSES

SUPPORT CODE

01, 02	IBM CORPORATION
62, 63	PROGRAMMING SYSTEM MGR.
64, 66	BLDG. 947 DEPT. H74 IBM ROAD POUGHKEEPSIE, N. Y. 12602
10	IBM CORPORATION SERVICE PLANNING MANAGER BLDG. 656-2, DEPT. 900 37TH ST., HIGHWAY 52 N.W. ROCHESTER, MN. 55901
11	IBM CORPORATION 11400 BURNET ROAD BLDG. 996, DEPT. 914 AUSTIN, TEXAS 78758
13, 65	IBM CORPORATION PROGRAMMING SYSTEMS MGR. SO. BASCOM CAMPBELL, CA. 95008
23, 03	IBM CORPORATION SERVICE PLANNING MANAGER DEPT. 952/A073 BLDG. 060 RESEARCH TRIANGLE PARK RALEIGH, N. C. 27709
27	IBM CORPORATION P.O. BOX 1328 BLDG. 001-3, DEPT. 90A BOCA RATON, FLA. 33432



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PROGRAM TITLE	COMPID	FMID	PLM	SRL	FICHE	FMID	PLM	SRL	FICHE
**** 360A ****									
ASD SYS OS VER 3	CX-15X		GY20-0305		GYB0-0854				
DOS MACLIB/RELOCATE	TX-016		GY34-0010		GJD1-1790				
OS MACLIB/RELOCATE	TX-026		GY34-0010		GJD1-1790				
**** 360H ****									
3705 EP SUPPORT	TX-033		SY30-3001		GJD2-4102				
3705 NCP FOR OS	TX-034		SY30-3003		GJD2-4105				
3705 SSP FOR OS	TX-035		SY30-3001		GJD2-4101				
**** 360N ****									
DOS/360 FORTRAN IV	FO-479		GY28-6394		GJD1-2056				
DOS/360 FORTRAN LIB	LM-480				GJD1-2056				
**** 370H ****									
HASP II VERSION 4	TX-001				GYB0-0856				
**** 370S ****									
DLS CUSTOMER SITE 4.2	DL-002				S2B6-3900				

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PROGRAM TITLE	COMPID	FMID	PLM	SRL	FICHE	FMID	PLM	SRL	FICHE
**** 5660 ****									
DPPE/IPF	27-101		LY20-2511		LYB0-2509				
**** 5664 ****									
SYSTEM PROD. FACILITY VM	00-901		LY25-0005		LYB0-2482				
SYSTEM PROD. FACILITY MVS	00-901	HDP1102	LY25-0006		LYB0-2481				
VSPC MVS V2R1	26-301	HVC2102							
**** 5734 ****									
CICS/OS-STANDARD V2	XY-700		LY20-0714	SH20-1043	LYB0-0781				
COBOL V4	CB-202		LY28-6420	GC28-6396	LYC7-5045				
COBOL V4 LIP ONLY	LM-201		LY28-6419	GC28-6396	LYC7-5045				
FORTTRAN IV G1 COMP	FO-201		LY28-6856	SC28-6853	LYC7-5021				
FORTTRAN IV H EXT CMP	FO-301		LY28-6403	SC28-6852	LYC7-5019				
FORTTRAN IV LIE MOD 2	LM-301		LY28-6409	SC28-6861	LYC7-5020				
OS PL/1 CHECKOUT CMP	PL-241		LY33-6013	GC33-0007	LYC7-2500	LY33-6014	GC33-0007	LYC7-2500	
OS PL/1 OPT CMP	PL-141		LY33-6007	GC33-0006	LYC7-2506				
OS PL/1 RESIDENT LIR	LM-441		LY33-6008	GC33-0006	LYC7-2504				
OS PL/1 TRANS LIP	LM-541		LY33-6009	GC33-0006	LYC7-2505				
OS/VIDEO/370	RC-500				LYC7-5048				
TSO COBOL PROMPTER	CP-101		LY28-6406		LYC7-5040				

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PROGRAM TITLE	COMPID	FMID	PLM	SRL	FICHE	FMID	PLM	SRL	FICHE
****									
5735									
****									
ACF/NCP/V5 (DOS PP)	SC-300	ENC0100	LY30-3030		SJD2-4135				
ACF/NCP/V5 (DOS SCP)	SC-300	ENC1200	LY30-3030		SJD2-4139				
ACF/NCP/V5 (OS/V5 PP)	SC-300	ENC0100	LY30-3030		SJD2-4134				
ACF/NCP/V5 (OS/V5 SCP)	SC-300	ENC1200	LY30-3030		SJD2-4138				
EMULATION SUPPORT	SC-100	EEP0100	SY30-3001						
NCP/V5	SC-200								
NCP3/VTAM	SC-300		SY30-3031		SJD2-4125		SY30-3031		SJD2-4126
3650 PSS PHAR APPL	H1-100		LY20-2490						
****									
5736									
****									
AUTO REPORT	RG-1AR		LY21-0014		LYC7-1317				
CICS/DOS ENTRY	XY-600				LYB0-0724				
CICS/DOS STANDARD	XY-700				LYB0-0735				
DOS F/ANS COBL LIB 3	LM-201		LY28-6413		LYC7-5031				
DOS PL/1 OPT COMP	PL-161		LY33-6010		LYC7-2503				
DOS PL/1 PES LIB	LM-461		LY33-6011		LYC7-2501				
DOS PL/1 TRANS LIB	LM-561		LY33-6012		LYC7-2502				
DOS RPG II	RG-101		LY21-0014		LYB1-0450				
DOS/FULL ANS COBL V3	CB-201		LY28-6412		LYC7-5030				
DOS/VIDEO/370	RC-300				LYC7-5049				

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PROGRAM TITLE	COMPID	FMID	PLM	SRL	FICHE	FMID	PLM	SRI	FICHE
****									
5740									
****									
CICS/OS/VS	XX-100		LY33-6029		LYA4-3002		LY33-6029		LYB0-8008
DASDR	UT-100		LY20-8049	SH20-9111	LJB6-0002				
DB/DC DATA DICTIONARY	XX-F00	HDD1400	LY20-8037		LJB6-0038				
DF/DS SERVICES	CC-100	HUT1135							
GIS/VS	XX-700		LY20-8010	SH20-9037					
HCF MVS/VS1	HC-133	HHC1100			LJB1-0940				
IMS/VS	XX-214	HIM1600	LY20-8050	GH20-1260	LYB6-0004		LY20-8063	GH20-9117	LYB0-8016
			LY20-8069	SH20-9081					
IMS/VS	XX-214			SH20-9085				SH20-9085	
				SH20-9085					
IMS/VS	XX-214			SH20-9085				SH20-9085	
				SH20-9085					
IMS/VS	XX-214	JIM1610			LJB6-0014	JIM1620			LYB0-8017
		JIM1630			LYB0-8038				
IMS/VS	XX-214	JIM1640			LJB6-0003	JIM1650			LJB6-0036
NPDA COMMON	PD-132	PPD1100	LY25-0002						
NPDA	PD-132	HPD1103							
OS/VS COBOL COMPILER	CB-103		LY28-6486	GC28-6396	LYC7-5052				
	CB-103			GC26-3857					
OS/VS COBOL LIBRARY	LM-103		LY28-6425	GC28-6396	LYC7-5052				
	LM-103			GC26-3857					
OS/VS SORT MERGE	SM-105		LY33-8042	SC33-4035	LYC7-0904				
OS/VS1 VSPC	YR-500		LY20-8036	SH20-9071	LYB0-8043				
OS/VS2 VSPC	YR-600		LY20-8036	SH20-9072	LYB0-8045				
SCREEN DEF FAC	XY-F00		LY19-6060		LJD3-6001	HDF1101			

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PROGRAM TITLE	COMPTD	FMD	PLM	SRL	FICHE	FMD	PLM	SRL	FICHE
****									
5740									
****									
SCREEN DEF FAC	YY-P00	HDF1201							
S/370 HOST PPEP	XP-315		LY38-3036		LJB1-0960				
TCAM IMS	XX-C10		LY20-2126	SH20-1686	LYB0-2221				
TCS-ACF	XY-300		LY20-2383						
TCS-AF	YX-D00		LY20-2219	SH20-1734	LYB0-2257				
3650 PSS COBOL	CB-200		LY30-3050		LJB1-2011				
3650 PSS POS APPL	D1-400		LY30-3047						
3650 PSS POS APPL	D1-500		LY30-3049						
3650 PSS POS APPL	D2-100		LY30-3046						
3650 PSS POS APPL	D2-200		LY20-2479						
3650 SPPS II	D1-601		LY30-3045		LJB1-2008				
3680 PSS SALES APPL	D6-100		LY20-2495						
3680 PSS ADMIN APPL	D6-200		LY20-2505						
****									
5741									
****									
ACF/VTAM PP BASE R1	SC1-23	JVT1111	LY27-8016		LJB1-0418	JVT1911			
ACF/VTAM CRYPTO R1	SC1-23	JVT1131	LY27-8024		LJB1-0421	JVT1931			
ACF/VTAM CRYPTO R2	SC1-23	JVT1231	LY38-3025		LJB1-0425				
ACF/VTAM CRYPTO R3	SC1-23	JVT1331	LY38-3043		LJB1-0455				
ACF/VTAM PP BASE R2	SC1-23	JVT1211	LY38-3032		LJB1-0422				
ACF/VTAM PP BASE R3	SC1-23	JVT1311	LY38-3040		LJB1-0428				
ACF/VTAM MSNP R1	SC1-23	JVT1121	LY27-8022		LJB1-0419	JVT1921			
ACF/VTAM MSNP R2	SC1-23	JVT1221	LY38-3025		LJB1-0423				
ACF/VTAM MSNP R3	SC1-23	JVT1321	LY38-3046		LJB1-0456				

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PROGRAM TITLE	COMPID	FMID	PLM	SRL	FICHE	FMID	PIM	SRL	FICHE
****									
5741									
****									
ACF/VTAM SCP BASE R1	SC 1-23	EVT1101							EVT1901
ACF/VTAM SCP BASE R2	SC 1-23	EVT1201							
ACF/VTAM SCP BASE R3	SC 1-23	EVT1301	LY38-3040		SJB1-0452				
ASSEMBLER XP	SC 1-03	SY33-8041	GC33-4021	SJD2-2034	EAS1201	SY33-8041	GC33-4021	SJD2-2184	
BTAH	SC 1-20	SY27-7246	GC27-6960	SJD2-2049	EBT1201	SY27-7246	GC27-6960	SJD2-2197	
CATALOG	SC 1-D3	SY35-0003	GC26-3874	SJD2-2099	EDM1201	SY35-0003	GC26-3874	SJD2-2200	
CHECKPOINT/RESTART	SC 1-09	SY24-5159	GC26-3876	SJD2-2054	EDM1201	SY24-5159	GC26-3876	SJD2-2200	
		JDM1121							
COMMANDS	SC 1-B8	SY24-5168	GC38-0110	SJD2-2022	EBA1201	SY24-5168	GC38-0110	SJD2-2194	
		JBA1211							
COMMANDS	SC 1-B8	JBA1311							
COMMON SUPV MACROS	SC 1-CN	SY24-5155	GC24-5103		EBA1201	SY24-5155	GC24-5103	SJD2-2194	
		JBA1211							
		JBA1311							
COMMON SUPV MACROS	SC 1-CN	SY33-8041	GC33-4021		EDM1201	SY33-8041	GC33-4021	SJD2-2200	
CONDITIONAL ASM SWTH	SC 1-CS	GY30-2011	GC30-2016	SJD2-2084	ERJ1201	SY30-2011	GC30-2016	SJD2-2211	
CRJE	SC 1-0A	LY28-1018	GC28-1014	LJB2-9517					
CPYPTO UNIT SUPPT	CU 1-34								
CTS-RETAIL HOST	SC 1-26								
CTS-SPDS	SC 1-28	SY30-3024		SJD2-4191					
CVAF	DM 1-CV								
DADSM	SC 1-D4	SY26-3837	GC26-3874	SJD2-2060	EDM1201	SY26-3837	GC26-3874	SJD2-2200	
		JDM1121							
DAM	SC 1-D7	SY26-3836	GC26-3874	SJD2-2062	EDM1201	SY26-3836	GC26-3874	SJD2-2200	
DASD ERP	SC 1-CA	SY24-5155	GC26-3837	SJD2-2067	RDS1201	SY24-5155	GC26-3837	SJD2-2202	
		JDS1121							

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**** 5741 ****									
DEMF	CM-100	EDE1201			SJD2-2199				
DIDOC5	SC1-C4		SY24-5168	GC24-5099	SJD2-2030	EBA1201	SY24-5168	3C24-5099	SJD2-2194
DSM EREP	SC1-CI		SY24-5155	GC26-3837	SJD2-5460	ENS1201	SY28-0669	3C26-3837	SJD2-2208
DSF SYS SUPPORT	SC1-UN	EDS1201 FDS1121			SJD2-2202	FDS1411			
EXT PREC FLT PT SIM	SC1-CP		SY24-5155	GC24-5103	SJD2-2110	EBA1201	SY24-5155	GC24-5103	SJD2-2194
FETCH	SC1-C7		SY24-5155	GC24-5103	SJD2-2055	EBM1201	SY24-5155	GC24-5103	SJD2-2210
GAM	SC1-G0		SY27-7240	GC26-3874	SJD2-2031	ESA1201	SY27-7240	3C26-3874	SJD2-2205
GSP	SC1-07		SY27-7242	GC27-6973	SJD2-2032	ESG1201	SY27-7242	3C27-6973	SJD2-2206
GTF	SC1-11		SY28-0635	GC28-0665	SJD2-2041	ESA1201	SY28-0635	3C28-0665	SJD2-2212
HCF VS1	HC-133				LJB1-0910				
HMASMP	SC1-30		SY28-0685	GC28-0665	SJD2-2181		SY28-0685	GC28-0665	SJD2-6251
HMASPZAP	SC1-12		SY28-0635	GC28-0665	SJD2-2042	ESA1201	SY28-0635	3C28-0665	SJD2-2212
HMBLIST	SC1-14		SY28-0635	GC28-0665	SJD2-2076	EBM1201	SY28-0635	3C28-0665	SJD2-2210
HMDPRDMP	SC1-13		SY28-0635	GC28-0665	SJD2-2043	ESA1201	SY28-0635	3C28-0665	SJD2-2212
		JSA1211							
HMDPRDMP	SC1-13	JSA1311							
HMDPRDMP/FOIT	SC1-18		SY28-0635	GC28-0665	SJD2-2106	ESA1201	SY28-0635	3C28-0665	SJD2-2212
HMSADM P	SC1-15		SY28-0635	GC28-0665	SJD2-2044	ESA1201	SY28-0635	3C28-0665	SJD2-2212
I O DEVICE ALLOCATION	SC1-P4		SY24-5168	GC24-5090	SJD2-2018	EBA1201	SY24-5168	3C24-5090	SJD2-2194
		JBA1211							
I O DEVICE ALLOCATION	SC1-P4	JBA1311							
IBCDASDI	SC1-11		SY35-0005	GC35-0005	SJD2-2078	EDS1201	SY35-0005	3C35-0005	SJD2-2202
IBCDMPPS	SC1-10		SY35-0005	GC35-0005	SJD2-2077	EDS1201	SY35-0005	3C35-0005	SJD2-2202
ICAPPTBI	SC1-12		SY35-0005	GC35-0005	SJD2-2079	EUT1201	SY35-0005	3C35-0005	SJD2-2218

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PROGRAM TITLE	COMPID	F MID	PLM	SRL	FICHE	F MID	PLM	SRL	FICHE
****									
5741									
****									
ICAPRTBL	SC1-I2	JUT1135							
IDCAMS	SC1-DK		SY35-0008	GC26-3842	SJD2-2114	FDM1201	SY35-0008	GC25-3842	SJD2-2200
		JDM1111	SY35-0008	GC26-3842	LJB6-0015				
IDWS	YYE-00	JBA1121							
IEBCOMPR	SC1-UK		SY35-0005	GC35-0005	SJD2-2089	EUT1201	SY35-0005	GC35-0005	SJD2-2218
IEBCOPY	SC1-U6		SY35-0005	GC35-0005	SJD2-2085	EUT1201	SY35-0005	GC35-0005	SJD2-2218
IEBDG	SC1-UJ		SY35-0005	GC35-0005	SJD2-2091	EUT1201	SY35-0005	GC35-0005	SJD2-2218
IEBEDIT	SC1-U9		SY35-0005	GC35-0005	SJD2-2102	EUT1201	SY35-0005	GC35-0005	SJD2-2218
IEBGENER	SC1-U7		SY35-0005	GC35-0005	SJD2-2086	EUT1201	SY35-0005	GC35-0005	SJD2-2218
	SC1-UM	FUT1131							
IEBISAM	SC1-UH		SY35-0005	GC35-0005	SJD2-2090	EUT1201	SY35-0005	GC35-0005	SJD2-2218
IEBIMAGE	SC1-UM	EUT1201			SJD2-2218				
IEBPTPCH	SC1-UA		SY35-0005	GC35-0005	SJD2-2088	EUT1201	SY35-0005	GC35-0005	SJD2-2218
IEBTCRIN	SC1-UG		SY35-0005	GC35-0005	SJD2-2053	EMO1201	SY35-0005	GC35-0005	SJD2-2207
IEBUPDTE	SC1-U8		SY35-0005	GC35-0005	SJD2-2087	EUT1201	SY35-0005	GC35-0005	SJD2-2218
IEHATLAS	SC1-UF		SY35-0005	GC35-0005	SJD2-2082	EDS1201	SY35-0005	GC35-0005	SJD2-2202
		JDS1121							
IEHDASDR	SC1-U0		SY35-0005	GC35-0005	SJD2-2080	EDS1201	SY35-0005	GC35-0005	SJD2-2202
IEHINITT	SC1-UD		SY35-0005	GC35-0005	SJD2-2097	EUT1201	SY35-0005	GC35-0005	SJD2-2218
IEHIOSUP	SC1-U1		SY35-0005	GC35-0005	SJD2-2081	EUT1201	SY35-0005	GC35-0005	SJD2-2218
IEHLIST	SC1-U2		SY35-0005	GC35-0005	SJD2-2048	EUT1201	SY35-0005	GC35-0005	SJD2-2218
		JUT1121							
IEHMOVE	SC1-UC		SY35-0005	GC35-0005	SJD2-2092	EUT1201	SY35-0005	GC35-0005	SJD2-2218
IEHPROGM	SC1-U3		SY35-0005	GC35-0005	SJD2-2096	EUT1201	SY35-0005	GC35-0005	SJD2-2218
IEHSTATR	SC1-UE		SY35-0005	GC35-0005	SJD2-2098	EUT1201	SY35-0005	GC35-0005	SJD2-2218



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PROGRAM TITLE	COMPID	FMID	PLM	SRL	FICHE	FMID	PLM	SRL	FICHE
****									
5741									
****									
IMCJOBQD	SC1-17		SY28-0635	GC28-0665	SJD2-2028	EBA1201	SY28-0635	GC28-0665	SJD2-2194
IMCOSJQD	SC1-19		SY28-0635	GC28-0665	SJD2-2129	EBA1201	SY28-0635	GC28-0665	SJD2-2194
INITIATOR/DSO	SC1-B6		SY24-5168	GC24-5099	SJD2-2020	EBA1201	SY24-5168	GC24-5099	SJD2-2194
		JBA1211							
INITIATOR/DSO	SC1-B6	JBA1311							
INPUT STREAM	SC1-B1		SY24-5168	GC24-5099	SJD2-2015	EBA1201	SY24-5168	GC24-5099	SJD2-2194
INTERPRETER	SC1-B9		SY24-5168	GC24-5099	SJD2-2023	EBA1201	SY24-5168	GC24-5099	SJD2-2194
IOS	SC1-C3		SY24-5156	GC26-3837	SJD2-2001	EBA1201	SY24-5156	GC26-3837	SJD2-2194
		JBA1211							
IOS	SC1-C3	JBA1311							
IOSGEN	SC1-S7	EBA1201			SJD2-2194				
IPL	SC1-C1		SY24-5160	GC24-5103	SJD2-2000	EBA1201	SY24-5160	GC24-5103	SJD2-2194
		JBA1211							
IPL	SC1-C1	JBA1311							
ISAM	SC1-D8		SY26-3838	GC26-3874	SJD2-2063	EDM1201	SY26-3838	GC26-3874	SJD2-2200
ISSP	SC1-PK		SY24-5168	GC24-5090	SJD2-2122	EBA1201	SY24-5168	GC24-5090	SJD2-2194
IYP	SC1-08			GC26-3791		FBA1201		GC26-3791	SJD2-2194
JAM	SC1-D9		SY24-5168	GC26-3837	SJD2-2064	EDM1201	SY24-5168	GC26-3837	SJD2-2200
		FDM1131							
JAM	SC1-D9	JDM1135				JDM1235			
JECS	SC1-B0		SY24-5168	GC26-3783	SJD2-2014	EBA1201	SY24-5168	GC26-3783	SJD2-2194
JES COMPAT INTERFACE	SC1-DB		SY24-5168	GC26-3793	SJD2-2074	EDM1201	SY24-5168	GC26-3793	SJD2-2200
JOB LIST MGR	SC1-EJ		SY24-5168	GC24-5099	SJD2-2140	EBA1201	SY24-5168	GC24-5099	SJD2-2194
LINKAGE EDITOR	SC1-04		SY26-3815	GC26-3813	SJD2-2068	FPM1201	SY26-3815	GC26-3813	SJD2-2210
LOADER	SC1-05		SY26-3814	GC26-3813	SJD2-2069	EBM1201	SY26-3814	GC26-3813	SJD2-2210

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PROGRAM TITLE	COMPID	FMID	PL4	SRL	FICHE	FMID	PLM	SRI	FICHE
**** 5741 ****									
MAPPING MACROS	SC1-01		SY28-0605	GC24-5103	SJD2-2003	EDM1201	SY28-0605	GC24-5103	SJD2-2200
MEDIA MANAGER	DM1-CM	JDM1121							
MTCR	SC1-D6		GY21-0012	GC26-3837	SJD2-2061	RST1201	GY21-0012	GC26-3837	SJD2-2214
MLWS	SC1-BL	EBA1201			SJD2-2194				
MSC TABLE CREATE	SC1-DQ		SY35-0016	GC35-0013	SJD2-2141	EMS1201	SY35-0016	GC35-0013	SJD2-2208
MSC TRACE	SC1-DT		SY35-0014	GC35-0016	SJD2-2144	EMS1201	SY35-0014	GC35-0016	SJD2-2208
MSS COMMUNICATOR	SC1-DP		SY35-0012	GC35-0011	SJD2-2132	EMS1201	SY35-0012	GC35-0011	SJD2-2208
MSS DATA ANALYSIS	SC1-DS		SY28-0669	GC28-0668	SJD2-2143	EMS1201	SY28-0669	GC28-0668	SJD2-2208
MSS EXTENSION			LY35-0037	GC35-0018	L3P6-0101		LY35-0039	GC35-0018	L3P6-0101
MSS RECOVERY SPRV	SC1-EZ	EMS1201			SJD2-2208				
MSS SERVICES	SC1-DU		SY35-0015	GC35-0017	SJD2-2145	EMS1201	SY35-0015	GC35-0017	SJD2-2208
MSS SPACE MANGE	SC1-DP		SY35-0012	GC35-0011	SJD2-2142	EMS1201	SY35-0012	GC35-0011	SJD2-2208
NCCP	YX6-00	HCS1101	LY38-3010		LJB1-0426	HCS1301	LY38-3010		LJB1-0427
		HCS1501	LY38-3010		LJB1-0428				
NIP	SC1-C8		SY24-5160		SJD2-2111	EBA1201	SY24-5160		SJD2-2194
		JBA1211							
NIP	SC1-C8	JBA1311							
NOSP	XX2-G0		LY27-8026		LJB1-0417	HNO1101	LY27-8026		LJB1-0417
MPDA R1	PD1-32	HPD1111	LY25-0002		LJA0-0306	JPD1211			
OBR RECORDER	SC-OBR	JSA1211				JSA1311			
OBR/FRPP/PDE	SC1-CD		SY28-0773	GC28-0772	SJD2-2160	FSA1201	SY28-0669	GC23-0772	SJD2-2212
OCR	SC1-E5		GY21-0013	GC28-3837	SJD2-2051	EMO1201	GY21-0013	GC23-3837	SJD2-2207
OLTRP	SC1-O6		SY28-0662	GC28-0666	SJD2-2046	ESX1201	SY28-0662	GC28-0666	SJD2-2215
OPPF/CLOSE/POV	SC1-D1		SY26-3839	GC26-3874	SJD2-2058				
	SC1-D1	FDM1131							

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PROGRAM TITLE	COMPID	FMID	PLM	SRL	FICHE	FMID	PLM	SRL	FICHE
**** 5741 ****									
OPEN/CLOSE/EOV	SC1-D1	EDM1201 JDM1235	SY26-3839	GC26-3874	SJD2-2200	JDM1135			
OPEN/CLOSE/EOV	SC1-D1	JDM1121							
OUTPUT STREAM CTL	SC1-E2		SY24-5168	GA33-1515	SJD2-2016	EBA1201	SY24-5168	GA33-1515	SJD2-2194
		JBA1211							
OUTPUT STREAM CTL	SC1-E2	JBA1311							
OVERLAY SUPERVISOR	SC1-C2		SY24-5155	GC24-5103	SJD2-2056	EBM1201	SY24-5155	GC24-5103	SJD2-2210
PAM	SC1-D2		SY26-3840	GC26-3874	SJD2-2059	EDM1201	SY26-3840	GC26-3874	SJD2-2200
		JDM1134							
PASSWORD PROTECT	SC1-DC		SY26-3837	GC26-3874	SJD2-2100	EDM1201	SY26-3837	GC26-3874	SJD2-2200
POWER WARNING FEAT	SC1-0E	ESX1201			SJD2-2215				
QUEUE MANAGER	SC1-E5		SY24-5168	GC24-5094	SJD2-2019	EBA1201	SY24-5168	GC24-5094	SJD2-2194
RES	SC1-BB		SY28-6849	GC28-6878	SJD2-2105	EBA1201	SY28-6849	GC28-6878	SJD2-2194
RES ACCOUNT UTILITY	SC1-BC		SY28-0660	GC28-6879	SJD2-2107	ESX1201	SY28-0660	GC28-6879	SJD2-2215
RMS	SC1-CE		SY24-5170	GC38-0110	SJD2-2033	EBA1201	SY24-5170	GC38-0110	SJD2-2194
RSTRT RDR/DSDR PROC	SC1-BD		SY24-5168	GC24-5099		EBA1201	SY24-5168	GC24-5099	SJD2-2194
SAM	SC1-D0		SY26-3840	GC26-3874	SJD2-2057	EDM1201	SY26-3840	GC26-3874	SJD2-2200
		JDM1135							
		JDM1235							
SAM	SC1-D0	JDM1121				FDM1131			
SCHED INITIALIZATION	SC1-BG		SY24-5168	GC24-5099	SJD2-2027	EBA1201	SY24-5168	GC24-5099	SJD2-2194
SCHEDULER SMF	SC1-00		SY24-5155	GC24-5115	SJD2-2009	EBA1201	SY24-5168	GC24-5115	SJD2-2194
SCHEDULER SYSGEN	SC1-S5			GC26-3791		EBA1201		SY24-5544	SJD2-2194
		JBA1211							
SCHEDULER SYSGEN	SC1-S5	JBA1311							

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PROGRAM TITLE	COMPID	FMID	PLM	SRL	PICHE	FMID	PLM	SRL	PICHE
**** 5741 ****									
SERVICE AIDS SYSGEN	SC1-S6		SY28-0635	GC28-0665		ESA1201	SY28-0635	GC28-0665	SJD2-2212
SGIEH402	SC1-UX		SY35-0005	GC35-0005		EUT1201	SY35-0005	GC35-0005	SJD2-2218
SMP	SC1-02		SY24-5155	GC24-5115	SJD2-2094	EBA1201	SY24-5155	GC24-5115	SJD2-2194
SSS (BASE IND SUPT)	SC1-SS		SY30-3017	GC30-3022	SJD2-2133		SY30-3017	GC30-3022	SJD2-2180
		ESS1201	SY30-3017	GC30-3022	SJD2-2213				
STARTER SYSTEM 3330 SUPERVISOR	SC1-S2	EBA1201			SJD2-2194				
	SC1-C5		SY24-5155	GC24-5103	SJD2-2002	EBA1201	SY24-5155	GC24-5103	SJD2-2194
		JBA1211							
SUPERVISOR	SC1-C5	JBA1311							
SUPERVISOR SYSGEN	SC1-S4	EBA1201			SJD2-2194	JBA1211			
		JBA1311							
SYSGEN	SC1-S1			GC26-3791	SJD2-2128	EBA1201		GC26-3791	SJD2-2194
		JBA1211							
SYSGEN	SC1-S1	JBA1311							
SYSTEM LOG	SC1-BE		SY24-5168	GC24-5099	SJD2-2025	EBA1201	SY24-5168	GC24-5099	SJD2-2194
SYSTEM RESTART	SC1-B3		SY24-5168	GC24-5099	SJD2-2017	EBA1201	SY24-5168	GC24-5099	SJD2-2194
TAPE/3851 ERP/VES	SC1-CC		SY24-5156	GC26-3837	SJD2-2101	EDS1201	SY24-5156	GC26-3837	SJD2-2202
		JDS1121							
TCAM	SC1-21		SY30-2049	GC30-2045	SJD2-2124		SY30-2069	GC30-2054	SJD2-2124
		ETC0207	SY30-2069	GC30-2054	SJD2-2217				
TCAM	SC1-21		SY30-2049	GC30-2045	SJD2-2171	JTC1111	SY30-2049	GC30-2045	LJD2-2172
		JTC1121	SY30-2069	GC30-2054	LJD2-2173				
TCAM DIRECT	SC1-21		SY30-3032	GC30-2054	SJD2-2161				
TERMINATION	SC1-P7		SY24-5168	GC24-5099	SJD2-2021	EBA1201	SY24-5168	GC24-5099	SJD2-2194
		JBA1211							

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PROGRAM TITLE	COMPID	PMID	PLM	SRL	FICHE	PMID	PLM	SRL	FICHE
**** 5741 ****									
TOLTEP	SC1-0C	EVT0207	SY28-0664	GC28-0663	SJD2-2134	EVT0107			
TOLTEP	SC1-0C	EVT1101	SY28-0664	GC28-0663	SJD2-2221	EVT1201			
TOLTEP	SC1-0C	EVT1901	SY24-0664	GC28-0663	SJD2-2222				
TOLTEP	SC1-0C	JVT1211	LY38-3032	GC28-0663	SJB1-0424	JVT1111	SY24-0664	GC28-0663	LJB1-0418
TOLTEP	SC1-0C	JVT1311	LY38-3027	GC28-0663	LJB1-0422				
UNIT RECOFD ERP	SC1-CB	FDS1131	LY38-3040		LJB1-0452	EDS1201	SY24-5156	GC26-3837	SJD2-2202
UNIT RECOFD ERP	SC1-CB	JDS1135	SY24-5156	GC26-3837	SJD2-2010	JDS1235			
VM/VCNA	VA-123		LY38-3033						
VPSS	SC1-DV			GC24-5122	SJD2-2178	EVP1201		GC24-5122	SJD2-2220
VSAM	SC1-DF	EDM1201	SY26-3841	GC26-3838	SJD2-2118		SY35-0008	GC26-3840	SJD2-2118
VSAM	SC1-DE	FDM1131	SY26-3841	GC26-3838	SJD2-2200	JDM1121			
VTAM	SC1-23		SY27-7256	GC27-6987	SJD2-2113		SY27-7257	GC27-6996	SJD2-2113
VTAM	SC1-23	EVT0207	SY27-7266	GC27-6995	SJD2-2113	EVT1901	SY27-7257	GC27-0022	SJD2-2222
WTP	SC1-EF	EVT1201	LY38-3027	GC27-6987	SJD2-2221				
3344/3350 AP-1	SC1-31		SY24-5168	GC26-3791	SJD2-2026	EBA1201	SY24-5169	GC26-3791	SJD2-2194
3505/3525 RDP/PCU SP	SC1-DD		SY26-3851	GC26-3855	SJD2-2138	EDS1201	SY26-3851	GC26-3855	SJD2-2202
3540	SC1-DD		SY26-3840		SJD2-2108	ESX1201	SY26-3840		SJD2-2215
3600 HOST SUPPORT	SC1-DM		SY24-5166	GC24-5110	SJD2-2131	EMO1201	SY24-5166	GC24-5110	SJD2-2207
3851 ERP	SC1-24		SY27-2514	GA27-2764					
	SC1-CI		SY24-5156	GC38-1000	SJD2-2139				

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PROGRAM TITLE	COMPID	FMID	PLM	SRL	FICHE	FMID	PLM	SRL	FICHE
**** 5741 ****									
3886 OCR	SC1-DL		SY24-5162	GC24-5101	SJD2-2116	EMO1201	SY24-5162	GC24-5101	SJD2-2207
3890 DOC PROC	SC1-DF		SY24-5163	GA24-3612	SJD2-2115	EMO1201	SY24-5163	GA24-3612	SJD2-2207
3895 ERP	SC1-DM	EMO1201			SJD2-2207				
**** 5742 ****									
ACF/VTAM	SC1-23		LY27-8018		LJB1-0432				
ACF/VTAM MSNF	SC1-23		LY27-8022		LJB1-0433				
**** 5744 ****									
ACF/SSP/VS	AN1		LY30-3030		SJD2-4136				
BATCH TRANSFER PROGRAM	CG1		SY33-8901	GC33-5901	SYC7-1702				
BATCH TRANSFER PROGRAM	CG2		SY33-8901	GC33-5901	SYC7-1703				
BATCH TRANSFER PROGRAM	CH1		SY33-8901	GC33-5901	SYC7-1704				
DISK COPY PROGRAM	BL1		SY24-5165						
DISK INTEL SYSTEM	BK1		GY34-0019		GJD1-1795				
DOS EMULATOR	AS1		SY33-7015		SYC7-2101				
EREP	EREP1	EER1110			SJD2-2204				
EREP PRODUCT SUPPORT	EREP1	EER1110	SY28-0773	GC28-0772	SJD2-2156				
EREP 1.1 FOR VS1	EREP1	EER1300	SY28-0773	GC28-0772	SJB2-9010				
EREP 1.1 FOR MVS	EREP1	EER1300	SY28-0773	GC28-0677	SJD2-2156				
OS/VS ASM/7	AB1		GY34-0007		GJD1-1796				3JD1-1797
OS/VS FORMAT/7	AD1		GY34-0007		GJD1-1796				3JD1-1797
OS/VS LINK/7	AC1		GY34-0008		GJD1-1796				3JD1-1797

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PROGRAM TITLE	COMPID	PMID	PLM	SRL	FICHE	PMID	PLM	SRL	FICHE
**** 5744 ****									
OS/VS MACLIB/R	AA 1		GY34-0010 GY34-0018		GJD1-1790		GY34-0012		3JD1-A794
SMP 4	SC-130	ESY1100	SY28-0685	GC28-0665	SJD2-2216	ESY1100			
SYSTEM SUPPORT PPROGRAM	AN1		SY30-3004		SJD2-4131		SY30-3006		3JD2-4131
1285/1287/1288 D M	AE1								
1401 EMULATOR	AH1		SY33-7016						
1410 EMULATOR	AG1								
3600 HOST SUPPORT	CA3		SY27-7261		SJB1-0222				
3650 PSS HOST SUPPORT	D1-600		SY30-3044		SJB1-2004				
3650 SPPS II	DA-100		LY30-3045		SJB1-2006				
3735 MACROS & UTIL	AZ1								
3790 HOST SUPPORT	BZ3		SY27-7264		SJB1-0022				
**** 5745 ****									
ELIAS-I	XX-V00		LY19-6121		LYA9-6133				
EREP	SC-ERP			GC26-3904					
EREP1 WITH VSE	SC-ER1		SY28-0773	GC28-0677	SJD2-2156				
ACF/VTAM	SC-VTM		LY38-3022	GC38-0253	SJB1-0410		LY38-3041		3JB1-0453
ACF/VTAM PP	SC-VTM		LY38-3022	GC38-0253	LJB1-0408		LY38-3041		LJB1-0415
ACF/VTAM MSNF	SC-VTM		LY38-3023	GC38-0253	LJB1-0409		LY38-3046		LJB1-0454
ASSEMBLER PHK	SC-ASM		SY33-8567	GC33-4010	SYC7-1934				
ATTENTION ROUTINES	SC-AIT		LY33-9063		LYC7-0453		LY33-9064		LYC7-0453
			SY33-8553	GC33-5373	SYC7-1932				
BTAM	SC-BTM		SY27-7251	GC27-6989	SYC7-1935				

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PROGRAM TITLE	COMPID	PMID	PLM	SRL	FICHE	PMID	PLM	SRI	FICHE
****									
5745									
****									
CHECKPOINT/RESTART	SC-CKR		SY33-8559	GC33-5374	SYC7-1936				
COMP I/O MODULES	SC-IOM		SY33-8560	GC33-5372	SYC7-1944				
CTS-RETAIL HOST	SC-RTL								
CTS-SPPS	SC-SPP		SY30-3024		SJD2-4190				
DIR ACC METHOD	SC-DAM		SY33-8561	GC3305372	SYC7-1937				
DISK EREP	SC-DKE		SY33-8552	GC33-5373	SYC7-1938				
DISKETTE IOCS	SC-DIO		SY33-8560	GC33-5372	SYC7-1966				
DISP OPER CONSOLE	SC-DOC		LY33-9064		LYC7-0454		SY33-8553	GC33-5373	SYC7-1939
			SY33-8560	GC33-5372	SYC7-1939				
DISTRIBUTION PROGRAM	SC-DIS			GC33-5377	SYC7-1964				
EREP	SC-EFP		SY33-8554	GC33-5880	SYC7-1942				
EREP1	SC-EP1		SY28-0773	GC33-5880	SYC7-1990				
FTP	SC-FTP		LY12-5033		LYA2-5220				
HCF DOS	HC-133				LJB1-0930				
INDEX SEQ FILE MGMT	SC-ISM		SY33-8561	GC33-5372	SYC7-1947				
IPF	MS-100				LYB0-2485				LYB0-2486
IOCS/DEV IND T/C	SC-IOX		SY33-8560	GC33-5372	SYC7-1945		SY33-8552	GC33-5373	SYC7-1945
JPL BUFFER LOAD	SC-IPL		LY33-9066		LYC7-0455		SY33-8555	GC33-5376	SYC7-1946
JOB CONTROL	SC-JCL		LY33-9066		LYC7-0456		SY33-8555	GC33-5376	SYC7-1950
JEP	SC-JEP		LY12-5031		LYA2-5219				
LIB, SRRV E MAINT	SC-LFP		LY33-9068		LYC7-0457		SY33-8557	GC33-5376	SYC7-1949
LINKAGE EDITOR	SC-LNK		LY33-9067		LYC7-0458		SY33-8556	GC33-5376	SYC7-1950
MAG TAPE IOCS	SC-TAP		SY33-8560	GC33-5372	SYC7-1960				
MAINTAIN SYS HIST	SC-UTS		SY33-9089	GC33-5381	SYC7-0451				
MCP IOCS	SC-MCP		SY33-8560	GC33-5372	SYC7-1951				



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PROGRAM TITLE	COMPID	FMID	PLM	SRL	FICHE	FMID	PLM	SRL	FICHE
****									
5745									
****									
MOD 20 EMULATOR	SC-E20			SY33-8575	GC33-5388				SYC7-1943
NCCF/G06	XX-600			LY38-3010					LJB1-0413
NO5P/G26	XX-200			LY27-8026					LJB1-0405
NPDA	PD-132			LY25-0002					LJA0-0307
OCCF	SC-OCF			LY33-9097					LYC7-0461
OCR IOCS	SC-OCR			SY33-8560	GC33-5372				SYC7-1952
OLTEP	SC-OLT			SY33-8568	GC33-5383				SYC7-1953
PAPER TAPE IOCS	SC-PTP			SY33-8560	GC33-5372				SYC7-1955
PD AIDS	SC-PDA			LY33-9065					LYC7-0459
POWER	SC-PWR			SY33-8570	GX33-9004				SYC7-1976
				SY33-8576	GC33-6049				SYC7-1976
POWER	SC-PWR			SY33-8577	GC33-5405				SYC7-1976
QTAM	SC-QTM			SY27-7249	GC27-6986				SYC7-1957
RMSR	SC-RMS			SY33-8552	GC33-5373				SYC7-1958
SEQUENT DISK I/O	SC-DSK			SY33-8560	GC33-5372				SYC7-1940
SSS (BASE IND SUPT)	SC-SSS			SY30-3017	GC30-3022				SYC7-1970
SUPERVISOR	SC-SUP			LY33-9063	GC33-5377				LYC7-0460
SYSTEM UTILITIES	SC-UTL			SY33-8558	GC33-5381				SYC7-1962
TAPE BREP	SC-TPE			SY33-8552	GC33-5373				SYC7-1961
TOLTEP	SC-TLT			SY28-0664	GC28-0663				SYC7-1969
TOLTEP LP 711	SC-TLT			LY38-3014	GC28-0663				LJB1-0458
TOLTEP LP 714	SC-TLT			LY38-3024	GC28-0663				LJB1-0408
TOLTEP LP 741	SC-TLT			LY38-3041					LJB1-0415
TOLTEP SCP729	SC-TLT			LY38-3022	GC28-0663				SJB1-0410
TOLTEP SCP730	SC-TLT			LY38-3014	GC28-0663				SJB1-0459

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PROGRAM TITLE	COMPID	FMID	PLM	SRL	FICHE	FMID	PLM	SRL	FICHE
****									
5745									
****									
VM/VCNA	SC-VSA		LY38-3033						
VSAM	SC-VSM		LY24-5191	GC33-5382	LYB4-6102				
VSAM BACKUP/RESTORE	SC-AMS		LY24-5213		LYC7-0470				
VSAM COMMON MACROS	SC-VCM		LY24-5191	GC33-5382	LYB4-6102				
VSAM SERVICE PROG	SC-AHS		LY24-5191	GC33-5382	LYB4-6102				
VSE/DITTO	UT-300		LY19-6061		LJD3-6000				
VSE/IPC	SC-IPC		SY25-0004		LJA0-0303				
VSE/POWER RJE	SC-PWR		LY12-5034		LJA2-5217				
VTAM	SC-VTM		SY27-7256	GC27-6994	SYC7-1968	SY27-7262	GC27-6995	SYC7-1968	
			SY27-7263	GC27-6957	SYC7-1968				
VTAM	SC-VTM		SY27-7265	GX27-0033	SYC7-1968	SY27-7270	GC27-0036	SYC7-1968	
VTAME LP	SC-VTM		LY38-3014		SJB1-0458				
VTAME SCP	SC-VTM		LY38-3014		SJB1-0459				
14XX EMULATOR	SC-EML		LY33-9082		LYC7-0462				
1401/1410 EMULATOR	SC-EML		SY33-8573	GC33-5384	SYC7-1941	SY33-8574	GC33-5385	SYC7-1941	
3344/3350 AP-1	SC-APC		SY26-3852		SYC7-0450				
3600 RSS HOST SUPT	SC-124		SY27-7261			SY27-2515			
3650 PSS COBOL COMPILER	CB-200				LJB1-2010				
3650 PSS POS APPL	D1-400		LY30-3047						
3650 PSS POS APPL	D2-100		LY30-3046						
3650 PSS POS APPL	D2-200		LY20-2479						
3650 SPPS II	D1-601		LY30-3045		LJB1-2009				
3680 PSS ADMIN APPL	D6-200		LY20-2505						
3680 PSS SALES APPL	D6-100		LY20-2495						
3800 DOS/VS ICR	SC-AIT			GC26-3900	SJB6-6010				

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PROGRAM TITLE	COMBID	FMID	PLM	SRL	FICHE	FMID	PLM	SRL	FICHE
**** 5745 ****									
3800 POWER ICR	SC-PWR			GC26-3905	SJB6-6009				
**** 5746 ****									
CICS DOS/VS EXTM	XX-B00				LYB0-2218				
CICS/DOS/VS	XX-300		LY33-6032						
DB/DC DATA DICTIONARY	XX-C00		LY20-8037		LJB6-0037				
DL/1 DOS	XX-100		LY12-5016		LYB4-6101				
DL/1 ENTRY	XX-700		LY12-5017		LYA2-5213				
DOS/VS FULL CBL/LIB	CB-100		LY28-6423		LYC7-5050				
DOS/VS FULL LJB	LM-400		LY28-6424		LYC7-5050				
DOS/VS SORT MERGE	SM-200		LY33-8044	SC33-4044	LYC7-0905			SC33-4045	
DOS/VS SORT/MERGE	SM-104		LY33-8038	SC33-4028	LYC7-0903				
DOS/VS VSPC	XR-300		LY20-8039		LYB0-9046	LY33-8038		SC33-4026	LYC7-0905
FOR 4 LIB DOS 3330	LM-302		GY28-6394		LYC7-5044				
RPGII	RG-100		LY33-9062		LJD3-3800				
SCREEN DEF FAC	XX-T00		LY19-6060		LJD3-6002				
VSE/ACCPSS CONTROL	XE-700		LY12-5032		LYC7-0465				
VSE/IBM SYS3 3340	AM-300				LYC7-0461				
VSE/ICCP	TS-100		LY33-9081		LYC7-0464				
	TS-100		LY33-9093						
VSE/OCCP	XC-500		LY33-9097	GC33-6113					

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PROGRAM TITLE	COMPID	FMID	PLM	SRL	FICHE	FMID	PLM	SRI	FICHE
****									
5747									
****									
ACF/SSP/VS	AG-100		LY30-3030		SJD2-4137				
BATCH TRANSFER PROG	BW-100		SY33-8900	GC33-5900	SYC7-1701				
DOS/VS ASM/7	AB-100		GY34-0007		GJD1-1787				
DOS/VS FORMAT/7	AD-100		GY34-0007		GJD1-1787				
DOS/VS LINK/7	AC-100		GY34-0009		GJD1-1787				
DOS/VS MACLIB/R	AE-100		GY34-0010		GJD1-1790				
			GY34-0018			GY34-0012			GJD1-1794
3600 HOST SUPPORT	BR-100		SY27-2514						
3650 PSS HOST SUPPORT	D1-600		SY30-3044		SJB1-2005				
3650 PSS POS ARC	D1-500		LY30-3048						
3650 SPDS II	CJ-200		LY30-3045		SJB1-2007				
3660 HOST	BK-200				SJB1-0301				
3705 DOS/VS ASSSEMBLER	AG-100		SY30-3004		SJD2-4132		SY30-3006		
3735 MACROS & UTIL	AZ-100								
3790 HOST SUPPORT	BO-100		SY27-7264		GJB1-0001				
****									
5748									
****									
DMS/DPCX	XC-400		LY20-2542		LJB1-1221				
FORTRAN COMP & LIB	FO-300	HFT1101							
VS APL OS	AP-101		LY20-8032		LJB6-6101				
VS APL VM	AP-101				LJB6-6102				
VS APL DOS/VSE	AP-101				LJB6-6103				
VS/BASIC	XX-111		LY28-6422		LYC7-5051				
VSPC FORTRAN	FO-211		LY20-8031	GC28-6515	LYB0-8044				

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PROGRAM TITLE	COMPID	FMID	PLM	SRL	PICHE	FMID	PLM	SRL	PICHE
****									
5748									
****									
3800 UTILITY PROG DOS	UT-200		LY20-8058		LJB6-0010				
3800 UTILITY PROG OS	UT-200		LY20-8058		LJB6-0009				
****									
5749									
****									
ASSEMBLER	SC-103		SY33-8041	GC33-4010	SYB0-0901				
CMS	DM-S00		SY20-0887	GC20-1818	SYB0-0901				
CP	DM-K00		SY20-0882	GC20-1820	SYC0-9002	SY20-0886	GC20-1820		LYC0-9003
			SY25-7701	GC20-1820	LYC0-9004				
DMS/CMS	YX-B00				LYC0-9008				
ELIAS-I/VM	XX-K00		LY19-6121		LYA9-6142				
EREP	SC-ER1		SY28-0773	GC28-0772	SJD2-2156				
IPCS	DM-M00			GC20-1823	SYC0-9001				
OBR/EREP/RDE	SC-1CD		SY25-7701	GC29-8300					
RSCS	DM-T00		SY20-0883	GC20-1816	SYC0-9000				
VM/370 DIRECT.MAINT	DV-H00		LY20-0889						
VM/PASS THROUGH	DV-M00		LY24-5208		LYC0-9011				
VM IFS	XX-C00		SY20-0888		LYC0-9009				
VSAM	SC-AMS		LY24-5191	GC33-5382	LYB4-6102				
VSAM	SC-VSM		LY24-5191	GC33-5382	LYB4-6102				
VSAM COMMON MACROS	SC-VMC		LY24-5191	GC33-5382	LYB4-6102				

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PROGRAM TITLE	COMPID	FMID	PLM	SRL	FICHE	FMID	PLM	SRL	FICHE
****									
5752									
****									
ACCESS METHOD SERVICE	SC1-DK		SY35-0010		SJD2-4710	EDM1102	SY35-0010		3JD2-6224
		JDM1122	SY35-0010		LJD2-6226				
ACCESS METHOD SERVICE	SC1-DK	JDM1113							
ACF/TCAM NET-844	SC1-21		LD21-0002		LJD2-6208				
ACF/TCAM-846	SC1-21		LY30-3030		LJD2-6209				
ACF/TCAM-859	SC1-21		LY30-3036		SJD2-6175				
ACF/TCAM V2R2	TC2-21		LY30-3052		SJD2-7220				
ACF/TCAM V2R3	TC2-21		LY30-3042		LJD2-7222				
ACF/TCAM V2P3 NET	TC2-21		LY30-3042		LJD2-7236				
ACF/VTAM PP BASE R1	SC1-23	JVT1112	SY28-0621		LJD2-6268		SY28-0621		LJD2-6269
			SY28-0621		LJD2-6270				
ACF/VTAM CRYPTO P2	SC1-23	JVT1232	LY38-3025		LJB1-0438				
ACF/VTAM CRYPTO R3	SC1-23	JVT1332	LY38-3043		LJB1-0445				
ACF/VTAM CRYPTO R1	SC1-23	JVT1132	LY27-8024		LJD2-6213				
ACF/VTAM PP BASE P2	SC1-23	JVT1212	LY27-8016		LJD2-6204				
ACF/VTAM PP BASE R3	SC1-23	JVT1312	LY38-3040		LJB1-0443				
ACF/VTAM PP BASE P2	SC1-23		LY38-3032		LJB1-0435				
ACF/VTAM MSNF R1	SC1-23	JVT1122							
ACF/VTAM MSNF P2	SC1-23	JVT1222	LY27-8013		LJD2-6203				
ACF/VTAM MSNF R3	SC1-23	JVT1322	LY38-3046		LJB1-0444				
ACF/VTAM MSNF R2	SC1-23		LY38-3023		LJB1-0436				
ACF/VTAM SCP BASE P1	SC1-23	EVT1102							
ACF/VTAM SCP BASE P2	SC1-23	EVT1202	LY38-3027		SJD2-6173				
ACF/VTAM SCP BASE R3	SC1-23	EVT1302	LY38-3040		SJB1-0441				
ACF/VTAM SCE BASE P2	SC1-23		LY38-3027		SJB1-0437				

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PROGRAM TITLE	COMPID	FMID	PLM	SRL	FICHE	FMID	PLM	SRL	FICHE
**** 5752 ****									
ALLOCATION	SC1-B4		SY28-0713		SJD2-4260	EBB1102	SY28-0713		SJD2-6217
		JBB1112	SY28-0713		LJD2-6218				
ALLOCATION	SC1-B4	JBB1126	SY28-0713	GD23-0176	LJB2-9514	JBB1226			
		JBB1326							
AMAPTELE	SC1-16		SY28-0643	GC28-0674	SJD2-5270	EBB1102	SY28-0643	GC28-0674	SJD2-6217
AMASPZAP	SC1-12		SY28-0643	GC28-0674	SJD2-5230	EBB1102	SY28-0643	GC28-0674	SJD2-6217
		JBB1126	SY28-0643	GC28-0674	LJB2-9514				
AMASPZAP	SC1-12	JBB1226				JBB1326			
AMBLIST	SC1-14		SY28-0643	GC28-0674	SJD2-5250	EBB1102	SY28-0643	GC28-0674	SJD2-6245
AMDPRDMP	SC1-13		SY28-0643	GC28-0674	SJD2-5240	EBB1102	SY28-0643	GC28-0674	SJD2-6217
		JBB1122	SY28-0643	GC28-0674	SJD2-6219				
AMDPRDMP	SC1-13	JBB1126	SY28-0643	GC28-0674	LJB2-9514	JBB1226			
		JBB1326							
AMDPRDMP/EDJT	SC1-18		SY28-0643	GC28-0674	SJD2-5280	EBB1102	SY28-0643	GC28-0674	SJD2-6217
		JBB1126	SY28-0643	GC28-0674	LJB2-9514				
AMDPRDMP/EDIT	SC1-18	JBB1226				JBB1326			
AMDSADMP	SC1-15		SY28-0643	GC28-0674	SJD2-5260	EBB1102	SY28-0643	GC28-0674	SJD2-6217
		JBB1122	SY28-0643	GC28-0674	LJD2-6219				
AMDSADMP	SC1-15	JBB1126	SY28-0643	GC28-0674	LJB2-9514	JBB1226			
		JBB1326							
ASSEMBLER XF	SC1-03		SY33-8041	GC33-4021	SJD2-5150	FA51102	SY33-8041	GC33-4-21	SJD2-6216
AUX STOR MANAGER	SC1-CW		SY28-0717		SJD2-4490	EBB1102	SY28-0717		SJD2-6217
		JBB1122	SY28-0717		LJD2-6219				
AUX STOR MANAGER	SC1-CW	JBB1126	SY28-0717		LJB2-9514	JBB1226			
		JBB1326							

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PROGRAM TITLE	COMPID	FMID	PLM	SRL	FICHE	FMID	PLM	SRL	FICHE
**** 5752 ****									
BLOCK PROCESSOR	SC1-DA	JDM1134	SY26-3825		SJD2-4620	EDM1102	SY26-3825		SJD2-6224
BLOCK PROCESSOR	SC1-DA	JDM1136							
BTAM	SC1-20		SY27-7246	GC27-6980	SJD2-5290	EBT1102	SY27-7246	GC27-6980	SJD2-6221
CATALOG CTRLLR 3	SC1-DE		SY35-0011	GC35-0010	SJD2-4690	EDM1102	SY35-0011	GC35-0010	SJD2-6224
CHECKPOINT/RESTART	SC1-09		SY28-0715	GC26-3877	SJD2-5200	EDM1102	SY28-0715	GC26-3877	SJD2-6224
CHECKPOINT/RESTART	SC1-09	JDM1112	SY28-0715	GC26-3877	LJD2-6225				
CHECKPOINT/RESTART	SC1-09	JDM1132	SY28-0715	GX26-3877	LJD2-6227	JDM1134			
CHECKPOINT/RESTART	SC1-09	JDM1136							
CHECKPOINT/RESTART	SC1-09	JDM1138							
COMM TASK	SC1-CK		SY28-0714		SJD2-4410	EBB1102	SY28-0714		SJD2-6217
COMM TASK	SC1-CK	JBB1126	SY28-0714		LJB2-9514				
COND ASM SWITCH	SC1-CS	JBB1226				JBB1326			
CONTENTS SUPERVISOR	SC1-CJ		SY28-0713		SJD2-4400	EBB1102	SY28-0713		SJD2-6217
CONVERTER/INTERPRETER	SC1-B9	JBB1122	SY28-0713		LJD2-6219				
CRYPTO UNIT SUPPORT	CU1-34		SY28-0715		SJD2-4310	JBB1226			
CTS-RETAIL HOST	SC1-26	EBB1102	SY28-0715		SJD2-6217				
CTS-SPPS	SC1-28	HCU1102	LY28-1017	GC28-1014	LJB2-9516				
DADSM	SC1-D4		SY30-3024						
DADSM	SC1-D4	JDM1113	SY26-3828		SJD2-4770	EDM1102	SY26-3828		SJD2-6224
DAM	SC1-D7	JDM1134				JDM1136			
DAM	SC1-D7		SY26-3831		SJD2-4800	EDM1102	SY26-3831		SJD2-6224



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PROGRAM TITLE	COMPID	FMID	PLM	SRL	FICHE	FMID	PLM	SRL	FICHE
****									
5752									
****									
DAM	SC1-D7	JDM1112	SY26-3831		LJD2-6225	JDM1138			
DASD EPP	SC1-CA		SY26-3823		SJD2-4330	EDS1102	SY26-3823		SJD2-6228
		JBB1126	SY26-3823		LJB2-9514				
DASD ERP	SC1-CA	JBB1226				JBB1326			
		JDS1134							
DASD ERP	SC1-CA	JDS1136							
DEMF	CM1-00	EDE1102			SJD2-6223				
DI DOCS	SC1-C4		SY28-0713		SJD2-4560	EBB1102	SY28-0713		SJD2-6217
DSF	SC1-UN	FDS1134							
DSMEREP	SC1-CI				SJD2-5460	EMS1102			SJD2-6242
ENP	BB1-31	JBB1126	LD23-0187	SD23-0183	LJB2-9514	JBB1226			
		JBB1326							
EXCP	SC1-C6		SY26-3823		SJD2-4580	EBB1102	SY26-3823		SJD2-6217
		JBB1122	SY26-3823		LJD2-6219				
EYT PREC FLT PMT	SC1-CP		SY28-0713		SJD2-4440	EBB1102	SY28-0713		SJD2-6217
EXTENDED SVC ROUTER	SC1-CP		SY28-0713		SJD2-4370	EBB1102	SY28-0713		SJD2-6217
EXTERNAL WRITER	SC1-F2		SY28-0622		SJD2-4240				
	SC1-B2	EXW1102	SY28-0622		SJD2-6271	EXW1102	SY28-0713		SJD2-6271
EXTERNAL WRITER	SC1-C7		SY28-0713		SJD2-4590	EPM1102	SY28-0713		SJD2-6245
FETCH	SC1-G0		SY27-7241		SJD2-4820	ESA1102	SY27-7260		SJD2-6232
GAM	SC1-07		SY27-7242		SJD2-5190	ES1102	SY27-7242		SJD2-6233
GSP	SC1-11		SY28-0643	GC28-0674	SJD2-5220	EBB1102	SY28-0643	GC28-0674	SJD2-6217
GTF		JBB1122	SY28-0643	GC28-0674	LJD2-6219				
	SC1-11	JBB1126	SY28-0643	GC28-0674	LJD2-6219	JBB1226	SY28-0643	GC28-0674	LJD2-6219

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PROGRAM TITLE	COMPID	FMID	PLM	SRL	FICHE	FMID	PLM	SRL	FICHE
****									
5752									
****									
GTF	SC1-11	JEB1326							
HCF MVS	HC1-33				LJB1-0920				
HMASMP	SC1-30		SY28-0685	GC28-0673	SJD2-5330		SY28-0685	GC28-0673	SJD2-6251
IBCDASDI	SC1-11		SY35-0005	GC35-0005	SJD2-4840	EDS1102	SY35-0005	GC35-0005	SJD2-6228
IBCDMPRS	SC1-10		SY35-0005	GC35-0005	SJD2-4830	EDS1102	SY27-7260	GC35-0005	SJD2-6228
ICAPR9BL	SC1-12		SY35-0005	GC35-0005	SJD2-4850	PWT1102	SY35-0005	GC35-0005	SJD2-6263
IDWS	AMA-00	HOP1102							
IEBCOMPR	SC1-UK		SY35-0005	GC35-0005	SJD2-5010	EUT1102	SY35-0005	GC35-0005	SJD2-6263
IEBCOPY	SC1-U6		SY35-0005	GC35-0005	SJD2-5060	EUT1102	SY35-0005	GC35-0005	SJD2-6263
IEBDG	SC1-UJ		SY35-0005	GC35-0005	SJD2-5000	EUT1102	SY35-0005	GC35-0005	SJD2-6263
IEBEDIT	SC1-U9		SY35-0005	GC35-0005	SJD2-5090	EUT1102	SY35-0005	GC35-0005	SJD2-6263
IEBGENER	SC1-U7		SY35-0005	GC35-0005	SJD2-5070	EUT1102	SY35-0005	GC35-0005	SJD2-6263
IEBIMAGE	SC1-UM	EUT1102	SY35-0005	GC35-0005	SJD2-6263				
	SC1-UM	FUT1133							
IEBISAM	SC1-UH		SY35-0005	GC35-0005	SJD2-4990	EUT1102	SY35-0005	GC35-0005	SJD2-6263
IEBPTPCH	SC1-UA		SY35-0005	GC35-0005	SJD2-4930	EUT1102	SY35-0005	GC35-0005	SJD2-6263
IEBTCRIN	SC1-UG		SY35-0005	GC35-0005	SJD2-4980	EMI1102	SY35-0005	GC35-0005	SJD2-6240
IEBUPDTE	SC1-U8		SY35-0005	GC35-0005	SJD2-5080	EUT1102	SY35-0005	GC35-0005	SJD2-6263
IEHATLAS	SC1-UF		SY35-0005	GC35-0005	SJD2-4970	EDS1102	SY28-0652	GC35-0005	SJD2-6228
		JDS1134							
IEHDASDR	SC1-U0		SY35-0005	GC35-0005	SJD2-5030	EDS1102	SY35-0005	GC35-0005	SJD2-6228
INFORMATION/SYSTEM	OZ1-35	HOZ1102	LY25-0008		LJA0-0326	HOZ1200	LY25-0008	SC34-2044	LJA0-0326
INFORMATION/SYSTEM MGMT	OZ1-35	HOZ1220	LY25-0003	SC34-2031	LJA0-0330				
IEHINITT	SC1-UD		SY35-0005	GC35-0005	SJD2-4950	EUT1102	SY35-0005	GC35-0005	SJD2-6263
IEHLIST	SC1-U2		SY35-0005	GC35-0005	SJD2-5040	EUT1102	SY35-0005	GC35-0005	SJD2-6263

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PROGRAM TITLE	COMPID	FMID	PLM	SRL	FICHE	FMID	PLM	SRL	FICHE
****									
5752									
****									
IEHLIST	SC1-U2	JUT1134							
IEHMOVE	SC1-UC		SY35-0005	GC35-0005	SJD2-4940	EUT1102	SY35-0005	GC35-0005	SJD2-6263
IEHPROGM	SC1-U3		SY35-0005	GC35-0005	SJD2-5050	EUT1102	SY35-0005	GC35-0005	SJD2-6263
IEHSTATR	SC1-UE		SY35-0005	GC35-0005	SJD2-4960	EUT1102	SY35-0005	GC35-0005	SJD2-6263
IEHUCAT	SC1-UY		SY35-0005	GC35-0005	SJD2-5020				
INITIATOR	SC1-B6		SY28-0715		SJD2-4280	EBB1102	SY28-0715		SJD2-6217
		JBB1122	SY28-0715		LJD2-6219				
INITIATOR	SC1-B6	JBB1126	SY28-0715		LJB2-9514	JBB1226			
		JBB1326							
IOCP	BB1-30	JBB1226							
IOCP COMMON PART	BB1-36	JBB1226							
IOS	SC1-C3		SY26-3823		SJD2-4550	EBB1102	SY26-3823		SJD2-6217
		JBB1122	SY26-3823		LJD2-6219				
IOS	SC1-C3	JBB1126	SY26-3823		LJB2-9514	JBB1226			
		JBB1326							
IPCS	SC1-32	EIP1102	SY25-0001	GC34-2004	SJD2-6235	JBB1226			
		JIP1226							
IPL	SC1-C9		SY28-0623		SJD2-4610	EBB1102	SY28-0623		SJD2-6217
		JBB1122	SY28-0623		LJD2-6219				
IPL	SC1-C9	JBB1126	SY28-0623		LJB2-9514	JBB1226			
		JBB1326							
ISAM	SC1-D8		SY26-3833		SJD2-4810	EDM1102	SY26-3833		SJD2-6224
IVP	SC1-08	EBB1102			SJD2-6217				
JES 2	SC1-BH		SY28-0622		SJD2-4230	EJE1102	SY28-0622		SJD2-6236
		JJE1112	SY28-0622		LJD2-6237				

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PROGRAM TITLE	COMPID	FMID	PLM	SRL	FICHE	FMID	PLM	SRL	FICHE
****									
5752									
****									
JES 2	SC1-BH	EJE1103							
JES 2 NJE	SC1-BH		LY24-6001		LYB8-0838	HJE1104			
		HJE2226	LY24-6006	SC23-0046					
JES 3	SC1-BA		SY28-0612			FJS1102	SY28-0612		SJD2-6238
		FJS1133							
JES 3	SC1-BA	HJS2226							
LINK LOADGO PROMPTER	SC1-T5		SY28-0652		SJD2-4910	EST1102	SY28-0652		SJD2-6250
LINKAGE EDITOR	SC1-04		SY26-3815	GC26-3813	SJD2-5160	EPH1102	SY26-3815	GC26-3813	SJD2-6245
LOADER	SC1-05		SY26-3814	GC26-3813	SJD2-5170	EPH1102	SY26-3814	GC26-3813	SJD2-6245
M P RECONFIGURATION	SC1-CZ		SY28-0713		SJD2-4520	JBB1122	SY28-0713		LJD2-6219
		JBB1126	SY28-0713		LJB2-9514				
M P RECONFIGURATION	SC1-CZ	JBB1226				JBB1326			
M S COMMANDS	SC1-B8		SY28-0714	GC38-0229	D222-4790	JBB1122	SY28-0714	GC38-0229	LJD2-6219
		JBB1126	SY28-0714	GC38-0229	LJB2-9514				
M S COMMANDS	SC1-B8	JBB1226				JBB1326			
MAPPING/SUPVR MACROS	SC1-01				SJD2-5130	JBB1112			LJD2-6218
		JBB1126			LJB2-9514				
MAPPING/SUPVR MACROS	SC1-01	JBB1226				JBB1326			
MEDIA MANAGER	DM1-CM	JDM1134							
MF/1	SC1-CQ		SY28-0715		SJD2-4450	EMF1102	SY28-0715		SJD2-6239
MICR	SC1-D6		SY21-0012		SJD2-4790	EST1102	SY21-0012		SLD2-6250
MLWS	SC1-EL	EHL1102	SY28-0622		SJD2-6241				
MSC TABLE CREATE	SC1-DO		SY35-0016	GC35-0013	SJD2-5440	EMS1102	SY35-0016	GC35-0013	SJD2-6242
MSC TRACE	SC1-DT		SY35-0014	GC35-0016	SJD2-5400	EMS1102	SY35-0014	GC35-0016	SJD2-6242
MSS COMMUNICATOP	SC1-DP		SY35-0013	GC35-0011	SJD2-5370	EMS1102	SY35-0013	GC35-0011	SJD2-6242

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PROGRAM TITLE	COMPID	F MID	PLM	SRL	FICHE	F MID	PLM	SRL	FICHE
**** 5752 ****									
MSS DATA ANALYSIS	SC1-DS		SY28-0678	GC35-0011	SJD2-5390	EMS1102	SY28-0678	GC35-0011	SJD2-6242
MSS EXTENSIONS			LY35-0038		LGP6-0102				
MSS SERVICES	SC1-DU		SY35-0015	GC35-0016	SJD2-5410	EMS1102	SY35-0015	GC35-0016	SJD2-6242
MSS SPACE MANGE	SC1-DR		SY35-0013	GC35-0011	SJD2-5380	EMS1102	SY35-0013	GC35-0011	SJD2-6242
MVS/TSO/VTAM	SC1-T9		LY38-3040		LJB1-0443				
MVS/TSO/VTAM SCP R3	SC1-T9	EVT1302	LY38-3040		SJB1-0441				
NCCP	XX-600	HCS1102	LY38-3010		LJB1-0439	HCS1302	LY38-3010		LJB1-0440
		HCS1502	LY38-3010		LJB1-0441				
NPDA R2 COMMON	PD-132	JPD1200	LY25-0002		LJA0-0309				
NPDA R2 VS1	PD-132	JPD1211	LY25-0002		LJA0-0310				
NPDA R2 MVS	PD-132	JPD1212	LY25-0002		LJA0-0311				
NPDA R1	PD-132	JPD1122							
NIP	SC1-C8		SY28-0623		SJD2-4600	EBB1102	SY28-0623		SJD2-6217
		JBB1122	SY28-0623		LJD2-6219				
NIP	SC1-C8	JBB1126	SY28-0623		LJB2-9514	JBB1226			
		JBB1326							
NOSP	XX2-00		LY27-8026		LJD2-6205	HNO1102	LY27-8026		LJD2-6243
O/C/EOV	SC1-D1		SY26-3827		SJD2-4740	EDM1102	SY26-3827		SJD2-6224
		JDM1112	SY26-3827		LJD2-6225				
OPEN/CLOSE/EOV	SC1-D1	FDM1133				JDM1134			
		JDM1136							
OBR/EREP/RDE	SC1-CD		SY28-0773		SJD2-4350	EBB1102	SY28-0773		SJD2-6217
OBR	SCO-BR	JBB1126	SY28-0773		LJB2-9514	JBB1226			
		JBB1326							
OCR	SC1-D5		GY21-0013		SJD2-4780	EMI1102	GY21-0013		SJD2-6240

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PROGRAM TITLE	COMPID	PMID	PLM	SRL	FICHE	PMID	PLM	SRL	FICHE
**** 5752 ****									
OLTEP	SC1-06	JBB1126	SY28-0676	GC28-0675	SJD2-5180	EBB1102	SY28-0676	GC28-0675	SJD2-6217
		JBB1226	SY28-0676	GC28-0675	LJB2-9514				
OLTEP	SC1-06	JBB1226				JBB1326			
OVERLAY SUPERVISOR	SC1-C2		SY28-0716		SJD2-4540	EPM1102	SY28-0716		SJD2-6245
		JBB1126	SY28-0716		LJB2-9514				
OVERLAY SUPERVISOR	SC1-C2	JBB1226				JBB1326			
PAM	SC1-D2		SY26-3828		SJD2-4750	EDM1102	SY26-3832		SJD2-6224
PASSWORD PROTECT	SC1-DC		SY26-3827		SJD2-4640	EDM1102	SY26-3827		SJD2-6224
POWER WARNING FEATURE	SC1-0E		SY27-7250		SJD2-5110	EBB1102	SY27-7250		SJD2-6217
RACF REPORT WRITER	RF1-00	JRF1305							
RACF	XYH-00		LY28-0730	GC28-0733	LYB8-0770		LY28-0730	GC28-0722	LYB8-0771
		HRF1302	LY28-0730	GC28-0722	LJD2-6246				
RACF	XYH-00	HFF1305	LY28-0730	GC28-0722	LJD2-6246				
RADIX PARTITION TREE	SC1-CY		SY28-0715		SJD2-4510	EBB1102	SY28-0715		SJD2-6217
REAL STOR MANAGER	SC1-CR		SY28-0717		SJD2-4460	EBB1102	SY28-0717		SJD2-6217
		JBB1122	SY28-0717		LJD2-6219				
REAL STOR MANAGER	SC1-CR	JBB1126	SY28-0717		LJB2-9514	JBB1226			
		JBB1326							
RECOVERY TERMINATION	SC1-CM		SY28-0716		SJD2-4430		SY28-0718		
			SY28-0719						
RECOVERY TERMINATION	SC1-CM	EBB1102	SY28-0716		SJD2-6217	JBB1122	SY28-0716		LJD2-6219
		JBB1126	SY28-0716		LJB2-9514				
RECOVERY TERMINATION	SC1-CM	JBB1226				JBB1326			
		JDM1136							
REGION CONTROL TASK	SC1-CU		SY28-0714		SJD2-4470	EBB1102	SY28-0714		SJD2-6217

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PROGRAM TITLE	COMPID	FMID	PLM	SRL	FICHE	FMID	PLM	SRL	FICHE
**** 5752 ****									
REGION CONTROL TASK	SC1-CU	JBB1122	SY28-0714		LJD2-6219				
RMP V1	XXM-00		LY28-0739	SC28-0740	SJB2-9500				
RMP V2	XY4-00		LY28-0923	GC28-0736	LJB2-9507				
RMS	SC1-CE		SY27-7250		SJD2-4360	EBB1102	SY27-7250		SJD2-6217
		JBB1122	SY27-7250		LJD2-6219				
RMS	SC1-CE	JBB1126	SY27-7250		LJB2-9514	JBB1226			
		JBB1326							
SAM	SC1-D0		SY26-3832		SJD2-4730	EDM1102	SY26-3832		SJD2-6224
		JDM1112	SY26-3832		LJD2-6225				
SAM	SC1-D0	FDM1133				JDM1134			
		JDM1136							
SAM	SC1-D0	JDM1138							
SAM SUBSYSTEM	SC1-DB		SY26-3832		SJD2-4630	EDM1102	SY26-3832		SJD2-6224
SCHEDULER RESTART	SC1-B3		SY28-0715		SJD2-4250	EBB1102	SY28-0715		SJD2-6217
SCHEDULER SYSGEN	SC1-S5		SY28-0713			EBB1102	SY28-0713		SJD2-6217
		JBB1122	SY28-0713		LJD2-6219				
SCHEDULER SYSGEN	SC1-S5	JBB1126	SY28-0713		LJB2-9514	JBB1226			
		JBB1326							
SERVICE AIDS SYSGEN	SC1-S6		SY28-0643	GC28-0674					
SGIEH402	SC1-UX		SY35-0005	GC35-0005		EUT1102	SY35-0005	GC45-0005	SJD2-6263
SMF	SC1-02		SY28-0626		SJD2-5140	EBB1102	SY28-0626		SJD2-6217
		JBB1122	SY28-0715		LJD2-6219				
SMF	SC1-02	JBB1126	SY28-0626		LJB2-9514	JBB1226			
		JBB1326							
SMF SCHEDULER	SC1-00		SY28-0626		SJD2-5120	EBB1102	SY28-0626		SJD2-6217

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PROGRAM TITLE	COMPID	FMID	PLM	SRL	FICHE	FMID	PLM	SRL	FICHE
**** 5752 ****									
SMF SCHEDULER	SC1-00	JBB1122 JBB1226	SY28-0715		LJD2-6219	JBB1126	SY28-0626		LJB2-9514
SMF SCHEDULER	SC1-00	JBB1326							
SSS	SC1-SS		SY30-3017		SJD2-2133	ESS1102	SY30-3017		SJD2-6249
SU BIT STRING	SC1-SU	ESU1102							
SUPERVISOR CONTROL	SC1-C5	JBB1122	SY28-0716	GC28-0753	SJD2-4570	EBB1102	SY28-0716	GC28-0753	SJD2-6217
SUPERVISOR CONTROL	SC1-C5	JBB1126 JBB1326	SY28-0716	GC28-0753	LJD2-6219				
SUPERVISOR SYSGEN	SC1-S4	JBB1122	SY28-0713		LJD2-6219	EBB1102	SY28-0713		SJD2-6217
SUPERVISOR SYSGEN	SC1-S4	JBB1126 JBB1326	SY28-0713		LJB2-9514	JBB1226			
SU850			LD26-6000		LJB2-9508				
SVC 109	SC1-CG				SJD2-4380				
SWA MANAGER	SC1-B5		SY28-0715		SJD2-4270	EBB1102	SY28-0715		SJD2-6217
SYSGEN	SC1-S1		SY35-0005	GC26-3792		EDS1102	SY35-0005	GC26-3792	SJD2-6228
		HNO1102		GC26-3792	LJD2-6243				
SYSGEN	SC1-S1	FDS1125							
SYSTEM RESOURCE MGR	SC1-CX	JBB1122	SY28-0715		SJD2-4500	EBB1102	SY28-0715		SJD2-6217
SYSTEM RESOURCE MGR	SC1-CX	JBB1126 JBB1326	SY28-0715	GC26-3792	LJD2-6219				
SYSTEM SECURITY SUPPT	SC1-PN		SY28-0713		LJB2-9514	JBB1226			
TAPE ERP/VES	SC1-CC		SY26-3823		SJD2-6015	EBB1102	SY28-0713		SJD2-6217
					SJD2-4340	EDS1102	SY26-3823		SJD2-6228



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PROGRAM TITLE	COMPID	FMID	PLM	SRL	FICHE	FMID	PLM	SRL	FICHE
****									
5752									
****									
TAPE ERP/VES	SC1-CC	JDS1134							
TASK MANAGER	SC1-CL		SY28-0716		SJD2-4420	EBB1102	SY28-0716		SJD2-6217
		JBB1122	SY28-0716		LJD2-6219				
TASK MANAGER	SC1-CL	JBB1126	SY28-0716		LJB2-9514	JBB1226			
		JBB1326							
TCAM	SC1-21		SY30-2040		SJD2-5300	ETC0108	SY30-2059		SJD2-6256
		ETC1102	SY30-2059		SJD2-6257				
TCAM	SC1-21	JTC1112	SY30-2059		LJD2-6258	JTC1122	SY30-2059		LJD2-6259
TCAM DIRECT	SC1-21		SY30-3032						
TIMER SUPERVISOR	SC1-CV		SY28-0716		SJD2-4480	FBB1102	SY28-0716		SJD2-6217
		JBB1122	SY28-0716		LJD2-6219				
TIMER SUPERVISOR	SC1-CV	JBB1126	SY28-0716		LJB2-9514	JBB1226			
		JBB1326							
TIMER SUPERVISOR	DM1-CV	JDM1134							
TOLTEP	SC1-OC		SY28-0664	GC28-0663		EVT0108	SY28-0664	GC28-0663	SJD2-6266
		EVT1102	SY28-0664	GC28-0663	SJD2-6267				
TOLTEP	SC1-OC	JVT1112	SY28-0664	GC28-0663	LJD2-6268				
TOLTEP LP	SC1-OC	JVT1212	LY38-3027		LJB1-0435	JVT1312	LY38-3040		LJB1-0443
TOLTEP SCP	SC1-OC	EVT1202	LY38-3032		SJB1-0437				
TSO CMD PKG			LY28-0749	GC28-0748	SJD2-9501				
TSO EDIT	SC1-T0		SY33-8548		SJD2-4860	EBB1102	SY33-8548		SJD2-6217
		JBB1112	SY33-8548		LJD2-6218				
TSO SCHEDULER	SC1-T4		SY28-0626		SJD2-4900	EBB1102	SY28-0626		SJD2-6217
		JBB1112	SY28-0713		LJD2-6218				
TSO SCHEDULER	SC1-T4	JBB1226							

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P/PROGRAM TITLE	COMPID	FMID	PI 4	SRL	PICHE	FMID	PLM	SRL	FICHE
****									
5752									
****									
TSO TCAM SUBROUTINES	SC1-T8				SJD2-4920				
TSO TPST	SC1-T1		SY35-0004		SJD2-4870	EBB1102	SY35-0004		SJD2-6217
TSO TIOC	SC1-T3		SY30-2059		SJD2-4890	ETC0108	SY30-2059		SJD2-6256
		ETC1102	SY30-2059		SJD2-6257				
TSO TIOC	SC1-T3	ETI1106	SY30-2059		SJD2-6260				
TSO UTILITIES	SC1-T2		SY28-0652		SJD2-4880	EST1102	SY28-0652		SJD2-6250
TSO/VTAM	SC1-T9		LY27-8028		LJD2-6204	FTV0108	LY27-8028		SJD2-6262
		EVT1102	LY27-8028		SJD2-6267				
TSO/VTAM	SC1-T9	JVT1112	LY27-8028		LJD2-6268				
TSO/VTAM LP	SC1-T9	JVT1212	LY38-3032		LJB1-0435				
TSO/VTAM SCP	SC1-T9	EVT1202	LY38-3027		SJB1-0437				
TSO/VTAM 858			SY27-2769		SJD2-6171				
U R ERP	SC1-CB		SY26-3823		SJD2-4330	EDS1102	SY26-3823		SJD2-6228
	SC1-CB	FDS1133							
VBP	SC1-DG		SY26-3834		SJD2-4680	EDM1102	SY26-3834		SJD2-6224
		JDM1112	SY26-3834		LJD2-6225				
VBP	SC1-DG	JDM1136							
VIRT STOR MANGR	SC1-CH		SY28-0717		SJD2-4390	EBB1102	SY28-0717		SJD2-6217
		JBB1122	SY28-0717		LJD2-6219				
VPSS	SC1-PV	EBB1102	SY24-5173		SJD2-6217	EVP1102	SY24-5173		SJD2-6265
VSAM & VSAM CATALOG	SC1-DE				SJD2-4660	EDM1102			SJD2-6224
		JDM1122			LJD2-6226				
VSAM & VSAM CATALOG	SC1-DE	JBB1112	LY28-0749		LJB2-9501	JDM1113			
		JDM1134							
VSAM & VSAM CATALOG	SC1-DE	JDM1135							

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**** 5752 ****									
VTAM	SC1-23		SY27-7256	GC27-0023	SJD2-5320		SY27-7267	GC27-6987	
			SY27-7272	GC27-6994					
VTAM	SC1-23		SY28-0621	GC27-6995		EVT0108	SY28-0621		SJD2-6266
			SY28-0621		SJD2-6267				
WINDOW INTERCEPT	SC1-DJ		SY26-3834			EDM1102	SY26-3834		SJD2-6224
2314 STARTER	SC1-S3								
3330 STARTER	SC1-S2								
3344/3350 AP-1	SC1-31			GC26-3855	SJD2-6016	EDS1102		GC26-3855	SJD2-6228
3505/3525 RDR/PCH	SC1-DD		SY26-3832	GC21-5097	SJD2-4650	EBB1102	SY26-3832	GC21-5097	SJD2-6217
3540	SC1-DN		SY24-5167		SJD2-5360	EMI1102	SY24-5167		SJD2-6240
3600 HOST SUPPORT	SC1-24		SY27-2514		SJD2-5430	EUT1102	SY27-7261		SJD2-6263
3886 OCR	SC1-DL		SY24-5162	GC24-5101		EMI1102	SY24-5162	GC24-5101	SJD2-6240
3890 DOCUMNT PROC	SC1-DF		SY24-5163		SJD2-4670	EMI1102	SY24-5163		SJD2-6240
**** 5760 ****									
DPPX ASSEMBLER	AS1			GC27-0411					
DPPX BASE	010			GC27-0400	LYB0-2510				
DPPX COBOL COMPILER	CB1		SY26-3874	GC26-3914					
DPPX COBOL LIBRARY	LB1		SY26-3874	GC26-3929					
DPPX DMS	XC2			GH20-2154					
DPPX DPS FM	XR1-10		LY33-6031	GC33-0090					
DPPX DPS IMD	XR1-20		LY33-6036	GC33-0091					
DPPX DSC	RC1			GC27-0400					
DPPX DTMS	TD1		SY26-3876	GC26-3915					

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PROGRAM TITLE	CONPID	PHID	PLM	SRL	FICHE	PHID	PLM	SRL	FICHE
**** 5760 ****									
DPPX FORTRAN COMP	LM1			GC27-0417					
DPPX FORTRAN LIB	PO1			GC27-0417					
DPPX GEN3644	ED1		LC31-0005	GC24-5179	LJD2-7320				
DPPX RJE	XC1			GC30-3053					
DPPX SORT	SM1		SY26-3877	GC26-3931					
**** 5761 ****									
DPCI	DS1		LY38-3037	GC22-9075	LJB1-0702				LJB1-0802
**** 5799 ****									
EMUL B100/200/300	AAC								
EMULATOR H120/200	AAB								
FILM RDR/RECORDER	WAA								
FORTRAN H EXT PLUS	AAV				LYC7-5042				
HASP NETWORKING	ATC		LY20-2340						
HLTA TERM ADAPT	WFK		SY21-0527						
PRPQ	AAE								
PRPQ	AAT								
P5HRPQ	WAF								
S/3 MOD6 1017 IOCS	WDF								
S/3 MOD6 1018 IOCS	WDL								
S/3 M10 BSCA MODIF	WHG								
S/3 M10 C 1017 IOCS	WAD								

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PROGRAM TITLE	COMPID	FMID	PLM	SRL	FICHE	FMID	PLM	SRL	FICHE
****									
5799									
****									
S/3 M10 C 1018 IOCS	WAM								
S/3 M10 C 2501 ATT	WCE								
S/3 M10 D MLTA IOCS	WAW								
S/3 M10 D 1017 IOCS	WAE								
S/3 M10 D 1018 IOCS	WAN								
S/3 M10 D 2501 ATT	WCF								
S/3 M10 D 2956 ATT	WGX								
S/3 M10 INT. TIMER	WGY								
S/3 M10 1017/1442	WDP								
S/3 M10 1018/1441	WFD								
S/3 M10 2ND 1403 ATT	WFL								
S/3 M10 2793/2797	WDT								
S/3 M12 MLTA IOCS	WKH								
S/3 M15 D MLTA IOCS	WLD								
S/3 M15 MLTA IOCS	WFK								
S/3 M15 1017 IOCS	WHP								
S/3 M15 1018 IOCS	WHT								
S/7 CH ATT-OS/DOS	WCB								
S/7 TPMM BSC	WFG								
S/7 3340 ATT	WJP								
S/7 3340 ATT	WJJ								
S/7 3340 ATT	WJK								
S/7 3340 ATT	WJY								
S/7 3340 ATT	WJY								
VM/370 NETWORKING	ATA								

SY21-0527

SY21-0527

SY21-0527

SY21-0527

SY34-0517

SY34-0542

SY09-1200

SY09-1200

SY09-1200

SY09-1200

SY09-1200

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PROGRAM TITLE	COMPJD	FMID	PLM	SRL	FICHE	FMID	PLM	SRL	FICHE
**** 5799 **** VM/370 RESOURCE MGT.	AFO		LY20-1996						

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FE SERVICE NUMBER ASSIGNMENT

DESCRIPTION	DIGITS	FESH							REL	
		L	S	R	P	P	C	C	R	F
CURRENT SYSTEMS PROGRAMS (CSP)		0	X	X	X	X	X	X		
GSD SCP		1	X	X	X	X	X	X		
GSD LP		2	X	X	X	X	X	X		
GSD SPECIAL		3	X	X	X	X	X	X		
PRPQ		4	X	X	X	X	X	X		
SYSTEMS CONTROL PROGRAM (SCP)		5	X	X	X	X	X	X		
LICENSED PROGRAM (LP)		6	X	X	X	X	X	X		
5719-SERIES 1		X	1	9	X	X	X	X		
SYSTEM/32		X	2	5	X	X	X	X		
SYSTEM/34		X	2	6	X	X	X	X		
360A (APPLICATION)		0	3	0	X	X	X	X		
FIELD SUPPORT PROGRAMS		0	3	1	7	7	7	0		
SYSTEM/7		1	5	1	X	X	X	X		
SYSTEM/3 MOD 10 CARD SYSTEM		X	6	1	X	X	X	X		
SYSTEM/3 MOD 10 DISK SYSTEM		X	6	2	X	X	X	X		
SYSTEM/3 MOD 6		X	6	3	X	X	X	X		
SYSTEM/3 MOD 15		X	6	4	X	X	X	X		
SYSTEM/3 MOD 12		X	6	5	X	X	X	X		
8100 DPPX		6	0	X	X	X	X	X		
8100 DPCS		6	1	X	X	X	X	X		
OS/VS1		X	2	X	X	X	X	X		
OS/VS2 (SVS)		X	3	X	X	X	X	X		
VN/370		X	4	X	X	X	X	X		
OS/VS2 (MVS)		X	5	X	X	X	X	X		
DOS/VS & DOS/VSE		X	6	X	X	X	X	X		
INDEPENDENT (NCP,EP,ETC)		X	7	X	X	X	X	X		
OS (360S)		0	9	1	X	X	X	X		
OS LP (360S)		6	9	1	X	X	X	X		
DOS (REL 27 AND PRIOR)		0	9	2	X	X	X	X		
DOS LP (REL 27 AND PRIOP)		6	9	2	X	X	X	X		
CLASS B		0	9	9	0	0	2	8		
CLASS C		0	9	9	0	0	3	9		
LICENSED INDICATOR		L								
SYSTEM INDICATOR		S								
PRODUCT CODE					P	P	P			
COMPONENT CODE								C	C	
RELEASE									R	
FEATURE CODE										F

NOTE: A VALUE OF 0000 IS VALID IN POSITIONS 4-7  
 (BASE FESH) IS VALID ONLY FOR SCPS.

WHEN FESHNS WERE CONVERTED IN MARCH 1979, ONLY THE  
 FESH WAS CHANGED - THE RELEASE VALUES WERE NOT.

THIS PAGE MAY BE USED AS A CROSS REFERENCE FOR THE CODES LISTED IN THE FE SERVICE NUMBER PAGES UNDER THE HEADING OF 'SERV CLS.'. THE MATRIX DESCRIBES THE SUPPORT ASSOCIATED WITH A FE SERVICE NUMBER.

	U	S	S	S	U	U	U	X	X	X	X
SUPPORT	S	1	2	X	1	3	4	1	2	3	U
SCP											
CURRENT SCP SUPPORT	X										
SCP - CLASS 1		X									
SCP - CLASS 2			X								
SCP - CLASS 1 OR 2				X							
-----											
LICENSED PROGRAMS											
CENTRAL SERVICE					X	X		X	X	X	
LOCAL SERVICE					X			X			
LOCAL ASSISTANCE									X		
DESIGNATED IBM REP											
PSR/CE					X	X					
SE								X	X	X	
SUPPORT AVAILABLE											X
SUPPORT DISCONTINUED								X			

NOTE: THE TERM 'CP' USED IN 8100 PROGRAMMING IS THE SAME AS 'U1'.  
 'CP' IS USED TO INDICATE THE LP WHICH ACTS AS THE OPERATING SYSTEM.

THE ABBREVIATIONS USED UNDER THE HEADING 'LIC. TYPE' HAVE THE FOLLOWING MEANING :

- INST = PROGRAM IS LICENSED TO AN INSTALLATION
- LOC. = PROGRAM IS LICENSED TO A LOCATION
- MACH = PROGRAM IS LICENSED TO A SPECIFIC MACHINE

\*\*\*\*\*  
 \*\*\*SEE DP LETTER 277-27 FOR A DETAILED DESCRIPTION \*\*\*  
 \*\*\*OF SERVICE CLASSIFICATIONS AND LICENSE AGREEMENTS. \*\*\*  
 \*\*\* REFER TO SECTION 2 FOR GENERAL INFO ABOUT THE \*\*\*  
 \*\*\* AGREEMENT FOR IBM LICENSED PROGRAMS. \*\*\*  
 \*\*\*\*\*

THE NUMBER LISTED UNDER THE HEADING 'SERV PER.' INDICATES THE NUMBER OF MONTHS THAT LOCAL SERVICE WILL BE PROVIDED AFTER INSTALLATION OF THE PROGRAM.  
 MPSC....AN '\*' IN THE MONTHLY PROGRAM SUPPORT CHARGE INDICATES THAT SERVICE IS PERFORMED UNDER THE 'AGREEMENT FOR LOCAL PROGRAM SUPPORT FOR SYSTEM CONTROL PROGRAMMING ON IBM MACHINES' OR THE 'AGREEMENT FOR LOCAL LICENSED PROGRAM SUPPORT FOR IBM LICENSED PROGRAMS'.  
 REFER TO DP MARKETING ANNOUNCEMENT LETTERS 279-18 THRU 279-23.

NOTES:

1. ONLY THOSE FE SERVICE NUMBERS AND RELEASES LISTED IN THIS BOOK OR IN THE FE MIS FILE 'FESNX' ARE TO BE RECORDED ON THE PSAR DOCUMENT.
2. PROGRAMS THAT HAVE BEEN CLASSIFIED AS CLASS 'C', 'X4' OR DISC., 'U4' FOR OVER ONE YEAR ARE NOT PRINTED. THE FESN IS 099 0039 AND THE RELEASE IS 999 FOR THOSE PRODUCTS.
3. RELEASE DATA FOR SCP'S IS LISTED WITH THE BASE FESN (EXAMPLE 550 0000) FOR EACH SCP.
4. FOR INDIVIDUAL COMPONENTS WHICH CONTAIN DASHES IN THE RELEASE FIELD USE THE RELEASE OF THE BASE FESN.
5. FOR COMPONENTS THAT ARE SHOWN WITH BOTH DASHES AND A RELEASE NUMBER (SEE 5745-SC-VTM FOR EXAMPLE) USE THE BASE FESN RELEASE OR THE RELEASE LISTED WITH THE COMPONENT, WHICHEVER IS APPROPRIATE.
6. AN '\*' IN THE FIRST COLUMN INDICATES THAT SERVICE CLASSIFICATION FOR THAT FESN AND RELEASE WILL CHANGE PRIOR TO THE NEXT UPDATE OF THE PSGIM.



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NOTES:

7. THE TERM 'BASE PESN' APPLIES ONLY FOR SCPS. IT REFERS TO THE BASE OPERATING SYSTEM. 'BASE PESN' HAS THE FOLLOWING FORMAT: IXX 0000 . THE BASE PESN CAN BE FOUND AT THE BEGINING OF EACH COMPID HEADER (IF ONE APPLIES).
8. HOW DO YOU TELL WHETHER A PROGRAM IS AN FDP OR IUP, ETC? FDP'S, IUP'S, PP'S AND PRPQ'S CAN BE IDENTIFIED AS SUCH BY THEIR PID NUMBER. FDP'S ARE 5798, IUP'S ARE 5785,5787 AND 5796, PRPQ'S ARE 5799. REFER TO GB21-9949 FOR A LIST OF THESE PROGRAMS.
9. IF SERVICE CLASS OR MPSC CONTAIN DASHES, THE TRUE VALUE FOR THAT ENTRY MAY BE FOUND IN THE BASE RECORD.

PRODUCT NOTES:

1. DOS ADVANCED FUNCTIONS (VS & VSE) CAN BE FOUND UNDER THE APPROPRIATE 5745 COMPID WITH THE APPROPRIATE RELEASE. THE FOLLOWING CHART HAS BEEN DESIGNED TO ASSIST YOU IN THE READY IDENTIFICATION OF THIS PRODUCT.

ADV.FUN. RELEASE	SCP BASE RELEASE	PRODUCT NAME	( DESCRIPTION MODIFIER )
REL 701	DOS/VS	REL 340 ADV FUN	( AF )
REL 712	DOS/VSE	REL 350 VSE/ADV FUN	( VSE/AF )
REL 713	DOS/VSE	REL 351 VSE/ADV FUN	( VSE/AF2 )
REL 798	DOS/VSE	REL 352 VSE/ADV FUN	( VSE/AF3 )

2. SMP 4 CAN BE FOUND UNDER COMPID 5744-SC-130.
3. THE BASE RELEASE SHOULD BE RECORDED WHEN SYSTEM LEVEL WORK OR NORMAL COMPONENT ACTIVITY IS DONE. USE RELEASE 102 FOR MVS, 101 FOR VS1 067, AND 201 FOR VS1 070.

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COMPONENT ID	SVC CLS	MP SC	LIC. TYPE	SVC PER.	FESN	REL	PID AVAIL	CURR. END	DESCRIPTION	SUP GROUP	CTR LOC	SUPP ADDR	MAIL NO.	PID NO.	ANNOUN LETTER
**** 1130 ****	ALL	X4			099 0039				ALL 1130 PROGRAMS						
**** 1800 ****	ALL	X4			099 0039				ALL 1800 PROGRAMS						
**** 360A ****	OTHER	X4			099 0039				OTHER 360A PROGRAMS						
	TX-016	U1			030-0169	100			DOS MACLIB/RELOCATE			27	AF		
	TX-016	U1			" - "	100			DOS MACLIB/RELOCATE			27	AF	1	
	TX-026	U1			030-0269	100			OS MACLIB/RELOCATE			27	AF		
**** 360C ****	ALL	X4			099 0039				ALL 360C PROGRAMS						
**** 360D ****	ALL	X4			099 0039				OTHER 360D PROGRAMS						
**** 360F ****	ALL	X4			099 0039				ALL 360F PROGRAMS						

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COMPONENT ID	SVC CLS	XP SC	IIC. TYPE	SVC PER.	FESN	REL	PID AVAIL	CURR. END	DESCRIPTION	SUP GROUP	CTP LOC	SGPP ADDR	MAIL NO.	PID NO.	ANNOUN LETTER
**** 360G ****															
ALL	X4				099 0039				ALL 360G PROGRAMS						
**** 360H ****															
TX-033	U1				091-9102	030	08/18/76		370X/FP SUPPORT	370X PRG 23	EG				76-115
TX-034	X4				091-1102	013	11/04/74	06/15/80	3705 NCP FOR OS						74-057
TX-035	X4				091-1202	030	08/18/76	04/15/80	370X/SSP FOR OS						76-115
**** 360M ****															
ALL	X4				099 0039				ALL 360M PROGRAMS						
**** 360N ****															
DOS															
OTHER FO-479	X4 Y4 X4 U1 X4 X4 U1				099 0039 092-1102			037 038 039		OTHER 360N PROGRAMS DOS/360 FORTRAN IV DOS/360 FORTRAN IV DOS/360 FORTRAN IV					
	X4				092-1103			037	DOS/370 FORTRAN IV	FORTRAN	13		AK		
	X4				" - "			038	DOS/370 FORTRAN IV						
	U1				" - "			039	DOS/370 FORTRAN IV	FORTRAN	13		AK		
L1-480	X4				092-1104			037	DOS/370 FORT4 LIB						
	X4				" - "			038	DOS/370 FORT4 IIB						
	U1				" - "			039	DOS/370 FORT4 IIB	FORTRAN	01		AK		
	X4				092-1105			037	DOS/360 FORT4 LIB						

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COMPONENT ID	SVC CLS	MP SC	LIC. SVC TYPE PER.	FESH	FEL	PID AVAIL	CURR. END	DESCRIPTION	SUP GROUP	CTR LOC	SUPP MAIL ADDR	PID NO.	ANNOUN LETTER
**** 360N CONT ****													
	X4			092-1105	039			DOS/360 FORT4 LIB					
	U1			" - "	039			DOS/360 FORT4 LIB	FORTRAN	13	AK		
**** 360P ****													
OTHER	X4			099 0039				OTHER 360P PROGRAMS					
UT-213	X4			091-1242				OS/360 DASDI					
UT-214	X4			091-1243				OS/360 DUMP RESTR					
UT-215	X4			091-1244				OS/360 RECOVERY					
**** 360S OS ****													
ALL	X4			099 0039				ALL 360S PROGRAMS					
**** 360T ****													
ALL	X4			099 0039				ALL 360T PROGRAMS					
**** 360U ****													
ALL	X4			099 0039				ALL 360U PROGRAMS					

COMPONENT ID	SVC CLS	MP SC	LIC. SVC TYPE PER.	FFSN	REL	PID AVAIL	CURP. END	DESCRIPTION	SUP CTR GROUP	SHPP LOC	MAIL ADDR	PID NO.	ANNOUN LETTER
**** 360V ****	ALL	X4		099	0039			ALL 360V PROGRAMS					
**** 360W ****	ALL	X4		099	0039			ALL 360W PROGRAMS					
**** 370H **** **** 370N ****	ALL	X4	DOS	099	0039			ALL 370N PROGRAMS					
**** 370S ****	DL-302	11		570-1101	030			DLS				AH	
		11		" - "	040			DLS				AH	
		11		" - "	041			DLS				AH	
		11		" - "	042			DLS				AH	
		11		" - "	043	12/01/77		DLS				AH	
		11		" - "	044	12/31/78		DLS				AH	

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COMPONENT ID	SVC CLS	MP SC	LIC. TYPE	SVC PER.	FESN	REL	PID AVAIL	CURR. END	DESCRIPTION	SUP GPOUP	CTF LOC	SUPP MAIL ADDR	PID NO.	ANNOU LETTER
**** 5611 ****	SS-100	U1	LOC.		211-0611	010	02/29/80		ADMIN PROCESSING		11	DB		679-80
**** 5658 ****	00-101	SX			520-0101	100	10/16/80		3694 DOC PROC VS1		23	D3	5558001	80-154
		SX			550-0101	100	10/16/80		3694 DOC PROC MVS		23	D3	5658001	80-154
		SX			560-0101	100	10/16/80		3694 DOC PROC DVS		23	D3	5658001	80-154
**** 5660 ****	DPPX													
	26-401	U1	* MACH		602-6401	100	05/31/81		DPPX/DPS II	8100DPS	03	DX	5660264	80-182
		U1	* MACH		" - "	101	05/31/81		IND FEAT II	8100DPS	03	DX	5660264	80-182
	26-502	U1	* MACH	01	602-6502	100	12/26/80		DMS/DPPX EXEC PAC	8100	03	DX	5660265	80-043
	26-701	U1	* MACH		602-6701	100	01/31/81		DPPX/PS3640 ITG		03	DX		80-136
	26-702	U1	* MACH		602-6702	100	01/31/81		DPPX/PS3640-EM		03	DX		80-136
	27-101	U1	* MACH		602-7101	100	12/01/80		DPPX/IPF		03	DX	5660271	80-232
**** 5662 ****	VS1													
	25-702	U3	* MACH		622-5702	211	09/30/80		SEE COMP 5741SC1B2					80-022
	25-703	U3	* MACH		622-5703	211	09/30/80		SEE COMP 5741SC1B4					80-022
	25-704	U3	* MACH		622-5704	211	09/30/80		SEE COMP 5741SC1B6					80-022
	25-705	U3	* MACH		622-5705	211	09/30/80		SEE COMP 5741SC1B7					80-022
	25-706	U3	* MACH		622-5706	211	09/30/80		SEE COMP 5741SC1B8					80-022
	25-707	U3	* MACH		622-5707	211	09/30/80		SEE COMP 5741SC1CN					80-022

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COMPONENT ID	SVC CLS	MP SC	LIC. SVC TYPE PER.	FESN	REL	PID AVAIL	CURR. END	DESCRIPTION	SUP CTR GROUP	STPP LOC	MAIL ADDR	PID NO.	ANNOUN LETTER
**** 5662	CONT												
****													
25-708	U3	*	MACH	622-5708	211	09/30/80		SEE COMP 5741SC1C3					80-022
25-709	U3	*	MACH	622-5709	211	09/30/80		SEE COMP 5741SC1C5					80-022
25-710	U3	*	MACH	622-5710	211	09/30/80		SEE COMP 5741SC1C8					80-022
25-711	U3	*	MACH	622-5711	211	09/30/80		SEE COMP 5741SC1S1					80-022
25-712	U3	*	MACH	622-5712	211	09/30/80		SEE COMP 5741SC1S4					80-022
25-713	U3	*	MACH	622-5713	211	09/30/80		SEE COMP 5741SC1S5					80-022
25-714	U3	*	MACH	622-5714	211	09/30/80		SEE COMP 5741SC0BR					80-022
25-715	U3	*	MACH	622-5715	135	09/30/80		SEE COMP 5741SC1D0					80-022
25-716	U3	*	MACH	622-5716	135	09/30/80		SEE COMP 5741SC1D1					80-022
25-717	U3	*	MACH	622-5717	135	09/30/80		SEE COMP 5741SC1D9					80-022
25-718	U3	*	MACH	622-5718	135	09/30/80		SEE COMP 5741SC1CB					80-022
25-719	U3	*	MACH	622-5719	135	09/30/80		SEE COMP 5741SC1I2					80-022
**** 5664	VM/370												
****													
00-901	U1		MACH	640-0901	100	04/30/81		SPF VM/CMS		02	BG	5568009	80-168
**** 5665	MVS												
****													
28-301	U1		MACH	650-0901	102	12/23/80		SPF MVS/TSO		02	BG	5568009	80-168
	U1		MACH	652-8301	102	06/30/81		VSPC MVS V2R1		13	AK	5665283	80-249



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COMPONENT ID	SVC CLS	MP SC	LIC. TYPE	SVC PER.	FESH	REL	PID AVAIL	CURR. END	DESCRIPTION	SUP CTR GROUP	SUPP LOC	MAIL ADDR	PID NO.	ANNOUN LETTER
****														
5666			DOS/VS											
****														
5668														
****														
00-201	U1	*	INST		620-0201	100	12/31/80		DASD MIGRATION AID		13	AK		80-116
	U1	*	INST		650-0201	100	12/31/80		DASD MIGRATION AID		13	AK		80-116
00-301	X2		MACH		099-0028	100	06/30/81		DIP/CICS			PA		80-124
00-401	X2		MACH		099-0028	100	06/30/81		DIP/DIST			PA		80-124
00-601	U1	*	MACH		620-0601	100	09/30/81		DOWNSTREAM LOAD UT		13	AK	5568005	80-269
	U1	*	MACH		660-0601	100	06/30/81		DOWNSTREAM LOAD UT		13	AK	5666005	80-157
00-704	U3		MACH		680-0704	010	10/21/80		CORNES OS/VS		02	S	5668007	80-086
01-101	X2		MACH		620-1101	100	11/12/80		IIAS		23	AL		80-245
	X2		MACH		640-1101	100	11/12/80		IIAS		23	AL		80-245
	X2		MACH		650-1101	100	11/12/80		IIAS		23	AL		80-245
	X2		MACH		660-1101	100	11/12/80		IIAS		23	AL		80-245
01-201	X2		MACH		620-1201	100	11/12/80		IIPS		23	AL		80-245
	X2		MACH		640-1201	100	11/12/80		IIPS		23	AL		80-245
	X2		MACH		650-1201	100	11/12/80		IIPS		23	AL		80-245
	X2		MACH		660-1201	100	11/12/80		IIPS		23	AL		80-245
99-801	U1	*	MACH		629-9801	100	12/31/81		GEN 3644		03	DG		80-158
	U1	*	MACH		669-9801	100	12/31/81		GFN 3644		03	DG		80-158
****														
5701			SYS3-MOD 10 (CARD)											
****														
	SC-1		US		161-0000	120	04/25/75		S/3 M10 CARD SYSTEM		10			675-22
		--	--		161-0009	---		10/10/80	S/3 CARD SYSTEM		10	AP		

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COMPONENT ID	SVC CLS	MP SC	LIC. TYPE	SVC PER.	FESN	REL	PID AVAIL	CURR. END	DESCRIPTION	SUP GROUP	CTR LOC	SUPP MAIL ADDR	PID NO.	ANNOUM LETTER
**** 5701	CONT													
**** 5702	SYS3-MOD 10 (DISK)													
****					162-0000	140	03/25/77	10/10/80	S/3 M10 DISK SYSTEM		10			677-16
					" - "	150	07/28/78	10/10/80	S/3 M10 DISK SYSTEM		10			678-52
CB-1	X4		MACH		262-2559	160	12/21/79	03/20/80	S/3 MOD 8810 COBOL					79-115
K1-1	X2		MACH		099-0028				S/3 FOR TV AND RADIO			CH	AB	
M4-1	X2		MACH		099-0028				S/3 BM PROC			CH	AB	
M5-2	X2		MACH		099-0028				S/3 INV ROMNTS PLNS			CH	AB	
RG-1	X0		MACH		262-0379	160	12/21/79	03/20/80	S/3 DISK RPS 11					79-115
SC-1	--	--			162-0019	---		10/10/80	S/3 DISK SYSTEM			10	AP	
					162-1039	---		10/10/80	S/3 C.C.P. FEATURE			10	AP	
					162-1059	---		10/10/80	S/3 M.R.J.E. FEATURE			10	AP	
SM-1	X4		MACH		262-0389	160	12/21/79	03/20/80	S/3 MOD 8810 SORT					79-115
YP-1	X2		MACH		099-0028				JAS/3			WP	N	
YX-1	X2		MACH		099-0028				DATA/3 LOGIC					
**** 5703	SYS3-MOD 4 & 6													
****					163-0000	160	12/21/79	06/15/80	S/3 M4 & M6		10			79-115
N1-1	X2		MACH		099-0028				HEALTH, WELF, PENS FND			WP		
RG-1RG	X4		MACH		263-1729	160	12/21/79	03/20/80	S/3 MOD 486 RPG					79-115
SM-1	X4		MACH		263-1739	160	12/21/79	03/20/80	S/3 M4&6 DISK SORT					79-115
SM-2DS	X4		MACH		263-1759	160	12/21/79	03/20/80	CCP DISK SORT					79-115
XM-2	X2		MACH		099-0028				S/3 MOD 6 MATH/BASIC		13	BL		

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COMPONENT ID	SVC CLS	HP SC	LIC. TYPE	SVC PER.	FESN	REL	PID AVAIL	CUPR. END	DESCRIPTION	SUP CTR GROUP	SUPP LOC	MAIL ADDR	PID NO.	ANNOUN LETTER
****														
5704			SYS3-MOD 15 (A,B,C)											
****														
			US		164-0000	060	08/26/77		S/3 M15 (A B C)				10	677-11
			US		" - "	070	12/22/78		S/3 M15 (A B C)				10	78-120
			US		" - "	080	06/27/80		S/3 M15 (A B C)				10	680-59
AS-1	X4		MACH		264-3619	060	08/26/77	10/10/80	BASIC ASSM					677-71
	X4		MACH		" - "	080	06/27/80	10/10/80	BASIC ASSM					680-59
AS-2	U1		MACH		264-3659	010	12/30/76		BASIC ASSEM			10	AP	676-84
	U1		MACH		" - "	020	11/30/77		BASIC ASSEM			10	AP	
	U1		MACH		" - "	030	09/29/78		BASIC ASSEM			10	AP	678-83
	U1		MACH		" - "	040	09/28/79		BASIC ASSEM			10	AP	679-72
	U1		MACH		" - "	050	09/26/80		BASIC ASSEM			10	AP	680-92
CB-1	X4		MACH		264-3599	060	08/26/77	10/10/80	ANS COBOL					677-71
	X4		MACH		" - "	070	12/22/78	10/10/80	ANS COBOL					
	X4		MACH		" - "	080	06/27/80	10/10/80	ANS COBOL					680-59
CB-2	U1		MACH		264-3669	010	12/30/76		ANS COBOL			10	AP	676-84
	U1		MACH		" - "	020	11/30/77		ANS COBOL			10	AP	
	U1		MACH		" - "	030	10/27/78		ANS COBOL			10	AP	678-83
	U1		MACH		" - "	040	09/28/79		ANS COBOL			10	AP	679-72
	U1		MACH		" - "	050	09/26/80		ANS COBOL			10	AP	680-92
	U1		MACH		" - "	070	12/22/78		ANS COBOL			10	AP	78-120
FO-1	X4		MACH		264-3609	060	08/26/77	10/10/80	FORTRAN IV					677-71
	X4		MACH		" - "	070	12/22/78	10/10/80	FORTRAN IV					
	X4		MACH		" - "	080	06/27/80	10/10/80	FORTRAN IV					680-59
FO-2	U1		MACH		264-3679	010	12/30/76		FORTRAN IV			10	AP	676-84
	U1		MACH		" - "	020	11/30/77		FORTRAN IV			10	AP	
	U1		MACH		" - "	030	10/27/78		FORTRAN IV			10	AP	678-83

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COMPONENT ID	SVC CLS	MP SC	LIC. TYPE	SVC PER.	FESM	REL	PID AVAIL	CURR. END	DESCRIPTION	SUP GROUP	CTR LOC	MAIL ADDR	PID NO.	AMOUNT LETTER
***														
5704 CONT														
***														
	U1		MACH		264-3679	040	09/28/79		FORTRAN IV		10	AP		679-72
	U1		MACH		"	050	09/26/80		FORTRAN IV		10	AP		680-92
	U1		MACH		"	070	12/22/78		FORTRAN IV		10	AP		78-120
RS 1	X4		MACH		264-3589	063	08/26/77	10/10/80	REG II					677-71
	X4		MACH		"	070	12/22/78	10/10/80	REG II					78-120
	X4		MACH		"	080	06/27/80	10/10/80	REG II					680-59
RG-2	U1		MACH		264-3689	010	12/30/76		REG II		10	AP		676-84
	U1		MACH		"	020	11/30/77		REG II		10	AP		
	U1		MACH		"	030	09/29/78		REG II		10	AP		678-83
	U1		MACH		"	040	09/28/79		REG II		10	AP		679-72
	U1		MACH		"	050	09/26/80		REG II		10	AP		680-92
SC-1	--				164-0879	---		10/10/80	S/3 MOD 15 ABC		10	AP		
	--				164-1019	---		10/10/80	CCP FEATURE		10	AP		
	--				164-1079	---		10/10/80	M.R.J.E. FEATURE		10	AP		
SC-2	US				164-1089	010	12/30/76		S/3 MOD 15 DISK		10	AP		676-84
	US				"	020	11/30/77		S/3 MOD 15 DISK		10	AP		679-83
	US				"	030	10/27/79		S/3 MOD 15 DISK		10	AP		679-72
	US				"	040	09/28/79		S/3 MOD 15 DISK		10	AP		680-92
	US				"	050	09/26/80		S/3 MOD 15 DISK		10	AP		676-84
	US				164-1099	010	12/30/76		CCP FEATURE		10	AP		
	US				"	020	11/30/77		CCP FEATURE		10	AP		678-83
	US				"	030	10/27/79		S/3 MOD 15 DISK		10	AP		679-72
	US				"	040	09/28/79		S/3 MOD 15 DISK		10	AP		680-92
	US				"	050	09/26/80		S/3 MOD 15 DISK		10	AP		676-84
	US				164-1109	010	12/30/76		M.R.J.E. FEATURE		10	AP		

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COMPONENT ID	SVC CLS	MP SC	LJC. TYPE	SVC PER.	FESN	REL	PID AVAIL	CURR. END	DESCRIPTION	SUP GROUP	CTR LOC	SUPP ADDR	MAIL NO.	PID NO.	ANNOUN LETTER
****															
5704	CONT														
****															
			US		164-1109	020	11/30/77		M.R.J.E. FEATURE			10	AP		
			US		" - "	030	10/27/78		M.R.J.E. FEATURE			10	AP		678-83
			US		" - "	040	09/28/79		M.R.J.E. FEATURE			10	AP		679-72
			US		" - "	050	09/26/80		M.R.J.E. FEATURE			10	AP		680-92
SM-1			X4	MACH	264-3629	060	08/26/77	10/10/80	DISK SORT						677-71
			X4	MACH	" - "	070	12/22/78	10/10/80	DISK SORT						
			X4	MACH	" - "	080	06/27/80	10/10/80	DISK SORT						680-59
SM-2			X4	MACH	264-3639	010	12/30/76	10/10/80	TAPE SORT						676-84
			X4	MACH	" - "	020	11/30/77	10/10/80	TAPE SORT						
			X4	MACH	" - "	030	10/27/78	10/10/80	TAPE SORT						678-83
			X4	MACH	" - "	040	09/28/79	10/10/80	TAPE SORT						679-72
			X4	MACH	" - "	050	09/26/80	10/10/80	TAPE SORT						680-92
			X4	MACH	" - "	070	12/22/78	10/10/80	TAPE SORT						78-120
			X4	MACH	" - "	080	06/27/80	10/10/80	TAPE SORT						680-59
SM-7			U1	MACH	264-3709	010	12/30/76		CCP/DISK SORT			10	AP		676-84
			U1	MACH	" - "	020	11/30/77		CCP/DISK SORT			10	AP		
			U1	MACH	" - "	030	10/27/78		CCP/DISK SORT			10	AP		678-83
			U1	MACH	" - "	040	09/28/79		CCP/DISK SORT			10	AP		679-72
			U1	MACH	" - "	050	09/26/80		CCP/DISK SORT			10	AP		680-92
			U1	MACH	" - "	070	12/22/78		CCP/DISK SORT			10	AP		78-120
SM-8			U1	MACH	264-3719	010	12/30/76		TAPE SORT			10	AP		676-84
			U1	MACH	" - "	020	11/30/77		TAPE SORT			10	AP		
			U1	MACH	" - "	030	09/29/78		TAPE SORT			10	AP		678-83
			U1	MACH	" - "	040	09/28/79		TAPE SORT			10	AP		679-72
			U1	MACH	" - "	050	09/26/80		TAPE SORT			10	AP		680-92

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COMPONENT ID	SVC CLS	MP SC	LIC. TYPE	SVC PER.	FESN	REL	PID AVAIL	CURR. END	DESCRIPTION	SUPP GROUP	CTP LOC	MAIL ADDR	PID NO.	ANNOUN LETTER
****														
5704 CONT														
****														
SM-9	U1		MACH		264-3699	010	12/30/76		DISK SORT		10	AP		676-84
	U1		MACH		" - "	020	11/30/77		DISK SORT		10	AP		
	U1		MACH		" - "	030	10/27/78		DISK SORT		10	AP		678-83
	U1		MACH		" - "	040	09/28/79		DISK SORT		10	AP		679-72
	U1		MACH		" - "	050	09/26/80		DISK SORT		10	AP		680-92
	U1		MACH		" - "	070	12/22/78		DISK SORT		10	AP		78-120
UT-1	X4		MACH		264-3649	060	08/26/77	10/10/80	UTILITIES					677-71
	X4		MACH		" - "	070	12/22/78	10/10/80	UTILITIES					
	X4		MACH		" - "	080	06/27/80	10/10/80	UTILITIES					680-59
UT-3	U1		MACH		264-3729	010	12/30/76		UTILITIES		10	AP		676-84
	U1		MACH		" - "	020	11/30/77		UTILITIES		10	AP		
	U1		MACH		" - "	030	09/29/78		UTILITIES		10	AP		678-83
	U1		MACH		" - "	040	09/28/79		UTILITIES		10	AP		679-72
XX-1	U1		MACH		" - "	050	09/26/80		UTILITIES		10	AP		680-92
	X2		MACH		099-0028				DATA/3 LOGIC					
****														
5705 SYS3-MOD 12														
****														
RG-1	US				165-0000	030	06/24/77		SYS/3 MOD 12		10			677-58
	US				" - "	040	03/31/78		SYS/3 MOD 12		10	AP		
	US				" - "	050	03/30/79		SYS/3 MOD 12		10	AP		679-23
	US				" - "	060	03/28/80		SYS/3 MOD 12		10	AP		680-36
RG-1	X4		MACH		265-0029	060	03/28/80	10/10/80	RPG II					680-36

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COMPONENT ID	SVC CLS	MP SC	LIC. TYPE	SVC PER.	FESN	REL	PID AVAIL	CURR. END	DESCRIPTION	SUP CTR GROUP	SUPP LOC	MAIL ADDR	PID NO.	ANNOU LETTER
**** 5707	SYS7													
****			US		151-0000	100	05/28/76		S/7			27 AF		676-33
	AB-1	--	-		151-0919	----			MSP/7 PROCLIB			27 AF		
	AC-1	--	-		151-0929	----			MSP/7 SYSCODE			27 AF		
	AD-1	--	-		151-0939	----			MSP/7 ASM/7			27 AF		
	AE-1	--	-		151-0949	----			MSP/7 SLP			27 AF		
	AF-1	--	-		151-0959	----			MSP/7 LINK/7			27 AF		
	AG-1	--	-		151-0969	----			MSP/7 DSS/7 8-12F			27 AF		
	F1-2	X2		MACH	099-0028	010	11/30/76		GRAPHICS FEAT		PA	DY		76-191
	RC-1	X4		MACH	099-0039	010	09/03/76		CCAP/7					676-60
	RC-2	X2		MACH	099-0028				CCAP/7 VER 2		WA	V		
	SC-2	--	-		151-0449	----			MSP/7 DSS/7			27 AF		
	T1-2	X4		MACH	099-0039	010	09/03/76		ACD-MONITOR					676-60
	U1-1	X7		MACH	099-0028	020	10/15/76		ENERGY MGMT SYSTEM					676-65
	XM-5	X4		MACH	099-0039	010	03/08/76		PCP/7 PREP					676-12
**** 5708	5280	SVS												
****			US		108-0000	010	03/28/80		5280					
	AS-1AS	U1		MACH	208-0019	010	03/28/80	12/31/83	5280 ASSEMBLEP			11 DP	570RAS1	
	CB-2DS	U2		MACH	208-0099	010	09/31/80	09/30/85	5280 COBOL DOS/VSE			11 DP	570RCB2	
	CV-1VS	U3		MACH	208-0089	010	09/31/80	09/30/85	5280 COBOL OS/VSE			11 DP	570RCV1	
	DC-1BS	U1		MACH	208-0029	010	03/29/80	12/31/86	5280 BSC COMM			11 DP	570RDC1	
	DC-1SN	U1		MACH	208-0039	010	03/28/80	12/31/86	5280 SNA COMM			11 DP	570RDC1	
	DE-1RP	U1		MACH	208-0049	010	05/30/80	12/31/83	5280 DS/PP3			11 DP	570RDE1	
	SC-1SC	--	-		108-0109	----			5280 SCP			11 DP	570RSC1	

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COMPONENT ID	SVC CLS	MP SC	LIC. TYPE	SVC PER.	PFSN	REL	PID AVAIL	CURR. END	DESCRIPTION	SUP GROUP	CTR LOC	SUPP MAIL ADDR	PID NO.	ANNOJN LETTER
**** 5708 ****									CONT					
	SM-1DS	U1	MACH		208-0059	010	03/28/80	12/31/83	5280 SORT/MERGE			11 DP	5708SM1	
	UT-1GU	U1	MACH		208-0069	010	03/28/80	12/31/83	5280 UTILITIES			11 DP	5708UT1	
**** 5711 ****									113G					
**** 5714 ****	ALL	X4			099 0039				ALL 5711 PROGRAMS					
	CV-200	U1	MACH		214-0019	010	08/24/79		CONV REFORMAT UTIL			10 BQ		
		U1	MACH		" - "	011	09/26/80		CONV REFORMAT UTIL			10 BQ		680-93
	RG-100	U1	MACH		214-0029	010	08/24/79		RPG			10 BQ		680-93
		U1	MACH		" - "	011	09/26/80		RPG			10 BQ		680-93
	SS-100	U1	MACH		214-0039	010	08/24/79		CONTROL PGM FACILITY			10 BQ	5714SS1	
	UT-100	U1	MACH		214-0049	010	08/24/79		INTER DATA BASE UTIL			10 BQ		
		U1	MACH		" - "	011	09/26/80		INTER DATA BASE UTIL			10 BQ		680-93
**** 5718 ****									1800					
	OTHER	X4			099 0039				OTHER 5718 PROGRAMS					
	US				151-0000									
	SC-2	--	--		151-0051	---			S/7 SCP IPL/LOADER			27 AF		
		--	--		151-0052	---			S/7 SCP ASSEMBLER			27 AF		
		--	--		151-0053	---			S/7 SCP UTILITIES			27 AF		
		--	--		151-0054	---			S/7 SCP SUBROUTINES			27 AF		





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****															
5719															
****															
MS-100	U3		MACH	00	319-0451	110	10/26/79	10/31/81	EDX MULT TERM MGR			27	AE	5719MS1	679-29
MS-200	U3		MACH	00	319-0452	010			EDX MULT TERM MGR			27	AE		
PC-2	X4		MACH	00	319-0421		04/28/78	07/31/80	REALTIME PROG VER 2					5719PC2	677-25
PC-3	X4		MACH	00	319-0431		09/29/78	09/30/80	REALTIME PROG VER 3					5719PC3	677-25
PC-400	U3		MACH	00	319-0441		05/25/79	05/31/81	REALTIME PROG VER 4			27	AE	5719PC4	678-18
PL-1	X4		MACH	00	319-3951		04/28/78	04/30/80	PL/1 COMP & RES LIB					5719PL1	677-04
PL-200	X3		MACH	00	319-0471	020	10/28/79	10/31/81	PL/1 COMP & RES LIB			27	AE	5719PL2	679-50
PL-3	X4		MACH	00	319-3953		04/28/78	04/30/80	PL/1 TRANSIENT LIB					5719PL3	677-04
PL-400	X3		MACH	00	319-0481	020	10/28/79	10/31/81	PL/1 TRANSIENT LIB			27	AE	5719PL4	679-50
PL-500	X3		MACH	00	319-3955	010	04/25/80	05/31/82	S/1 EDE PL/1			27	AE	5719PL5	679-51
	X3		MACH	00	" - "	011		05/31/82	S/1 EDE PL/1			27	AE	5719PL5	
PL-600	X3		MACH	00	319-3956	010	04/25/80	05/31/82	S/1 EDX PL/1 TRANS			27	AE	5719PL6	679-51
	X3		MACH	00	" - "	011		05/31/82	S/1 EDX PL/1 TRANS			27	AE	5719PL6	
SC-2	U5				119-3911	010	08/26/77		STAND ALONE UTIL			27	AE	5719SC2	677-07
SP-100	X3		MACH	00	319-0081	010	04/25/80		RPS SCR FMT DSN AID			27	AE	5719SP1	679-52
SP-200	X3		MACH	00	319-0101	010	04/25/80		RPS SCR FMT PRST SUP			27	AE	5719SP2	679-52
SM-100	U3		MACH	00	319-0051	010	05/25/79	05/31/81	S/1 SOFT MERGE			27	DD	5719SM1	678-21
	U3		MACH	00	" - "	011		05/31/81	S/1 SOFT MERGE			27	DD	5719SM1	
SM-200	U3		MACH	00	319-0109	110	07/27/79	07/31/81	EDX SOFTMERGE			27	DD	5719SM2	679-30
SN-100	U3		MACH	00	319-0461	010			REALTIME PROG VER 5					5719SN1	
TA-100	U3		MACH	00	319-0511	010	12/28/79	12/31/81	5250 DISPLAY SUPPORT			27	AE	5719TA1	679-01
TA-400	U3		MACH	00	319-0591	010	12/28/79	12/31/81	MAGNETIC TAPE SUP			27	AE	5719TA4	679-01
UT-300	U3		MACH	00	319-0731	110	05/25/79	05/31/81	EDX UTILITIES			27	AE	5719UT3	679-04
UT-400	X3		MACH	00	319-0732	010	04/25/80	05/31/82	EDX UTILITIES			27	AE	5719UT4	679-49
U1-1	U1		MACH	C6	219-3911	011	12/05/77	04/01/81	PC/PM1			27	BO	5719U11	677-26

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COMPONENT ID	SVC CLS	MP SC	LIC. TYPE	SVC PER.	FESN	REL	PID AVAIL	CUPR. END	DESCRIPTION	SUP GROUP	CTR LOC	MAIL ADDR	PID NO.	ANNOUN LETTER
****														
5719	CONT													
****														
U1-2	U1		MACH	06	219-3912	010	06/24/77	06/24/81	FC/PM2			27	BO	5719U12 677-01
	U1		MACH	06	219-3913	010	06/24/77	06/24/81	APPU			27	BO	5719U12 677-01
	U1		MACH	06	219-3914	010	06/24/77	06/24/81	FC/PM3			27	BO	5719U12 677-01
U1-300	U1		MACH	06	219-3917	300	11/24/78	08/25/81	FC/PM 4			27	BO	5719U13
U1-400	U1		MACH	06	219-3915	010	05/12/78	06/24/81	FC/PM 2 M			27	BO	5719U14 677-02
U1-500	U1		MACH	06	219-3916	010	11/24/78	08/25/81	FC/PM 4 M			27	BO	5719U15 678-04
XS-100	U3		MACH	00	319-0741	010	05/25/79	05/31/81	EDX SUPERVISOR			27	AE	5719XS1 679-04
XS-200	X3		MACH	00	319-0742	010	04/25/80	05/31/82	EDX BASIC SUPERV			27	AE	5719XS2 679-49
XX-200	U3		MACH	00	319-0721	010	05/25/79	05/31/81	EDX PROGRAM PREP			27	AE	5719XX2 679-04
XX-300	X3		MACH	00	319-0722	010	04/25/80	05/31/82	EDX PPF			27	AE	5719XX3 679-49
****														
5725	SYSTEM 32													
****														
	US				125-0000	060	05/27/77		S/32			10		677-47
	US				" - "	070			S/32			10		
	US				" - "	080	11/22/78		S/32			10		
	US				" - "	090			S/32			10		
AS-1AS	U1		MACH		225-3749	060	05/27/77		BASIC ASSEMBLER S/32			10	CC	677-47
	U1		MACH		" - "	070			BASIC ASSEMBLER S/32			10	CC	
	U1		MACH		" - "	080	11/22/78		BASIC ASSEMBLER S/32			10	CC	
FO-1FO	U1		MACH		225-3799	060	05/27/77		S/32 PORT COMPILER			10	CC	677-47
	U1		MACH		" - "	070			S/32 PORT COMPILER			10	CC	
	U1		MACH		" - "	080	11/22/78		S/32 PORT COMPILER			10	CC	
RG-1AR	U1		MACH		225-3709	060	05/27/77		RPG II AUTO REPORT			10	CC	677-47
	U1		MACH		" - "	070			RPG II AUTO REPORT			10	CC	

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COMPONENT ID	SVC CLS	MP SC	LIC. TYPE	SVC PER.	FESN	REL	PID AVAIL	CURR. END	DESCRIPTION	SUP GROUP	CTR LOC	SUPP ADDR	MAIL NO.	PID NO.	ANNOU LETTER
****															
5725															
****															
RG-1BS	U1		MACH		225-3709	060	05/27/77		RPG II BSC SUPPORT				10	CC	677-47
	U1		MACH		" - "	070			RPG II BSC SUPPORT				10	CC	
RG-1RG	U1		MACH		225-3709	060	05/27/77		RPG II COMPILER				10	CC	677-47
	U1		MACH		" - "	070			RPG II COMPILER				10	CC	
	U1		MACH		" - "	080	11/22/78		RPG II COMPILER				10	CC	
SC-1BA	--	-			125-1049	----			\$BACK BACKUP LIB UTL				10	CC	
SC-1BI	--	-			125-1049	----			\$BICR INTRCH3 UTL				10	CC	
SC-1BS	--	-			125-1049	----			BSC IOS				10	CC	
SC-1BU	--	-			125-1049	----			\$BUILD ALT SECT ASSG				10	CC	
SC-1BW	--	-			125-1079	----			BWS/SNA/SDLC				10	CC	
SC-1CE	--	-			125-1049	----			CE DIAG AIDS				10	CC	
SC-1CN	--	-			125-1049	----			CNFISSCP SCP INSTALL				10	CC	
SC-1CO	--	-			125-1049	----			\$COPY DISK COPY UTIL				10	CC	
SC-1CS	--	-			125-1049	----			CNTL STORE UCODE				10	CC	
SC-1DE	--	-			125-1049	----			\$DELETE FILE DELETE				10	CC	
SC-1DM	--	-			125-1049	----			DATA MANAGMENT				10	CC	
SC-1DU	--	-			125-1049	----			\$DUPPD DISKETTE COPY				10	CC	
SC-1HI	--	-			125-1049	----			\$HIST HISTORY DISP				10	CC	
SC-1IN	--	-			125-1049	----			\$INIT DISKETTE INIT				10	CC	
SC-1LA	--	-			125-1049	----			\$LABEL VTDC DISPLAY				10	CC	
SC-1LE	--	-			125-1049	----			LINKAGE EDITOR				10	CC	
SC-1LO	--	-			125-1049	----			\$LOAD RELOAD LIB				10	CC	
SC-1MA	--	-			125-1049	----			\$MAINT LIB MAINT				10	CC	
SC-1MG	--	-			125-1049	----			\$MGBLD CREATE MSG				10	CC	
SC-1MR	--	-			125-1059	----			HRJE				10	CC	

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COMPONENT ID	SVC CLS	MP SC	LIC. TYPE	SVC PER.	FESN	REL	PID AVAIL	CURR. END	DESCRIPTION	SUP GROUP	CTR LOC	MAIL ADDR	PID NO.	ANNOUN LETTER
****														
5725 COHT														
****														
SC-19A	--	-			125-1049	---			\$PACK DISK REORG	10		CC		
SC-1RE	--	-			125-1049	---			\$REBLD REBUILD DATA	10		CC		
SC-1SE	--	-			125-1049	---			\$SETCF SET UTILITY	10		CC		
SC-1SH	--	-			125-1049	---			SCHEDULEP	10		CC		
SC-1ST	--	-			125-1049	---			\$STATS STATUS DISP	10		CC		
SC-1US	--	-			125-1049	---			\$USOO SYNTAX CHECK	10		CC		
SC-1WP	--	-			125-1069	---			WORD PROCESSING FEAT	10		DB		
UT-1DF	U1		MACH		225-3729	070			DATA FILE UTL	10		CC		
	U1		MACH		" - "	080	11/22/78		DATA FILE UTL	10		CC		677-47
UT-1DS	U1		MACH		225-3719	060	11/22/78		DISK SORT	10		CC		677-47
	U1		MACH		" - "	070			DISK SORT	10		CC		
	U1		MACH		" - "	080	11/22/78		DISK SORT	10		CC		
UT-1SE	U1		MACH		225-3739	060	11/22/78		SOURCE ENTRY UTL	10		CC		677-47
	U1		MACH		" - "	070			SOURCE ENTRY UTL	10		CC		
	U1		MACH		" - "	080	11/22/78		SOURCE ENTRY UTL	10		CC		
UT-2	U1		MACH		225-3789	060	11/22/78		FILE CONV. UTIL	10		CC		677-47
	U1		MACH		" - "	070			FILE CONV. UTIL	10		CC		
	U1		MACH		" - "	080	11/22/78		FILE CONV. UTIL	10		CC		
XX-1WP	U1		MACH		225-3759	020	11/23/77		WORD PROCESSOR/32	10		CC		677-51
	U1		MACH		" - "	030	12/30/77		WORD PROCESSOR/32	10		CC		677-50
	U1		MACH		" - "	080	11/22/78		WORD PROCESSOR/32	10		CC		

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COMPONENT ID	SVC # CLS SC	LIC. SVC TYPE PPR.	FESM	PEL	PID AVAIL	CURR. END	DESCRIPTION	SUP CTR GROUP	SUPP LOC	MAIL ADDR	PID NO.	ANNOU LETTER
**** 5726 ****	SYSTEM	34										
AS-1AS	U1	MACH	226-1559	010	01/28/79		S/34 BASIC ASSEMBLER	10	CC			667-25
	U1	MACH	" - "	020	07/28/79		S/34 BASIC ASSEMBLER	10	CC			
	U1	MACH	" - "	030	01/26/79		S/34 BASIC ASSEMBLER	10	CC			679-13
	U1	MACH	" - "	040	07/27/79		S/34 BASIC ASSEMBLER	10	CC			
	U1	MACH	" - "	050	01/25/80		S/34 BASIC ASSEMBLER	10	CC			679-75
	U1	MACH	" - "	070	01/30/81		S/34 BASIC ASSEMBLER	10	CC			80-123
BA-1BA	U1	MACH	226-1539	050	01/25/80		S/34 BASIC	10	CC			679-87
	U1	MACH	" - "	070	01/30/81		S/34 BASIC	10	CC			80-123
CB-1CB	U1	MACH	226-1569	040	07/27/79		S/34 BASIC ASSEMBLER	10	CC			
	U1	MACH	" - "	070	01/30/81		S/34 BASIC ASSEMBLER	10	CC			80-123
EM-1EM	U1	MACH	226-1529	050	01/25/80		S/34 3270 DEVICE	10	CC			679-61
	U1	MACH	" - "	070	01/30/81		S/34 3270 DEVICE	10	CC			80-123
FO-1FO	U1	MACH	226-1579	020	07/28/78		S/34 FORTRAN	10	CC			667-78
	U1	MACH	" - "	030	01/26/79		S/34 FORTRAN	10	CC			679-13
	U1	MACH	" - "	040	07/27/79		S/34 FORTRAN	10	CC			
	U1	MACH	" - "	050	01/25/80		S/34 FORTRAN	10	CC			679-75
	U1	MACH	" - "	070	01/30/81		S/34 FORTRAN	10	CC			80-123
M4-G00	X3	MACH	099-0028	010			S/34 CR PLANNING					
RG-1LN	U1	MACH	226-1589	020	07/28/78		S/34 RPG II LE	10	CC			667-78
	U1	MACH	" - "	070	01/30/81		S/34 RPG II LE	10	CC			80-123
RG-1RG	U1	MACH	226-1589	010	01/27/78		S/34 RPG II COMP	10	CC			667-23
	U1	MACH	" - "	020	07/28/78		S/34 RPG II COMP	10	CC			667-78
	U1	MACH	" - "	030	01/26/79		S/34 RPG II COMP	10	CC			679-13
	U1	MACH	" - "	040	07/27/79		S/34 RPG II COMP	10	CC			
	U1	MACH	" - "	050	01/25/80		S/34 RPG II COMP	10	CC			679-75

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****														
5726														
****														
		U1	MACH		226-1589	070	01/30/81		S/34 RPG 11 COMP			10 CC		80-123
SS-1		U1	MACH		226-1599	010	01/27/78		S/34 SYS SUPT. PROG			10 CC	5726SS1	667-23
SS-1BS		U1	MACH		226-1599	020	07/28/78		S/34 SSP BSCA			10 CC	5726SS1	667-78
		U1	MACH	" - "	" - "	070	01/30/81		S/34 SSP BSCA			10 CC	5726SS1	80-123
SS-1CP		U1	MACH		226-1599	020	07/28/78		S/34 SSP COM PROC			10 CC	5726SS1	667-78
		U1	MACH	" - "	" - "	070	01/30/81		S/34 SSP COM PROC			10 CC	5726SS1	80-123
SS-1DM		U1	MACH		226-1599	020	07/28/78		S/34 SSP DATA MGT			10 CC	5726SS1	667-78
		U1	MACH	" - "	" - "	030	01/26/79		S/34 SSP DATA MGT			10 CC	5726SS1	679-13
		U1	MACH	" - "	" - "	040	07/27/79		S/34 SSP DATA MGT			10 CC	5726SS1	
		U1	MACH	" - "	" - "	050	01/25/80		S/34 SSP DATA MGT			10 CC	5726SS1	679-75
		U1	MACH	" - "	" - "	060			S/34 SSP DATA MGT			10 CC	5726SS1	
		U1	MACH	" - "	" - "	070	01/30/81		S/34 SSP DATA MGT			10 CC	5726SS1	80-123
SS-1IC		U1	MACH		226-1549	040	07/27/79		S/34 SSP DATA MGT			10 CC		
		U1	MACH	" - "	" - "	070	01/30/81		S/34 SSP DATA MGT			10 CC		80-123
SS-1HR		U1	MACH		226-1619	010	01/28/78		S/34 HRJE			10 CC	5726SS1	667-22
		U1	MACH	" - "	" - "	020	07/28/78		S/34 SSP HRJP			10 CC	5726SS1	667-78
		U1	MACH	" - "	" - "	030	01/26/79		S/34 HRJE			10 CC	5726SS1	679-13
		U1	MACH	" - "	" - "	040	07/27/79		S/34 HRJE			10 CC	5726SS1	
		U1	MACH	" - "	" - "	050	01/25/80		S/34 HRJE			10 CC	5726SS1	679-75
		U1	MACH	" - "	" - "	060			S/34 HRJE			10 CC	5726SS1	
		U1	MACH	" - "	" - "	070	01/30/81		S/34 HRJE			10 CC	5726SS1	80-123
SS-1OL		U1	MACH		226-1599	020	07/28/78		S/34 SSP OVERLAY ED			10 CC	5726SS1	667-78
		U1	MACH	" - "	" - "	070	01/30/81		S/34 SSP OVERLAY ED			10 CC	5726SS1	80-123
SS-1RW		U1	MACH		226-1599	070	01/30/81		S/34 SSP DATA MGT			10 CC	5726SS1	80-123
SS-1SD		U1	MACH		226-1609	020	07/28/78		S/34 SSP SNA/SDLC			10 CC	5726SS1	667-78

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COMPONENT ID	SVC CLS	MP SC	LIC. SVC TYPE PER.	FESN	REL	PID AVAIL	CURR. END	DESCRIPTION	SUP GROUP	CTR LOC	SUPP MAIL ADDR	PID NO.	ANNOUN LETTER
****													
5726			CONT										
****													
			U1	MACH	226-1609	030	01/26/79	S/34 SNA/SDLC		10	CC	5726SS1	679-13
			U1	MACH	" - "	040	07/27/79	S/34 SNA/SDLC		10	CC	5726SS1	
			U1	MACH	" - "	050	01/25/80	S/34 SNA/SDLC		10	CC	5726SS1	679-75
			U1	MACH	" - "	060		S/34 SNA/SDLC		10	CC	5726SS1	
			U1	MACH	" - "	070	01/30/81	S/34 SNA/SDLC		10	CC	5726SS1	80-123
SS-1SH			U1	MACH	226-1599	020	07/28/78	S/34 SSP SCHEDULEP		10	CC	5726SS1	667-78
			U1	MACH	" - "	070	01/30/81	S/34 SSP SCHEDULEP		10	CC	5726SS1	80-123
SS-1SU			U1	MACH	226-1599	020	07/28/78	S/34 SSP SYS UTIL		10	CC	5726SS1	667-78
			U1	MACH	" - "	070	01/30/81	S/34 SSP SYS UTIL		10	CC	5726SS1	80-123
SS-1SV			U1	MACH	226-1599	020	07/28/78	S/34 SSP SUPERVISOR		10	CC	5726SS1	667-78
			U1	MACH	" - "	020	07/28/78	S/34 SSP SUPERVISOR		10	CC	5726SS1	667-78
			U1	MACH	" - "	070	01/30/81	S/34 SSP DATA MGT		10	CC	5726SS1	80-123
UT-1DS			U1	MACH	226-1629	010	01/28/78	S/34 UTILITIES		10	CC		677-24
			U1	MACH	" - "	030	01/26/79	S/34 UTILITIES		10	CC		679-13
			U1	MACH	" - "	040	07/27/79	S/34 UTILITIES		10	CC		
UT-1UT			U1	MACH	226-1629	020	07/28/78	S/34 UTILITIES		10	CC		667-78
			U1	MACH	" - "	050	01/25/80	S/34 UTILITIES		10	CC		679-75
			U1	MACH	" - "	060		S/34 UTILITIES		10	CC		
			U1	MACH	" - "	070	01/30/81	S/34 UTILITIES		10	CC		80-123
UT-1WS			U1	MACH	226-1659	010	01/28/78	S/34 W S U		10	CC		677-24
			U1	MACH	" - "	020	07/28/78	S/34 WSU		10	CC		667-78
			U1	MACH	" - "	030	01/26/79	S/34 WSU		10	CC		679-13
			U1	MACH	" - "	050	01/25/80	S/34 WSU		10	CC		679-75
			U1	MACH	" - "	060		S/34 WSU		10	CC		
			U1	MACH	" - "	070	01/30/81	S/34 W S U		10	CC		80-123



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COMPONENT ID	SVC CLS	MP SC	LIC. TYPE	SVC PER.	FESN	REL	PID AVAIL	CURR. END	DESCRIPTION	SUP GROUP	CTR LOC	SUPP ADDR	MAIL NO.	PID NO.	ANNOUN LETTER
**** 5726 **** I		U1	MACH		226-1659	070	01/30/81		S/34 W5U			10	CC		80-123
**** 5734 ****									OSVS PP						
CB-202	U1		MACH		621-6005	015	02/06/78	03/31/81	OS FULL ANS COBOL V4	COBOL	13	AK		5734CB2	
	U1		MACH		631-6005	015	02/06/78	03/31/81	OS FULL ANS COBOL V4	COBOL	13	AK			
	U1		MACH		641-6005	015	02/06/78	03/31/81	OS FULL ANS COBOL V4	COBOL	13	AK		5734CB2	
	U1		MACH		651-6005	015	02/06/78	03/31/81	OS FULL ANS COBOL V4	COBOL	13	AK		5734CB2	
	U1		MACH		691-6005	015	02/06/78	03/31/81	OS FULL ANS COBOL V4	COBOL	13	AK		5734CB2	
CB-4	X2		MACH		099-0028	014	03/30/77		COBOL INTER DEBUG					WP	AK 77-030
CP-101	U1		MACH		621-6007	014	03/03/77		TSO COBOL PROMPTER	COBOL	13	AK		5734CP1	77-030
	U1		MACH		631-6007	014	03/03/77		TSO COBOL PROMPTER	COBOL	13	AK			77-030
	U1		MACH		651-6007	014	03/03/77		TSO COBOL PROMPTER	COBOL	13	AK		5734CP1	77-030
	U1		MACH		691-6007	014	03/03/77		TSO COBOL PROMPTER	COBOL	13	AK		5734CP1	77-030
FO-201	U1		MACH		621-4903	020	02/12/73		FORTRAN IV 31 COMP	FORTRAN	13	AK		5734FO2	
	U1		MACH		631-4903	020	02/12/73		FORTRAN IV 31 COMP	FORTRAN	13	AK			
	U1		MACH		641-4903	020	02/12/73		FORTRAN IV 31 COMP	FORTRAN	13	AK		5734FO2	
	U1		MACH		651-4903	020	02/12/73		FORTRAN IV 31 COMP	FORTRAN	13	AK		5734FO2	
	U1		MACH		691-4903	020	02/12/73		FORTRAN IV 31 COMP	FORTRAN	13	AK		5734FO2	
FO-301	U1		MACH		621-4902	023	09/22/78		FORTRAN IV H EXT CMP	FORTRAN	13	AK		5734FO3	
	U1		MACH		631-4902	023	09/22/78		FORTRAN IV H EXT CMP	FORTRAN	13	AK			
	U1		MACH		641-4902	023	09/22/78		FORTRAN IV H EXT CMP	FORTRAN	13	AK		5734FO3	
	U1		MACH		651-4902	023	09/22/78		FORTRAN IV H EXT CMP	FORTRAN	13	AK		5734FO3	
	U1		MACH		691-4902	023	09/22/78		FORTRAN IV H EXT CMP	FORTRAN	13	AK		5734FO3	
FO-5	X2		MACH		099-0028				FORTRAN INTER DEBUG					WP	AK

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****															
5734 CONT															
****															
F1-1	X2		MACH		099-0028		04/01/74		CHECK PROC CTRL SYS		WP	N			74-015
F3-1	X2		MACH		099-0028		11/16/77		TELECOMM CTL TCS		23	AL			77-184
F3-2	X2		MACH		099-0028		01/28/74		SEC ORDER MATCH		23	AL			74-004
F3-4	X2		MACH		099-0028				REGISTERED REP SYS		WP	N			
LM-201	U1		MACH		621-6006	015	02/06/78	03/31/81	COBOL V4 LIB ONLY	COBOL	13	AK		5734CB2	
	U1		MACH		631-6006	015	02/06/78	03/31/81	COBOL V4 LIB ONLY	COBOL	13	AK		5734CB2	
	U1		MACH		641-6006	015	02/06/78	03/31/81	COBOL V4 LIB ONLY	COBOL	13	AK		5734CB2	
	X4		MACH		651-6006	014	08/23/76		COBOL V4 LIB ONLY					5734CB2	
	U1		MACH		" - "	015	02/06/78		COBOL V4 LIB ONLY	COBOL	13	AK		5734CB2	
	U1		MACH		691-6006	015	02/06/78	03/31/81	COBOL V4 LIB ONLY	COBOL	13	AK		5734CB2	
LM-301	X4		MACH		621-4904	021	08/01/75		FORTRAN IV LIB MOD 2					5734LM3	
	X4		MACH		" - "	022	11/26/76		FORTRAN IV LIB MOD 2					5734LM3	
	U1		MACH		" - "	023	08/03/78		FORTRAN IV LIB MOD 2	FORTRAN	13	AK		5734LM3	
	X4		MACH		631-4904	021	08/01/75		FORTRAN IV LIB MOD 2					5734LM3	
	X4		MACH		" - "	022	11/26/76		FORTRAN IV LIB MOD 2					5734LM3	
	U1		MACH		" - "	023	08/03/78		FORTRAN IV LIB MOD 2	FORTRAN	13	AK		5734LM3	
	X4		MACH		641-4904	021	08/01/75		FORTRAN IV LIB MOD 2					5734LM3	
	X4		MACH		" - "	022	11/26/76		FORTRAN IV LIB MOD 2					5734LM3	
	U1		MACH		" - "	023	08/03/78		FORTRAN IV LIB MOD 2	FORTRAN	13	AK		5734LM3	
	X4		MACH		651-4904	021	08/01/75		FORTRAN IV LIB MOD 2					5734LM3	
	X4		MACH		" - "	022	11/26/76		FORTRAN IV LIB MOD 2					5734LM3	
	U1		MACH		" - "	023	08/03/78		FORTRAN IV LIB MOD 2	FORTRAN	13	AK		5734LM3	
	X4		MACH		691-4904	021	08/01/75		FORTRAN IV LIB MOD 2					5734LM3	
	X4		MACH		" - "	022	11/26/76		FORTRAN IV LIB MOD 2					5734LM3	
	U1		MACH		" - "	023	09/22/78		FORTRAN IV LIB MOD 2	FORTRAN	13	AK		5734LM3	

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COMPONENT ID	SVC CLS	MP SC	IIC. TYPE	SVC PER.	PESH	REL	PID AVAIL	CURR. END	DESCRIPTION	SUP GROUP	CTR LOC	SUPP ADDR	MAIL NO.	PID NO.	ANNOUN LETTER
****															
5734															
****															
LM-441	U1		MACH		621-6102	030	12/08/76	12/31/81	OS PL/1 RESIDENT IIB	PL1	13	AK	5734LM4	76-196	
	U1		MACH		" - "	031	11/01/79		OS PL/1 RESIDENT LIB	PL1	13	AK	5734LM4	79-253	
	U1		MACH		631-6102	030	12/08/76	12/31/81	OS PL/1 RESIDENT LIB	PL1	13	AK		76-196	
	U1		MACH		" - "	031	11/01/79		OS PL/1 RESIDENT LIB	PL1	13	AK		79-253	
	U1		MACH		641-6102	030	12/08/76	12/31/81	OS PL/1 RESIDENT LIB	PL1	13	AK	5734LM4	76-196	
	U1		MACH		" - "	031	11/01/79		OS PL/1 RESIDENT LIB	PL1	13	AK	5734LM4	79-253	
	U1		MACH		651-6102	030	12/08/76	12/31/81	OS PL/1 RESIDENT LIB	PL1	13	AK	5734LM4	76-196	
	U1		MACH		" - "	031	11/01/79		OS PL/1 RESIDENT LIB	PL1	13	AK	5734LM4	79-253	
	U1		MACH		691-6102	030	12/08/76	12/31/81	OS PL/1 RESIDENT LIB	PL1	13	AK	5734LM4	76-196	
	U1		MACH		" - "	031	11/01/79		OS PL/1 RESIDENT LIB	PL1	13	AK	5734LM4	79-253	
LM-541	U1		MACH		621-6103	030	12/08/76	12/31/81	OS PL/1 TRANS LIB	PL1	13	AK	5734LM5	76-196	
	U1		MACH		" - "	031	11/01/79		OS PL/1 TRANS LIB	PL1	13	AK	5734LM5	79-253	
	U1		MACH		631-6103	030	12/08/76	12/31/81	OS PL/1 TRANS LIB	PL1	13	AK		76-196	
	U1		MACH		" - "	031	11/01/79		OS PL/1 TRANS LIB	PL1	13	AK		79-253	
	U1		MACH		641-6103	030	12/08/76	12/31/81	OS PL/1 TRANS LIB	PL1	13	AK	5734LM5	76-196	
	U1		MACH		" - "	031	11/01/79		OS PL/1 TRANS LIB	PL1	13	AK	5734LM5	79-253	
	U1		MACH		651-6103	030	12/08/76	12/31/81	OS PL/1 TRANS LIB	PL1	13	AK	5734LM5	76-196	
	U1		MACH		" - "	031	11/01/79		OS PL/1 TRANS LIB	PL1	13	AK	5734LM5	79-253	
	U1		MACH		691-6103	030	12/08/76	12/31/81	OS PL/1 TRANS LIB	PL1	13	AK	5734LM5	76-196	
	U1		MACH		" - "	031	11/01/79		OS PL/1 TRANS LIB	PL1	13	AK	5734LM5	79-253	
M4-1	X4		MACH		099-0029			09/30/80	OS/360 CAPOSS						
PL-141	U1		MACH		621-6104	030	12/08/76	12/31/81	OS PL/1 OPT COMP	PL1	13	AK	5734PL1	76-196	
	U1		MACH		" - "	031	11/01/79		OS PL/1 OPT COMP	PL1	13	AK	5734PL1	79-253	
	U1		MACH		631-6104	030	12/08/76	12/31/81	OS PL/1 OPT COMP	PL1	13	AK		76-196	
	U1		MACH		" - "	031	11/01/79		OS PL/1 OPT COMP	PL1	13	AK		79-253	

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COMPONENT ID	SVC MP CLS SC	LIC. SVC TYPE PEF.	FFSK	PFL	PID AVAIL	CURR. END	DESCRIPTION	SUP CTR GROUP	SUPP LOC	MAIL ADDR	PID NO.	ANNOUN LETTER	
****													
5734	CONT												
****													
		MACH	641-6104	030	12/08/76	12/31/81	OS PL/1 OPT COMP	PL1	13	AK	5734PL1	76-196	
		U1	" - "	031	11/01/79		OS PL/1 OPT COMP	PL1	13	AK	5734PL1	79-253	
		U1	MACH	651-6104	030	12/08/76	12/31/81	OS PL/1 OPT COMP	PL1	13	AK	5734PL1	76-196
		U1	" - "	031	11/01/79		OS PL/1 OPT COMP	PL1	13	AK	5734PL1	79-253	
		U1	MACH	691-6104	030	12/08/76	12/31/81	OS PL/1 OPT COMP	PL1	13	AK	5734PL1	76-196
		U1	" - "	031	11/01/79		OS PL/1 OPT COMP	PL1	13	AK	5734PL1	79-253	
PL-241		U1	MACH	621-6105	030	12/08/76		OS PL/1 CHECKOUT CHP	PL1	13	AK	5734PL2	76-196
		U1	" - "	031			OS PL/1 CHECKOUT CHP	PL1	13	AK	5734PL2		
		U1	MACH	631-6105	030	12/08/76		OS PL/1 CHECKOUT CHP	PL1	13	AK		76-196
		U1	" - "	031			OS PL/1 CHECKOUT CHP	PL1	13	AK			
		U1	MACH	641-6105	030	12/08/76		OS PL/1 CHECKOUT CHP	PL1	13	AK	5734PL2	76-196
		U1	" - "	031			OS PL/1 CHECKOUT CHP	PL1	13	AK	5734PL2		
		U1	MACH	651-6105	030	12/08/76		OS PL/1 CHECKOUT CHP	PL1	13	AK	5734PL2	76-196
		U1	" - "	031			OS PL/1 CHECKOUT CHP	PL1	13	AK	5734PL2		
		U1	MACH	691-6105	030	12/08/76		OS PL/1 CHECKOUT CHP	PL1	13	AK	5734PL2	76-196
		U1	" - "	031			OS PL/1 CHECKOUT CHP	PL1	13	AK	5734PL2		
PC-500		U1	MACH	621-6802	022	08/02/77		OS/VIDEO/370	VIDEO	62	CB	5734RC5	77-142
		U1	MACH	631-6802	022	09/02/77		OS/VIDEO/370	VIDEO	62	CB		77-142
		U1	MACH	651-6802	022	09/02/77		OS/VIDEO/370	VIDEO	62	CB	5734RC5	77-142
		U1	MACH	691-6802	022	09/02/77		OS/VIDEO/370	VIDEO	62	CB	5734RC5	77-142
XA-3		X2	MACH	099-0028			03/31/81	STAT/BASIC		13	BL		
XC-4		X2	MACH	099-0028				OS/DMS-3270					
X4-B		X2	MACH	099-0028			03/31/81	BUS ANAL/BASIC ITF		13	BL		
X4-1		X2	MACH	099-0028				APL OS		13	AK		
X4-8		X2	MACH	099-0028			03/31/81	MATH/BASIC ITF			BL		

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COMPONENT ID	SVC CLS	MP SC	LIC. TYPE	SVC PER.	FESN	REL	PID AVAIL	CURR. END	DESCRIPTION	SUP GROUP	CTR LOC	SUPP MAIL ADDR	PID NO.	ANNOON LETTER
****														
5734	CONT													
****														
****														
5735	NCP													
****														
H1-100	U1		MACH		671-1201	110	08/31/79		PHARMACY APPLIC	IND. SYS	23	BU	5735H11	79-003
SC-100	S2				570-9102	030			370X/EP SUPPORT VS.	370X PRG	23	BG	5735SC1	76-115
	S2				" - "	100	06/30/79		370X/EP SMP4	370X PRG	23	BG	5735SC1	79-123
	S2				" - "	101	05/30/80		EP/OS VOR101	370X PRG	23	BG	5735SC1	79-128
	S2				" - "	200	11/30/80		EP/OS VOR200	370X PRG	23	BG	5735SC1	79-128
	S2				" - "	506	11/30/80		EP DOS VOR200	370X PRG	23	BG	5735SC1	79-128
	S2				" - "	782	05/30/80		EP/DOS VOR101	370X PRG	23	BG	5735SC1	79-131
	U4				" - "	803	06/30/79	12/31/80	370X/EP SMP3	370X PRG	23	BG	5735SC1	79-123
SC-300	S2				570-1201	050	08/18/76		NCP/VS R050	370X PRG	23	AL	5744BA1	76-115
	S2				" - "	051	06/30/79		NCP/DOS R050 SER	370X PRG	23	AL	5735XX1	79-123
	S2				" - "	070	06/30/79		ACF/NCP DOS V1R2	370X PRG	23	AL	5735XX1	79-123
	S2				" - "	100	06/30/79		NCP/OS R050 SMP4	370X PRG	23	AL	5735XX1	79-123
	U4				" - "	160	11/28/77	09/30/80	ACF/NCP V1R1	370X PRG	23	AL	5735XX1	77-196
	S2				" - "	200	06/30/79		ACF/NCP V1R2 SMP4	370X PRG	23	AL	5735XX1	79-123
	S2				" - "	201	05/30/80		ACF/NCP V1R2.1	370X PRG	23	AL	5735XX1	79-131
	S2				" - "	300	11/30/80		ACF/NCP/OS V1R3	370X PRG	23	AL	5735XX1	79-128
	S2				" - "	507	11/30/80		ACF/NCP/DOS V1R3	370X PRG	23	AL	5735XX1	79-128
	S2				" - "	778	05/30/80		ACF/NCP DOS V1R2.1	370X PRG	23	AL	5735XX1	79-131
	U4				" - "	801	06/30/79	12/31/80	NCP/OS R050 SMP3	370X PRG	23	AL	5735XX1	79-123
	U4				" - "	804	06/30/79	12/31/80	ACF/NCP V1R2 SMP3	370X PRG	23	AL	5735XX1	79-123
X4			MACH		670-1201	161	11/28/77	09/30/80	ACF/NCP V1R1				5735XX1	77-196
U1			MACH		" - "	171	06/30/79		ACF/NCP DOS V1R2	370X PRG	23	AL	5735XX1	79-123



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COMPONENT ID	SVC CLS	MP SC	LIC. TYPE	SVC PER.	FESN	REL	PID AVAIL	CURR. END	DESCRIPTION	SUP CTR GPOUP	SUPP LOC	MAIL ADDR	PID NO.	ANNOUW LETTER
****														
5736 CONT														
****														
LM-561	X4	*	MACH		661-5703	050	12/08/76	05/25/80	DOS PL/1 TRANS LIB				5736LM5	76-196
	U1	*	MACH		" - "	051	01/25/80	12/31/81	DOS PL/1 TRANS LIB	PL1	13	AK	5736LM5	80-016
	X4	*	MACH		692-5703	050	12/08/76	05/25/80	DOS PL/1 TRANS LIB				5736LM5	76-196
	U1	*	MACH		" - "	051	01/25/80	12/31/81	DOS PL/1 TRANS LIB	PL1	13	AK	5736LM5	80-016
M4-1	X4		MACH		099-0028			09/30/80	DOS/360 CAPOSS					
N1-3	X4		MACH		099-0028			04/15/80	CFO II					
N1-4	X4		MACH		099-0028	200	06/03/74	04/15/80	ALPHA SEARCH					74-024
PL-161	X4	*	MACH		661-5704	050	12/08/76	05/25/80	DOS PL/1 OPT COMP				5736PL1	76-196
	U1	*	MACH		" - "	051	01/25/80	12/31/81	DOS PL/1 OPT COMP	PL1	13	AK	5736PL1	80-016
	X4	*	MACH		692-5704	050	12/08/76	05/25/80	DOS PL/1 OPT COMP				5736PL1	76-196
	U1	*	MACH		" - "	051	01/25/80	12/31/81	DOS PL/1 OPT COMP	PL1	13	AK	5736PL1	80-016
RC-300	U1	*	MACH		661-6102	022	09/02/77		DOS/VS/VSE VIDEO/370	VJDEO	62	CB	5736RC3	77-142
	U1	*	MACH		692-6102	022	09/02/77		DOS VIDEO/370	VIDEO	62	CB	5736RC3	77-142
T1-1	X2		MACH		099-0028				FARE QUOTE/TICKETING			WP	N	
UT-4	X2		MACH		099-0028				DOS/360 UDB	WT ONLY	ST	G		
U1-1	X2		MACH		099-0028				ENERGY MGMT SYSTEM					
XM-1	X2		MACH		099-0028				APL DOS					
XT-2	X2		MACH		099-0028				SPF/TSO					
****														
5740 OSVS PP														
****														
AM-400	X2		MACH		099-0028		06/30/78		IPS					78-088
BC-500	X4		MACH		621-3211	200	10/26/79	05/29/80	ADC FOR STORES				5735XP2	79-247
	U3		MACH		" - "	300	02/29/80		ADC FOR STORES		23	CI	5735XP2	80-038
	X4		MACH		651-3211	200	10/26/79	05/29/80	ADC FOR STORES				5735XP2	79-247

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COMPONENT ID	SVC CLS	MP SC	LIC. TYPE	SVC PER.	FESN	REL	PID AVAIL	CURR. END	DESCRIPTION	SUP GROUP	CTP	SUPP LOC	MAIL ADDR	PID NO.	ANNOU LETTER
****															
5740															
CONT															
****															
		U3	MACH		651-3211	300	02/29/80	02/27/81	ADC FOR STORES			23	CI	5735XR2	80-038
		U3	MACH		" - "	400	12/05/80		ADC FOR STORES			23	CI	5735XR2	80-271
CB-103		U1	MACH		621-6002	022	09/16/78	12/31/81	OS/VS COB COMPILER	COBOL		13	AK	5740CB1	
		U1	MACH		" - "	023	11/17/79		OS/VS COB COMPILER	COBOL		13	AK	5740CB1	
		U1	MACH		631-6002	022	09/16/78	12/31/81	OS/VS COB COMPILER	COBOL		13	AK		
		U1	MACH		" - "	023	11/17/79		OS/VS COB COMPILER	COBOL		13	AK		
		U1	MACH		641-6002	022	09/16/78	12/31/81	OS/VS COB COMPILER	COBOL		13	AK	5740CB1	
		U1	MACH		" - "	023	11/17/79		OS/VS COB COMPILER	COBOL		13	AK	5740CB1	
		U1	MACH		651-6002	022	09/16/78	12/31/81	OS/VS COB COMPILER	COBOL		13	AK	5740CB1	
		U1	MACH		" - "	023	11/17/79		OS/VS COB COMPILER	COBOL		13	AK	5740CB1	
CB-200		U1	MACH		621-6008	110	10/26/79		PSS COBOL	IND. SYS	23	BU	5740CB2	79-001	
		U1	MACH		651-6008	110	10/26/79		PSS COBOL	IND. SYS	23	BU	5740CB2	79-001	
CC-100		U1	MACH		620-0822	135	11/26/80		DF/DS SERVICES			13	AK		80-114
		U1	MACH		650-0822	135	11/26/80		DF/DS SERVICES			13	AK	5740UB3	80-114
DC-100	X4		MACH		099-0028	010	08/08/77	12/31/80	CHANGE MANG. TRACK						77-129
DC-200	X4		INST		099-0028	010	08/08/77	12/31/80	DP ACCOUNT. FOR IMS						77-129
DC-300	X2		INST		099-0028	010	07/29/77		SERV. LEVEL REPORTER						77-701
	X2		INST		" - "	011	03/03/78		SERV. LEVEL REPORTER						78-026
DC-400	X4		MACH		099-0028	010	08/08/77	12/31/80	CHANGE TRACKER						77-129
D1-400	U1		MACH		621-3205	100	08/08/79	06/30/81	3650 RETAIL	3650		23	DH	5748D14	78-185
	U1		MACH		" - "	200	12/30/80		3650 RETAIL	3650		23	DH	5748D14	80-004
	U1		MACH		651-3205	100	08/08/79	06/30/81	3650 RETAIL	3650		23	DH	5748D14	78-185
	U1		MACH		" - "	200	12/31/80		3650 RETAIL	3650		23	DH	5748D14	80-004
D1-500	U1		MACH		621-3206	100	06/29/79		REPORT CUST	3650		23	DH	5748D15	78-123
	U1		MACH		" - "	200	11/13/81		REPORT CUST	3650		23	DH	5748D15	80-254



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COMPONENT ID	SVC CLS	MP SC	LIC. TYPE	SVC PER.	FESN	REL	PID AVAIL	CURR. END	DESCRIPTION	SUP GROUP	CTR LOC	MAIL ADDR	PID NO.	ANNOU LETTER
****														
5740	CONT													
****														
		U1	MACH		651-3206	100	06/29/79		REPORT CUST	3650	23	DH	5748D15	78-123
		U1	MACH		" - "	200	11/13/81		REPORT CUST	3650	23	DH	5748D15	80-254
D1-601		U1 *	MACH		621-2605	110			SPPS II	IND. SYS	23	BU	5735D16	78-122
		U1 *	MACH		" - "	210	03/10/80		SPPS II	IND. SYS	23	BU	5735D16	79-002
		U1 *	MACH		651-2605	110			SPPS II	IND. SYS	23	BU	5735D16	78-122
		U1 *	MACH		" - "	210	04/07/80		SPPS II	IND. SYS	23	BU	5735D16	79-002
D2-100		U1	MACH		621-3207	100	07/13/79		SUPERMARKET ENV	3650	23	DH	5748D21	78-121
		U1	MACH		" - "	200	11/13/81		SUPERMARKET ENV	3650	23	DH	5748D21	80-253
		U1	MACH		651-3207	100	07/13/79		SUPERMARKET ENV	3650	23	DH	5748D21	78-121
		U1	MACH		" - "	200	11/13/81		SUPERMARKET ENV	3650	23	DH	5748D21	80-253
D2-200		U1	MACH		621-3208	100	07/13/79		SD MGMT SERVICES	3650	23	DH	5748D22	78-184
		U1	MACH		" - "	200	08/08/79		SD MGMT SERVICES	3650	23	DH	5748D22	79-185
		U1	MACH		" - "	300	11/13/81		SD MGMT SERVICES	3650	23	DH	5748D22	80-255
		U1	MACH		651-3208	100	07/13/79		SD MGMT SERVICES	3650	23	DH	5748D22	78-184
		U1	MACH		" - "	200	08/08/79		SD MGMT SERVICES	3650	23	DH	5748D22	79-185
		U1	MACH		" - "	300	11/13/81		SD MGMT SERVICES	3650	23	DH	5748D22	80-255
D6-100		U1	MACH		621-3209	110	03/10/80		3680 SALES APPL.	3680	23	DH	5735D61	79-006
		U1	MACH		" - "	210	03/26/82		3680 SALES APPL.	3680	23	DH	5735D61	80-294
		U1	MACH		651-3209	110	03/10/80		3680 SALES APPL.	3680	23	DH	5735D61	79-006
		U1	MACH		" - "	210	03/26/82		3680 SALES APPL.	3680	23	DH	5735D61	80-294
D6-200		U1	MACH		621-3210	110	03/10/80		3680 STORE ADMIN APP	3680	23	DH	5735D62	79-005
		U1	MACH		" - "	210	03/26/82		3680 STORE ADMIN APP	3680	23	DH	5735D62	80-295
		U1	MACH		651-3210	110	03/10/80		3680 STORE ADMIN APP	3680	23	DH	5735D62	79-005
		U1	MACH		" - "	210	03/26/82		3680 STORE ADMIN APP	3680	23	DH	5735D62	80-295
F1-1		X2	INST		099-0028	102	02/28/77		PC/3600					77-026

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COMPONENT ID	SVC CLS	MP SC	LIC. TYPE	SVC PER.	FESN	FEL	PID AVAIL	CURR. END	DESCRIPTION	SUP GROUP	CTR LOC	SUPP MAIL ADDR	PID NO.	ANNOU LETTER
****														
5740														
****														
P1-2	X2		MACH		099-0028	010	11/30/76		TREND ANALYSIS/370		PA	DY		76-191
P1-501	X2		MACH		679-7904	110	11/14/80		DSL/CICS/OS		SN	AZ	5740F15	79-166
P1-502	X2		MACH		679-7905	110	11/14/80		DSL/CICS/OS AUTH.		SN	AZ	5740F15	79-166
P1-601	X2		MACH		679-7906	110	11/14/80		DSL/IMS		SN	AZ	5740F16	79-166
P1-602	X2		MACH		679-7907	110	11/14/80		DSL/IMS AUTH		SN	AZ	5740F16	79-166
P5-100	X2		MACH		099-0028		03/16/79		3614/3624 COLTS		WP	CJ		78-034
P5-600	U1	*	MACH		620-1601	110	10/16/80		DOC CONT MACROS		23		5748P56	80-153
	U1	*	MACH		650-1601	110	10/16/80		DOC CONT MACROS		23		5748P56	80-153
HC-133	U1	*	MACH		620-5632	100	03/31/80		HCF TCAM		03	BG	5735XR1	78-174
	U1	*	MACH		650-5632	100	03/31/80		HCF TCAM		03	BG	5735XR1	78-174
I1-214	X4		MACH		621-5540	114	12/01/78	06/15/80	FAST PATH IMS/VS				5740XX2	78-189
	U1		MACH		" - "	115	10/27/78		FAST PATH IMS/VS	IMS	13	AK	5740XX2	78-098
	U1		MACH		" - "	640	08/15/80		FAST PATH IMS/VS	IMS	13	AK	5740XX2	80-059
	X4		MACH		631-5540	114	12/01/78	06/15/80	FAST PATH IMS/VS					78-189
	U1		MACH		" - "	115	10/27/78		FAST PATH IMS/VS	IMS	13	AK		78-098
	X4		MACH		651-5540	114	12/01/78	06/15/80	FAST PATH IMS/VS				5740XX2	78-189
	U1		MACH		" - "	115	10/27/78		FAST PATH IMS/VS	IMS	13	AK	5740XX2	78-098
	U1		MACH		" - "	240	03/31/79		FAST PATH IMS/VS	IMS	13	AK	5740XX2	78-200
	U1		MACH		" - "	640	08/15/80		FAST PATH IMS/VS	IMS	13	AK	5740XX2	80-059
I2-214	X4		MACH		621-5550	114	12/01/78	06/15/80	DBRCF IMS/VS				5740XX2	78-189
	U1		MACH		" - "	115	03/29/79		DBRCF IMS/VS	IMS	13	AK	5740XX2	79-087
	U1		MACH		" - "	650	08/15/80		DBRCF IMS/VS	IMS	13	AK	5740XX2	80-059
	X4		MACH		631-5550	114	03/30/79	06/15/80	DBRCF IMS/VS					79-014
	U1		MACH		" - "	115	03/29/79		DBRCF IMS/VS	IMS	13	AK		79-087
	X4		MACH		651-5550	114	12/01/78	06/15/80	DBRCF IMS/VS				5740XX2	78-189



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COMPONENT ID	SVC CLS	MP SC	LIC. TYPE	SVC PER.	FPSN	REL	PID AVAIL	CURR. END	DESCRIPTION	SUP GROUP	CTR LOC	SUPP ADDR	MAIL NO.	PID NO.	ANNOUN LETTER
****															
5740				CONT											
****															
SC-FPP	U1	*	MACH		620-5011	110	07/10/80		FTP				01	H	5748XE6 79-061
	U1	*	MACH		650-5011	110	07/10/80		FTP				01	H	5748XE6 79-061
SM-105	X4		MACH		621-6202	031	06/30/78	04/29/80	OS/V5 SORT/MERGE						5740SM1
	U1		MACH		" - "	040	10/31/79		OS/V5 SORT/MERGE						5740SM1
	X4		MACH		631-6202	031	06/30/78	04/29/80	OS/V5 SORT/MERGE						5740SM1
	U1		MACH		" - "	040	10/31/79		OS/V5 SORT/MERGE						5740SM1
	X4		MACH		641-6202	031	06/30/78	04/29/80	OS/V5 SORT/MERGE						5740SM1
	U1		MACH		" - "	040	10/31/79		OS/V5 SORT/MERGE						5740SM1
	X4		MACH		651-6202	031	06/30/78	04/29/80	OS/V5 SORT/MERGE						5740SM1
	U1		MACH		" - "	040	10/31/79		OS/V5 SORT/MERGE						5740SM1
UT-100	U1		MACH		621-6702	010	05/06/77	06/30/81	DASDR				65	S	5740UT1 77-080
	U1		MACH		" - "	111	03/01/79	06/30/81	DASDR				65	S	5740UT1 78-142
	U1		MACH		631-6702	010	05/06/77	06/30/81	DASDR				65	S	5740UT1 77-080
	U1		MACH		651-6702	010	05/06/77	06/30/81	DASDR				65	S	5740UT1 77-080
	U1		MACH		691-6702	010	05/06/77	06/30/81	DASDR				65	S	5740UT1 77-080
U1-1	X2		MACH		099-0028				ENERGY MANG. SYSTEM						
XC-2	X2		MACH		099-0028		03/10/78	06/30/81	DMS/OS/V5						78-039
XC-500	X4		INST		621-7102	110	04/28/79	07/31/80	DMS/CICS/OS						5740XC5 79-055
	X4		INST		" - "	111	04/28/79	07/31/80	DMS/CICS/OS FEATURE						5740XC5 79-055
	U1		INST		" - "	210	11/30/79		DMS/CICS/OS						5740XC5 79-055
	U1		INST		" - "	211	11/30/79		DMS/CICS/OS FEATURE						5740XC5 79-055
	U1		INST		" - "	310			DMS/CICS/OS						5740XC5 79-055
	U1		INST		" - "	311			DMS/CICS/OS FEATURE						5740XC5 79-055
	X4		INST		631-7102	110	04/28/79	07/31/80	DMS/CICS/OS						5740XC5 79-055
	X4		INST		" - "	111	04/28/79	07/31/80	DMS/CICS/OS FEATURE						5740XC5 79-055

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COMPONENT ID	SVC CLS	MP SC	LIC. TYPE	SVC PER.	FESN	REL	PID AVAIL	CURR. END	DESCRIPTION	SUP GROUP	CTR LOC	MAIL ADDR	PID NO.	ANNOUN LETTER
****														
5740 CONT														
****														
	U1		INST		631-7102	210	11/30/79		DMS/CICS/OS	CICS	13	AK	5740XC5	79-055
	U1		INST	" - "	" - "	211	11/30/79		DMS/CICS/OS FEATURE	CICS	13	AK	5740XC5	79-055
	U1		INST	" - "	" - "	310			DMS/CICS/OS	CICS	13	AK	5740XC5	79-055
	U1		INST	" - "	" - "	311			DMS/CICS/OS FEATURE	CICS	13	AK	5740XC5	79-055
	X4		INST		651-7102	110	04/28/79	07/31/80	DMS/CICS/OS				5740XC5	79-055
	X4		INST	" - "	" - "	111	04/28/79	07/31/80	DMS/CICS/OS FEATURE				5740XC5	79-055
	U1		INST	" - "	" - "	210	11/30/79		DMS/CICS/OS	CICS	13	AK	5740XC5	79-055
	U1		INST	" - "	" - "	211	11/30/79		DMS/CICS/OS FEATURE	CICS	13	AK	5740XC5	79-055
	U1		INST	" - "	" - "	310			DMS/CICS/OS	CICS	13	AK	5740XC5	79-055
	U1		INST	" - "	" - "	311			DMS/CICS/OS FEATURE	CICS	13	AK	5740XC5	79-055
XB-200	X2		MACH		099-0028				MVS TSO 3270					78-137
XM-1	X4		MACH		099-0039				GRAPHAGE OS/VS					
XM-3	X2		MACH		099-0028		03/20/78		MPSX/370 OS/VS			PR AR		
XP-1	X2		MACH		099-0028				PROJACS OS/VS			PR CA		
XP-1	X2		MACH		099-0028	023	12/14/76		STAIRS/VS			ST G		76-197
XR-2	X4		MACH		099-0039				RIRMS OS/VS					
XR-315	U1 *		MACH		620-2805	100	03/31/80		S/370 HOST PREP	IND. SYS	03	BT	5735XR3	79-135
	U1 *		MACH	" - "	" - "	200	10/07/80		S/370 HOST PREP	IND. SYS	03	BT	5735XR3	80-204
	U1 *		MACH	" - "	" - "	300	12/11/80		S/370 HOST PREP	IND. SYS	03	BT	5735XR3	80-276
	U1 *		MACH	" - "	" - "	400	05/31/81		S/370 HOST PREP	IND. SYS	03	BT	5735XR3	80-125
	U1 *		MACH		650-2805	100	03/31/80		S/370 HOST PREP	IND. SYS	03	BT	5735XR3	79-135
	U1 *		MACH	" - "	" - "	200	10/07/80		S/370 HOST PREP	IND. SYS	03	BT	5735XR3	80-204
	U1 *		MACH	" - "	" - "	300	12/11/80		S/370 HOST PREP	IND. SYS	03	BT	5735XR3	80-276
	U1 *		MACH	" - "	" - "	400	05/31/81		S/370 HOST PREP	IND. SYS	03	BT	5735XR3	80-125
XP-4	X2		MACH		099-0028				DECTAT OS/VS			PP AR		

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****															
5740	CONT														
****															
XR-500	U1	*	MACH		621-6402	010	04/30/76		OS/VS1 VSPC	VSPC	13	AK	5740XR5	76-057	
	U1	*	MACH		" - "	020	01/15/79		OS/VS1 VSPC	VSPC	13	AK	5740XR5	79-009	
XR-600	U1		MACH		651-6402	010	09/30/76		OS/VS2 VSPC	VSPC	13	AK	5740XR6	76-144	
	U1		MACH		" - "	020	09/29/78		OS/VS2 VSPC	VSPC	13	AK	5740XR6	78-086	
XR-900	X2		MACH		099-0028	010	03/31/77		VSTIO FOR VSPC					77-045	
XT-4	X2		INST		099-0028		11/17/77		TPNS					77-187	
XT-7	X4		INST		099-0028	100	02/28/77	12/31/80	OPC ENTRY					77-025	
XT-8	X2		INST		099-0028	210	04/25/77		TSO 3270 SPF		WP	N		77-065	
XT-900	X4		INST		099-0028	100	06/01/79	04/30/80	OPC					78-186	
	X2		INST		" - "	200	01/01/80		OPC						
XX-B	X2		MACH		099-0028				STEPS-PROD OS/VS		PP	CA			
XX-D00	X4		INST		621-5902	010	12/15/75	09/30/80	TCS-AF					5740XXD	75-076
	X4		INST		" - "	040	07/15/77	09/30/80	TCS-AF					5740XXD	77-127
	X4		INST		" - "	041	11/16/77	09/30/80	TCS-AF					5740XXD	77-186
	X4		INST		" - "	042	05/05/78	09/30/80	TCS-AF					5740XXD	78-071
	X4		INST		631-5902	010	12/15/75	09/30/80	TCS-AF					75-076	
	X4		INST		" - "	040	10/15/77	09/30/80	TCS-AF					77-127	
	X4		INST		" - "	041	11/16/77	09/30/80	TCS-AF					77-186	
	X4		INST		" - "	042	05/05/78	09/30/80	TCS-AF					78-071	
	X4		INST		651-5902	010	12/15/75	09/30/80	TCS-AF					5740XXD	75-076
	X4		INST		" - "	040	03/15/78	09/30/80	TCS-AF					5740XXD	77-127
	X4		INST		" - "	041	11/16/77	09/30/80	TCS-AF					5740XXD	77-186
	X4		INST		" - "	042	05/05/78	09/30/80	TCS-AF					5740XXD	78-071
XX-F00	U1		MACH		621-7202	300	11/01/79	05/31/81	DB/DC DATA DICTIONAR		13	AK		79-056	
	U1		MACH		" - "	400	09/26/80		DB/DC DATA DICTIONAR		13	AK		80-073	

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COMPONENT ID	SVC CLS	MP SC	LIC. TYPE	SVC PER.	FESN	REL	PID AVAIL	CURR. END	DESCRIPTION	SUP GROUP	CTR LOC	SUPP ADDP	MAIL NO.	PID NO.	ANNOUN LETTER
****															
5740															
****															
		U1	MACH		621-7202	410	09/26/80		CICS/VS ONLINE SUPT				13	AK	80-073
		U1	MACH		" - "	420	09/26/80		IMS/VS ONLINE SUPT				13	AK	80-073
		U1	MACH		631-7202	300	11/01/79	05/31/81	DB/DC DATA DICTIONAR				13	AK	5740XXF 79-056
		U1	MACH		" - "	400	09/26/80		DB/DC DATA DICTIONAR				13	AK	5740XXF 80-073
		U1	MACH		651-7202	300	11/01/79	05/31/81	DB/DC DATA DICTIONAR				13	AK	5740XXF 79-056
		U1	MACH		" - "	400	09/26/80		DB/DC DATA DICTIONAR				13	AK	5740XXF 80-073
		U1	MACH		" - "	410	09/26/80		CICS/VS ONLINE SUPT				13	AK	5740XXF 80-073
		U1	MACH		" - "	420	09/26/80		IMS/VS ONLINE SUPT				13	AK	5740XXF 80-073
	XX-Q	X2	INST		099-0028	210	11/29/77		DBDA DOS/VS						77-198
	XX-V	X2	MACH		099-0028	011	09/20/77		ATMS-II/OS/VS			PA	EB		77-150
	XX-100	U1	MACH		621-5302	140	09/29/78	06/30/81	CICS/OS/VS		CICS		13	CB	5740XX1 78-119
		U1	MACH		" - "	141	09/04/79	06/30/81	CICS/OS/VS		CICS		13	CB	5740XX1 79-145
		U1	MACH		" - "	150	09/30/80		CICS/OS/VS		CICS		13	CB	5740XX1 79-223
		U1	MACH		631-5302	140	09/29/78		CICS/OS/VS		CICS		13	CB	78-119
		U1	MACH		" - "	141	09/04/79		CICS/OS/VS		CICS		13	CB	79-145
		U1	MACH		651-5302	140	09/29/78	06/30/81	CICS/OS/VS		CICS		13	CB	5740XX1 78-119
		U1	MACH		" - "	141	09/04/79	06/30/81	CICS/OS/VS		CICS		13	CB	5740XX1 79-145
		U1	MACH		" - "	150	09/30/80		CICS/OS/VS		CICS		13	CB	5740XX1 79-223
	XX-214	X4	MACH		621-5502	114	05/05/77	06/15/80	DATA BASE IMS/VS						5740XX2 77-098
		U1	MACH		" - "	115	10/28/78		DATA BASE IMS/VS		IMS		13	AK	5740XX2 78-098
		U1	MACH		" - "	600	07/25/80		DATA BASE V1 R1.6		IMS		13	AK	5740XX2 80-059
		U1	MACH		621-5510	115	10/27/78		SURVEYOR UT IMS/VS		IMS		13	AK	5740XX2 78-098
		J1	MACH		" - "	610	07/25/80		SURVEYOR UT V1 R1.6		IMS		13	AK	5740XX2 80-059
		X4	MACH		621-5520	114	05/05/77	06/15/80	DATA COMM IMS/VS						5740XX2 77-098
		U1	MACH		" - "	115	10/28/78		DATA COMM IMS/VS		IMS		13	AK	5740XX2 78-098

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COMPONENT	SVC	MP	LIC.	SVC		PID	CURP.			SUP	CTP	SUPP	MAIL	PID	ANNOON
ID	CLS	SC	TYPE	BFR.	FFSN	REL	AVAIL	FND	DESCRIPTION	GROUP	LOC	ADDR	NO.	LEITER	
****															
5740	COVT														
****															
			U1	MACH	621-5520	620	07/25/80		DATA COMM V1 R1.6	IMS	13	AK	5740XX2	80-059	
			X4	MACH	631-5502	114	05/05/77	06/15/80	DATA BASE IMS/VS					77-098	
			U1	MACH	" - "	115	10/28/78		DATA BASE IMS/VS	IMS	13	AK		78-098	
			U1	MACH	631-5510	115	10/27/78		SURVEYOR UT IMS/VS	IMS	13	AK		78-098	
			X4	MACH	631-5520	114	05/05/77	06/15/80	DATA COMM IMS/VS					77-098	
			U1	MACH	" - "	115	10/28/78		DATA COMM IMS/VS	IMS	13	AK		78-098	
			X4	MACH	651-5502	114	05/05/77	06/15/80	DATA BASE IMS/VS				5740XX2	77-098	
			U1	MACH	" - "	115	10/28/78		DATA BASE IMS/VS	IMS	13	AK		78-098	
			U1	MACH	" - "	600	07/25/80		DATA BASE V1 R1.6	IMS	13	AK	5740XX2	80-059	
			U1	MACH	651-5510	115	10/27/78		SURVEYOR UT IMS/VS	IMS	13	AK	5740XX2	78-098	
			U1	MACH	" - "	610	07/25/80		SURVEYOR UT V1 R1.6	IMS	13	AK	5740XX2	80-059	
			X4	MACH	651-5520	114	05/05/77	06/15/80	DATA COMM IMS/VS				5740XX2	77-098	
			U1	MACH	" - "	115	10/28/78		DATA COMM IMS/VS	IMS	13	AK	5740XX2	78-098	
			U1	MACH	" - "	620	07/25/80		DATA COMM V1 R1.6	IMS	13	AK	5740XX2	80-059	
XX-700			U1	MACH	621-5802	111	08/26/77		GIS/VS	IMS	13	AK	5740XX7	77-072	
			U1	MACH	631-5802	111	08/26/77		GIS/VS	IMS	13	AK		77-072	
			U1	MACH	651-5802	111	08/26/77		GIS/VS	IMS	13	AK	5740XX7	77-072	
XX-8			X2	MACH	099-0028	020	11/09/77		PLANCODE I OS VS				PR CF	77-183	
XX-9			X2	MACH	099-0028	012	11/29/77		PLANCODE S OS VS				PR CF	77-199	
			X2	INST	" - "	014	02/06/80		PLANCODE S OS VS				PR AR		
XY-B00			X2	INST	099-0028		08/31/79		CIF/VS					78-024	
XY-C00			X2	INST	099-0028		07/25/79		CIF/VS CICS					78-024	
XY-D00			X2	INST	099-0028		05/25/79		AOF			PA	CN	78-097	
XY-P00			U1	MACH	621-4002	110	12/07/79		SCREEN DEF PAC/CICS			13	CB	5740XXF 79-099	
			U1	MACH	" - "	201	11/18/80		SCREEN DEF PAC/CICS			13	CB	5740XXF 80-138	



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COMPONENT ID	SVC CLS	MP SC	LIC. SVC TYPE PER.	FESN	REL	PID AVAIL	CURR. END	DESCRIPTION	SUP CTR GROUP	SUPP LOC	MAIL ADDR	PID NO.	ANNOU LETTER
****													
5740	CONT												
****													
		U1	MACH	651-4002	110	12/07/79		SCREEN DEF PAC/CICS			13 CB	5740XYF	79-099
		U1	MACH	" - "	201	11/18/80		SCREEN DEF PAC/CICS			13 CB	5740XYF	80-138
XY-K00	X2	MACH	099-0028			10/31/80		DOS SYSTEM 3730			ST AS		79-119
XY-L00	X2	MACH	099-0028	110		04/01/80		ATMS III			PA EA		79-147
XY-T00	U3	MACH	099-0028	110		10/21/80		TREND ANALYSIS			PA DY		80-226
XY-W00	U3	MACH	099-0028	110		09/30/81		OS/VS1 NJP			23		80-250
XY-211	X4	MACH	621-5530	114		10/01/76	06/15/80	MSC IMS VS				5740XX2	
	U1	MACH	" - "	115		10/01/76		MSC IMS VS	IMS	13 AK		5740XX2	
	U1	MACH	" - "	630		08/15/80		MSC IMS VS	IMS	13 AK		5740XX2	80-059
	X4	MACH	651-5530	114		10/01/76	06/15/80	MSC IMS VS				5740XX2	
	U1	MACH	" - "	115		10/01/76		MSC IMS VS	IMS	13 AK		5740XX2	
	U1	MACH	" - "	630		08/15/80		MSC IMS VS	IMS	13 AK		5740XX2	80-059
XY-300	U1	MACH	621-5903	122		11/13/78	06/30/81	TCS-ACF BASE	TCS	23 AL		5740XY3	78-210
	U1	MACH	" - "	122		11/13/78	06/30/81	TCS-ACF NETWORKING	TCS	23 AL		5740XY3	78-210
	U1	MACH	631-5903	121		09/05/78	06/30/81	TCS-ACF BASE	TCS	23 AL			78-151
	U1	MACH	" - "	121		09/05/78	06/30/81	TCS-ACF NETWORKING	TCS	23 AL			78-151
	U1	MACH	651-5903	110		11/16/77	06/30/81	TCS-ACF BASE	TCS	23 AL		5740XY3	77-185
	U1	MACH	" - "	110		11/16/77	06/30/81	TCS-ACF NETWORKING	TCS	23 AL		5740XY3	77-185
	U1	MACH	" - "	111		05/05/78	06/30/81	TCS-ACF BASE	TCS	23 AL		5740XY3	78-070
	U1	MACH	" - "	111		05/05/78	06/30/81	TCS-ACF NETWORKING	TCS	23 AL		5740XY3	78-070
	U1	MACH	" - "	120		07/20/78	06/30/81	TCS-ACF BASE	TCS	23 AL		5740XY3	78-130
	U1	MACH	" - "	120		07/20/78	06/30/81	TCS-ACF NETWORKING	TCS	23 AL		5740XY3	78-130
XY-8	X2	INST	099-0028	210		11/29/77	06/30/81	DRDA OS/VS					77-198
XY-900	X2	MACH	099-0028			10/31/80		DOS			ST AS		79-119

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COMPONENT ID	SVC CLS	MP SC	LIC. TYPE	SVC PER.	FESN	REL	PID AVAIL	CURR. END	DESCRIPTION	SUP GROUP	CTP LOC	SUPP MAIL ADDR	PID NO.	ANNOUN LETTER
****														
5741			OS				VS1							
****														
			U4		520-0000	060	10/11/76	03/31/80	VS1 BASE				5741VS1	76-150
			S2		" - "	101	03/01/79		NSS BASE (067)				5741VS1	78-142
			S1	*	" - "	201	09/01/79		NSS BASE (070)				5652VS1	79-021
BD-TST	--	--			520-2056	---			DLIB LOAD/INSTALL			02 BR		
CM-100	S2				520-4802	101	03/01/79		DEMF	DEMF	23 AL		5741VS1	78-142
	U4				" - "	624	02/13/78	12/31/80	DEMF	DEMF	23 AL		5741VS1	78-016
CU-134	U1		MACH		621-7006	101	10/07/80		CRYPTO UNIT SUPPT	CRYPTO	02 BG		5740XY6	80-022
DM-1CM	U1	*	MACH		620-1429	121	09/30/81		MEDIA MANAGER		13 AK		5740AM6	80-112
DM-1CV	U1	*	MACH		620-1428	121	09/30/81		COMMON VTOC ACCESS		13 AK		5740AM6	80-112
HC-133	U1	*	MACH		620-5631	101	03/31/80		HCF TCAM		03 BG		5735XR1	78-174
	U1	*	MACH		" - "	102	11/30/79		HCF VTAM		03 BG		5735XR1	78-174
PD-132	U1	*	MACH		621-1419	111	11/30/79		NPDA	NPDA	03 BG		5735XX8	78-209
	U1	*	MACH		" - "	211	12/01/80		NPDA	NPDA	03 BG		5735XX8	79-133
SC-OBR	S2				520-5003	100	03/01/79		OBR	ERP	02 BG		5741VS1	78-142
	U1	*	MACH		620-5003	211	09/16/80		OBR	ERP	02 BG			80-022
	U1	*	MACH		" - "	311	06/30/81		OBR	ERP	02 BG			80-270
SC-1BB	--	--			520-2002	---			RES/RTAM	JCB MGT	01 AN			
	U1	*	MACH		620-2002	121	08/31/79		RES/RTAM	JCB MGT	01 AN			79-069
SC-1BC	--	--			520-3806	---			RES ACCOUNT UTILITY	JOB MGT	02 AX			
SC-1BD	--	--			520-2004	---			RSTRT RDR/DSDR PROC	JOB MGT	01 AN			
SC-1BE	--	--			520-2005	---			SYSTEM LOG	JOB MGT	01 AN			
SC-1BF	--	--			520-2006	---			WTP	JOB MGT	01 AN			
SC-1BG	--	--			520-2007	---			SCHED INITIALIZATION	JOB MGT	01 AN			
SC-1BJ	--	--			520-2008	---			JOB LIST MGR	JOB MGT	01 AN			
SC-1BK	--	--			520-2009	---			ISSP	JOB MGT	01 AN			

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COMPONENT ID	SVC CLS	MP SC	LIC. TYPE	SVC PER.	FESN	REL	PID AVAIL	CURR. END	DESCRIPTION	SUP GPOUP	CTP	SUPP LOC	MAIL ADDR	PID NO.	ANNOUN LETTER
****															
E741 CONT															
****															
SC-1BL	S2				520-2058	101	03/01/79		SSI	JOB MGT	01	AN	5741VS1	78-142	
SC-1BZ	--	-			520-3502	---			MSS RECOVERY SERV	JOB MGT	13	AK			
	U1		MACH		620-3502	111	06/29/79		MSSE RECOVERY SER	JOB MGT	13	AK	5740XY3	78-224	
	U1		MACH		" - "	113	03/27/80		MSSE RECOVERY SER	JOB MGT	13	AK	5740XY3	80-061	
SC-1B0	--	-			520-2010	---			JEC5	JOB MGT	01	AN			
SC-1B1	--	-			520-2011	---			INPUT STREAM CONTROL	JOB MGT	01	AN			
SC-1B2	--	-			520-2012	---			OUTPUT STREAM CTL	JOB MGT	01	AN			
	U1	*	MACH		620-2012	211	09/16/80		OUTPUT STREAM CTL	JOB MGT	01	AN	5662257	80-022	
	U1	*	MACH		" - "	311	06/30/81		OUTPUT STREAM CTL	JOB MGT	01	AN	5662257	80-270	
SC-1B3	--	-			520-2013	---			SYSTEM RESTART	JOB MGT	01	AN			
SC-1B4	--	-			520-2014	---			I O DEVICE ALLOC	JOB MGT	01	AN			
	U1	*	MACH		620-2014	211	09/16/80		I O DEVICE ALLOC	JOB MGT	01	AN	5662257	80-022	
	U1	*	MACH		" - "	311	06/30/81		I O DEVICE ALLOC	JOB MGT	01	AN	5662257	80-270	
SC-1B5	--	-			520-2015	---			QUEUE MANAGER	JOB MGT	01	AN			
SC-1B6	--	-			520-2016	---			INITIATOR/DSO	JOB MGT	01	AN			
	U1	*	MACH		620-2016	211	09/16/80		INITIATOR/DSO	JOB MGT	01	AN	5662257	80-022	
	U1	*	MACH		" - "	311	06/30/81		INITIATOR/DSO	JOB MGT	01	AN	5662257	80-270	
SC-1B7	--	-			520-2017	---			TERMINATION	JOB MGT	01	AN			
	U1	*	MACH		620-2017	211	09/16/80		TERMINATION	JOB MGT	01	AN	5662257	80-022	
	U1	*	MACH		" - "	311	06/30/81		TERMINATION	JOB MGT	01	AN	5662257	80-270	
SC-1B8	--	-			520-2018	---			COMMANDS	JOB MGT	01	AN			
	U4				" - "	620	04/24/78	12/31/80	COMMANDS	JOB MGT	02	AN	5741VS1	78-061	
	U1	*	MACH		620-2018	211	09/16/80		COMMANDS	JOB MGT	01	AN	5662257	80-022	
	U1	*	MACH		" - "	311	06/30/81		COMMANDS	JOB MGT	01	AN	5662257	80-270	
SC-1B9	--	-			520-2019	---			INTERPRETER	JOB MGT	01	AN			

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COMPONENT ID	SVC CLS	MP SC	LIC. TYPE	SVC PER.	FESN	REL	PID AVAIL	CURR. END	DESCRIPTION	SUP GROUP	CTR LOC	MAIL ADDR	PID NO.	ANNOUN LETTER
****														
5741														
****														
SC-1CA	--	-			520-2201	---			DASD ERP	ERP		13 AK		
	U1	*	MACH		620-2201	121	09/30/81		DASD ERP	ERP	13	AK	5740AM6	80-112
SC-1CB	--	-			520-2202	---			UNIT RECORD ERP	ERP		13 AK		
	S1	*			" - "	131	03/05/80		UNIT RECORD ERP	ERP	13	AK	5652VS1	79-187
	U1	*	MACH		620-2202	135	09/16/80		UNIT RECORD ERP	ERP	13	AK	5662257	80-022
	U1	*	MACH		" - "	235	06/30/81		UNIT RECORD ERP	ERP	13	AK	5662257	80-270
SC-1CC	--	-			520-2203	---			TAPE ERP/VES	ERP		13 AK		
	U1	*	MACH		620-2203	121	09/30/81		TAPE ERP/VES	ERP	13	AK	5740AM5	80-112
SC-1CD	--	-			520-2042	---			OBR/ERP/RDE	ERP		02 BG		
SC-1CE	--	-			520-2023	---			RMS	SUPERV.		02 BG		
	U4				" - "	620	04/24/78	12/31/80	RMS	SUPERV.	02	BG	5741VS1	78-061
SC-1CI	--	-			520-3503	---			3851 ERP	ERP		13 AK		
SC-1CN	--	-			520-2025	---			COMMON SUPV MACROS	SUPERV.		01 AN		
	U1	*	MACH		620-2025	211	09/16/80		COMMON SUPV MACROS	SUPERV.	01	AN	5662257	80-022
	U1	*	MACH		" - "	311	06/30/81		COMMON SUPV MACROS	SUPERV.	01	AN	5662257	80-270
SC-1CP	--	-			520-2026	---			EXT PREC FLT PT SIM	SUPERV.		01 AN		
SC-1CS	--	-			520-1420	---			CONDITIONAL ASM SWTH	SUPERV.		13 AK		
SC-1C1	--	-			520-2027	---			IPL	SUPERV.		01 AN		
	U1	*	MACH		620-2027	211	09/16/80		IPL	SUPERV.	01	AN	5662257	80-022
	U1	*	MACH		" - "	311	06/30/81		IPL	SUPERV.	01	AN	5662257	80-270
SC-1C2	--	-			520-1801	---			OVERLAY SUPERVISOR	SUPERV.		13 AK		
SC-1C3	--	-			520-2028	---			IOS	ERP		01 AN		
	U4				" - "	620	04/24/78	12/31/80	IOS	ERP	02	AN	5741VS1	78-061
	U1	*	MACH		620-2028	211	09/16/80		IOS	ERP	01	AN	5662257	80-022
	U1	*	MACH		" - "	311	06/30/81		IOS	ERP	01	AN	5662257	80-270

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COMPONENT ID	SVC CLS	MP SC	LIC. TYPE	SVC PFR.	FESN	REL	PID AVAIL	CURR. END	DESCRIPTION	SUPP GROUP	CTR LOC	SUPP ADDR	MAIL NO.	PID NO.	ANNOUN LEIFER
****															
5741 CONT															
****															
SC-1C4	--	-			520-2029	---			DIDOCs	DIDOCs	02	BG			
	U4				" - "	620	04/24/78	12/31/80	DIDOCs	DIDOCs	02	BG	5741VS1	78-061	
SC-1C5	--	-			520-2030	---			SUPERVISOR	SUPERV.	01	AN			
	U1	*	MACH		620-2030	211	09/16/80		VS1 BPEP FPAT	SUPERV.	01	AN	5662257	80-022	
	U1	*	MACH		" - "	311	06/30/81		VS1 BPEP FPAT	SUPERV.	01	AN	5662257	80-270	
SC-1C7	--	-			520-1802	---			FETCH	SUPERV.	13	AK			
SC-1C8	--	-			520-2031	---			NIP	SUPERV.	01	AN			
	U4				" - "	620	04/24/78	12/31/80	NIP	SUPERV.	02	AN	5741VS1	78-061	
	U1	*	MACH		620-2031	211	09/16/80		NIP	SUPERV.	01	AN	5662257	80-022	
	U1	*	MACH		" - "	311	06/30/81		NIP	SUPERV.	01	AN	5662257	80-270	
SC-1DB	--	-			520-1405	---			JES COMPAT INTERFACE	DATA MGT	13	AK			
SC-1DC	--	-			520-1406	---			PASSWORD PROTECT	DATA MGT	13	AK			
SC-1DD	--	-			520-3801	---			3505/3525 RDR/PCH SP	DATA MGT	13	AK			
SC-1DE	--	-			520-1404	---			VSAM	DATA MGT	13	AK			
	S1	*			" - "	131	03/05/80		VSAM	DATA MGT	13	AK	5652VS1	79-187	
	U4				" - "	615	04/28/78	12/31/80	VSAM	DATA MGT	13	AK		78-068	
	U1	*	MACH		620-1404	121	09/30/81		VSAM	DATA MGT	13	AK	5740AM6	80-112	
SC-1DF	--	-			520-3306	---			3890 DOC PROC	DATA MGT	01	AN			
SC-1DK	--	-			520-1418	---			ACCESS METHOD SERVIC	DATA MGT	13	AK			
	U1		MACH		620-1418	111	03/01/79		AMS CRYPTO OPTION	DATA MGT	13	AK	5740AM9	78-142	
	U1		MACH		" - "	625	08/25/78		AMS CRYPTO OPTION	DATA MGT	13	AK	5740AM9		
SC-1DL	--	-			520-3301	---			3886 OCR	DATA MGT	01	AN			
SC-1DM	U4				520-3302	604		12/31/80	3895 ERP	DATA MGT	01	AN	5741VS1		
SC-1DN	--	-			520-3303	---			3540	DATA MGT	01	AN			
SC-1DP	--	-			520-3504	---			MSS COMMUNICATOR	DATA MGT	13	AK			



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COMPONENT ID	SVC CLS	MP SC	LIC. SVC TYPE PER.	FESN	REI	PID AVAIL	CURR. END	DESCRIPTION	SUP CTR GROUP	SUPP LOC	MAIL ADDR	PID NO.	ANNOUN LETTER
**** 5741 CONT ****													
SC-1D3	--	-		520-1422	---			CATALOG	DATA MGT	13	AK		
SC-1D4	--	-		520-1412	---			DADSM	DATA MGT	13	AK		
	U1	*	MACH	620-1412	121	09/30/81		DADSM	DATA MGT	13	AK	5740AM5	80-112
SC-1D5	--	-		520-3304	---			OCR	DATA MGT	01	AN		
SC-1D6	--	-		520-3201	---			MICR	DATA MGT	13	AK		
SC-1D7	--	-		520-1414	---			DAM	DATA MGT	13	AK		
SC-1D8	--	-		520-1415	---			ISAM	DATA MGT	13	AK		
SC-1D9	--	-		520-1423	---			JAM	DATA MGT	13	AK		
	S1	*		" - "	131	03/05/80		JAM	DATA MGT	13	AK	5652VS1	79-187
	U1	*	MACH	620-1423	135	09/16/80		JAM	DATA MGT	13	AK	5662257	80-022
	U1	*	MACH	" - "	235	06/30/81		JAM	DATA MGT	13	AK	5662257	80-270
SC-1E1	--	-		520-1104	---			EMUL CONTROL	EMULATOR	63	F		
SC-1G0	--	-		520-2516	---			GAM	BTAM	02	CE		
	U4			" - "	620	04/24/78	12/31/80	GAM	BTAM	02	CE	5741VS1	78-061
SC-1I0	--	-		520-2204	---			IBCDMPRS	UTILITY	65	S		
SC-1I1	--	-		520-2205	---		01/22/81	IBCDASDI	UTILITY	65	S		
SC-1I2	--	-		520-1704	---			ICAPRTBL	UTILITY	65	S		
	U1	*	MACH	620-1704	135	09/16/80		ICAPRTBL	UTILITY	65	S	5662257	80-022
	U1	*	MACH	" - "	235	06/30/81		ICAPRTBL	UTILITY	65	S	5662257	80-270
SC-1SS	--	-		520-3602	---			SSS (BASE IND)	IND. SYS	03	CE		
	S2			" - "	031			SSS (BASE IND)	IND. SYS	03	CE		
	S2			" - "	040			SSS (BASE IND)	IND. SYS	03	CE		
	S2			" - "	050			SSS (BASE IND)	IND. SYS	03	CF		
SC-1SU	--	-		520-5101	---	03/01/79		SU BIT STRING	SUPERV.	01	AN		78-142
SC-1S1	--	-		520-2032	---			SYSGEN	SYSGEN	01	AN		

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COMPONENT ID	SVC CLS	MP SC	LIC. TYPE	SVC PER.	FESN	REL	PID AVAIL	CURR. END	DESCRIPTION	SUP GROUP	CTR LOC	SUPP MAIL ADDR	PID NO.	ANNOU LETTER
****														
5741									CONT					
****														
		U4			520-2032	620	04/24/78	12/31/80	SYSGEN	SYSGRP	02	AN	5741VS1	78-061
		U1	*	MACH	620-2032	211	09/16/80		SYSGEN	SYSGPN	01	AN	5662257	80-022
		U1	*	MACH	" - "	311	06/30/81		SYSGEN	SYSGPN	01	AN	5662257	80-270
SC-1S2	--	--	--	--	520-2033	---			STARTER SYSTEM 3330	SYSGEN	01	AN		
SC-1S3	--	--	--	--	520-2040	---			STARTER SYSTEM 2314	SYSGPN	01	AN		
SC-1S4	--	--	--	--	520-2034	---			SUPERVISOR SYSGEN	SYSGEN	01	AN		
		U1	*	MACH	620-2034	211	09/16/80		SUPERVISOR SYSGEN	SYSGEN	01	AN	5662257	80-022
		U1	*	MACH	" - "	311	06/30/81		SUPERVISOR SYSGPN	SYSGPN	01	AN	5662257	80-270
SC-1S5	--	--	--	--	520-2020	---			SCHEDULER SYSFPN	SYSGEN	01	AN		
		U4			" - "	620	04/24/78	12/31/80	SCHEDULER SYSFPN	SYSGEN	01	AN	5741VS1	78-061
		U1	*	MACH	620-2020	211	09/16/80		SCHEDULER SYSGEN	SYSGEN	01	AN	5662257	80-022
		U1	*	MACH	" - "	311	06/30/81		SCHEDULER SYSFPN	SYSGEN	01	AN	5662257	80-270
SC-1S6	--	--	--	--	520-2055	---			SERVICE AIDS SYSGEN	SYSGEN	02	BG		
SC-1S7	--	--	--	--	520-2059	---	03/01/79		IOSGEN	SYSGEN	02	AN		78-142
SC-1UA	--	--	--	--	520-1705	---			IEBPTPCH	UTILITY	65	S		
SC-1UC	--	--	--	--	520-1706	---			IEHMOV	UTILITY	65	S		
SC-1UD	--	--	--	--	520-1707	---			IEHINIT	UTILITY	65	S		
SC-1UF	--	--	--	--	520-1708	---			IEHSTAT	UTILITY	65	S		
SC-1UF	--	--	--	--	520-2207	---			IEHATLAS	UTILITY	65	S		
		U1	*	MACH	620-2207	121	09/30/81		IEHATLAS	UTILITY	65	S	5740AM5	90-112
SC-1UG	--	--	--	--	520-3305	---			IEBTRN	UTILITY	02	AN		
SC-1UH	--	--	--	--	520-1710	---			IEBISAM	UTILITY	65	S		
SC-1UJ	--	--	--	--	520-1711	---			IEBDS	UTILITY	65	S		
SC-1UK	--	--	--	--	520-1712	---			IEBSCOMP	UTILITY	65	S		
SC-1UM	--	--	--	--	520-1713	---			IEBIMAGE	UTILITY	65	S		



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COMPONENT ID	SVC CLS	MP SC	LIC. SVC TYPE PFR.	FESN	REL	PTD AVAIL	CUPP. END	DESCRIPTION	SUP GROUP	CTR LOC	SUPP MAIL ADDR	PTD NO.	ANNOUN LETTER
****													
5741			CONT										
****													
	SC-10N	S1	*	520-1713	131	03/05/80		IEBIMAGE	UTILITY	65	S	5652VS1	79-187
		S2		520-2210	121	09/30/81		DSF SYS SUPPORT	UTILITY	13	AK	5652VS1	80-115
		S2		" - "	211	01/22/80		DSF SYS SUPPORT	UTILITY	13	AK	5652VS1	80-012
		S2		" - "	311	11/26/80		DSF SYS SUPPORT	UTILITY	13	AK	5652VS1	80-115
		U4		" - "	638	12/31/78	12/31/80	DSF SYS SUPPORT	UTILITY	13	AK	5741VS1	78-135
	SC-10R	U4		520-2211	638	12/31/78	12/31/80	DSF STANDALONE	UTILITY	13	AK	5741VS1	78-135
	SC-10X	--	--	520-1714	---			SGIEH402	UTILITY	65	S		
	SC-100	--	--	520-2208	---		01/22/81	IEHDASDR	UTILITY	65	S		
	SC-101	--	--	520-1716	---			IEHIOSUP	UTILITY	65	S		
	SC-102	--	--	520-1717	---			IEHLIST	UTILITY	65	S		
		U1	* MACH	620-1717	121	09/30/81		IEHLIST	UTILITY	65	S	5740AM5	80-112
	SC-103	--	--	520-1718	---			IEHPROGM	UTILITY	65	S		
	SC-106	--	--	520-1719	---			IEBCOPY	UTILITY	65	S		
	SC-107	--	--	520-1720	---			IEBGGENER	UTILITY	65	S		
	SC-108	--	--	520-1721	---			IEBUPDTE	UTILITY	65	S		
	SC-109	--	--	520-1722	---			IEBEDIT	UTILITY	65	S		
	SC-10C	S2		520-3002	011			TOLTEP	VTAM	03	BX	5741VS1	
		S2		" - "	020	04/30/76		TOLTEP VTAM VS1-6	VTAM	03	BX	5741VS1	76-055
		U4		" - "	101	03/01/79	12/31/80	TOLTEP ACFVTM SCP R1	VTAM	03	BX	5741VS1	78-142
		U4		" - "	107	03/01/79	12/31/80	TOLTEP VTAM	VTAM	03	BX	5741VS1	78-142
		U4		" - "	201	12/31/79	12/31/80	TOLTEP ACFVTM SCP R2	VTAM	03	BX	5741VS1	78-203
		S2		" - "	207	08/31/79	12/31/82	TOLTEP VTAM VS1-7	VTAM	03	BX	5741VS1	
		U4		" - "	615	04/30/78	12/31/80	TOLTEP ACFVTAM VS1-6	VTAM	03	BX	5741VS1	
		S2		" - "	901	08/31/79	12/31/82	TOLTEP ACF VS1-7 SCP	VTAM	03	BX	5741VS1	
		U1	MACH	620-3002	111	03/01/79	09/30/81	TOLTEP ACFVTM PP R1	VTAM	03	BX	5735RC2	78-142

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COMPONENT ID	SVC # CLS SC	LIC. SVC TYPE PER.	FESN	REL	PID AVAIL	CURR. END	DESCRIPTION	SUP GROUP	CTR LOC	SUPP MAIL ADDR	PID NO.	ANNOU LETTER
****												
5741 CONT												
****												
	U1	MACH	620-3002	211	12/31/79	12/31/82	TOLTEP ACFVTM PP R2	VTAM	03	BX	5735RC2	78-203
	U1	MACH	" - "	311	05/01/81		TOLTEP PP R3	VTAM	03	BX	5735RC2	79-126
	U1	MACH	" - "	607	04/30/78	12/31/82	TOLTEP ACFVTAM VS1-6	VTAM	03	BX	5735RC2	
	U1	MACH	" - "	911	08/31/79	12/31/82	TOLTEP PP VS1-7	VTAM	03	BX	5735RC2	
SC-10E	--	-	520-3804	---			POWER WARNING FEAT	SUPERV.	02	AX		
SC-100	--	-	520-2021	---			SCHEDULER SMF	JOB MGT	01	AN		
SC-101	--	-	520-1424	---			MAPPING MACROS	SUP MACR	02	BN		
	U4		" - "	620	04/24/78	12/31/80	MAPPING MACROS	SUP MACR	02	BN	5741VS1	78-061
SC-102	--	-	520-2022	---			SMF	JOB MGT	01	AN		
SC-103	--	-	520-1302	---			ASSEMBLER KP	ASSEMB	65	S		
SC-104	--	-	520-3902	---			LINKAGE EDITOR	LNK/EDIT	13	AK		
SC-105	--	-	520-3903	---			LOADER	LNK/EDIT	13	AK		
SC-106	--	-	520-3802	---			OLTEP	OLTEP	02	BG		
SC-107	--	-	520-2801	---			GSP	SUPERV.	02	CE		
SC-108	--	-	520-2036	---			IVP	SYSGEN	01	AN		
SC-109	--	-	520-1416	---			CHECK POINT/RESTART	JOB MGT	13	AK		
	U1	* MACH	620-1416	121	09/30/81		CHECK POINT/RESTART	JOB MGT	13	AK	5740AM5	80-112
SC-111	--	-	520-2043	---			GTF	SERV AID	02	BG		
SC-112	--	-	520-2044	---			HMASPZAP	SERV AID	02	BG		
SC-113	--	-	520-2045	---			HMDPRDMP	SERV AID	02	BG		
	U4		" - "	620	04/24/78	12/31/80	HMDPRDMP	SERV AID	02	BG	5741VS1	78-061
	U1	* MACH	620-2045	211	09/16/80		HMDPRDMP	SERV AID	02	BG		80-022
	U1	* MACH	" - "	311	06/30/81		HMDPRDMP	SERV AID	02	BG		80-270
SC-114	--	-	520-1805	---			HMBLIST	SERV AID	13	AK		
SC-115	--	-	520-2046	---			HMDSDMP	SERV AID	02	BG		

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COMPONENT ID	SVC CLS	MP SC	LIC. TYPE	SVC PER.	FESN	REL	PID AVAIL	CURR. END	DESCRIPTION	SUP CTR GROUP	SUPP LOC	MAIL ADDR	PID NO.	ANNOUN LETTER
****														
5741									CONT					
****														
SC-117	--	-			520-2037	---			IMCJOBQD	SERV	AID	01	AN	
SC-118	--	-			520-2048	---			HMDPRDMP/EDIT	SERV	AID	02	BG	
SC-119	--	-			520-2038	---			IMCOSJQD	SERV	AID	01	AN	
SC-120	--	-			520-2602	---			BTAM	BTAM		02	CE	
SC-121	S2				520-4401	090	03/31/76		TCAM 9	TCAM		23	AL	5741VS1 75-054
	SY				" - "	101	03/01/79		ACF/TCAM V1 SCP-PLR	TCAM		23	AL	5741VS1 78-142
	S2				" - "	107			TCAM DIRECT-PLR 067	TCAM		23	AL	5741VS1
	S2				" - "	207			TCAM DIRECT-PLR 070	TCAM		23	AL	5741VS1
	U4				" - "	602	06/15/77	12/31/80	TCAM DIRECT-SU	TCAM		23	AL	5741VS1 77-095
	U4				" - "	612	06/29/78	12/31/80	ACF/TCAM V1 SCP-SU	TCAM		23	AL	5741VS1 78-112
	U1	MACH			620-4401	111	03/01/79		ACF/TCAM V1 PP-PLR	TCAM		23	AL	5744CG1 78-142
	U1	MACH			" - "	121	03/01/79		ACF/TCAM V1 NET-PLR	TCAM		23	AL	5744CG1 78-142
	X4	MACH			" - "	613	06/29/78	12/31/80	ACF/TCAM V1 PP-SU					5744CG1 78-112
	X4	MACH			" - "	614	06/29/78	12/31/80	ACF/TCAM V1 NET-SU					5744CG1 78-112
SC-123	S2				520-3003	011			VTAM	VTAM		03	BX	5741VS1
	S2				" - "	020	04/30/76		VTAM	VTAM		03	BX	5741VS1 76-055
	S2				" - "	101	03/01/79		ACF/VTAM SCP BASE R1	VTAM		03	BX	5741VS1 78-142
	SY				" - "	107	03/01/79		VTAM SCP	VTAM		03	BX	5741VS1 78-142
	SY				" - "	201	12/31/79	12/31/82	ACF/VTAM SCP BASE R2	VTAM		03	BX	5741VS1 78-203
	SY				" - "	207	08/31/79	12/31/82	VTAM VS1-7	VTAM		03	BX	5741VS1
	SY				" - "	301	05/01/81		ACF/VTAM SCP BASE R3	VTAM		03	BX	5741VS1 79-126
	U4				" - "	615	04/30/78	12/31/80	ACF/VTAM SCP BASE R1	VTAM		03	BX	5741VS1 78-068
	SY				" - "	901	08/31/79	12/31/82	ACFVTAM SCP R1 VS1-7	VTAM		03	BX	5741VS1
	U1	MACH			620-3003	111	03/01/79	09/30/81	ACF/VTAM PP BASE R1	VTAM		03	BX	5735PC2 78-142
	U1	MACH			" - "	121	03/01/79	09/30/81	ACF/VTAM MSNF R1	VTAM		03	BX	5735PC2 78-142

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COMPONENT ID	SVC CLS	MP SC	LIC. TYPE	SVC PER.	FESN	REL	PID AVAIL	CURR. END	DESCRIPTION	SUP GROUP	CTR LOC	MAIL ADDR	PID NO.	ANNOU LETTER
****														
5741														
CONT														
****														
	U1		MACH		620-3003	131	03/01/79	09/30/81	ACF/VTAM CRYPTO R1	VTAM	03	BX	5735RC2	78-142
	U1		MACH		" - "	211	12/31/79	12/31/82	ACF/VTAM PP BASE R2	VTAM	03	BX	5735RC2	78-203
	U1		MACH		" - "	221	12/31/79	12/31/82	ACF/VTAM MSNF R2	VTAM	03	BX	5735RC2	78-203
	U1		MACH		" - "	231	12/31/79	12/31/82	ACF/VTAM CRYPTO R2	VTAM	03	BX	5735RC2	78-203
	U1		MACH		" - "	311	05/01/81		ACF/VTAM PP BASE R3	VTAM	03	BX	5735RC2	79-126
	U1		MACH		" - "	321	05/01/81		ACF/VTAM MSNF R3	VTAM	03	BX	5735RC2	79-126
	U1		MACH		" - "	331	05/01/81		ACF/VTAM CRYPTO R3	VTAM	03	BX	5735RC2	79-126
	U1		MACH		" - "	607	04/30/78	12/31/82	ACF/VTAM PP BASE R1	VTAM	03	BX	5735RC2	78-068
	U1		MACH		" - "	608	04/30/78	12/31/82	ACF/VTAM MSNF R1	VTAM	03	BX	5735RC2	78-068
	U1		MACH		" - "	618	08/30/78	12/31/82	ACF/VTAM CRYPTO R1	VTAM	03	BX	5735RC2	77-207
	U1		MACH		" - "	911	08/31/79	12/31/82	ACF/VTAM PP R1 VS1-7	VTAM	03	BX	5735RC2	
	U1		MACH		" - "	921	08/31/79	12/31/82	ACFVTAM MSN R1 VS1-7	VTAM	03	BX	5735RC2	
	U1		MACH		" - "	931	08/31/79	12/31/82	ACFVTM CRYP R1 VS1-7	VTAM	03	BX	5735PC2	
SC-124	S2				520-3102	010			3600 HOST SUPPORT	IND. SYS	23	DN	5744BQ3	
SC-126	S2				520-3202	032	01/09/78		3650 RETAIL/3650	IND. SYS	23	AL	5744BQ3	78-001
SC-127	U4				520-3204	010	09/10/74		3660 HOST SUPPORT	IND. SYS	23	BU	5744BP2	74-045
	S2				" - "	030	05/20/77		3660 HOST SUPPORT	IND. SYS	23	BU	5744BR2	77-086
	S2				" - "	031			3660 HOST SUPPORT	IND. SYS	23	BU	5744BP2	
	S2				" - "	032			3660 HOST SUPPORT	IND. SYS	23	BU	5744BR2	
SC-130	--	-			520-1502	---			HMASMP	SMP	02	BN		
	U4				" - "	622	08/01/77	03/31/80	HMASMP	SMP	02	BN		77-121
SC-131	--	-			520-2209	---			3344/3350 AP-1	SUPERV.	13	AK		
TC-221	S2				522-5601	101	09/01/79		ACF/TCAM V2R1 SCP070	TCAM	23	AL	5735RC3	78-204
	S2				" - "	107			ACF/TCAM V2R1 SCP067	TCAM	23	AL	5735RC3	
	S2				" - "	201	07/31/80		ACF/TCAM V2R2 SCP070	TCAM	23	AL	5735RC3	78-204

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COMPONENT ID	SVC CLS	MP SC	LIC. TYPE	SVC PER.	FESN	REL	PID AVAIL	CURR. END	DESCRIPTION	SUP GROUP	CTR LOC	MAIL ADDR	PID NO.	ANNOUN LETTER
****														
5741														
****														
		S2			522-5601	207			ACF/TCAM V2R2 SCP067	TCAM	23	AL	5735RC3	
		S2			" - "	301	05/30/81		ACF/TCAM V2R3 SCP	TCAM	23	AL	5735RC3	79-127
		U1	MACH		622-5601	111	09/01/79		ACF/TCAM V2R1 PP	TCAM	23	AL		78-204
		U1	MACH		" - "	121	09/01/79		ACF/TCAM V2R1 NET	TCAM	23	AL		78-204
		U1	MACH		" - "	211	07/31/80		ACF/TCAM V2R2 PP	TCAM	23	AI		78-204
		U1	MACH		" - "	221	07/31/80		ACF/TCAM V2R2 NET	TCAM	23	AL		78-204
		U1	MACH		" - "	311	05/30/81		ACF/TCAM V2R3 PP	TCAM	23	AL		79-127
		U1	MACH		" - "	321	05/30/81		ACF/TCAM V2R3 NET	TCAM	23	AL		79-127
VA-123		U1	* MACH		620-3005	101	09/30/80		VM/VCNA	VTAM	03	BX	5735RC5	80-018
XX-200		U1	* MACH		621-3006	101	03/01/79		NOSP	VTAM	03	BG	5735XX2	78-142
		U1	* MACH		" - "	201	08/31/79		NOSP R1 VS1-7	VTAM	03	BG	5735XX2	
		U1	* MACH		" - "	609	04/30/78		NOSP	VTAM	03	BG	5735XX2	78-069
XX-600		U1	* MACH		621-7602	101	11/30/79		NCCF	VTAM	03	BG	5735XX6	78-208
		U1	* MACH		" - "	301	04/30/80		NCCF	VTAM	03	BG	5735XX6	78-208
		U1	* MACH		" - "	501	02/29/80		NCCF	VTAM	03	BG	5735XX6	78-208
XY-E00		U1	* MACH		621-3807	121	08/31/79		IDWS	RES/RTAM	01	AN	5740XYE	79-069
XY-500		U1	MACH		621-7005	010	08/31/78		CRYPTO FACILITY	CRYPTO	02	BG	5740XY5	77-205
		U1	MACH		" - "	101	03/01/79		CRYPTO FACILITY	CRYPTO	02	BG	5740XY5	78-142

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 5742 OS SVS  
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ALL X4 099 0039

OTHER OS SVS PROGRAM

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COMPONENT ID	SVC CLS	MP SC	LIC. TYPE	SVC PER.	FESN	REL	PID AVAIL	CURR. END	DESCRIPTION	SUP GROUP	CTR LOC	SUPP MAIL ADDR	PID NO.	ANNOU LETTER
****														
5743														
****														
****														
5744	OS	VS												
****														
AA-100	US				151-0929	100	05/28/76		OS/VS MACLIB/R			27	AF	676-33
AB-100	US				151-0819	100	05/28/76		OS/VS ASH/7			27	AF	676-33
AC-100	US				151-0829	100	05/28/76		OS/VS LINK/7			27	AF	676-33
AD-100	US				151-0839	100	05/28/76		OS/VS FORMAT/7			27	AF	676-33
AE-1	--				520-1106	---			1285/1287/1288 DM					
AN-100	S2				520-3101	030	08/18/76		370X SSP					
	S2				" - "	050			SSP/OS R050			370X	PRG 23	AL 5744AN1 76-115
	S2				" - "	100	06/30/79		SSP/OS R050 SMP4			370X	PRG 23	AL 5744AN1 79-123
	S2				" - "	160	11/28/74		ACF/SSP V1R1			370X	PRG 23	AL 5744AN1 77-197
	S2				" - "	200	06/30/79		ACF/SSP V1R2 SMP4			370X	PRG 23	AL 5744AN1 78-206
	S2				" - "	201	05/30/80		ACF/SSP V1R2.1			370X	PRG 23	AL 5744AN1 79-131
	S2				" - "	220	06/30/79		ACF/SSP V1R2 SMP4			370X	PRG 23	AL 5744AN1 78-205
	S2				" - "	221	05/30/80		ACF/SSP V1R2.1			370X	PRG 23	AL 5744AN1 79-131
	S2				" - "	300	11/30/80		ACF/SSP V1R3 SMP4			370X	PRG 23	AL 5744AN1
	S2				" - "	320	11/30/80		ACF/SSP V1R3 SMP4			370X	PRG 23	AL 5744AN1
	U4				" - "	802	06/30/79	12/31/80	SSP/OS R050 SMP3			370X	PRG 23	AL 5744AN1 79-123
	U4				" - "	805	06/30/79	12/31/80	ACF/SSP V1R2 SMP3			370X	PRG 23	AL 5744AN1 78-205
	U4				" - "	808	06/30/79	12/31/80	ACF/SSP V1R2 SMP3			370X	PRG 23	AL 5744AN1 78-205
	S2				550-3101	030	08/18/76		370X/SSP			370X	PRG 23	AL 5744AN1 76-115
	S2				" - "	050			SSP/OS R050			370X	PRG 23	AL 5744AN1 76-115
	S2				" - "	100	06/30/79		SSP/OS R050 SMP4			370X	PRG 23	AL 5744AN1 79-123
	S2				" - "	160	11/28/77		ACF/SSP V1R1			370X	PRG 23	AL 5744AN1 77-197

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COMPONENT ID	SVC CLS	MP SC	LIC. TYPE	SVC PER.	FESN	REL	PID AVAIL	CUPP. END	DESCRIPTION	SUP GROUP	CTR LOC	SUPP MAIL ADDR	PID NO.	ANNOUN LETTER
****														
5744														
****														
S2					550-3101	200	06/30/79		ACF/SSP V1R2 SMP4	370X	PRG 23	AL	5744AN1	78-206
S2					" - "	201	05/30/80		ACF/SSP V1R2.1	370X	PRG 23	AL	5744AN1	79-131
S2					" - "	220	06/30/79		ACF/SSP V1R2 SMP4	370X	PRG 23	AL	5744AN1	78-206
S2					" - "	221	05/30/80		ACF/SSP V1R2.1	370X	PRG 23	AL	5744AN1	79-131
S2					" - "	300	11/30/80		ACF/SSP V1R3 SMP4	370X	PRG 23	AL	5744AN1	
S2					" - "	320	11/30/80		ACF/SSP V1R3 SMP4	370X	PRG 23	AL	5744AN1	
S2					" - "	802	06/30/79		SSP/OS R050 SMP3	370X	PRG 23	AL	5744AN1	79-123
S2					" - "	805	06/30/79		ACF/SSP V1R2 SMP3	370X	PRG 23	AL	5744AN1	79-123
SX					" - "	808	06/30/79		ACF/SSP V1R2 SMP3	370X	PRG 23	AL	5744AN1	78-206
U1	*	MACH			620-3101	161	11/28/77		ACF/SSP V1R1	370X	PRG 23	AL	5735XX3	77-197
U1	*	MACH			" - "	210	06/30/79		ACF/SSP V1R2 SMP4	370X	PRG 23	AL	5735XX3	78-206
U1	*	MACH			" - "	211	05/30/80		ACF/SSP V1R2.1	370X	PRG 23	AL	5735XX3	79-131
U1	*	MACH			" - "	230	06/30/79		ACF/SSP V1R2 SMP4	370X	PRG 23	AL	5735XX3	78-205
U1	*	MACH			" - "	231	05/30/80		ACF/SSP V1R2.1	370X	PRG 23	AL	5735XX3	79-131
U1	*	MACH			" - "	310	11/30/80		ACF/SSP V1R3	370X	PRG 23	AL	5735XX3	
U1	*	MACH			" - "	330	11/30/80		ACF/SSP V1R3	370X	PRG 23	AL	5735XX3	
U1	*	MACH			" - "	807	06/30/79		ACF/SSP V1R2 SMP3	370X	PRG 23	AL	5735XX3	78-205
U1	*	MACH			" - "	809	06/30/79		ACF/SSP V1R2 SMP3	370X	PRG 23	AL	5735XX3	78-205
U1	*	MACH			650-3101	161	11/28/77		ACF/SSP V1R1	370X	PRG 23	AL	5735XX3	77-197
U1	*	MACH			" - "	210	06/30/79		ACF/SSP V1R2 SMP4	370X	PRG 23	AL	5735XX3	78-206
U1	*	MACH			" - "	211	05/30/80		ACF/SSP V1R2.1	370X	PRG 23	AL	5735XX3	79-131
U1	*	MACH			" - "	230	06/30/79		ACF/SSP V1R2 SMP4	370X	PRG 23	AL	5735XX3	78-205
U1	*	MACH			" - "	231	05/30/80		ACF/SSP V1R2.1	370X	PRG 23	AL	5735XX3	79-131
U1	*	MACH			" - "	310	11/30/80		ACF/SSP V1R3 SMP4	370X	PRG 23	AL	5735XX3	
U1	*	MACH			" - "	330	11/30/80		ACF/SSP V1R3 SMP4	370X	PRG 23	AL	5735XX3	

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COMPONENT ID	SVC CLS	MP SC	LIC. TYPE	SVC PER.	FESN	REL	PID AVAIL	CURR. END	DESCRIPTION	SUP CTR GROUP	SUPP LOC	MAIL ADDR	PID NO.	ANNOU LETTER
****														
5744														
CONT														
****														
	U1	*	MACH		650-3101	807	06/30/79		ACF/SSP V1R2 SMP3	370X PRG	23	AL	5735XX3	78-205
	U1	*	MACH		" - "	809	06/30/79		ACF/SSP V1R2 SMP3	370X PRG	23	AL	5735XX3	78-205
AS-101	S2				520-2802	033	01/01/11		DOS EMULATOR	EMULATOR	63	F	5744AS1	77-003
BL-1	S2				550-1102	010			OS/VS2 DISK COPY PRO	UTILITY	02	BT	5744BL1	
BZ-300	U4				520-4203	060	01/07/77	04/30/80	3790 HOST SUPPORT	IND. SYS	23	BG	5744BZ3	77-002
	U4				" - "	070	11/07/77	04/30/80	3790 HOST SUPPORT	IND. SYS	02	BT	5744BZ3	77-181
	H4				" - "	071		04/30/80	3790 HOST SUPPORT	IND. SYS	23	BT	5744BZ3	
	U4				" - "	080	05/05/78	08/31/80	3790 HOST SUPPORT	IND. SYS	23	BT	5744BZ3	78-076
	U4				" - "	090	11/16/78	08/31/80	3790 HOST SUPPORT	IND. SYS	23	BT	5744BZ3	78-211
	SX				" - "	100	04/30/79		3790 HOST SUPPORT	IND. SYS	23	BT	5744BZ3	79-108
	SX				" - "	110	08/31/79		3790 HOST SUPPORT	IND. SYS	23	BT	5744BZ3	79-198
	SX				" - "	120	04/07/80		3790 HOST SUPPORT	IND. SYS	23	BT	5744BZ3	80-070
	U4				550-4203	060	01/07/77	04/30/80	3790 HOST SUPPORT	IND. SYS	23	BT	5744BZ3	77-002
	U4				" - "	070	11/07/77	04/30/80	3790 HOST SUPPORT	IND. SYS	23	BT	5744BZ3	77-181
	SX				" - "	090	11/16/78		3790 HOST SUPPORT	IND. SYS	23	BT	5744BZ3	78-211
	SX				" - "	100	04/30/79		3790 HOST SUPPORT	IND. SYS	23	BT	5744BZ3	79-108
	SX				" - "	110	08/31/79		3790 HOST SUPPORT	IND. SYS	23	BT	5744BZ3	79-198
	SX				" - "	120	04/07/80		3790 HOST SUPPORT	IND. SYS	23	BT	5744BZ3	80-070
CA-300	U4				520-3004	040	09/07/77	03/31/80	3600 HOST SUPPORT	IND. SYS	23	DN	5744CA3	77-144
	U4				" - "	050	09/27/78	12/31/80	3600 HOST SUPPORT	IND. SYS	23	DN	5744CA3	78-139
	SX				" - "	060	12/31/79		3600 HOST SUPPORT	IND. SYS	23	DN	5744CA3	79-188
	U4				550-3004	040	09/07/77	03/31/80	3600 HOST SUPPORT	IND. SYS	23	DN	5744CA3	77-144
	U4				" - "	050	09/27/78	12/31/80	3600 HOST SUPPORT	IND. SYS	23	DN	5744CA3	78-139
	SX				" - "	060	12/31/79		3600 HOST SUPPORT	IND. SYS	23	DN	5744CA3	79-188
CG-100	S2				520-4501	020	06/01/76		BATCH TRANSFER PRO3	IND. SYS	23	DE	5744CG1	76-072



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COMPONENT	SVC	MP	LIC.	SVC	FESN	REL	PID	CURR.	DESCRIPTION	SUP	CTR	SUPP	MAIL	PID	ANNOUN
ID	CLS	SC	TYPE	PER.			AVAIL	END		GROUP	LOC	ADDR	NO.	LETTER	
****															
5744	CONT														
****															
		S2			520-4501	030	06/01/76		BATCH TRANSFER PROG	IND.	SYS	23	DE	5744CG1	76-072
		S2			" - "	031			BATCH TRANSFER PROG	IND.	SYS	23	DE	5744CG1	
		S2			" - "	032			BATCH TRANSFER PROG	IND.	SYS	23	DE	5744CG1	
		S2			" - "	040	05/09/78		BATCH TRANSFER PROG	IND.	SYS	23	DE	5744CG1	
CG-200		S2			550-4502	020	06/01/76		BATCH TRANSFER PROG	IND.	SYS	23	DE	5744CG2	76-072
		S2			" - "	030	06/01/76		BATCH TRANSFER PROG	IND.	SYS	23	DE	5744CG2	76-072
		S2			" - "	031			BATCH TRANSFER PROG	IND.	SYS	23	DE	5744CG2	
		S2			" - "	032			BATCH TRANSFER PROG	IND.	SYS	23	DE	5744CG2	
		S2			" - "	040	06/28/78		BATCH TRANSFER PROG	IND.	SYS	23	DE	5744CG2	
CR-100		U4			520-9106	010	06/23/78	03/31/80	3630 HOST SUPPORT	IND.	SYS	23	DG	5744CR1	78-111
		SX			" - "	015	03/30/79	03/31/81	3630 HOST SUPPORT	IND.	SYS	23	DG	5744CR1	79-062
		SX			" - "	020	03/31/80		3630 HOST SUPPORT	IND.	SYS	23	DG	5744CR1	80-031
		U4			550-9106	010	06/23/78	03/31/80	3630 HOST SUPPORT	IND.	SYS	23	DG	5744CR1	
		SX			" - "	015	03/30/79	03/31/81	3630 HOST SUPPORT	IND.	SYS	23	DG	5744CR1	79-062
		SX			" - "	020	03/31/80		3630 HOST SUPPORT	IND.	SYS	23	DG	5744CR1	80-031
DA-100		SX			520-2804	010	07/13/79		SPPS II	IND.	SYS	23	BU	5744DA1	79-168
		SX			550-2804	010	07/13/79		SPPS II	IND.	SYS	23	BU	5744DA1	79-168
D1-600		SX			520-2611	010	07/13/79		3650 HOST SUPPORT	IND.	SYS	23	BU	5744D16	79-169
		SX			" - "	210	03/10/80		3650/80 HOST SUPPORT	IND.	SYS	23	BU	5744D16	279-03
		SX			" - "	300	12/30/80		3650 HOST SUPPORT	IND.	SYS	23	BU	5744D16	80-005
		SX			550-2611	010	07/13/79		3650/80 HOST SUPPORT	IND.	SYS	23	BU	5744D16	79-169
		SX			" - "	210	04/07/80		3650/80 HOST SUPPORT	IND.	SYS	23	BU	5744D16	279-03
		SX			" - "	300	12/30/80		3650 HOST SUPPORT	IND.	SYS	23	BU	5744D16	80-005
ER-EP1		S2			520-5002	100	04/09/79	08/31/81	EREP	ERP		02	BG	5652YS1	78-142
		S2			" - "	110	06/30/79	08/31/81	EREP	ERP		02	BG	5652YS1	79-097

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COMPONENT ID	SVC CLS	MP SC	LIC. TYPE	SVC PER.	FESN	REL	PID AVAIL	CURR. END	DESCRIPTION	SUPP GROUP	CTR LOC	SUPP MAIL ADDR	PID NO.	ANNOU LETTER
****														
5744 CONT														
****														
	S1	*			520-5002	200	08/30/79	08/31/81	EREP FOR VS1 REL 7	ERP	02	BG	5652VS1	79-202
	S1	*			" - "	300	08/29/80		EREP 1.1 FOR VS1	ERP	02	BG	5652VS1	
	S2				550-5002	100	04/09/79	08/31/81	EREP	ERP	02	BG	5752VS2	78-142
	S2				" - "	110	06/30/79	08/31/81	EREP	ERP	02	BG	5752VS2	79-097
	S2				" - "	300	08/29/80		EREP	ERP	02	BG	5752VS2	
SC-130	S2				520-1503	400	03/01/79		HMASMP	SMP	02	BN	5652VS1	78-142
	S2				550-1503	400	03/01/79		HMASMP	SMP	02	BN	5752VS2	78-142
****														
5745 DOS VS, DOS VSE														
****														
	S1	*			560-0000	350	06/01/79	12/31/81	VSE SCP BASE FOR AP1				5745020	79-022
	S1	*			" - "	351	01/31/80		VSE SCP BASE FOR AF2				5745030	80-008
	S1	*			" - "	352	10/09/80		VSE SCP BASE FOR AF3				5745030	80-212
AM-400	U3	*	MACH		661-7702	755	01/14/80		VSE/FAST COPY	UTILITY	02	H	5746AM4	79-031
BC-S00	X2		MACH		661-3211	100	06/29/79		SNAP		23	CI	5735XR2	79-004
	X4		MACH		" - "	200	10/26/79	05/29/80	SNAP				5735XR2	79-247
	X2		MACH		" - "	300	02/29/80	02/27/81	SNAP		23	CI	5735XR2	80-038
	X2		MACH		" - "	400	05/12/80		SNAP		23	CI	5735XR2	80-271
CB-200	U1	*	MACH		661-6008	110	10/26/79		PSS COBOL	IND. SYS	23	BU	5746CB2	79-001
DC-100	X2		MACH		099-0028		12/28/79		3890 DOC PROC SUPT		01	DK		79-163
D1-400	U1		MACH		661-3205	100	08/08/79	06/30/81	3650 RETAIL	3650	23	DH	5748D14	78-185
	U1		MACH		" - "	200	12/30/80	06/30/81	3650 RETAIL	3650	23	DH	5748D14	80-004
D1-500	U1		MACH		661-3206	100	06/29/79		REPORT CUST	3650	23	DH	5748D15	78-123
	U1		MACH		" - "	200	11/13/81		REPORT CUST	3650	23	DH	5748D15	80-254
D1-601	U1	*	MACH		661-2605	210	03/10/80		SPPS II	IND. SYS	23	BU	5735D16	79-002

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COMPONENT ID	SVC CLS	MP SC	IIC. TYPE	SVC PER.	FESN	REL	PID AVAIL	CURR. END	DESCRIPTION	SUP GROUP	CTR LOC	SUPP ADDR	MAIL NO.	PID NO.	ANNOU LETTER
****															
5745 CONT															
****															
	U1	*	MACH		661-2605	748			SPPS II	IND.	SYS	23	BU	5735D16	78-122
D2-100	U1		MACH		661-3207	100	06/29/79		SUPERMARKET ENV	3650		23	DH	5748D21	78-121
	U1		MACH		" - "	200	11/13/81		SUPERMARKET ENV	3650		23	DH	5748D21	80-254
D2-200	U1		MACH		661-3208	100	07/31/79		SD NGMT SERVICES	3650		23	DH	5748D22	78-184
	U1		MACH		" - "	200	08/08/79		SD NGMT SERVICES	3650		23	DH	5748D22	79-185
	U1		MACH		" - "	300	11/13/81		SD NGMT SERVICES	3650		23	DH	5748D22	80-255
D6-100	U1		MACH		661-3209	110	03/10/80		3680 SALES APPL.	3680		23	DH	5735D61	79-006
	U1		MACH		" - "	761	03/26/82		3680 SALES APPL.	3680		23	DH	5735D61	80-294
D6-200	U1		MACH		661-3210	110	03/10/80		3680 STORE ADMIN APP	3680		23	DH	5735D62	79-005
	U1		MACH		" - "	762	03/26/82		3680 STORE ADMIN APP	3680		23	DH	5735D62	80-295
F5-600	U1	*	MACH		660-1601	775	10/16/80		DOC CONT MACROS			23		5748F56	80-153
HC-133	U1	*	MACH		660-5631	772	03/31/80		HCP			02	BG	5735XR1	78-174
MS-100	U1	*	MACH		660-5902	523	03/31/81		DOS VS IPF	IPF		02	DJ	5748MS1	80-285
	U1	*	MACH		" - "	763	09/14/79	12/31/81	DOS VS IPF	IPF		02	DJ	5748MS1	79-052
	U1	*	MACH		" - "	796	11/11/80		DOS VS IPF	IPF		02	DJ	5748MS1	80-127
PD-132	U1	*	MACH		661-1419	512	11/30/81		TARA DOS	NPDA		03	BG	5735XX8	80-139
	U1	*	MACH		" - "	746	07/31/80		NPDA	NPDA		02	BG	5735XX8	78-209
	U1	*	MACH		" - "	747	07/03/80		NPDA	NPDA		02	BG	5735XX8	79-133
SC-AIT	--	-			560-1402	---			ATTENTION ROUTINES	SUPERV.		02	H		
	S2				" - "	727	12/28/77	03/31/81	ATTN RTN 3800 ICR/34	SUPERV.		02	H	5745010	77-216
	U1	*	MACH		660-1402	701	05/27/77	10/31/81	ATTN RTN AF	SUPERV.		02	H	5746XE2	77-090
	U1	*	MACH		" - "	712	06/12/79	12/31/81	ATTN RTN VSE/AF 1	SUPERV.		02	H	5746XE8	79-023
	U1	*	MACH		" - "	713	01/01/80		ATTN RTN VSE/AF 2	SUPERV.		02	H	5746XE9	79-023
	U1	*	MACH		" - "	798	10/09/80		ATTN RTN VSE/AF 3	SUPERV.		02	H	5746XE8	80-207
SC-AMS	S2				560-1903	340	05/27/77	03/31/81	VSAM SERVICE PROG	EVSAM		01	G	5745010	77-091

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COMPONENT ID	SVC CLS	MP SC	LIC. TYPE	SVC PER.	FESN	REL	PID AVAIL	CURR. END	DESCRIPTION	SUP GROUP	CTR LOC	MAIL ADDR	PID NO.	ANNOUN LETTER
****														
5745 CONT														
****														
		X4	*	MACH	661-1903	707	06/30/79	12/31/81	VSE/AMS REL 1				5746AM2	79-029
		U1	*	MACH	" - "	718	01/14/80	12/31/81	VSE/AMS REL 1	EVSAM	01	G	5746AM2	79-029
		U1	*	MACH	" - "	719	01/14/80	12/31/81	VSE/AMS REL 1	EVSAM	01	G	5746AM2	79-029
		U1	*	MACH	" - "	774	02/29/80	12/31/81	VSE/AMS REL 1	EVSAM	01	G	5746AM2	79-184
SC-APC	--	-	-	-	560-1403	---			3344/3350 AP-1	SUPERV.	13	AK		
SC-ASM	--	-	-	-	560-1202	---			ASSEMBLER PHK	ASSEMB	02	S		
	U1	*	MACH		660-1202	798	10/09/80		ASSEMBLER PHK VSE/AF	ASSEMB	02	S	5746XE8	80-207
SC-BTM	--	-	-	-	560-1802	---			BTAM REL 34 & PRIOR	BTAM	23	CF		
	S1	*	MACH		" - "	723	03/31/79		BTAM SCP BASE - VSE	BTAM	23	CE	5747CG1	79-038
	U1	*	MACH		660-1802	708	03/31/79		BTAM/ES	BTAM	23	CE	5746RC5	79-038
SC-CKR	--	-	-	-	560-1404	---			CHECKPOINT/RESTART	SUPERV.	02	H		
	U1	*	MACH		660-1404	713			CHECKPOINT VSE/AF2	SUPERV.	02	H		
	U1	*	MACH		" - "	798	10/09/80		CHECKPOINT VSE/AF3	SUPERV.	02	H	5746XE8	80-207
SC-DAM	--	-	-	-	560-1302	---			DIR ACC METHOD	LIOCS	02	H		
	U1	*	MACH		660-1302	798	10/09/80		DIR ACCESS VSE/AF3	LIOCS	02	H	5746XE8	80-207
SC-DDU	S1	*			560-2403	350		12/31/81	4331 ICA TRACE UTIL		03	AL	5745020	
	S1	*			" - "	351			4331 ICA TRACE UTIL		03	AL	5745030	
	U1	*	MACH		660-2403	798	10/09/80		4331 ICA TRACE AF 3		03	AL	5746XE8	80-207
SC-DIO	--	-	-	-	560-1303	---			DISKETTE IOCSI/O	LIOCS	02	AN		
	U1	*	MACH		660-1303	798	10/09/80		DISKETTE VSE/AF3	LIOCS	02	AN	5746XE8	80-207
SC-DIS	--	-	-	-	560-1405	---			DISTRIBUTION PROGRAM	SUPERV.	02	H		
	S1	*			" - "	350		12/31/81	DISTRIBUTION PROGRAM	SUPERV.	02	H	5747SA1	
	S1	*			" - "	351			DISTRIBUTION PROGRAM	SUPERV.	02	H	5745030	
	U1	*	MACH		660-1405	712	06/01/79	12/31/81	DISTRIB PGM VSE/AF	SUPERV.	02	H	5746XE8	79-023
	U1	*	MACH		" - "	713	12/31/79		DIST PGM VSE/AF 2	SUPERV.	02	H	5746XE8	79-023

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COMPONENT ID	SVC CLS	MP SC	LIC. TYPE	SVC PER.	FESN	FEL	PID AVAIL	CURP. END	DESCRIPTION	SUP CTR GROUP	SUPP LOC	MAIL ADDR	PID NO.	ANNOUN LETTER
****														
5745	CONT													
****														
SC-DKE	U1	*	MACH		660-1405	798	10/09/80		DIST PGM VSE/AF3	SUPERV.	02	H	5746XE8	80-207
	--	-			560-1406	---			DISK ERP	SUPERV.	02	H		
SC-DOC	U1	*	MACH		660-1406	798	10/09/80		DISK ERP VSE/AF3	SUPERV.	02	H	5746XE8	80-207
	--	-			560-1407	---			DISK OPER CONSOLF	SUPERV.	02	H		
	U1	*	MACH		660-1407	701	05/27/77	10/31/81	DIS OP CONSOLE AF	SUPERV.	02	H	5746XE2	77-090
	U1	*	MACH		" - "	712	06/12/79	12/31/81	DISPLY OP CON VSE/AF	SUPERV.	02	H	5746XF8	79-023
	U1	*	MACH		" - "	713	12/31/79		DSPLY OP CON VSE/AF2	SUPERV.	02	H	5746XF8	79-023
	U1	*	MACH		" - "	798	10/09/80		DSPLY OP CON VSE/AF3	SUPERV.	02	H	5746XE8	80-207
SC-DSP	S1	*			560-1722	583	11/26/80		DSP SYS SUPPORT R3	UTILITY	13	AK		80-115
	S1	*			" - "	776	01/22/80		DSP SYS SUPPORT VSE	UTILITY	13	AK	5745030	80-012
	U1	*	MACH		660-1722	798	10/09/80		DSP SYS SUPT VSE/AF3	UTILITY	13	AK	5746XE8	80-207
SC-DSK	--	-			560-1304	---			SEQUENT DISK I/O	LIOCS	02	H		
	U1	*	MACH		660-1304	712	06/01/79	12/31/81	SEQ DISK VSE/AF	LIOCS	02	H	5746XE8	79-023
	U1	*	MACH		" - "	713	12/31/79		SEQ DISK VSE/AF 2	LIOCS	02	H	5746XE8	79-023
	U1	*	MACH		" - "	798	10/09/80		SEQ DISK VSE/AF3	LIOCS	02	H	5746XE8	80-207
SC-EML	U1	*	MACH		661-1602	709	06/29/79		14XX EMULATOR	EMULATOR	64	G	5746S01	79-039
SC-ERP	--	-			560-1408	---			EREP REL 34 & PRIOR	SUPERV.	02	H		
	S2	*			" - "	727	12/28/77	03/31/81	EREP 3800 ICR	SUPERV.	02	H	5745010	77-216
SC-ERR1	S1	*			560-5002	350	06/01/79	12/31/81	EREP 1	SUPERV.	02	BG	5745020	79-022
	S1	*			" - "	351			EREP 1	SUPERV.	02	BG	5745030	
	S1	*			" - "	352	10/09/80		EREP 1.1	SUPERV.	02	BG	5745030	80-212
	U1	*	MACH		660-5002	798	10/09/80		EREP 1 VSE/AF3	SUPERV.	02	BG		80-207
SC-FTP	U1	*	MACH		661-5011	750	07/10/80		FILE TRANSPER PGM	POWER	02	H	5748XE6	79-061
SC-IMP	S2	*			560-3002	727	12/28/77	03/31/81	3800 IMAGE UTILITY	UTILITY	02	S	5745010	77-216
SC-IOM	--	-			560-1401	---			COMP IO MODS	LIOCS	02	H		

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****															
5745	CONT														
****															
SC-IDX	U1	*	MACH		660-1401	798	10/09/80		COMP IO MODS VSE/AF3	LIOCS	02	H	5746XE8	80-207	
	--	-			560-1305	---			IOCS/DEV IND I/O	LIOCS	02	H			
	S2				" - "	727	12/28/77	03/31/81	IOCS/DEV IND I/O	LIOCS	02	H	5745010	77-216	
	U1	*	MACH		660-1305	712	06/01/79	12/31/81	IOCS/DEV IND VSE/AF	LIOCS	02	H	5746XE8	79-023	
	U1	*	MACH		" - "	713	12/31/79		IOCS VSE/AF 2	LIOCS	02	H	5746XE8	79-023	
	U1	*	MACH		" - "	798	10/09/80		IOCS/DEV IND VSE/AF3	LIOCS	02	H	5746XE8	80-207	
SC-IPC	U1	*	MACH		661-1303	513	10/09/80		VSE/IPCS REL 3	IPCS	02	H	5746SA1	80-209	
	U1	*	MACH		" - "	733	06/29/79	12/31/81	VSE/IPCS REL 1	IPCS	02	H	5746SA1	79-034	
	U1	*	MACH		" - "	783	01/14/80		VSE/IPCS REL 2	IPCS	02	H	5746SA1	80-009	
SC-IPL	--	-			560-1409	---			IPL BUFFER LOAD	SUPERV.	02	H			
	U1	*	MACH		660-1409	701	05/27/77	10/31/81	IPL BUFFER LOAD AF	SUPERV.	02	H	5746XE2	77-090	
	U1	*	MACH		" - "	712	06/01/79	12/31/81	IPL BUFRLD VSE/AF	SUPERV.	02	H	5746XE8	79-023	
	U1	*	MACH		" - "	713	12/31/79		IPL/BUFRLD VSE/AF2	SUPERV.	02	H	5746XE8	79-023	
	U1	*	MACH		" - "	798	10/09/80		IPL BFR LOAD VSE/AF3	SUPERV.	02	H	5746XE8	80-207	
SC-ISM	--	-			560-1306	---			INDEX SEQ FILE MGMT	LIOCS	02	H			
	U1	*	MACH		660-1306	713			INDX SEQ VSE/AF2	LIOCS	02	H	5746XE8		
	U1	*	MACH		" - "	798	10/09/80		INDX SEQ VSE/AF3	LIOCS	02	H	5746XE8	80-207	
SC-JCL	--	-			560-1410	---			JOB CONTROL	JOB CONT	02	H			
	S2				" - "	727	12/28/77	03/31/81	JOB CONTROL 3800 ICR	JOB CONT	02	H	5745010	77-216	
	U1	*	MACH		660-1410	701	05/27/77	10/31/81	JOB CONTROL AF	JOB CONT	02	H	5746XE2	77-090	
	U1	*	MACH		" - "	712	06/01/79	12/31/81	JOB CONTROL VSE/AF	JOB CONT	02	H	5746XE8	79-023	
	U1	*	MACH		" - "	713	12/31/79		JOB CONTROL VSE/AF 2	JOB CONT	02	H	5746XE8	79-023	
	U1	*	MACH		" - "	798	10/09/80		JOB CONTROL VSE/AF 3	JOB CONT	02	H	5746XE8	80-207	
SC-JEP	U1	*	MACH		661-5010	749	07/10/80		JOB ENTRY PROGRAM	POPER	02	H	5746XP6	79-061	
SC-LBR	--	-			560-1411	---			COPIYSERV (R330 ONLY)	SUPERV.	02	G			

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COMPONENT ID	SVC CLS	MP SC	LIC. TYPE	SVC PER.	FESN	REL	PID AVAIL	CURR. END	DESCRIPTION	SUP GROUP	CTR LOC	MAIL ADDR	PID NO.	ANNOUN LETTER
****														
5745	CONT													
****														
		--	-		560-1411	---			LIB SERV AND MAINT.	SUPERV.	02	H		
		U1	*	MACH	660-1411	701	05/27/77	10/31/81	COPYSERV AF	SUPERV.	02	G	5746XE2	77-090
		J1	*	MACH	" - "	701	05/27/77	10/31/81	LIB SERV & MAINT AF	SUPERV.	02	H	5746XF2	77-090
		U1	*	MACH	" - "	712	06/01/79	12/31/81	COPYSERV VSE/AF	SUPERV.	02	G	5746XE8	79-023
		U1	*	MACH	" - "	712	06/01/79	12/31/81	LIB SRV/MAINT VSE/AF	SUPERV.	02	H	5746XF8	79-023
		U1	*	MACH	" - "	713	12/31/79		COPYSERV VSE/AF 2	SUPERV.	02	G	5746YE8	79-023
		U1	*	MACH	" - "	713	12/31/79		LIBRARIAN VSE/AF 2	SUPERV.	02	H	5746XE8	79-023
		J1	*	MACH	" - "	798	10/09/80		COPYSERV VSE/AF3	SUPERV.	02	G	5746XE8	80-207
SC-LTK		--	-		560-1412	---			LINKAGE EDITOR	JOB CONT	02	H		
		U1	*	MACH	660-1412	701	05/27/77	10/31/81	LINKAGE EDITOR AF	JOB CONT	02	H	5746YF2	77-090
		U1	*	MACH	" - "	712	06/01/79	12/31/81	LINK EDITOR VSE/AF	JOB CONT	02	H	5746XE8	79-023
		U1	*	MACH	" - "	713	12/31/79		LINK EDITOR VSP/AF2	JOB CONT	02	H	5746XE8	79-023
		U1	*	MACH	" - "	798	10/09/80		LINKAGE PDTR VSE/AF3	JOB CONT	02	H	5746XE8	80-207
SC-MCR		--	-		560-1307	---			MCP IOCS	LIOCS	02	H		
		--	-		" - "	---			3895 DRI	LIOCS	02	AN		
		U1	*	MACH	660-1307	798	10/09/80		3895 DRI	LIOCS	02	AN	5746YE8	80-207
SC-OCR		--	-		560-1308	---			OCR IOCS	LIOCS	02	AN		
		U1	*	MACH	660-1308	798	10/09/80		OCR IOCS VSE/AF3	LIOCS	02	AN	5746YE8	80-207
SC-OT		--	-		560-1502	---			OLTEP	SUPERV.	02	RG		
		U1	*	MACH	660-1502	798	10/09/80		OLTEP VSE/AF 3	SUPERV.	02	BT	5746YE8	80-207
SC-PDA		--	-		560-1413	---			PD AIDS	SEPV AID	02	H		
		U1	*	MACH	660-1413	701	05/27/77	10/31/81	PD AIDS AF	SEPV AID	02	H	5746XF2	77-090
		U1	*	MACH	" - "	712	06/01/79	12/31/81	PD AIDS VSE/AF	SEPV AID	02	H	5746XE8	79-023
		U1	*	MACH	" - "	713	12/31/79		PD AIDS VSE/AF2	SEPV AID	02	H	5746YE8	79-023
		U1	*	MACH	" - "	798	10/09/80		PD AIDS VSE/AF 3	SEPV AID	02	H	5746XE8	80-207

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****														
5745			CONT											
****														
SC-PRT	S2			560-3003	727	12/28/77	03/31/81	3800 SET PRINT	SUPERV	02	H	5745010	77-216	
SC-PIP	--	-		560-1309	---			PAPER TAPE IOCS	LIOCS	02	H			
	U1	*	MACH	660-1309	798	10/09/80		PAPER TAPE IOCS AFB	LIOCS	02	H	5746XE3	80-207	
SC-PWR	S2			560-2102	349	05/27/77	03/31/81	POWER/V5	POWER	02	H		77-091	
	S2			" - "	728	12/28/77	03/31/81	POWER/V5 3800 ICR	POWER	02	H	5745010	77-216	
	U1	*	MACH	661-2102	702	06/29/79	12/31/81	VSE/POWER REL 1	POWER	02	H	5746XE3	79-026	
	U1	*	MACH	" - "	717	06/29/79	12/31/81	RJE FEATURE REL 1	POWER	02	H	5746XE3	79-026	
	U1	*	MACH	" - "	734	01/31/80		VSE/POWER REL 2	POWER	02	H	5746XE3	80-008	
	U1	*	MACH	" - "	735	01/31/80		SPOOL FEATURE REL 2	POWER	02	H	5746XE3	80-008	
	U1	*	MACH	" - "	736	01/31/80		RJE FEATURE REL 2	POWER	02	H	5746XE3	80-008	
SC-PMS	--	-		560-1414	---			RMSR	SUPERV.	02	H			
	S2			" - "	727	12/28/77	03/31/81	RMSR 3800 ICR	SUPERV.	02	H	5745010	77-216	
	U1	*	MACH	660-1414	798	10/09/80		RMSR VSE/AF3	SUPERV.	02	H	5746XE3	80-207	
SC-SDS	S1	*		560-7302	350	06/01/79	12/31/81	SELECTED DEVICE SUP	SUPERV.	02	H	5745020	79-019	
	S1	*		" - "	351			SELECTED DEVICE SUP	SUPERV.	02	H	5745030		
	U1	*	MACH	660-7302	798	10/09/80		SPEC DEV SUP VSE/AF3	SUPERV.	02	H	5746XE3	80-207	
SC-SMK	--	-		560-2702	---			3660 HOST SUPPORT	IND. SYS	23	BU			
	U4			" - "	010			3660 HOST SUPPORT	IND. SYS	23	BU			
	S2			" - "	030	05/20/77		3660 HOST SUPPORT	IND. SYS	23	BU		77-086	
SC-SPP	--	-		560-2604	---			CTS-SPPS	IND. SYS	23	AL			
	S2			" - "	021			CTSSPPS	IND. SYS	23	BU			
SC-SSS	--	-		560-2202	---			SSS (BASE IND SUPT)	IND. SYS	23	CE			
	S2			" - "	724	11/22/76		SSS (BASE IND SUPT)	IND. SYS	23	CE	5747CC6	76-185	
SC-SUP	--	-		560-1415	---			SUPERVISOR	SUPERV.	02	H			
	U1	*	MACH	660-1415	701	05/27/77	10/31/81	SUPERVISOR AF	SUPERV.	02	H	5746XE2	77-090	



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****														
5745														
CONT														
****														
	U1	*	MACH		660-1415	712	06/01/79	12/31/81	SUPERVISOR VSE/AF	SUPERV.	02	H	5746XE8	79-023
	U1	*	MACH		" - "	713	12/31/79		SUPERVISOR VSE/AF2	SUPERV.	02	H	5746XE8	79-023
	U1	*	MACH		" - "	798	10/09/80		SUPERVISOR VSE/AF3	SUPERV.	02	H	5746XE8	80-207
SC-TAP	--	-			560-1310	---			MAG TAPE IOCS	LIOCS	02	H		
	U1	*	MACH		660-1310	712	06/01/79	12/31/81	MAG TAPE VSE/AF	LIOCS	02	H	5746XE8	79-023
	U1	*	MACH		" - "	713	12/31/79		MAG TAPE VSE/AF2	LIOCS	02	H	5746XE8	79-023
	U1	*	MACH		" - "	798	10/09/80		MAG TAPE VSE/AF3	LIOCS	02	H		80-207
SC-TLT	S2				560-2002	011			TOLTEP	VTAM	03	BX	5747CF1	
	S2				" - "	020	04/30/76		TOLTEP	VTAM	03	BX	5747CF1	76-055
	S2				" - "	721	12/31/77		TOLTEP	VTAM	03	BX	5747CF1	
	S2				" - "	729	06/30/79		TOLTEP	VTAM	03	BX	5747CF1	78-203
	SX				" - "	730	09/30/79		TOLTEP	VTAM	03/	BX	5747CF1	79-024
	U1	*	MACH		660-2002	703	12/31/77		TOLTEP	VTAM	03	BX	5746RC3	
	U1	*	MACH		" - "	711	09/30/79	12/31/82	TOLTEP	VTAM	03	BX	5746RC7	79-024
	U1	*	MACH		" - "	714	06/30/79	12/31/82	TOLTEP	VTAM	03	BX	5746RC3	78-203
	U1	*	MACH		" - "	742	02/29/81		TOLTEP	VTAM	03	BX	5746RC3	79-126
SC-TPE	--	-			560-1311	---			TAPE ERP	SUPERV.	02	H		
	--	*			660-1311	798	10/09/80		TAPE ERP VSE/AF3	SUPERV.	02	H		80-207
SC-UTL	--	-			560-1702	---			OBJMAINT	UTILITY	02	H		
	--	-			" - "	---			SYSTEM UTILITIES	UTILITY	02	H		
	S1	*			" - "	350		12/31/81	SYSTEM UTILITIES	UTILITY	02	H	5747SA1	
	S1	*			" - "	351			SYSTEM UTILITIES	UTILITY	02	H	5745030	
	U1	*	MACH		660-1702	798	10/09/80		OBJMAINT VSE/AF3	UTILITY	02	H	5746XE8	80-207
SC-WPS	--	-			560-1416	---			MAINTAIN SYS HIST	SUPERV.	02	G		
	U1	*	MACH		660-1416	798	10/09/80		MSHP VSE/AF3	SUPERV.	02	G	5746XE8	80-207

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****													
5745 COM													
****													
SC-VCM	U1	*	MACH	661-1904	707	06/06/79	12/31/81	VSAM/VTAM COM MACPO	EVSAM	02	G	5746AM2	79-029
	U1	*	MACH	" - "	711	09/30/79	12/31/82	VSAM/VTAM COM MACRO	EVSAM	02	G	5746RC7	79-024
	U1	*	MACH	" - "	714	06/30/79		VSAM/VTAM COM MACRO	EVSAM	02	G	5746RC3	79-024
SC-VSA	U1	*	MACH	660-2005	751	12/31/80		VM/VCNA	VTAM	03	BX	5735RC5	80-018
	U1	*	MACH	" - "	752	03/31/81		VM/VCNA	VTAM	03	BX	5735RC5	80-018
SC-VSM	S2			560-1902	340	05/27/77	03/31/81	VSAM	EVSAM	02	G	5745010	77-091
	U1	*	MACH	661-1902	707	06/30/79	12/31/81	VSE/VSAM PEL1	EVSAM	01	G	5746AM2	79-029
	U1	*	MACH	" - "	718	01/14/80	12/31/81	VSE/VSAM BASE PEL1	EVSAM	01	G	5746AM2	79-029
	U1	*	MACH	" - "	719	01/14/80	12/31/81	VSE/VSAM SAM REL1	EVSAM	01	G	5746AM2	79-029
	U1	*	MACH	" - "	765	02/28/80		VSE/VSAM	EVSAM	01	G	5746AM2	79-184
	U1	*	MACH	" - "	774	02/29/80		VSE/VSAM BACKUP REL1	EVSAM	01	G	5746AM2	79-184
	U1	*	MACH	" - "	795	02/29/80		VSE/VSAM BACKUP REL2	EVSAM	01	G	5746AM2	79-184
SC-VTM	--	--		560-2003	---			VTAM	VTAM	03	BX	5745010	
	S2			" - "	010	09/30/74		VTAM	VTAM	03	BX	5745010	74-050
	S2			" - "	011			VTAM	VTAM	03	BX	5745010	
	S2			" - "	020	04/30/76		VTAM	VTAM	03	BX	5745010	76-055
	SX			" - "	721	12/31/77	03/31/81	ACE/VTAM SCP BASE R1	VTAM	03	BX	5747CF1	77-218
	SX			" - "	729	06/30/79		ACE/VTAM SCP BASE R2	VTAM	03	BX	5747CF1	78-203
	SX			" - "	730	09/30/79		ACE/VTAME SCP	VTAM	03	BX	5747CF2	79-024
	SX			" - "	741	02/28/81		ACE/VTAM SCP BASE R3	VTAM	03	BX	5747CF1	79-126
	U1	*	MACH	660-2003	703	12/31/77	03/31/81	ACE/VTAM PP BASE R1	VTAM	03	BX	5746RC3	77-218
	U1	*	MACH	" - "	704	12/31/77	03/31/81	ACE/VTAM MSNF R1	VTAM	03	BX	5746RC3	77-218
	U1	*	MACH	" - "	711	09/30/79	12/31/82	ACE/VTAM PP	VTAM	03	BX	5746RC7	79-024
	U1	*	MACH	" - "	714	06/30/79	12/31/82	ACE/VTAM PP BASE P2	VTAM	03	BX	5746RC3	78-203
	U1	*	MACH	" - "	715	06/30/79	12/31/82	ACE/VTAM MSNF P2	VTAM	03	BX	5746RC3	78-203

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****														
5745 CONT														
****														
		U1	*	MACH	660-2003	742	02/29/81		ACF/VTAM PP BASE R3	VTAM	03	BX	5746RC3	79-126
		U1	*	MACH	" - "	743	02/28/81		ACF/VTAM MSNF R3	VTAM	03	BX	5746RC3	79-126
SC-124	S2				560-2502	010			3600 HOST SUPPORT	IND. SYS	23	DN	5747BR1	
UT-300	U1	*	MACH		661-5103	732	06/29/79		VSE/DITTO REL1	UTILITY	02	AS	5746UI3	79-032
	U1	*	MACH		" - "	792	10/09/80		VSE/DITTO REL2	UTILITY	02	AS	5746UI3	80-211
XR-315	U1	*	MACH		660-2805	520	10/07/80		S/370 HOST PREP	IND. SYS	23	BT	5735XR3	80-204
	U1	*	MACH		" - "	528	12/11/80		S/370 HOST PREP R3	IND. SYS	23	BT	5735XR3	80-276
	U1	*	MACH		" - "	771	03/31/80		S/370 HOST PREP	IND. SYS	23	BT	5735XR3	79-135
XX-V00	U1	*	MACH		660-R002	777	12/11/80		ELIAS-I	ELI	13	CG	5746XXV	80-227
XX-200	U1	*	MACH		661-3006	705	12/31/77		NOSP	VTAM	03	BG	5735XX2	77-219
	U1	*	MACH		" - "	726	06/30/79		NOSP	VTAM	03	BG	5735XX2	79-022
XX-600	U1	*	MACH		661-7602	706	06/03/80		NCCF	VTAM	03	BG	5735XX6	78-208
****														
5746 DOS VS, DOS VSE PP														
****														
AM-100	X2		MACH		099-0028		06/30/78		IPS					78-080
AM-300	X4	*	MACH		661-7002	010	06/30/79	12/31/80	VSE/IBM S/3 3340 DI				5746AM3	79-040
AM-500	X2		MACH		099-0028	010	02/28/80		3270 BSC PASS THRU		23	DI		79-028
CB-100	U1	*	MACH		661-6302	025	06/30/79		DOS/VS FULL COBOL	COBL DOS	13	AK	5746CB1	79-165
F1-1	X2		MACH		099-0028	102	02/28/77		PROG CUSTOMIZER					77-026
F1-2	X2		TMSI		099-0028	020	12/19/77		DOSCHECK					77-213
F1-401	X2		MACH		679-7902	110	11/14/80		DSL/CICS/DOS		SN	A2	5746F14	79-166
F1-402	X2		MACH		679-7903	110	11/14/80		DSL/CICS/DOS AUTH.		SN	A2	5746F14	79-166
F5-200	X2		MACH		099-0028		12/22/80		IFS 1					80-277
F5-300	X2		MACH		099-0028		12/22/80		IFS 2					80-277

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****															
5746	CONT														
****															
F5-400	X2		MACH		099-0028		12/22/80		IFS 3						80-277
F5-500	X2		MACH		099-0028		12/22/80		IFS 4						80-277
F5-700	X2		MACH		099-0028		03/16/79		3614/3624 COLTS			WP	CJ		78-034
LH-302	X4	*	MACH		661-4904	020	11/30/73	04/07/80	PORT 4 LIB DOS 3330					5746LM3	73-094
					" - "	030	12/31/79		PORT 4 LIB DOS 3330		FORTRAN	13	AK	5746LM3	
LM-400	U1	*	MACH		661-6303	025	07/02/79		DOS/VS COBOL LIB		COBL	DOS	13	AK	5746CB1
M4-1	X2		INST		099-0028	011	06/16/77		CAPOSS-E						77-103
N1-1	X4		MACH		099-0028		09/16/74	04/15/80	LIFE INQ/DATA ENTRY						74-047
RC-900	X2		MACH		099-0028	030	12/11/80		DOS/VSE RJE WS						80-275
					" - "		03/30/79		DOS/VSE RJE WS						79-027
RG-100	X4	*	MACH		661-6402	020	06/30/78	12/31/80	RPG II COMPILER					5746RG1	78-041
					" - "	030	06/30/79		RPG II COMPILER		RPG	13	G	5746RG1	79-035
SM-200	U1	*	MACH		661-5803	020	04/26/79	12/31/81	DOS/VS SORT MERGE		SORT	DOS	13	AK	5746SM2
					" - "	030	01/30/80		DOS/VS SORT MERGE		SORT	DOS	13	AK	5746SM2
					" - "	040	03/31/81		DOS/VS SORT MERGE		SORT	DOS	13	AK	5746SM2
TS-100	U1	*	MACH		661-7402	010	06/29/79	12/31/81	VSE/ICCF		ICCF	02	G	5746TS1	79-025
					" - "	731	06/29/79		VSE/ICCF		ICCF	02	G	5746TS1	79-025
					" - "	773	01/28/80		VSE/ICCF		ICCF	02	G	5746TS1	80-024
					" - "	797	10/09/80		VSE/ICCF R3		ICCF	02	G	5746TS1	80-208
XC-2	X2		MACH		099-0028		03/10/78	06/30/81	DMS/DOS/VS						78-039
XC-400	U1	*	INST		661-7102	110	04/28/79	12/31/81	DMS/CICS/DOS		CICS	13	AK	5746XC4	79-055
					" - "	111	04/28/79	12/31/81	DMS/CICS/DOS FEATURE		CICS	13	AK	5746XC4	79-055
					" - "	210	11/30/79		DMS/CICS/DOS		CICS	13	AK	5746XC4	79-055
					" - "	211	11/30/79		DMS/CICS/DOS FEATURE		CICS	13	AK	5746XC4	79-055
					" - "	310			DMS/CICS/DOS		CICS	13	AK	5746XC4	79-055

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****														
5746	CONT													
****														
		U1	*	INST	661-7102	311			DMS/CICS/DOS FEATURE	CICS	13	AK	5746XC4	79-055
XC-500		U1	*	MACH	660-7103	766	10/09/80		OCCF	OCCF	02	H	5746XC5	79-258
XE-700		U1	*	MACH	661-7403	010	08/27/79		VSE ACCESS CONTROL	ICCP	02	AS	5746XE7	79-033
XM-1		X4		MACH	099-0039				GRAPHAGE DOS/VS					
XM-2		X2		MACH	099-0028		01/13/75		MPSX/370 DOS/VS		PR	AR		75-002
XV-1		X4		MACH	099-0028		04/08/74	09/30/80	APT-BC DOS/VS					74-017
XP-1		X2		MACH	099-0028				PPOJACS DOS/VS		PR	CA		
XR-1		X4		MACH	099-0039				RIRMS DOS/VS					
XR-2		Y2		MACH	099-0028				DECTAT DOS/VS		PR	AR		
XR-300		U1	*	MACH	661-6002	010	10/29/76	03/31/81	DOS/VS VSPC	VSPC	13	AK	5746XR3	76-162
XR-4		X2		MACH	099-0028	100	08/02/76		STAIRS/DOS/VS					76-106
XX-A		X2		MACH	099-0028		11/29/77		PLANCODE S DOS VS		PR	CF		77-199
XX-C00		U1	*	MACH	661-7202	130	01/01/80		DB/DC DATA DICTONAR		13	AK	5746XXC	79-056
XX-G		X2		MACH	099-0028	010	07/09/76		ATMS-IT/DOS/VS		PA	EB		76-098
XX-M		X2		MACH	099-0028	010	11/30/77		COMM MESSAGE SYSTEM					77-200
XX-S00		X2		INST	099-0028		04/27/79		CIF/VS CICS					78-024
XX-T00		U1	*	MACH	661-4002	511	11/18/80		SCREPN DEF PAC/CICS		13	CB	5746XXT	80-138
		U1	*	MACH	" - "	753	12/07/79		SCREEN DEF PAC/CICS		13	CB	5746XXT	79-099
XX-U00		U3		MACH	099-0028	770	04/01/80		ATMS III		PA	EA		79-147
XX-100		X4	*	MACH	661-5502	140	11/08/78	04/30/80	DL/1 DOS				5746XX1	78-120
		U1	*	MACH	" - "	150	06/29/79		DL/1 DOS	DL1	02	G	5746XX1	79-030
		U1	*	MACH	" - "	151			DL/1 DOS	DL1	02	G	5746XX1	80-028
		U1	*	MACH	" - "	155			DL/1 DOS	DL1	02	G	5746XX1	80-119
XX-2		X2		MACH	099-0028				STEPS PROD DOS/VS		PP	CA		
XX-300		U1	*	MACH	661-5302	140	07/21/78	02/27/81	CICS/DOS/VS	CICS DOS	13	CB	5746XX3	78-119

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COMPONENT ID	SVC CLS	MP SC	LIC. TYPE	SVC PER.	FESN	REL	PID AVAIL	CURR. END	DESCRIPTION	SUP GROUP	CTR LOC	SUPP ADDR	MAIL PID NO.	ANNOUN LETTER
****														
5746 CONT														
****														
			U1	*	MACH		661-5302	141	06/25/79	12/31/81			CICS/DOS/VS	CICS DOS 13 CB 5746XX3 79-145
			U1	*	MACH		" - "	150	06/13/80				CICS/DOS/VS	CICS DOS 13 CB 5746XX3 79-223
		XY-301	U3	*	MACH		661-5303	140	01/26/79				CICS/DOS/VS FERS	CICS DOS 13 CB 5746XX3
			U3	*	MACH		" - "	141	06/25/79	12/31/81			CICS/DOS/VS FERS	CICS DOS 13 CB 5746XX3 79-145
			U3	*	MACH		" - "	150	06/13/80				CICS/DOS/VS FERS	CICS DOS 13 CB 5746XX3 79-223
		XX-700	U1	*	MACH		662-5602	211	12/21/78				DL/1 ENTRY DOS/VS	DL1 02 G 5746XX7 78-229
		XX-9	X2		MACH		099-0028		11/09/77				PLANCODE I DOS VS	PP CF 77-183
****														
5747 SYS7, DOS VS & DOS VSE														
****														
		AB-100	US				151-0469	100	05/28/76				DOS/VS ASM/7	27 AF 676-33
		AC-100	US				151-0479	100	05/28/76				DOS/VS LINK/7	27 AF 676-33
		AD-100	US				151-0489	100	05/28/76				DOS/VS FORMAT/7	27 AF 676-33
		AE-100	US				151-0499	100	05/28/76				DOS/VS MACLIB/R	27 AF 676-33
		AF-100	US				151-0459	100	05/28/76				DOS/VS MSP/7 HPPF	27 AF 676-33
		AG-100	S2				560-2401	021					370X/SSP DOS	370X PRG 23 AL 5747AG1
			S2				" - "	050	02/08/77				SSP/DOS R050	370X PRG 23 AL 5747A31 76-115
			S2				" - "	051	06/30/79				SSP/DOS SPR UPD	370X PRG 23 AL 5747AG1 79-123
			U4				" - "	160	11/28/77	09/30/80			ACF/SSP DOS V1R1	370X PRG 23 AL 5747AG1 77-197
			S2				" - "	200	06/30/79				ACF/SSP DOS V1R2	370X PRG 23 AL 5747AG1 78-206
			S2				" - "	509	11/30/80				SSP/DOS V1R3	370X PRG 23 AL 5747AG1 79-129
			S2				" - "	780	05/30/80				ACF/SSP DOS V1R2.1	370X PRG 23 AL 5747AG1 79-132
			U4	*	MACH		660-2401	161	11/28/77	09/30/80			ACF/SSP DOS V1R1	5735XX3 77-197
			U1	*	MACH		" - "	210	06/30/79				ACF/SSP DOS V1R2	370X PRG 23 AL 5735XX3 78-206
			U1	*	MACH		" - "	510	11/30/80				ACF/SSP/DOS V1R3	370X PRG 23 AL 5735XX3 79-128

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****															
5747 CONT															
****															
	U1	*	MACH		660-2401	781	05/30/80		ACF/SSP DOS V1R2.1	370X	PRG	23	AL	5735XX3	79-132
BJ-200	S2				520-3203	031	04/22/77		3650 SPPS	IND.	SYS	23	BU	5747BJ2	77-068
	S2				550-4003	031	04/22/77		3650 SPPS	IND.	SYS	23	BU	5747BJ2	77-068
	U4				560-2603	021	02/09/76		3650 SPPS	IND.	SYS	23	BU	5747BJ2	76-010
	U4				" - "	030	04/19/76		3650 SPPS	IND.	SYS	23	BU	5747BJ2	76-047
	S2				" - "	031	04/22/77		3650 SPPS	IND.	SYS	23	BU	5747BJ2	77-068
BJ-300	SX				520-4602	032	01/09/78		3650 HOST SUPPORT	IND.	SYS	23	BU	5747BJ3	78-001
	SX				550-4602	032	07/24/78		3650 HOST SUPPORT	IND.	SYS	23	BU	5747BJ3	78-134
	SX				560-4602	032	01/09/78		3650 HOST SUPPORT	IND.	SYS	23	BU	5747BJ3	78-001
BQ-100	SX				560-2802	010	03/31/75		3790 HOST SUPPORT	IND.	SYS	23	BT	5747BQ1	75-020
	SX				" - "	020	09/22/75		3790 HOST SUPPORT	IND.	SYS	23	BT	5747BQ1	75-044
	SX				" - "	030	12/08/75		3790 HOST SUPPORT	IND.	SYS	23	BT	5747BQ1	75-075
	SX				" - "	040	04/12/76		3790 HOST SUPPORT	IND.	SYS	23	BT	5747BQ1	76-045
	SX				" - "	041	07/06/76		3790 HOST SUPPORT	IND.	SYS	23	BT	5747BQ1	76-093
	SX				" - "	050	08/31/76		3790 HOST SUPPORT	IND.	SYS	23	BT	5747BQ1	76-121
	U4				" - "	060	01/07/77	04/30/80	3790 HOST SUPPORT	IND.	SYS	23	BT	5747BQ1	77-002
	U4				" - "	070	11/07/77	04/30/80	3790 HOST SUPPORT	IND.	SYS	23	BT	5747BQ1	77-181
	U4				" - "	080	05/05/78	08/31/80	3790 HOST SUPPORT	IND.	SYS	23	BT	5747BQ1	78-076
	U4				" - "	090	11/16/78	08/31/80	3790 HOST SUPPORT	IND.	SYS	23	BT	5747BQ1	78-211
	SX				" - "	100	04/30/79		3790 HOST SUPPORT	IND.	SYS	23	BT	5747BQ1	79-108
	SX				" - "	110	08/31/79		3790 HOST SUPPORT	IND.	SYS	23	BT	5747BQ1	79-198
	SX				" - "	120	04/07/80		3790 HOST SUPPORT	IND.	SYS	23	BT	5747BQ1	80-070
BR-100	U4				560-2503	040	09/07/77	03/31/80	3600 HOST SUPPORT	IND.	SYS	23	DN	5747BR1	77-144
	U4				" - "	050	09/27/78	12/31/80	3600 HOST SUPPORT	IND.	SYS	23	DN	5747BR1	78-139
	SX				" - "	060	12/21/79		3600 HOST SUPPORT	IND.	SYS	23	DN	5747BR1	79-188

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**** 5747 ****	CONT														
RW-100	S2				560-2803	020	06/01/76		BATCH TRANSFER PROG	IND.	SYS	03	DE	5747BW1	76-062
	S2				" - "	030	12/03/76		BATCH TRANSFER PROG	IND.	SYS	03	DE	5747BW1	76-192
	S2				" - "	040	06/28/78		BATCH TRANSFER PROG	IND.	SYS	03	DE	5747BW1	78-111
CJ-100	U4				560-9102	010	06/23/78	03/31/80	3630 HOST SUPPORT	SSS		23	DS	5747CJ1	
	SX				" - "	015	03/30/79	03/31/81	3630 HOST SUPPORT	SSS		22	DC	5747CJ1	79-062
	SX				" - "	020	03/31/80		3630 HOST SUPPORT	SSS		23	DS	5747CJ1	80-031
CJ-200	SX				560-2804	010	07/13/79		SPPS II	IND.	SYS	23	BU	5747CJ2	79-168
D1-600	SX				560-2611	010	07/13/79		3650 HOST SUPPORT	IND.	SYS	23	BU	5747D16	79-169
	SX				" - "	210	03/10/80		3650 HOST SUPPORT	IND.	SYS	23	BU	5747D16	279-03
	SX				" - "	300	12/30/80		3650 HOST SUPPORT	IND.	SYS	23	BU	5747D16	80-005
**** 5748 ****	VS PP														
AP-101	U1	*	MACH		621-6602	030	02/16/79	07/31/81	VS APL	APL		13	AK	5748AP1	78-215
	U1	*	MACH		" - "	031	10/14/80		VS APL	APL		13	AK	5748AP1	80-084
	U1	*	MACH		" - "	040	03/31/81		VS APL	APL		13	AK	5748AP1	80-149
	U1	*	MACH		641-6602	030	02/16/79	07/31/81	VS APL	APL		13	AK	5748AP1	78-215
	U1	*	MACH		" - "	031	10/14/80		VS APL	APL		13	AK	5748AP1	80-084
	U1	*	MACH		" - "	040	03/31/81		VS APL	APL		13	AK	5748AP1	80-149
	U1	*	MACH		651-6602	030	02/16/79	07/31/81	VS APL	APL		13	AK	5748AP1	78-215
	U1	*	MACH		" - "	031	10/14/80		VS APL	APL		13	AK	5748AP1	80-084
	U1	*	MACH		" - "	040	03/31/81		VS APL	APL		13	AK	5748AP1	80-149
	U1	*	MACH		661-6602	030	02/16/79	12/31/81	VS APL	APL		13	AK	5748AP1	78-215
	U1	*	MACH		" - "	031	10/14/80	12/31/81	VS APL	APL		13	AK	5748AP1	80-084
	U1	*	MACH		" - "	040	03/31/81		VS APL	APL		13	AK	5748AP1	80-149



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****														
5748 CONT														
****														
CX-112	U1	*	MACH		621-7103	100	02/28/81		DMS/DPCX		03	DX	5748XC4	79-235
	U1	*	MACH		651-7103	100	02/28/81		DMS/DPCX		03	DX	5748XC4	79-235
	U1	*	MACH		661-7103	100	02/28/81		DMS/DPCX		03	DX	5748XC4	79-235
DS-1UR	S1	*			570-1726	120	01/22/80		DSF STANDALONE	UTILITY	13	AK		80-012
	S1	*			" - "	220	11/26/80		DSF STANDALONE	UTILITY	13	AK		80-115
FO-211	U1	*	MACH		621-4905	010	04/30/76		VSPC FORTRAN	FORTRAN	13	AK	5748FO2	76-057
	U1	*	MACH		" - "	011	12/31/77		VSPC FORTRAN	FORTRAN	13	AK	5748FO2	
	U1	*	MACH		631-4905	010	04/30/76		VSPC FORTRAN	FORTRAN	13	AK		76-057
	U1	*	MACH		" - "	011	12/31/77		VSPC FORTRAN	FORTRAN	13	AK		
	U1	*	MACH		651-4905	010	09/30/76		VSPC FORTRAN	FORTRAN	13	AK	5748FO2	76-144
	U1	*	MACH		" - "	011	12/31/77		VSPC FORTRAN	FORTRAN	13	AK	5748FO2	
	U1	*	MACH		661-4905	010	10/29/76		VSPC FORTRAN	FORTRAN	13	AK	5748FO2	76-162
	U1	*	MACH		" - "	011	12/31/77		VSPC FORTRAN	FORTRAN	13	AK	5748FO2	
FO-300	U1	*	MACH		621-4906	110	04/30/81		FORTRAN COMP & LIB	FORTRAN	13	AK	5748FO3	80-140
	U1	*	MACH		641-4906	110	04/30/81		FORTRAN COMP & LIB	FORTRAN	13	AK	5748FO3	80-140
	U1	*	MACH		651-4906	110	04/30/81		FORTRAN COMP & LIB	FORTRAN	13	AK	5748FO3	80-140
	U1	*	MACH		661-4906	110	04/30/81		FORTRAN COMP & LIB	FORTRAN	13	AK	5748FO3	80-140
F1-2	X2		MACH		099-0028	010	08/23/77		DOC ID AND DESC MACR		02	AN		77-135
F1-300	X2		INST		099-0028		06/29/79		EPSS		WP	BL		78-104
F5-300	X2		MACH		099-0028	010	08/31/79		MAPS/3690		WP	CK		80-151
F5-400	X2		MACH		099-0028	010	08/31/81		MAPS/370		WP	CK		80-152
F5-500	X2		MACH		099-0028		06/27/80		3600 ADMIN		WP	CJ		79-214
GD-101	U1	*	MACH		620-7801	100	09/30/80		GDDM		23	CB	5748XXH	79-228
	U1	*	MACH		" - "	200	10/31/81		GDDM		23	CB	5748XXH	80-281
	U1	*	MACH		640-7801	100	10/17/80		VH/370 GDDM		23	CB	5748XXH	79-228

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COMPONENT ID	SVC CLS	MP SC	LIC. TYPE	SVC PER.	FESN	REL	PID AVAIL	CURR. END	DESCRIPTION	SUP GROUP	CTR LOC	SUPP ADDR	MAIL NO.	PID NO.	ANNOU LETTER
****															
5748 CONT															
****															
GD-102	U1	*	MACH		640-7801	200	10/31/81		VM/370 GDDM			23	CB	5748XXH	80-281
	U1	*	MACH		650-7801	100	06/13/80		GDDM			23	CB	5748XXH	79-228
	U1	*	MACH		" - "	200	10/31/81		GDDM			23	CB	5748XXH	80-281
	U1	*	MACH		660-7801	100	06/13/80		DOS/VSE GDDM			23	CB	5748XXH	79-228
	U1	*	MACH		" - "	200	10/31/81		DOS/VSE GDDM			23	CB	5748XXH	80-281
	U1	*	MACH		620-7802	101	09/30/80		GDDM VS1 PGF			23	CB	5748XXH	79-228
	U1	*	MACH		" - "	201	10/31/81		GDDM VS1 PGF			23	CB	5748XXH	80-281
	U1	*	MACH		640-7802	101	10/17/80		VM/370 PGF			23	CB	5748XXH	79-228
	U1	*	MACH		" - "	201	10/31/81		VM/370 PGF			23	CB	5748XXH	80-281
	U1	*	MACH		650-7802	101	06/13/80		GDDM PRES. FEAT.			23	CB	5748XXH	79-228
	U1	*	MACH		" - "	201	10/31/81		GDDM PRES. FEAT.			23	CB	5748XXH	80-281
	U1	*	MACH		660-7802	101	06/13/80		DOS/VSE PGF			23	CB	5748XXH	79-228
	U1	*	MACH		" - "	201	10/31/81		DOS/VSE PGF			23	CB	5748XXH	80-281
	LM-303	U1	*	MACH		621-4907	110	04/30/81		FORTRAN LIB			13	AK	5748LM3
U1		*	MACH		641-4907	110	04/30/81		FORTRAN LIB			13	AK	5748LM3	80-140
U1		*	MACH		651-4907	110	04/30/81		FORTRAN LIB			13	AK	5748LM3	80-140
U1		*	MACH		661-4907	110	04/30/81		FORTRAN LIB					5748LM3	80-140
T1-100	X2		MACH		099-0028		12/28/79		ACP/TPF						78-118
UT-200	U1	*	INST		621-5102	010	01/27/78		3800 UTILITY PROGRAM	UTILITY	13	S		5748UT2	77-112
	U1	*	INST		" - "	111	03/01/79		3800 UTILITY PROGRAM	UTILITY	13	S		5748UT2	78-142
	U1	*	INST		631-5102	010	01/27/78		3800 UTILITY PROGRAM	UTILITY	13	S			77-112
	U1	*	INST		641-5102	010	01/27/78		3800 UTILITY PROGRAM	UTILITY	13	S		5748UT2	77-112
	U1	*	INST		651-5102	010	01/27/78		3800 UTILITY PROGRAM	UTILITY	13	S		5748UT2	77-112
	U1	*	INST		661-3004	010	01/27/78		3800 UTILITY PROGRAM	UTILITY	13	S		5748UT2	77-112
	U1	*	INST		691-5102	010	01/27/78		3800 UTILITY PROGRAM	UTILITY	13	S		5748UT2	77-112
	U1	*	INST		691-5102	010	01/27/78		3800 UTILITY PROGRAM	UTILITY	13	S		5748UT2	77-112

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****														
5748														
****														
XC-2	X2		MACH		099-0028		01/27/78		DMS					77-083
XC-3	X2		MACH		099-0028			03/31/81	DMS/3770					78-127
XT-2	X2		MACH		099-0028	010	09/03/76		PS3 II/VS-CMS					76-128
XT-300	X2		MACH		099-0028		09/27/79		SPF/CMS		WP	N		79-225
XX-B00	X4		MACH		679-6503	010	12/29/78	08/31/80	DOC LIB FACILITY				5748XXE	78-212
	U3		MACH		" - "	020	04/30/80		DOC LIB FACILITY	SCRIPT	13	AK	5748XXE	79-148
XX-G	X2		MACH		099-0028		04/28/78		DSX					78-072
XX-G00	X2		MACH		099-0028	022	07/16/80	03/31/81	DSX					80-144
	U1	*	MACH		621-3902	210	12/01/80		DSX VS1		03	BX		80-189
	U1	*	MACH		651-3902	210	12/01/80		DSX MVS		03	BX	5748XXG	80-189
	U1	*	MACH		661-3902	210	12/01/80		DSX DVS		03	BX	5748XXG	80-189
XX-111	U1	*	MACH		621-6502	030	01/07/77		VS/BASIC	BASIC	13	AK	5748XX1	77-001
	U1	*	MACH		631-6502	010	06/17/74		VS/BASIC	BASIC	13	AK		74-027
	U1	*	MACH		" - "	030	01/07/77		VS/BASIC	BASIC	13	AK		77-001
	U1	*	MACH		641-6502	030	01/07/77		VS/BASIC	BASIC	13	AK	5748XX1	77-001
	U1	*	MACH		651-6502	010	06/17/74		VS/BASIC	BASIC	13	AK	5748XX1	74-027
	U1	*	MACH		" - "	030	01/07/77		VS/BASIC	BASIC	13	AK	5748XX1	77-001
	U1	*	MACH		661-6502	010	06/17/74		VS/BASIC	BASIC	13	AK	5748XX1	74-027
	U1	*	MACH		" - "	030	01/07/77		VS/BASIC	BASIC	13	AK	5748XX1	77-001
XX-3	X2		MACH		099-0028	200	01/26/76		DL/1 BRIDGE					76-007
XX-6	Y2		MACH		099-0028		02/16/78		INT/INSTP SYS					78-043
XX-900	U3		MACH		679-6504	010	12/29/78	12/31/81	DOC COMP FACILITY	SCRIPT	13	AK	5748XX9	78-212
	U3		MACH		" - "	020	04/30/80		DOC COMP FACILITY	SCRIPT	13	AK	5748XX9	79-148

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**** 5749	VM	370													
****															
	U4				540-0000		512	12/31/80	VM/370 BASE						5749010
	S2				" - "		513		VM/370 BASE						5749010
	S2				" - "		514		VM/370 BASE						5749010
	S1 *				" - "		600	03/30/79	VM/370 BASE						5749010 79-042
	S1 *				" - "		601		VM/370 BASE						5749010
	S1 *				" - "		602		VM/370 BASE						5749010
	S1 *				" - "		603		VM/370 BASE						5749010
	S1 *				" - "		604		VM/370 BASE						5749010
	S1 *				" - "		605		VM/370 BASE						5749010
	S1 *				" - "		606		VM/370 BASE						5749010
	S1 *				" - "		607		VM/370 BASE						5749010
	S1 *				" - "		608		VM/370 BASE						5749010
	S1 *				" - "		609		VM/370 BASE						5749010
	S1 *				" - "		610		VM/370 BASE						5749010
	S1 *				" - "		611		VM/370 BASE						5749010
	S1 *				" - "		612		VM/370 BASE						5749010
	S1 *				" - "		613		VM/370 BASE						5749010
	S1 *				" - "		614		VM/370 BASE						5749010
	S1 *				" - "		615		VM/370 BASE						5749010
	S1 *				" - "		616		VM/370 BASE						5749010
DH-K00	--				540-1302		---		VM/370 CP	VM 370	02	BN			
	U1 *	MACH			640-1302		451	03/17/78	VM/370 SEP	VM 370	02	BN	5748XE1		78-050
	U1 *	MACH			" - "		452	04/28/78	VM/370 BSEP	VM 370	02	BN	5748XX8		77-160
	U1 *	MACH			" - "		461	09/30/79	VM/370 SEP	VM 370	02	BN	5748XE1		79-044
	U1 *	MACH			" - "		462	04/30/79	VM/370 BSEP	VM 370	02	BN	5748XX8		79-043

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COMPONENT ID	SVC CLS	MP SC	LIC. TYPE	SVC PER.	FESN	REL	PID AVAIL	CURR. END	DESCRIPTION	SUP GROUP	CTR LOC	SUPP MAIL ADDR	PID NO.	ANNOUN LETTER
****														
5749 CONT														
****														
	U1	*	MACH		640-1302	471	10/08/80		VM/370 SP	VM 370	02	BN	5664167	80-019
DM-M00	--	--			540-1303	---			IPCS	VM 370	02	BN		
DM-S00	--	--			540-1402	---			VM/370 CMS	VM 370	01	AN		
	U1	*	MACH		640-1402	451	03/17/78		VM/370 SEP	VM 370	01	AN	5748XE1	78-050
	U1	*	MACH		" - "	452	04/28/78		VM/370 BSEP	VM 370	01	AN	5748XX8	77-160
	U1	*	MACH		" - "	461	09/30/79		VM/370 SEP	VM 370	01	AN	5748XE1	79-044
	U1	*	MACH		" - "	462	04/30/79		VM/370 BSEP	VM 370	01	AN	5748XX8	79-043
	U1	*	MACH		" - "	471	10/08/80		VM/370 SP	VM 370	01	AN	5664167	80-019
DM-T00	--	--			540-1304	---			VM/370 RSCS	VM 370	01	AN		
DT-V00	U1	*	MACH		640-1303	110	10/15/79		IPCS EXT	VM 370	02	BN	5748SA1	79-050
	U1	*	MACH		" - "	200	10/07/80		IPCS EXT	VM 370	02	BN	5748SA1	80-160
DT-W01	X2		MACH		099-0028		09/24/79		SPF/CMS	VM 370	WP	N		79-049
DV-H00	U1	*	MACH		641-5301	110	12/31/79		VM/370 DIRECT.MAINT	VM 370	02	BN	5748XE4	79-048
DV-M00	U1	*	MACH		640-1307	110	05/12/80		VM/PASS THROUGH	VM 370	01	AN	5748RC1	80-020
MS-101	U1	*	MACH		640-5902	110	07/01/79	12/31/81	VM/370 IPP	VM 370	02	DJ	5748MS1	79-052
	U1	*	MACH		" - "	120	11/11/80		VM/370 IPP	VM 370	02	DJ	5748MS1	80-093
	U1	*	MACH		" - "	130	03/31/81		VM/370 IPP	VM 370	02	DJ	5748MS1	80-285
MS-102	U1	*	MACH		640-5903	110	07/01/79	12/31/81	VM/DOS IPP	VM 370	02	DJ	5748MS1	79-052
	U1	*	MACH		" - "	120	11/11/80		VM/DOS IPP	VM 370	02	DJ	5748MS1	80-093
	U1	*	MACH		" - "	130	03/31/81		VM/DOS IPP	VM 370	02	DJ	5748MS1	80-285
SC-AMS	--	--			540-1903	---			CMS/VSAM	VM 370	01	G		
	U1	*	MACH		641-1903	707	06/30/79	12/31/81	CMS/VSE/VSAM SERVICE	VM 370	02	G	5746AM2	79-029
SC-ER1	--	--			540-5002	---			EREP	ERP	02	BG	5749010	
	S1	*			" - "	460	06/01/79		EREP 1.0	ERP	02	BG	5749010	79-042
	S1	*			" - "	471	08/29/80		EREP 1.1 ON VM SP	ERP	02	BG	5749010	

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COMPONENT ID	SVC CLS	MP SC	LIC. TYPE	SVC PER.	FESN	REL	PID AVAIL	CURP. END	DESCRIPTION	SUP GROUP	CTR LOC	MAIL ADDR	PID NO.	ANNOUN LETTER
****														
5749 CONT														
****														
SC-VCM	U1	*	MACH		641-1904	707	06/30/79	12/31/81	VSAM/VTAM COM MACRO	VM 370	02	G	5746AM2	79-029
SC-VSM	--	-			540-1902	---			CMS/VSAM	VM 370	02	BG		
	U1	*	MACH		641-1902	707	06/30/79	12/31/81	VSE/VSAM	VM 370	02	G	5746AM2	79-029
SC-1CD	-	-			540-1305	---			OBR/EREP/RDE	VM 370	02	BG		
	S1	*			" - "	450	03/03/78		OBR/EREP/RDE	VM 370	02	BG	5749010	
SC-103	--	-			540-1306	---			ASSEMBLER XP	ASSEMB	65	S		
XP-100	U1	*	MACH		641-1702	100	05/31/79	12/31/81	VM/370 RSCS:NJE	VM 370	01	AN	5748XP1	79-045
	U1	*	MACH		" - "	200	10/06/80		VM/370 RSCS:NJE	VM 370	01	AN	5748XP1	80-021
XY-B00	U1	*	MACH		641-1502	110	05/11/79		VM/370 DMS/CMS	VM 370	01	AN	5748XKB	79-047
XY-C00	U1	*	MACH		641-1602	110	05/14/79		VM/370 IFS	VM 370	01	AN	5748XVC	79-046
XY-K00	U1	*	MACH		640-8002	110	12/11/80		ELIAS-1/VM	ELI	13	CG	5748XXK	80-227
****														
5750														
****														
BA-100	Y1		MACH		099-0102	300	11/30/80		DPPX IPO		03	DX		80-231
****														
5752 OS MVS														
****														
	U4				550-0000	037	05/01/76	12/31/80	MVS BASE				5752VS2	76-067
	S2				" - "	102	03/01/79		MVS PRODUCT BASE				5752VS2	78-142
AM-300	U1		MACH		650-1502	102	02/28/80		IDWS	INFODIST	23	BG	5740AMA	79-068
BB-1CT	U1		MACH		650-2061	226	06/30/81	04/30/83	MCH SP R2	SUPERV	02	BN		80-106
	U1		MACH		" - "	326	10/31/81		MCH SP1.3.0		02			80-239
BB-130	U1		MACH		650-2701	127	03/31/81	12/31/82	IOCP		02	BN	5740XYN	80-238
	U1		MACH		" - "	226	06/30/81	04/30/83	IOCP		02	BN	5740XYS	80-106

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COMPONENT ID	SVC CLS	MP SC	LIC. SVC TYPE PER.	FESN	REL	PID AVAIL	CURP. END	DESCRIPTION	SUP GROUP	CTF	SUPP LOC	MAIL ADDR	PID NO.	ANNOUN LETTER
****														
5752			CONT											
****														
BB-131	U1		MACH	650-3702	126	08/15/80	12/31/82	ENF SP REL1			02	BN	5740XYN	80-103
	U1		MACP	" - "	226	06/30/81	04/30/83	ENF SP P2			02	BN	5740XYN	80-106
	U1		MACH	" - "	326	10/31/81		ENF SP1.2.0			02		5740XYN	80-239
BR-135	U1		MACH	650-3703	127	03/31/81	12/31/82	IOCP CONTROL PART			02		5740XYN	80-239
BB-136	U1		MACH	650-3704	127	03/31/81	12/31/82	IOCP COMMON PART			02	BN		80-239
	U1		MACH	" - "	226	06/30/81	04/30/83	IOCP COMMON PART			02	BN	5740XYN	80-106
PD-TST	--	-		550-2056	---			DLIB LOAD/INSTALL			02	BR		
CX-100	S2			550-4802	102			DEMF	VTAM		23	BG	5752VS2	
	S2			" - "	868	01/31/78		DEMF	VTAM		23	BG	5752VS2	78-010
CU-134	U1		MACH	651-7006	102	06/27/80		CRYPTO UNIT SUPPT	CRYPTO		02	BG	5740XY6	79-262
DM-1CM	U1		MACH	650-1429	134	11/26/80		MEDIA MANAGER			13	AK	5740AM7	80-112
	U1		MACH	" - "	136	03/31/81		MEDIA MANAGER			13	AK	5740AM7	80-112
DM-1CV	U1		MACH	650-1428	134	11/26/80		COMMON VTOC ACCESS			13	AK	5740AM7	80-112
HC-133	U1	*	MACH	650-5631	101	03/31/80		HCF TCAM			03	BG	5735XR1	78-174
	U1	*	MACH	" - "	102	11/30/79		HCF VTAM			03	BG	5735XR1	78-174
OZ-135	U1		MACH	650-2071	102	01/31/80		INFO/SYSTEM			02	BG	5735OZS	80-030
	U1		MACH	" - "	202	01/14/81		INFO/SYSTEM			02	BG	5735OZS	80-213
	U1		MACH	" - "	222	01/14/81		INFO/MANAGEMENT			02	BG	5735OZS	80-214
	U1		MACH	" - "	232	06/30/81		INFO/ACCESS			02	BG	5735OZS	80-243
PD-132	U1	*	MACH	651-1419	122	09/30/79		NPDA	NPDA		03	BG	5735XX8	78-209
	U1	*	MACH	" - "	212	10/10/80		NPDA	NPDA		03	BG	5735XX8	79-133
RF-100	U1		MACH	651-7004	305	10/06/80		RACF REPORT WRITER	RACF		02	BN	5740XXH	80-202
SC-OBR	S2			550-5003	102	03/01/79		OBR	ERP		02	BG	5752VS2	78-142
	U1		MACH	650-5003	126	08/15/80	12/31/82	OBR SP REL1	ERP		02	BG	5740XYN	80-103
	U1		MACH	" - "	127	03/31/81	12/31/82	OBR SP REL1	ERP		02	BG	5740XYN	80-238

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****														
5752 CONT														
****														
	U1		MACH		650-5003	221			OBR	ERP	02	BG		
	U1		MACH		" - "	226	06/30/81	04/30/83	OBR SP R2	ERP	02	BG	5740XYN	80-106
	U1		MACH		" - "	326	10/31/81		OBR SP1.3.0	ERP	02	BG	5740XYN	80-239
SC-SDS	U1		MACH		650-4102	226	01/02/81	04/30/83	GRS SP R2	SUPERV	02	BN		80-106
	U1		MACH		" - "	326	10/31/81		D S SHARING SP1.3.0		02			80-239
SC-XMS	U1		MACH		651-2047	226	01/02/81	04/30/83	XMS SP R2	SUPERV	02	BN	5740XYN	80-106
	U1		MACH		" - "	326	10/31/81		CROSS MEMORY SP1.3.0		02			80-239
SC-1BA	U4				550-3410	010	12/01/75	12/31/80	JES 3	JES 3	02	AK	5752VS2	75-047
	S2				" - "	102	03/01/79		JES 3	JES 3	02	AK	5752VS2	78-142
	S2				" - "	133	02/29/80		JES 3	JES 3	02	AK	5752VS2	79-120
	U4				" - "	812	04/30/76	12/31/80	JES 3	JES 3	02	AK	5752VS2	76-055
	U4				" - "	818	05/02/77	12/31/80	JES 3	JES 3	02	AK	5752VS2	77-075
	U4				" - "	826	04/03/79	12/31/80	JES 3	JES 3	02	AK	5752VS2	78-158
	U4				" - "	829	10/03/77	12/31/80	JES 3	JES 3	02	AK	5752VS2	77-165
	U1		MACH		650-3410	110	09/20/79		JES 3	JES 3	02	AK	5799AZI	79-085
	U1		MACH		" - "	134			JES 3	JES 3	02	AK	5799AZI	
	U1		MACH		" - "	226	06/30/81	04/30/83	JES 3 SP R2	JES 3	02	AK	5740XYN	80-106
	U1		MACH		" - "	234	06/17/80		JES 3	JFS 3	02	AK	5799AZI	
	U1		MACH		" - "	326	10/31/81		JES 3 SP1.2.0	JFS 3	02	AK	5740XYN	80-239
SC-1BH	S2				550-3302	030	03/31/75		JES 2	JES 2	02	AK	5752VS2	
	S2				" - "	102	03/01/79		JES 2	JES 2	02	AK	5752VS2	78-142
	S2				" - "	103	02/29/80		JES 2	JES 2	02	AK	5752VS2	79-120
	U4				" - "	825	04/07/77	12/31/80	JES 2	JES 2	02	AK	5752VS2	77-050
	U1		MACH		650-3302	104	02/29/80		JES 2 NJE	JES 2	02	AK	5740XP8	79-120
	U1		MACH		" - "	112	03/01/79		JES 2 NJE	JES 2	02	AK	5740XP8	78-142



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COMPONENT ID	SVC CLS	MP SC	LIC. TYPE	SVC PER.	FESN	REL	FID AVAIL	CURR. END	DESCRIPTION	SUP GROUP	CTR LOC	SUPP ADDR	MAIL PID NO.	ANNOUN LETTER
****														
5752	COMT													
****														
		U1	MACH		650-3302	226	06/30/81	04/30/83	JES 2 NJE SP R2	JES 2	02	AK	5740XYS	80-106
		U1	MACH		" - "	326	10/31/81		JES 2 NJE SP1.2.0	JES 2	02	AK	5740XYS	80-239
		U4	MACH		" - "	823	04/05/78	12/31/90	JES 2 NJE				5740XRB	78-052
SC-1BL		S2			550-2901	102	03/01/79		MLWS	JES 2	02	AN	5752VS2	78-142
SC-1BY	--	-			550-2050	---			SYSTEM SECURITY SUPT	SUPPRV.	02	BN		
SC-1BP	--	-			550-3430	---			JFS2/JES3 FUNCTION	JFS 2	13	AK		
SC-1BZ	--	-			550-3502	---			MSS RECOVERY SERV	DATA MGT	13	AK	5752VS2	
		U4			" - "	824	04/01/77	12/31/80	MSS RECOVERY SERV	DATA MGT	13	AK	5752VS2	
		U1	MACH		650-3502	112	06/29/79		MSS RECOVERY SERV	DATA MGT	13	AK	5740XYG	78-224
SC-1B2	--	-			550-1902	---			EXTPRNL WRITER	JES	13	AK		
		U1	MACH		650-1902	226	06/30/81	04/30/83	EXT WRITER SP R2	JES	13	AK	5740XYN	80-106
		U1	MACH		" - "	326	10/31/81		EXT WRITER SP1.2.0	JES	13	AK	5740XYN	80-239
SC-193	--	-			550-2002	---			SCHEDULEP RPSTART	JOB MGT	02	BN	5752VS2	
		S2			" - "	221	03/30/79		SCHEDULEP RPSTART	JOB MGT	02	BN	5752VS2	78-198
		U4			" - "	807	08/05/76	12/31/80	SCHEDULEP RPSTART	JOB MGT	02	BN	5752VS2	76-111
		U4			" - "	810	08/05/76	12/31/80	SCHEDULEP RPSTART	JOB MGT	02	BN	5752VS2	76-111
		U4			" - "	816	04/01/77	12/31/80	SCHEDULEP RPSTART	JOB MGT	02	BN	5752VS2	77-015
		U4			" - "	864	03/30/79	12/31/80	SCHEDULEP RPSTART	JOB MGT	02	BN	5752VS2	78-198
SC-1B4	--	-			550-2003	---			ALLOC/UNALLOC/VAC	JOB MGT	02	BN	5752VS2	
		S2			" - "	221	03/30/79		ALLOC/UNALLOC/VAC	JOB MGT	02	BN	5752VS2	78-198
		U4			" - "	804	08/05/76	12/31/80	ALLOC/UNALLOC/VAC	JOB MGT	02	BN	5752VS2	76-111
		U4			" - "	810	08/05/76	12/31/80	ALLOC/UNALLOC/VAC	JOB MGT	02	BN	5752VS2	76-111
		U4			" - "	816	04/01/77	12/31/80	ALLOC/UNALLOC/VAC	JOB MGT	02	BN	5752VS2	77-015
		U4			" - "	864	03/30/79	12/31/80	ALLOC/UNALLOC/VAC	JOB MGT	02	BN	5752VS2	78-198
		U1	MACH		650-2003	112	02/01/79		ALLOC/UNALLOC/VAC	JOB MGT	02	BN	5740YI6	78-142

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****														
5752 CONT														
****														
	U1		MACH		650-2003	126	08/15/80	12/31/82	ALL UNAL VAC SP REL1	JOB MGT	02	BN	5740XYN	80-103
	U1		MACH		" - "	222	08/30/79		ALLOC/UNALLOC/VAC	JOB MGT	02	BN	5740XE1	79-081
	U1		MACH		" - "	226	06/30/81	04/30/83	ALL UNAL VAC SP R2	JOB MGT	02	BN	5740XYN	80-106
	U1		MACH		" - "	326	10/31/81		ALL UNAL VAC SP1.3.0	JOB MGT	02	BN	5740XYN	80-239
	X4		MACH		" - "	811	09/02/76	12/31/80	ALLOC/UNALLOC/VAC				5740XT6	76-128
SC-1B5	--	-			550-2004	---			SWA MANAGER	JOB MGT	02	BN	5752VS2	
	S2				" - "	221	03/30/79		SWA MANAGER	JOB MGT	02	BN	5752VS2	78-198
	U4				" - "	804	08/05/76	12/31/80	SWA MANAGER	JOB MGT	02	BN	5752VS2	76-111
	U4				" - "	810	08/05/76	12/31/80	SWA MANAGER	JOB MGT	02	BN	5752VS2	76-111
	U4				" - "	816	04/01/77	12/31/80	SWA MANAGER	JOB MGT	02	BN	5752VS2	77-015
	U4				" - "	864	03/30/79	12/31/80	SWA MANAGER	JOB MGT	02	BN	5752VS2	78-198
SC-1B6	--	-			550-2005	---			INITIATOR TERMINATOR	JOB MGT	02	BN	5752VS2	
	S2				" - "	221	03/30/79		INITIATOR TERMINATOR	JOB MGT	02	BN	5752VS2	78-198
	U4				" - "	804	08/05/76	12/31/80	INITIATOR TERMINATOR	JOB MGT	02	BN	5752VS2	76-111
	U4				" - "	807	08/05/76	12/31/80	INITIATOR TERMINATOR	JOB MGT	02	BN	5752VS2	76-111
	U4				" - "	816	04/01/77	12/31/80	INITIATOR TERMINATOR	JOB MGT	02	BN	5752VS2	77-015
	U4				" - "	817	08/31/76	12/31/80	INITIATOR TERMINATOR	JOB MGT	02	BN	5752VS2	76-123
	U4				" - "	864	03/30/79	12/31/80	INITIATOR TERMINATOR	JOB MGT	02	BN	5752VS2	78-198
	X4		MACH		650-2005	122	03/01/79	12/31/80	INITIATOR TERMINATOR				5740XE1	78-142
	X4		MACH		" - "	123	03/01/79	12/31/80	INITIATOR TERMINATOR				5740XE1	78-142
	U1		MACH		" - "	126	08/15/80	12/31/82	INIT TERM SP REL1	JOB MGT	02	BN	5740XYN	80-103
	U1		MACH		" - "	222	08/30/79		INITIATOR TERMINATOR	JOB MGT	02	BN	5740XE1	79-081
	U1		MACH		" - "	226	06/30/81	04/30/83	INIT TERM SP R2	JOB MGT	02	BN	5740XYN	80-106
	U1		MACH		" - "	326	10/31/81		INIT TERM SP1.3.0	JOB MGT	02	BN	5740XYN	80-239
	X4		MACH		" - "	850	03/06/78	12/31/80	INITIATOR TERMINATOR				5740XE1	77-108

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COMPONENT ID	SVC CLS	MP SC	LIC. TYPE	SVC PER.	FESN	REL	PID AVAIL	CURR. END	DESCRIPTION	SUP GROUP	CTR LOC	SUPP ADDR	MAIL NO.	PID NO.	ANNOON LETTER
****															
5752 CONT															
****															
SC-1B8	X4		MACH		650-2005	865	03/30/79	12/31/80	INITIATOR TERMINATOR					5740XE1	78-198
	--	-			550-2006	---			M S COMMANDS	JOB MGT	02	BN		5752VS2	
	S2				" - "	221	03/30/79		M S COMMANDS	JOB MGT	02	BN		5752VS2	78-198
	U4				" - "	804	08/05/76	12/31/80	M S COMMANDS	JOB MGT	02	BN		5752VS2	76-111
	U4				" - "	807	08/05/76	12/31/80	M S COMMANDS	JOB MGT	02	BN		5752VS2	76-111
	U4				" - "	810	08/05/76	12/31/80	M S COMMANDS	JOB MGT	02	BN		5752VS2	76-111
	U4				" - "	816	04/01/77	12/31/80	M S COMMANDS	JOB MGT	02	BN		5752VS2	77-015
	U4				" - "	817	08/31/76	12/31/80	M S COMMANDS	JOB MGT	02	BN		5752VS2	76-123
	U4				" - "	833	05/01/77	12/31/80	M S COMMANDS	JOB MGT	02	BN		5752VS2	77-087
	U4				" - "	851		12/31/80	M S COMMANDS	JOB MGT	02	BN		5752VS2	77-040
	U4				" - "	859	03/09/78	12/31/80	M S COMMANDS	JOB MGT	02	BN		5752VS2	78-036
	U4				" - "	864	03/30/79	12/31/80	M S COMMANDS	JOB MGT	02	BN		5752VS2	78-198
	X4		MACH		650-2006	122	03/01/79	12/31/80	M S COMMANDS					5740XE1	78-142
	X4		MACH		" - "	123	03/01/79	12/31/80	M S COMMANDS					5740XE1	78-142
	U1		MACH		" - "	126	08/15/80	12/31/82	M S COMMANDS SP REL1	JOB MGT	02	BN		5740XYN	80-103
	U1		MACH		" - "	127	03/31/81	12/31/82	M S COMMANDS SP REL1	JOB MGT	02	BN		5740XYN	80-238
	U1		MACH		" - "	222	08/30/79		M S COMMANDS	JOB MGT	02	BN		5740XE1	79-081
	U1		MACH		" - "	226	06/30/81	04/30/83	M S COMMANDS SP R2	JOB MGT	02	BN		5740XYN	80-106
	U1		MACH		" - "	326	10/31/81		M S COMMANDS SP1.3.0	JOB MGT	02	BN		5740XYN	80-239
	X4		MACH		" - "	850	03/06/78	12/31/80	M S COMMANDS						77-108
	X4		MACH		" - "	865	03/30/79	12/31/80	M S COMMANDS						78-198
SC-1B9	--	-			550-2007	---			CONVERTER/INTERPRETE	JOB MGT	02	BN		5752VS2	
	U4				" - "	804	08/05/76	12/31/80	CONVERTER/INTERPRETE	JOB MGT	02	BN		5752VS2	76-111
	U4				" - "	807	08/05/76	12/31/80	CONVERTER/INTERPRETE	JOB MGT	02	BN		5752VS2	76-111
	U4				" - "	810	08/05/76	12/31/80	CONVERTER/INTERPPETE	JOB MGT	02	BN		5752VS2	76-111

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COMPONENT ID	SVC CLS	MP SC	LIC. TYPE	SVC PER.	FESN	REL	PID AVAIL	CURR. END	DESCRIPTION	SUP GROUP	CTR LOC	SUPP ADDR	MAIL NO.	PID NO.	ANNOUN LETTER
*****															
5752 CONT															
*****															
			U4		550-2007	816	04/01/77	12/31/80	CONVERTER/INTERPRETE	JOB MGT	02	BN	5752VS2	77-015	
			U4		" - "	817	08/31/76	12/31/80	CONVERTER/INTERPRETE	JOB MGT	02	BN	5752VS2	76-123	
			U1	MACH	650-2007	222	08/30/79		CONVERTER/INTERPRETF	JOB MGT	02	BN		79-081	
			U1	MACH	" - "	226	06/30/81	04/30/83	CONV INTER SP1.2.0	JOB MGT	02	BN	5740XYN	80-106	
SC-10A		--			550-2201	---			DASD ERP	ERP	13	AK	5752VS2		
			S2		" - "	122			REL 122 IC DTF	ERP	13	AK	5752VS2		
			U4		" - "	824	04/01/77	12/31/80	DASD ERP	ERP	13	AK	5752VS2		
			U1	MACH	650-2201	126	08/15/80	12/31/82	DASD ERP SP REL1	ERP	02	BN	5740XYN	80-103	
			U1	MACH	" - "	134	11/26/80		DASD ERP	ERP	02	BN	5740AM7	80-112	
			U1	MACH	" - "	136	03/31/81		DASD ERP	ERP	02	BN	5740AM7	80-112	
			U1	MACH	" - "	226	06/30/81	04/30/83	DASD ERP SP R2	ERP	02	BN	5740XYN	80-106	
			U1	MACH	" - "	326	10/31/81		DASD ERP SP1.2.0	ERP	02	BN	5740XYN	80-239	
SC-10B		--			550-2202	---			U R ERP	ERP	13	AK	5752VS2		
			S2		" - "	133	03/05/80		U P ERP	ERP	13	AK	5752VS2	79-121	
			U4		" - "	810	08/05/76	12/31/80	U R ERP	ERP	13	AK	5752VS2	76-111	
SC-10C		--			550-2203	---			TAPE/ ERP/VES	ERP	13	AK	5752VS2		
			U4		" - "	810	08/05/76	12/31/80	TAPE/ ERP/VES	ERP	13	AK	5752VS2	76-111	
			U4		" - "	830		12/31/80	TAPE/ ERP/VES	ERP	13	AK	5752VS2		
			U1	MACH	650-2203	134	11/26/80		TAPE/ ERP/VES	ERP	13	AK	5740AM7	80-112	
SC-10D		--			550-2001	---			OBR/EREP/RDE	ERP	02	BG	5752VS2		
			S7		" - "	221	03/30/79		OBR/EREP/RDE	ERP	02	BG	5752VS2	78-198	
			U4		" - "	806	06/28/76	12/31/80	OBR/EREP/RDE	ERP	02	BG	5752VS2	76-087	
			U4		" - "	810	08/05/76	12/31/80	OBR/EREP/RDE	ERP	02	BG	5752VS2	76-111	
			U4		" - "	817	08/31/76	12/31/80	OBR/EREP/RDE	ERP	02	BG	5752VS2	76-123	
			U4		" - "	827	02/28/77	12/31/80	OBR/EREP/RDE	ERP	02	BG	5752VS2	77-022	

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COMPONENT ID	SVC CLS	MP SC	LTC. TYPE	SVC PER.	FESN	REL	PID AVAIL	CUPP. END	DESCRIPTION	SUP GROUP	CTR LOC	SUPP ADDR	PID NO.	ANNOU LETTER
****														
5752	CONT													
****														
					550-2001	830		12/31/80	OBR/EREP/RDE	ERP	02	BG	5752VS2	
					" - "	851	03/06/78	12/31/80	OBR/EREP/PDE	ERP	02	BG	5752VS2	78-029
					" - "	864	03/30/79	12/31/80	OBR/EREP/RDE	ERP	02	BG	5752VS2	78-198
SC-1CE	--	-			550-2010	---			RMS	SUPERV.	02	BN	5752VS2	
	S2				" - "	221	03/30/79		RMS	SUPERV.	02	BN	5752VS2	78-198
					" - "	806	06/28/76	12/31/80	RMS	SUPERV.	02	BN	5752VS2	76-087
					" - "	807	08/05/76	12/31/80	RMS	SUPERV.	02	BN	5752VS2	76-111
					" - "	851	03/06/78	12/31/80	RMS	SUPERV.	02	BN	5752VS2	78-029
					" - "	855	07/01/77	12/31/80	RMS	SUPERV.	02	BN	5752VS2	77-076
					" - "	864	03/30/79	12/31/80	RMS	SUPERV.	02	BN	5752VS2	78-198
					650-2010	122	03/01/79		RMS				5740XE1	78-142
					" - "	126	08/15/80	12/31/82	RMS SP REL1	SUPERV.	02	BN		80-103
					" - "	127	03/31/81	12/31/82	RMS SP REL1	SUPERV.	02	BN		80-238
					" - "	222	08/30/79		RMS	SUPERV.	02	BN	5740XF1	79-081
					" - "	226	06/30/81	04/30/83	RMS SP R2	SUPERV.	02	BN	5740XYN	80-106
					" - "	326	10/31/81		RMS SP1.3.0	SUPERV.	02	BN	5740XYN	80-239
					" - "	850	03/06/78	12/31/80	RMS				5740XE1	77-108
SC-1CF	--	-			550-2013	---			EXTENDED SVC ROUTER	SUPERV.	02	BN		
SC-1CG	--	-			550-2057	---			SVC 109	SUPERV.	02	BN		
SC-1CH	--	-			550-2014	---			VIRT STOR MANGR	SUPERV.	02	BN	5752VS2	
					" - "	805	08/05/76	12/31/80	VIRT STOR MANGR	SUPERV.	02	BN	5752VS2	76-111
					" - "	807	08/05/76	12/31/80	VIRT STOR MANGR	SUPERV.	02	BN	5752VS2	76-111
					650-2014	122	03/01/79		VIRT STOR MANGR				5740XE1	78-142
					" - "	222	08/30/79		VIRT STOR MANGR	SUPERV.	02	BN	5740XE1	79-081
					" - "	226	06/30/81	04/30/83	VIRT STOR M3 SP R2	SUPERV.	02	BN	5740XYN	80-106

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COMPONENT ID	SVC CLS	PP SC	LIC. TYPE	SVC PER.	FESN	REL	PID AVAIL	CURR. END	DESCRIPTION	SUP GROUP	CTR LOC	SUPP ADDR	MAIL NO.	PID NO.	ANNOUN LETTER
****															
5752 CONT															
****															
	U1		MACH		650-2014	326	10/31/81		VIRT STOR MG SP1.3.0	SUPERV.	02	BN	5740XYN	80-239	
	X4		MACH		" - "	850	03/06/78	12/31/80	VIRT STOR MANGR				5740XE1	77-108	
SC-1CI	--	-			550-3503	---			3851 DSM ERP	ERP	13	AK	5752VS2		
	U4				" - "	824	08/05/76	12/31/80	3851 DSM ERP	ERP	13	AK	5752VS2	76-111	
SC-1CJ	--	-			550-2015	---			CONTENTS SUPERVISOR	SUPERV.	02	BN	5752VS2		
	U4				" - "	807	08/05/76	12/31/80	CONTENTS SUPERVISOR	SUPERV.	02	BN	5752VS2	76-111	
	X4		MACH		650-2015	122	03/01/79	12/31/80	CONTENTS SUPERVISOR				5740XE1	78-142	
	U1		MACH		" - "	222	08/30/79		CONTENTS SUPERVISOR	SUPERV.	02	BN	5740XE1	79-081	
	U1		MACH		" - "	226	06/30/81	04/30/83	CONTENTS SUP SP R2	SUPERV.	02	BN	5740XYN	80-106	
	U1		MACH		" - "	326	10/31/81		CONTENTS SUP SP1.3.0	SUPERV.	02	BN	5740XYN	80-239	
	X4		MACH		" - "	850	03/06/78	12/31/80	CONTENTS SUPERVISOR				5740XE1	77-108	
SC-1CK	--	-			550-2008	---			COMM TASK	SUPERV.	02	BN	5752VS2		
	S2				" - "	221	03/30/79		COMM TASK	SUPERV.	02	BN	5752VS2	78-198	
	U4				" - "	804	08/05/76	12/31/80	COMM TASK	SUPERV.	02	BN	5752VS2	76-111	
	U4				" - "	851	03/06/78	12/31/80	COMM TASK	SUPERV.	02	BN	5752VS2	78-029	
	U4				" - "	864	03/30/79	12/31/80	COMM TASK	SUPERV.	02	BN	5752VS2	78-198	
	U1		MACH		650-2008	126	08/15/80	12/31/82	COMM TASK SP REL1	SUPERV.	02	BN	5740XYN	80-103	
	U1		MACH		" - "	127	03/31/81	12/31/82	COMM TASK SP REL1	SUPERV.	02	BN	5740XYN	80-238	
	U1		MACH		" - "	222	08/30/79		COMM TASK	SUPERV.	02	BN	5740XE1	79-081	
	U1		MACH		" - "	226	06/30/81	04/30/83	COMM TASK SP R2	SUPERV.	02	BN	5740XYN	80-106	
	U1		MACH		" - "	326	10/31/81		COMM TASK SP1.3.0	SUPERV.	02	BN	5740XYN	80-239	
SC-1CL	--	-			550-2016	---			TASK MANAGER	SUPERV.	02	BN	5752VS2		
	S2				" - "	221	03/30/79		TASK MANAGER	SUPERV.	02	BN	5752VS2	78-198	
	U4				" - "	807	08/05/76	12/31/80	TASK MANAGER	SUPERV.	02	BN	5752VS2	76-111	
	U4				" - "	864	03/30/79	12/31/80	TASK MANAGER	SUPERV.	02	BN	5752VS2	78-198	

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COMPONENT ID	SVC CLS	MP SC	LIC. TYPE	SVC PER.	FESN	REL	PID AVAIL	CURR. END	DESCRIPTION	SUP GROUP	CTR LOC	MAIL ADDR	PID NO.	ANNOU LETTER
****														
5752														
****														
	X4		MACH		650-2016	122	03/01/79	12/31/80	TASK MANAGER				5740XE1	78-142
	X4		MACH	" - "	" - "	123	03/01/79	12/31/80	TASK MANAGER				5740YE1	78-142
	U1		MACH	" - "	" - "	126	08/15/80	12/31/82	TASK MGR SP REL1	SUPERV.	02	BN	5740YN	80-103
	U1		MACH	" - "	" - "	127	03/31/81	12/31/82	TASK MGR SP REL1	SUPERV.	02	BN	5740YN	80-238
	U1		MACH	" - "	" - "	222	08/30/79		TASK MANAGER	SUPERV.	02	BN	5740XE1	79-081
	U1		MACH	" - "	" - "	226	06/30/81	04/30/83	TASK MGR SP R2	SUPERV.	02	BN	5740YN	80-106
	U1		MACH	" - "	" - "	326	10/31/81		TASK MGR SP1.3.0	SUPERV.	02	BN	5740YN	80-239
	X4		MACH	" - "	" - "	850	03/06/78	12/31/80	TASK MANAGER				5740XE1	77-108
	X4		MACH	" - "	" - "	865	03/30/79	12/31/80	TASK MANAGER				5740YE1	78-198
SC-1CM	--	-			550-2017	---			RECOVERY TERMINATION	SUPERV.	02	BN	5752VS2	
	S2			" - "	" - "	221	03/30/79		RECOVERY TERMINATION	SUPERV.	02	BN	5752VS2	78-198
	U4			" - "	" - "	905	08/05/76	12/31/80	RECOVERY TERMINATION	SUPERV.	02	BN	5752VS2	76-111
	U4			" - "	" - "	807	08/05/76	12/31/80	RECOVERY TERMINATION	SUPERV.	02	BN	5752VS2	76-111
	U4			" - "	" - "	817	08/31/76	12/31/80	RECOVERY TERMINATION	SUPERV.	02	BN	5752VS2	76-123
	U4			" - "	" - "	833	05/01/77	12/31/80	RECOVERY TERMINATION	SUPERV.	02	BN	5752VS2	77-087
	U4			" - "	" - "	851	03/06/78	12/31/80	RECOVERY TERMINATION	SUPERV.	02	BN	5752VS2	78-029
	U4			" - "	" - "	855	07/01/77	12/31/80	RECOVERY TERMINATION	SUPERV.	02	BN	5752VS2	77-076
	U4			" - "	" - "	864	03/30/79	12/31/80	RECOVERY TERMINATION	SUPERV.	02	BN	5752VS2	78-198
	X4		MACH		650-2017	122	03/01/79	12/31/80	RECOVERY TERMINATION				5740XE1	78-142
	X4		MACH	" - "	" - "	123	03/01/79	12/31/80	RECOVERY TERMINATION				5740YE1	78-142
	U1		MACH	" - "	" - "	126	08/15/80	12/31/82	RECOVER TERM SP REL1	SUPERV.	02	BN	5740YN	80-103
	U1		MACH	" - "	" - "	127	03/31/81	12/31/82	RECOVER TERM SP REL1	SUPERV.	02	BN	5740YN	80-238
	U1		MACH	" - "	" - "	222	08/30/79		RECOVERY TERMINATION	SUPERV.	02	BN	5740XF1	79-081
	U1		MACH	" - "	" - "	226	06/30/81	04/30/83	RECOVER TERM SP R2	SUPERV.	02	BN	5740YN	80-106
	U1		MACH	" - "	" - "	326	10/31/81		RECOVER TERM SP1.3.0	SUPERV.	02	BN	5740YN	80-239

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COMPONENT ID	SVC CLS	MP SC	LIC. TYPE	SVC PFR.	FESN	REL	PID AVAIL	CURR. END	DESCRIPTION	SUP GPOUP	CTR LOC	SUPP ADDR	MAIL NO.	PID NO.	ANNOUN LEITFR
****															
5752															
****															
	X4		MACH		650-2017	850	03/06/78	12/31/80	RECOVERY TERMINATION					5740XE1	77-108
	X4		MACH		" - "	865	03/30/79	12/31/80	RECOVERY TERMINATION					5740XE1	78-198
SC-1CP	--	-			550-2018	---			EXT PREC FLT PNT	SUPERV.		01	AN		
SC-1CR	--	-			550-2019	---			REAL STOR MANAGER	SUPERV.		02	BN	5752VS2	
	S2				" - "	221	03/30/79		REAL STOR MANAGER	SUPERV.		02	BN	5752VS2	78-198
	U4				" - "	807	06/05/76	12/31/80	REAL STOR MANAGER	SUPERV.		02	BN	5752VS2	76-111
	U4				" - "	833	05/01/77	12/31/80	REAL STOR MANAGER	SUPERV.		02	BN	5752VS2	77-087
	U4				" - "	855	07/01/77	12/31/80	REAL STOR MANAGER	SUPERV.		02	BN	5752VS2	77-076
	U4				" - "	864	03/30/79	12/31/80	REAL STOR MANAGER	SUPERV.		02	BN	5752VS2	78-198
	X4		MACH		650-2019	122	03/01/79	12/31/80	REAL STOR MANAGER					5740XE1	78-142
	U1		MACH		" - "	126	09/15/80	12/31/82	REAL ST MGR SP REL1	SUPERV.		02	BN	5740XN	80-103
	U1		MACH		" - "	127	03/31/81	12/31/82	REAL ST MGR SP REL1	SUPERV.		02	BN	5740XN	80-238
	U1		MACH		" - "	222	08/30/79		REAL STOR MANAGER	SUPERV.		02	BN	5740XE1	79-081
	U1		MACH		" - "	226	06/30/81	04/30/83	REAL ST MGR SP R2	SUPERV.		02	BN	5740XN	80-106
	U1		MACH		" - "	326	10/31/81		REAL ST MGR SP1.3.0	SUPERV.		02	BN	5740XN	80-239
	X4		MACH		" - "	850	03/06/78	12/31/80	REAL STOR MANAGER					5740XE1	77-108
SC-1CU	--	-			550-2020	---			REGION CONTROL TASK	SUPERV.		02	BN	5752VS2	
	U4				" - "	807	08/05/76	12/31/80	REGION CONTROL TASK	SUPERV.		02	BN	5752VS2	76-111
	X4		MACH		650-2020	122	03/01/79	12/31/80	REGION CONTROL TASK					5740XE1	78-142
	U1		MACH		" - "	222	08/30/79		REGION CONTROL TASK	SUPERV.		02	BN	5740XE1	79-081
	U1		MACH		" - "	226	06/30/81	04/30/83	REG CONT SP R2	SUPERV.		02	BN	5740XN	80-106
	U1		MACH		" - "	326	10/31/81		REG CONT SP1.3.0	SUPERV.		02	BN	5740XN	80-239
	X4		MACH		" - "	850	03/06/78	12/31/80	REGION CONTROL TASK					5740XE1	77-108
SC-1CV	--	-			550-2021	---			TIMER SUPERVISOR	SUPERV.		02	BN	5752VS2	
	S2				" - "	221	03/30/79		TIMER SUPERVISOR	SUPERV.		02	BN	5752VS2	78-198



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****														
5752 CONT														
****														
					550-2021	807	08/05/76	12/31/80	TIMER SUPERVISOR	SUPERV.	02	BN	5752VS2	76-111
					" - "	864	03/30/79	12/31/80	TIMER SUPERVISOR	SUPERV.	02	BN	5752VS2	78-198
			MACH		650-2021	122	03/01/79	12/31/80	TIMER SUPERVISOR				5740XE1	78-142
			MACH		" - "	126	08/15/80	12/31/82	TIMER SUPER SP REL1	SUPERV.	02	BN	5740XYN	80-103
			MACH		" - "	127	03/31/81	12/31/82	TIMER SUPER SP REL1	SUPERV.	02	BN	5740XYN	80-238
			MACH		" - "	222	08/30/79		TIMER SUPERVISOR	SUPERV.	02	BN	5740XE1	79-081
			MACH		" - "	226	06/30/81	04/30/83	TIMER SUPER SP R2	SUPERV.	02	BN	5740XYN	80-106
			MACH		" - "	326	10/31/81		TIMER SUPER SP1.3.0	SUPERV.	02	BN	5740XYN	80-239
			MACH		" - "	850	03/06/78	12/31/80	TIMER SUPERVISOR				5740XE1	77-108
SC-1CW		-			550-2022	---			AUX STOR MANAGER	SUPERV.	02	BN	5752VS2	
					" - "	807	08/05/76	12/31/80	AUX STOR MANAGER	SUPERV.	02	BN	5752VS2	76-111
			MACH		650-2022	122	03/01/79	12/31/80	AUX STOR MANAGER				5740XE1	78-142
			MACH		" - "	126	08/15/80	12/31/82	AUX STOR MGR SP REL1	SUPERV.	02	BN	5740XYN	80-103
			MACH		" - "	127	03/31/81	12/31/82	AUX STOR MGR SP REL1	SUPERV.	02	BN	5740XYN	80-238
			MACH		" - "	222	08/30/79		AUX STOR MANAGER	SUPERV.	02	BN	5740XE1	79-081
			MACH		" - "	226	06/30/81	04/30/83	AUX STOR MGR SP R2	SUPERV.	02	BN	5740XYN	80-106
			MACH		" - "	326	10/31/81		AUX STOR MGR SP1.3.0	SUPERV.	02	BN	5740XYN	80-239
			MACH		" - "	850	03/06/78	12/31/80	AUX STOR MANAGER				5740XE1	77-108
SC-1CX		-			550-2023	---			SYSTEM RESOURCE MGR	SUPERV.	02	BN	5752VS2	
					" - "	807	08/05/76	12/31/80	SYSTEM RESOURCE MGR	SUPERV.	02	BN	5752VS2	76-111
					" - "	851	03/06/78	12/31/80	SYSTEM RESOURCE MGR	SUPERV.	02	BN	5752VS2	78-029
			MACH		650-2023	122	03/01/79	12/31/80	SYSTEM RESOURCE MGR				5740XE1	78-142
			MACH		" - "	126	08/15/80	12/31/82	SY RES MGR SP REL1	SUPERV.	02	BN	5740XYN	80-103
			MACH		" - "	127	03/31/81	12/31/82	SY RES MGR SP REL1	SUPERV.	02	BN	5740XYN	80-238
			MACH		" - "	222	08/30/79		SYSTEM RESOURCE MGR	SUPERV.	02	BN	5740XE1	79-081

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COMPONENT ID	SVC CLS	MP SC	LIC. TYPE	SVC PER.	FESN	REL	PID AVAIL	CURR. END	DESCRIPTION	SUP GROUP	CTR LOC	MAIL ADDR	PID NO.	ANNOU LETTER
****														
5752 CONT														
****														
			U1	MACH	650-2023	226	06/30/81	04/30/83	SY RES MGR SP R2	SUPERV.	02	BN	5740XYN	80-106
			U1	MACH	" - "	326	10/31/81		SY RES MGR SP1.3.0	SUPERV.	02	BN	5740XYN	80-239
			X4	MACH	" - "	850	03/06/78	12/31/80	SYSTEM RESOURCE MGR				5740XE1	77-108
SC-1CY	--	-			550-2024	---			RADIX PARTITION TREE	SUPERV.	02	BS		
SC-1CZ	--	-			550-2025	---			MP RECONFIGURATION	SUPERV.	02	BN	5752VS2	
			S2	" - "	" - "	221	03/30/79		MP RECONFIGURATION	SUPERV.	02	BN	5752VS2	78-198
			U4	" - "	" - "	805	08/05/76	12/31/80	MP RECONFIGURATION	SUPERV.	02	BN	5752VS2	76-111
			U4	" - "	" - "	807	08/05/76	12/31/80	MP RECONFIGURATION	SUPERV.	02	BN	5752VS2	76-111
			U4	" - "	" - "	816	04/01/77	12/31/80	MP RECONFIGURATION	SUPERV.	02	BN	5752VS2	77-015
			U4	" - "	" - "	851	03/06/78	12/31/80	MP RECONFIGURATION	SUPERV.	02	BN	5752VS2	78-029
			U4	" - "	" - "	855	07/01/77	12/31/80	MP RECONFIGURATION	SUPERV.	02	BN	5752VS2	77-076
			U4	" - "	" - "	864	03/30/79	12/31/80	MP RECONFIGURATION	SUPERV.	02	BN	5752VS2	78-198
			X4	MACH	650-2025	122	03/01/79	12/31/80	MP RECONFIGURATION				5740XE1	78-142
			X4	MACH	" - "	123	03/01/79	12/31/80	MP RECONFIGURATION				5740XE1	78-142
			U1	MACH	" - "	126	08/15/80	12/31/82	MP RECONFIS SP REL1	SUPERV.	02	BN	5740XYN	80-103
			U1	MACH	" - "	127	03/31/81	12/31/82	MP RECONFIS SP REL1	SUPERV.	02	BN	5740XYN	80-238
			U1	MACH	" - "	222	08/30/79		MP RECONFISURATION	SUPERV.	02	BN	5740XE1	79-081
			U1	MACH	" - "	226	06/30/81	04/30/83	MP RECON SP R2	SUPERV.	02	BN	5740XYN	80-106
			U1	MACH	" - "	326	10/31/81		MP RECON SP1.3.0	SUPERV.	02	BN	5740XYN	80-239
			X4	MACH	" - "	850	03/06/78	12/31/80	MP RECONFIGURATION				5740XE1	77-108
			X4	MACH	" - "	865	03/30/79	12/31/80	MP RECONFIGURATION				5740XE1	78-198
SC-1C2	--	-			550-1801	---			OVERLAY SUPERVISOR	SUPERV.	13	AK		
			U1	MACH	650-1801	126	08/15/80	12/31/82	OVERLAY SUP SP REL1	SUPERV.	13	AK	5740XYS	80-103
			U1	MACH	" - "	226	06/30/81	04/30/83	OVERLAY SUPER SP R2	SUPERV.	13	AK	5740XYN	80-106
			U1	MACH	" - "	326	10/31/81		OVERLAY SUPER SP1.3	SUPERV.	13	AK	5740XYN	80-239

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COMPONENT ID	SVC CLS	HP SC	LIC. TYPE	SVC PER.	FFSN	FEL	PID AVAIL	CURR. END	DESCRIPTION	SUP GROUP	CTR LOC	SUPP MAIL ADDR	PID NO.	ANNOU LETTER
****														
5752														
****														
SC-1C3	--	-			550-2026	---			IOS	ERP	02	BN	5752VS2	
	S2				" - "	221	03/30/79		IOS	ERP	02	BN	5752VS2	78-198
	U4				" - "	805	08/05/76	12/31/80	IOS	ERP	02	BN	5752VS2	76-111
	U4				" - "	807	08/05/76	12/31/80	IOS	ERP	02	BN	5752VS2	76-111
	U4				" - "	816	04/01/77	12/31/80	IOS	ERP	02	BN	5752VS2	77-015
	U4				" - "	851	03/01/78	12/31/80	IOS	ERP	02	BN	5752VS2	78-029
	U4				" - "	855	07/01/77	12/31/80	IOS	ERP	02	BN	5752VS2	77-076
	U4				" - "	864	03/30/79	12/31/80	IOS	ERP	02	BN	5752VS2	78-198
	X4	MACH			650-2026	122	03/01/79	12/31/80	IOS				5740XE1	78-142
	X4	MACH			" - "	123	03/01/79	12/31/80	IOS				5740XE1	78-142
	U1	MACH			" - "	126	08/15/80	12/31/82	IOS SP REL1	ERP	02	BN	5740XYN	80-103
	U1	MACH			" - "	127	03/31/81	12/31/82	IOS SP REL1	ERP	02	BN	5740XYN	80-238
	U1	MACH			" - "	222	08/30/79		IOS	ERP	02	BN	5740XE1	79-081
	U1	MACH			" - "	226	06/30/81	04/30/83	IOS SP R2	ERP	02	BN	5740XYN	80-106
	U1	MACH			" - "	326	10/31/81		IOS SP1.3.0	ERP	02	BN	5740XYN	80-239
	X4	MACH			" - "	850	03/06/78	12/31/80	IOS				5740XE1	77-108
	X4	MACH			" - "	865	03/30/79	12/31/80	IOS				5740XE1	78-198
SC-1C4	--	-			550-2027	---			DIDOCs	DIDOCs	02	BN	5752VS2	
	S2				" - "	221	03/30/79		DIDOCs	DIDOCs	02	BN	5752VS2	78-198
	U4				" - "	851	03/06/78	12/31/80	DIDOCs	DIDOCs	02	BN	5752VS2	78-029
	U4				" - "	864	03/30/79	12/31/80	DIDOCs	DIDOCs	02	BN	5752VS2	78-198
	U1	MACH			650-2027	222	08/30/79		DIDOCs	DIDOCs	02	BN	5740XE1	79-081
	U1	MACH			" - "	226	06/30/81	04/30/83	DIDOCs SP R2	SUPERV.	02	BN	5740XYN	80-106
	U1	MACH			" - "	326	10/31/81		DIDOCs SP1.3.0	SUPERV.	02	BN	5740XYN	80-239
SC-1C5	--	-			550-2028	---			SUPERVISOR CONTROL	SUPERV.	02	BN	5752VS2	

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COMPONENT ID	SVC CLS	MP SC	LIC. TYPE	SVC PER.	FESN	REL	PID AVAIL	CURR. END	DESCRIPTION	SUP GROUP	CTR LOC	SUPP MAIL ADDR	PID NO.	ANNOUN LETTER
****														
5752														
CONT														
****														
	S2				550-2028	221	03/30/79		SUPERVISOR CONTROL	SUPERV.	02	BN	5752VS2	78-198
	U4				" - "	805	08/05/76	12/31/80	SUPERVISOR CONTROL	SUPERV.	02	BN	5752VS2	76-111
	U4				" - "	807	08/05/76	12/31/80	SUPERVISOR CONTROL	SUPERV.	02	BN	5752VS2	76-111
	U4				" - "	864	03/30/79	12/31/80	SUPERVISOR CONTROL	SUPERV.	02	BN	5752VS2	78-198
	X4	MACH			650-2028	122	03/01/79	12/31/80	SUPERVISOR CONTROL				5740XE1	78-142
	X4	MACH			" - "	123	03/01/79	12/31/80	SUPERVISOR CONTROL				5740XE1	78-142
	U1	MACH			" - "	126	08/15/80	12/31/82	SUPER CONT SP REL1	SUPERV.	02	BN	5740XYN	80-103
	U1	MACH			" - "	127	03/31/81	12/31/82	SUPER CONT SP REL1	SUPERV.	02	BN	5740XYN	80-238
	U1	MACH			" - "	222	08/30/79		SUPERVISOR CONTROL	SUPERV.	02	BN	5740XE1	79-081
	U1	MACH			" - "	226	06/30/81	04/30/83	SUPER CONT SP R2	SUPERV.	02	BN	5740XYN	80-106
	U1	MACH			" - "	326	10/31/81		SUPER CONT SP1.3.0	SUPERV.	02	BN	5740XYN	80-239
	X4	MACH			" - "	850	03/06/78	12/31/80	SUPERVISOR CONTROL				5740XE1	77-108
	X4	MACH			" - "	865	03/30/79	12/31/80	SUPERVISOR CONTROL				5740XE1	78-198
SC-1C6	--	-			550-2029	---			EXCP	SUPERV.	02	BN		
	X4	MACH			650-2029	122	03/01/79	12/31/80	EXCP				5740XE1	78-142
	U1	MACH			" - "	127	03/31/81	12/31/82	EXCP SP R2	SUPERV.	02	BN		80-238
	U1	MACH			" - "	222	08/30/79		EXCP	SUPERV.	02	BN	5740XE1	79-081
	U1	MACH			" - "	226	06/30/81	04/30/83	EXCP SP R2	SUPERV.	02	BN	5740XYN	80-106
	U1	MACH			" - "	326	10/31/81		EXCP SP1.3.0	SUPERV.	02	BN	5740XYN	80-239
	X4	MACH			" - "	850	03/06/78	12/31/80	EXCP				5740XE1	77-108
SC-1C7	--	-			550-1802	---			FETCH	SUPERV.	13	AK		
SC-1C8	--	-			550-2030	---			NIP	SUPERV.	02	BN	5752VS2	
	S2				" - "	221	03/30/79		NIP	SUPERV.	02	BN	5752VS2	78-198
	U4				" - "	806	06/28/76	12/31/80	NIP	SUPERV.	02	BN	5752VS2	76-087
	U4				" - "	807	08/05/76	12/31/80	NIP	SUPERV.	02	BN	5752VS2	76-111

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COMPONENT ID	SVC CLS	MP SC	LIC. TYPE	SVC PER.	FESN	REL	PID AVAIL	CURR. END	DESCRIPTION	SUP GROUP	CTR LOC	SUPP MAIL ADDR	PID NO.	ANNOU LETTER
****														
5752														
****														
					550-2030	851	03/06/78	12/31/80	NIP	SUPERV.	02	BN	5752VS2	78-029
					" - "	855	07/01/77	12/31/80	NIP	SUPERV.	02	BN	5752VS2	77-076
					" - "	864	03/30/79	12/31/80	NIP	SUPERV.	02	BN	5752VS2	78-198
					650-2030	122	03/01/79	12/31/80	NIP				5740XE1	78-142
					" - "	123	03/01/79	12/31/80	NIP				5740XE1	78-142
					" - "	126	08/15/80	12/31/82	NIP SP REL1	SUPERV.	02	BN	5740XYN	80-103
					" - "	127	03/31/81	12/31/82	NIP SP REL1	SUPERV.	02	BN	5740XYN	80-238
					" - "	222	08/30/79		NIP	SUPERV.	02	BN	5740XE1	79-081
					" - "	226	06/30/81	04/30/83	NIP SP R2	SUPERV.	02	BN	5740XYN	80-106
					" - "	326	10/31/81		NIP SP1.3.0	SUPERV.	02	BN	5740XYN	80-239
					" - "	850	03/06/78	12/31/80	NIP				5740XE1	77-108
					" - "	865	03/30/79	12/31/80	NIP				5740XE1	78-198
SC-1C9					550-2031	---			IPL	SUPERV.	02	BN		
					650-2031	122	03/01/79	12/31/80	IPL				5740XE1	78-142
					" - "	123	03/01/79	12/31/80	IPL				5740XE1	78-142
					" - "	126	08/15/80	12/31/82	IPL SP REL1	SUPERV.	02	BN	5740XYN	80-103
					" - "	127	03/31/81	12/31/82	IPL SP REL1	SUPERV.	02	BN	5740XYN	80-238
					" - "	222	08/30/79		IPL	SUPERV.	02	BN	5740XE1	79-081
					" - "	226	06/30/81	04/30/83	IPL SP R2	SUPERV.	02	BN	5740XYN	80-106
					" - "	326	10/31/81		IPL SP1.3.0	SUPERV.	02	BN	5740XYN	80-239
					" - "	850	03/06/78	12/31/80	IPL				5740XE1	77-108
					" - "	865	03/30/79	12/31/80	IPL				5740XE1	78-198
SC-1DA					550-1403	---			BLOCK PROCESSOR	DATA MGT	13	AK	5752VS2	
					" - "	807	08/05/76	12/31/80	BLOCK PPOCESSOR	DATA MGT	13	AK	5752VS2	76-111
					650-1403	134	11/26/80		BLOCK PROCESSOR	DATA MGT	13	AK	5740AM7	80-112



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COMPONENT ID	SVC CLS	MP SC	LIC. TYPE	SVC PER.	FESN	REL	PJD AVAIL	CURR. END	DESCRIPTION	SUP GROUP	CTR LOC	SUPP MAIL ADDR	PID NO.	ANNOUN LETTER
****														
5752														
****														
	X4		MACH		650-1418	122	03/01/79	12/31/80	ACCESS METHOD SERVIC				5740AM8	78-142
	U1		MACH		" - "	872	06/30/78		ACCESS METHOD SERVIC	DATA	MGT 13	AK	5740AM8	78-062
SC-1DL	--	-			550-2303	---			3886 OCR	DATA	MGT 01	AN		
SC-1DM	U4				550-2302	830		12/31/80	3895 ERP	DATA	MGT 02	AN	5752VS2	
SC-1DN	--	-			550-2304	---			3540	DATA	MGT 01	AN		
SC-1DP	--	-			550-3504	---			MSS COMMUNICATOR	DATA	MGT 13	AK	5752VS2	
	U4				" - "	824	04/01/77	12/31/80	MSS COMMUNICATOR	DATA	MGT 13	AK	5752VS2	
	U1		MACH		650-3504	112	06/29/79		MSSE COMMUNICATOR	DATA	MGT 13	AK	5740XY3	78-224
SC-1DQ	--	-			550-3505	---			MSC TABLE CREATR	DATA	MGT 13	AK	5752VS2	
	U4				" - "	824	04/01/77	12/31/80	MSC TABLE CREATE	DATA	MGT 13	AK	5752VS2	
SC-1DR	--	-			550-3506	---			MSS SPACE MANAGER	DATA	MGT 13	AK	5752VS2	
	U4				" - "	824	04/01/77	12/31/80	MSS SPACE MANAGER	DATA	MGT 13	AK	5752VS2	
	U1		MACH		650-3506	112	06/29/79		MSSE SPACE MANAGER	DATA	MGT 13	AK	5740XY3	78-224
SC-1DS	--	-			550-3507	---			MSS DATA ANALYSIS	DATA	MGT 13	AK	5752VS2	
	U4				" - "	824	04/01/77	12/31/80	MSS DATA ANALYSIS	DATA	MGT 13	AK	5752VS2	
SC-1DT	--	-			550-3508	---			MSC TRACE	DATA	MGT 13	AK	5752VS2	
	U4				" - "	824	04/01/77	12/31/80	MSC TRACE	DATA	MGT 13	AK	5752VS2	
SC-1DU	--	-			550-3509	---			MSS SERVICES	DATA	MGT 13	AK	5752VS2	
	U4				" - "	824	04/01/77	12/31/80	MSS SERVICES	DATA	MGT 13	AK	5752VS2	
	U1		MACH		650-3509	112	06/29/79		MSSE SERVICES	DATA	MGT 13	AK	5740XY3	78-224
SC-1DV	S2				550-2058	102	03/01/79		VPSS	DATA	MGT 01	AN	5752VS2	78-142
	U4				" - "	856	10/03/77	12/31/80	VPSS	DATA	MGT 01	AN	5752VS2	77-165
SC-1DO	--	-			550-1409	---			SAM	DATA	MGT 13	AK	5752VS2	
	S2				" - "	133	03/05/80		SAM	DATA	MGT 13	AK	5752VS2	79-121
	U4				" - "	810	08/05/76	12/31/80	SAM	DATA	MGT 13	AK	5752VS2	76-111

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COMPONENT ID	SVC MP CLS SC	LIC. SVC TYPE PER.	FESM	REL	PID AVAIL	CURR. END	DESCRIPTION	SUP GROUP	CTR LOC	SUPP ADDR	MAIL NO.	PID NO.	ANNOUN LETTER
****													
5752 CONT													
****													
			550-1409	830		12/31/80	SAM					5752VS2	
			" - "	848	01/03/77		SAM					5752VS2	77-012
		MACH	650-1409	112	03/01/79		SAM EXT					5740AM3	78-142
			" - "	134	11/26/80		SAM EXT					5740AM7	80-112
		MACH	" - "	136	03/31/81		SAM EXT					5740AM7	80-112
		MACH	" - "	138	03/31/81		SAM EXT					5740AM7	80-112
		MACH	" - "	809	04/11/78		SAM EXT					5740AM3	78-056
SC-1D1	--	-	550-1410	---			O/C/EOV					5752VS2	
			" - "	133	03/05/80		O/C/EOV					5752VS2	79-121
			" - "	807	08/05/76	12/31/80	O/C/POV					5752VS2	76-111
			" - "	810	08/05/76	12/31/80	O/C/POV					5752VS2	76-111
			" - "	830		12/31/80	O/C/EOV					5752VS2	
			" - "	832	08/01/77	12/31/80	O/C/EOV					5752VS2	77-016
			" - "	860	03/03/78		O/C/EOV					5752VS2	78-025
		MACH	650-1410	112	03/01/79		O/C/EOV (SAM EXT)					5740AM3	78-142
		MACH	" - "	134	11/26/80		O/C/EOV					5740AM7	80-112
		MACH	" - "	136	03/31/81		O/C/EOV					5740AM7	80-112
		MACH	" - "	809	04/11/78		O/C/EOV (SAM EXT)					5740AM7	78-056
SC-1D2	--	-	550-1411	---			PAM					5752VS2	
		MACH	650-1411	134	11/26/80		PAM					5740AM3	80-112
SC-1D4	--	-	550-1412	---			DADSM					5752VS2	
			" - "	832	08/01/77	12/31/80	DADSM					5752VS2	77-016
			" - "	860	03/03/78		DADSM					5752VS2	78-025
		MACH	650-1412	113	03/31/81		DADSM					5740AM7	80-113
		MACH	" - "	134	11/26/80		DADSM					5740AM7	80-112



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COMPONENT ID	SVC CLS	MP SC	LIC. TYPE	SVC PFR.	FESN	REL	PID AVAIL	CURR. END	DESCRIPTION	STP GROUP	CTR LOC	SUPD ADDR	MAIL NO.	PID NO.	ANNOUN LETTER
****															
5752															
****															
		U1	MACH		650-1412	136	03/31/81		DADSM	DATA MGT	13	AK	5740AM7	80-112	
SC-1D5	--	-			550-2305	---			OCR	DATA MGT	01	AN			
SC-1D6	--	-			550-3201	---			MTCP	DATA MGT	13	AK			
SC-1D7	--	-			550-1414	---			DAM	DATA MGT	13	AK			
		U1	MACH		650-1414	112	03/01/79		DAM (SAM EXT)	DATA MGT	13	AK		78-142	
		U1	MACH		" - "	138	03/31/81		DAM (SAM EXT)	DATA MGT	13	AK		80-112	
		U1	MACH		" - "	809	04/11/78		DAM (SAM EXT)	DATA MGT	13	AK		78-056	
SC-1D8	--	-			550-1415	---			ISAM	DATA MGT	13	AK			
SC-1R1	--	-			550-2033	---			EMUL CONTROL	EMULATOR	63	F			
SC-1G0	--	-			550-2516	---			GAM	BTAM	02	CE	5752VS2		
		U4			" - "	851	03/06/78	12/31/80	GAM	BTAM	02	CE	5752VS2	78-029	
SC-1I0	--	-			550-2204	---			IBCDMPRS	UTILITY	65	S	5752VS2		
		U4			" - "	810	08/05/76	12/31/80	IBCDMPRS	UTILITY	65	S	5752VS2	76-111	
SC-1I1	--	-			550-2205	---			IBCDASDI	UTILITY	65	S	5752VS2		
		U4			" - "	810	08/05/76	12/31/80	IBCDASDI	UTILITY	65	S	5752VS2	76-111	
SC-1I2	--	-			550-1704	---			ICAPRTBL	UTILITY	65	S			
SC-1SS	S2				550-3602	837	10/24/77		SSS (SE IND SUPT)	IND. SYS	23	CE	5752VS2	77-171	
SC-1SU	--	-			550-5102	---			SU BIT STRING		01	AN	5752VS2		
SC-1S1	--	-			550-2296	---			SYSGEN	SYSGEN	13	AK	5752VS2		
		S2			" - "	221			SYSGEN	SYSGEN	13	AK	5752VS2		
		U4			" - "	830		12/31/80	SYSGEN	SYSGEN	13	AK	5752VS2		
		U4			" - "	851	03/06/78	12/31/80	SYSGEN	SYSGEN	13	AK	5752VS2	78-029	
		U4			" - "	864	03/30/79	12/31/80	SYSGEN	SYSGEN	13	AK	5752VS2	78-198	
		U4	MACH		650-2206	122	03/01/79	12/31/80	SYSGEN				5740XE1	78-142	
		U1	MACH		" - "	125	12/31/80		SYSGEN	SYSGEN	13	AK	5740XYN	80-104	

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COMPONENT ID	SVC MP CLS SC	LIC. SVC TYPE PER.	PESN	REL	PID AVAIL	CURR. END	DESCRIPTION	SUP GROUP	CTR LOC	SUPP MAIL ADDR	PID NO.	ANNOU LETTER
****												
5752	CONT											
****												
		U1	MACH	650-2206	222	08/30/79	SYSGEN	SYSGEN	03	AK	5740XE1	79-081
		X4	MACH	" - "	850	03/06/78	12/31/80	SYSGEN			5740XE1	77-108
SC-1S2	--	-		550-2053	---		3330 STARTER	SYSGEN	02	AN		
SC-1S3	--	-		550-2054	---		2314 STARTER	SYSGEN	02	AK		
SC-1S4	--	-		550-2034	---		SUPERVISOR SYSGEN	SYSGEN	02	BN	5752VS2	
		S2		" - "	221	03/30/79	SUPERVISOR SYSGEN	SYSGEN	02	BN	5752VS2	78-198
		U4		" - "	833	05/01/77	12/31/80	SUPERVISOR SYSGEN	SYSGEN	02	BN	5752VS2 77-087
		U4		" - "	864	03/30/79	12/31/80	SUPERVISOR SYSGEN	SYSGEN	02	BN	5752VS2 78-198
		X4	MACH	650-2034	122	03/01/79	12/31/80	SUPERVISOR SYSGEN			5740XE1	78-142
		X4	MACH	" - "	123	03/01/79	12/31/80	SUPERVISOR SYSGEN			5740XE1	78-142
		U1	MACH	" - "	126	08/15/80	12/31/82	SUPER SYSGEN SP REL1	SYSGEN	02	BN	5740XYN 80-103
		U1	MACH	" - "	127	03/31/81	12/31/82	SUPER SYSGEN SP REL1	SYSGEN	02	BN	5740XYN 80-238
		U1	MACH	" - "	222	08/30/79		SUPERVISOR SYSGEN	SYSGEN	02	BN	5740XE1 79-081
		U1	MACH	" - "	226	06/30/81	04/30/83	SUPER SYS SP R2	SYSGEN	02	BN	5740XYN 80-106
		U1	MACH	" - "	326	10/31/81		SUPER SYS SP1.3.0	SYSGEN	02	BN	5740XYN 80-239
		X4	MACH	" - "	850	03/06/78	12/31/80	SUPERVISOR SYSGEN			5740XE1	77-108
		X4	MACH	" - "	865	03/30/79	12/31/80	SUPERVISOR SYSGEN			5740XE1	78-198
SC-1S5	--	-		550-2009	---		SCHEDULER SYSGEN	SYSGEN	02	BN	5752VS2	
		S2		" - "	221	03/30/79		SCHEDULER SYSGEN	SYSGEN	02	BN	5752VS2 78-198
		U4		" - "	851	03/06/78	12/31/80	SCHEDULER SYSGEN	SYSGEN	02	BN	5752VS2 78-029
		U4		" - "	864	03/30/79	12/31/80	SCHEDULER SYSGEN	SYSGEN	02	BN	5752VS2 78-198
		X4	MACH	650-2009	122	03/01/79	12/31/80	SCHEDULER SYSGEN			5740XE1	78-142
		X4	MACH	" - "	123	03/01/79	12/31/80	SCHEDULER SYSGEN			5740XE1	78-142
		U1	MACH	" - "	126	08/15/80	12/31/82	SCHED SYSGEN SP REL1	SYSGEN	02	BN	5740XYN 80-103
		U1	MACH	" - "	222	08/30/79		SCHEDULER SYSGEN	SYSGEN	02	BN	5740XE1 79-081

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COMPONENT ID	SVC CLS	MP SC	LIC. SVC TYPE PER.	FESN	REL	PID AVAIL	CURR. END	DESCRIPTION	SUP GROUP	CTR LOC	SUPP ADDR	MAIL NO.	PID NO.	ANNOUN LETTER
****														
5752	CONT													
****														
			MACH	650-2009	226	06/30/81	04/30/83	SCHED SYSGEN SP R2	SYSGEN	02	BN	5740XYN	80-106	
			MACH	" - "	326	10/31/81		SCHED SYSGFN SP1.3.0	SYSGFN	02	BN	5740XYN	80-239	
			MACH	" - "	850	03/06/78	12/31/80	SCHEDULER SYSGFN				5740XE1	77-108	
			MACH	" - "	865	03/30/79	12/31/80	SCHEDULER SYSGFN				5740XE1	78-198	
SC-1S6	--	-		550-2055	---			SERVICE AIDS SYSGFN	SYSGFN	02	BG			
SC-1T0	--	-		550-2035	---			TSO EDIT	TSO	23	AL			
			MACH	650-2035	112	03/01/79		TSO EDIT	TSO	23	AL	5740XT6	78-142	
			MACH	" - "	811	09/02/76	12/31/80	TSO EDIT				5740XT6	76-128	
SC-1T1	--	-		550-2036	---			TSO TEST	TSO	23	AL			
SC-1T2	--	-		550-3205	---			TSO UTILITIES	TSO	23	AL			
				650-3205	112			TSO UTILITIES	TSO	23	AL	5740XT6		
			MACH	" - "	811	09/02/76	12/31/80	TSO UTILITIES				5740XT6	76-128	
SC-1T3	--	-		550-2703	---			TSO TI0C	TSO	23	AL	5752VS2		
				" - "	102	03/01/79		TSO TI0C	TSO	23	AL	5752VS2	78-142	
				" - "	106	03/01/79		TSO TI0C	TSO	23	AL	5752VS2	78-142	
				" - "	108	03/01/79		TSO TI0C	TSO	23	AL	5752VS2	78-142	
				" - "	858	03/09/78	12/31/80	TSO TI0C	TSO	23	AL	5752VS2	78-036	
				650-2703	112			TSO TI0C	TSO	23	AL	5740XT6		
			MACH	" - "	811	09/02/76	12/31/80	TSO TI0C				5740XT6	76-128	
SC-1T4	--	-		550-2037	---			TSO SCHEDULER	TSO	23	AL	5752VS2		
				" - "	221	03/30/79		TSO SCHEDULER	TSO	23	AL	5752VS2	78-198	
				" - "	807	08/05/76	12/31/80	TSO SCHEDULER	TSO	23	AL	5752VS2	76-111	
				" - "	832	08/01/77	12/31/80	TSO SCHEDULER	TSO	23	AL	5752VS2	77-016	
				" - "	859	03/09/78	12/31/80	TSO SCHEDULFR	TSO	23	AL	5752VS2	78-036	
				" - "	864	03/30/79	12/31/80	TSO SCHEDULER	TSO	23	AL	5752VS2	78-198	

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COMPONENT ID	SVC CLS	MP SC	LIC. TYPE	SVC PER.	FESN	REL	PID AVAIL	CURR. END	DESCRIPTION	SUP GROUP	CTR LOC	MAIL ADDR	PID NO.	ANNOU LETTER
****														
5752 CONT														
****														
	U1		MACH		650-2037	112	03/01/79		TSO SCHEDULEP	TSO	23	AL	5740XT6	78-142
	U1		MACH		" - "	226	06/30/81	04/30/83	TSO SCHEDULEP	TSO	23	AL	5740XYN	80-106
	X4		MACH		" - "	811	09/02/76	12/31/80	TSO SCHEDULEP					5740XT6 76-128
SC-1T5	--	-			550-3207	---			LINK LOADGO PROMPTER	TSO	13	AK		
	S2				650-3207	112			LINK LOADGO PROMPTER	TSO	13	AK	5740XT6	
	X4		MACH		" - "	811	09/02/76	12/31/80	LINK LOADGO PROMPTER					5740XT6 76-128
SC-1T8	--	-			550-2701	---			TSO TCAM SUBROUTINES	TSO TCAM	23	AL		
SC-1T9	--	-			550-3001	---			NVS/TSO/VTAM	TSO	03	BX	5752VS2	
	S2				" - "	102	03/01/79		NVS/TSO/VTAM	TSO	03	BX	5752VS2	78-142
	S2				" - "	108	03/01/79		NVS/TSO/VTAM	TSO	03	BX	5752VS2	78-142
	S2				" - "	202	09/30/79		NVS/TSO/VTAM	TSO	03	BX	5752VS2	78-203
	S2				" - "	302	11/31/80		NVS/TSO/VTAM R3	TSO	03	BX	5752VS2	79-126
	S2				" - "	840	02/28/78		NVS/TSO/VTAM	TSO	03	BX	5752VS2	76-165
	U4				" - "	858	03/09/78	12/31/80	NVS/TSO/VTAM	TSO	03	BX	5752VS2	78-036
	U1		MACH		650-3001	112	03/01/79		NVS/TSO/VTAM	TSO	03	BX	5735RC2	78-142
	U1		MACH		" - "	212	09/30/79		NVS/TSO/VTAM	TSO	03	BX	5735RC2	78-203
	U1		MACH		" - "	312	11/31/80		NVS/TSO/VTAM R3	TSO	03	BX	5735RC2	79-126
	U1		MACH		" - "	835	02/28/78		NVS/TSO/VTAM	TSO	03	BX	5735RC2	76-165
SC-1UA	--	-			550-1705	---			IEBPTPCH	UTILITY	65	S		
SC-1UC	--	-			550-1706	---			IEHMOVE	UTILITY	65	S	5752VS2	
	S2				" - "	808	06/16/78		IEHMOVE	UTILITY	65	S	5752VS2	
	U4				" - "	832	08/01/77	12/31/80	IEHMOVE	UTILITY	65	S	5752VS2	77-016
SC-1UD	--	-			550-1707	---			IEHINITT	UTILITY	65	S		
SC-1UE	--	-			550-1708	---			IEHSTATR	UTILITY	65	S		
SC-1UF	--	-			550-2207	---			IEHATLAS	UTILITY	65	S		

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COMPONENT ID	SVC CLS	MP SC	LIC. SVC TYPE PER.	FESN	REL	PID AVAIL	CURR. END	DESCRIPTION	SUP GROUP	CTR LOC	SUPP MAIL ADDR	PID NO.	ANNOUN LETTER
****													
5752			CONT										
****													
SC-10G	--	-	MACH	650-2207	134	11/26/80		IEHATLAS	UTILITY	65	S	5740AM7	80-112
				550-2306	---			IEBTCRIN	UTILITY	02	AN		
SC-10H	--	-		550-1710	---			IEBISAM	UTILITY	65	S		
SC-10J	--	-		550-1711	---			IEBDG	UTILITY	65	S		
SC-10K	--	-		550-1712	---			IEBCOMPR	UTILITY	65	S		
SC-10M	--	-		550-1713	---			IEBIMAGE	UTILITY	65	S	5752VS2	
				" - "	133	03/05/80		IEBIMAGE	UTILITY	65	S	5752VS2	79-121
				" - "	810	08/05/76	12/31/80	IEBIMAGE	UTILITY	65	S	5752VS2	76-111
				" - "	848	01/03/77		IEBIMAGE	UTILITY	65	S	5752VS2	77-012
SC-10N				550-1722	134	11/26/80		DSF SYS SUPPORT	UTILITY	13	AK	5752VS2	80-115
				" - "	143	01/22/80		DSF SYS SUPPORT	UTILITY	13	AK	5752VS2	80-012
				" - "	243	12/31/80		DSF SYS SUPPORT	UTILITY	13	AK	5752VS2	80-115
				" - "	884	12/31/78	01/22/81	DSF SYS SUPPORT	UTILITY	13	AK	5752VS2	78-135
SC-10R	U4			550-1723	884	12/31/78	01/22/81	DSF STANDALONE	UTILITY	13	AK	5752VS2	78-135
SC-10X	--	-		550-1714	---			SGIEH402	UTILITY	65	S	5752VS2	
				" - "	808	06/16/78		SGIEH402	UTILITY	65	S	5752VS2	
SC-10Y	--	-		550-1724	---			IEHUCAT	UTILITY	02	CL		
SC-100	--	-		550-2208	---			IEHDASDR	UTILITY	65	S	5752VS2	
				" - "	808	06/16/78	01/22/81	IEHDASDR	UTILITY	65	S	5752VS2	
				" - "	832	08/01/77	12/31/80	IEHDASDR	UTILITY	65	S	5752VS2	77-016
SC-102	--	-		550-1716	---			IEHLIST	UTILITY	65	S	5752VS2	
				" - "	808	06/16/78		IEHLIST	UTILITY	65	S	5752VS2	
				" - "	860	03/03/78		IEHLIST	UTILITY	65	S	5752VS2	78-025
				" - "	134	11/26/80		IEHLIST	UTILITY	13	AK	5740AM7	80-112
SC-103	--	-	MACH	650-1716	134	11/26/80		IEHLIST	UTILITY	13	AK	5740AM7	80-112
				550-1717	---			IEHPROGM	UTILITY	65	S	5752VS2	

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COMPONENT ID	SVC CLS	MP SC	LIC. TYPE	SVC PER.	FESN	REL	PID AVAIL	CURR. END	DESCRIPTION	SUP GROUP	CTR LOC	MAIL ADDR	PID NO.	ANNOU LETTER
****														
5752				CONT										
****														
		S2			550-1717	808	06/16/78		IEHPRG M	UTILITY	65	S	5752VS2	
		U4			" - "	832	08/01/77	12/31/80	IEHPRG M	UTILITY	65	S	5752VS2	77-016
SC-106	--	-			550-1718	---			IEBCOPY	UTILITY	65	S		
SC-107	--	-			550-1719	---			IEBGENE R	UTILITY	65	S		
SC-108	--	-			550-1720	---			IEBUPDTE	UTILITY	65	S		
SC-109	--	-			550-1721	---			IEBEDIT	UTILITY	65	S		
SC-10C	S2				550-3002	011			TOLTEP	VTAM	03	BY	5752VS2	
	S2				" - "	102	03/01/79	09/30/81	TOLTEP	VTAM	03	BY	5752VS2	78-142
	S2				" - "	109	03/01/79	09/30/81	TOLTEP	VTAM	03	BY	5752VS2	78-142
	S2				" - "	202	09/30/79		TOLTEP	VTAM	03	BY	5752VS2	78-203
	S2				" - "	801	04/30/76		TOLTEP	VTAM	03	BY	5752VS2	76-055
	S2				" - "	840	02/28/78		TOLTEP	VTAM	03	BY	5752VS2	76-165
	U1		WACH		650-3002	112	03/01/79	09/30/81	TOLTEP	VTAM	03	BY	5735RC2	78-142
	U1		WACH		" - "	212	09/30/79		TOLTEP LP	VTAM	03	BY	5735RC2	78-203
	U1		WACH		" - "	312	11/26/80		TOLTEP LP P3	VTAM	03	BY	5735RC2	79-126
	U1		WACH		" - "	835	02/28/78		TOLTEP	VTAM	03	BY	5735RC2	76-165
SC-10E	--	-			550-2038	---			POWER WARNING FEATJP	SUPPFV.	02	BN	5752VS2	
	S2				" - "	221	03/30/79		POWER WARNING FEATUP	SUPPFV.	02	BN	5752VS2	78-198
	U4				" - "	864	03/30/79	12/31/80	POWER WARNING FEATUP	SUPPFV.	02	BN	5752VS2	78-198
	U1		WACH		650-2038	127	03/31/81	12/31/82	PWR WARN FEA SP R2	SUPPFV.	02	BN		80-238
	U1		WACH		" - "	226	06/30/81	04/30/83	PWR WARN FEA SP R2	SUPPFV.	02	BN	5740XYN	80-106
	U1		WACH		" - "	326	10/31/81		PWR WARN FEA SP1.3.0	SUPPFV.	02	BN	5740XYN	80-239
SC-100	--	-			550-2012	---			SMF SCHEDULEFP	JOB MGT	02	BN	5752VS2	
	S2				" - "	221	03/30/79		SMF SCHEDULEFP	JOB MGT	02	BN	5752VS2	78-198
	U4				" - "	807	08/05/76	12/31/80	SMF SCHEDULEFP	JOB MGT	02	BN	5752VS2	76-111



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COMPONENT ID	SVC CLS	MP SC	LIC. TYPE	SVC PER.	FESN	REL	PID AVAIL	CURR. END	DESCRIPTION	SUP GROUP	CTR LOC	SUPP MAIL ADDR	PID NO.	ANNOU LETTER
****														
5752 CONT														
****														
		X4	MACH		650-2039	865	03/30/79	12/31/80	MAPPING/SUPVSR MACRO				5740XE1	78-198
SC-102	--	-			550-2011	---			SMF	JOB MGT	02	BN	5752VS2	
		S2			" - "	221	03/30/79		SMF	JOB MGT	02	BN	5752VS2	78-198
		U4			" - "	807	08/05/76	12/31/80	SMF	JOB MGT	02	BN	5752VS2	76-111
		U4			" - "	864	03/30/79	12/31/80	SMF	JOB MGT	02	BN	5752VS2	78-224
		X4	MACH		650-2011	122	03/01/79	12/31/80	SMF				5740XE1	78-142
		U1	MACH		" - "	126	08/15/80	12/31/82	SMF SP REL1	JOB MGT	02	BN	5740XN	80-103
		U1	MACH		" - "	222	08/30/79		SMF	JOB MGT	02	BN	5740XE1	79-081
		U1	MACH		" - "	226	06/30/81	04/30/83	SMF SP R2	JOB MGT	02	BN	5740XN	80-106
		U1	MACH		" - "	326	10/31/81		SMF SP1.3.0	JOB MGT	02	BN	5740XN	80-239
		X4	MACH		" - "	850	03/06/78	12/31/80	SMF				5740XE1	77-108
SC-103	--	-			550-1302	---			ASSEMBLER XF	ASSEMB	65	S		
SC-104	--	-			550-1803	---			LINKAGE EDITOR	LNK/EDIT	13	AK		
SC-105	--	-			550-1804	---			LOADER	LNK/EDIT	13	AK		
SC-106	--	-			550-2040	---			OLTEP	OLTEP	02	BG	5752VS2	
		U4			" - "	810	08/05/76	12/31/80	OLTEP	OLTEP	02	BG	5752VS2	76-111
		U4			" - "	829	10/03/77	12/31/80	OLTEP	OLTEP	02	BG	5752VS2	77-165
		U1	MACH		650-2040	126	08/15/80	12/31/82	OLTEP SP REL1	OLTEP	02	BG	5740XN	80-103
		U1	MACH		" - "	127	03/31/81	12/31/82	OLTEP SP REL1	OLTEP	02	BG	5740XN	80-238
		U1	MACH		" - "	226	06/30/81	04/30/83	OLTEP SP R2	OLTEP	02	BG	5740XN	80-106
		U1	MACH		" - "	326	10/31/81		OLTEP SP1.3.0	OLTEP	02	BG	5740XN	80-239
SC-107	--	-			550-2801	---			GSP	SUPERV.	02	CE		
SC-108	--	-			550-2041	---			IVP	SUPERV.	02	BR		
SC-109	--	-			550-1416	---			CHKPT/RSTRT	JOB MGT	13	AK	5752VS2	
		U4			" - "	807	08/05/76	12/31/80	CHKPT/PSTRT	JOB MGT	13	AK	5752VS2	76-111



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COMPONENT ID	SVC CLS	MP SC	LIC. TYPE	SVC PER.	FESN	REL	PID AVAIL	CURR. END	DESCRIPTION	SUPP GROUP	CTR LOC	SUPP ADDR	MAIL NO.	PID NO.	ANNOU LETTER
****															
5752 CONT															
****															
		U4			550-1416	832	08/01/77	12/31/80	CHKPT/RSTRT	JOB MGT	13	AK	5752VS2	77-016	
		U1	MACH		650-1416	112	03/01/79		CHKPT/RSTRT (SAM E)	JOB MGT	13	AK	5740AM7	78-142	
		X4	MACH		" - "	122	03/01/79	12/31/80	CHKPT/RSTRT				5740AM7	78-142	
		U1	MACH		" - "	132			CHKPT/RSTRT	JOB MGT	13	AK	5740AM7		
		U1	MACH		" - "	134	11/26/80		CHKPT/RSTRT	JOB MGT	13	AK	5740AM7	80-112	
		U1	MACH		" - "	136	03/31/81		CHKPT/RSTRT	JOB MGT	13	AK	5740AM7	80-112	
		U1	MACH		" - "	138	03/31/81		CHKPT/RSTRT	JOB MGT	13	AK	5740AM7	80-112	
		U1	MACH		" - "	809	04/11/78		CHKPT/RSTRT (SAM E)	JOB MGT	13	AK	5740AM3	78-056	
		X4	MACH		" - "	850	03/06/78	12/31/80	CHKPT/RSTRT				5740AM7	77-108	
SC-111		--			550-2043	---			GTF	SERV AID	02	BG	5752VS2		
		U4			" - "	810	08/05/76	12/31/80	GTF	SERV AID	02	BG	5752VS2	76-111	
		U4			" - "	864	03/30/79	12/31/80	GTF	SERV AID	02	BG	5752VS2	78-224	
		X4	MACH		650-2043	122	03/01/79	12/31/80	GTF				5740XE1	78-142	
		X4	MACH		" - "	123	03/01/79	12/31/80	GTF				5740XE1	78-142	
		U1	MACH		" - "	126	08/15/80	12/31/82	GTF SP REL1	SERV AID	02	BN	5740XYN	80-103	
		U1	MACH		" - "	127	03/31/81	12/31/82	GTF SP REL1	SERV AID	02	BN	5740XYN	80-238	
		S2			" - "	221			GTF	SERV AID	02	BG			
		U1	MACH		" - "	222	08/30/79		GTF	SERV AID	02	BG	5740XE1	79-081	
		U1	MACH		" - "	226	06/30/81	04/30/83	GTF SP R2	SERV AID	02	BN	5740XYN	80-106	
		U1	MACH		" - "	326	10/31/81		GTF SP1.3.0	SERV AID	02	BN	5740XYN	80-239	
		X4	MACH		" - "	850	03/06/78	12/31/80	GTF				5740XE1	77-108	
		X4	MACH		" - "	865	03/30/79	12/31/80	GTF				5740XE1	78-198	
SC-112		--			550-2044	---			AMASPZAP	SERV AID	02	BG			
		U1	MACH		650-2044	126	08/15/80	12/31/82	AMASPZAP SP REL1	SERV AID	02	BG	5740XYN	80-103	
		U1	MACH		" - "	226	06/30/81	04/30/83	AMASPZAP SP R2	SERV AID	02	BG	5740XYN	80-106	

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COMPONENT ID	SVC CLS	MP SC	LIC. TYPE	SVC PER.	FESN	REL	PID AVAIL	CURR. END	DESCRIPTION	SUP GROUP	CTP LOC	SUPP MAIL ADDR	PID NO.	ANNOU LETTER
****														
5752 CONT														
****														
SC-113			MACH		650-2044	326	10/31/81		AMASPZAP SP1.3.0	SERV	AID 02	BG	5740XYN	80-239
					550-2045	---			AMDPDMP	SERV	AID 02	BG	5752VS2	
					" - "	807	08/05/76	12/31/80	AMDPDMP	SERV	AID 02	BG	5752VS2	76-111
					" - "	810	08/05/76	12/31/80	AMDPDMP	SERV	AID 02	BG	5752VS2	76-111
					" - "	817	08/31/76	12/31/80	AMDPDMP	SERV	AID 02	BG	5752VS2	76-123
					" - "	833	05/01/77	12/31/80	AMDPDMP	SERV	AID 02	BG	5752VS2	77-087
					" - "	851	03/06/78	12/31/80	AMDPDMP	SERV	AID 02	BG	5752VS2	78-029
			MACH		650-2045	122	03/01/79	12/31/80	AMDPDMP				5740XE1	78-142
			MACH		" - "	123	03/01/79	12/31/80	AMDPDMP				5740XE1	78-142
			MACH		" - "	126	08/15/80	12/31/82	AMDPDMP SP REL1	SERV	AID 02	BG	5740XYN	80-103
			MACH		" - "	127	03/31/81	12/31/82	AMDPDMP SP REL1	SERV	AID 02	BG	5740XYN	80-238
			MACH		" - "	221			AMDPDMP	SERV	AID 02	BG		
			MACH		" - "	222	08/30/79		AMDPDMP	SERV	AID 02	BG	5740XE1	79-081
			MACH		" - "	226	06/30/81	04/30/83	AMDPDMP SP R2	SERV	AID 02	BG	5740XYN	80-106
			MACH		" - "	326	10/31/81		AMDPDMP SP1.3.0	SERV	AID 02	BG	5740XYN	80-239
			MACH		" - "	850	03/06/78	12/31/80	AMDPDMP				5740XE1	77-108
			MACH		" - "	865	03/30/79	12/31/80	AMDPDMP				5740XF1	78-198
SC-114					550-1805	---			AMBLIST	SERV	AID 13	AK		
SC-115					550-2046	---			AMDSADMP	SERV	AID 02	BG	5752VS2	
					" - "	221			AMDSADMP	SERV	AID 02	BG	5752VS2	
					" - "	807	08/05/76	12/31/80	AMDSADMP	SERV	AID 02	BG	5752VS2	76-111
					" - "	833	05/01/77	12/31/80	AMDSADMP	SERV	AID 02	BG	5752VS2	77-087
					" - "	864	03/30/79	12/31/80	AMDSADMP	SERV	AID 02	BG	5752VS2	78-198
			MACH		650-2046	122	03/01/79	12/31/80	AMDSADMP				5740XE1	78-142
			MACH		" - "	126	08/15/80	12/31/82	AMDSADMP SP REL1	SERV	AID 02	BG	5740XYN	80-103

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COMPONENT ID	SVC CLS	MP SC	LIC. TYPE	SVC PER.	FESN	REL	PID AVAIL	CURR. END	DESCRIPTION	SUP CTR GROUP	SUPP LOC	MAIL ADDR	PID NO.	ANNOUN LETTER
****														
5752	CONT													
****														
		U1	MACH		650-2046	127	03/31/81	12/31/82	AMDSADMP SP REL1	SERV AID 02	BG	5740XYN	80-238	
		U1	MACH		" - "	222	08/30/79		AMDSADMP	SERV AID 02	BG	5740XE1	79-081	
		U1	MACH		" - "	226	06/30/81	04/30/83	AMDSADMP SP R2	SERV AID 02	BG	5740XYN	80-106	
		U1	MACH		" - "	326	10/31/81		AMDSADMP SP1.3.0	SERV AID 02	BG	5740XYN	80-239	
		X4	MACH		" - "	810		12/31/80	AMDSADMP					
		X4	MACH		" - "	850	03/06/78	12/31/80	AMDSADMP			5740XE1	77-108	
		X4	MACH		" - "	851		12/31/80	AMDSADMP					
SC-118		--	-		550-2048	---			AMDPDMP EDIT	SERV AID 02	BG	5752VS2		
		S2			" - "	221			AMDPDMP EDIT	SERV AID 02	BG	5752VS2		
		S2			" - "	801			AMDPDMP EDIT	SERV AID 02	BG	5752VS2		
		U4			" - "	810	08/05/76	12/31/80	AMDPDMP EDIT	SERV AID 02	BG	5752VS2	76-111	
		S2			" - "	835			AMDPDMP EDIT	SERV AID 02	BG	5752VS2		
		U4			" - "	864	03/30/79	12/31/80	AMDPDMP EDIT	SERV AID 02	BG	5752VS2	78-198	
		U1	MACH		650-2048	126	08/15/80	12/31/82	AMDPDMP ED SP REL1	SERV AID 02	BG	5740XYN	80-103	
		U1	MACH		" - "	226	06/30/81	04/30/83	AMDPDMP ED SP R2	SERV AID 02	BG	5740XYN	80-106	
		U1	MACH		" - "	326	10/31/81		AMDPDMP ED SP1.3.0	SERV AID 02	BG	5740XYN	80-239	
SC-120		--	-		550-2602	---			BTAM	BTAM	02	CE	5752VS2	
		S2			" - "	851	03/06/78		BTAM	BTAM	02	CE	5752VS2	78-029
SC-121		S2			550-4401	102	03/01/79		ACF/TCAM V1 SCP-PLR	TCAM	23	AL	5752VS2	78-142
		S2			" - "	108	03/01/79		TCAM DIRECT-PLR	TCAM	23	AL	5752VS2	78-142
		U4			" - "	802	04/30/76	12/31/80	TCAM 9	TCAM	23	AL	5752VS2	76-055
		U4			" - "	836	11/16/77	12/31/80	TCAM DIRECT-SU	TCAM	23	AL	5752VS2	77-188
		U4			" - "	859	02/28/78	12/31/80	ACF/TCAM V1 SCP-SU	TCAM	23	AL	5752VS2	
		U1	MACH		650-4401	112	03/01/79		ACF/TCAM V1 PP-PLR	TCAM	23	AL		78-142
		U1	MACH		" - "	122	03/01/79		ACF/TCAM V1 NET-PLR	TCAM	23	AL		78-142

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****														
5752														
****														
			X4	MACH	650-4401	844	02/28/78	12/31/80	ACF/TCAM V1 NET-SU					76-167
			X4	MACH	" - "	846	02/28/78	12/31/80	ACF/TCAM V1 PP-SU					76-167
SC-123			S2		550-3003	011			VTAM	VTAM	03	BX	5752VS2	
			S2		" - "	102	03/01/79	09/30/81	ACF/VTAM SCP BASE R1	VTAM	03	BX	5752VS2	78-142
			S2		" - "	108	03/01/79	09/30/81	VTAM SCP	VTAM	03	BX	5752VS2	78-142
			S2		" - "	202	09/30/79		ACF/VTAM SCP BASE R2	VTAM	03	BX	5752VS2	78-203
			S2		" - "	302	11/01/80		ACF/VTAM SCP BASE R3	VTAM	03	BX	5752VS2	79-126
			S2		" - "	801	04/30/76		VTAM	VTAM	03	BX	5752VS2	76-055
			S2		" - "	840	02/28/78		ACF/VTAM SCP BASE R1	VTAM	03	BY	5752VS2	76-165
			U1	MACH	650-3003	112	03/01/79	09/30/81	ACF/VTAM EP PASE R1	VTAM	03	BX	5735RC2	78-142
			U1	MACH	" - "	122	03/01/79	09/30/81	ACF/VTAM MSNF R1	VTAM	03	BX	5735RC2	78-142
			U1	MACH	" - "	132	03/01/79	09/30/81	ACF/VTAM CRYPTO R1	VTAM	03	BX	5735RC2	78-142
			U1	MACH	" - "	212	09/30/79		ACF/VTAM PP BASE R2	VTAM	03	BX	5735RC2	78-203
			U1	MACH	" - "	222	09/30/79		ACF/VTAM MSNF R2	VTAM	03	BX	5735RC2	78-203
			U1	MACH	" - "	232	09/30/79		ACF/VTAM CRYPTO R2	VTAM	03	BX	5735RC2	78-203
			U1	MACH	" - "	312	11/26/80		ACF/VTAM PP BASE R3	VTAM	03	BX	5735RC2	79-126
			U1	MACH	" - "	322	11/26/80		ACF/VTAM MSNF R3	VTAM	03	BX	5735RC2	79-126
			U1	MACH	" - "	332	11/26/80		ACF/VTAM CRYPTO R3	VTAM	03	BX	5735RC2	79-126
			U1	MACH	" - "	834	02/28/78		ACF/VTAM MSNF R1	VTAM	03	BX	5735RC2	76-165
			U1	MACH	" - "	835	02/28/78		ACF/VTAM PP BASE R1	VTAM	03	BX	5735RC2	76-165
			U1	MACH	" - "	854	06/30/78		ACF/VTAM CRYPTO P1	VTAM	03	BX	5735RC2	78-114
			U1	MACH	" - "	870	09/30/79		ACF/VTAM BASE	VTAM	03	BX	5735RC2	78-203
			U1	MACH	" - "	871	09/30/79		ACF/VTAM MSN PPAT	VTAM	03	BX	5735RC2	78-203
			U1	MACH	" - "	893	09/30/79		ACF/VTAM CRYPTO	VTAM	03	BX	5735RC2	78-203
SC-124	--	-			550-1701	---			1600 HCST SUPPORT	IND.	SYS	23	DN	

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COMPONENT ID	SVC CLS	MP SC	LIC. TYPF	SVC PER.	FESN	REL	PID AVAIL	CURR. END	DESCRIPTION	SUP GROUP	CTR LOC	SUPP ADDR	MAIL NO.	PID NO.	ANNOU LETTER
****															
5752	CONT														
****															
SC-126	--	-			550-4002	---			CTS-RETAIL HOST	IND.	SYS	23	BU	5744BQ4	
	U4				" - "	021			CTS-RETAIL HOST	IND.	SYS	23	BU	5744BQ4	75-048
	S2				" - "	032	07/24/78		3650 RETAIL/3650	IND.	SYS	23	AL	5744BQ4	78-134
SC-127	--	-			550-4001	---			CTS-SUPERMARKET HOST	IND.	SYS	23	BU	5744BR2	
	U4				" - "	010	11/04/74		CTS-SUPERMARKET HOST	IND.	SYS	23	BU	5744BR2	74-057
	S2				" - "	030	05/20/77		3660 HOST SUPPORT	IND.	SYS	02	BT	5744BR2	77-086
SC-128	--	-			550-4003	---			CTS-SPPS	IND.	SYS	23	AL	5747BJ2	
	S2				" - "	031	04/22/77		SPPS RETAIL/3650	IND.	SYS	23	AL	5747BJ2	77-068
SC-130	--	-			550-1502	---			HMASMP	SMP		02	BN	5752VS2	
	U4				" - "	863	08/01/77	12/31/80	HMASMP	SMP		02	BN	5752VS2	77-121
SC-131	--	-			550-2209	---			3344/3350 AP-1	SUPERV.		13	AK		
SC-132	S2				550-4701	102			IPCS	IPCS		02	BN	5752VS2	
	U4				" - "	857	05/12/78	12/31/80	IPCS	IPCS		02	BN	5752VS2	78-085
	U1		MACH		650-4701	226	06/30/81	04/30/83	IPCS	IPCS		02	BN	5740XYN	80-106
SY-BLD	--	-			550-2049	---			BLDL AND LPA LISTS	SUPERV.		02	BN		
TC-221	S2				552-5601	102	06/01/79	09/30/81	ACF/TCAM V2R1 SCP	TCAM		23	AL	5735RC3	78-204
	S2				" - "	202	03/30/80		ACF/TCAM V2R2 SCP	TCAM		23	AL	5735RC3	78-204
	S2				" - "	302	11/30/80		ACF/TCAM V2R3 SCP	TCAM		23	AL	5735RC3	79-127
	U1		MACH		652-5601	112	06/01/79	09/30/81	ACF/TCAM V2R1 PP	TCAM		23	AL	5735RC3	78-204
	U1		MACH		" - "	122	06/30/79	09/30/81	ACF/TCAM V2R1 NET	TCAM		23	AL	5735RC3	78-204
	U1		MACH		" - "	212	03/30/80	05/01/82	ACF/TCAM V2R2 PP	TCAM		23	AL	5735RC3	78-204
	U1		MACH		" - "	222	03/30/80	05/01/82	ACF/TCAM V2R2 NET	TCAM		23	AL	5735RC3	78-204
	U1		MACH		" - "	312	11/30/80		ACF/TCAM V2R3 PP	TCAM		23	AL	5735RC3	79-127
	U1		MACH		" - "	322	11/30/80		ACF/TCAM V2R3 NET	TCAM		23	AL	5735RC3	79-127
XR-B00	U1		MACH		651-7003	202	06/05/79		HIERAR	DATA MGT		13	AK	5740XRB	79-066

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****																	
5752	CONT																
****																	
			U1	MACH	651-7003	302	08/31/81		HIERAR			DATA	MGT	13	AK	5740XRB	80-117
			U1	MACH	" - "	899	03/31/79		HIERAR			DATA	MGT	13	AK	5740XRB	79-066
	XX-H00		U1	MACH	651-7002	302	03/01/79		RACP			RACP		02	BN	5740XXH	78-142
			X4	MACH	" - "	662	08/01/78	12/31/80	RACP							5740XXH	78-132
	XX-200		U1	* MACH	651-3006	102	03/01/79		NOSP			VTAM		03	BG	5735XX2	78-142
			U1	* MACH	" - "	845	03/09/78		NOSP			VTAM		03	BG	5735XX2	78-038
	XX-600		U1	* MACH	651-7602	102	09/30/79		NCCF			VTAM		03	BG	5735XX6	78-208
			U1	* MACH	" - "	302	02/29/80		NCCF			VTAM		03	BG	5735XX6	78-208
			U1	* MACH	" - "	502	12/31/80		NCCF REL 2			VTAM		03	BG	5735XX6	78-208
	XY-400		U1	MACH	652-7003	204	03/01/79		RMF VER 2			RMF		02	BN	5740XY4	78-142
			U1	MACH	" - "	205	03/01/79	12/31/81	RMF VER 2			RMF		02	BN	5740XY4	78-142
			U1	MACH	" - "	214	03/31/79		RMF VER 2			RMF		02	BN	5740XY4	78-198
			X4	MACH	" - "	215	03/31/79	12/31/81	RMF VER 2							5740XY4	78-198
			U1	MACH	" - "	225	08/31/79	12/31/81	RMF VER 2			RMF		02	BN	5740XY4	79-081
			U1	MACH	" - "	305	12/31/80	12/31/82	RMF VER 2			RMF		02	BN	5740XY4	80-108
			U1	MACH	" - "	315	12/31/80	12/31/82	RMF VER 2			RMF		02	BN	5740XY4	80-108
			U1	MACH	" - "	405	06/30/81		RMF VER 2			RMF		02	BN	5740XY4	80-109
			X4	MACH	" - "	853	03/30/78	12/31/80	RMF VER 2							5740XY4	78-031
			X4	MACH	" - "	861	11/21/77	12/31/80	RMF VER 2							5740XY4	77-191
			X4	MACH	" - "	895	03/31/79	12/31/80	RMF VER 2							5740XY4	78-198
			X4	MACH	" - "	896	03/31/79	12/31/80	RMF VER 2							5740XY4	78-198
	XY-500		U1	MACH	651-7005	102	03/01/79		CRYPTO FACILITY			CRYPTO		02	BG	5740XY5	78-142
			X4	MACH	" - "	839	06/01/78	12/31/80	CRYPTO FACILITY							5740XY5	77-205

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COMPONENT ID	SVC # CLS SC	LIC. SVC TYPE PER.	FESH	REL	PID AVAIL	CURR. END	DESCRIPTION	SUP CTR GROUP	SUPP LOC	MAIL ADDR	PID NO.	ANNOUN LETTER
**** 5760												
****	DPPX											
AS-100	U1	MACH 16	601-5701	110	08/30/79		ASSEMBLER	9100	03	DX	5760AS1	78-162
CB-100	U1	MACH 08	601-5101	110	04/30/80		COBOL COMPILER	8100COB	13	DX	5760CB1	78-163
FD-100	U1	MACH 12	601-6401	100	12/11/79		3644 ADUP	DPPX GEN	03	D3	5760FD1	78-171
FO-100	U1	MACH 16	601-5601	110	08/30/79		FORTAN COMPILER	8100FORT	03	DX	5760FO1	78-164
LB-100	U1	MACH 08	601-5102	110	04/30/80		COBOL LIB	8100COB	13	DX	5760LB1	78-163
LY-100	U1	MACH 16	601-5602	110	08/30/79		FORTAN LIB	8100FORT	03	DX	5760LY1	78-164
RC-100	U1	MACH 12	601-5401	110	12/12/79		DATA STREAM COMPAT	8100	03	DX	5760RC1	78-167
SM-100	U1	MACH 14	601-5201	110	10/23/79		SORT/MERGE	8100SORT	13	DX	5760SM1	78-163
TD-100	U1	MACH 12	601-5001	110	12/14/79		DB/DC PP	8100DIMS	13	DX	5760TD1	78-166
XC-100	U1	MACH 09	601-5301	110	03/11/80		DPPX/RJE	8100	03	DX	5760XC1	78-168
XC-200	U1	MACH 06	601-6501	110	06/30/80		DMS/DPPX	8100	03	DX	5760XC2	78-170
XR-110	U1	MACH 16	601-5501	110	08/30/79		DPS FM	8100DPS	13	DX	5760XR1	78-165
XR-120	U1	MACH 16	601-5502	110	08/30/79		DPS IMD	8100DPS	13	DX	5760XR1	78-165
XR-500	X4	MACH 09	090-0028	100	01/11/80	07/31/80	DPPX/PT MONITOR					78-175
	X2	MACH " - "	" - "	200	04/30/80		DPPX/PT MONITOR		02	CF		80-006
XR-600	U3	MACH 01	601-6901	110	02/01/81		DCMS/DPPX	8100	03	DI		79-234
01-000	CD	MACH 16	601-6301	110	08/30/79		DPPX/BASF	8100	03	DX	5760010	78-161
**** 5761												
****	DPCX											
DS-100	CD	MACH 611-7001		110	08/31/79		DPCX	8100	03	DX	5761DS1	78-160
	CD	MACH " - "	" - "	111	11/30/79		DPCX	8100	03	DX	5761DS1	78-160
	CD	MACH " - "	" - "	112	03/30/80		DPCX	8100	03	DX	5761DS1	78-160
	CD	MACH " - "	" - "	113	09/26/80		DPCX	8100	03	DX	5761DS1	
	CD	MACH " - "	" - "	114	11/24/80		DPCX	8100	03	DX	5761DS1	80-257

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COMPONENT ID	SVC CLS	MP SC	LIC. TYPE	SVC PEP.	FESH	REL	PID AVAIL	CURR. END	DESCRIPTION	SUP GROUP	CTR LOC	SUPP MAIL ADDR	PID NO.	ANNOUN LETTER
**** 5761 ****	CONT													
XR-100	CP		MACH		611-7001	210	05/31/81		DPCX	8100	03	DX	5761DS1	80-122
	U1		MACH		611-1491	110	05/31/81		DOSF	8100	03	BX	5761XR1	80-123
	U1		MACH		" - "	210	11/30/81		DOSF	8100	03	BX	5761XR1	80-123
**** 5799 ****														
AA-B	U1		MACH		440-9102				EMULATOR H120/200		01	H		
AA-N	X2		MACH		099-0028				S/S TERMINAL CTL PGM					
AA-R	U1		MACH		440-9103				PRPQ		02	AJ		
AA-T	U1		MACH		440-9104				PRPQ		02	AJ		
AA-U	X2		MACH		099-0028				PRPQ		WA	V		
AA-W01	U1		MACH		440-9105	023	02/13/79		FORTRAN H EXT PLUS	FORTRAN	13	AK		
AB-P	X2		MACH		099-0028				PRPQ		CH	AB		
AD-G	X2		MACH		099-0028				S/7 D D D-OS/DOS			AF		
AD-J	X2		MACH		099-0028				S/3 M6 1627 PLOTTER		RO	AM		
AD-W	X2		MACH		099-0028				S/3-10 1627 PLOTTER		RO	AM		
AD-Z	X2		MACH		099-0028				S/3-6 1627 PLOTTER		RO	AM		
AE-R	X2		MACH		099-0028				S/7 CAS-OS/DOS		BR	AF		
AE-X	X4		MACH		099-0039				S/7 RDC-OS					
AE-Y	X4		MACH		099-0039				PRPQ					
AF-N	X2		MACH		099-0028				S/7 TMS-OS/DOS		BR	AF		
AH-A	X2		MACH		099-0028				S/7 CAS-OS/DOS		BR	AF		
AJ-W	X4		MACH		099-0039				S/7 TTS PRPQ					
AL-K	X4		MACH		099-0039				APL/CMS PRPQ					
AL-Q	X2		INST		099-0028	010	05/28/76		PRINTEX/370		PA	DY		76-073



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COMPONENT ID	SVC CLS	MP SC	LIC. TYPE	SVC PER.	FESN	REL	PID AVAIL	CURR. END	DESCRIPTION	SUP GROUP	CTR LOC	SUPP MAIL ADDR	PID NO.	ANNOU LETTER
****														
5799														
****														
AL-R	X2		INST		099-0028	011	07/15/78		PRINTTEXT/370 CLASS			PA DY		
	X2		INST		099-0028	010	01/30/76		PRINTTEXT/370			PA DY		76-009
	X2		INST		" - "	011	07/15/78		PRINTTEXT/370			PA DY		
AL-X	X2		MACH		099-0028		04/28/75		GIS DOS/VS			13 AK		75-025
AN-R00	U1		MACH		448-2009				S/3 M15 1255 UTIL			10 AM		
AQ-C	X4		MACH		099-0028	030	04/15/76	09/30/80	APLSV					76-048
AQ-T	U1		MACH		440-9110	013	04/01/78		BSC SWIFT PRPQ		63	DC		
AR-D	X2		INST		099-0028		01/31/78	06/30/81	PIN SERV TERM					78-012
AR-E	X2		INST		099-0028		01/31/78	06/30/81	FSTS					78-012
AR-Y	X2		MACH		099-0028		06/13/77	06/30/81	CREDIT MANG./VS					77-101
AT-C00	X4		MACH		440-9136	010	04/15/77		HASP NETWORKING					77-059
	X4		MACH		" - "	011	06/01/78	12/31/80	HASP NETWORKING					
AT-D	X4		MACH		440-9137	010		06/15/80	3705 EP EXTENDED					
AT-Q	X2		MACH		099-0028	010	10/24/77		HASP/MVT/3800					77-170
AW-Q	U1		MACH		448-2319	010	12/07/77		S/32 COBOL PRPQ		10	CC		
AW-R	U1		MACH		448-2369	010	06/30/78		S/34 COBOL		10	CC		
	U1		MACH		" - "	040	07/27/79		S/34 COBOL		10	CC		
AX-W00	X2		MACH		099-0028				3277 APL GRAPH ATT					
AY-Q00	U1		MACH		448-2389	030	09/28/78		15D SYS MEAS PAC		10	AP		
AY-W00	U1		MACH		448-2379	040	07/27/79		S/34 WORK STATION		10	CC		678-71
AZ-L00	X2		MACH		099-0028		07/13/79		D.P.D.S.		03	AG		79-082
AZ-N00	X2		MACH		099-0028		02/28/80		CTAM					80-035
AZ-P00	X2		MACH		099-0028		12/29/79		NET EXT FACILITY					78-221
BC-P00	U1		MACH		448-2329	010	08/15/80		SYS 34 DIST DISK PAC		10	CC	5799BCP	680-42
	U1		MACH		" - "	060			SYS 34 DIST DISK PAC		10	CC	5799BCP	

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COMPONENT ID	SVC CLS	MP SC	LIC. TYPE	SVC PER.	FESN	REL	PID AVAIL	CURR. END	DESCRIPTION	SUP CTR GROUP	SUPP LOC	MAIL ADDR	PID NO.	ANNOON LETTER
****														
5799														
****														
BC-Q00	U1		MACH		449-7329	010			SYS 3 M15D DDFP		10	AP		
	U1		MACH		" - "	050	09/30/80		SYS 3 M15D DDFP		10	AP		680-42
BD-E00	X3		MACH		099-0020	010	02/28/81		8100 DPPX AUTO ANS		03	DX		80-188
	U1		MACH	00	448-2023	010			8100 DPPX AUTO ANS					
BE-H00	U1		MACH		448-2031	010	12/31/81		CICS/VS EXT				5799BEH	80-282
BE-J00	X4		MACH		099-0039	010	12/31/81		AD CONTROL SYSTEM					80-216
BE-Q00	X3		MACH		099-0028	010	01/16/80		LINK SORT/BDCU					
	U1		MACH		448-2052	010			LINK SORT/BDCU					
BE-W00	X4		MACH		099-0039	010	12/31/81		SERIES/1 SUPPOPT					80-216
BE-Z00	U1		MACH		448-2071	010	01/30/81		S/34 3270 BSC DEVICE		10			
BP-A00	U1		MACH		440-0911	010	01/30/81		SYS/34 AUTO RESP FAC		10			
PE-100	U1		MACH		440-9158	100	01/31/80		PEP		03			79-204
	U1		MACH		" - "	810			PEP		03			
TR-F00	U1		MACH	00	348-0501		11/11/77		SER/1 SS INTFRFAC		27	BO	5799TRF	
TB-H	U1		MACH	06	348-0561	010	11/05/77	04/01/81	FC/PM SUPERMARKET		27	AE	5799TBH	
TB-K	X4		MACH	00	348-0511	010	04/28/78	04/30/80	SERIES 1 RJE					5799TBK 677-15
TB-L	X4		MACH	00	348-0521	010	04/28/78	04/30/80	SERIES 1 DISK SPOOL					5799TBL 677-15
TB-M	X4		MACH	00	348-0531	010	04/28/78	04/30/80	SERIES 1 4978 SUPP.					5799TBM 677-15
TB-N	X4		MACH	00	348-0541	010	04/21/78	04/30/80	SERIES 1 I A M					5799TBN 677-15
TB-P	X4		MACH	00	348-0551	010	02/24/78	03/31/80	SERIES 1 BASIC SORT					5799TBP 677-15
TB-Q	X4		MACH	00	348-0571	010	02/10/78	04/30/80	RPS ADR XLATOR SUP					5799TBQ 677-15
TB-X00	U3		MACH	00	348-5201		06/30/78		SER/1 FPSADDR		27	AE	5799TFX	
TB-Y00	U3		MACH	00	348-5211		12/01/78		S/1 RPS ADR XLATOR		27	AE	5799TFY	
TC-A00	U3		MACH	00	348-5221		06/30/78		SER/1 IAM U2		27	AE	5799TCA	
TC-B00	U3		MACH	00	348-5231				SER/1 4978 V2		27	AE	5799TCB	

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COMPONENT ID	SVC CLS	MP SC	LIC. TYPE	SVC PER.	FESF	REL	PTD AVAIL	CURR. END	DESCRIPTION	SUP GROUP	CTR LOC	SUPP ADDR	PID NO.	ANNOU LETTER
****														
5799	CONT													
****														
TC-C00	U3		MACH	00	348-5241		05/31/79		SER/1 IAM V4		27	AE		678-09
TC-D00	U3		MACH	00	348-5251		07/28/78		SER/1 4978 SUPT		27	AE	5799TCD	
TC-E00	X4		MACH	00	348-5261		10/13/78	10/31/80	SER/1 4978 SUPT				5799TCE	
TC-F00	X4		MACH	00	348-5271		05/31/79	10/31/80	SER/1 4978 SUPP V4					678-09
TC-G00	X4		MACH	00	348-5281		07/28/78		SER/1 DISK SPOOL				5799TCG	
TC-H00	X4		MACH	00	348-5291	010	10/20/78	10/31/80	SER/1 DISK SPOOL 3				5799TCH	
TC-J00	U3		MACH	00	348-5301		05/31/79	05/31/81	SER/1 DISK SPOOL V4		27	AE		678-09
TC-L00	U3		MACH	00	348-5311				VISUAL INFO PRES		27	AE	5799TCL	
TC-P00	U3		MACH		348-5471		11/21/79	12/21/81	SER/1 PACKET NET				CP	
TC-X00	U3		MACH		348-5431		09/28/79	09/30/81	SER/1 COMM MONITOR		27	DD		79-002
TC-Y00	U3		MACH		348-5321		09/29/79	09/29/81	SER/1 MULTI TERM		27	DA		
TD-G00	X4		MACH	00	348-5371		10/27/79	10/31/80	SER/1 TRANS ACT V1					
WA-A	U1		MACH		440-9138				FILM RDR/RECORDER		02			
WA-B	U1		MACH		440-9139				2740/2968 A/V CTL PK		13	AK		
WC-B00	U1		MACH		449-0619				S/1 CH ATT-OS/DOS		27	AF		
WC-Y	X2		MACH		099-0028				S/1 TAPE CASSETTE		BR	AF		
WC-Z	X4		MACH		099-0039				5930 BTM DOS					
WD-A	X4		MACH		099-0039				5930 BTM OS					
WE-A	X2		MACH		099-0028				S/1 AUD RESP-OS/DOS		BR	AF		
WE-C	X2		MACH		099-0028				S/1 I T S-OS/DOS		BR	AF		
WE-R	X2		MACH		099-0028				S/3 M10 3735 SUPPORT		RO	AM		
WF-D	U5				449-0209				S/3 M10 1018/1442		10	AM		
WF-E	X2		MACH		099-0028				S/1 EXT ITS-OS/DOS		BR	AF		
WF-G00	U1		MACH		449-1649				S/1 TPM BSC-OS/DOS		27	AF		
WF-J00	U5				449-0219				S/3 DUMP/RESTORE		10	AM		

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COMPONENT ID	SVC CLS	MP SC	LIC. TYPE	SVC PER.	FESN	REL	PID AVAIL	CURR. END	DESCRIPTION	SUP CTR GROUP	SUPP LOC	MAIL ADDR	PID NO.	ANNOUN LETTER
**** 5799 ****	CONT													
WF-K00	US				449-0229				S/3 M15 A/B/C HLTA		10	AP		
WG-F	U1		MACH		440-9142				5930 BTAM 270 DOS/V5		63	CC		
WG-G	U1		MACH		440-9143				5930 BTAM 270 OS/V51		63	CC		
WG-H	U1		MACH		440-9144				5930 BTAM 270 OS/V52		63	CC		
WG-J	U1		MACH		440-9145				5930 BTAM 370 DOS/V5		63	CC		
WG-K	U1		MACH		440-9146				5930 BTAM 370 OS/V51		63	CC		
WG-L	U1		MACH		440-9147				5930 BTAM 370 OS/V52		63	CC		
WH-G	US				449-0379				S/3 M10 BSCA MODIF		10	AP		
WH-L00	US				449-0399				S/3 M10 2ND 1403 ATT		10	AP		
WH-Q	X2		MACH		099-0028				S/3 M15 3735 SUPPORT		RO	AM		
WH-X	X2		MACH		099-0028	101	03/10/77	03/31/81	DOS/V5 RJE WK STAT					77-034
WJ-H00	S2				440-9148				S/7 3340 ATT OS/V5		27	AF		
WJ-J00	S2				440-9149				S/7 3340 ATT DOS/V5		27	AF		
WJ-K00	S2				440-9150				S/7 3340 ATT		27	AF		
WJ-W00	U1		MACH		440-9151				3890 PRPQ SUPPORT	DATA MGT	02	CJ		
WJ-X00	U1		MACH		440-9152				S/7 3340 ATT DOS		27	AF		
WJ-Y00	U1		MACH		440-9153				S/7 3340 ATT OS		27	AF		
WK-A	US				449-0509	020	06/27/75		SCP 6/8 LINE PRPQ		10	CC		
WK-G	X2		MACH		099-0028				AIRLINE CONTROL PR3					
WL-D	US				449-2089				S/3 M15 D HLTA IOCS		10	AP		
WN-K00	US				449-1799	030	09/28/78		S/3 15D SMP		10	AP		678-83
	US				" - "	040	09/28/79		S/3 15D SMP		10	AP		679-72
WN-R	US				449-0149	020	03/31/78		D/3 M15 LIB PROJ		10	AP		
WN-T	US				449-2339	070	01/22/78		S/32 BSCA AUTO RESP		10	CC		
WP-K	X2		MACH		099-0028		11/09/78		MSVIZAP PROGRAM					78-090

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COMPONENT ID	SVC CLS	MP SC	LIC. TYPE	SVC PER.	FESN	REL	PID AVAIL	CURR. END	DESCRIPTION	SUP GROUP	CTR LOC	SUPP ADDR	MAIL NO.	PID NO.	ANNOUN LETTER
**** 5799 ****															
	WQ-R	U1	MACH		440-9154		02/01/79		OS/VS NCP COMPAT				63	DC	
	WQ-Y	U1	MACH		440-9155	033	02/01/79		DOS/VS NCP COMPAT				63	DC	

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THIS TNL: Z225-0518-17  
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BASE PUBLICATION: Z225-0511-5/6

PREVIOUS TNLS  
SECTION 1: NONE  
SECTION 2: Z225-0534, 0535  
          0536, 0538  
SECTION 3: NONE

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SECTION 1: NONE  
SECTION 2: ZZ25-0534, 0535  
          0536, 0538  
SECTION 3: NONE

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BASE PUBLICATION: ZZ25-0511-5/6

PREVIOUS TNLS  
SECTION 1: NONE  
SECTION 2: ZZ25-0534, ZZ25-0535  
          ZZ25-0536, ZZ25-0538  
SECTION 3: NONE

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PREVIOUS TNLS  
SECTION 1: NONE  
SECTION 2: ZZ25-0534, ZZ25-0535  
          ZZ25-0536 & ZZ25-0538  
SECTION 3: NONE

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**1** RETAIN/370

RETAIN/370 is available for use by designated Branch Office personnel. Properly used, it will provide timely information to hardware and program support personnel and assist them in the performance of their assignments.

The RETAIN/370 Data Bank contains information about hardware and software problems relating to IBM products. Information is added to this data bank continuously so that it reflects the current status of problems and their resolution.

The Software Support Facility contains software information and can be accessed after normal RETAIN/370 sign-on.

The following documentation explains in detail the functions and usage of the RETAIN/370 system:

RETAIN/370 User's Guide	ZZ26-3045
RETAIN User's Guide Software Support Facility	ZZ25-3362
RETAIN/370 User Procedures - Self-Study Course	70127
Remote Support System/Software Support Facility Student Self-Study Course	57417

Labels (Form number ZR31-0766) are available from Mechanicsburg to define the R/370 functions of the 3277 keyboard. Use of these labels should reduce the amount of time required to learn effective use of system functions.

Note: Commands after which a "colon" (:) must follow are indicated by key labeling.

Example: A Parameter Search is performed by the 'PAR' key followed by the 'COLON' key and is indicated on the label by 'PAR:'. ie, P:SEARCH ARGUMENT (enter)

The 'semicolon' (;) can always be substituted for the 'colon.'

## SIGNING ON TO RETAIN/370

- |   |  |
|---|--|
| 1. Initial system sign on.  | =R37   |
| 2. Select support required  | 1  |
| 1 = Technical   |  |
| 2 = Instructional   |  |
| 3. Enter Serial Number and Security Key.  | NNNNNN/SEC   |
| If this is the first time you've used R/370, you must enter 'KEY' and assign yourself a Security Key. In the example 'ABC' is the Security Key.       | EXAMPLE:<br>123456/KEY-ABC                                     |
| 4. Your Security Key is valid through the last day of the month. After that, you must assign yourself a new key. You may change your key at any time. | EXAMPLE:<br>123456/ABC-XYZ<br>ABC is old key<br>XYZ is new key |

Your Region RETAIN/370 coordinator should be contacted for assistance with the following problems:

1. RETAIN/370 sign-on problems.
2. Security Key problems.
3. RETAIN/370 system problems.



RETAIN/370 (continued)

SYSTEM SECURITY

The RETAIN system provides access to a large amount of information. As a registered user, it is your responsibility to help ensure the security of the system by adhering to the following guidelines:

1. Prevent unauthorized use of your employee number by maintaining a unique Security Key known only by you.
2. Convey information or provide system access only to authorized persons.
3. Ensure that all unattended terminals are signed off.
4. Remove and secure all information obtained on the location printers.
5. Do not use your initials, abbreviations of the month, or other obvious combinations of characters as Security Keys. You may not re-use a Security Key for three months.

The following data bank facilities are available to the branch office user:

- BOIF - The Branch Office Information Facility contains addresses, phone numbers, region numbers, etc. A version of this facility is available in both R/370 and SSF mode.
  - CALC - The Calculator Facility enables the user to use R/370 as a calculator in either decimal or hexadecimal mode.
  - DATE - The Date/Time Facility is based on a perpetual calendar and will display a specified month, the time and other related data.
  - TUTOR - This Instructional Facility will assist the user in learning the basic functions of the system.
  - DEFAULT - This facility in RETAIN/370 will allow the user to pre-select libraries and files.
  - DEFSETS - In the Software Support Facility are designed to allow the user to pre-select libraries and files to be searched. If you commonly use a particular selection, use of this function can save you time and effort.
- Note: Used incorrectly, DEFAULT or DEFSETS may cause inaccessibility of information.
- SRCH - The Search Facility (Library 0) provides access to hardware maintenance information stored in the data bank including Technical Information (TIP), Symptom Fix (S/F), and Incident (INC).

The Search Facility (Library 1) contains Basic Records, PGENs, GENINFO (General Information, such as: H/FIX LISTS, APAR LISTS, etc), SU data, PUT and updated DLIB types of information. Specific files may be selected individually or as a group. For example:

RETAIN/370 (continued)

N:4/V1/F MSC  
 N:4 Selects the SEARCH Facility  
 V1 Selects Library 1  
 F MSC Selects the Misc, PIN Information file  
 or: F ALL Will select all files available  
 and: P;GENI NF O JES3

The above search argument will yield any APAR lists in the Search Library for JES3. A similar search can be performed to locate entries for other products (ie, VTAM, IMS, NCP, etc)

The slash (/) 'CHAINS' the three commands together. Chaining can save you valuable time if you know exactly what you wish to do, since you are not required to wait for each consecutive prompt screen to be displayed.

INC - The Incident Facility contains data for hardware, software, and diagnostic programs.

PASS - This facility is no longer available in R/370 and has been replaced by SSF.

COMPID - The Component Identification Function of the software support Facility contains information about particular software products. It can be searched either by the first four character system identifier (ie, 5741) or by the nine character component number (ie, 5741SC121).

WHO - Displays the name of the user signed onto the terminal.

SSS (SOFTWARE SUPPORT FACILITY)

SSF - The Software Support Facility provides access to software information. APARs are visible immediately when entered, but must not be considered to be valid problems until they are assigned a valid APAR closing code (DOC, PER, PRS, UR1, UR3).

After access to the Software Support Facility is accomplished, you will be requested to select the desired facility from a 'MENU' page.

For the software APAR and PTF files, enter a dash: - (enter)

Available options are now displayed:

R - DIRECT RECORD READ will display an APAR text or PTF record: R UY12345. No library specification is required if the APAR or PTF number is known.

P: - DEFAULT SEARCH will search the library and files indicated for the words in your search argument - P:5752SC1C3 ABEND0C5 and present a list of 'HITS' for your selection.

OS - SEARCH OS LIB

V1 - SEARCH VS1 LIB

V2 - SEARCH VS2 LIB

**RETAIN/370** (continued)

PA - SEARCH PGM Product 'A' LIB

DN - SEARCH Diagnostics LIB

DS - SEARCH DOS/Small systems LIB (also, System/7)

After specifying the desired library, the system will prompt for specification of APAR common (AC) or PTF common (PC). These options can be selected singularly or together and controls whether your search argument will go against APAR data, PTF data, or both.

Your search argument can consist of from 1 to 15 words of not more than 15 characters each separated by blanks. The slash (/), dash (-), and asterisk (\*) are the only characters that can be used in the search argument. The asterisk (\*) is the 'DON'T CARE' character. For example, the search statement:

P:5741SC120 PD77/07/\*\* will retrieve all records for component 5741SC120 that were pin authored during the month of July, 1977.

You may use the '+' (OR) and '\$' (NOT) operators in your search argument. For example:

P:5741SC121 +5741SC120 \$WAIT - will retrieve all records for both component IDs that do not have 'WAIT' in the record.

You may use the '-' (RANGE SEARCH) function to find new activity or updates which have occurred over a specified period of time. For example:

P:PE 77/09/01-14 will retrieve all PE records Pinned or Pin updated from 77/09/01 through 77/09/14.

P:PE T7707-8 will retrieve all PE records Pinned or Pin updated for tapes 7707 through 7708.

You will want to enter a search argument that will yield as few records as possible and at the same time completely cover your problem.

Be aware that if you use abbreviations for component IDs, you may not retrieve all existing records for that component. The only correct method to represent a component is with the full nine-character identification number.

There are many more features to RETAIN/370 and SSF than are discussed here. The purpose of this section is to refresh your memory on some of the most commonly used functions. Refer to the documentation and self-study courses listed on page 2-1 for complete explanation and instruction in the use of the system.

**RETAIN/SSF PTF RESEARCH**

PTF cover letters for SCPs (ie, 5741, 5742, 5752, 5745 and Program Products) can be found in the SSF facility. The SSF facility can be accessed using the following command:

Change: SSF which is entered as N: -  
the selection command can be further expanded to select the appropriate library and file. For example:

RETAIN/370 (continued)

N:-/V2/PC This command says change to SSF, library V2 which contains VS2 data, and PTF command.

N:-/V2/AC Allows access to VS2 APAR data including PTF PE APARs.

APAR and PTF data can be searched at the same time if the following command is entered:

N:-/V2/AC PC

The V2 can be replaced with V1, OS, DS, PA, etc, dependent on which product is desired for search.

Program Product PTF data is found in two RETAIN locations. The locations are SEARCH (N:4) and SSF (N:-) dependent on the age of the record. In the future, as products or releases are withdrawn, the use of SSF will increase and SEARCH will stop being used. However, at present, it is necessary to search both facilities until the desired record is retrieved.

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**1A**

## **IBM Support Center Overview**

### **Introduction**

This information is intended to provide customers using the IBM support center with an understanding of the function of the center and how to use the center so that maximum assistance may be obtained quickly and efficiently.

### **Supported Products (1)**

Customers with S/370, 3031, 3032 or 3033 processors running DOS/VSE, DOS/VS, VM/370 or OS/VS1 and users of designated IBM Licensed Programs began using the center on a phased implementation schedule beginning February 1979.

Customers with 4331 or 4341 processors running DOS/VSE, DOS/VS, VM/370 or OS/VS1 and 8100 users running DPCX, DPPX and associated Licensed Programs were permitted access to the center upon installation of their processor.

Customers running OS/VS2 (MVS), NCP/VS, EP/VS, ACF/NCP co-requisite SCP on System 370, 3031, 3032, 3033, 4341 and 3081 processors, or 3704/3705 machine users and users of designated Licensed Programs will be phased into the support center during 1981.

(1) This sections provides information on the planned transition of customers to use of the IBM Support Center only and does not affect the availability of central or local services for the listed SCPs or Licensed Programs.

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## **Hours Of Operation**

The IBM support center operates seven (7) days a week, 24 hours a day, with the maximum resources available Monday through Friday, from 8:00 a.m. to 5:00 p.m.

If you call during other hours and the personnel available cannot resolve your problem, the following will occur:

1. If you have a critical problem and cannot wait until the next working day for assistance, the IBM Support Center Level 1 representative will involve Level 2 support or initiate PSR dispatch as appropriate.
2. If you have a problem of a less critical nature and can wait until the next working day for assistance, an IBM Support Center Level 2 representative will call to assist you.

## **Access Code**

Each customer has a unique access code authorizing use of the IBM support center. It is necessary to provide this access code each time the IBM support center is contacted. Appropriate personnel (System Programmers, Data Processing managers, etc.) should be provided this code.

The confidential access code is unique to each customer and should be kept within your organization.

## **Support Structure**

All calls for programs supported by the IBM support center are made directly to the IBM support center.

The center is designed to handle and provide assistance in program support situations, including:

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1. Problem situations (ABENDs, waits, loops, etc.).

Status information requests on open problems. Information requests (Preventive Service information, PUT/PTF information and other program support general information requests).

A 'Duty Manager' is always available to assist in resolving unusual situations.

The IBM support center is structured as two entities, Level 1 and Level 2, to provide maximum assistance in the most effective and efficient manner possible. The following will acquaint you with the duties of Level 1 and Level 2 and the interactions that may occur when you use the IBM support center.

1. Level 1
  - a. Dispatcher

The dispatcher will answer your call and:

- 1) Request Access Code.
- 2) Request Problem Number.
  - a) If old problem and Level 2 is involved call will be queued to Status Desk.
  - b) If new problem, a problem number is assigned and call is queued to appropriate Level 1 queue.
- 3) Request failing component/SCP.
- 4) Request original failing CPU or Controller type and Serial Number.
- 5) Request Name.

At this point the dispatcher will have generated a record in the data base for your problem and will place your

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call on a queue for the appropriate Level 1 representative. You will then be placed on hold for a brief period. While on hold you will hear music to indicate a continuous connection.

b. Level 1 Representative

If the component causing the problem is known, a Level 1 representative specializing in that component will handle your call. If the component is not identified, your call will be taken by a representative supporting your base SCP who specializes in problem source identification assistance.

Level 1 representative, depending on the queue upon which you have been placed, will provide the following assistance:

- Search the data base of known problems;
- Assist with problem source identification;
- Identify and recommend application of service available on a Program Update Tape (PUT tape);
- Where available and appropriate, provide a bypass or circumvention;
- Provide preventive service information;
- Provide status information on problems, fixes, APARs and PTFs;
- Record 'feedback' information on a fix or pre-release PTF previously provided;



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Record severity of problem in data base record.

If at this point your problem has not been resolved and the component has been identified, or if this is a call back to a Level 2 representative, your call will be placed on the appropriate Level 2 queue in priority sequence. The Level 1 representative will also update the data base record on your problem with all appropriate information.

If your problem has not been resolved in a case where Problem Source Identification (identification of the failing component) has not been completed, the Level 1 representative will recommend: That you do additional analysis to complete Problem Source Identification and then call back

or

- That a PSR be dispatched to assist you.

c. Status Desk Function

The Status Desk is designed to provide quick access to open problem data where problem diagnosis or technical assistance is not required by the support center. The

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following activities are provided by the  
Status Desk:

- Present status of an APAR or PTF.
  - Requeue of caller to Level 2 (a second action concerning the same problem where Level 2 has previously been involved).
  - Problem (incident) updating or closing.
  - Second Level response information.
- d. Level 2 Representative

Problems/inquiries where the component has been identified but not resolved at Level 1 of the IBM support center will be handled by a Level 2 representative who specializes in the component.

Based on a more in depth knowledge of the component and access to the Change Team for the component, the Level 2 representative will provide the following assistance:

- Perform component level problem diagnosis;
- Perform any additional data base search required;
- Identify and recommend application of service which will resolve the problem if available on a PUT tape;
- When available and appropriate, provide a fix or circumvention;
- In a high severity situation when the problem is a new one, develop a bypass or circumvention;

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Recommend and assist in the submission of an APAR on a new problem.

If the problem is still unresolved, the Level 2 representative may recommend that you do further problem analysis locally and call back (reinstate), or may recommend that a PSR be dispatched to assist in problem resolution efforts.

Local Program Support Agreement (LPSA) or Per Call rates will apply whenever a PSR is dispatched.

The Level 2 representative will then update the data base record on the problem with appropriate information. If a decision has been reached to dispatch a PSR, the Level 2 representative will initiate action to have the local IBM Branch Office dispatch a PSR. The Branch Office dispatcher will be provided with the customer name, telephone number, the name of the individual to be contacted, the problem number, severity and a brief description of the problem.

e. Program Support Representative (PSR)

While not a part of the IBM support center, PSRs from the local IBM Branch

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Office are available to assist when a problem is not resolved by the IBM support center. In these cases, PSRs will have available to them all pertinent data on the problem and actions taken by the IBM support center. PSRs will assist as much as they have in the past, except that a great deal of the problem investigation work will already be completed. PSRs will continue to work with you until the problem is resolved, or based on the results of their efforts, it is appropriate that an IBM support center representative carry the problem to resolution.

If the PSR is at the customer's location, the customer can ask the PSR for assistance in:

- 1) Activities outlined by the IBM Support Center.
- 2) Activities while awaiting Level 2 call back.
- 3) Further problem resolution activities after Level 2 call back.

Local Program Support Agreement (LPSA) or Per Call rates will apply whenever a PSR is dispatched.

Questions regarding IBM local program support agreements or PSR hourly programming service should be directed to your local IBM Marketing Representative.

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## **Problem Severity**

Problem severity should be determined and indicated to the IBM support center representative when discussing the problem. All calls will be assigned a problem severity prior to transferring the call to Level 2's component specialist or requesting local Branch Office PSR assistance. Refer to the APAR Procedures section of this Programming System General Information Manual for assistance in determining problem severity.

## **How To Use The IBM Support Center**

### **1. New Problems**

When a problem is encountered, problem analysis should be performed to determine which component is failing (Problem Source Identification). As this effort is being performed, the Problem Inquiry Data Sheet should be completed. Use of this form (a sample is presented on last page) or any variation which contains the same information will speed up communication of problem data and greatly assist in problem resolution and tracking activities. Once Problem Source Identification is completed, contact the IBM support center and provide the information under required, (see this Section under "Dispatcher").

If you are unable to complete Problem Source Identification, the IBM support center may be contacted for assistance in this effort.

### **2. Open Problems**

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To reestablish contact with Level 1, call the IBM support center and give the dispatcher the failing component and existing problem number.

To reestablish contact with Level 2 (reinstate), call the IBM support Center and ask the dispatcher for the "Status Desk" for a "reinstate".

3. To obtain general information, information on Preventive Service, or status information, call the IBM support center and give the dispatcher the component or base SCP.
4. For questions on IBM support center procedures, call the IBM support center and ask the dispatcher for the "Control Desk".

## **Documentation**

### ***Problem Inquiry Data Sheet***

A sample of this form is included in this section. You should use the sample form or any variation which contains the same information. Use of this form is important in problem communication and problem management.

### ***System And Service History***

A listing of all program components and service installed on the various program components of your system must be available. There are programming aids included in the SCPs to assist in maintaining this information.

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## ***Programming Systems General Information Manual (ZZ25-0511)***

Section 3 of this manual contains important details on the data required (dumps, traces, maps, listing) for specific types of problems on a component basis.

This manual should be added to your SLSS subscription so that updates will automatically be received.

## **APAR Preparation/Submission**

APAR forms are no longer required. The data that is needed will be entered in the IBM data base and will be the vehicle for APAR data and status information.

The IBM support center, while assisting in problem diagnosis, will enter this data in the data base. The APAR number will be provided to the customer by the IBM support center.

When supporting documentation is required, enter this number on the top right hand portion of each separate piece of documentation submitted. APAR submission details are explained in the Procedures Section of this Programming System General Information Manual.

The IBM support center will directly notify you of receipt of support documentation and of APAR resolution.

## **Preventive Service**

For DOS/VSE, VM/370 Release 6, OS/VSI Release 7 and MVS.

Integrated, Customized and Cumulative Preventive Service:

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IBM users of DOS/VSE, OS/VSI Release 7, VM/370 Release 6 and specified Licensed Programs\* will receive a system Program Update Tape (PUT) customized to their SCP and program product profile. Each system PUT will be researched against a master service data base, synchronized to the applicable SCP, field tested as one package, customized to SCP and program product profile, and shipped directly to the customer. The system PUT for SCP and Licensed Programs will be distributed in the format of the applicable vehicle specified for the SCP.

\* For a current list of the specified Licensed Programs contact your DP Marketing Representative.

Preventive service application is a customer option based on the requirements of a tailored preventive service installation plan that should be developed for each individual customer environment and included in an account System Management Plan. This plan should be tailored to the customer's need to manage the introduction of change, to enhance the ability for software stabilization, and to provide flexibility in the application of preventive service. The customer is responsible to apply preventive service update tapes to the current release of the applicable programs as called for in the individual customer's System Management Plan.



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## PROBLEM INQUIRY DATA SHEET

Sheet 1 of \_\_\_\_\_

Customer            Date            Problem #

Access Code        Cpu #           Severity

Sys Prog

Problem/inquiry Description

Keywords            Label    Loc

Abend/progck \_\_\_\_\_ Loop \_\_\_\_\_ Perf \_\_\_\_\_

Component        \_\_\_\_\_ Message \_\_\_\_\_ Wait State \_\_\_\_\_

IncorROUT        \_\_\_\_\_ Module \_\_\_\_\_ Wait Code \_\_\_\_\_

Scp Rel \_\_\_\_\_ Scp Lvl \_\_\_\_\_ Comp Rel \_\_\_\_\_ Comp Lvl \_\_\_\_\_

Vm Lvl \_\_\_\_\_ Plc Lvl \_\_\_\_\_ Ltr Lvl \_\_\_\_\_

### Documentation Available:

\_\_\_\_\_ Storage        \_\_\_\_\_ Storage        \_\_\_\_\_ Tape

\_\_\_\_\_ Dump            \_\_\_\_\_ Map            \_\_\_\_\_ Dump

\_\_\_\_\_ Dasd            \_\_\_\_\_ Source        \_\_\_\_\_ Pbkect

\_\_\_\_\_ Dump Q        \_\_\_\_\_ Deck Tape        \_\_\_\_\_ Deck Tape

\_\_\_\_\_ Program        \_\_\_\_\_ Control        \_\_\_\_\_ Console

\_\_\_\_\_ Listing        \_\_\_\_\_ Cards Jcl        \_\_\_\_\_ Log

\_\_\_\_\_ Console        \_\_\_\_\_ System        \_\_\_\_\_ System

\_\_\_\_\_ Conditions        \_\_\_\_\_ Log            \_\_\_\_\_ Output

\_\_\_\_\_ Test            \_\_\_\_\_ Diagnostic        \_\_\_\_\_ Ptf

\_\_\_\_\_ Data            \_\_\_\_\_ Output        \_\_\_\_\_ List

\_\_\_\_\_ User's            \_\_\_\_\_ Tp            \_\_\_\_\_ Load

\_\_\_\_\_ Routine        \_\_\_\_\_ Conf List        \_\_\_\_\_ List Vm

### Problem Tracking

Date        Name        Activity

Resolutions        Put Tape

Apar # \_\_\_\_\_ Ptf \_\_\_\_\_ Other \_\_\_\_\_

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## **2 Program Support Activities and Responsibilities - F.E.**

### ***Description***

IBM provides Programming Support for IBM programming and responds to emergency assistance calls on other programs used in conjunction with IBM data processing systems.

The Service Classification applied to IBM programming indicates the support provided for that programming.

### ***Program Support Mission***

The Field Engineering Program Support mission is to assist the customer in achieving a high degree of utilization of IBM systems. To fulfill this mission, it is essential that the Field Engineering representative establish a cooperative working relationship with DP and the customer to make certain the the IBM activities outlined below are handled in the most effective manner.

### ***IBM Programming Activities and Responsibilities***

Customers are responsible for the selection, use, and management of the software in their installation. Nevertheless, there are activities associated with the customer's software for which IBM has responsibility. IBM marketing and field engineering play unique roles in supporting the customer's software systems. The relevant IBM activities and responsibilities are described on the following pages.

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## ***Proposal***

### **Marketing Responsibility**

This activity provides an opportunity to discuss and clarify the program announcement material with the customer. As a result of this meeting, the customer will know what program material to order and will have established implementation dates which can be used in future planning sessions.

The program announcement letter is used as a basis for discussion. Representative points covered include:

- New features and improvements.
- Changes required to present programs and operational procedures.
- Hardware changes.
- IBM education.
- Systems engineering services.
- Related licensed programs.
- Engineering changes (FE consulted, if appropriate).

## ***Order***

### **Marketing Responsibility**

An order is placed for the program and supporting documentation based upon the proposal meeting. The program announcement letters contain specific ordering details. Required support documentation is added to the user's SLSS subscription.

## ***Installation Planning***

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### **Marketing Responsibilities**

Proper planning is essential for a successful installation. This installation planning is part of the marketing responsibility and is intended to provide the customer with the technical information pertinent to a program release so that the customer may effect a successful installation. Design, coding, and implementation of the results of the planning session are customer responsibilities. Some of the areas which may be considered when providing program installation planning to the customer include:

- Informing the customer of the functional and internal changes in the new release so that an evaluation may be made of the user's system code modifications and/or equipment.
- Guidance on the general procedures which should be followed in determining the source of software problems.
- Guidance on tracking problems to resolution and managing changes in the account environment.
- Definition of controls and standards requirements.
- Selection of control program options.
- Advice in the selection of the language processors, utilities, and other IBM programs.
- Arrangements for the Field Engineering pre-installation service planning function.
- Review of IBM's program support activities.
- Review of customer's installation and conversion plan.
- Development and review of an implementation schedule.
- Selection and planning of education.

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The above points are some of the investigatory and planning activities to be performed prior to the actual installation of a release. Individual projects associated with the planning function, such as in-depth performance evaluation, instruction or training of the customer's personnel, and assistance in implementation of the customer's objectives, are outside the scope of marketing and are available under SE services. This activity in planning takes the user to the point where implementation may begin.

*Note: All the above marketing responsibilities are applicable to the IBM 8100 Information System.*

### **FE Responsibilities**

For current System Control Programming (SCP) Class 1 and 2 and Licensed Programs with Service Classification A, with Local Service, or for which Local Program Support is available, the FE representative may perform, at no additional charge, the following installation planning activities:

- Guidance on the general procedures which should be followed in determining the source of software problems.
- Assistance to DP in providing guidance on tracking problems to resolution.
- Selection of control program options, such as service aids and other appropriate diagnostic tools.
- Review of IBM's program support activities.
- Review of the customer's installation and conversion plan.

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- Review of the customer's implementation schedule.

In addition to the above activities, the FE representative may also review, install, and verify required PTFs and APAR fixes for IBM Class 2 System Control Programming, Licensed Programs with Service Classification A, and Licensed Programs with Local Service. These services are rendered for the initial program installation and for the installation of subsequent new releases.

The FE representative with program support responsibility should also assist the FE representative with hardware responsibility in the preparation and cataloging of the hardware diagnostics. Library space should be allocated and the diagnostic selection(s) made during the installation planning session.

**Note:** *All the above FE responsibilities are applicable also to the IBM 8100 Information System.*

### ***Installation***

Control card preparation is a user responsibility. However, for System Control Programming Class 1 and 2 and Licensed Programs with Classification A, with Local Service, or for which IBM Support Center assistance is provided, the FE representative may, at no additional expense, review the listing of these control cards for technical consistency and syntactical accuracy. This service may be rendered prior to machine implementation for the initial program installation and for the installation of subsequent new releases. (This service is also applicable to the IBM 8100 Information System.)

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All activities associated with machine generation of the programs being installed are the responsibility of the user.

### **Installation/Verification**

At the customer's option and at no additional charge, Field Engineering will install on a designated IBM DP system a current unaltered release of IBM Class 2 SCP and verify its operation using IBM Installation Verification Procedures (IVPs).

The installation procedures may typically include the following: applying the programming shipped from PID to the designated system and/or, as applicable, checking the customer-supplied listing of control cards for syntactical accuracy, preparing residence media, and performing necessary assemblies and like edits to generate the IBM SCP.

At the conclusion of this installation and prior to the customer link-editing the application programs, FE will verify the operation of the SCP using the IBM-provided IVPs.

Following the verification procedures, the FE representative has fulfilled the responsibility of installing the unaltered IBM Class 2 SCP. This service is rendered for the initial program installation, the installation of subsequent new releases, and when required for the initial installation of hardware systems components shipped directly from IBM for which SCP support has been provided. If the customer wishes to perform these installation and verification procedures, the FE representative will assist when requested.

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Sample test data is supplied with most IBM programs. Marketing should, if appropriate, participate in the running of the sample test data by the user, demonstrating that it produces the anticipated output.

This demonstration does not constitute an acceptance test and its sole function is to demonstrate that the sample program operates properly. Any other participation provided beyond this demonstration constitutes a billable service.

Some users may choose to employ additional testing. This may include running sample job streams or operating in parallel with live data. This additional verification, which may have been formulated in the planning sessions, is a customer responsibility.

Documentation insures that the customer has documented all appropriate elements of the installed programming system. This documentation, at a minimum, should include:

- PTFs which have been applied.
- Output listings of system generation and installation.
- Test input and results.
- Operating procedures.

These program installation planning activities vary in time, level of detail, and scope.

### ***Problem Determination***

Assisting the customer with problem determination is an FE responsibility under the terms of either the Agreement for Lease or Rental of IBM Machines or the IBM Maintenance Agreement, or on a per call basis. It is an assessment of whether the problem has been caused by hardware or software. This



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assessment includes examining the available symptoms to verify what system component has caused the problem. Problem determination is complete when the cause of the malfunction has been identified as hardware or software.

### ***Problem Source Identification***

Problem source identification begins when problem determination has been completed. Assisting the customer with problem source identification is an FE responsibility. For Class 1 SCP, problem source identification assistance is provided under the terms of the Agreement for Local Program Support for System Control Programming on IBM machines, or on a per call basis. For Class 2 SCP, problem source identification assistance is provided under the terms of the Agreement for Lease or Rental of IBM Machines, or the IBM Maintenance Agreement, or on a per call basis. Problem source identification is an assessment of where in the customer's software the problem resides. That assessment includes examining the available symptoms by using all available expertise and resources (for example, EWS, documentation, specialists, etc.). Assistance for an IBM 8100 Information System will be available for as long as Local Service is provided for the DPPX/Base or DPCX Licensed Program which is being utilized on the IBM 8100 for which these activities took place.

Problem source identification is not complete until one of the following has been identified as being the source of the problem:

- IBM System Control Programming,
- IBM Licensed Program,

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- IBM Current Systems Programming (IBM Types I, II and III programs),
  - Other IBM program,
  - Customer or non-IBM program,
- OR
- the examination reveals that there was:
- A system operator error,
  - An error in the use of the IBM control programming,
  - No trouble found.

### ***Problem Diagnosis and Resolution***

Problem diagnosis and resolution begins when problem source identification has been completed. It includes all additional efforts necessary to decide what further action is required, and taking that action.

### **FE Responsibilities**

Generally, the corrective action, takes place by application of an available IBM fix. If a fix is not available, an assessment should be made of the situation by the FE representative or the IBM Support Center and the user with the involvement of DP, if appropriate. Based on the severity of the situation one of the following actions will be applicable:

- Utilizing all available resources, obtain and apply a local patch (report via APAR).
- Circumvent or by-pass the problem (report via APAR).
- Submit an APAR.

Diagnosis and resolution, as defined above, are FE responsibilities for the following IBM programming:

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- System Control Programming.
- Licensed Programs - Programming Service Classification A or with Local Service.
- Other IBM programs - Programming Service Classification 1 or with Local Service.

Performing or assisting the customer in diagnosis and resolution activities, as defined above, for IBM Class 1 SCP and certain designated Licensed Programs may be provided for a charge under the terms of the Agreement for Local Program Support for the System Control Programming on IBM Machines, and the Agreement for Local Licensed Program Support for IBM Licensed Programs, respectively, or at an hourly (per call) rate.

For all other programs not listed above, FE programming assistance may apply. This assistance is available to assist the user to do minor programming jobs that will relieve a critical situation. FE programming assistance is a billable service and applicable only if the task is estimated to be less than eight hours duration.

### **Marketing Responsibilities**

If at the conclusion of problem source identification, the problem appears to be one of system and/or application design, performance or improper implementation, it is the responsibility of the DP representative to work with the customer, as appropriate, to develop a plan to resolve the problem.

Systems Engineers may assist the customer in resolving the defects in Licensed Programs with programming Service Classification B. This service includes assisting the customer in diagnosing defects, preparing APARs for submission to an IBM

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Central Programming Service location and, if the Licensed Program is inoperable, applying a PTF or making a reasonable attempt to develop an emergency by-pass pending response to the APAR submitted.

Requests for such SE assistance may come as the result of an FE problem source identification call or through a call to FE dispatch. In either case, the FE Programming Systems Representative will always offer to contact an SE Manager, or in his/her absence, another member of management in the appropriate DP branch office. The SE Manager will then ensure that the proper SE responds to the account. (In locations where the FE branch office services a number of DP offices, the FE branch and DP branches will implement a system whereby the FE Programming Systems Representative can readily identify the appropriate DP branch.)

For problem related activities, should the occasion arise where a DP representative is on the customer's site and a critical problem has been reported, the DP representative should provide IBM leadership to insure that proper IBM and customer resources are addressing the problem so as to expedite problem resolution. An IBM Marketing Representative is not to perform billable or potentially billable FE activity. An SE can perform billable or potentially billable FE activity at the applicatle FE rate. Keeping in mind that a billable activity is billable regardless of who performs it.

### ***System Control Programming***

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## **General**

System Control Programming is designated as either Class 1 or 2. This terminology is to distinguish the two categories of service provided for System Control Programming.

All System Control Programming will be serviced as described under Class 2 System Control Programming until January 1, 1980. Beginning January 1, 1980, individual System Control Programming will receive service corresponding to its classification.

## **Class 1**

### **Installation**

IBM will assist with planning for installation of Class 1 SCP on a IBM machine. The customer will be responsible for installation and verification of the SCP.

### **Programming Services**

Central Service, including the IBM Support Center, will be available for current releases, discontinued by IBM upon twelve months' written notice. Via Central Service, IBM will accept APAR and supporting documentation or reports indicating that a problem is caused by a defect in the Class 1 SCP. IBM will respond to a defect in the current unaltered release of the Class 1 SCP by issuing correction documentation, corrected code, notice of availability of corrected code, or a restriction or a by-pass. The customer is responsible for preparing and submitting APARs to Central Service.

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### **Support Center**

The IBM Support Center is the first point of contact for eligible users who require installation assistance, information on the selection or application of preventive service, and assistance for problem resolution. Via an "800" number, twenty-four hours, seven-days per week customers can contact IBM Support Center personnel who have direct access to the Software Support Facility data base and Central Service support specialists.

When a customer telephones the IBM Support Center with a problem, IBM personnel will assist the customer in pin-pointing the problem and will then determine if a correction is available. If the problem has not been previously identified, the Support Center will provide guidance for the customer to prepare and submit an APAR. Corrections will be distributed directly to the customer location.

If as a result of a discussion with the customer, the Support Center determines that the problem requires IBM personnel at the customer site and the customer requests on-site assistance, a PSR will be sent to the customer's location to assist the customer in resolving the problem.

### **Local Program Support**

Local Program Support will be provided under the terms and conditions of the Agreement for Local Program Support for System Control Programming on IBM Machines at the monthly program support charge, or monthly additional program support charge for the additional processor on which the Class 1 SCP is used. Local Program Support will also be provided at the applicable hourly rate.

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(Local Program Support performed by IBM Field Engineering will be available until discontinued by IBM upon twelve months' written notice.)

## **Class 2**

All System Control Programming announced prior to January 30, 1979 is designated Class 2 SCP.

## **Installation**

On IBM systems with metered lease/rental components, when Field Engineering is installing unaltered IBM SCP, the equipment meters will be in CE mode if the system is not being used simultaneously by the customer for other purposes. The meters will remain in the CE mode during the SCP installation and execution of the installation verification procedures.

*Note: The IBM CPU and IBM components should be reported as installed, based on the completion of the hardware installation and checkout (not including SCP).*

## **Programming Services**

Field Engineering will provide programming services to verify customer reported defects in unaltered portions of a currently supported release. At the customer's option, FE will apply available program temporary fixes or, when required, develop a local fix or by-pass. Field Engineering will prepare APARs and submit them to the Central Programming Service location.

On IBM systems with metered lease/rental components, the equipment meters will be in the CE mode when Field Engineering personnel are

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using the system to perform these programming services provided the system is not being used simultaneously by the customer.

The customer will not be charged for the metered time on IBM lease/rental system components to rerun a job or job segment, provided (1) IBM agrees that the rerun was caused by a defect in a current release of System Control Programming and (2) reasonable checkpoint/restart subroutines and associated operational procedures exist.

These programming services are available at no additional charge if the SCP is installed on and supporting IBM equipment for which it was announced.

Programming services provided for SCP designated Class 2 will continue to be available for current releases until discontinued by IBM upon twelve months notice or until the previously announced date of programming service discontinuance.

### **Class 1 and 2**

IBM SCP installation services or planning assistance, if available, are provided for the applicable IBM CPU without additional charge when required for the initial installation of IBM hardware system components, including RPQs for which SCP support has been provided and for the initial installation of all new SCP releases.

Field Engineering services or assistance will be provided at the applicable FE Hourly Service (per call) rates in the following situations:

- More than one installation of the same SCP release on the same CPU.



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- Changes in control program options not caused by IBM.
- Changes in system configuration due to customer installation of IBM system components not shipped directly from IBM.
- Changes in system configuration due to customer installation of non-IBM system components.
- Installation of the first SCP on an IBM CPU not shipped directly from IBM.

In these situations, the equipment meters on IBM lease/rental system components will remain in user mode.

### **Release Currency**

The period of currency for each SCP and LP will be stated for each release on or before the availability of that release.

When the SCP release is no longer current, support for the release will be discontinued. Central Service will no longer be provided and only Field Engineering Programming Assistance will be available at the applicable FE Hourly Service rates. In this case, the meter on IBM lease/rental system components would remain in the user mode.

### **Alternation and PCM Devices**

A program alteration is a change to the code of an IBM program.

When a problem in the IBM SCP is encountered which is definitely determined to be attributable to:

- a program alteration
- a system component for which support has not been announced, or
- unique software requirements of a Plug Compatible Manufacturer (PCM) device.

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Field Engineering programming activities will be provided, and all time and expense incurred, including problem source identification time, will be charged at the applicable hourly service rates. FE will not, however, submit APARs to the Central Service location for the problem encountered.

**Note:** *In those cases where customer personnel investigate the alteration and inform IBM of its purpose and how it interacts with the IBM Program, the incremental time is not to be billed.*

### **Unsupported Environment**

When a problem is attributable to an IBM defect, any additional time required by FE as the result of a program alteration is billable.

When the IBM SCP is installed on and supporting IBM equipment for which SCP support was not announced, Programming Assistance will be provided at the applicable hourly service rates; however, FE will not submit APARs to the Central Service location for the problem encountered.

Field Engineering and Central Services are not available for IBM SCP installed on a non-IBM CPU.

### ***Licensed Programs***

#### **Installation**

It is the customer's responsibility to install each Licensed Program and to apply new releases provided by IBM. (IBM System Engineers may assist the customer in this activity.)

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### **Service Classification A**

When the customer encounters a problem which IBM Field Engineering diagnosis indicates is caused by a defect in a current unaltered release of the Licensed Program, IBM Field Engineering will (1) if the licensed program is inoperable, apply a Program Temporary Fix (PTF) or make a reasonable attempt to develop an emergency by-pass, and (2) prepare an Authorized Program Analysis Report (APAR) and submit it to an IBM Central Programming Service location.

IBM Central Programming Service will respond to any problem caused by a defect in a current unaltered release of the Licensed Program by issuing a PTF to the originator of the APAR and/or issuing corrected code or notice of availability of corrected code. Corrections will be incorporated into new releases of the Licensed Program which will be made available to the customer by IBM. Any other programming services or assistance will be provided at a charge.

### **Service Classification B**

When the customer encounters a problem which his diagnosis indicates is caused by a Licensed Program defect, the customer may submit an APAR to an IBM Central Programming Service location.

IBM Central Programming Service will respond to any problem caused by a defect in a current unaltered release of the Licensed Program by issuing a PTF to the originator of the APAR and/or issuing corrected code or notice of availability of corrected code. Corrections will be incorporated into new releases of the Licensed Program which will be made available to the customer by IBM.

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On request, and subject to availability, IBM System Engineering personnel will assist the customer in (1) diagnosing defects and preparing APARs for submission to an IBM Central Programming Service location, and (2) if the Licensed Program is inoperable, applying a PTF, or making a reasonable attempt to develop an emergency by-pass pending the IBM Central Programming Service response to the APAR submitted. Any other programming services or assistance will be provided at a charge.

#### **Service Classification C**

Programming assistance will be provided at a charge. Central Programming Service will not be provided, except for corrections applicable to APARs received prior to the date Class C becomes effective for a Licensed Program previously assigned Class A or Class B.

#### **Central Service and FE Local Service**

When Central Service is specified IBM will establish one or more service locations which will accept documentation, in a format prescribed by IBM, indicating that a problem is caused by a defect in the Licensed Program. IBM will respond to a defect in the current unaltered release of the Licensed Program by issuing: defect correction information such as correction documentation, corrected code, or notice of availability of correct code; or a restriction or a by-pass.

When Local Service is specified and a problem occurs which the customer determines is caused by the use of a Licensed Program and the diagnosis of the designated IBM representative indicates the

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problem is caused by a defect in the unaltered portion of a current release of the Licensed Program, the IBM representative will perform the following problem resolution activities:

- attempt to correct or by-pass the defect by providing the customer with correction information issued by the Central Service, if available; or
- submit documentation to the Central Service, if specified as available; and, in any event
- if the program is inoperable, make a reasonable attempt to resolve the problem by applying a local fix or providing a by-pass.

#### **Central Service and SE Local Assistance**

When Central Service is specified IBM will provide one or more service locations which will accept documentation, in a format prescribed by IBM, indicating that a problem is caused by a defect in the Licensed Program. IBM will respond to a defect in the current unaltered release of the Licensed Program by issuing: defect correction information such as correction documentation, corrected code, or notice of availability of correct code; or a restriction or a by-pass.

When Local Assistance is specified and the customer encounters a problem, which the customer's diagnosis indicates is caused by a defect in the unaltered portion of a current release of the licensed program, the customer may request IBM assistance in resolving the problem. Such assistance if requested, will be provided by a designated IBM representative and may be subject to the availability of personnel. This assistance may include, but not

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extend beyond, the following problem resolution activities:

- attempting to correct or by-pass the defect by providing the customer with correction information issued by the Central Service, if available; or
- assisting the customer with preparing documentation for submission to the Central Service, if specified as available; and, in any event
- if the program is inoperable, making a reasonable attempt to resolve the program by assisting the customer in applying a local fix or providing a by-pass.

#### **Central Service (Including IBM Support Center)**

When Central Service is specified IBM will establish one or more service locations which will accept documentation, in a format prescribed by IBM, indicating that a problem is caused by a defect in the Licensed Program. IBM will respond to a defect in the current unaltered release of the Licensed Program by issuing: defect correction information such as correction documentation, corrected code, or notice of availability of corrected code; or a restriction or a by-pass. Unless FE Local Service or SE Local Assistance are also specified for the Licensed Program, the customer will be responsible for the preparation and submission of documentation to the Central Service.

The IBM Support Center is the first point of contact for eligible users who require installation assistance, information on the selection or application of preventive service, and assistance for problem resolution. Via an "800" number,

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twenty-four hours, seven-days per week, customers can contact IBM Support Center personnel who have direct access to the Software Support Facility data base and Central Service support specialists.

When a customer telephones the IBM Support Center with a problem, IBM personnel will assist the customer in pin-pointing the problem and will then determine if a correction is available. If the problem has not been previously identified, the Support Center will provide guidance for the customer to prepare and submit an APAR. Corrections will be distributed directly to the customer location.

If as a result of a discussion with the customer, the Support Center determines that the problem requires IBM personnel at the customer site and the customer requests on-site assistance, a PSR will be sent to the customer's location to assist the customer in resolving the problem.

### **Local Program Support**

Local Program Support will be provided under the terms and conditions of the Agreement for Local Licensed Program Support for IBM Licensed Programs at the monthly program support charge, or monthly additional program support charge for the additional processor on which the Licensed Program is licensed. Local Program Support will also be provided at the applicable hourly rate. Local Program Support performed by the IBM Field Engineering will be available for current releases, until discontinued by IBM upon twelve months' written notice.

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### **Central Service (Not including IBM Support Center)**

When Central Service is specified IBM will provide one or more service locations which will accept documentation, in a format prescribed by IBM, indicating that a problem is caused by a defect in the licensed program. IBM will respond to a defect in the current unaltered release of the Licensed Program by issuing: defect correction information such as correction documentation, corrected code, or notice of availability of corrected code; or a restriction or a by-pass. The customer will be responsible for the preparation and submission of documentation to Central Service.

FE Programming Assistance is available at the applicable hourly rate at customer request.

### **Alterations**

A program alteration is a change to the code of an IBM program.

When a problem in the IBM Licensed Program is encountered which is definitely determined to be attributable to:

- an alteration
- a system component for which support has not been announced, or
- the software specifications of a PCM device that are dissimilar to the corresponding IBM supported devices.

Field Engineering programming activities will be provided, and all time and expense incurred, excluding problem source identification time, will be charged at the applicable hourly service rates. FE will not, however, submit APARs to the Central Programming Service location for the problem encountered.



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**Note:** *In those cases where customer personnel investigate the alteration and inform IBM of its purpose and how it interacts with the IBM Program, the incremental time is not to be billed.*

When a problem is attributable to an IBM defect, any additional time required by FE as the result of an alteration is billable.

### **Release Currency**

A Licensed Program release becomes backlevel at a specified time after availability of the next release.

FE responsibility to verify defects for such backlevel releases is limited to defects not corrected in the current release. This includes applying available PTFs, developing an emergency fix or by-pass when required and/or submitting APARs.

When a problem is attributable to a defect that has been corrected in the most current release, the customer will be billed for the total time, excluding problem source identification time, spent by FE.

On customer request, locally available PTFs for problems which are corrected in a current release of a Licensed Program with Service Classification A or FE Local Service may be provided at no additional charge. Programming Assistance is available, at an hourly rate, for installation and retrofitting of PTFs.

### ***Current Systems Programming***

#### **Installation**

It is the customer's responsibility to install Current Systems Programming.

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### **Service Classification A**

All Current Systems Programming originally classified as Service Classification A is now Service Classification C. (Also see "Programming Service Reclassification" elsewhere in this section.)

### **Service Classification B and C**

FE Programming Assistance is available at an hourly rate on customer request.

### ***Programming Service Reclassification***

When an IBM program is reclassified to Service Classification C, or when Central Service is discontinued, IBM will no longer provide Central Programming Services. All active problems/APARs as of the date of reclassification should be resolved (without additional charge to the customer). Existing PTFs may be given to the customer if locally available.

### **APAR Acceptance/Submission**

For programs being reclassified, APARs will be accepted up to the effective date of reclassification. At IBM's discretion, a final release may be sent to users of record incorporating corrections for all valid APARs received up to that time.

APARs may, however, be submitted after the effective date of reclassification under the following conditions:

- The APARs address problems resulting from (a) PTFs or (b) fixes in the last release of the program.
- Submission must be within ninety days of the PID availability of the PTF or the last release.

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- These APARs will be handled in accordance with the programming service classification of the program prior to its reclassification.

### **Compatibility of Reclassified Programs**

When a Service Classification C program announced as supported by a new release level of IBM SCP does not function due to a change which has been made in the new release, an APAR will be accepted against the SCP. This applies only to IBM programs which run successfully on the release levels of SCP which are current at the time of availability of the new release level. Verification of the defect, application of available PTFs, development of an emergency fix or by-pass when required and/or submission of an APAR is a FE responsibility and will be done at no additional charge.

GSA contract provisions for FE programming service apply until the contract expires (September 30 of each year). Each program in use at GSA accounts normally maintains the same service classification assigned at the start of the contract throughout the contract period. Therefore, if a program is reclassified during the period of the contract, the program is to receive service based upon the original service classification.

GSD, DPD, and FE have agreed to accept and answer APARs on an individual basis from GSA customers using the reclassified programs. The Programming Support Representatives must clearly identify such APARs by printing the letters GSA in the special activity block of the APAR.

Questions should be directed to the FEHQ GSA Contract Administrator.

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### ***Customer Problem Determination***

In OS, DOS and certain SCPs, customers are provided procedures and service aid programs to assist them in problem determination. It is expected that these facilities will be executed by the customer prior to calling IBM for service.

Customer use of these procedures and aids should result in the following significant advantages:

- Improvement in systems availability
- Reduction in machine time for re-runs.
- Improving the capability of customer operations personnel.
- Reducing the customer's potentially billable service situations.

Customers taking this recommended action prior to calling IBM, will enable IBM to assign the right service representative to the call, and reduce the FE time spent working on systems failures caused by non-IBM defect associated incidents such as operator error, problem not identified, or user programming problems.

### ***Non-IBM Programs***

FE Programming Assistance is available at an hourly rate at the request of IBM customers. FE will bill for the time spent diagnosing problems within non-IBM customer programs used in conjunction with IBM equipment. This includes time spent analyzing program logic in non-IBM Control Programs even though the problem may turn out to be a hardware failure (either IBM or non-IBM).

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### **SCP-CSP**

Field Engineering (including per call) and Central Programming Services will not be provided for System Control Programming (SCP); Current Systems Programming and non-IBM programming when such programming is used on a non-IBM CPU.

### **Licensed Programs**

Local Programming and Central Programming Services will be provided for Licensed Programs used on a non-IBM CPU under the terms and conditions of the amended License Agreement for IBM Program Products or the Agreement for IBM Licensed Programs.

IBM PSRs will respond to customer requests for Program Services involving a suspected IBM Licensed Program defect.

**Note:** *Where correct operation of the IBM Licensed Program is not in doubt, it is not our practice to respond to requests for service (such as standby for installation assistance on interrelated programming not supported by IBM).*

IBM Licensed Programs are designed to operate on IBM equipment and the service representatives are trained to provide programming services for IBM equipment only. IBM's obligation to provide programming services is subject to limitations occasioned by the local service representative's knowledge of the non-IBM equipment. On this basis, the IBM employee would only be expected to apply his best efforts to verify IBM defects utilizing customer supplied documentation such as storage

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dumps, flowcharts, etc., submit APARs and provide but not install by-passes or PTFs. The IBM employee will not be expected to operate the non-IBM equipment.

Where the customer has reported a problem in a IBM Licensed Program and it is subsequently determined that the trouble is external to the IBM Licensed Program, all PSR time and expense, up to the point the effort has been suspended in the belief that the failure may be located external to the IBM Licensed Program, is to be recorded as Service Code 25 which is billable.

### **Marketing Responsibility**

To provide consistency in handling requests for IBM-furnished programming to be used on non-IBM CPUs, the marketing branch office:

- Must notify PID to discontinue SCP and CSP (Type I programs announced or available prior to June 23, 1969) release distribution immediately upon the discontinuance or removal of the last IBM CPU.
- Is responsible for ordering all SCPs and CSPs for non-IBM CPU users, upon obtaining a written request from the customer.
- Is responsible for ordering user-specified PTFs for SCP/CSP Programming used on non-IBM CPUs.
- Is responsible for updating the SLSS Profile.
- Is responsible for amending the License Agreement for IBM Program Products, in the event the customer retains licensed IBM programs under this agreement for use on a non-IBM CPU.

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### **User Responsibility**

Non-IBM CPU users of IBM SCP/CSP programming can obtain PTF information from IBM by subscribing, for a charge, to Early Warning System (EWS) on SLSS.

The user is responsible for PTF identification on all SCP/CSP PTF requests. PTFs requested by the customer are to be ordered by the marketing branch office.

### **Mixed Systems**

In a mixed system situation where a customer has installed an IBM CPU and a non-IBM CPU which utilizes IBM developed programming, IBM expects that its customers will ensure that IBM employees are not called upon to support the IBM programming utilized on the non-IBM CPU. The following practices are applicable:

- IBM on-site employees will not make available programming documentation, temporary fixes, by-passes, etc., to non-IBM support personnel for any purpose related to programming on the non-IBM CPU.
- IBM employees will continue to verify IBM defects utilizing customer supplied documentation such as storage dumps, flowcharts, etc., when the failure reported occurred on the IBM CPU. In the event the IBM employee determines that the failure reported did not occur on the IBM CPU, defect verification will terminate.
- IBM expects its customers will ensure that the IBM CPU is not utilized as a vehicle to recreate failures which occurred on a non-IBM CPU in order to obtain IBM APAR service.

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IBM understands that in a multiple CPU installation a customer may attempt to re-run, on a backup CPU, an application which failed when originally executed on another CPU. Under those circumstances normal IBM service will be provided for IBM defects when the failure reported occurs on the IBM CPU.

### ***Programming Changes for Diagnostic Purposes***

#### **Temporary Programming Changes**

Local FE personnel are permitted to make temporary programming changes to IBM programming or IBM diagnostic programming only when the change is necessary for diagnosis of a suspected IBM hardware or programming defect. This change must be removed by FE personnel when the IBM diagnosis is complete.

#### **Permanent Programming Changes**

Local FE personnel are permitted to make the following changes to IBM programming:

- Correction of IBM programming defects in emergency situations. These corrections are permanent until replaced by authorized IBM PTFs.
- Installation of authorized IBM PTFs.
- Installation of authorized IBM Service Aid PTFs (SAPTFs).

Local FE personnel are not permitted to make any other permanent changes. This restriction:

- includes changes made to expand serviceability function.\*
- does not apply to programs for which Central Programming Service is not provided.



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**Note:** *\*Customers requiring permanent serviceability functions other than those provided in IBM's standard operating systems, may request those additional facilities through normal IBM marketing channels (for example, PRPQ).*

### **Billing**

Permitted temporary or permanent programming changes made by local FE personnel to IBM SCP, IBM programs in Service Class "A", and IBM Licensed Programs with FE Local Program Support are not subject to the IBM billing practice for programming alterations.

Permitted temporary or permanent program changes made to IBM programs by local FE personnel to assist in the diagnosis of a suspected IBM hardware defect, are not subject to the IBM billing practice for programming alterations.

### ***Programming RPQ (PRPQ), Program Support for Hardware RPQ (PSHRPQ)***

FE will provide Programming Service or Programming Assistance according to the Service Classification of the PRPQ or PSHRPQ.

For PRPQs and PSHRPQs with Service Classification B or SE Local Assistance, IBM-Systems Engineers may assist the customer (without charge) in dealing with defects, APAR preparation, PTF installation, etc. FE may, at the request of DP management, perform these activities to provide assistance to S.E. (Note: This support time is recoverable from DP by using the appropriate service code.)

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### ***Field Test of Licensed Programs***

IBM Licensed Programs may be field tested at customer locations by DP or the product division Application Program Test.

When a test is to be conducted, DP or the product division will notify the appropriate FE Branch Manager, via ITPS, as to the customer name, CPU #, scheduled test dates and the Licensed Program to be tested.

The customer must not be billed for any CE time, both programming and equipment, which may be directly attributable to the Licensed Program under test.

Questions regarding specific tests should be directed to San Jose FE Programming Service Planning.

### ***Host System SCP and System/7 SCP***

#### **FE/GSD Program Support Responsibilities**

The process of preparing System/7 programs on a host system, which will later be executed on the System/7, involves the skills of both the GSD CE and the FE PSR. Programming problems that occur within this environment have prompted inquiries as to support responsibilities.

The following are failure categories where the GSD and FE Program Support responsibilities require clarification.

- Failures that occur when the System/7 and the host system are attached via a channel or communication link.

The Division receiving the initial call should do problem determination. When it is evident that the skills of the complementary division are needed to

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complete problem determination, the GSD CE and the FE PSR should work together, as required, to determine where the problem lies.

- Failures that occur while assembling and/or link-editing the System/7 program(s) on the host system.

In these instances, the host FE PSR has responsibility for problem diagnosis and resolution.

- Failures that occur during program execution on the System/7.

The GSD CE has responsibility for problem diagnosis and resolution. If the resolution of the problem requires that a PTF be installed back at the host system, the FE PSR is responsible to obtain and apply the PTF along with any required prerequisite fixes.

In addition to the above, the following two general areas may require clarification:

#### 1. *SCP Installation*

- a. If requested by the customer, the host site PSR is responsible to install the System/7 Host Preparation SCP modules on the host system. The user is responsible to install the resulting S/7 Host Preparation object program on the System/7. The GSD PSR is responsible to install the System/7 SCP on System/7, if requested by the user.

#### 2. *Pre-System Planning*

- a. The GSD PSR is responsible to *determine* which PTFs are required for the System/7 program(s). The FE PSR is responsible for *obtaining, planning, and installing* the required PTFs on the host system SCP.

### ***Agreement for IBM Licensed Programs***

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## **General**

### **Description**

On April 4, 1977, IBM introduced a new agreement entitled Agreement for IBM Licensed Programs. This new agreement consolidates and restructures into one document, terms and conditions from previous agreements and amendments. It provides one simplified document for all IBM licensed programs.

This agreement is used in place of the previous License Agreement for IBM Program Products for IBM licensed programs announced on or after April 4, 1977. In addition, this new agreement is used for any customers for whom, as of that date, the old license agreement had not yet been accepted by IBM and for the MVS/System Extensions Program Product (5740-XE1) and the VM/System Extensions Program Product (5748-XE1).

### **Programming Services**

One of the significant changes in the new agreement is the Program Services description. New licensed programs will not be designated as having Class A, B, or C services. While there is no difference in the program services provided by Field Engineering, Program Services have been restructured into three types of service:

- Central Service
- Local Service
- Local Assistance

Each service is specified for one of the following periods:

- For a continuing period until discontinued by IBM upon six months notice.

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- Until a designated calendar date.
- For a designated number of months for each program license.

Each licensed program requires a supplement which is to be signed by both the customer and IBM. The supplement will designate the specific terms for the licensed program and also will serve as a confirmation of the customer's order.

The conversion of terms of Programming Services under the old license agreement to Program Services under the new agreement are as follows:

Programming Services (Old Agreement)	Programming Services (New Agreement)		
	Central Service	Local Service	Local Assistance
A	Note 1	Note 1	N/A
B	Note 1	N/A	Note 1
C	N/A	N/A	N/A
IUP or FDP	Note 2	N/A	N/A
IUP or FDP with extended support	Note 1	N/A	N/A

1 - available until discontinued by IBM upon 6 months notice.

2 - available until a designated calendar date.

*N/A - not applicable.*

The type of service and the service period, when applicable, will be specified in the licensed program announcement. Also, for programs for which Local Service or Local Assistance is specified, the designated IBM representative responsible for providing the service will also be specified in the announcement. For example, a licensed program

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may have *Central Service* and *Local Service* with *Field Engineering* being the designated IBM representative. Such programs, as indicated in the chart above, are the equivalent of currently available programs having a service classification of A.

An additional provision of the new agreement is the Specified Operating Environment. For each licensed program, IBM will set forth the environment (IBM machine types and, in most instances, other IBM equipment and programs) in which the licensed program is designed to operate. Program Services for licensed programs used in other than the specified operating environment are subject to limitations as outlined in the new agreement.

### **Conversion to New Agreement for IBM Licensed Programs**

For licensed programs announced prior to April 4, 1977 (except MVS/System Extensions and VM/System Extensions), the old License Agreement for IBM Program Products and its amendments and supplements may continue to be used for new orders of these programs as well as the previously installed programs, except for customers for whom, as of that date, the old agreement had not yet been accepted for IBM. However, any customer who wishes to transfer all licenses for programs installed and on order to the new Agreement for IBM Licensed Programs should be encouraged to do so.

If the customer wishes to transfer existing program licenses to the new Agreement for Licensed Programs, all programs licensed by the

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customer under the old agreement (including FDPs and IUPs) must be transferred. This can be done by having the customer sign the new Agreement for Licensed Programs and a new supplement under that agreement for each of the customer's licensed programs together with a letter requesting IBM to terminate the customer's previous License Agreement for IBM Program Products, effective upon IBM's acceptance of the new agreement and supplements.

For purposes of conversion the Program Product Specifications provided under the License Agreement for IBM Program Products are to be considered the Licensed Program Specifications. The Specified Operating Environment will be considered to be the Programming Systems and System Requirements sections contained in the Program Product Specifications or the Program Product Functional Description, and for FDPs and IUPs the Programming and System Considerations sections of the notice of availability.

### **Terms and Conditions**

IBM and the customer agree that the following terms and conditions will apply to any customer order for IBM licensed programs that is accepted by IBM under this agreement. Under these terms and conditions, IBM will

1. furnish such licensed programs to the customer,
2. furnish licensed optional materials in support of such licensed programs,
3. grant to the customer a nontransferable and nonexclusive license to use the licensed program materials, and

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4. provide program services, all as described herein.

The customer agrees with respect to the licensed programs to accept the responsibility for

1. their section to achieve the customer's intended results,
2. their installation,
3. their use, and
4. the results obtained therefrom.

The customer also has the responsibility for the selection and use of, and results obtained from, any other programs or programming equipment, or services used with the licensed programs.

A nontransferable and nonexclusive license in the United States and Puerto Rico for licensed program materials is granted subject to the terms and conditions of this agreement effective when a Supplement to Agreement for IBM Licensed Programs (supplement) for each program is signed by the customer and IBM.

Any terms which this agreement states are to be specified by IBM for a licensed program and/or related optional materials, will be designated in the supplement for that program.

### **Definitions**

The term "licensed program" in this agreement means a licensed data processing program consisting of a series of instructions or statements in machine readable form and any related licensed materials such as, but not limited to, flow charts, logic diagrams and listings provided for use in connection with the licensed data processing program.



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The term "licensed optional materials" in this agreement means any machine readable or printed material not included in the licensed program and which is designated by IBM as available under license to customers who have licensed the program to which such optional materials relate.

The term "licensed program materials" in this agreement means both the licensed program and the licensed optional materials as defined above.

The term "use" in this agreement means copying any portion of the licensed program materials into a machine and/or transmitting them to a machine for processing of the machine instructions or statements contained in such materials.

### **Terms of Agreement**

This agreement is effective from the date on which it is accepted by IBM and will remain in effect until terminated by the customer upon one months written notice, or by IBM as set forth in this section. This agreement may be terminated by the customer only when all licensed program materials licensed hereunder are discontinued and all licensed program materials have been returned or destroyed.

Licenses granted under this agreement for which monthly charges have commenced may be discontinued by the customer on one months written notice. Otherwise any license may be discontinued at any time upon written notice effective immediately.

Notice of discontinuance of any or all licenses is not considered notice of termination of this agreement unless specifically stated.

IBM may discontinue any license or terminate this agreement upon written notice if the customer

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fails to comply with any of the terms and conditions of this agreement.

Notice of discontinuance of any license or licensed program is notice of discontinuance of the license, the licensed program and of all licensed optional materials obtained in connection therewith.

### **License**

Each license granted under this agreement authorizes the customer to:

1. use the licensed program materials in machine readable form on the machine or machines (hereinafter referred to as "machine") designated in an applicable supplement for such licensed program materials and in conjunction therewith to store the licensed program materials in, transmit them through or display them on units associated with such designated machine;
2. utilize the licensed program materials in printed form in support of the use of the licensed program;
3. copy the licensed program materials in machine readable form into any machine readable or printed form to provide sufficient copies to support the customer's use of the licensed program as authorized under this agreement. Licensed program materials provided by IBM in printed form may not be copied. Additional copies may be obtained under license from IBM at the charges then in effect.

A separate license is required for each machine in which the licensed program materials will be

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used, except as provided in the subsections entitled "Temporary License Transfer", "Installation License" and "Location License".

No right to use, print, copy or display the licensed program materials, in whole or in part, is granted hereby except as expressly provided in this agreement.

### **Temporary License Transfer**

The customer is authorized to transfer the license to and to use the licensed program materials on:

1. a backup machine when the designated machine or an associated unit required for use of the licensed program is temporarily inoperable until operable status is restored and processing on the backup machine is completed; or
2. another machine for assembly or compilation of the licensed program materials if the designated machine and its associated units do not provide the configuration required for assembly or compilation.

### **Installation License**

When IBM specifies "Installation License Applies" the customer is also authorized to use the licensed program materials on any other machine in the same installation as the designated machine. For the purposes of this agreement "same installation" shall mean a single room or contiguous rooms unless otherwise agreed to in writing by IBM.

### **Location License**

When IBM specifies "Location License Applies" the customer is also authorized to use the licensed

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program materials on any other machine in the same location as the designated machine. For purposes of this agreement "same location" shall mean a single physical customer location, designated by a single mailing address and contained within a single building unless otherwise agreed to in writing by IBM.

#### **Change in Designated Machine**

The customer may notify IBM of the customer's intention to change the designation of the machine on which licensed program materials are to be used. The change of designation will be effective upon the data set forth in the form entitled Confirmation of Change in Designated Machine furnished to the customer by IBM.

#### **Additional Licenses**

Each additional license for a licensed program and/or licensed optional materials already licensed by the customer under this agreement requires a supplement signed by the customer and IBM. After such additional supplement has been signed, the customer may, upon notice to IBM, in lieu of additional distribution from IBM, copy those licensed program materials previously distributed to that customer by IBM in machine readable form. The testing period, if any, for such additional license will commence on the effective date for additional license designated in the supplement. Permission to copy granted in this sub-section does not apply to licensed program materials provided by IBM in printed form.

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### **Shipment**

The shipment or delivery date for licensed programs will be specified by IBM. However, IBM does not represent or warrant that such shipment or delivery dates will be met.

IBM will notify the customer of the type of program storage media required for shipment. Unless returnable or disposable media are used, the program storage media must be provided by the customer or ordered from IBM at the applicable charge. Except when otherwise specified by IBM licensed program materials will be shipped to the customer without shipping charge. Any special shipment requested by the customer will be at customer expense.

### **Licensed Program Testing**

For each licensed program IBM will specify the testing period, if any, during which the program will be made available for non-productive use. The purpose of the testing period is to permit the customer to determine whether the licensed program functions selected by the customer operate together and to assist the customer in determining whether the licensed program meets the customer's requirements. The testing period will begin 10 days after shipment of the licensed program by IBM, unless otherwise specified.

The customer may discontinue the licensed program, upon written notice effective immediately, at any time during the testing period, in which event monthly charges, one-time charges, initial charges and licensed optional materials charges will not be due. However, process charges will be payable and charges for early shipment of program

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materials will not be refunded. Unless such notice of discontinuance is given, the customer will be deemed at the end of the testing period to have decided to retain the licensed program under the provisions of this agreement.

In the event that the licensed program is used for productive purposes during the testing period, the testing period will be deemed to have ended as of the date upon which the customer commences productive use.

Subsequent release, if any, of a licensed program which have the same program number will be made available to the customer for productive use and/or test on the designated machine while the customer continues productive use of a previous release on that machine and pays applicable charges therefor. The customer has the right to decide whether to install any such releases or continue use of a previous release having given due regard to the provisions of the sections entitled "Program Services".

#### **Risk of Loss**

If licensed program materials are lost or damaged while in the possession of the customer, IBM will replace such licensed program materials at the applicable charges, if any, for processing, distribution, and/or program storage media.

#### **Early Shipment of Licensed Printed Materials**

When the customer and IBM have signed a supplement for an available licensed program for which there is a monthly charge, licensed program materials which are provided by IBM in printed form can, upon customer request, be shipped to the

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customer up to six months prior to shipment of the machine readable portion of the licensed program. The printed materials, thus provided, may not be copied in any form for any purpose.

If the customer does not request that the machine readable portion of the licensed program be shipped within six months following the date of shipment of the printed materials, the customer will discontinue the license for the program and return or destroy the printed materials. If the customer subsequently reorders the same licensed program for the same installation (or location, when IBM has specified "Location Licence Applies"), such printed materials will not be made available prior to shipment of the machine readable portion of the licensed program.

The charge for early shipment of licensed printed materials will consist of:

1. a charge equal to one months charge for the licensed program together with any applicable initial charge. Payment of this charge will be credited to the first months invoice of the licensed program; and
2. any applicable process charges and charges for licensed optional materials

Program services, if any, for the licensed program will not be provided prior to shipment or delivery of the machine readable portion of the licensed program.

For each licensed program IBM will specify the type(s) and period(s) of program services, if any, to be provided without additional charge for a current release of the licensed program. Program services will commence at the beginning of the licensed program testing period or, if there is no testing

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period for that license, when charges (other than charges for early shipment of licensed printed materials) are due. Program services will be subject to the provisions of the section entitled "Specified Operating Environment".

### **Types of Service**

#### **Central Service**

When Central Service is specified IBM will provide one or more service locations which will accept documentation, in a format prescribed by IBM, indicating that a problem is caused by a defect in the licensed program. IBM will respond to a defect in the current unaltered release of the licensed program issuing: defect correction information such as correction documentation, corrected code, or notice of availability of corrected code; or a restriction or a by-pass. Unless local service is also specified for the licensed program, the customer will be responsible for the preparation and submission of documentation to the Central Service.

#### **Local Service**

When Local Service is specified and a problem occurs which the customer determines is caused by the use of a licensed program and the diagnosis of the designated IBM representative indicates the problem is caused by a defect in the unaltered portion of a current release of the licensed program, the IBM representative will perform the following problem resolution activities:

1. attempt to correct or by-pass the defect by providing the customer with correction



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- information issued by the Central Service, if available; or
2. submit documentation to the Central Service, if specified as available; and, in any event
  3. if the program is inoperable, make a reasonable attempt to resolve the problem by applying a local fix or providing a by-pass.

### **Local Assistance**

When Local Assistance is specified and the customer encounters a problem, which the customer's diagnosis indicates is caused by a defect in the unaltered portion of a current release of the licensed program, the customer may request IBM assistance in resolving the problem. Such assistance if requested, will be provided by a designated IBM representative and may be subject to the availability of personnel. This assistance may include, but not extend beyond, the following problem resolution activities:

1. attempting to correct or by-pass the defect by providing the customer with correction information issued by the Central Service, if available; or
2. assisting the customer with preparing documentation for submission to the Central Service, if specified as available; and, in any event
3. if the program is inoperable, making a reasonable attempt to resolve the problem by assisting the customer in applying a local fix or providing a by-pass.

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### **Program Services Period**

Each type of program service provided will be specified as available:

1. until discontinued by IBM upon six months written notice; or
2. until a designated calendar date; or
3. for a designated number of months for each program license. In the event the customer discontinues a licensed program and subsequently reorders the same licensed program for the same installation (or location, when IBM has specified "Location License Applies"), the service period then in effect will be reduced by the number of months for which such service was previously provided.

For any licensed program, IBM shall have the right to charge for any of the foregoing program services to the extent they are not specified as provided without additional charge.

Other types of program services may be specified by IBM and designated in the supplement for a licensed program.

IBM shall also have the right to charge for any additional effort which results from providing services for an altered licensed program or a release which is not current.

IBM does not guarantee service results or represent or warrant that all errors or program defects will be corrected.

### **Permission to Modify**

The customer may modify any licensed program materials in machine readable form and/or merge such materials into other program material to form

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an updated work for the customer's own use; provided that, upon discontinuance of the licensed program, the licensed program materials will be completely removed from the updated work and dealt with under this agreement as if permission to modify or merge had never been granted. Any portion of the licensed program materials included in such an updated work will continue to be subject to all terms of this agreement.

#### **Protection and Security of Licensed Program Material**

The customer will take appropriate action, by instruction, agreement or otherwise, with any persons permitted access to licensed program materials so as to enable the customer to satisfy the customer's obligation under this agreement.

All copies of licensed program materials made by the customer including translations, compilations, partial copies within modifications and updated works are the property of IBM. The customer will reproduce and include the copyright notice on any such copies in accordance with the copyright instructions provided by IBM.

The customer will maintain records of the number and location of all copies of licensed program materials and will notify IBM in writing if the original or any copy of the licensed program materials will be kept at an installation (or location, when IBM has specified "Location License Applies") other than that of the machine designated in the applicable supplement.

The customer will insure, prior to disposing of any media, that any licensed program materials contained thereon have been erased or otherwise destroyed.

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The customer will not provide or otherwise make available any licensed program materials in any form without IBM's prior written consent except to customer employees, IBM employees or other persons during the period they are on the customer's premises for purposes specifically related to the customer's use of the licensed program.

### **Licensed Program Specifications**

For each licensed program which is warranted IBM will publish, at the time that licensed program becomes available, a document entitled "Licensed Program Specifications". Such Licensed Program Specifications may be updated by IBM from time to time and such updates may constitute a change in specifications.

### **Charges**

The charges applicable to each licensed program will be specified by IBM and will consist of monthly charges (or a one-time charge in lieu thereof) and any initial charge and/or process charge.

Monthly charges will continue until the licensed program is discontinued. However, for certain licensed programs IBM may specify a payment period of consecutive months after which further monthly charges are waived.

Licensed optional materials may be subject to a charge as specified by IBM.

Any additional charges for program services for licensed programs will be at IBM's then applicable rates and such services will be provided under the terms and conditions of this agreement unless provided under separate written agreement signed by the customer and IBM.

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### **Price Changes**

Monthly charges are subject to change by IBM upon three months written notice to the customer. If the monthly charge is increased for any licensed program materials, the customer may discontinue them in accordance with the provisions of this agreement; otherwise, the new charge will become effective.

One-time charges, process or initial charges and charges for licensed optional materials are subject to change without notice except that for licensed program materials for which a supplement has been signed by the customer and IBM 1) the process charge will not be increased during the three months prior to and including the applicable estimated shipment or delivery date, and 2) one-time charges and initial charges will not be increased on or after the applicable estimated shipment date, delivery date, or effective date for additional license. In the event the customer requests a later estimated shipment date, delivery date or effective date for additional license, such later date will be used for the purpose of determining if such price changes apply. If such charges are increased for any such licensed program materials, the customer may discontinue them in accordance with the provisions of this agreement; otherwise, the new charge will become effective.

### **Warranty**

Each licensed program which is designated in the supplement as warranted will conform to its Licensed Program Specifications when shipped to the customer if properly used in a Specified Operating Environment. Thereafter IBM will

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provide program services as described in the section entitled "Program Services". IBM does not warrant that the functions contained in a licensed program will meet the customer's requirements or will operate in the combinations which may be selected for use by the customer, or that the operation of the licensed program will be uninterrupted or error free or that all program defects will be corrected.

All other licensed programs will be distributed on an "As Is" basis without warranty of any kind either express or implied.

The foregoing warranties are in lieu of all other warranties, express or implied, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose.

### **Specified Operating Environment**

Each licensed program is designed to operate on one or more IBM machine types and, in most instance, in conjunction with other IBM equipment and programs. The Licensed Program Specification for each warranted licensed program will state the environment in which the licensed program is designed to operate. For licensed programs distributed on an "As Is" basis the Specified Operating Environment will be stated in a notice of availability of the licensed program.

Program services for a licensed program used in other than a Specified Operating Environment are subject to limitations occasioned by the differences between the Specified Operating Environment and the customer's operating environment and by the extent of the local IBM representative's knowledge of the customer's equipment and programs. Such

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program services will be subject to the following conditions:

1. When performing Local Service or Local Assistance IBM's obligation is limited to having the local IBM representative apply a reasonable effort to provide program services as described in the applicable portion of the section entitled "Program Services". Furthermore, the local IBM representative will only be expected to operate a machine designated in the supplement if it was marketed or manufactured by IBM. IBM will have the right to make additional charges for any additional effort required to perform these program services.
2. Central Service will only respond to defects which will occur when Central Service operates the licensed program in a Specified Operating Environment.

#### **Return or Destruction of Licensed Program Materials**

Within one month after the date of discontinuance of any license granted hereunder, the customer will furnish to IBM a completed form entitled "IBM Licensed Program Certificate of Return or Destruction" certifying that through the customer's best effort, and to the best of the customer's knowledge, the original and all copies of the licensed program materials received from IBM or made in connection with such license have been returned or destroyed. This requirement will apply to all copies in any form including translations, whether or not modified or merged into other program materials as authorized herein. However, upon prior written authorization from IBM, the

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customer may retain a copy for archive purposes only.

When the customer has licensed a new version of a licensed program, which carries a different program number, the customer may retain the prior version of the licensed program for a period not to exceed three months following its date of discontinuance, to be used only if a defect in the new version prevents its use. During this period the customer will pay only the applicable charges for the new version of the licensed program. Within one month following this three-month period, the customer will furnish IBM a completed form entitled "IBM Licensed Program Certificate of Return or Destruction" for the prior version as set forth above.

#### **Limitation of Remedies**

IBM's entire liability and the customer's exclusive remedy shall be as follows:

- In all situations involving performance or non-performance of licensed programs furnished under this agreement, the customer's remedy is 1) the correction by IBM of program defects, or 2) if, after repeated efforts, IBM is unable to make the program operate as warranted, the customer shall be entitled to recover actual damages to the limits set forth in this section.

For any other claim concerning performance or non-performance by IBM pursuant to, or in any other way related to the subject matter of, this agreement and any supplement hereto, the customer shall be entitled to recover actual damages to the limits set forth in this section.



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Date: 04/15/80  
Base Publication: ZZ25-0511-6  
Previous TNLs:  
Section 2: ZZ25-0534-0537

IBM's liability for damages to the customer for any cause whatsoever, and regardless of the form of action, whether in contract or in tort including negligence, shall be limited to the greater of \$25,000 or any charges which would be due for twelve months use of the licensed program that caused the damages or that is the subject matter of or is directly related to the cause of action. Such charges shall be those in effect when the cause of action arose and shall include any initial, process or one-time charges paid to IBM. This limitation of liability will not apply to claims for copyright infringement or for personal injury or damage to real property or tangible personal property caused by IBM's negligence.

In no event will IBM be liable for any damages arising from performance or non-performance of the licensed program during the licensed program testing period or for any damages caused by the customer's failure to perform the customer's responsibilities, or for any lost profits or other consequential damages, even if IBM has been advised of the possibility of such damages, or for any claim against the customer by any other party.

### **General**

This agreement is not assignable; none of the licenses granted hereunder nor any of the licensed program materials or copies thereof may be sublicensed, assigned or transferred by the customer without the prior written consent of IBM. Any attempt to sublicense, assign or transfer any of the rights, duties or obligations under this agreement is void.

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Licensed program materials furnish under this agreement are to be used only on machines located in the United States and Puerto Rico.

The terms of this agreement may be modified by IBM upon six months written notice to the customer, except that any modifications of the terms and conditions which relate specifically to termination of this agreement or discontinuance of licenses granted under this agreement as provided in the section entitled "Term" shall be effective only as to licensed program materials designated in a supplement signed by IBM after the date of such notice. Modifications shall become effective unless the customer terminates this agreement or discontinues any applicable licenses before the effective date thereof. Otherwise, the agreement or any supplement can only be modified by a written agreement duly signed by persons authorized to sign agreements on behalf of the customer and IBM, and variance from the terms and conditions of this agreement and any supplement in any Customer purchase order or other written notification will be of no effect.

IBM is too responsible for failure to fulfill its obligations under this agreement due to causes beyond its control.

No action, regardless of form, arising out of this Agreement may be brought by either party more than two years after the cause of action has arisen, or, in the area of nonpayment, more than two years from the date of the last payment.

The agreement will be governed by the laws of the State of New York.

The customer acknowledges that he has read this agreement, understands it and agrees to be bound

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by its terms and conditions. Further, the customer agrees that it is the complete and exclusive statement of the agreement between the parties which supersedes all proposals or prior agreements, oral or written, and all other communications between the parties relating to the subject matter of this agreement.

### ***Local Program Support Agreements - General***

Under the Agreement for Local Program Support for System Control Programming on IBM Machines, the customer may elect to obtain Local Program Support, when required, for the Class 1 System Control Programming on an IBM machine for a Monthly Program Support Charge. Local Program Support for System Control Programming is only provided on IBM machines designated for use with that programming.

Under the Agreement for Local Licensed Program Support for IBM Licensed Programs, the customer may only elect to obtain Local Program Support on all eligible Licensed Programs on a designated processor for a Monthly Program Support Charge. Local Program Support coverage is specified for newly announced licensed programs in their individual marketing announcement letters.

The IBM PSR can be dispatched by the IBM Support Center notifying the appropriate FE branch office when it is determined the problem resolution could be facilitated by IBM personnel at the customer site.

Under both agreements, the customer receives on the designated processor the assistance of a PSR at the customer location, when required, for:

- Problem diagnosis\*.

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- Assistance with APAR preparation/submission.
- Local fix or by-pass development.
- Problems encountered during PTF/PUT applications.

The Agreement for Local Program Support for System Control Programming on IBM Machines, also provides coverage for problem source identification\*\*.

- \* Problem diagnosis is that set of activities performed in pin-pointing the exact cause of the problem once the failing software component has been identified.
- \*\* Problem source identification is that set of activities performed in determining the source of a suspected programming problem. Local Program Support in these activities is provided to users of IBM System Control Programming on IBM machines, under the Local Program Support Agreement.

*Note: Assistance in problem determination is provided by the Customer Engineer as part of hardware maintenance coverage. Problem determination is that set of activities performed in verifying whether the malfunction is caused by hardware or software.*

#### **Additional Machine Program Support Option**

Under the Local Program Support agreements, a customer with multiple systems may choose to designate a single processor for Local Program Support. There will be a monthly additional program support charge or monthly additional licensed program support charge for each additional machine or Licensed Program from which problems

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will be forwarded to the designated customer service machine. Under the additional machine program support option, the customer receives Local Program Support on the designated customer service machine for the additional machines and Licensed Programs specified.

### **Customer Responsibilities**

The customer responsibilities under the Local Program Support agreements are to:

- Perform appropriate problem definition activities and remedial actions prescribed by the IBM Support Center prior to the dispatch of an IBM representative.
- Apply preventive service update tapes to the current release of the applicable programs within the period of time specified by IBM.

The customer responsibilities under the additional machine program support option are to:

- Provide problem documentation to the IBM PSR at the customer service machine location.
- If required, recreate the problem on the customer service machine upon IBM's request.
- Distribute, install, and test corrections provided by IBM at the customer service machine location to the machine on which the problem occurred.

IBM reserves the right to charge for any additional effort which results from providing programming service for an altered program or for effort which results from failure of the customer to perform those actions defined under Customer Responsibilities.

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### **Local Program Support Coverage**

Service under the agreements for Local Program Support may be provided 24 hours per day, 7 days per week.

### **Local Program Support Term**

The minimum initial period for monthly Local Program Support is twelve months.

During the initial period or program support extension period, the monthly charge is waived upon one months notice with the discontinuance by the customer of the program or machine to which it applied. Discontinuance of Local Program Support during the initial twelve months or during the program support extension period for reasons other than discontinuance of the machine or program will result in termination charges.

After the first twelve months of monthly program support or after the program support extension period, if any, the monthly charge will apply until:

- The machine is withdrawn from the agreement by the customer upon one months written notice in the case of System Control Programming.
- All eligible programs are withdrawn from the agreement by the customer upon one months written notice in the case of Licensed Programs.

### **Terms and Conditions**

For details and the full text of the Local Program Support agreements, for System Control Programming and Licensed Programs, see the Agreements section of the Business Practices Manual.

**INTRODUCTION**

The IBM Preventive Service Strategy has been established to reduce the amount of time that PSRs spend on the "rediscovery" of known problems and eliminate much of the impact of these problems on our customers.

To accomplish the above goal, two kinds of service have been defined. They are:

- **Corrective Service**
  - Application of an APAR Fix to *correct* an encountered problem.
- **Preventive Service**
  - Application of Preventive Packages. Preventive Packages may consist of PUT tapes, VM/370 PLC tapes, updated DLIBs, IPOs, or Program Product PTF tapes designed to *avoid* problems. The single distributor for these packages is PID.

**CORRECTIVE SERVICE**

When you are operating in corrective mode, you must determine the severity of the problem. If the problem is of low impact (Severity 3 or 4) submit an APAR after normal FTSC prescreening. Relief for a low-impact problem will *not* be immediate. Instead the correction which resolves this type of problem may be issued at some later date in a Preventive Service Package issued through PID.

If the problem is of high severity, utilize the support structure to access the resources necessary to solve the problem. If the high severity problem is not previously known (and the APAR you submit is valid), the Change Team will generate an APAR Fix/Relief and will provide it to you, the originator.

The fix will be sent as quickly as possible, generally with *limited testing*. Remember, the objective is to give timely relief to a specific customer. *The Corrective Fix is not intended for preventive application* since it is not tested as thoroughly as a Preventive Fix. Therefore, indiscriminate application of APAR Fixes from any source, including RETAIN and Data Link Library (DLL) must be avoided.

**APAR SUBMISSION/TRACKING**

RETAIN has been enhanced to include APAR and PTF tracking and control. This Software Support Facility (SSF) provides each branch office with a valuable communications link to the Change Teams. APAR and APAR Fix information is entered into the Change Team's data bank, and that information is linked into the SSF on a daily basis. This technique ensures that the field is aware of all reported problems and solutions in a timely fashion.

The field can track the status of an APAR or PTF through SFF. For example, the date the Change Team receives the APAR can be found in RETAIN.

SFF also contains APAR/PTF history, a message file, flags and fixes to tell what the status of the various PTFs are (indicating whether the PTFs are in error or not), and any special instructions for installing a PTF or Corrective Fix.

## IBM Internal Use Only

### IBM CORRECTIVE/PREVENTIVE SERVICE (*continued*)

#### PRE-PID APAR FIXES AND PTFs

Pre-PID APAR Fixes and PTFs (including the contents of DLL) are considered to be still in the testing stage and because of this are to be used for *Corrective Service* only. *Pre-PID packages are not for general distribution.* Because of limited testing, the error risk is greater than it is for PID distributed Preventive Service Packages.

DOS/VS distributes individual Corrective Service PTFs through PID, only as a means of eliminating lengthy shipping delays from PTF Control in Uithoorn.

#### LOCAL PACKAGES

Numerous customer situations have been created by "local" preventive packages. "Local" packages are those that have been assembled by the branch offices, Regions, PSRs, etc, and preventively applied to systems.

The exposure of putting together this type of package is that the prerequisites and corequisites are not included, implementation documentation for installation is not there, there are no means of communicating errors, and possible downleveling of service can occur. These packages are extremely vulnerable to quality problems and are difficult for the Change Team to support if a problem is encountered that requires assistance.

Our customers view these packages as part of IBM Service and if there is a problem in one of these packages, they view that as poor quality on the part of IBM.

#### PREVENTIVE SERVICE

Extensive testing of Preventive Service Packages, prior to their release from PID, ensures high quality. Timely application of these high quality packages (based on an individual customer's requirements, environment, sophistication, and current level of stability) is intended to significantly reduce problem rediscoveries and minimize chances of new problems being injected into the system.

Preventive Service Packages may consist of:

- Updated Distribution Libraries (DLIBs)  
or
- Installation Productivity Options (IPOs)  
or
- Program Update (PUT) Tapes  
or
- Program Product PTF Tapes  
or
- VM/370 PLC Tapes



IBM CORRECTIVE/PREVENTIVE SERVICE (*continued*)

WHAT TO APPLY

Preventive Service is the application of the Preventive Packages received from PID (and *only* those packages received from PID). Preventive Packages consist of:

● DLIB Updates

Availability:

- OS/VS - three-month cycle
- DOS/VS - as required (generally monthly for latest release)

● Installation Productivity Option (IPO)

Availability is generally:

- OS/VS1 - three-month cycle
- OS/VS2 MVS - three-month cycle
- DOS/VS - three-month cycle
- VM/370 - three-month cycle

● Program Update (PUT) Tapes

Availability:

- OS/VS - monthly
- DOS/VS - as required (generally monthly for latest release)
- CICS/DOS/VS - monthly (between issues of CICS PTF tapes)

● PLC (Program Level Change)

Availability:

- VM/370 - monthly

● PTF Tapes

Availability

- IMS/CICS - three-month cycle
- Languages, Sorts, and Emulators - Activity dependent

EXCEPTIONS

The two exceptions where Corrective Service may be applied at the time of Preventive Application are:

1. PE APAR Fix

PTFs in error will be indicated by a PE APAR entry in the RETAIN bucket associated with a specific Preventive Package.

Because of the differences in packaging, we recommend the following:

- For OS/VS SCPs, PTFs in error *should not* be applied as Preventive Service except for some PTFs with non-logic errors that can be easily circumvented. These exceptions and the PTFs to be excluded will be identified in the RETAIN/370 PUT buckets. For updated DLIBs, the RETAIN/370 buckets should be reviewed by the account PSR and the customer to determine if they are susceptible to any of the known PE APARs.

## IBM Internal Use Only

### IBM CORRECTIVE/PREVENTIVE SERVICE (*continued*)

- For DOS/VS SCPs, the account PSR and the customer should review the PTFs in error to determine which of the following actions to take:
  - a. Reject the PTF at PUT application time (with APAS)
  - b. Allow application of the PTF and apply the PE APAR fix.
  - c. Allow application of the PTF - PE APAR not required for this account.
- For PPs the PE APAR fix *must* be applied concurrently with the Preventive PTF tape.

#### 2. H/FIX

Corrective fixes for problems that cause system re-IPLs or impact data integrity/recovery will be identified as H/FIXes to denote high impact. The narrative for high impact fixes will identify any special configuration unique to this problem.

A thorough review by the account PSR and the customer must be done to determine if the account is susceptible to a high impact problem that may be caused by the installation of an H/FIX. If not, the H-FIX may be applied in preventive mode.

#### TAILORING CUSTOMER PLANS

All users do not require the same preventive application plan. For example, a stable OS/VS1 user may only require a SYSGEN every 5-6 months, using the latest DLIB from PID, to bring his system up to an appropriate service level. Conversely, a complex OS/VS1 user may require a Program Update Tape to be applied regularly in order to keep his system at a current service level and minimize rediscoveries.

The following should assist you in both evaluating what is best for your accounts and in tailoring service plans to meet their needs.

#### NEW CUSTOMER ENVIRONMENT

A new installation involves bringing up a new release of an SCP/PP or the migration from one SCP/PP to another. The updated PID distributed DLIBs/IPOs and the current Preventive Packages (PUT, PLC, or PTF tapes) make up the main thrust of Preventive Service. PSR and user judgment should be used to select from available "H/FIXes" which have symptoms obviously relating to their particular configuration. PE APAR fixes for Program Products must be applied in conjunction with the associated PTF tape. Beyond this, indiscriminate mass application of all other outstanding APAR fixes must be avoided!

- Use latest level of PID distributed DLIBs/IPOs.
- Generate the system.
- Apply to the system any PUT or PTF tapes that may have become available since the last DLIB update.
- Apply regular Preventive Packages as they become available.

## IBM CORRECTIVE/PREVENTIVE SERVICE (continued)

## STABLE CUSTOMER ENVIRONMENT

A stable environment has no change activity in the customer installation such as user application, selectable units, or device configuration. Customers in a stable environment may keep their systems current by either installing the Preventive Packages (PUT, PLC, or PTF tapes) as they become available, or in the case of SCPs by installing the updated DLIBs or IPOs periodically. The decision should be made on the basis of past rediscovery history and current problem activity.

If you have not been applying the Preventive Packages on a periodic basis and you now need Corrective Service, there are some considerations that must be taken into account. They are:

1. Are you dealing with a problem area as opposed to dealing with a specific problem?
2. Does this Corrective Service require any prerequisites?
3. Is there a major effort involved in installing the prerequisites?
4. Do any of the prerequisites require a system generation to install?
5. Does the Corrective Service require a system generation to install?

*If the answer to any of these questions is yes, then consider either an updated DLIB, or IPO, or updating the system by way of the Preventive Packages that are available.*

## CHANGING CUSTOMER ENVIRONMENT

A changing customer environment can be defined as one in which there are changes in application, function or device configuration. These changes may expose the customer to problems that can usually be avoided by bringing the system up to the current service level.

- If you and your customer determine that it would require a significant amount of time and resources to update the system to the level of the latest Preventive Package, you should consider installing an updated DLIB or IPO, followed by application of PUT, PLC or PTF tape.
- If your customer has been applying the Preventive Packages, only the most recent package (PUT, PLC, or PTF tape) may be required.

For all of these environments, the PSR must thoroughly research the DLIBs and Preventive Packages for known PE APARs and H/FIXes, and exercise judgement in the application of these fixes in conjunction with the application of the Preventive Packages or updated DLIBs.

VM/370 users are encouraged to apply the PLCs as they are made available.

## VS1, VS2-SVS, AND VS2 - MVS PUT DESCRIPTION

Program update tapes are PTF tapes with several enhancements designed to simplify the installation of PTFs. The PUT enhancements only apply to releases that are supported. The total PUT philosophy includes:

- a. A single research source which is the PUT RETAIN entries.
- b. A service aid program that automates the checking of PTF and system conflicts.
- c. A selective backout facility.

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### IBM CORRECTIVE/PREVENTIVE SERVICE (*continued*)

- d. A tested jobstream to apply PTFs.
- e. Installation instructions and documentation.
- f. A cross-reference tracking program that provides both the PSR and FEFs with an accurate history of the installed PTFs by customer.
- g. Tracking of rediscovery information to aid the PSR and FEFs to:
  - 1. Measure the effectiveness of planned preventive service.
  - 2. Give the PSR a means to identify customers that should adopt a software preventive service program.

### DOS/VS PUT DESCRIPTION

Program update tapes contain DOS/VS private libraries. These libraries include modules which have had PTFs applied to them. In addition to the PTFs the tape also contains:

- a. Service aid programs which automatically check the user's system and apply appropriate PTFs.
- b. A PTF backout facility.
- c. Untested PTFs from the most current PTF tapes to be used for corrective service only.
- d. Service aid programs supplied by the field.

### INSTALLATION OF CORRECTIVE AND PREVENTIVE SERVICE - PP

PTFs for Program Products with either FE Local Service or with an FE Service Classification of A are furnished directly to the customer. Field Engineering will assist the customer in the application of these PTFs when required.

### IMS/VS

#### *Corrective Service*

Corrective Service is accomplished in IMS/VS by applying APAR fixes. These fixes are often available through several different sources such as:

- RETAIN
- DLL
- Deck Request
- FIXTEST

When it has been determined that an APAR fix for Corrective Service must be applied, SMP should be used, just as it was for OS/VS Corrective Service.

#### *Preventive Service*

Preventive Service is accomplished in IMS/VS by applying PTF tapes. SMP is provided for the purpose of standardizing the installation, removal, and tracking of system service.

**IBM CORRECTIVE/PREVENTIVE SERVICE** (*continued*)

**CICS/VS**

*Corrective Service*

Corrective APAR fixes are available in SSF, EWS, and (for fixes over 25 lines of code) in DLL. All fixes are supplied in source code.

CICS/OS/VS will provide fixes in SMP format. See "OS/VS Systems" installation for further detail.

**CICS/DOS/VS**

See "DOS/VS" Installation.

*Preventive Service*

**CICS/OS/VS**

Cumulative PTFs will be distributed in SMP format and will be full-module replacement. The PTF will be a series of sections grouped logically by function. This grouping is required for utilization of SMP and, because of the logical stopping points it provides, allows easier application and testing by the user.

**CICS/DOS/VS**

Cumulative PTFs and Program Update Tapes will be distributed in full module replacement form.

**LANGUAGES AND INTERACTIVE PRODUCTS**

*Corrective Service*

Corrective APAR fixes are available in SSF and EWS. Fixes that contain more than twenty-five lines of code are available upon request. Fixes are usually supplied in SUPERZAP format.

*Preventive Service*

Cumulative PTFs will be distributed periodically, generally every 90 days, from PID. These PTFs will consist of full module or CSECT replacements.

**4 APAR PROCEDURES**

The Authorized Program Analysis Report (APAR), Form G120-0482, described in this PSM is designed to handle problem reporting for all programs with central programming service. The APAR and its accompanying support material must be mailed to the APAR address identified by the structure of the program identification number (refer to Section 1), of this manual.

APARs are not to be used for comments, suggestions or improvements. The Product and Support Requirement Request, Form G120-1702, should be submitted through DPD Systems Engineering or Marketing.

APARs are acceptable for two types of error conditions; program logic errors, and documentation logic errors.

Examples of documentation logic errors are:

- Ambiguous and/or incorrect documentation which caused the customer to use the IBM program incorrectly.
- Missing or incorrect messages.

APARs are not to be used to report errors in spelling, format, style or punctuation. The reader's comment form at the back of the publication should be used for this purpose.

**GENERAL APAR SUBMISSION PROCEDURES**

(Class B APAR submitters should contact their local DP Representative for instructions on APAR submission procedures.)

**100 PERCENT APAR PRE-SCREENING****Intent**

The following procedures and responsibilities have been instituted to ensure that all APARs, prior to submission and regardless of severity, have been properly screened for validity.

**Implemented Plan**

- A. Severity 1 and 2 APARs to be screened by SPRs at Change Team locations.
- B. Severity 3 and 4 APARs to be screened by FTSCs.
- C. All components to be covered by screening procedures.
- D. All APARs received (all severities) that have not been pre-screened will be subject to cancellation.

**Pre-Screening Description**

Prior to all APAR submission, pre-screening responsibilities and documented procedures established to ensure:

- A. PSR has researched the problem through EWS and RETAIN/370.
- B. Generation of searches in RETAIN/370.
- C. On high impact APARs (Sev 1 and 2), Support SPRs at Change Team location have been involved in the problem.

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**APAR PROCEDURES** (*continued*)

- D. Change Team diagnostic assistance is utilized for Sevel and 1 problems. Change Team assistance should also be utilized to ensure that documentation and supporting material required by the C/T is made known to the PSR prior to high-impact APAR submissions.
- E. Assistance has been extended to the PSR with wording (ABSTRACT) and problem description.
- F. An assigned APAR number is issued by each screening location group and is to be indicated on the APAR form.
- G. PSR is aware of the most current component-in-error mailing address.
- H. When submitting additional documentation for an APAR previously closed RET, a new APAR number must be obtained from the FTSC or FEFS. The abstract and text written on the new APAR form should be written to read the same as that of the original APAR.

The submitting branch office is responsible for the packaging and identification, by APAR serial number and component ID, of all support material submitted with the APAR. This will ensure that it will not become separated, damaged, or confused with other APARs being submitted from the same location. Each location should establish a shipping mode that will ensure both timely customer service and economical operations.

Disk packs and all tape reels except Disposable Tape Reels (DTRs) will be automatically returned to the APAR submitter. Any other material specifically requested by the submitter will be returned following problem resolution and testing. These items will be returned under separate cover.

Each APAR is identified by its APAR number to establish control. All APARs must be recorded with the FE Branch Office Program Support Coordinator. The originator's copy of the APAR will be retained by the branch office or submitter. The third copy is extra and can be used as a worksheet or given to the customer for his records.

APAR Processing will respond by returning an acknowledgement to the branch office via the FSS/ANSWR system.

The APAR answer will be returned via the same route.

Valid APAR answers will be made available via the Field Support System (FSS-RETAIN) and Microfiche Early Warning System (EWS).

## APAR APPEAL PROCESS

The process of appealing an APAR closing can sometimes result in a very positive effect in resolving customer situations. In addition, it is conducive to improving APAR communications and resolutions in general.

Following for your information and use is a review of the APAR appeal process. As you will note, the actions apply to any APAR closing that you feel is inadequate when compared to your customers' needs. You should also recognize that prior to exercising this process, both Branch and Region management should have reviewed and supported the escalation actions.

### Purpose

Clarify and review the disciplined procedure that allows a PSR to challenge an APAR response that he deems inadequate when compared to his customer's needs. This process is applied to any and all possible closing codes issued by the Change Team.

### The Appeal Process

Basically, the process consists of the following actions, each step being taken if the previous one has not resolved the concern. The appeal process should be initiated within 30 days of closing notification.

#### Step 1

In the case of an APAR that is going to be closed as RET'd, (refer to Memo to FE Division Managers 74-139), the Change Team is required to contact the branch office first.\* At this time, the PSR and Change Team programmer will discuss the reasons for the closing. If the resolution is unsatisfactory to the PSR, then:

#### Step 2

The PSR should discuss the problem with the responsible support SPR. If the closing still presents a problem, the PSR should discuss the problem with the responsible Field Manager. The branch office should contact the appropriate Regional TAG Staff should the closing still present a problem. Step 2 is also the entry point for all other APAR closings that are considered inadequate. If this step does not resolve the concern, then:

#### Step 3

The Region escalates to the Field Support group at the appropriate Change Team location. If the Region is still not satisfied with the closing then:

#### Step 4

The responsible SPR manager will negotiate with the Change Team manager whose department answered the APAR. If still no results, then:

\*See 2-46, RET Closing



## APAR PROCEDURES (continued)

## Step 5

The SPR manager will escalate to the Change Team Location managers who will have the responsibility of arbitrating with Change Team management. With input from the SPR manager, their conclusions will result in a final plan of resolution.

## COMPONENT ID AND LEVEL NAMING CONVENTION

## Component ID

The component ID is assigned according to whether the product (PP, SU, ICR, or IR) is SCP-dependent or SCP-independent. An SCP dependent product is one which can only be installed on a particular SCP. An SCP independent product is one which can be installed on several SCPs (ie, 5741, 5742, 5745, 5752). The component ID consists of the four-character base number, such as 5752 for an MVS related product and the five-character program number, such as SC121. The base number of an SCP dependent product will be that of the SCP whether priced or unpriced. SCP independent products will be assigned an appropriate product number (ie, 5740, 5746, 5748, etc).

## Component Level

The component level will be designated with a three-character numeric identifier if the product is unlicensed and alphanumeric if licensed.

Examples:

<u>Description</u>	<u>Component ID-Level</u>
SCP BASE Component	5745-SCVTM-340 (DOS/VS)
SCP BASE Component	5752-SC110-037 (MVS)
Unlicensed SCP Component	5752-SC1C4-813 (MVS)
Licensed SCP Component	5752-SC1T0-H11 (MVS)
Licensed SCP Component	5745-SCVTM-G04 (DOS/VS)
Unlicensed SCP Component	5745-SCVTM-721 (DOS/VS)
Unlicensed SCP Independent Component	5748-XXXXX-1XX (VS)
Licensed SCP Independent Component	5748-XXXXX-AXX (VS)

The 'Xs' represent the remainder of the component ID and component level.

Since the PSAR has the limitation of accepting only numeric data, the alphanumeric component level must be converted to numeric and placed in the release block of the PSAR.

The alphanumeric level can be converted to its equivalent numeric identity as follows:

1XX = AXX Where XX is the remainder of the level ID  
 5XX = EXX  
 6XX = FXX  
 7XX = GXX  
 8XX = HXX  
 9XX = IXX

## APAR PROCEDURES (continued)

## SMP CDS and Y.PTFSCP Considerations

The SMP CDS and Y.PTFSCP for DOS/VS will indicate a licensed SCP product as installed using the numeric PTF identify. For example: MVS Level H35 will be indicated as UZ83500 and DOS/VS Level G03 will be indicated as N70300.

## APAR Considerations

When submitting a problem via APAR, the component ID, component level, and SCP-CSP level are recorded in the 'N' block of the APAR Form (G120-0482). The following examples illustrate the proper way to complete the 'N' field.

<u>Component ID</u>	<u>Component Level</u>	<u>SCP-CSP Level</u>
5752-SC1T0	H11 Licensed	037
5752-SC1C4	813 Unlicensed	037

## APAR CANCELLATION PROCEDURE

To cancel an APAR after it has been submitted, contact the FTSC. This procedure should be followed to cancel an APAR that is in abeyance or any APAR after it has been submitted but not closed. The FTSC will contact the responsible Field Engineering Field Support or World Trade CETO location who will make the necessary arrangements for cancellation.

APAR PROCEDURES (continued)

DESCRIPTION OF APAR FORM LAYOUT:

Type, or if handwritten, print all information legibly.

Item	Description	Explanation
A.	Customer Name	Customer name should be entered in full.

\_\_\_\_\_

Ⓐ CUSTOMER NAME

\_\_\_\_\_

B.	Customer Number	This number can be obtained from the Territory Maintenance Analysis Report (TMA) or from the Sales Office DP Orders and Movements Group.
----	-----------------	--

\_\_\_\_\_

Ⓑ CUSTOMER NO.

--	--	--	--	--	--	--	--	--	--

C.	Customer Mailing Address	Complete customer address.
----	--------------------------	----------------------------

Note: For APARs written by FE, against SCP components with Class A service, the *customer address* is not required.

\_\_\_\_\_

Ⓒ CUSTOMER MAILING ADDRESS

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

D.	Name and Mailing Address	Service classification "A" - Print the name, not title, of person responsible for handling APAR correspondence. Print the address of the FE Branch Office where APAR correspondence may be directed. This address will be used for any follow-up required to resolve this APAR.
----	--------------------------	---

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**APAR PROCEDURES** (continued)

Service classification "B" - Provide the name of your IBM Marketing Representative and Mailing address of your local IBM Branch Office.

IBM REPRESENTATIVE--NAME AND ADDRESS	
Ⓒ	NAME
MAILING ADDRESS	

**E. Location Numbers**

Ⓒ	FE REG	BRANCH OFF. NO.

SCP or programs with service classification "A."

To ensure proper routing, Domestic APAR originators must provide the FE Branch Office and Region number. Other office numbers may cause unpredictable routing and loss of replies.

Programs with service classification "B."

Should be left blank unless form is completed by SPR.

**F. World Trade Countries**

Ⓒ		WORLD TRADE COUNTRY	
NO.		NAME	

SCP or programs with service classification "A."

World Trade APAR originators must provide the World Trade Area number in the FE Area block, the Branch Office number from the individual country in the Branch Office block, and the World Trade country name and number in the World Trade country block.

Programs with service classification "B."

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APAR PROCEDURES (continued)

Should be left blank unless form is completed by SPR.

G-H ITPS-Phone  
Number

Service classification "A" - Provide the ITPS code for responsible FE office and the Branch Office telephone number of the originator who may be contacted to aid in resolution of the APAR. Indicate tie line number if available.

Service classification "B" - Provide installation phone number.

⑤ ITPS CODE    ⑥ IBM BRANCH OFF. PHONE

J. Problem Number

Enter the 5-digit B/O assigned problem number.

⑦

K. Severity Code

Severity code will reflect the PSR's appraisal of the local customer situation. Circle the proper code. This field is not to be completed on service classification "B" programs. If no severity code is circled, a severity of 3 will be assigned.

⑧ SEVERITY CODE 1 2 3 4

APAR PROCEDURES (continued)

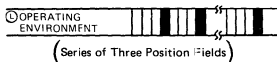
Code 1 Indicates the inability of the customer to use the program resulting in a critical impact on his operations. The condition requires an immediate solution that is not already available from the Branch Office or Area Support Group. Immediate action must be coordinated through Area Support. FE Field Support must be contacted on all Severity 1 APARs. The APAR number, if supplied by FE Field Support, as a result of an assistance call, must be included on each form.

Code 2 The user is able to use the program but is severely restricted.

Code 3 The user is able to use the program with limited functions which are not critical to the overall operations.

Code 4 The customer or the CE has found a way to circumvent the problem. However, the APAR will be evaluated and action taken as dictated by the problem.

L. Operating Environment



The APAR submitter is to describe those SUs applied to the failure component. Other environment data such as "MVT with HASP, MVS with JES3," etc, should be included as the first item in the error description.

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**APAR PROCEDURES** (continued)

M. System Type Configuration and Features Describe the system configurations. CPU type, storage size and unit type for SYSRES, SYSIN, SYSOUT.

Storage		Storage	
Size	Code	Size	Code
4K	A	192K	Q
8K	C	224K	QE
12K	B	240K	W
16K	D	244K	X
24K	P	248K	Y
32K	E	256K	H
40K	K	376K	Z
48K	N	384K	R
56K	M	392K	S
64K	F	512K	I
80K	FC	768K	T
96K	O	1024K	J
128K	G	2048K	K
164K	V	3072K	JK
		4096K	L
		5120K	JL
		6144K	KL
		7168K	JKL

(M)	CPU	CORE SIZE	SYS. RES.	SYS. IN	SYS. OUT

N. Program Identity and Change Level This block is used to describe the component ID, PP or component level, and SCP or control program level.

Example -

```
5741-SC120          05.0
5740-CB103  102.0  05.0
5745-SCVTM  2G0.3  34.0
5752-SC1C5  380.5  03.7
```

<sup>1</sup>Version 2 Mod 0 = 02.0  
<sup>3</sup>SU 805 = 80.5

COMPONENTS OR PROGRAM IN ERROR/SUSPECTED  
PROGRAM IDENTITY AND CHANGE LEVEL

(N)	Comp't ID Number	Comp't Lev.	SCP	CSP	Lev.

<sup>2</sup>SCP-DERIVED  
LICENSED PRODUCT

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APAR PROCEDURES (continued)

- P. Material Submitted with the APAR Self-explanatory, with the exception of documentation and support material specially requested in the individual program system section of this PSM. In addition to requested material, the user should submit any items which he has used to arrive at his diagnosis and which he feels will aid APAR Processing in their evaluation of the problem.

MATERIAL SUBMITTED WITH APAR	
<input type="checkbox"/> STORAGE DUMP	<input type="checkbox"/> CONTROL CARDS/JCL
<input type="checkbox"/> STORAGE MAP	<input type="checkbox"/> CONSOLE LOG
<input type="checkbox"/> TAPE DUMP	<input type="checkbox"/> CONSOLE CONDITIONS
<input type="checkbox"/> DASD DUMP Q	<input type="checkbox"/> SYSTEM LOG
<input type="checkbox"/> SOURCE DECK TAPE	<input type="checkbox"/> SYSTEM OUTPUT
<input type="checkbox"/> OBJECT DECK TAPE	<input type="checkbox"/> TEST DATA
<input type="checkbox"/> PROGRAM LISTING	<input type="checkbox"/> DIAGNOSTIC OUTPUT
<input type="checkbox"/> OTHER	<input type="checkbox"/> PTF LIST
	<input type="checkbox"/> USERS ROUTINE
	<input type="checkbox"/> TP CONF LIST

- Q. Special Activities This block is normally left blank. However, when APARing an error in a PTF, the FEFS Support SPR will ask you to fill in this field. In this case, the field must contain the 7-character number of the PTF in error
- X. RET APAR No. This field is used when submitting supporting documentation for an APAR previously closed RET. The RET APAR No. field must contain the 6-character number of the APAR closed RET, for which the additional information is being supplied.
- Y. Prescreening This is a number supplied by the FTSC when they have prescreened an APAR before submission. This field should be completed on all APARs.

<input type="checkbox"/> SPECIAL ACTIVITIES	<input checked="" type="checkbox"/> RET APAR No.	<input checked="" type="checkbox"/> PRE SCREENING
---	--	---

APAR IDENTITY
---------------

At APAR pre-screen and entry into RETAIN/370 the APAR submitter will be provided with an APAR identity. This number should be clearly written in the APAR identity block of the APAR Form. The APAR identity consists of 7 characters.

- Z. APAR Submitted Month, Day, and Year

Z APAR SUBMITTED		
MO.	DAY	YR.





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### APAR PROCEDURES (continued)

W. Submitters Name and Signature The person submitting an APAR should print his name above or below his signature.

④ Submitters Name (print) and Signature

ORIGINATOR IS			
FE	DP	CUST	OTHER

G120 0482 9  
(U/M 050)

Page Number Where more than one APAR form is used to describe a problem, indicate the total number of pages used on each form.

DISTRIBUTION: 1,2 ..... APAR PROCESSING  
4..... ORIGINATOR  
3 ..... APAR PROCESSING/OR AS  
DIRECTED IN PSM GEN-4

PAGE \_\_\_\_\_ OF \_\_\_\_\_

The program logic error APAR must be submitted as soon as the problem can be defined. Therefore, it is possible that APARs will be submitted without temporary relief being provided to the user. It is important that this be done in order to reduce program repair time.

An APAR should not be submitted for documentation errors that fall into the category of format, punctuation, spelling, or style. Errors of this type should be called to the attention of the appropriate publications group via the Reader's Comment page tear-out that is furnished with each publication.

Technical program errors (such as missing or wrong level modules) related to the normal programs distribution routine (ie, DP Program Information Department, PID) should be submitted on the current APAR form. Errors that fall into the category of packaging, quality, missing items from material list, etc, should be directed to PID and not submitted as an APAR.

APAR PROCEDURES (continued)

RET CLOSING

**Request for Additional Information**

In those cases where a Change Team cannot resolve an APAR without additional input from the field, the APAR will be closed, using the closing code RET. The submitting PSR, or branch office, will be notified of this closing before it occurs, if the Change Team is in the U.S.A. For those Change Team locations in Europe, the notification may not occur prior to APAR closing.

When the submitter of an APAR, closed RET, or any other PSR interested in this problem, has the requested additional information, it may be submitted to the Change Team under a new APAR number.

This second APAR must be pre-screened following the same procedure as with any other APAR submission.

One difference should be noted. The RET APAR number field of the APAR form must be filled in with the 6-character APAR number of the RET APAR being referenced.

**PROCEDURES FOR SUBMITTING TAPES AS PART OF APAR DOCUMENTATION**

When tapes are being submitted as part of the APAR documentation always use the smallest reel possible (ie, mini or 1200 ft) to minimize shipping costs. When the customer does not request return of the APAR data being submitted on tape, use IBM supplied tapes (ie scratch PTF tapes or other scratch tape) if available, to eliminate tape return shipping costs. The customer must have the option of requesting the return of APAR documentation and must be advised that the IBM supplied tape will normally not be returned. If for any reason, although an IBM supplied tape was used, the customer requests return of the tape, indicate return to sender on the label and include the return address.

A label, form number S229-2186, is available for identifying User Tapes, submitted to IBM for the purpose of supplying APAR documentation. The following information should be supplied on the label prior to shipment of the APAR data:

1. CE Name - APAR submitter
2. Region - Region number
3. Branch Office - Branch Office number
4. Customer number - Tape owner number
5. APAR Serial - Pre-assigned APAR serial number
6. Mode and Density - 7 or 9-track
7. Label - S + D (standard), non STD (non-standard), No (no label)
8. File Format - Fixes Blocked, Unblocked, etc
9. BLK Size - Physical record size
10. REC Size - Logical record size
11. Prog Used to Create - Program used to create the tape, eg, DEBE, OS DUMP/RESTORE, etc.

This label is intended to prevent loss of User tapes should they become separated from the APAR. /Lost Tapes/ will be returned to the Branch Office indicated on the Label.

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APAR SUBMISSION/MAILING PROCEDURES

HOW TO OBTAIN APAR SUBMISSION MATERIALS

The following materials may be ordered from any IBM FE Branch Office.\*

- a. APAR Mailer Box - Form Number G229-2147
- b. APAR Mailer Envelope - Form Number G229-3573
- c. IBM Field Engineering Programming System General Information Manual - (FE PSGIM) - Form Number **ZZ25-0511\***
- d. Program Identification Label - Form Number G229-2186
- e. Business Reply Mailing Labels (Provide first class/priority airmail transit).

Mail Address Code	APAR Processing Center Location	IBM Form Number
AK	San Jose, CA	G229-2159
AL, AX, CE	Raleigh, NC	G229-2160
AN	Endicott, NY	G229-2236
BN	Poughkeepsie, NY	G229-3570
AW, BG	Gaithersburg, MD	G229-3572
BX	Kingston, NY	G229-3568
DX	Kingston, NY	G229-3569
	APAR Receiving Centers For European Locations	
E,F,G,H,CB	White Plains, NY	G229-3571
S,AS	East Fishkill, NY	G229-3225

The following materials may be obtained from any U.S. Post Office which provides "Express Mail" service.

Express Mail Label 11B  
Express Mail Instruction Material

\*The IBM FE PSGIM (ZZ25-0511) should be placed on SLSS subscription. Any updates will then be sent automatically.

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APAR Packaging

The use of APAR containers supplied by IBM is recommended. A higher incidence of shipping damage has been experienced when other containers had been used.

Envelopes should be of high strength material (i.e., IBM Form G229-3573 or equivalent). Cartons should be a good quality material of at least 275 pounds test. The recommended APAR box (IBM Form No. G229-2147) is 350 pounds test.

Magnetic materials (tapes, etc.) and card decks should be provided with additional protection from damage. Contents should be soundly packed using cushioning material where needed.

Seal the container securely with filament reinforced tape. Cartons which are taped only along the seams are more likely to burst open during shipment. Filament reinforced tape should also be applied across the seams.

When multiple APAR containers are bound together for shipment, prepare each container with the appropriate labels, addresses, etc., as if it were being mailed separately. Mark each container for the same APAR 1 of \_\_\_\_, 2 of \_\_\_\_, etc. Securely bind each container separately, then securely bind the containers together using filament reinforced tape.

Do not exceed the U.S. Postal Service size and weight restrictions. The mailing information of only one container should be visible.

Do not place tape over shipping address labels, express mail labels or postage.

General Instructions For The Submission Of APARs To IBM  
APAR Processing Centers

1. Follow the normal APAR submission process.
2. Write the APAR number on the front top right hand corner of each piece of documentation included in the APAR mailing envelope or box.
3. Contact the IBM Support Center representative for expediting assistance and for the latest information on APAR Mailing. Changes may have occurred since this information was published.
4. Determine the mailing address and business reply label (if supplied) as follows:
  - a. Use the FE PSGIM "Program ID Listings" and determine the "Mail Address" code for the affected component ID. (Program Number)
  - b. Using Chart A (Section 1) translate the "Mail Address" code into a mailing address and business reply label form number (if supplied). If the "Mail Address" code is not found in Chart A, use the "APAR Mailing Address" listing (Section 1).
5. Affix the business reply label (if provided) or print the applicable address (reference Chart A or the "APAR Mailing Address" listing) in the center of the address side of the container.
  - a. Print the return address in the space provided on the business reply label. When a reply label is not used, print the return address in the upper left corner of the container.

The Return Address is Required

- b. When the APAR is to be submitted via First Class mail, "First Class Mail" should be boldly printed to the left of the destination address. "Priority Mail" may also be indicated when the APAR container weight is over 12 ounces. Affix an appropriate label (if available). This indicates Air Mail handling to the postal service. Thus eliminating incorrect routing of the APARs into the "Parcel Post" mail stream.

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6. The following information is used within IBM to expedite the APAR to the proper APAR processing group.
  - a. Information Label. Most business reply labels have an information label attached. Fill in the required information and affix the label above the business reply label. When an information label is not available, the information to be printed on the container is described in the appropriate U.S. or European APAR mailing instructions. Some APAR Mailer containers may have provision for this information preprinted above the address area.
  - b. When "APAR" is not preprinted on the container or information label, print "APAR" in bold letters along the right edge of the address side of the container.
7. Proceed to the appropriate set of instructions as follows:
  - a. For U.S. IBM APAR processing Center mail addresses proceed to: "APAR Submission to U.S. IBM APAR Processing Centers".
  - b. For European IBM APAR Processing Center mail addresses proceed to: "APAR Submission to European IBM APAR Processing Centers".

APAR Submission to U.S. IBM APAR Processing Centers

(Continued From General Instructions For The Submission of APARs)

1. Print the following information on the APAR container above the mailing address (Fill in and affix the information label if available)

APAR Number ----- Severity Code -

Component ID (Program Number) ---- -- ---

2. Expedited APAR Shipments:

Contact the IBM Support Center Representative for assistance in expediting APARs to IBM APAR Processing Centers.

3. IBM pays the cost of APAR Mailing only when the APAR is mailed using the Business Reply Labels supplied by IBM. All Other APAR Transit Costs Including The Expense of Expediting The APAR (i.e.: Express Mail, etc.) Are Not Refundable To The Customer By IBM.



APAR Submission To European IBM APAR Processing Centers

(Continued From General Instructions For The Submission of APARS)

(Reference Chart A, Section 1)

1. APAR Routings

- A. APARS originated in the U.S. should be mailed to an IBM APAR Receiving center located in the U.S. for forwarding by IBM to the European APAR Processing Center designated by the "Ship To Code" printed on the APAR container by the APAR originator, or
- B. The originator may mail the APAR directly to certain European IBM APAR Processing Centers by using "On Demand" International Express Mail.

2. Customs Information:

To conform to export licensing requirements, the following statement must be printed near the top of each APAR form, which is optional, or listed separately and included with all APARS destined for other countries.

"FOR EXPORT GTDR APPLICABLE"

IF THE APAR RELATES TO PROGRAM PRODUCTS IMPLEMENTING IBM'S DATA ENCRYPTON STANDARD (DES) THE FOLLOWING STATEMENT MUST BE LISTED SEPARATELY AND PLACED INSIDE THE PACKAGE, ON TOP OF THE DOCUMENTATION.

"LICENSE MC 157-76 AND 157-76A APPLICABLE.  
THESE ITEMS ARE LICENSED BY THE U.S. GOVERNMENT FOR EXPORT TO (COUNTRY OF DESTINATION).  
DIVERSION CONTRARY TO U.S. LAW IS PROHIBITED."

EACH CONTAINER MUST CONTAIN THE APPLICABLE STATEMENT.  
DO NOT PRINT THIS STATEMENT ON THE CONTAINER.

3. DISK Packs:

All APARS containing Disk Packs destined for European APAR Processing Centers must be submitted via the IBM WTDC EAST Fishkill facility. Using the appropriate "Ship To Code" follow the instructions for "Submission of APARS to European Mail Addresses 'S,' 'AS' for cartons. This includes use of information to Label G229-3225 and the forwarding of information to the IBM Support Center Representative.

4. Expediting APARs To European Locations

Generally, when an Express Mail Post Office is available, use "Next Day Service" Express Mail for expediting to the APAR RECEIVING CENTER or use "On Demand" International Express Mail for direct mailing to mail addresses CB, E or H.

If an Express Mail Post Office is not accessible from the originating location, contact the IBM Support Center representative.

Since Express Mail is a guaranteed next business day delivery service within the U.S. and adheres to International Postal Standards for outside the U.S., it can be used for timely shipment of APARs in most instances where it is available. This method also eliminates delays caused during holiday periods when excessive mailing delays are experienced.

5. IBM pays the cost of APAR Mailing only when the APAR is mailed using the Business Reply Labels supplied by IBM. APARs received at an IBM APAR Receiving or Distribution Center are forwarded to European IBM APAR Processing Centers at no expense to the sender. All Other APAR Transit Costs Including The Expense of Expediting The APAR (i.e.: Express Mail, etc.) Are Not Refundable To The Customer by IBM.

6. Proceed to the appropriate set of instructions as follows:

- a. For mail addresses F, G, H and CB (except APARs containing Disk Packs) proceed to: "Submission of APARs to European "Mail Addresses" F, G, H and CB."
- b. For mail addresses "S" and "AS" and for all APARs containing Disk Packs proceed to:  
"Submission of APARs to European 'Mail Address' S, AS."

Submission of APARS To European "Mail Addresses" F, G, H and CB.

1. Either envelopes or APAR boxes may be used.
2. Maximum weight limits
  - a. 32 pounds per container when sent to an APAR Receiving Center.
  - b. 33 pounds per shipment when mailed using International "On Demand" Express Mail direct to a European IBM APAR Processing center.
3. Multiple container shipments to an APAR RECEIVING CENTER.
  - a. Prepare each container as if it were to be mailed separately. (Labels, addresses, ship to codes, etc)
  - b. Each container must have the same "Ship to Code" (Same European APAR Processing Center destination).
  - c. The weight of any single container must not exceed 32 pounds.
  - d. Mark each container 1 of \_\_, 2 of \_\_, etc.
  - e. Seal each container and bind together with filament reinforced tape.

4. Information Labels:

Business reply labels have information labels attached. Fill in the required information and affix the label above the business reply label.

When an information label is not available, the following information must be printed above the mail address area:

APAR Number -----                      Severity Code -  
Component ID (Program Number) ---- -- ---  
Ship To Code ---

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Submission of APARs to European "Mail Addresses" "S", "AS"  
(Also APARs containing Disk Packs to Mail Addresses F, G, H, CB)

1. Envelopes:

APARs may be mailed in envelopes to the addresses indicated in Chart A.

- a. Weight limit is 4 pounds.
- b. Materials other than paper should be provided additional protection from damage in shipment.

2. Cartons: (The following also applies to APARs containing Disk Packs destined for Mail Addresses F,G,H and CB)

When not submitted in envelopes, the APAR material must be contained in an APAR mailer box or a similar strength container (at least 275 pounds test) - it must be boxed and mailed to an address indicated in Chart A according to mailing method.

The information label attached to the business reply label (form G229-3225) must be completely filled out and affixed to the mailer box above the reply label. If the label is not available, the descriptive information must be clearly printed on the box above the address. A return address is required.

The information provided on the information label (also described below) must be given to the IBM Support Center Representative. This is required for APARs in cartons being submitted to Mail Addresses "S" and "AS".

\* The following guide is to be used when completing the information label.

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INFORMATION (LABEL) FORMAT  
(User Form No. G229-3225)

	<u>P/C</u>	<u>Q</u>	<u>U/V</u>	<u>V</u>
APAR ID # AP -----	49 Tapes	-	---	---
DATE SHIPPED -/--/--	49 Cards	-	---	---
SHIP TO CODE	49 Prtd. Matl.	-	---	---
PROG. ID - - - - -	49 DISK	-	---	---
GROSS WEIGHT - - - -	49 PTF	-	---	---
LENGTH-----WIDTH-----HEIGHT-----				---

INSTRUCTIONS

1. APAR ID # AP:-----: FILL IN THE 6 BLANK POSITIONS WITH THE FIVE NUMERIC DIGITS OF THE ASSIGNED APAR IDENTITY NUMBER PRECEDED BY A NUMERIC DIGIT (0-9) DETERMINED AS FOLLOWS: (PRINT ONLY ONE IDENTIFYING NUMBER TO AVOID CONFUSION.)
  - 0 = APAR IS CONTAINED IN ONE BOX
  - 1 = BOX #1 OF A MULTI-BOX APAR
  - 2 = BOX #2 OF A MULTI-BOX APAR
  - ETC. THROUGH 9
2. DATE SHIPPED -/--/--: SUPPLY THE DATE THE PACKAGE IS MAILED IN THE FORM Y/MM/DD.
3. SHIP TO CODE ---: FILL IN THE "SHIP TO CODE" AS DESCRIBED BELOW: (REF: SECTION 1)
  - A) USING THE PSGIM, DETERMINE THE MAIL ADDRESS CODE FOR THE COMPONENT ID (PROGRAM NUMBER)
  - B) OBTAIN THE SHIP TO CODE FROM CHART A
  - C) WRITE THE THREE DIGIT SHIP TO CODE IN THE SPACE PROVIDED ON THE INFORMATION LABEL.
4. PROG. ID - - - - -: COMPLETE THIS FIELD BY INCLUDING THE PROG. ID OF COMPONENT BEING APARED.
5. GROSS WEIGHT - - - - -: ENTER THE WEIGHT OF THE PACKAGE IN POUNDS
6. LENGTH \_\_\_\_\_ WIDTH \_\_\_\_\_ HEIGHT \_\_\_\_\_: ENTER THE DIMENSIONS OF THE BOX IN INCHES. THIS ENTRY IS NOT REQUIRED WHEN THE STANDARD IBM APAR MAILER BOX (FORM NO. G229-2147) IS USED.

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	Q	U/V	V
7. TAPES	---	-----	-----
CARDS	---	-----	-----
PRINTED MAT.	---	-----	-----
DISK	---	-----	-----
PTF	---	-----	-----

UNDER THE COLUMN LABELED Q, INDICATE THE QUANTITY OF EACH TYPE OF SUPPORTING DOCUMENTATION CONTAINED IN THE PACKAGE. IF THERE ARE NO ITEMS OF A PARTICULAR TYPE LISTED, THEN MARK THAT ROW WITH A ZERO IN EACH COLUMN.

UNDER THE COLUMN LABELED U/V, INDICATE THE UNIT VALUE OF EACH ITEM INCLUDED OF THIS TYPE. A VALUE MUST BE INCLUDED FOR EACH TYPE OF MATERIAL BEING SENT. ZERO MAY NOT BE USED IN THIS COLUMN, OR IN THE V COLUMN, UNLESS THE Q COLUMN FOR THAT TYPE IS ALSO ZERO.

THE FOLLOWING VALUES ARE TO BE USED IN THIS COLUMN:

	UNIT/VALUE	
FOR TAPES:	2400 FT REEL	8
	1200 FT REEL	6
	SMALLER REEL	3
FOR CARDS:		1 FOR EACH DECK
PRINTED MATERIAL:		1 FOR EACH SEPARATE LISTING
FOR DISK PACKS:	1316	360
	2316	525
	2315	90
	2336 MOD I	775
	2336 MOD II	1150
	3348 35 MEG	1600
	3348 70 MEG	2200
	3348 FIX. HEAD	4400
	5400	175
FOR PTFs:		1 FOR EACH DECK

UNDER THE COLUMN LABELED V, INDICATE THE PRODUCT OF THE VALUE CONTAINED IN COLUMN Q MULTIPLIED BY THE VALUE CONTAINED IN COLUMN U/V.

ADD THE VALUES IN COLUMN V AND INDICATE THE TOTAL ON THE BOTTOM LINE OF COLUMN V.

**5** PROGRAMMING SUGGESTIONS

The award eligibility of programming suggestions has been defined as follows:

- Programs used by customers are not eligible for suggestion awards.
- Diagnostic programs released for Field Engineering use only are eligible for suggestion awards.
- Diagnostic programs released for customer and Field Engineering use, such as OBR, SDR, and OLTS, are not eligible for suggestion awards.
- IBM internal programs, not used by customers, are eligible for suggestion awards.

Programming problems and ideas are to be directed through the appropriate communication channels.

Products and Support Requirement Request (PSRR)  
(ZZ29-1702)

IBM Aids Program ZZ20-2343 Manual ZZ29-2446

Authorized Program Analysis Report (APAR) G120-0482

Field Developed Programs ZZ20-2326 Marketing Development  
Guide

Field Engineering Serviceability Enhancement Request  
(FESER) (229-3222)

**6 HOW TO USE EWS PROGRAMMING INFORMATION**

Early Warning Microfiche is an information system designed to get large quantities of information to the field rapidly. It is organized into the following groups.

Group	Form No.
1130/1800/Sys 7/Series 1	S2C0-0151
OS/360, PPs, and VM/370	S2C0-0101
DOS, Emulators	S2C0-0201
Sys/3 and Sys/32	S2C0-2007
OS/VS1, OS/VS2, VM/370 and PPs	S2C0-0031
DOS/VS, VM/370, and PPs	S2C0-0021
WTC Programming System	S2C0-2003

Programming information is categorized as follows:

1. Programming Symptom Index
2. APAR Numeric List
3. PSI Text
4. Miscellaneous program support information
  - a. PTF Application Charts
  - b. PTF cover letter information
  - c. PTF-APAR cross-reference list
  - d. Basic Record information
  - e. General information

**PROGRAMMING SYMPTOM INDEX (PSI)**

The Programming Symptom Index consists of abstracts of each individual text entry. All EWS entries are indexed in the PSI. This includes all known resolved APARs as well as PTF information, basic record entries, and general information entries.

Entries in the PSI are listed in a format and sequence to allow fast and accurate access. Refer to PSM 16 entitled "Standard Keyword Conventions for APAR Preparation" for a description of the keywords used in the index and their definitions.

The individual PSIs are grouped by program type (first four characters of the program ID). The individual entries are sorted by component ID (last five characters of the program ID) further sorted by projected Fix Release within Symptom and then by the Description Field.



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**HOW TO USE EWS PROGRAMMING INFORMATION** *(continued)*

The Programming Symptom Index is comprised of the following eight fields.

1	2	3	4	5
	<u>CMPNT</u>	<u>SYMPTOM</u>	<u>DESCRIPTION</u>	<u>APAR #</u>
*	SC1C3	ABEND0F2	IEAIOS00 (abstract)	X14131
+	SC1DP	INCORROUT	D/T3330V (abstract)	X15022
#	I0526	LOOP	IGG0201E (abstract)	P50060
6	7	8		
<u>FIX</u>	<u>ACTION</u>	<u>LOCATION</u>		
F999	S/FIX	132B12		
F060	S/ZAP	132C13		
F217		32B19		

1. The first field contains a one-character indicator.

A plus sign (+) indicates a new entry on the PSI. An asterisk (\*) indicates that the entry was changed from the previous week. A pound sign (#) indicates a field of the PSI only was changed.

It should be noted that changes made to the PSI entries, such as Fixed Release changes, Action Field changes, etc, are not reflected in the text message of an APAR. It is for this reason that the PSI should be referred to first when searching for a problem, rather than scanning text information.

2. The CMPNT field identifies the program component in error.
3. The SYMPTOM field contains a failure keyword selected from the appropriate system keyword matrix. This will be the keyword that defines the failure category that problem best fits into.

## IBM Internal Use Only

### HOW TO USE EWS PROGRAMMING INFORMATION (continued)

4. The DESCRIPTION field contains up to 66 characters. In this field will be found additional keywords reported in a definite sequence to further define the failure keyword (refer to the appropriate system keyword matrix) as well as a free form abstract giving a brief description of the problem.
5. The APAR number field contains the number of the APAR on which the problem was reported.
6. The FIXD field gives the number of the release in which the problem is projected to be fixed. Note 1
7. The ACTION field gives the method of resolving the problem if you are encountering it. Refer to the appropriate system keyword matrix for a list of keywords used in this field.
8. The LOCTN field contains the card and frame number where the APAR text can be found.

In the case of multiple entries for a single APAR, all entries will be referenced to the original APAR text via the location column. Only the ORIGINAL abstract will appear in the text message.

### To Use The Symptom Index

1. Place the programming problem you are searching for into one of the failure categories listed on the appropriate system matrix.
2. After locating the proper component ID number, scan the SYMPTOM column for the failure keyword(s) within that component.
3. Then scan the DESCRIPTION section of these entries to determine if any describe the problem you are encountering. Refer to the card and frame shown in the LOCTN field for the text of any entry.
4. If you do not find the problem you are searching for in the Symptom Index, interrogate RETAIN using the proper symptom code to search for additional entries that were made for a given component since the latest edition of the EWS PSI was published. (Refer to section entitled "RETAIN Retrieval Formats" for RETAIN Retrieval Procedures.)

Note 1: F999 is used to indicate that at the time of the closing of a valid APAR, there is no known release in which the fix will be integrated. RNAF is used to indicate that the Pin item is not related to any particular release, ie, a user error.

**HOW TO USE EWS PROGRAMMING INFORMATION** *(continued)*

In addition to the PSI first described, a second PSI will also be available for use in determining what has changed since the last EWS publication. This second PSI, called 'New Pin Abstracts' is pointed to by the table of contents, and contains the same type entries as those contained in the PSI. The New Pin Abstracts however, will contain only those entries that have been added, replaced, or updated since the last publication of the EWS series. This index can, therefore, be used as a quick reference to activity that has taken place.

**APAR NUMERIC INDEX**

The APAR Numeric Index is a list that enables the user to locate the full text of an APAR when only the APAR number is known.

The information in this index is identical to the information shown in the last four columns of the PSI, except that it is sorted in APAR Sequence. When changes and updates are made to these columns in the PSI, they are also reflected in the APAR Numeric Index. Because of this, the Fixed Release and the Action field shown in the APAR numeric Index may differ from that shown in the APAR text for some entries. The APAR Numeric Index and the PSI always contain the most up-to-date information. The RETAIN key number for each entry is listed in the APAR Numeric Index.

An APAR Numeric List is provided in each EWS group.

**PSI TEXT**

An entry is made in the PSI text for every entry in the Symptom Index. All reference to text items should be made only through the Symptom Index. Changes to the Action Field, the Fix Release Field, and some other changes are made to the Symptom Index only and are not reflected in the text entry. When an item becomes obsolete, it is deleted from the Symptom Index only. For this reason, text should not be scanned without verifying the fact that a current Symptom Index entry exists for the text entry you are using.

**MISCELLANEOUS PROGRAM SUPPORT INFORMATION**

**PTF Application Charts** - A separate PTF Application Chart is provided in EWS for each OS and VS release. Refer to PSM 12 entitled "PTF Application Charts" for information on how to use these charts.

**PTF Cover Letter Information** - This information is entered into EWS and is sorted in the PSI under the following labels:

OS - 360S-OS-PTF  
 VS1 - 5741-VS-PTF  
 VS2 - 5742-VS-PTF  
 DOS/VS - 5745-VS-PTF  
 DOS/VS Advanced Function - 5746-VS-PTF

For Program Products, PTF information is entered under the label for each Program Product ID.

**HOW TO USE EWS PROGRAMMING INFORMATION** (*continued*)

The PTF-APAR Cross Reference - This cross reference is provided to list those APARs, for which corrections are available. Its format is such that each entry contains the APAR numbers, the Fix Release, the content of the action field, and a pointer to the correct EWS card and location. Any APAR whose ACTION Field contains any of the following keywords will be listed by this index.

H/FIX  
SGFIX  
S/FIX  
S/ZAP

xxxxx for a 5-digit PTF number

The index entries are sorted using the following fields, (listed major to minor), component ID, Fixed Release, Action Field.

**PTF Information in EWS**

PTF information is maintained under a set of unique component identities. For 360S PTFs, the identity is 360S-OS-PTF. For 5741, 5742, 5745, 5747 (IR), and 5752 PTFs, the identity is xxxx-VS-PTF, where xxxx is the 4-character System ID. In addition to PTF availability notices, PE entries, and AI entries, these identities will also contain an entry for each APAR describing a PTF error. (For PTFs distributed since August, 1975 only.)

The PTF and APAR entries in these identities are sorted by PTF number within component.

These component identities, therefore, provide a depository for all PTF related Pin items. The entries will state if the PTF has been superseded, or is in error, and if in error, the APAR entries will contain any correction that may be available.

Note, however, that if dealing with PTFs less than 6 months old, R/370 should be consulted. This information is sometimes very dynamic. EWS may be used if the PTF is more than six months old.

**7 APAR FIX AND PTF ERRORS****APAR FIX AND PTF FEEDBACK PROCEDURES**

APAR fixes and PTFs are subjected to extensive quality checks as they are being prepared for distribution through PID as Preventive Service. Preventive application of these PID-released Preventive Service packages is fundamental to the programming support strategy. In some cases, additional testing in the field is required to assure a high level of quality. Branch office feedback is essential to the strategy and should be handled in the following manner:

**Corrective Service Feedback:**

- **FIXTEST** - When an APAR fix is provided to the PSR for field testing prior to its availability from PID, a FIXTEST transaction is entered into RETAIN/SSF by the change team. Feedback is to be provided via the FTSC in all cases, whether 'good', 'bad', or 'other'.
- **TOTEST** - When a PTF is provided to the PSR for field testing prior to its availability from PID, a TOTEST transaction is entered into RETAIN/SSF by the change team. Feedback is to be provided via the FTSC in all cases, whether 'good', 'bad', or 'other'.
- **Non-Test Account** - Individual APAR fixes or PTFs may be applied as Corrective Service for high-impact situations. Prior to their PID availability in Preventive Service packages, they may be obtained from DLL, APAR responses in RETAIN/SSF, or by Field PTF Requests. If not designated as a FIXTEST or TOTEST account, the PSR should only provide negative ('BAD') feedback via the FTSC and Call Management.
- **Feedback Information Requirements** - The PSR should have the following information available when calling the FTSC with feedback:
  - APAR Fix or PTF number
  - Component Identification
  - Change Team number (C/T ID on Summary page of SSF record)
  - Test result: Good, Bad, or Other
  - Date fix or PTF applied
  - If Bad: Logic, Documentation, or Application problem
  - Applied to a failing system?
  - Were you designated a FIXTEST or TOTEST Account?
  - Where was the APAR fix or PTF obtained?
  - Details explaining the Good, Bad, or Other feedback result
- **Feedback Response Time** - The PSR is expected to apply, test, and provide feedback on APAR fixes or PTFs when designated as a FIXTEST or TOTEST account. The feedback, via the FTSC, is expected to occur within 15 days of the FIXTEST or TOTEST transaction in RETAIN/SSF. These dates are found in RETAIN/SSF: in the APAR record, FT is the FIXTEST date; in the PTF record, TT is the TOTEST date.
- **FIXTEST/TOTEST Field Communications**
  - The change team or support SPR will contact the PSR/Branch Office prior to sending the APAR fix or PTF to be tested to verify the field's intention to perform the test.
  - A message will be sent to the branch office via the ANSWER system when the FIXTEST or TOTEST transaction is entered.

## IBM Internal Use Only

### APAR FIX AND PTF ERRORS (continued)

- The APAR Status Report provides by customer, within branch office, within Region:
  - APAR number
  - ABY date (FIXTEST entered)
  - ROP date (FIXTEST ended)
  - Closing code and date
- Region support is notified of delinquent APAR FIXTEST and PTF TOTEST feedback via the RETAIN attention list.

#### Preventive Service Feedback:

- Feedback is to be provided by APAR for any new problems encountered with APAR fixes or PTFs released from PID in Preventive Service packages.
- These APARs are called PE APARs and must contain a symptom code of PE and the complete seven-character number for the erroneous PTF in the Special Activity field. In the case of Program Products, this is the PTF number identifying the PID tape. After entry into RETAIN/SSF this number will appear in the 'PE =' field of the PE APAR record. In addition, the abstract on the APAR form must begin with PEXXXXX, where XXXXX is the last five digits of the error PTF number.
- PE APARs must be prescreened by the component SPR. They are only coded as Severity 1 or 2 using the following definitions:

Severity 1 - The customer is unable to use the program and is severely impacted due to a PTF that cannot be bypassed or fixed temporarily. (In some cases, an acceptable bypass may simply be to back the PTF out of the system.)

Severity 2 - All PTF errors that are not Severity 1.

- Valid reasons for submitting a PE APAR are:
  - a. The PTF solves the original problem(s) but creates a new one. Problems existing in base code prior to the application of the PTF are not valid PE problems.
  - b. A fix in the PTF is incorrect.
  - c. The PTF does not fix all of the APARs that the cover letter states as fixed.
  - d. The PTF has errors in the supplied JCL or control cards such that it will not apply, applies incorrectly, or does not properly record the application via the PTF application vehicle.
  - e. A documentation error exists on the cover letter or in the microfiche which can cause confusion or operational difficulty.

**8 MISCELLANEOUS INFORMATION****BINDER FOR FE HANDBOOKS AVAILABLE**

A blue binder is available as part number 453559. It is well suited to hold FE handbooks since it has six 1-inch rings. The handbook binder is 7.5 inches by 5 inches in size. You order it as a hardware tools and test equipment part. Use existing tools and test equipment ordering procedures for your local Emergency Parts Centers. A binder is also available for ordering by non FE personnel. This binder is available via Form number S229-4124.

**ITPS CHARACTER SUBSTITUTIONS**

Due to the limited character set currently available on the ITPS, some character substitution will be made to indicate special characters.

Original Character		ITPS
<u>Graphic</u>	<u>Description</u>	<u>Substitution</u>
'	Apostrophe, prime	-
(	Left parenthesis	./
)	Right parenthesis	/.
+	Plus sign	PLUS
-	Minus sign	MINUS
=	Equal sign	EQ
<	Less than	LT
>	Greater than	GT
@	At sign	AT
#	Number sign	NO

**PATENT PROTECTION FOR PROGRAMMING INVENTIONS**

Because of recent court decisions and other factors it is absolutely necessary that all creative programming be considered for disclosure as programming inventions.

The largest area of exposure is field developed programs such as Service Aid PTFs, Problem Determination Aids, etc.

1. Programming Inventions are programs that contain creative programming. All Field developed programs could fall into this category and should be reviewed with immediate management for guidance.
2. Immediate management will provide assistance in obtaining forms used for submitting program inventions.

Note: FE Management Technical Service Letter (TSL Programming General number 9 describes the necessary forms.)

**PUBLICATIONS AVAILABILITY**

All publications currently available for a specific programming system, program product, SCP, RPQ, or CSP can be identified by referring to the IBM System/370 Bibliography, Form number GC20-0001 or the IBM System/360 Bibliography, Form number GC20-0360.

## 9 FIELD REQUEST FOR APAR FIXES OR PTFs (CORRECTIVE SERVICE REQUESTS)

Individual APAR fixes or PTFs to be used as Corrective Service for high-impact situations are normally available for valid closed APARs from:

- PID tapes
- Data Link Library (DLL)
- APAR answers in RETAIN/SSF

Call Management is used for *new* or *open* APAR problems when a solution is required for a high-impact situation.

When Corrective Service is *not* available from these normal sources, the FTSC may be asked to enter a Field Request to provide a solution for a customer's high-impact problem.

Through proper screening by the FTSC using the RETAIN system, the PSR's request is guided to the correct source for the needed Corrective Service as follows:

### A. Open APAR (your problem matches APAR in RETAIN)

- High-impact problem:
  - PSR is placed on Call Management
- Low-impact problem:
  - An entry is made in the Interested Parties page of RETAIN/SSF.

### B. Closed APAR (your problem matches APAR in RETAIN)

- High-impact problem:
  - Apply Corrective Service if available from one of the following sources:
    - Preventive Service package from PID
    - Data Link Library (DLL)
    - RETAIN/SSF APAR response text
  - If Corrective Service is *not* available from the above sources, the FTSC will enter a Field Request into RETAIN. For valid requests, the PSR will receive a PTF, a fix, or Relief.
- Low-impact problem:
  - Wait for Preventive Service package from PID, or
  - Retrofit an existing FIX/PTF to your system, or
  - Advise the customer to upgrade to a later release.

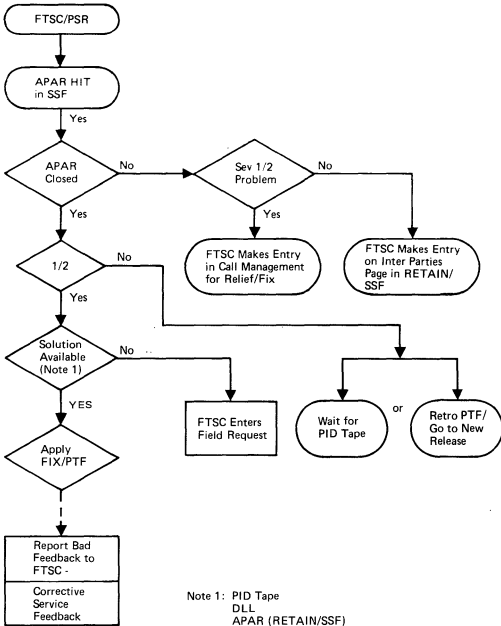
### C. New Problem (no match in RETAIN/SSF)

- High-impact problem:
  - PSR is placed on Call Management
- Low-impact problem:
  - Enter APAR through FTSC



FIELD REQUEST FOR APAR FIXES OR PTFs (CORRECTIVE SERVICE REQUESTS) (continued)

FIELD REQUEST FLOWCHART



IBM INTERNAL USE ONLY

PROCEDURE FOR DETERMINING THE STATUS OF A FIELD REQUEST FOR  
CORRECTIVE SERVICE

1. PTF Request entered into RETAIN/SSF.
  - a. Search proper library for PTF by assigned number.
  - b. Check summary page as follows:
    - 1) RYY/MM/DD (Received) date -  
This indicated date C/T acknowledged PTF request.  
  
Status of the PTF request is indicated on top line of the summary page. (STAT=XXXX)
    - 2) Those requests closed as duplicates will have an indication of 'STAT=DUP'. The duplicate PTF number will be posted on line 3 (DUP/UANNNNN).
  - c. Check Customer Page of PTF Common File as follows:
    - 1) RQ DATE/FIELD REQUEST DATE  
. Date PTF was requested.
    - 2) FR DATE/FIELD REQUEST RECEIVED DATE  
. Date PTF request was acknowledged by Central Service.
    - 3) FC DATE/FIELD COPY SENT DATE  
. Date PTF or relief was sent to requestor.
2. Where item 1 will not satisfy your situation:
  - 1) Open an incident through IBM support center asking for a 'PTF Status Request'.
  - 2) Have IBM support center make an entry in responsible 'Call Management Queue'.
  - 3) The SPR will investigate and place the 'Status' in the incident for the PSR to review.

**10 PTF REGISTRATION INSTRUCTIONS**

Each FE Branch Office may subscribe for the following on a no charge basis:

One CICS/DOS/VS Update Tape  
 One DOS/VS PTF Tape  
 One 2316 DOS/VS PTF Disk  
 One 3336 DOS/VS PTF Disk  
 One 3348 DOS/VS PTF Disk  
 Two OS/VS1 PTF Tapes  
 Two OS/VS2 PTF Tapes  
 Two OS/VS2 Rel 2 PTF Tapes  
 One VM/370 PLC Tape

**NOTE:** Refer to registration section for details on disk distribution.

Disk subscriptions will be sent only to IBM locations. Subscriptions other than disk may be sent to the Branch Office or any other location designated by the Branch Office or to a combination of locations. It is recommended that subscriptions be sent only to IBM locations.

**NOTE:** DOS/VS PTF distribution is initially limited to one tape. For OS/VS, if necessary, you may order an additional tape.

If a Branch Office has a requirement for more tapes than previously listed, it is possible to subscribe for more (up to a maximum of 9). These additional tapes will be charged to the Branch Office at the current PID unit cost.

All registrations must be provided on an IBM Program Order Form, Z120-1957. Details for filling out this form are provided below.

Separate order forms must be used for OS/VS or DOS/VS. Also, a form must be provided for each different location to which tapes are shipped. All forms from any one Branch Office must contain the same IBM internal customer number.

**INITIAL REGISTRATION PROCEDURES**

1. This procedure should be used only if you have never sent in any orders previously. Two initial registrations are required (1 OS/VS, 1 DOS/VS) if subscriptions are needed for both programming systems.
  - a. PID will ship backlevel PTF tapes upon the request of a new subscriber. If a specific request for backlevel PTF tapes is not included with the order, PID will start shipping PTF tapes with the next succeeding PTF tape.

**IBM Internal Use Only**  
**PTF REGISTRATION INSTRUCTIONS** (*continued*)

2. Section 1

- a. Fill in one of the following in columns 4-10:

For OS/VS1 - 370XPTF

For OS/VS2 - 370YPTF

For OS/VS2 - Rel 2 - 5752PTF

For VM/370 - 370VPLV

For DOS/VS (Tape) - 5745PTF

For DOS/VS Disk the following additional information is required in columns 15-18:

For 2314 support enter 2316

For 3330 support enter 3336

For 3340 support enter 3348

For CICS/DOS/VS fill in the following in columns 4-13:

5746XX3PTF

Multiple PTF media may be ordered on the same order form for DOS/VS only. Columns 4-10 must be included for every disk media ordered.

- b. Leave the remainder of Section 1 blank.

3. Section 2

- a. Fill in the first seven digits of your FE Branch Office customer number. (All IBM internal numbers are 460xxxx.)
- b. Last two digits (shaded area) should be one of the following:

OS/VS - VM/370 - 50 (eg 460xxxx50)

DOS/VS - 60 (eg, 460xxxx60)

NOTE: Suffixes 5x or 6x must not be used for purposes other than the PTF subscriptions. Do not use for ordering any other programs or documentation.

4. Section 3 is left blank.

5. Section 4

- a. Enter action code R (for registration)
- b. Fill in both FE Division (23) and Branch Office Numbers in blocks marked IBM Division and IBM Location.
- c. In the S/360 Magnetic Tape capability box enter under the correct track and density the quantity (maximum of 9 per block) of tapes required for this location. For 9-track 6250 BPI density, use 7-track 800 BPI box.
- d. Enter FE Branch Office name and address or any other designated "ship to" address. (Do not use Post Office Box.)
- e. Attention To Line -- Enter title of person to receive PTF subscription.

6. Section 5 -- Requires signature of authorized manager.

**IBM Internal Use Only**  
**PTF REGISTRATION INSTRUCTIONS** (*continued*)

7. Send Copy 1 to:

IBM Corporation  
Program Information Department  
40 Saw Mill River Road  
Hawthorne, New York 10532

Attention: PTF Registration

File Copy 2 for future reference. Copy 3 may be discarded.

**REQUIREMENTS FOR DOS/VS DISK DISTRIBUTION**

1. Quantity distributed to FE Branch Offices

- a. PID will ship backlevel PTF tapes upon the request of a new subscriber. If a specific request for backlevel PTF tapes is not included with the order, PID will start shipping PTF tapes with the next succeeding PTF tape.

One of each registered DASDI device will be distributed per month. A maximum of three disks per DASDI device will be allocated for each branch office. These three disk packs are to be used as follows:

- a. In transit to branch office  
b. Current PTF disk in branch office  
c. In transit to PID

In order to receive the next level of PTFs released, the branch office must ensure that a disk pack is always *available* at PID. If no pack is available for a particular DASDI device the branch office will not receive the current level of PTFs on disk.

2. Return of disk packs from branch office to PID.

It is required that disk packs be returned to PID via a traceable method. This will provide a method to be able to recover lost or delayed disk packs. Also it is recommended that all returned disk packs to PID be insured. Return all disk packs to same address as referenced in Section 7 on previous page.

All inquiries should be directed to the PTF coordinator at PID.

**REGISTRATION FOR ADDITIONAL LOCATION**

1. This procedure should be used only if an initial registration has previously been completed and tapes/disks are to be shipped to more than one location.
2. Complete all sections on the form as outlined under Initial Registration Procedures except:

Section 2

- a. Fill in first seven digits of FE Branch Office customer number (must be same as customer number on initial registration).

## IBM Internal Use Only

### PTF REGISTRATION INSTRUCTIONS (*continued*)

- b. Last two digits (shaded area) should be as follows for the first additional location:

OS/VS-VM/370 - 51 (460xxxx51)

DOS/VS - 61 (460xxxx61)

A separate form must be submitted for each new location. This suffix must be incremented by one on each new form (eg, second additional location enter 52 or 62, third 53 or 63, etc). The maximum number allowed is 59 or 69 giving each Branch Office the capability of receiving tapes at 20 different locations (10 for DOS - 10 for OS).

### REGISTRATION CHANGES

1. This procedure is to be used to make any changes to any previously submitted registrations (initial or additional). It may be used to change the mailing address or the tape/disk requirements for any one location.

2. Section 1

Section 2

Duplicate all information from original registration. Be sure that customer number and suffix are exactly the same.

3. Section 4

- a. Enter action code M (for modify)
- b. Fill in both FE Division (23) and Branch Office Numbers in blocks marked IBM Division and IBM location.
- c. In the S/360 Magnetic Tape capability box enter under the correct track and density the quantity (maximum of 9 per block) of tapes required for this location. If no change from original registration, copy information from original. Do not leave blank.

Example: If the location was previously registered for one 9-track 800 BPI tape and now wants two 9-track 800 BPI tapes enter a quantity of two.

## IBM Internal Use Only

### PTF REGISTRATION INSTRUCTIONS (*continued*)

- d. Enter FE Branch Office name and address or other designated "ship to" address. This may be the same as the original registration or a completely new address.
4. Section 5 - Requires signature of authorized manager.
5. Send copy 1 to address listed under Initial Registration Procedures Item (7) and file copy 2 for future reference.

### DELETIONS

1. Deleting a Subscription
  - a. Any subscription may be discontinued by submitting an order form as described here.
  - b. Complete all sections on the form as outlined under Registration Changes except:

#### Section 4

1. Enter Action Code D (for Delete)
  2. Fill in both FE Division and Branch Office numbers in blocks marked IBM Division and Location.
2. Deleting a Specific Media Type

- a. Any media type may be discontinued by submitting an order form as follows:
  1. Section 1 - Enter in columns 4-10 the program number and program extension, if applicable (columns 15-18).
  2. Enter action code D in column 14.

Example:    Cols 4-10    Col 14    Cols 15-18  
              5745 PTF        D            2316

- b. Section 2 - Duplicate all information from original registration. Be sure that customer number and suffix are exactly the same.

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**PTF REGISTRATION INSTRUCTIONS** *(continued)*

c. Section 4

1. Fill in both FE Division and Branch Office numbers in blocks marked IBM Division and Location.

**RETURN OF PTF MEDIA**

No longer needed tapes, DTRs and diskettes from PID may be collected and bulk returned to the address listed below. Easy peel pre-paid return labels are available in your branch office, and more may be obtained by calling PID's Order Control Department.

Program Information Department  
40 Saw Mill River Road  
Hawthorne, New York 10532

**PTF CARD DECK INFORMATION**

1. DOS/VS - There is no automatic distribution of card deck PTFs. If a PTF is needed in either 80-column or 96-column card, it must be ordered via PTF Request. The media (80 or 96-column card) must be specified on the PTF Request. The PTF will be copied by PID and shipped to the address on the PTF Request.  
(The PTF Request is entered in RETAIN/SEARCH/V1/PTF File)
2. OS/VS PTFs - If it becomes necessary to obtain a copy of an individual PTF, the FTSC should be contacted.
3. Other PTFs - All PTFs for Program Products with Service Classification A that operate with OS/VS or DOS/VS will be distributed as available directly to licensed users (customers) of the respective program. There will be no distribution to the FE Branch Office. If it becomes necessary to obtain a copy of a PTF the responsible FE Field Support location should be contacted through your FTSC. A copy of the cover letter only for all Program Product PTFs shipped from PID will be sent to all FE Branch Offices.

**PTF DISKETTE INFORMATION**

DOS/VS - There is no automatic distribution of PTFs on diskette. Emergency needs for a PTF on diskette must be ordered via PTF Request. The media (diskette) must be specified on the PTF Request. The PTF will be copied by PID and shipped to the address on the PTF Request.  
(The PTF Request is entered in RETAIN/SEARCH/V1/PTF File)



CUSTOMIZED SERVICE - OS/VS1 AND OS/VS2 (MVS)

Direct distribution of customized OS/VS1 and OS/VS2 (MVS) program service and PTFs for licensed programs in SU format.

IBM users of VS1 and VS2 (MVS) will receive a monthly PTF Tape uniquely configured to their PID SCP and licensed program user profiles. Each tape will contain the PTFs for the SCP and PTFs for licensed programs distributed in the SU format for installation via the SMP process. These configurations will support the applicable SCP and SU format licensed programs installed by either SMP or Systems IPO.

PTFs for a given customer's SCP and SU format licensed program configuration will be combined on a single tape. PID will send this tape directly to the customer mailing address, providing the customer with synchronized delivery of each month's service.

This service will have been researched and field tested.

The tape will be produced in the highest density for which the customer is registered.

Only one VS1 and/or VS2 (MVS) customized PTF tape will be shipped to a customer mailing address (customer number) regardless of the number of copies of each SCP and/or SU format licensed program installed at that address.

Only those SCP and SU format licensed programs registered under the same customer number will be shipped on the same tape.

Automatic distribution of a customized SCP and SU format licensed program PTF tape with PUT files will be provided only to users of IBM CPUs on which VS1 and VS2 (MVS) are supported. Automatic distribution of a customized SU format licensed program PTF tape will be provided to other users of those licensed programs.

NOTE: IPO users must also be registered as MVS or VS1 users at PID to receive direct distribution of the SCP portion of the PTF tape.

**11 PROGRAM UPDATE TAPE (PUT) INFORMATION****DOS/VS PUT INSTALLATION STEPS**

These are general installation instructions, refer to the documentation supplied with the tape for detailed instructions.

- a. Research PUT Retain information.
- b. Make proper device assignments and execute the input jobstreams on the tape.
- c. Reply to questions asked by the program.
- d. Execute the jobstreams punched by the program.
- e. Mail the PUT installation card.
- f. Feedback comments or problems to Sterling Forest.

**DOS/VS****CORRECTIVE SERVICE**

Corrective Service in DOS/VS is accomplished by the application of PTFs and APAR fixes. A history of this service should be maintained for each system in the appropriate source statement library book (for example: Y.PTFSCP, Y.PTFPP R330/R340, or Y.CHLVLSCP, Y.CHLVLP R320). This is accomplished by using the Maintain System History (PTFHIST) Utility for Release 33 or Mini-SMP for Release 32 when applying PTFs, and by a manual update for APAR fixes.

**INSTALLATION OF CORRECTIVE AND PREVENTIVE SERVICE – SCP***OS/VS Systems*

All Preventive and Corrective Service for OS/VS Systems should be installed with the System Modification Program (SMP). SMP provides tracking of Service installation and a standard method of installing and removing Service. OS/VS Preventive and Corrective Service is supplied with the proper format control cards for installation with SMP. Refer to the SMP SRL (Form GC28-0673) for a complete description.

OS/VS CICS and IMS/VS are also supported by SMP.

**PUT INSTALLATION**

The Program Update Tape installation should be approached as a three-phase effort. The PUT jobstream is constructed with these three phases in mind so that a user can start a Reader to PUTPDS for members SETUP, INSTALL, and POST.

- **Pre-Installation Phase (SETUP)**

– Steps to be completed during SETUP are:

1. Print the PUT documentation file. This file contains installation instructions, descriptions of the Service Aid Program, XREF program, PUT JCL, PUTPDS members, etc.
2. Allocate and load the PUTPDS from a file on tape.
3. Add PROCs from PUTPDS to SYS1.PROCLIB.

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**PROGRAM UPDATE TAPE (PUT) INFORMATION** *(continued)*

4. Check the Sterling Forest PUT and PGEN buckets in the RETAIN SEARCH LIBRARY for the latest installation and PTF error information.

Use the following search argument to retrieve the buckets:

PGEN: P:SFSC-PG-EN  
PUTE P: XXXX-U7-YYY  
      where-  
      XXXX = the SCP ID  
      YYY = the last three digits of the PUT  
          number

For example, to retrieve VS2-MVS PUT 7801,  
Enter - P:5752-U7-801

PTF error information is provided in three lists:

- a. PE-REFDOC

Lists all PTFs on the tape that are impacted by PTF errors. This includes PTFs in error and PTFs in the 'chain' of a PTF in error (ie, PTFs which PRE-REQ a PTF in error). The list also indicates the PUT level at which the PTF in error is corrected.

- b. PE-EXCLUDE

Lists PTFs containing errors which should be excluded during installation of the PUT.

- c. PE-RESEARCH

Lists PTFs whose PE APARs require review prior to PTF application. The PTF error is generally documentation and may require some additional action or circumvention by the PSR.

5. Start a reader to PUTPDS (Member-SETUP). The following jobs will be executed:

- a. SERVAID - will list the current status of your system, indicate any action necessary to prepare for the PUT job-stream and will cross-reference PTFs to APARs. SERVAID will also produce a list of PTFs that will be excluded/applied and predicts space requirements for target libraries.
- b. REJECT - will do a blanket reject of the PTFs that have been RECEIVED only to clean up the SMPCDs and SMPPTS data sets.
- c. BKUPJOB - will do a COPY UNLOAD of all modules/macros that will be updated by this PUT tape. This copy is made to give a user a way to remove a PTF after it has been ACCEPTed to the DLIBs.
- d. LISTLOG - will list the SMPLOG data set and clear it in preparation for this PUT tape.

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**PROGRAM UPDATE TAPE (PUT) INFORMATION** *(continued)*

● **Installation Phase (INSTALL)**

— Steps to be completed during INSTALL are:

1. Start a reader to PUTPDS (Member - INSTALL). The following jobs will be executed:
  - a. SERVAID - this pass of the service aid program will tailor the jobstream to your system depending on your SU configuration. PTFs already applied, etc. You may delete PTFs which you do not want to apply via console replies.
  - b. REMAINING JOBS - these are the jobs that will RECEIVE/APPLY (and ACCEPT if necessary) PTFs to your system.
2. Reapply any user modifications or APAR fixes that were identified as possible regression by the Service Aid documentation pass which was run during SETUP phase.
3. Run PUTXREF - this job will provides the PSR with information about the service level of the system. It compares an available PTF table with the system CDS library.

● **Optional Pregeneration Phase (PREGEN)**

— An optional member is provided (following setup phase) for those customers who want to update DLIBs only, prior to SYSGEN. Steps to be completed are similar to those in the Installation Phase above. To use this option, start a reader to PUTPDS (Member - PREGEN).

● **SGACCEPT Phase (POST)**

— If you are going to do a SYSGEN, run the POST Phase. This phase will ACCEPT (update the distribution libraries) the PTF you just applied. This job must be run prior to the installation of next month's Program Update Tape.

Continuing Program Update Tape enhancements will result in changes to the installation process. All changes will be detailed in Program Update Tape Installation instructions.

**PREVENTIVE SERVICE**

Preventive Service in DOS/VS is accomplished by installation of updated DLIBs or PUT tapes. PUT selectively applies PTFs under control of the Automated PTF Application System (APAS). The purpose of APAS is to determine which PTFs are applicable to the target system, based on configuration and currently installed service. APAS provides the following functions:

- Three user options for application
- Space calculations for CIL, RELO, and Source
- Backout capability
- Reject routine
- Regression checking
- Supersede checking
- Corequisite checking
- Prerequisite checking
- CIL, SL, RL, Merge
- LINKEDIT (only on regression)
- Force apply PTFs (prerequisite has to be satisfied)
- Private library support
- Updates PTFSCP history book

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### PROGRAM UPDATE TAPE (PUT) INFORMATION *(continued)*

Details of the PUT application process are contained in a file on the Program Update Tape and in the hardcopy documentation accompanying each tape.

Current information concerning updated DLIBs and PUT tapes can be found in the appropriate RETAIN/370 entries. For example, information on the R330C DLIB can be found in 5745-R3-30C and for PUT 3302 in 5745-U3-302. PE information may be found by searching under the Release and Keyword PE (for example: 330E PE).

It is highly recommended that PSRs research these RETAIN entries prior to installation of any Preventive Package.

#### CICS/DOS/VS PUT DESCRIPTION

CICS/DOS/VS PUT is a non-labeled, multi-file tape in restore format. Each tape will contain from six to ten files and will consist of all PTFs against a supported release plus selected APAR fixes.

#### CICS/DOS/VS PUT INSTALLATION STEPS

1. Pull applicable RETAIN entries.
2. Print information file.
3. Discuss numbers 1 and 2 with customer.
4. Restore tape.
5. Select and execute appropriate JCL file.
6. Mail PUT Installation Card.
7. Feedback comments or problems to Sterling Forest.

**12 PTF APPLICATION CHARTS**

PTF Application Charts for OS, VS1, VS2, and DOS/VS are now provided in Retain/370 and EWS microfiche. New charts are created weekly in Retain/370 and transferred to EWS, overlaying the previous week's charts.

A separate Application Chart is created for each supported release from 21.0 on and for each VS release. Each chart is sorted by PTF number within component ID. Each chart can be found under its own Retain label according to applicable release. Retain labels are:

For DOS/VS:	5745-AR-330, etc
For OS:	360S-AR-218, etc
For VS1:	5741-AR-050, etc
For VS2(SVS):	5742-AR-017, etc
For VS2(MVS):	5752-AR-037, etc

Each chart indicates:

1. PTF number
2. Environment
3. Component ID
4. Status (distribution tape number superseded information, error flag, additional informaton flag)

The PTF Application Charts are also published in the corresponding EWS microfiche groups for OS, OS/VS, and DOS/VS.

If more current information is required than is available in EWS, use RETAIN/SSF or contact your FTSC.

**13 FSS APPLICATION 'ANSWR'**

APAR responses are transferred from the Retain/370 data base to FSS where they are made available to the branch offices.

APAR responses are generated in the RETAIN/SSF system and are then linked to the FSS system where they are made available to the branch offices.

Each branch office is assigned a special sign-on code for the purpose of making daily ANSWR inquiries into the system. The system will then output all APAR responses destined for that location.

**'ANSWR' SIGN-ON PROCEDURE**

The sign-on code for 'ANSWR' is comprised of the branch office number plus a check digit. The reason for the check digit is to prevent one branch office from accidentally striking a wrong key and getting another branch office's information.

Use of the check digit prevents accidental loss of messages by keying the wrong sign-on code.

Branch Office sign-on codes are formatted as follows:

uxxyyps/answr/xxx/s(bksp)e(bksp)c(eob)  
 where xxx = Branch Office number of 001-999,  
 y = check digit,  
 sec = terminal A security code  
 ps is a constant.

To compute the check digit, use the following formula:

$$\frac{a \times 7 + b \times 6 + c \times 5}{13} = n \text{ r}/13$$

where a = hundreds position of office number,  
 b = tens position of office number,  
 c = units position of office number,  
 n = whole number answer,  
 r = remainder, which is the check digit.

Note: Check digits are between 0 and 12 with:

10 denoted by a,  
 11 denoted by b, and  
 12 denoted by c.

Branch Office 546 would compute as:

$$\frac{5 \times 7 + 4 \times 6 + 6 \times 5}{13} = 6 \text{ 11}/13, \text{ check digit is 11 for which we substitute b.}$$

branch office 546 sign-on is u546bps/answr/xxx/s(bksp)e(bksp)c(eob)  
 where xxx = branch office number  
 sec = terminal A security code

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FSS APPLICATION 'ANSWR' (continued)

SIGN-OFF PROCEDURE FOR 'ANSWR' APPLICATION

After a user has retrieved his message, he will be presented with the following options.

02 LETTERS SENT IN THIS TRANSMISSION.

1. Accept (eob) ONLY – PREVENTS RE-TRANSMISSION TO YOUR LOCATION
2. rpt (eob) CAUSES IMMEDIATE RE-TRANSMISSION
3. sign off (eob) SAVES THESE MSGS FOR NEXT SIGN-ON

Option 1 Accept (eob) only – Causes the messages to be deleted from the system and should be the normal method used under most circumstances.

Option 2 rpt (eob) – Prints out same messages over again – makes copies

Option 3 sign off (eob) – Does *not* delete messages from system, but “saves” them and prints them upon next sign-on. Should not normally be used as it causes a build-up in storage required to hold these messages.



**14** MVS SYSTEM INTEGRITY

## DEFINITIONS

**System Integrity**

An operating system is said to have *system integrity* when it is so designed, implemented and maintained that it protects itself against unauthorized access, and does so to the extent that security controls specified for that system cannot be compromised. Specifically, for MVS, this means that there must be no way for any unauthorized program, using any system interface - defined or undefined, to:

- Bypass store<sup>1</sup> or fetch<sup>2</sup> protection.
- Bypass password checking, or RACF security checking, or
- Obtain control in an authorized state.

**Authorized Program**

An authorized program is defined as having:

- System key (key 0-7) and/or
- Supervisor state and/or
- Authorized program facility (APF) authorization.

**Unauthorized Program**

An unauthorized program is defined as follows:

- Runs in problem state and
  - Utilizes a problem key (key 8-15) and
  - Is not an APF authorized program.
1. *Store protection* is protection against alteration of an area of main storage.
  2. *Fetch protection* is protection against reading from an area of main storage.

**System Integrity - What it isn't**

- System integrity is not data integrity. Data integrity is primarily concerned with accidental damage to data (as a result of hardware, programming, user error etc), rather than deliberate damage or potential disclosure. The deliberate introduction of such "accidental errors" is a system integrity and not a data integrity concern.
- System integrity validity checking is not reliability, availability, and serviceability (RAS) validity checking; RAS is concerned with handling unexpected system error conditions, while system integrity validity checking is concerned with detecting and disallowing invalid user operations/system requests that, if allowed, would violate or cause the system to validate system integrity.

**INTEGRITY APARs**

At the time the MVS System Control Program became available, it was stated that all system integrity exposures then known to IBM had been removed from MVS. This statement was based on IBM's knowledge of system integrity at that time. However, because it is not possible to certify that any system has perfect integrity, any additional exposures that are identified should be documented and reported via APAR.

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MVS SYSTEM INTEGRITY (continued)

Integrity APAR support will be provided, by both FE Central and FE Local Service, for the licensed programs named in the following lists. Except as noted, the latest release and all features of the programs are supported. Furthermore, programs indicated by an asterisk (\*) include integrity support for *all* currently supported releases. Programs supported by DP are listed in Programming Announcement Letter P78-75.

Advanced Communication Function for TCAM	5735-RC1
Advanced Communication Function for VTAM-OS/VS	5735-RC2
CICS/OS/VS (Version 1) Release 4.0 (see Note 1)	5740-XX1
Direct Access Storage Dump Restore (DASDR)*	5740-UT1
Hierarchical Storage Manager	5740-XRB
IMS/VS (see Note 2)	5740-XX2
MVS/System Extensions*	5740-XE1
MVS/TSO Command Package	5740-XT6
MVS/TSO 3270 Session Manager	5740-XE2
Network Job Entry	5740-XR8
Offline IBM 3800 Utility	5748-UT2
OS/VS Sort/Merge*	5740-SM1
Programmed Cryptographic Facility*	5740-XY5
Resource Access Control Facility*	5740-XXH
Resource Measurement Facility Version 2*	5740-XY4
VSPC Personal Computing OS/VS2*	5740-XR6

- NOTE:
1. This does not apply to CICS if the high performance option is generated.
  2. This statement will apply to the most recent release of IMS/VS Version 1 running on OS/VS2 Release 3.7 (MVS) as of January 1, 1979, but not to any earlier releases of IMS/VS.

The products on the following list are intended to run unauthorized at all times and so should represent no threat to the system integrity of MVS.

Advanced Communication Function/SSP	5735-XX3
COBOL Compiler & Library (OS/VS)	5740-CB1
FORTRAN IV Library Mod II	5734-LM3
FORTRAN IV G1 Compiler	5734-FO2
FORTRAN IV H Extended Compiler	5734-FO3
General Information System	5740-XY7
Network Operation Support Program for ACF/VTAM	5735-XX2
PL/1 Checkout Compiler	5734-PL2
PL/1 Optimizing Compiler	5734-PL1
PL/1 Optimizing Compiler & Libraries	5734-PL3
PL/1 Resident Library	5734-LM3
PL/1 Transient Library	5734-LM5
TSO COBOL Prompter	5734-CP1
VS APL (VSPC)	5748-AP1
VS PC FORTRAN	5748-FO2

IBM will accept any APAR that describes the use of any system interface (defined or undefined) by an unauthorized program to:

- Bypass store or fetch protection,
- Bypass password checking or RACF security checking, or
- Obtain control in an authorized state.

## MVS SYSTEM INTEGRITY (continued)

### APAR Identification

Integrity APARs require special handling in order to assure that security is maintained for problem area information.

The following is the required procedure:

1. The PSR and the customer must identify the problem as an integrity exposure.
2. The APAR originator must utilize the symptom code - IG and the symptom keyword - INTEG.
3. The RETAIN/SSF facility will set the SECURITY/INTEGRITY flag as a result of the IG symptom code entry.
4. The SECURITY/INTEGRITY flag when on (SEC/INT = Y) will inhibit PIN AUTHORIZING and, therefore, prevent APAR inclusion in EWS.
5. The words "system integrity" or "integrity" should not be used in problem descriptions of non-integrity APARs. "Data integrity" may be used, but only when no other description applies.

### INTEGRITY PTFs

The cover letter that accompanies the PTFs supplied for integrity APARs contains the word INTEGRITY immediately following the keyword COMMENTS. If the product is copyrighted, the copyright statement precedes the word integrity following the COMMENTS keyword.

The problem description section of the cover letter has been standardized and will no longer include specific problem details for purposes of security. The standard entry is - INTEGRITY PROBLEM.

MVS users of record will be notified via memorandum when integrity PTFs become available at PID. The memorandum will identify the APAR/PTF number as well as the PTF tape that contains the correction.

### APAR DATA SECURITY

As previously stated, integrity APAR information is not included in EWS for purposes of system security. Consistent with this limitation, integrity APAR problem/correction details documented in RETAIN must not generally be distributed/discussed with customers. Problem/correction information should be limited to the extent possible and only provided upon request, to the customer representative authorized to discuss System Integrity exposures.

Due to the sensitivity of this data, RETAIN/SSF has been modified to provide further assistance in controlling access to integrity APAR problem information. As a result, branch office level users cannot view integrity APARs, except for data that may be included in title lines resulting from the execution of an SSF search. An integrity APAR cannot be retrieved by a direct record read or by selection from the title lines resulting from a data base search. If the title line data indicates the APAR is applicable or further information is needed, contact the FTSC.

MVS/MP APARS WITH SUGGESTION (SUG) AND MACHINE ERROR (MCH) CLOSINGS

PROCEDURE

MVS APARS closed SUG/MCH which describe any valid conditions that can result in a MVS/MP system crash, loss of significant system capabilities, or failure in recovery/reconfiguration logic, will be subjected to a development management review. Subsequently, a correction will be provided via PTF or in a future release/product if a solution exists within the bounds of current functional design and business constraints. The SUG/MCH closing message will be updated to indicate the interim and ultimate disposition of the APAR. Possible responses are:

- Suggestion to be reviewed by Development.
- Suggestion to be implemented via PTF.
- Suggestion to be implemented in a future Release/Product.
- Suggestion not accepted by Development.

These revised procedures will be managed internally. However, PSR support is key to the success of this program. PSRs should encourage customers to document, and report, recovery and availability problems; and then advise them of the final disposition of the APAR as listed above.

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MVS/IPCS

Reference Card

A reference card for MVS/IPCS is available from Mechanicsburg. It contains information extracted from the MVS/IPCS User's Guide and Reference publication. All MVS/IPCS users should order:

"OS/VS2 MVS/IPCS Interactive Problem Control System Reference Summary," GC34-2014.

Usage Recording

PSRs are reminded that the following Optional Data codes are required on all MVS problem related PSARs. Refer to FE Field Memorandum, dated June 6, 1978.

	<u>PSAR OPTIONAL DATA</u>
o MVS/IPCS is not installed.	60
o MVS/IPCS is installed, but was not used.	61
o MVS/IPCS is installed and was used by the PSR.	62
o MVS/IPCS is installed and was used by the customer.	63
o MVS/IPCS is installed and was used by both the PSR and customer.	64

## 16 STANDARD KEYWORD CONVENTIONS FOR APAR PREPARATION

This PSM is intended to assist the Program Support Representative in symptomizing APARs and interpreting the various entries of the EWS symptom index for each programming system. It describes the approach that is used by the various FE Field Support groups to symptomize APARs for entry into RETAIN and publication in EWS microfiche.

### INTRODUCTION

In order to provide a uniform approach to prescreening and reporting programming problems, the Program Support Representative should use specific keywords in a standardized format when symptomizing APARs. Refer to the keyword matrix for your system, on the following pages, to determine which keywords should be used in the APAR abstract.

### USE OF THE KEYWORD MATRICES

When submitting an APAR, Sections R, S, and T must be filled in for all programs with service classification "A" and SCP. This information will be used to construct an entry in the program symptom index for your APAR. The following instructions should be used.

1. Locate the keyword matrix for your system on the following pages.

NOTE: For those programs other than System/3, System/7, "VM/370" refer to General Matrix.

2. Select the symptom code and failure (symptom) keyword which best describes the external symptom. Enter this symptom code in Section R and the failure keyword, left justified, in Section S. If more than one symptom applies, show the additional failure keyword(s) at the beginning of the error description text, Section V.

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**STANDARD KEYWORD CONVENTIONS FOR APAR PREPARATION**  
(continued)

3. Choose one keyword from each of the remaining columns in your system's keyword matrix to further define the failure word. Use only keywords from your system's matrix and insert them in Section T in the same sequence as shown on the matrix. Separate keywords with a dash. Never separate keywords with a slash.

If you are unable to provide a keyword from a certain column, omit that keyword. Do not leave a blank space for omitted keywords. You may omit a keyword in Section T if absolutely necessary, but a failure keyword must be entered in Section S.

4. A free form abstract which summarizes the problem should be entered after the keywords in Section T, and should be descriptive of the external symptoms as determined by the user. Be sure to insert only one letter, character, digit, dash, or space in each block since the abstract in Section T is limited to 66 characters.

**IMPORTANT** – Treat Section T (abstract field) as one continuous 66-character field. The two 33-character lines on your APAR form will be combined (line 2 immediately following line 1) in RETAIN/370 to form an abstract. Use all of the blocks in line 1 before filling in line 2. The first block of line 2 should contain:

- a. A space between words (if a word is completed in the last block of line 1) or
  - b. The first letter of a new word (if line 1 ended with a space) or
  - c. A continuation of a word started in line 1. In this case, do not use hyphens. Write as much of the word as possible on line 1 and continue it on line 2.
5. The acronym for a component should be included in the APAR text if applicable (ie, ISAM, VSAM, ASP). Use only "VS1", "VS2", or "DOS/VS" for VS acronyms.

**NOTE:** APARs must be handwritten legibly or typewritten. Numerals 0 and 1 must be easily distinguishable from letters O and I. The letter Z should be crossed to distinguish it from a 2.

Identify the numeral zero by putting a slash through the zero, such as 0/.

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### STANDARD KEYWORD CONVENTIONS FOR APAR PREPARATION (continued)

#### CONVENTIONS FOR APAR ABSTRACT AND TEXT

The following rules must be adhered to when writing an APAR in order to ensure data base integrity in RETAIN. Conscientious use of uniform data standards will result in more effective RETAIN/370 data bank searches.

1. All spelling must be correct.
2. Abbreviations should not be used in the text of APARs. (Common acronyms are not considered as abbreviations.)
3. If an abbreviation is used in an abstract, the full word must appear in the text.
4. When possible, the problem description should contain module name, csect name and microfiche name. Label references are also helpful.
5. Careful attention should be given the spelling of references to:
  - a. Control blocks, their fields, bytes, and bits. (Names rather than displacements should be used if available.)
  - b. Csect, dsect and module names.
  - c. System components and service programs.
  - d. Assembler mnemonics and macros.
6. If a number modifies a word, it should be concatenated to that word (ie, Format1, SMF12).
  - a. SVCs should be shown as SVCn (n is the decimal digit value of the SVC, 0-255).
  - b. General purpose registers should be noted as REGn (n is the decimal ID of the register; for example, REG1, REG13). Use CREGn for control registers and FPREGn for floating point registers. For systems having XR or IR for index register (System/7, 1130, 1800), use XRn.
7. Do not hyphenate words or use slashes.
8. APAR numbers should be in the form of xxnnnnn where xx is the proper prefix as shown in EWS.



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### STANDARD KEYWORD CONVENTIONS FOR APAR PREPARATION (continued)

9. PTF numbers should be in the form xxnnnnn (alphanumeric characters as in the PTF announcement).
10. Reference to messages issued by the system should be in form MSGxxxxxxx, where xxxxxxx is the exact format that the message is outputted from the system (ie, MSGIEF614I).
11. Abends shown only as ABENDNNN or ABENDUNNNN, where NNN is the exact format that the system codes the abend.
12. Publication numbers (SRLs, PLMs, etc) should be entered without hyphens (ie, GC286413).
13. Use the singular form of words that may be used in search arguments.
14. Superzaps should be blocked by halfword (ie, VER 0080 47F0,C080, etc).
15. The following keywords, whether used as the failure (symptom) keyword in the APAR abstract or used in the text in any way, must be spelled and formatted exactly as shown below.

ABEND	Abnormal termination of a task, no error message
ABENDXXX	Abnormal termination of a task (XXX = identifier)
ABENDUXXXX	User abend (XXXX = user abend code)
DOC	Documentation discrepancy (cause, not result)
HALTXXXX	Halt (XXXX = halt number)
INCORROUT	Any incorrect data output, exclusive of performance degradation
LOOP	Loop
MACHCK	Sys/7 and 1800 machine check
MSGXXX	Message, error or otherwise (XXX = any length identifier)
PERFM	Performance degradation
PROCCHK	Processor check
PROGCK	Program check
WAIT	Wait condition (undocumented, no identifier)
WAITXXX	System wait condition (XXX = identifier)

16. When APARing a program check problem, name the label proceeding the instruction that actually program checked. This will help others in determining if a similar program check problem, is in fact the same problem your APAR describes.

**STANDARD KEYWORD CONVENTIONS FOR APAR PREPARATION**  
*(continued)*

**RETAIN/370 INTERNAL KEYWORD CONVENTIONS**

The following keywords are NOT to be used by the PS Rep on his APAR form, but are used by the various FEFS, FTSC, and Change Team locations to identify specific situations.

These keywords will not be included in the RETAIN/370 data base until they are verified as belonging in a specific record. Since they will appear in EWS, their definitions are provided to the PS Rep for information only.

<b>FXXX</b>	Projected fix release, where XXX = release number or version modification (VMM) number
<b>ARXXX</b>	Applicable release, where XXX = release number
<b>ARXXXV7YYY</b>	Applicable release and PLC level, VM/370 only, where XXX = release number and V7YYY = PLC tape number
<b>RXXX</b>	Reported release, where XXX = release number or version modification (VMM) number
<b>NARXXX</b>	Not applicable to release, where XXX = release number
<b>H/FIX</b>	High-impact problem
<b>SGFIX</b>	To identify fixes needed prior to sysgen
<b>D/TXXXX</b>	To identify problems associated with a particular I/O device, where XXXX = device type

**IBM Internal Use Only**  
**STANDARD KEYWORD CONVENTIONS FOR APAR PREPARATION**  
*(continued)*

**GENERAL KEYWORD MATRIX**

For VM/370 Only

To identify the level at which a problem has been encountered, insert the following keyword at the beginning of the text (Section V).

RXXXVYYYY

XXX = Release Number

VYYYY = PLC Tape Number

**COMPONENT LEVEL STANDARD KEYWORDS**

Following are the standard keyword conventions used to identify the applicability of APARs and PTFs to SUs, Releases, ICRs, IRs, and PPs.

**APARs**

This data will reside in the 'Selected Unit Data' field of the APAR. The field will be in the PIN item if PIN authored after 77/06/27. If the APAR was Pinned before 77/06/27, the information will reside in the responder text. The format of the 'Selectable Unit Data' field is as follows:

RXXX PSB CCCCCC UPYY/MM/DD X

Where:

R = Search Prefix for Release or SU

XXX = Indication of the component level of the product against which the APAR is applicable

PS = Search Prefix for Preventive Service Flag

B = Preventive service flag for this entry (Y = yes, N = no)

CCCCCC = PTF which fixes this release or SU

UP = Search Prefix for PTF date

YY/MM/DD = Date CCCCCC went to PID

X = Flag to show status of CCCCCC as follows:

P = PID

A = At PTF Production

C = Copy Sent

T = Totest

There is one SU data entry for each Release ICR, IR, PP, or SU the change team has identified the problem as being applicable.

**STANDARD KEYWORD CONVENTIONS FOR APAR PREPARATION**

*(continued)*

ARXXX = indicates those component levels for which the APAR contains a correction (ie, S/ZAP, S/FIX). This flag will usually be present on the temporary fix line of the APAR.

**PTFs**

ARXXX = indicates those component levels which are pre-reqs for application of the PTF. The search argument of AR855 will, therefore, give a list of all PTFs applicable to SU855. The flag would be present on the prerequisite line of the PTF cover letter.

NARXXX = indicates those component levels which are negative pre-reqs for application of the PTF. The flag would be present on the prerequisite line of the PTF cover letter.

KEYWORD MATRIX FOR SYSTEM/3, SYSTEM/32

<u>Section 'R'</u>	<u>Section 'S'</u>	<u>Section 'T' – Categories 1, 2, and 3</u>			
<u>Symptom Code</u>	<u>Failure Keyword</u>	<u>1. Activity</u>	<u>2. I/O or Access Meth</u>	<u>3. Function</u>	<u>No. Action Field</u>
DD	DOC	CMPL	BSCA	ADD	CRCMV
HL	HALTXXXX	EXEC	CONSOLE	CALC	(PTF No.)
IN	INCORROUT	LKED	CRT	CLOSE	PUBCH
LP	LOOP	MAINT	DA	DELET	RESTR
MS	MSGXXX	SORT	ISAM	DSPLY	WARNG
PR	PERFM	SUPVR	MICR	DUPREC	
AB	PROCCHK	SYSGEN	TAPE	EOJ	
WS	WAIT	UTIL	CCP	ERP	
UR	UNPRED		MRJE	INPUT	
AI (#) BASIC RECORD			RJE	IPL	
PF (#) (PTF No.)			SPOOL	LABEL	
AI (#) SAXXXX			UR	LOAD	
AI (#) SERVAID			DSKET	MISSREC	
XF (#) PTF CROSS REFERENCE			SEQ	OPEN	
PE (#) PTF (DISKETTE, DISK) ERROR				OUTPUT	
				RSTRT	
				UPDATE	
				WROREC	
				IMPL	

# FE Field Support use only (not used on APAR form)

STANDARD KEYWORD CONVENTIONS FOR APAR PREPARATION  
(continued)

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KEYWORD MATRIX FOR SYSTEM/7

This matrix is to be used during APAR preparation for all System/7 problems.

Section 'R'		Section 'S'	Section 'T' - Categories 1, 2, 3, and 4			
Sympton Code	Failure Keyword	1. Component	2. Activity	3. I/O Device	4. Expansion	## Action Field
AB	ABEND	ASM7	ASSY	CASSETTE	**NNNNXX	CRCMV
+ AB	ABENDXXXX	BKGND	CMPL	CONSOLE		MULTI
## AI	BASIC RECORD	DIAG	ERP	PROC		NOFIX
DD	DOC	DSS7	EXEC	RPQ		PUBCH
HL	HALTXXXX (PSTP)	# FICHE	GEN	TIMER		RESTR
++ LP	HANGXXXX	FMT7	IPL	TPASC		TREST
IN	INCORROUT	FOR	LOAD	TPBSC		WARNG
LP	LOOP	GEN	RSTRT	TPMX		XOXXX (PTF NO.)
MC	MACHCK	* IOCS	SYSGEN	XXXX (Device Type	eg 5028,7431)	90XXX (S/A NO.)
MS	MSGXXXX	LINK7	TRACE			++ or * EC FIX
PR	PERFM	++ LOG	# (FICHE ID NO.)			
AB	PROGCK	PASM	# (PLM NO.)			
PE	PTFERROR	# PLM	# (SRL NO.)			
AI	SERVAID	PRLIB				
WS	WAIT (PLEX)	RPQ				
+ WS	WAITXXXX	SLE				
		# SRL				
		++ SVP				
		SYSCD				

NOTES:

- ## CE Field Support Use (not used on APAR)
- # Use with doc keyword only
- + HPPF II Execution only
- ++ 3340 SVP (OLTS5998A) only
- \* 3340 IOCS (5799WJK00) module CAAA only
- \*\* 3340 SVP MSGDE90 only:  
NNNN=MODULE NAME  
XX=MESSAGE ID

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STANDARD KEYWORD CONVENTIONS FOR APAR PREPARATION

(continued)

SYSTEM/7 HPPF II (HOST PROGRAM PREPARATION FACILITY)  
APAR AND BASIC RECORD INFORMATION IN RETAIN/370)

System/7 APAR information can be found in the DS (DOS-small systems) library of RETAIN SSF (Software Support Facility).

System/7 basic information can be found in the 'SEARCH' facility in RETAIN/370 under the following entries:

- |             |   |
|-------------|---|
| SYS7-BA-SIC | Cross-references the component ID, RETAIN/PIN ID, basic record ID, PTF number format, and component name. These basic records also contain publication and microfiche numbers, release information and service aid PTF numbers. |
| XXXX-XX-XBR | Basic records by component ID contain PTF-to-APAR-to-PIN cross-references and PTF availability information. 5707-AC-1BR basic records also contain PTF distribution procedures for all components.                              |
| SYS7-PG-EN  | Basic records contain service aid information.  |

## GENERAL KEYWORD MATRIX

(For all Programs Except System/3, System/7, System/7 HPFF, and VM/370)

<u>Section 'R'</u>	<u>Section 'S'</u>	<u>Section 'T' – Categories 1, 2, and 3</u>			
<u>Symptom Code</u>	<u>Failure Keyword</u>	<u>1. Activity</u>	<u>2. Module/Csect</u>	<u>3. Cause</u>	<u>## Action Field</u>
AB	(1)ABENDXXX	(6) EXEC	(Module/Csect Name)	COREOVERLAY	CRCMV
AB	(1)ABENDUXXXX	(6) Cmpl	(8) (PLM No.)		HDWRE
DD	DOC	IPL	(8) (SRL No.)		PREST
HL	(2)HALTXXX	RSTRT	(8) (Fiche ID No.)		(PTF No.)
IN	INCORROUT	(7) PDAID			PUBCH
LP	LOOP	(7) SDAID			SUGG
MS	(9)MSGXXX	(2) EMGEN			S/FIX
PR	PERFM	(2) EMINIT			S/ZAP
AB	(3)(4)PROGCK	(2) LOAD			USER
PE	NOTE (5)	(10) PExxxxx			SGFIX
WS	WAIT				S/REP
WS	WAITXXX				H/FIX
AI	## Basic Record				
PF	## (PTF No.)				
IG	NOTE (13)				

## NOTES:

- (1) All except DOS and Emulator programs.
- (2) Emulator programs only.
- (3) DOS and Emulator programs only.
- (4) When PROGCK is used for DOS, include the type of program exception (Addr Exception, Operation Exception, Data Exception, etc) in the abstract.
- (5) The PE Symptom code may not be used unless the APAR has been pre-screened by FEFS. See Section 'PTF Errors'.
- (6) Used for compilers only; and emulators.
- (7) DOS only.
- (8) Used with DOC keyword only.
- (9) All CICS failures that are identified by the message of DFHXXXX should be described under the keyword of MSGXXX----- ie, MSGDFHXXXX.
- (10) PExxxxx, where xxxxx is the 5-digit PTF number, see Section 'PTF in Error'
- (13) See the section 'System Integrity'.



## VM/370 KEYWORD MATRIX

<u>Section 'R'</u>	<u>Section 'S'</u>	<u>Section 'T'</u>				
AB	(1) ABENDXXXXYY	(2) MODULE	(3) DISPLACEMENT	FAILING INSTRUCTION (1 HALFWORD)	CALLING MODULE	COMMAND
MS	(6) MSXXXXXXXXNNI	RETURN CODE	PREVIOUS MESSAGE	SUBSEQUENT MESSAGE	COMMAND	
WS	WAIT WAITNNN	"CP" "CMS" "RSCS" "VIRTSYS"	ENABLED DISABLED	EVENT WAITED UPON PAGE ie, I/O TIMER	COMMAND	
LP	LOOP	"CP" "CMS" "RSCS" "VIRTSYS"	ENABLED DISABLED	(5) MODULE	COMMAND	
PR	PERFM	"CP" "CMS" "RSCS" "VIRTSYS"	I/O PAGE TP TOTAL	COMMAND		
IN	INCORROUT	"CP" "CMS" "RSCS" "VIRTSYS"	DATA FUNCTION COMMAND DEVICE	DUPLICATE MISSING, INVALID OVERLAY SEQUENCE		
DD	DOC	(4) DOCUMEN- TATION IDENTIFICA- TION	PAGE FRAME	"ERROR" "VAGUE" "UNDEFINED" "INCOMPLETE"		

## Notes:

1. XXX = 3 alpha characters, YYY = 3 numeric characters.
2. 8 characters - closest entry point.
3. Within ABENDING module in hex (4 numeric characters).
4. Publication numbers should be entered without hyphens (ie, GC201807, SYB00900, 370V7404).
5. This keyword may be repeated for the number of modules in loop.
6. Note message is prefixed with 'MS' not 'MSG' because of length of VM/370 messages.

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**STANDARD KEYWORD CONVENTIONS FOR APAR PREPARATION**  
*(continued)*

**KEYWORD MATRIX FOR SERIES/1**

This matrix is to be used during APAR preparation for all Series/1 problems.

<u>Section R</u>	<u>Section S</u>
<u>Symptom Code</u>	<u>Failure Keyword</u>
AB	ABEND
AB	PROGCK
DD	DOC
HL	*HALTXXX
IN	INCORROUT
LP	LOOP
MC	MACHCK
MS	*MSGXXX
PE	PATCHERR
PR	PERFM
WS	WAIT
WS	*WAITXXX

\*XXX = Number, maximum eight characters

**SECTION 'T' - CATEGORIES 1, 2, and 3**

1. Component	2. Activity	3. I/O Device	##Action Field
APBLD	ASSY	CONSOLE	CRCMV
APPU (1)	CMPL	DISK	HDWRE
COMM	EDIT (1)	DSKET	NOFIX
DMGMT	ERP	INTGDIDO	PATCH
FCPM1 (1)	EXEC	OEM	PUBCH
FCPM2 (1)	GEN	PROC	RESTR
FCPM2M (1)	IPL	RPQ	SUGG
FCPM3 (1)	LOAD	TIMER	USER
FCPM4 (1)	PERSN (1)	TPASC	WARNG
FCPM4M (1)	PLM NO. (3)	TPBSC	
FLTEM (2)	RELOAD	TTYATCH	
FOR	RSTRT	XXXX (DEVICE NO)	
GEN	SRL NO. (3)	4962, 4979, etc	
JSP	SYSGEN		
MASM	TRACE		
PLI	XLAT (1)		
PLM (3)			
RPQ			
SRL (3)			
SUBR (4)			
SUPVR			
TXTED			
UTIL			

Notes: ## CE Field Support (not used on APAR)  
 (1) Use for FE/PM only  
 (2) Floating Point Emulator  
 (3) Use with DOC Keyword only  
 (4) Use for MFSL, FORTRAN Subroutine Library

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### STANDARD KEYWORD CONVENTIONS FOR APAR PREPARATION

(continued)

#### MATRIX KEYWORD DICTIONARY

This section is intended only to define the keywords in the matrices shown in the PSM. It is not intended to be used as a common abbreviation list. Abbreviations should not be used in the text of an APAR.

ABEND	Abnormal termination of a task, no error message
ABENDXXX	Abnormal termination of a task, (XXX = identifier)
ABENDUXXXX	User ABEND (XXXX = User ABEND Code)
ASM	Assembler
ASM7	System/7 assembler
ASSY	Assembly/processing assembler source statements
BKGND	Background (batch processing on System/7 or 1800)
BLD	Builder 1130-1800
BOM	Basic Operating Monitor -- 1800 MPX
BSCA	Binary Sync Comm Adapter
CALC	Calculate
CASSETTE	Cassette tape I/O for System/7
CATPROC	Catalog Procedure
CHKPT	Checkpoint
CIL	Core Image Loader
CLB	Core Load Builder
CLOSE	Close Data File
CMPL	Compile
CONSOLE	Console panel switches, etc CONSOLE portion of program (System/3)
COREOVERLAY	Overlaid core

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**STANDARD KEYWORD CONVENTIONS FOR APAR PREPARATION**  
*(continued)*

**MATRIX KEYWORD DICTIONARY (Continued)**

CRCMV	Circumvention available (action field keyword)
CRJE	Conversational Remote Job Entry
CRT	Cathode Ray Tube
DA	Direct Access Disk
DELET	Delete from library
DIAG	Online diagnostic interface
DISK	Disk storage device
DMP	Disk Management Program
DOC	Documentation error
DSKET	Diskette storage device
DSPLY	Display
DSS7	System/7 Disk Support System
DUP	Disk Utility Program
DUPREC	Duplicate Records
EDIT	Edit routine
EOJ	End of Job
ERP	Error Recovery Procedure
EXDIR	Executive Director
EXEC	Execute
FICHE	Microfiche
FOR	FORTRAN
FMT7	System/7 HPPF Format/7

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STANDARD KEYWORD CONVENTIONS FOR APAR PREPARATION  
(continued)

MATRIX KEYWORD DICTIONARY (Continued)

GEN	General activity (no other keyword useable)
H/FIX	High impact fix
HALTXXXX	Halt (XXXX = number)
HANGXXXX	One instruction loop (XXXX = address)
HDWRE	Hardware Error
HPPF	Host Program Preparation Facility
IMPL	Initial Microprogram Load
IOCS	System/7 3340 IOCS
INCORROUT	Incorrect Output, exclusive of performance degradation
INPUT	Input file
IPL	Initial Program Load, cold start
ISAM	Indexed Sequential Access Method
LABEL	Label routine
LINK7	System/7 HPPF link editor
LKED	Link Edit
LOAD	Load
LOG	System/7 3340 log
LOOP	Loop
MACB	Macro library basic (System/7 HPPF)
MACHCK	Machine Check
MACLIB	Macro Library
MACR	Macro Library Relocatable (System/7 HPPF)
MICR	Magnetic Ink Character Reader
MISSREC	Missing Records
MSGXXXX-----	Message, error or otherwise (+identifier)
MUP	Macro Update

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STANDARD KEYWORD CONVENTIONS FOR APAR PREPARATION  
(continued)

MATRIX KEYWORD DICTIONARY (Continued)

NOFIX (or blank)	No fix available
OPEN	Open data file
OTHDLER	Output Holder
OUTPUT	Output file
PASM	P-code assembler
PDAID	Problem Determination Aid Problem
PERFM	Performance degradation
PLM	Program Logic Manual
PREP7	System/7 HPPF Preparation Program
PREST	Permanent Restriction (action field keyword)
PRLIB	Procedures Library
PROCCHK	Processor Check
PROGCK	Program Check
PTR	Any printer not identifiable by device number
PUBCH	Publication Change (action field keyword)
RCxxx	Return code, where xxx is equal to the actual decimal value of the return code
REFMT	Reformatter
RESTR	Restriction
RNAP	Release Not Applicable
RPQ	RPQ device not identifiable by device number
RSTRT	Restart
SAXXXX	Service Aid Announcement (originated by FE Field Support)

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**STANDARD KEYWORD CONVENTIONS FOR APAR PREPARATION**  
*(continued)*

**MATRIX KEYWORD DICTIONARY (Continued)**

SAC	1130 Storage Access Channel
SCPTF	PTF is available
SDAID	System Diagnostic Aid
SEQ	Sequential file
SERVAID	Service Aid information (originated by FE Field Support)
S/FIX	Source Fix (action field keyword)
SGFIX	Pre SYSGEN fix
SLE	Source Library Editor
SORT	Sorting
S/REP	REP card fix
SRL	Systems Reference Library manual
SUBR	Subroutine
SUGG	Suggestion
SUPVR	Supervisor/resident monitor
SVP	System/7 3340 SVS
SYSCD	System Code
SYSDIR	System Director
SYSGEN	System Generation
S/ZAP	Superzap is available (action field keyword)
TAPE	Magnetic Tape
TASK	Temporary Assembled Skeleton – 1800 TSX
TP	Teleprocessing

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STANDARD KEYWORD CONVENTIONS FOR APAR PREPARATION  
(continued)

MATRIX KEYWORD DICTIONARY (Continued)

TPASC	Teleprocessing Asynchronous mode
TPBSC	Teleprocessing Binary mode
TPMX	System/7 TPMM or TPME
TRACE	Trace Service Aid
TREST	Temporary Restriction (System/7 action field keyword)
UPDATE	Update file
USER	User error
UTIL	System utility/stand-alone library
WAIT	Wait condition – undocumented
WAITXXX	System Wait condition (XXX = identifier)
WARNG	Warning or precaution in text (action field keyword)
WROREC	Wrong Record

MATRIX KEYWORD DICTIONARY (SERIES/1)

APBLD	Application Builder
APPU	Application Program Preparation Utility
COMM	Communications
DMGMT	Data Management
FCPM1	Facility Control/Power Management1
FCPM2	Facility Control/Power Management2
FCPM2M	Facility Control/Power Management2M
FCPM3	Facility Control/Power Management3
FCPM4	Facility Control/Power Management4
FCPM4M	Facility Control/Power Management4M
FLTEM	Floating-Point Emulator
INTEGDIDO	Integrated DI/DO



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**STANDARD KEYWORD CONVENTIONS FOR APAR PREPARATION**

*(continued)*

JSP	Job Stream Processor
MASM	Macro Assembler
OEM	Non IBM Device
PATCH	Patch
PATCHERR	Patch Error
PERSN	Personalization
PLI	PL/I
PROC	Any process I/O (System/7 or Series/1)
RELOAD	Reload
TIMER	Timer Function
TTYATCH	Teletypewriter Attachment
TXTED	Text Editor
XLAT	Translator

## **17** VM/370 PROGRAM LEVEL CHANGE TAPES

Programming update service for VM/370 is provided using the VM/370 Program Level Change (PLC) service.

A given release of VM/370 consists of the release base as well as all updates made available to date via the VM/370 PLC service. The release is designated by both the base number and the PLC number. When PLC 1 is made available for the Release 2 base, then the current release will be known as "VM/370 Release 2 PLC 1." Support for a given release of VM/370 will be available for six months following the next subsequent release of VM/370. PLCs issued to distribute fixes to an old base, after a new base is released, do not constitute a new release of the system.

Example: When PLC 1 was made available for the Release 2 Base, the current Release was known as "Release 2 PLC 1." Release 2 PLC 1 will be supported for six months following the availability of "Release 2 PLC 2."

The programming support described above is effective beginning with VM/370 Release 2. As previously announced, VM/370 Release 1 will be supported for nine months following the availability of Release 2.

The VM/370 PLC is a system update service that can include new functions as well as cumulative update changes. The latest PLC tape is made available at PID containing all new updates as well as all previous updates since the last VM/370 release base. IBM Field Engineering is responsible for initially ordering the PLC service. Thereafter, PID will automatically ship the PLC tapes to the FE location, and FE is responsible for applying the updates to the user's system. These tapes are not automatically distributed directly to customers of record by PID.

### **FIELD ENGINEERING ORDERING INFORMATION**

The VM/370 PLC service is ordered by the Field Engineering Branch Office using the Program Order Form and specifying 370VPLC. Refer to General PSM Number 23 for instructions in filling out the form. PLC update microfiche is available via SLSS by specifying Form Nos. SYB0-0900 and SYB0-0901. Documentation TNs will be available via SLSS for all PLC tapes that contain new function.

**18 DATA LINK SOFTWARE - DLS**

Program ID 370S-DL-002  
FE Service Number 310 0029

**GENERAL INFORMATION****Product Description**

Data Link Software is a Remote Service facility designed to provide a Remote Diagnostic Specialist the facilities he needs to do online software problem definition and transmit corrections downline to the customer location. Three groups of resources are necessary for Data Link use.

1. **DLS Utility Program** - This program is invoked at the customer site by the on-site Program Systems Representative (PS Rep). This utility acts as a slave to the central site. It has the ability to access data sets on the customer system and transmit the data through the FE DAU to the Retain/370 central site at Raleigh.
2. **Remote Specialist** - Through his display console (3277) the component specialist selects and requests the data required for analysis of a problem. Typical forms of this data are: ABEND dumps, stand-alone dumps, system library modules, service aid output, etc. The DLS program provides various commands to retrieve and manipulate this data such as scan, format, and calculate capabilities.
3. **RETAIN/370 System** - Contains the programming for data manipulation and acts as a master to the customer site.

**Machine Requirements**

1. **Hardware** - The FE Data Adapter Unit (DAU) is required for DLS services. In addition, a basic System/370 Model 145 or above with console, disk, card reader, and printer is necessary.
2. **Software** - DLS will run on OS, VS1, and VS2.

**DLS Data Security**

Access to customer data is protected for security and privacy in the following methods.

1. FE personnel will obtain customer permission prior to activation of the RETAIN/370 DAU.

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### DATA LINK SOFTWARE – DLS (*continued*)

2. No data link can proceed without FE activation of the RETAIN/370 DAU by the CE meter key.
3. The DLS utility at the customer site is an "application program," and as such, cannot access unassigned data sets or violate any other Operating System protection devices such as "password" protection.
4. All data sets accessed by the DLS utility must conform to standard Job Control Language (JCL) procedures. Thus, normal "job shop" operation by the customer will ensure IBM support personnel do not access the "protected" data sets (ie, label protection and non-shared access).
5. Prior to DLS activation, a console message to the customer requests authorization for DLS operation. This checkpoint permits the customer to examine the DLS JCL, remove sensitive data sets, and/or whatever is required by his operational group to comply with his internal security/privacy requirements.
6. All application programs have the capability of "looking" through memory (storage). DLS is no exception (ie, store protection prevents altering storage; however, fetch protection may be an option). DLS utilizes a special control card to provide this fetch or "look" facility. If the customer decides against this facility, removal of the special control card will prevent the remote component specialist storage access.
7. All input/output data link line data is recorded at the customer site for hard copy output and history log retention by the customer. This log saves all remote component specialist requests and corresponding data returned to him.

### PROGRAM SUPPORT FOR DLS

#### Installation

DLS at the customer site runs as a problem program or utility. DLS can be run as a job with the card deck provided or it can be linked into a library and invoked via JCL.

**Diagnostic Run Data Format**

The following list reflects the preferred *format* of data needed to affect a successful DLS diagnostic run.

**TCAM**

1. Dump - Standalone, unformatted, dump on disk or tape is preferred. DLS level 4 or greater can accommodate formatted dumps on disk or tape.
2. GTF Trace - Print Dump Utility, with GTF option, must be run with output spooled to disk or tape.
3. Comwrite Trace - IEDQXB must be run with output spooled to disk or tape.
4. Data Sets - DD cards should be included for SVCLIB and LINKLIB.

**IMS**

1. DUMPS - SYSUDUMP formatted on disk or tape is preferred.
2. LOG TAPES - the specific log records to be examined should be printed to disk or tape. Use IMS utility DFSERA30 to format (with output spooled to disk or tape).
3. DATA SETS - DD Cards should be included for IMSVS.RESLIB, IMSVS.PSBLIB, and IMSVS.DBDLIB.

DATA LINK SOFTWARE - DLS (continued)

**Problem Determination**

DLS is a tool and as such the PS Rep is not required to locally circumvent or correct the DLS program. DLS problem determination will be done at a high level. If a problem is encountered while running DLS, the PS Rep will:

1. Check for a user error (bad control card).
2. Contact the DLS control room.

**Service Strategy**

Since DLS is a service facility, the PS Rep is not expected to locally fix or circumvent. The PS Rep should perform problem determination and, if the problem is not previously reported, APAR it.

**APAR Procedures**

If after contacting the DLS Control Room and it is determined an APAR is necessary, the DLS Control Room will provide a mailing address. Then normal service classification "A" APAR procedures as defined in Programming General PSM 4 will be followed.

**DOCUMENTATION**

The Service Aid Package, 370S-DLS-00002, as ordered from the EPC, will contain the Operational Guide, Reference Card, and Program Deck.

**DATA LINK LIBRARY**

Pre-release PTFs for the following systems are available in the Data Link Library (RETAIN/DLL).

360S-OS  
5741-VS1  
5742-VS2  
5752-VS2 Rel 2

These Corrective Service PTFs require feedback. Report negative (BAD) feedback only, as indicated in PSM 7 "APAR FIX AND PTF ERRORS."

Other programs are also stored in the Data Link Library for the convenience of the field:

TCAM/NCP  
IMS/VS  
Program Products: 5740, 360A, GIS

The Data Link Library through DLS is another tool available to the PSR to assist him in meeting the needs of his customers. Making full use of all available assistance can result in greater customer acceptance of IBM's products.

**19 CPU IDENTIFICATION FOR MULTIPLE CPU ACCOUNTS**

In multiple CPU accounts where it is desirable to identify a core dump with a particular CPU, the following procedure may be used to locate the CPU ID and serial number in the nucleus core dump.

**OS AND OS/VS**

The ID and serial number of the CPU on which a nucleus core dump was taken may be found by looking in the CCH control blocks.

The CCH control blocks may be located via the following pointer chain.

CVT at offset X'74'	LOGREC DCB
LOGREC DCB at offset 0	IORMSCOM
IORMSCOM at offset X'0C'	CCH CHANNEL ANALYSIS TABLE

Once the CCH CHANNEL ANALYSIS TABLE has been located, the location of the CPU ID varies between OS/360-370 and OS/VS1-VS2.

For OS/360-370	For OS/VS1-VS2
CCH CHANNEL ANALYSIS TABLE at offset -X'10'	CCH CHANNEL ANALYSIS TABLE at offset -X'20'

is doubleword containing information stored by the STORE CPU ID instruction. Note that this is a PREFIX to the Channel Analysis Table, and will only hold true for those machines which recognize the STORE CPU ID instruction.

**DOS/VS**

The CPU ID and serial in a DOS/VS core dump may be found by:

**SYSCOM + X'70'** pointer to the RASLINK AREA.  
The first doubleword of the RASLINK AREA is the CPU ID and serial number.

**20** APAR CODES AND DEFINITIONS

## APAR CLOSING CODES

- CAN      APAR has been cancelled
- DOC \*      Documentation error
- DUA      Duplicate of a resolved non-acceptable APAR or duplicate of an APAR which was closed more than ten days ago.
- DUB      Duplicate of resolved acceptable APAR, received within ten days of the original APAR closing.
- DUU-      Duplicate of an unresolved APAR
- MCH      Machine error
- PER \*      Program error
- PRS \*      Permanent restriction
- RET-      Closing code used for APARs which cannot be resolved without additional input from the field.
- SUG      Suggestion
- UR1 \*      Unable to reproduce (or known to be corrected) on the next release available from PID. Written against a release that was supported at the time APAR was received.
- UR2      Same as UR1, except written against a release that was not supported at the time APAR was received.
- UR3 \*      Unable to reproduce (or known to be corrected) on a currently supported release. Written against a release supported at the time the APAR was received.
- UR4      Same as UR3 except written against a release not supported at the time APAR was received.
- UR5-      Unable to reproduce on the same level system as reported. Not used if UR1-2-3-4 are more appropriate.
- USE      User error

Note: Closing codes marked with a hyphen (-) are unresolved APARs. Closing codes underlined are considered to be invalid APARs. Closing codes marked with \* are considered to be valid APAR closings.

Note: These closing codes supersede the closing codes in Memo to FE Managers, 76-49.



**21** FIELD ENGINEERING SERVICEABILITY ENHANCEMENT  
REQUEST (FESER)

The FESER is the vehicle of communication between PSRs and Field Support Locations in areas of serviceability of IBM supplied programming. It is one of the means by which the Product Division is informed of desired changes in those areas. All FESERs must be submitted on form 229-3222.

Programming areas involved are as follows:

SCP - System Control Programming  
(DOS/VS, VS1, VS2, VM)

PP - Program Products  
(executable under an SCP)

Diagnostic Programs (executable under an SCP)

Note: Not included are those programs with a service classification of "B" or those which are "back level." Also not included are those programs which are designated as "CSP."

FE Field Support will, upon receipt, screen the FESER as to validity and applicability. The FESER will then be either forwarded to the Product Division for evaluation or returned to the submitter with an explanation.

The screening or evaluation will include a check for the following items:

1. Duplicate of previously submitted FESER
2. Not sufficiently documented for investigation
3. Not generalized field need
4. Should be an APARable item, or not an item best handled by a PSRR.

Any of the above items would cause return to submitter with appropriate comments. The submitter will also be notified when or if the FESER is forwarded to the Product Division for their evaluation. A submitter should expect any one of the above responses within two months from the date written. If the Product Division evaluation results in rejection of the FESER, an answer will be returned to Field Support and in turn to the submitter. This second response will be in addition to the first one mentioned above.

For reasons of product security, it is important to note that your recommended enhancement could impact, or be impacted by, programs currently under development. Therefore, it would be inappropriate to provide you with a response indicating unannounced development efforts. In these instances, the response that you receive will normally indicate only the fact that your FESER is being considered by the Product Division and a second response will not be forthcoming.

## IBM Internal Use Only

### FIELD ENGINEERING SERVICEABILITY ENHANCEMENT REQUEST (FESER) (continued)

Time spent creating a Serviceability Aid to be submitted via the FESER process, or time-related to working with and/or debugging a FESER Aid, should be coded using Service Code 78 with an Action Code of 80.

The FESER program is not intended to replace the PSRR program (which addresses functional enhancements) but rather to provide a means for direct input to FE Field Support to assist in the determination of the necessary serviceability items to support IBM programs.

#### DISTRIBUTION AND SUPPORT GUIDELINES FOR FIELD-DEVELOPED SERVICE FACILITIES

When a FESER is accompanied by a service aid that meets an immediate field requirement, Field Support will fill that lag between the time the request is received and, if acceptable, its subsequent inclusion into the product.

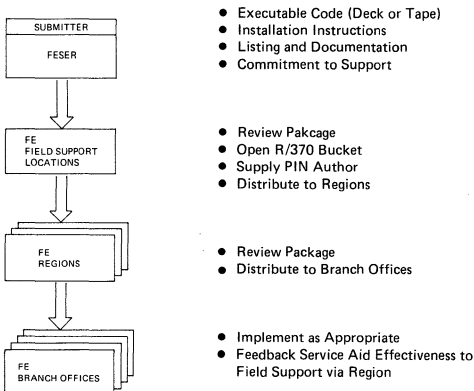
Upon submission, the service aid must consist of:

1. An executable copy of the function.
2. Description and installation procedures.
3. A commitment from the submitter to respond to problems in function and documentation.

The Field Support location will:

1. Review the package.
2. Open a unique Retain/370 bucket for fixes.
3. Provide PIN author support to the submitter.
4. Distribute to field via Regions.

Following is the structural flow of this process:



## 22 SERVICE AIDS

The following is a listing of service aids by SCP or component. The listing is intended to be used as a guide to service aid documentation. Items which have been omitted should be brought to the attention of the Process Control Group, Poughkeepsie, Dept H23, Bldg 706. Please be sure to include the service aid name, supporting documentation name, and form number.

### FIELD SUBMITTED SERVICE AIDS

Information describing Field Submitted Service Aids is maintained in Retain/370. A record, or series of records, will be used for each service aid. An index to these records may also be found in R/370.

In Search Library V1, the MSC file contains a record under the ID "SVAD-PG-XXX". This record(s) is an index to other service aid information available in R/370.

To find the index, change to Search Library V1, and select file MSC.

N:4/V1/F MSC

Then enter the following search argument.

P:SVAD PG XXX SERVICE AIDS

The service aid information may then be reviewed.

### DOS

#### *DUMPGEN*

Produces a stand-alone dump program tailored to system requirements. Refer to DOS System Control and Service, GC24-5036.

#### *LSERV*

Label cylinder display program (LSERV) displays on SYSLST the TBL, DLBL, and EXTENT information (except for secured data files) contained on the SYSRES label cylinder. Refer to DOS System Control and Service, GC24-5036.

#### *PDAID*

PDAID provides the option to trace one of the following specified events occurring during the program operation:

- Fetching or loading of other programs
- I/O activity
- Supervisor calls
- QTAM I/O activity

Refer to DOS System Control and Service, GC24-5036.

#### *TEB*

Tape error blocks are defined at SYSGEN time. Number of read/write errors occurring on a particular tape will be printed out on the console at EOJ.

Refer to DOS System Control and Service, GC24-5036.

## IBM Internal Use Only

### SERVICE AIDS (*continued*)

#### *EREP*

The EREP program edits, prints, and summarizes the data records that have been stored on the recorder file (SYSREC) by the recovery management support recorder (RMSR) function. Refer to DOS Version 4, GC24-5007.

#### *LVTOC*

The LVTOC program enables you to list out the volume table of contents of a disk pack. Refer to DOS Version 4, GC24-5007, DOS TOS Utility Programs, GC24-3465.

#### *OLTEP*

The online test executive tests allow you to test I/O devices. Refer to DOS OLTEP, GC24-5086.

#### *SEREP*

Used to record unrecoverable errors. Used when system enters an E2 wait state. Refer to DOS Version 4, GC24-5007.

#### *FOR DEBUGGING AIDS:*

Refer to DOS System Programmer's Guide, GC24-5073.

#### DOS/VS

##### *DOSVSDDMP (High-Speed Standalone Dump)*

Creates a standalone dump program which writes a storage dump in a file on tape or disk. This file can be printed during normal system operation at the user's convenience. Refer to DOS/VS Serviceability Aids and Debugging Procedures, GC33-5380.

##### *DUMPGEN*

Allows you to generate a stand-alone dump program that must be used to obtain information about the system under certain conditions of system malfunction. Refer to DOS/VS Serviceability Aids and Debugging Procedures, GC33-5380.

##### *EREP*

This program edits and prints information about hardware failures that are recorded on the system recorder file (SYSREC). Refer to DOS/VS Serviceability Aids and Debugging Procedures, GC33-5380.

##### *ESERV*

This program translates macros back to source format. Refer to DOS/VS Serviceability Aids and Debugging Procedures, GC33-5380.

**SERVICE AIDS** (*continued*)

*LSERV*

This program allows all the labels on a cylinder to be displayed, with the exception of data set secured labels. Refer to DOS/VS Serviceability Aids and Debugging Procedures, GC33-5380.

*OBJMAINT* (*Copy File and Maintain Object Module*)

A multipurpose program that:

- Copies file-to-file with blocking/deblocking.
- Updates relocatable and core image library object programs using REP cards.
- Expansion/truncation of object modules.
- Selection/exclusion of TPFs to be copied.
- Comprehensive listing of files.

Refer to DOS/VS Serviceability Aids and Debugging Procedures, GC33-5380.

*PTFHIST* - *Maintain System History*

Is used to maintain a system history as to fixes and PTFs applied. It will:

- Select PTFs from a PTF file.
- Generate job control statements to punch a backout PTF.
- Generate job control statements to update the system history.
- Lists a PTF index or job control statements within a PTF file.

Refer to DOS/VS System Utilities, GC33-5381.

*PDAID*

Used to obtain printed output of certain events which occur during the execution of programs.

- IO trace
- Fetch load trace (order in which transients are called)
- Generalized SVC trace
- QTAM trace
- VTAM trace
- VTAM buffer pool trace
- Transient dump. Dumps PTA and LTA when a program check occurs in a transient.

Refer to DOS/VS Serviceability Aids and Debugging Procedures, GC33-5380.

*POWER/VS RJE I/O TRACE*

An I/O trace for an RJE line after sign-on can be initiated by specifying "yes" to trace=IN the PRMT macro. Refer to DOS/VS Serviceability Aids and Debugging Procedures, GC33-5380.

**SERVICE AIDS** (*continued*)

*POWER/VS FILE DUMP PROGRAM*

This program enables any of the power/VS files (accounting, queue, data) to be dumped to a line printer assigned to SYSLST. An option is also provided to enable queue records and their associates track groups belonging to specific jobs to be dumped. Refer to DOS/VS Serviceability Aids and Debugging Procedures, GC33-5380.

*SDAID*

SDAIDs provide special dumping facilities that enable non-destroying dumps to be taken on the occurrence of specific events during program execution.

- Page trace
- Instruction trace
- Main storage alter
- General register trace
- Successful branch trace
- Stop and dump on specified events

Refer to DOS/VS Serviceability Aids and Debugging Procedures, GC33-5380.

*SYSVIS DUMP*

Copies the contents of the page data set (PDS) contained on the system logical unit SYSVIS onto magnetic tape or disk. Refer to DOS/VS Serviceability Aids and Debugging Procedures, GC33-5380.

*SEREP*

A self-loading stand-alone used to write the logout from real storage to some storage device and to perform a hard-copy edit print of the logout. Refer to DOS/VS Serviceability Aids and Debugging Procedures, GC33-5380.

*VTOC DISPLAY PROGRAM*

This program enables you to print out the volume table of contents of a DASD disk pack. Refer to DOS/VS Serviceability Aids and Debugging Procedures, GC33-5380.

*PDZAP*

Enables the alteration to programs cataloged in a system or private core image library. Refer to DOS/VS Serviceability Aids and Debugging Procedures, GC33-5380;

*IKQVDU*

The service aid assists in maintaining the VTOC and VOL1 labels on DASD devices. Refer to DOS/VS LIOCS Volume 4 VSAM Logic Rel 29 and 30, SY33-8562.

**SERVICE AIDS** (*continued*)

*OLTEP*

The online test executive program allows you to test I/O devices. Refer to DOS/VS OLTEP Reference, GC33-5383.

*TOLTEP*

The teleprocessing online test executive program is the interface between the online test programs and VTAM. TOLTEP controls the selection and execution of the OLTs used for testing TP terminals via VTAM. Refer to DOS/VS and OS/VS TOLTEP for VTAM, GC28-0663. For debugging aids see DOS/VS Serviceability Aids and Debugging Procedures, GC33-5380.

*VM/370*

*FORMAT/ALLOCATE SERVICE ROUTINE*

This is a stand-alone program which will:

- Format all or parts of a DASD device.
- Allocate DASD space.
- Create volume labels.

Devices supported are the 2314, 3330, 3340, and the 2305. Refer to VM/370 Service Routines, SY20-0882.

*IBCDASDI*

The IBCDASDI program initializes virtual disks. Refer to VM/370 Service Routines, SY20-0882.

*VMFDUMP*

VMFDUMP creates the CMS dump file on disk and formats and prints the CMS dump files. Refer to VM/370 Service Routines, SY20-0882.

*DIRECTORY SERVICE PROGRAM*

The directory program builds the VM/370 directory on a volume previously formatted by the format allocate program using cylinders which were previously allocated for use as directory space. Refer to VM/370 Service Routines, SY20-0882.

*DASD DUMP RESTORE PROGRAM*

This program executes under CMS via the DDR command. It performs five functions for DASD devices.

- Dump
- Restore
- Copy
- Print
- Type

Refer to VM/370 Service Routines, SY20-0882.

## IBM Internal Use Only

### SERVICE AIDS (continued)

#### ZAP SERVICE PROGRAM

The program (DMZAP) executes under control of CMS via the ZAP command. It performs three functions for LOADLIB, TXTLIB, and module files residing on DASD devices. The functions are:

- Dump
- Verify
- Replace

Refer to VM/370 Service Routines, SY20-0882.

#### CPEREP

This module is an interface which allows a CMS virtual machine user to edit and print VM/370 error recordings via the EREP edit and print program. CPEREP also clears the VM/370 error recording cylinders. Refer to VM/370 Service Routines, SY20-0882.

#### IVP PROGRAM

The installation verification procedure for VM/370 is designed to exercise the generated system to verify that basic VM/370 facilities are operable. Refer to VM/370 Service Routines, SY20-0882.

#### CP TRACE FUNCTION

Use the trace command to trace virtual machine activity and to record the results at the terminal, on a spooled printer or on both. Activities which can be traced are:

- SVC
- I/O
- Program
- External
- PRIV
- SIO
- CCW
- Branch
- Instruct
- All
- CSW

Refer to VM/370 System Programmers Guide, GC20-1807.

#### COMMAND SUMMARY

All VM/370 commands are contained in a quick reference card. Refer to Quick Guide for Users, GX20-1969.

\*\*Additional diagnostic information may be found in the System Programmers Guide.

#### TCAM

OS and VS TCAM Level 5 and 6.



## IBM Internal Use Only

### SERVICE AIDS (continued)

#### *BUFFER TRACE*

This service aid dumps TCAM buffer contents and status to a sequential data set. You can only trace buffers for a line being traced by the line I/O interrupt trace. Refer to OS TCAM Users Guide, GC30-2025.

#### *COMWRITE*

A TCAM routine named COMWRITE writes the I/O interrupt trace, the subtask trace, the buffer trace, the BTU trace, and the 3705 line trace table onto a sequential data set named COMWRITE. Refer to OS TCAM Users Guide, GC30-2025.

#### *TCAM ABEND DUMP*

Abend/snap storage dumps occur immediately after an abnormal termination, provided that the control program or problem program has issued an abend or snap macro instruction, or when the operator issues a cancel command that requests a dump and the proper dump data sets have been defined. Refer to OS TCAM Users Guide, GC30-2025.

#### *QUE DUMP FACILITY (IEDQXC)*

A TCAM utility program which prints a formatted dump of all traffic directed to stations with disk queuing. Refer to OS TCAM Users Guide, GC30-2025.

#### *BTU TRACE*

This TCAM service aid sequentially records the basic transmission units (BTU) that are sent to and received from a 3705 for each line for which it is active. Refer to OS TCAM Users Guide, GC30-2025.

#### *3705 LINE TRACE*

The line trace function performs a diagnostic and debugging service. It causes certain fields in the interface control word (ICW) to be stored at each level 2 interrupt on any designated line in the 3705. Refer to OS TCAM Users Guide, GC30-2025.

#### *STCB TRACE*

This service aid records the flow of all dispatched elements. It shows where elements go in the TCAM system and which subtasks work on them. Refer to OS TCAM Users Guide, GC30-2025.

#### *I/O TRACE*

This service aid sequentially traces all I/O interrupts that occur on a specified line. Refer to OS TCAM Users Guide, GC30-2025.

#### *VS TCAM LEVEL 8*

#### *STCB TRACE*

The dispatcher subtask trace table keeps a sequential record in main storage of the subtasks activated by the TCAM dispatcher. Refer to: For VS1 OS/VS1 Programmers Guide, GC30-2054; For VS2 OS/VS2 Programmers Guide, GC30-2041.

## IBM Internal Use Only

### SERVICE AIDS (continued)

#### I/O TRACE

The TCAM line I/O interrupt trace table provides a sequential record in main storage of the I/O interrupts occurring on a specified line. Refer to: For VS1 OS/VS1 Programmers Guide, GC30-2054; For VS2 OS/VS2 Programmers Guide, GC30-2041.

#### BUFFER TRACE

This facility permits TCAM buffer contents and status information to be dumped to a data set residing on magnetic tape or on disk. Refer to: For VS1 OS/VS1 Programmers Guide, GC30-2054; For VS2 OS/VS2 Programmers Guide, GC30-2041.

#### COMEDIT

This utility (IEDQXB) is a separate job or job step that formats and prints in hex the specified output from the COMWRITE data set. Refer to: For VS1 OS/VS1 Programmers Guide, GC30-2054; For VS2 OS/VS2 Programmers Guide, GC30-2041.

#### TCAM ABEND DUMP

A TCAM formatted abend dump is taken of the TCAM MCP memory or region that terminates abnormally. This abend dump formats TCAM control areas and attached subtasks. Refer to: For VS1 OS/VS1 Programmers Guide, GC30-2054; For VS2 OS/VS2 Programmers Guide, GC30-2041.

\*The Diagnostic Aids section of the TCAM Logic Manual contains several tables that should be useful in debugging a TCAM system.

### NCP SERVICE AIDS

#### PANEL SUPPORT ROUTINES

The routines process requests from the 3704, 3705 control panels. They are the panel display control update/refresh routine (CXCCPDRS), the panel test routine (CXPNLTST), the panel display routine (CXCCPDSP), and the panel monitor routine (CXCCPMON). Refer to 3704-3705 Communications PLM, SY30-3007, 3704-3705 Communications PLM Version 4, SY30-3013, 3704 Control Panel SRL, GA27-3086, and 3705 Control Panel SRL, GA27-3087.

#### LINE TRACE

The line trace function is an optional diagnostic and debugging aid that stores certain fields from the interface control word (ICW) each time a level 2 interrupt occurs on a designated line. Refer to 3704-3705 Communications PLM, SY30-3007, 3704-3705 Communications PLM Version 4, SY30-3013, 3705 Emulation Logic, SY30-3001, and 3704/3705 Program Reference Handbook, GY30-3012.

#### ADDRESS TRACE

A service aid by which the contents of selected areas of communications controller storage and selected external registers can be recorded at each successive level 1 address trace interrupt. Refer to 3704-3705 Communications PLM, SY30-3007, 3704-3705 Communications PLM Version 4, SY30-3013, 3704/3705 Program Reference Handbook, GY30-3012, and 3705 Emulation Logic, SY30-3001.

**IBM Internal Use Only**

**SERVICE AIDS** (*continued*)

*CHANNEL TRACE NCP3 ONLY*

This is an optional diagnostic and debugging aid that stores certain fields from the channel control block (type 2/3 CA) or channel operation block (type 1CA) into a trace table. Refer to 3704-3705 Communications PLM Version 4, SY30-3013.

*DYNADUMP - EMULATOR SERVICE AID*

Provides a dynamic dump of emulator storage. Refer to 370X Emulator PLM, SY30-3001.

**OS SERVICE AIDS**

*SMP*

The system modification program is the vehicle via which modifications (PTF, ZAPs) are inserted into the system. Refer to OS/VS SMP SRL, GC28-0673, OS/VS SMP Logic, SY28-0685.

*OLTEP*

The online test executive program enables you to run online test programs under the System/360 Operating Program. These programs test channels, control units, I/O devices, and TP terminals. Refer to Online Test Executive Program SRL, GC20-6650.

*IMDSADMP*

This is a stand-alone dump that dumps the contents of main storage to tape or printer. Refer to OS Service Aids, GC28-6719 and OS Service Aid Logic, SY28-6721.

*IMDPRDMP*

This service aid prints and formats system dump and trace information. Refer to OS Service Aids, GC28-6719 and OS Service Aid Logic, SY28-6721.

*IMASPZAP*

This service allows the user to inspect and modify instructions and data in any load module that exists as a member of a partitioned data set. Refer to OS Service Aids, GC28-6719 and OS Service Aid Logic, SY28-6721.

*IMBLIST*

This service aid formats and prints object modules, load modules, and CSECT identification records. Refer to OS Service Aids, GC28-6719 and OS Service Aid Logic, SY28-6721.

*IMDMDMAP*

This service aid allows mapping of a system's nucleus, load modules in a MVT link-pack area or load modules previously link edited into a partitioned data set. Refer to OS Service Aids, GC28-6719 and OS Service Aid Logic, SY28-6721.

## IBM Internal Use Only

### SERVICE AIDS (*continued*)

#### *IMCJQDMP*

This service aid operates as a stand-alone program to format and print the system job queue. Refer to OS Service Aids, GC28-6719 and OS Service Aid Logic, SY28-6721.

#### *IMCOSJQD*

This service aid operates as a problem program. It is used to format and print the system job queue without interrupting normal processing. Refer to OS Service Aids, GC28-6719 and OS Service Aid Logic, SY28-6721.

#### *MFTGTF - MVTGTF*

The generalized trace facility allows tracing of selected system events. Events which may be traced:

- I/O interrupts
- SIO
- SVC interrupts
- Program interrupts
- External interrupts
- Dispatcher task switch operations

Refer to OS Service Aids, GC28-6719 and OS Service Aid Logic, SY28-6721.

#### *IFCDIP00*

This service aid is used to initialize the SYS1.LOGREC data set. SYS1.LOGREC space allocation may also be modified by using IFCDIP00. Refer to OS Service Aids, GC28-6719 and OS Service Aid Logic, SY28-6721.

#### *IFCEREPO*

EREP is used to summarize and print record from the SYS1.LOGREC data set. Refer to OS Service Aids, GC28-6719 and OS Service Aid Logic, SY28-6721.

#### VS1

#### *GTF*

The generalized trace facility allows tracing of selected system events. Events which may be traced:

- I/O interrupts
- SIO
- SVC interrupts
- Program interrupts
- External interrupts

Refer to OS/VS1 Service Aids, GC28-0665.

#### *IMCJOBQD*

This service aid operates as a problem program. It is used to format and print the system job queue without interrupting normal processing. Refer to OS/VS1 Service Aids, GC28-0665.

**IBM Internal Use Only**

**SERVICE AIDS** (*continued*)

**HMBLIST**

This service aid formats and prints object modules, load modules, and CSECT identification records. Refer to OS/VS1 Service Aids, GC28-0665.

**IMCOSJQD**

This service aid operates as a problem program. It is used to format and print the system job queue without interrupting normal processing. Refer to OS/VS1 Service Aids, GC28-0665.

**HMDPRDMP**

This service prints and formats system dump and trace information. Refer to OS/VS1 Service Aids, GC28-0665.

**HMSADMP**

This is a stand-alone dump which will dump the contents of main storage to tape or printer. Refer to OS/VS1 Service Aids, GC28-0665.

**HMASPZAP**

This service aid allows the user to inspect and modify instructions and data in any load module that exists as a member of a partitioned data set. Refer to OS/VS1 Service Aids, GC28-0665.

**HMASMP**

The system modification program is a vehicle via which modifications (PTF, ZAPs) are inserted into the system. Refer to OS/VS1 Service Aids, GC28-0665.

**TRACE FACILITY**

This service aid traces line device control tables (DCT) and I/O buffers at channel-end time. Refer to OS/VS1 RES Programmers Guide, GC28-6878.

**JESDUMP**

This service aid provides selective, non-destructive real storage dump of JECS, SWADS manager and job list manager lists errors. Refer to OS/VS1 Job Management Logic, SY24-5161.

**JOB LIST VERIFICATION**

This program can be used when a system error or failure is caused by an error in the resident job list. Refer to OS/VS1 Job Management Logic, SY24-5161.

**IBM Internal Use Only**

**SERVICE AIDS** (*continued*)

**OS/VS2**

*GTF*

The generalized trace facility allows tracing of selected system events. Events which may be traced:

- I/O interrupts
- SIO
- SVC interrupts
- Program interrupts
- External interrupts

Refer to OS/VS2 Service Aids, GC28-0633 and OS/VS2 Service Aid Logic PLM, SY28-0643.

*AMASPZAP*

This service allows the user to inspect and modify instructions and data in any load module that exists as a member of a partitioned data set. Refer to OS Service Aids, GC28-0633 and OS Service Aid Logic, SY28-0643.

*AMDPRDMP*

This service aid prints and formats system dump and trace information. Refer to OS/VS2 Service Aids, GC28-0633 and OS/VS2 Service Aid Logic, SY28-0643.

*AMBLIST*

This service aid formats and prints object modules, load modules, and CSECT identification records. Refer to OS/VS2 Service Aids, GC28-0633 and OS/VS2 Service Aid Logic, GC28-0643.

*AMDSADMP*

This is a stand-alone dump which dumps the contents of main storage to tape or printer. Refer to OS/VS2 Service Aids, GC28-0633 and OS/VS2 Service Aid Logic, GC28-0643.

*JOBQD*

This service aid operates as a stand-alone program to format and print the system JOBQ. Refer to OS/VS2 Service Aids, GC28-0633 and OS/VS2 Service Aid Logic GC28-0643.

*OLTEP*

The online test executive program enables you to run online test programs under the System/360 Operating Program. These programs test channels, control units, I/O devices and TP terminals. Refer to OS/VS2 OLTEP SRL, GC28-0636 and OS/VS2 OLTEP Logic Error Recording Logic PLM, SY28-0637.

*SMP*

The system modification program is a vehicle via which modifications (PTF, ZAPs) are inserted into the system. Refer to OS/VS SMP SRL, GC28-0673 and OS/VS SMP Logic, SY28-0685.

## IBM Internal Use Only

### SERVICE AIDS (continued)

#### IMS

##### SYSTEM LOG TAPE

Records checkpoint data and various diagnostic traces of dynamic activities under control of console commands. Refer to System Manual Volume 1, LY20-8004.

##### SYSTEM LOG PRINT UTILITY

Formats and edits log trace records. Refer to IMS Utilities, SH20-9029 and System Programming Reference, SH20-9027.

##### DL/I LIST PROGRAM

For simulating application program calls and to recreate failures. Refer to System Programming Reference, SH20-9027.

##### MODIFIED PROGRAM REQUEST HANDLER (MPRH)

Converts application program calls into the format required by the DL/I program and punches the required control cards. Order from Emergency Parts Center (EPC), Part number 5740-XX2-S0001 or S0002.

##### FORMAT BLOCK ANALYSIS PROGRAM (FBAP)

Used to analyze 3270 control blocks version 1.0. Order from Emergency Parts Center (EPC) Part number 5734-XX6-S0003 (IMS/OS and IMS/VS).

##### DFS13270 CSECT

Adds the function of printing sense/status messages when received from a remote 3270 (version 1.0). Order from Emergency Parts Center (EPC) Part number 5734-XX6-S0003.

##### LOG TRANSACTION ANALYSIS PROGRAM

Collects information about individual occurrences of transactions. Refer to Systems Programming Reference, SH20-9027.

##### CALL IMAGE CAPTURE

This records all DL/I calls issued against a specified PSB in an online or batch environment. Output will be in a format acceptable to the DL/I test program. Available with IMS Release 114 PTF 2 (UP11113) and previously referred to as the "Modified Program Request Handler." Refer to IMS Program Logic Manual, Volume 3, LY20-8041.

##### CONSOLIDATED TRACE

This consolidates the Buffer Handler trace table, the HD Space Management trace table and the Scheduler trace table into a unified structure. Refer to IMS Program Logic Manual, Volume 3, LY20-8041.

##### IMS FORMATTED DUMP

This formats the control blocks and data areas in an IMS region. The areas formatted are broken into the system area, the DB area, and the DC area. Refer to IMS Program Logic Manual, Volume 3, LY20-8041.

23 Sterling Forest Field Support Center (SFFSC)

The SFFSC prepares the Preventive Service tape called PUT (Program Update Tape). The PUT contains both SCP service as well as service for designated licensed programs. A job-stream and related installation documentation is also supplied on the tape. This PUT, in conjunction with the RETAIN/370 entries, assists in the application of Preventive Service.

The SFFSC maintains a Call Management Queue accessed via the IBM Support Center.

To retrieve PUT information from the RETAIN Search file:

XXXX UY YYY      XXXX = Four Digit Program ID  
U = Update  
YYYY = PUT Number



SU (SELECTABLE UNITS) IDENTIFICATION

## MVS 3.7

SUs are identified in the CDS and ACDS data sets for SMP, in-core for the debugger, in manuals for documentation users, in microfiche for debuggers, on APARs for RETAIN and Change Teams, and on PSARs for tracking.

- SMP:** In the CDS and ACDS data sets used by SMP, an SU is identified by a PTF entry in the 80000 series. The format is UZ8XX00 where XX is for SU number. For example, UZ81700 is for SU17.
- In Core:** The SU installed is indicated IN-CORE by a bit having been turned on specifically for that SU. In the SU-bit-string, the first bit is for SU 0, the second bit is for SU 1, etc. The SU-bit-string is in the same CSECT as the CVT and is pointed to by CVTIHASU (CVT + X'414').
- Manuals:** Each page of a manual that is changed by a TNL related to an SU is identified. The format of the ID is 'VS2.03.8XX', where the XX is the SU number.
- Microfiche:** SUs are identified in microfiche as a unique release level of a module. Again, the format is XXX where XXX is the SU number. For example, SU2 is identified as release 802 in the microfiche (both in the cross system index and on each related card).
- APAR:** On an APAR if an SU is involved in the component being APARed, it is indicated in the component level field. The format of the entry is XXX where XXX is the SU number.

**Notes:**

## SU TNLS

TNLS will be issued for those manuals which are affected by the new function of each SU. As previously mentioned, each page of the TNL is marked with an ID to indicate which SU is involved. When filing these TNLS do NOT remove any pages from the base document. The old index and old table of contents can be removed. Leaving all pages in the document will cause duplicate page numbers (one base level and one SU level), but this lease the base information in the manual in case the SU is not accepted into the DLIBs. After all systems being supported by the library are at the SU level, the duplicate base level pages can be removed from the manuals.

## SU Microfiche

Beginning with Release 3.7, all new MVS system microfiche will be in the high density, compact fiche format. This will also be true for SUs.

Each SU will TNL those microfiche components in which the new function changes modules. These changes will be reflected in the cross system microfiche index (JSD2-6197) as a new release level (XX) of the changed modules.

Filing the SU file TNLS is simply a matter of placing the TNLS in card number order at the back of the existing high-density compact fiche for each affected component.

Enhanced SUs of MVS 3.8 are identified in the CDS by a new format:

T P P V R F F

T = The Type of Package

E = SCP

F = Feature to SCP

H = Licensed Product

J = Feature to Licensed Product

PP = The Product Identifier

V = The Version of the Product

R = Product Release Number

FF = Product Feature Number

Examples:      EBB1102 - MVS Supervisor  
                 EDM1102 - MVS Data Management  
                 ESY1400 - SMP Release 4

### Enhanced SU Microfiche Considerations

Microfiche for MVS is totally replaced and updated to reflect the integrated service and SUs in MVS 3.8.

It is in high-density, compacted format and requires an index to locate the proper version of a module. As in the past, this index is separately orderable and available from Mechanicsburg via SLSS subscription. The Title Backing Colors are red, blue, and buff. Red will be used for the SCP Structured SUs, blue will be used for licensed enhancements, and buff for the SCP enhancements.

The microfiche is now packaged by Structured SU -- no longer by component; thus, there are fewer form numbers to deal with. The modules are sorted alpha-numeric within the package and, as mentioned before, must be located by using the microfiche index. Since multiple components are now packaged together, the microfiche index should also be used to identify the proper component of a module.

The microfiche index number for MVS 3.8 is SJD2-6244.

## DOS/VS RELEASE 34.0 'SCP LIKE' PRODUCT IDENTIFICATION

DOS/VS 'SCP like' products, or known as SUs in MVS, are identified in the Y.PTFSCP history book for MSHP and APAS, in storage for the debugger, in manuals for documentation users, in microfiche for debuggers, on APARs and PTFs for RETAIN/370 and Change Teams and on PSARs for tracking.

**MSHP and APAS:** In the Y.PTFSCP history book used by MSHP and APAS, a DOS/VS 'SCP like' product is identified by a PTF entry in the 70000 series. The format is N7XX00 where 7XX is the numeric equivalent of the component level assigned to the specific product. For example, N70300 is for the DOS/VS ACF/VTAM, PP part.

Component levels are assigned the range of 7XX for unlicensed products and GXX for licensed products. See note.

**In Storage:** The assigned component level, for new and changed modules, will be appended to the module name DC that is located at the beginning of modules. This will assist in localizing a problem to a specific product.

**Manuals:** TNLs will be issued for those manuals which are affected by the new function of each product. When filing TNLs, do not remove any pages from the base document. Leaving all pages in the document will cause duplicate page numbers, but this leaves the base information in the manual for servicing those specific customers.

**Microfiche:** DOS/VS 'SCP like' products are identified in microfiche as a unique release level of a module. The format is 7XX, where 7XX is the component level number for unlicensed products, or GXX for licensed products. For example, DOS/VS Advanced Functions Release 1.0 is identified as Release 701 in the microfiche (both in the system index and on each related card). Microfiche will be provided by component for new and changed modules only.

**APAR:** On an APAR if a specific DOS/VS 'SCP like' product is involved in the component being APARed, it is indicated in the component level field. The format of the entry is 7XX, where 7XX is the component level for unlicensed products, and GXX for licensed products.

APARs in RETAIN/370 and Early Warning System microfiche are identified by the keyword 'R7XX' or 'RGXX', where 7XX is the component level for unlicensed products and GXX for licensed products. This will allow for inclusion or exclusion of APARs in RETAIN/SSF operations, and will indicate the level of the component experiencing the problem.

The component level will be indicated in the 'SU DATA' portion of SSF APAR record, only if the problem is caused by new or changed lines of code in that specific level of the module/macro.

PTFs: PTFs applicable to a specific DOS/VS 'SCP like' product are identified by using the assigned component level in Applicable Release and the numeric equivalent of the component level in the Prerequisite Control Statements. For example, 701 in the Applicable Release Statement and N70100 in the Prerequisite Statement would indicate the PTF is applicable to a DOS/VS R34 system that has DOS/VS Advanced Functions Release 1.0 installed. Conversely N70100 in the 'NPRES' control statement would indicate that the PTF must not be applied to an Advanced Functions 1.0 system. Additional comments on applicability are part of the Environment Control Statement.

PTFs in RETAIN/370 and Early Warning System microfiche are identified as follows:

ARXX = indicates those component levels which are prerequisites for application of the PTF. The search argument of ARG03 will, therefore, give a list of all PTFs applicable to DOS/VS ACF/VTAM, PP part.

NARXXX = indicates those component levels which are negative prerequisites for application of the PTF.

PSARs: Record the numeric equivalent of the component level for the latest PID available product installed on your system. For example, G03 must be converted to 703.

Recording is done in the release block of the PSAR, for defect and non-defect oriented problems.

Note: An exemption to the component level identification is DOS/VS Advanced Functions Release 1.0, which uses a component level of 701.

IBM INTERNAL USE ONLY

LEVEL ONE

All IBM support center traffic is Call Management controlled.

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Dispatch Operators

- Check Access Code
- Determine service required: Software, Hardware, Data Link (for Software, state component and/or operating system)

Dispatch Call

Control Desk

- Complaint Handling
- Access Code Verification
- Procedure Questions

Status Desk

- Requeue to Level Two
- Update and close Incidents
- Call Management Update
- Call Management Queue Info
- APAR Status
- PTF Status from PTF Request Record

Software Queues

- Component Defined
  - RETAIN Symptom Search
  - Hardcopy Info
  - APAR Actions
  - 'How To' Info
  - Pin Authorship for selected Components
- Response Control Monitor

Data Link Software

- Data Link Info
- Data Link Test
- CPU Registration
- Downline Transfer from Data Link Library

Hardware Queue

- Category 3 Products: RETAIN Symptom Search, Parts, E/C, and Hardcopy Info
- Category 4 Products: Parts, E/C, and Hardcopy Info

IBM SUPPORT CENTER OPERATIONS

Offshift Operations

- Same as Prime Shift but with reduced staff
- FSC Interfaces for selected Hardware Products
- Call out SPR or Patch to SPR for Diagnostic Assistance (Severity One Only)

LEVEL TWO

Component SPRs

- Calls with component defined and caller has supporting Doc.
  - Indepth Diagnostic Assistance
  - Corrective Service for High Impact Problems
  - Prescreening for all APARs
  - APAR Mailing Assistance

IBM INTERNAL USE ONLY

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SYSTEM IPO CONSIDERATIONS

- I. OVERVIEW
- II. PREVENTIVE SERVICE
- III. SUPPORT
- IV. RETAIN ACCESS/MICROFICHE

I. OVERVIEW

A System Installation Productivity Option (System IPO) consists of an integrated set of software components that are preconfigured, pregenerated and preallocated with preapplied service, and are ready to run in a specific operating environment. Optional software products are available as System IPO features. These features are complementary programs that are ordered separately but which are synchronized with the integrated set of components. These independently available features allow the user to easily customize a system for his own unique needs.

A System IPO is designed to ease the installation, servicing and use of IBM products. Recent additions include the Interactive Productivity Facility licensed program which contains interactive dialogues to help users of DOS/VSE, VM, or VM/DOS/VSE interactively perform system related functions.

Samples and examples are included to illustrate how the products delivered via a System IPO work together and to verify product interfaces.

The specific products contained within an individual System IPO are indicated in the programming announcement for each new release.

II. PREVENTIVE SERVICE

A. System Installation

A System IPO contains the most recently available preventive service when shipped from the IBM Programming Information Department (PID). Depending on the System IPO, this service is pre-applied and/or included for subsequent application. A System IPO contains information about this service.



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In addition, IBM Field Engineering should be contacted immediately prior to System IPO installation to get:

- The preventive service PTF exclude list for the System PUT included with the OS/VS System IPO
- The corrective service disposition for high impact problems identified in the System IPO RETAIN bucket
- A copy of the System IPO installation information/tips from RETAIN

For the users of Class 1 SCP's, the FE contact is the IBM support center.

B. Preventive Service Updates

The System PUT is the primary vehicle used to deliver preventive service to users of IBM products. The System PUT delivers preventive service in the same way to users of IBM product independent of the use of System IPO.

The Interactive Productivity Facility licensed program contained in a System IPO/E provides interactive dialogues that assist in the installation of preventive service for DOS/VSE, VM/370, and VM/DOS/VSE System IPO/E users.

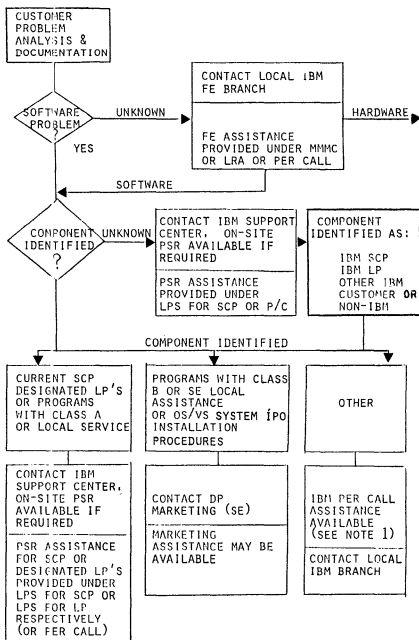
III. SYSTEM IPO SUPPORT CONSIDERATIONS

- A. The System IPO is an installation aid containing:
- multiple products.
  - installation procedures.
- B. The products within a System IPO receive announced Field Engineering support.
- C. Installation procedures for products in the DOS/VSE, VM/370 and VM/DOS/VSE System IPO/E's are included in the Interactive Productivity Facility licenses program which has central service and local FE support.
- D. Installation procedures for products contained in the OS/VS System IPO's have no service classification. They are:
- RETAIN supported at install.
  - Not APARable (No service classification).
  - Supported for problem reporting by a feedback form available as part of the System IPO documentation.
- E. The following figure is a conceptual overview showing software problem analysis flow. Note that products have identical support procedures independent of the use of System IPO for installation.

III. SYSTEM IPO SUPPORT CONSIDERATIONS (CONTINUED) IBM INTERNAL USE ONLY

E. (CONTINUED)

SOFTWARE PROBLEM ANALYSIS FLOW OVERVIEW  
(FOR USERS OF IBM MACHINES RUNNING A CLASS 1 SCP)



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III. SYSTEM IPO SUPPORT CONSIDERATIONS (Continued)

E. (Continued)

Terminology:

MMMC - IBM maintenance agreement

LRA - Agreement for lease or rental of IBM machines

LPS for SCP - Agreement for Local Program Support for System Control Programming on IBM machines

LPS for LP - Agreement for Local Program Support for IBM Licensed Programs

P/C - Per call

NOTE 1: If an IBM program has central service, IBM will respond to customer submitted APARs without separate charge. If an IBM program has central service and IBM support center, the IBM support center will assist with APAR preparation. Otherwise, assistance without separate charge for APAR preparation is available from IBM only for those programs that are Class A, Class B, or that have local service or local assistance.

IBM INTERNAL USE ONLY

IV. RETAIN ACCESS/MICROFICHE

System IPO information is contained in the IBM Field Engineering RETAIN system. The RETAIN keys are as follows:

DOS/VSE System IPO/E	
- Batch/Interactive	5750-AA-C00
- DC	5750-AA-B00
- DB/DC	5750-AA-A00
VM/370 System IPO/E	5750-AA-D00
VM/DOS/VSE System IPO/E	
- DC	5750-AA-F00
- DB/DC	5750-AA-E00
VSl System IPO	5750-AA-800
MVS System IPO	5750-AA-200
MSE System IPO	5750-AA-700

All of the System IPO machine readable documents, including features, are available on microfiche from Mechanicsburg for IBM internal use. Order numbers are as follows:

DOS/VSE System IPO/E	ZZB0-4257
VM/370 System IPO/E	ZZB0-4258
VM/DOS/VSE System IPO/E	ZZB0-4259
VSl System IPO	ZZB0-4254
MVS System IPO	ZZB0-4251
MSE System IPO	ZZB0-4256

# IBM Internal Use Only

## DOCUMENTATION REQUIREMENTS

### INTRODUCTION

This section deals with the *documentation requirements* when:

1. Referring calls to the Field Support Call Management Queues and,
2. For identifying what material must be submitted with each APAR.

The information in this section was the input of the Field Support location that handles that respective component.

To use this section, locate, in the Contents, the component being dealt with, turn to that page which represents the component, and on the basis of what type of problem is being experienced, determine what pieces of documentation are needed to be supplied to the SPR or with the APAR. Each piece of documentation is *Required* unless identified with the word "Optional" in parenthesis.

Proper use of this guide will enable the PSR to provide Field Support/Change Team with the documentation they need to resolve the problem satisfactorily.

Components with common requirements will be grouped together in the text and bracketed together in the Contents.

This "documentation" information is currently available in:

1. Early Warning Microfiche (EWS)
2. RETAIN/SEARCH (OSA File)

### GENERAL DOCUMENTATION

1. List of applied service at the time of the failure (PTF List).
2. All job-related output.
3. PSR should be aware of any user mods, user exits, and products with other than Class A service that are included in his system.

ASP

360A-CX-15X

- Necessary documentation on all problems:
  1. MLOG or DLOG for period of time encompassing failures should be sufficient history to establish failing environment.
  2. ASP formatted dump of support processor for all problems which result in ASP termination, wait, loop or failsoft condition.
  3. Listing of applied maintenance (MCADATA)
  4. INISH deck listings.
  5. Detailed description of problem.
  6. Listing of any user modified modules in the affected area.
  
- A. MAINTASK problems:
  1. If problems with MAINTASK are encountered that do not result in an abend, issue the following command:  
\*F MT,SNAP - this will cause a snap dump of MAINTASK. Any other failures require an OS SADMP.
  
- B. IOS problems:
  1. Standalone dump of failing OS system.
  2. IMBMDMAP or IMBLIST of OS nucleus.
  3. Listing of fixes and PTFs applied to IOS.
  
- C. ASP initialization problems:
  1. Listing of ASPOUT data set.
  2. Dump system using INTDEBUG service aid.
  
- D. Input service problems:
  1. If bad control blocks are suspected, rerun the failing job using `//*PROCESS CBPRINT` and `//*PROCESS PRINT` cards.
  2. If problems with ASPs processing of jobs JCL, rerun the failing job with a `//*FORMAT PR,DDNAME=JCLIN` to print job's JCL.
  
- E. DJC problems:
  1. Get output of DISPDJC.
  2. Description of DJC network and all `//*NET` cards.
  
- F. RJP problems:
  1. Turn on MLOG trace facility for failing line.
  2. Run RJSNPS service aid.
  
- G. Generalized MAIN scheduling problems:
  1. Issue the following commands for all MAINS:
    - \*F SYX, SELALL
    - \*F SYX, CLASSES
    - \*F SYX, GROUPS
  2. Get a display listing.
  3. Modify select to `DISPLAY=MLOG`

## IBM Internal Use Only

### H. MDS problems:

1. If improper JCL handling is suspected, rerun the failing job with //EXEC PGM=JSTTEST.
2. Issue the following commands for all MAINS:

```
*F SYX, SELALL
*f SYX, CLASSES
*f SYX, GROUPS
*f SYX, SNAPS
```

3. If improper device selection is suspected, modify.

### I. Reader interpreter problems:

1. Rerun the failing job //\*\*PROCESS RICONTL //\*\*PROCESS CBPRINT //\*\*PROCESS PRINT and //EXEC PGM=JSTTEST.
2. If R/I abends submit both of R/I program check dump and DM134 dump.
3. Supply information on R/I user exits.

Note: Any failure which causes the system to become inoperable, requires an OS standalone dump formatted with the ASP modified IMDPRDMP service aids. Also any CTC problems require a standalone dump of both systems.

## HASP

360D-51-014

- Necessary documentation on all problems:

1. See the general documentation requirements.

## 3705 EP SUPERVISOR

360H-TX-033

- Necessary documentation on all problems:

1. Maintenance list - Release of EP, PTFs applied to EP, PTFs applied to SSP, S/ZAPS applied.
2. Configuration list - Type of 3704/3705 (I or II), type of channel adapter(s), type of scanner(s).

- Documentation according to problem description:

#### A. Load of EP Intro 3704/3705 fails:

1. Standalone dump of 3704/3705
2. GTF/CCW trace of host (**Optional**)

#### B. Interface or channel control checks:

1. Standalone dump of 3704/3705
2. Level 2 and level 3 line trace of EP at time of failure
3. GTF/CCW trace of host (**Optional**)

#### C. Hardstop/program check:

1. Dump of 3704/3705 at time of failure
2. Level 2 and level 3 line trace of EP at time of failure (**Optional**)



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- D. Performance Problems:
  - 1. Dump of 3704/3705 at time of degraded performance
  - 2. Level 2 and level 3 line trace of EP during degradation
- E. General 3704/3705 Internal Failures (Bad Sense, Line Failures, Modem Sequence Problems, Data Sensitive Failures, EP Looping, Incorrect PCF States)
  - 1. Level 2 and level 3 trace at time of failure
  - 2. Dump of 3705 - Either STANDALONE or DYNADUMP
  - 3. GTF/CCW trace of host at time of failure (**Optional**)
  - 4. Specify line speed, MODEM and terminal type, conditions prior to failure.
- F. Host SSP Failures (Assembler, Dynamic and STANDALONE dumps)
  - 1. Dump of the failing module in host
  - 2. Output listings displaying failure symptoms

### NCP/OS 360H-TX-034

- Necessary documentation on all problems:
  - 1. Maintenance list
- Documentation according to problem description:
  - A. Load problems:
    - 1. Host dump of SSP loader program
    - 2. 370X dump
    - 3. I/O trace - GTF/CCW
    - 4. Load JCL
    - 5. Stage 1 and 2 listings (**Optional**)
  - B. Dump problems:
    - 1. Dump JCL
    - 2. SYSUDUMP of the SSP. Host dump of SSP dump program
  - C. Trace problems:
    - 1. Console sheet and explanation of traces used with trace JCL, if applicable
    - 2. SYSUDUMP of the SSP
    - 3. Host dump of SSP trace program
  - D. CCU check problems:
    - 1. 370X dump
    - 2. 370X panel indications. Display status through panel and record.
  - E. Drop into Load State Problems:
    - 1. 370X dump
  - F. NCP ABEND problems:
    - 1. 370X dump
    - 2. PIU/BTU trace (**Optional**)
    - 3. Line trace (**Optional**)

## IBM Internal Use Only

### G. Loop problems:

1. Determine where loop occurs (load address compare and the instruction step through panel)
2. 370X dump
3. PIU/BTU trace (Optional)
4. Line trace. Started through host (Optional)
5. CA trace (Optional)

### H. Interface control check problems:

1. I/O trace - GTF
2. CA trace
3. 370X dump

### I. Communication to terminal problems:

1. PIU/BTU trace
2. Line trace
3. 370X dump
4. Stage 1 listing (Optional)

### J. Failing SNA command problems:

1. PIU trace
2. 370X dump
3. Line trace

### K. PEP problems:

1. L2-L3 trace
2. 370X dump
3. Stage 1 listing (Optional)

### • Additional information:

#### A. How to get a CA (channel adapter) trace

1. Punch out assembly step for SYSC6006
2. Find the last card of input for that step
3. Add a parm of (,TRACE=256) to the last input card, making it the last parm on that input card.
4. Reassemble SYSC6006
5. Relink NCP (not re-gen)

Note: The CA trace entries are pointed to by the 'CHANNEL ADAPTER TRACE TABLE' control block in the handbook (3704, 3705).

## SSP/OS 360H-TX-035

### • Necessary documentation on all problems:

1. Maintenance list - Release of EP, PTFs applied to EP, PTFs applied to SSP, S/ZAPS applied.
2. Configuration list - Type of 3704/3705 (I or II), type of channel adapter(s), type of scanner(s).

### IBM Internal Use Only

- Documentation according to problem description:
  - A. Load of EP into 3704/3705 fails:
    - 1. STANDALONE dump of 3704/3705
    - 2. GTF/CCW trace of host (**Optional**)
  - B. Interface or channel control checks:
    - 1. STANDALONE dump of 3704/3705
    - 2. Level 2 and level 3 line trace of EP at time of failure
    - 3. GTF/CCW trace of host (**Optional**)
  - C. Hardstop/program check:
    - 1. Dump of 3704/3705 at time of failure
    - 2. Level 2 and level 3 line trace of EP at time of failure (**Optional**)
  - D. Performance problems:
    - 1. Dump of 3704/3705 at time of degraded performance
    - 2. Level 2 and level 3 line trace of EP during degradation
  - E. General 3704/3705 Internal Failures (bad sense, line failures, modem sequence problems, data sensitive failures, EP looping, incorrect PCF states)
    - 1. Level 2 and level 3 trace at time of failure
    - 2. Dump of 3705 - Either STANDALONE or DYNADUMP
    - 3. GTF/CCW trace of host at time of failure (**Optional**)
    - 4. Specify line speed, MODEM and terminal type, conditions prior to failure.
  - F. Host SSP failures (assembler, dynamic and STANDALONE dumps)
    - 1. Dump of the failing module in host
    - 2. Output listings displaying failure symptoms

### FORTRAN 360N-FO-479

- Necessary documentation on all problems:
  - 1. Release level or compiler
  - 2. PTFs applied
  - 3. Compilation listing (preferably with list, map, etc)
  - 4. Compiler options
  - 5. Operation system and level
- A. Execution time failures:
  - 1. LINKEDIT map, release level of FORTRAN library and PTFs
- B. ABENDS or loops:
  - 1. SYSUDUMP

**IBM Internal Use Only**

**FORTRAN LIBRARY  
360N-LM-480**

- Necessary documentation on all problems:
  1. Release level of compiler
  2. PTFs applied
  3. Compilation listing (preferably with list, map, etc)
  4. Compiler options
  5. Operation system and level
- A. Execution time failures:
  1. LINKEDIT map, release level of FORTRAN library and PTFs
- B. ABENDS or loops:
  1. SYSUDUMP

**DASDI  
360P-UT-213**

- Necessary documentation on all problems:
  1. See the general documentation requirements.

**DUMP RESTORE  
360P-UT-214**

- Necessary documentation on all problems:
  1. See the general documentation requirements.

**RECOVERY  
360P-UT-215**

- Necessary documentation on all problems:
  1. See the general documentation requirements.

**HASP  
370H-TX-001**

- Necessary documentation on all problems:
  1. HASP-JES2 generation or initialization parms.
  2. System log showing time before and after failure.
  3. List of HASP-JES2 maintenance.
  4. Standalone or SVCDUMP for any situation where a dump is normally required (ie, ABEND or WAIT). The dump should contain as minimum - the JES2 address space or HASP region, related user address space, NUC, CSA, LPA MAP.
- Required documentation for problems involving HASPRTAM:
  1. A trace of line activity. Acceptable data includes: MVS CCWTRACE, 3705 TRACE, or trace using GTF TRACEMACROS.
  2. Console sheet from remote terminal if there is a console.

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- Required documentation for problems in HASPXEQ or HASPSSSM:

1. JCL from related user programs.

- Required documentation for multi-spool problems (JES2 ONLY):

1. Reassemble module HASPMISC specifying &DEBUG=YES.
2. Recreate the failure using this option if possible.
3. Supply generation or initialization parms for all systems.

- Required documentation for HASPPRPU or HASPRDR problems:

1. JCL for jobs involved.
2. System output from failing jobs.
3. Listing of applicable modules for HASP and non-JES2 systems.

Note: If user modifications are present, a listing of each modified module directly or indirectly involved in the failure.

### COBOL 5734-CB-101

- Necessary documentation on all problems:

1. Release level and PTF level of compiler
2. Compilation listing (preferably with DMAP, PMAP, and SXREF options)
3. Copy of system output with JCL listing and messages which may have been outputted

- Documentation according to problem description:

A. ABEND or loop problems:

1. SYSUDUMP output

B. Execution time failure problems:

1. Link map
2. Determine if it was a batch job, IMS, CICS, etc.

### COBOL 5734-CB-202

- Necessary documentation on all problems:

1. Release level and PTF level of compiler
2. Compilation listing (preferably with DMAP, PMAP, and SXREF options)
3. Copy of system output with JCL listing and messages which may have been outputted

- Documentation according to problem description:

A. ABEND or loop problems:

1. SYSUDUMP output

B. Execution time failure problems:

1. Link map
2. Determine if it was a batch job, IMS, CICS, etc

**COBOL PROMPTER**  
**5734-CP-101**

- Necessary documentation on all problems:
  1. Release level and PTF level of compiler
  2. Compilation listing (preferably with DMAP, PMAP, and SXREF options)
  3. Copy of system output with JCL listing and messages which may have been outputted
- Documentation according to problem description:
  - A. ABEND or loop problems:
    1. SYSUDUMP output
  - B. Execution time failure problems:
    1. Link map
    2. Determine if it was a batch job, IMS, CICS, etc

**FORTRAN**  
**5734-FO-201**

- Necessary documentation on all problems:
  1. Release level and PTF level of compiler
  2. Compilation listing (preferably with list, map, etc)
  3. List of compiler options
  4. Operating system and level
- Documentation according to problem description:
  - A. ABEND or loop problems:
    1. SYSUDUMP output
  - B. Execution time failure problems:
    1. Linkedit map
    2. FORTRAN library release level and PTFs applied

**FORTRAN**  
**5734-FO-301**

- Necessary documentation on all problems:
  1. Release level and PTF level of compiler
  2. Compilation listing (preferably with list, map, etc)
  3. List of compiler options
  4. Operating system and level
- Documentation according to problem description:
  - A. ABEND or loop problems:
    1. SYSUDUMP output

## IBM Internal Use Only

### B. Execution time failure problems:

1. Linkedit map
2. FORTRAN library release level and PTFs applied

## COBOL LIBRARY

### 5734-LM-201

- Necessary documentation on all problems:
  1. Release level and PTF level of compiler
  2. Compilation listing (preferably with DMAP, PMAP, and SXREF options)
  3. Copy of system output with JCL listing and messages which may have been outputted
- Documentation according to problem description:
  - A. ABEND or loop problems:
    1. SYSUDUMP output
  - B. Execution time failure problems:
    1. Link map
    2. Determine if it was a batch job, IMS, CICS, etc

## FORTRAN LIBRARY

### 5734-LM-301

- Necessary documentation on all problems:
  1. Release level and PTF level of compiler
  2. Compilation listing (preferably with list, map, etc)
  3. List of compiler options
  4. Operating system and level
- Documentation according to problem description:
  - A. ABEND or loop problems:
    1. SYSUDUMP output
  - B. Execution time failure problems:
    1. Linkedit map
    2. FORTRAN library release level and PTFs applied

## PL1 LIBRARY

### 5734-LM-441

- Necessary documentation on all problems:
  1. Compile options and listing
  2. Source and attribute list
  3. JCL listing (except for CMS failures)
  4. Release and PTF level with any superzap fixes applied

**IBM Internal Use Only**

- A. Execution time problems:
  - 1. Dump
  - 2. Linkedit map with XREF option
- B. CMS problems:
  - 1. CMS terminal session log

**PL1 LIBRARY  
5734-LM-541**

- Necessary documentation on all problems:
  - 1. Compile options and listing
  - 2. Source and attribute list
  - 3. JCL listing (except for TSO CMS failures)
  - 4. Release and PTF level with any superzap fixes applied
- A. Execution time problems:
  - 1. Dump
  - 2. Linkedit map with XREF option
- B. CMS problems:
  - 1. CMS terminal session log
- C. Compile time problems:
  - 1. With MSGIEL0230, MSGIEL0001, or MSGIEL0970, run with dump

**PL1 COMPILER  
5734-PL-141**

- Necessary documentation on all problems:
  - 1. Compile options and listing
  - 2. Source and attribute list
  - 3. JCL listing (except for CMS failures)
  - 4. Release and PTF level with any superzap fixes applied
- A. Execution time problems:
  - 1. Dump
  - 2. Linkedit map with XREF option
- B. CMS problems:
  - 1. CMS terminal session log
- C. Compile time problems:
  - 1. With MSGIEL0230, MSGIEL0001, or MSGIEL0970, run with dump



**IBM Internal Use Only**

**PL1 COMPILER  
5734-PL-241**

- Necessary documentation on all problems:
  1. Compile options and listing
  2. Source and attribute list
  3. JCL listing (except for CMS failures)
  4. Release and PTF level with any superzap fixes applied
- A. Execution time problems:
  1. Dump
  2. Linkedit map with XREF option
- B. CMS problems:
  1. CMS terminal session log
- C. Compile time problems:
  1. With MSGIEL0230, MSGIEL0001, or MSGIEL0970, run with dump

**VIDEO 370  
5734-RC-500**

- Necessary documentation on all problems:

Not available

**GIS  
5734-XX-100**

- Necessary documentation on all problems:

Not available

**IMS 360  
5734-XX-634**

- Necessary documentation on all problems:
  1. Any material that the failing function (job transaction etc) produced.
  2. IMS release, PTF level of IMS and SCP.
  3. Is problem reproducible and what conditions.
- Documentation according to problem description:

\*\*\*START OF PROBLEM DEFINITION\*\*\*

1. Is this an OS abend (ABEND0C4 DFSDLR00), if not go to Step 3.
2. If yes, determine failing mod and possible cause of abend, have valid dump.
3. Was this a user abend, if not go to Step 4. If a user abend use message and codes for problem determination.

### IBM Internal Use Only

4. If not a database problem go to Step 5, if a database problem, determine the following:
  - a. Database structure being used, find PSB and DBD.
  - b. Call sequence by using JCB trace, buff handler trace, or DL/I trace.
  - c. If problem is reproducible recreate using DLI test. After failing call is determined take snaps before and after the failing call.
  - d. List associated DBDs and PSBs with failing call.
5. Is this a datacomm problem, if not go to Step 6. If this is a DC problem, determine failing TP network and function:
  - a. Was an abend involved, if yes need copy of save areas.
  - b. If a lost or hung line, try to reproduce with trace on.
  - c. Need appropriate log records.
6. Is this a MFS problem, if yes need failing format, if not go to Step 7.
7. Is this a utility problem, if not go to Step 8. If a utility problem determine the sequence of events.
  - a. Was there a message involved, if so obtain log sheet.
  - b. Obtain log tape records associated with the failure.
  - c. Have work files available for copy or prob reproduction.
  - d. Optional: have a print of log tape records of monitor utilities, however, if statistics, this is required doc.
8. Is this a message problem, if not go to Step 9, if a message use messages and codes problem determination items.
9. This is a system problem since not DB, DC or utilities.
  - a. Documentation needed would be dumps of control regions, dependent regions or both.
  - b. Determine failing area (checkpoint etc) regions or both depending on the failure.
  - c. Determine failing area (checkpoint restart etc).

#### **IQF IMS 5734-XX-635**

- Necessary documentation on all problems:

Not available

#### **CICS OS 5734-XX-701**

- Necessary documentation on all problems:

1. Maintenance list, including all PTFs and APARs applied

- Documentation according to problem description:

#### A. File problems:

1. File control program (DFHFCE) listing
2. File control table (DFHFCT) listing
3. Complete CICS/VS dump with trace active

B. Terminal problems:

1. Terminal control program (DFHTCP) listing
2. Terminal control table (DFHTCT) listing
3. Node control program (DFHZCP) listing (EXTM/VTAM only)
4. Complete CICS/VS dump with:
  - a. FE trace active (BTAM only)
  - b. PIU/APL trace (EXTM only)
  - c. I/O and buffer trace (VTAM only)
  - d. Line trace (EXTM/VTAM involved with a remote 370X)
5. Output messages from destination queues
  - a. CSMT and CSTL
  - b. EXML (EXTM only)
6. Terminal error program listings
  - a. DFHTACP/DFHTEP (BTAM only)
  - b. DFHZNAC/DFHNEP (EXTM/VTAM only)

C. Open/close type problems:

1. Destination control table (DFHDCT) listing
2. File control table (DFHFCT) listing
3. Open/close program (DFHOCP) listing
4. Complete CICS/VS dump with trace active

D. Transient data problems:

1. Transient data program (DFHTDP) listing
2. Destination control table (DFHDCT) listing
3. Complete CICS/VS dump with trace active

E. Storage problems:

1. Storage control program (DFHSCP) listing
2. Complete CICS/VS dump (Some methods for storage violations are: use of the SVD option in DFHSIT (1.3.0 and later). Generate and use DFHSCP w/recover=no option. An FE trap is available as pseudo APAR PP99108. Code is added to DFHTRP to verify the FAQE chains each time a trace entry is made and ABENDS if chain is bad.

F. Task wait problems:

1. Task control program (DFHKCP) listing
2. Complete CICS/VS dump with trace active

G. Mapping problems:

1. Application program listing(s) that encounter the problem(s)
2. Assembled listing of Maps and DSECTS involved
3. Complete CICS/VS dump with trace active

H. Application program problems :

1. Application program listing with (a) pre-processor input and output (COBOL and PL/1 only)
2. Complete CICS/VS dump (SRT=No if encountering ASRA transaction ABENDS) with trace active.

I. SYSGEN problems:

1. Input to Stage I
2. Output from Stage I

J. SYSTEM initialization problems:

1. SYSTEM initialization program (DFHSIP) or suspected overlay routine (DFHSIA1-DFHSIJ1)
2. Complete CICS/VS dump
3. SYSTEM initialization table (DFHSIT) listing
4. Listing of CICS/VS override parameters

K. Program control problems:

1. Program control program (DFHPCP) listing
2. Processing program table (DFHPPTO) listing
3. Program control table (DFHPCT) listing
4. Complete CICS/VS dump with trace active
5. Listing of the application program encountering problem

L. Journal problems:

1. Journal control program (DFHPCP) listing
2. Journal control table (DFHJCT) listing
3. Complete CICS/VS dump with trace active
4. Printout of the journal data set (affected area only)

M. SYNC point problems:

1. SYNC point program (DFHSPP) listing
2. Listing of program issuing SYNC point
3. Complete CICS/VS dump with trace active

N. Built-in function problems:

1. Built-in function program (DFHBIF) listing
2. Application program issuing the built-in function macro
3. Complete CICS/VS dump with trace active

● Additional information:

For problems requiring a trace, the trace table must be large enough to show failure or the PSR may use auxiliary trace.

**EMULATOR SUPPORT**

**5735-SC-100**

● Necessary documentation on all problems:

1. Maintenance list - release of EP, PTFs applied to EP, PTFs applied to SSP, S/ZAPS applied.
2. Configuration list - type of 3704/3705 (I or II), type of channel adapter(s), type of scanner(s).

● Documentation according to problem description:

A. Load of EP into 3704/3705 fails:

1. STANDALONE dump of 3704/3705
2. GTF/CCW trace of host (**Optional**)

### IBM Internal Use Only

- B. Interface or channel control checks:
  - 1. STANDALONE dump of 3704/3705
  - 2. Level 2 and level 3 line trace of EP at time of failure
  - 3. GTF/CCW trace of host (**Optional**)
- C. Hardstop/program check:
  - 1. Dump of 3704/3705 at time of failure
  - 2. Level 2 and level 3 line trace of EP at time of failure (**Optional**)
- D. Performance problems:
  - 1. Dump of 3704/3705 at time of degraded performance
  - 2. Level 2 and level 3 line trace of EP during degradation
- E. General 3704/3705 internal failures (bad sense, line failures, modem sequence problems, data sensitive failures, EP looping, incorrect PCF states)
  - 1. Level 2 and level 3 trace at time of failure
  - 2. Dump of 3705 - either STANDALONE or DYNADUMP
  - 3. GTF/CCW trace of host at time of failure (**Optional**)
  - 4. Specify line speed, MODEM and terminal type, conditions prior to failure.
- F. Host SSP failures (assembler, dynamic and STANDALONE dumps)
  - 1. Dump of the failing module in host
  - 2. Output listings displaying failure symptoms

### NCP 3 VS 5735-SC-200

- Necessary documentation on all problems:
  - 1. Maintenance list
- Documentation according to problem description:
  - A. Load problems:
    - 1. Host dump of SSP loader program
    - 2. 370X dump
    - 3. I/O trace-GTF/CCW
    - 4. Load JCL
    - 5. Stage 1 and 2 listings (**Optional**)
  - B. Dump problems:
    - 1. Dump JCL
    - 2. SYSUDUMP of the SSP. Host dump of SSP dump program
  - C. Trace problems:
    - 1. Console sheet and explanation of traces used with trace JCL, if applicable
    - 2. SYSUDUMP of the SSP
    - 3. Host dump of SSP trace program

**IBM Internal Use Only**

- D. CCU check problems:
  - 1. 370X dump
  - 2. 370X panel indications. Display status through panel and record.
- E. Drop into load state problems:
  - 1. 370X dump
- F. NCP ABEND problems:
  - 1. 370X dump
  - 2. PIU/BTU trace (**Optional**)
  - 3. Line trace (**Optional**)
- G. Loop problems:
  - 1. Determine where loop occurs (load address compare and the instruction step through panel)
  - 2. 370X dump
  - 3. PIU/BTU trace (**Optional**)
  - 4. Line trace. Started through host. (**Optional**)
  - 5. CA trace (**Optional**)
- H. Interface control check problems:
  - 1. I/O trace - GTF
  - 2. CA trace
  - 3. 370X dump
- I. Communication to terminal problems:
  - 1. PIU/BTU trace
  - 2. Line trace
  - 3. 370X dump
  - 4. Stage 1 listing (**Optional**)
- J. Failing SNA command problems:
  - 1. PIU trace
  - 2. 370X dump
  - 3. Line trace
- K. PEP problems:
  - 1. L2-L3 trace
  - 2. 370X dump
  - 3. Stage 1 listing (**Optional**)

● **Additional information:**

- A. How to get a CA (Channel Adapter) trace
  - 1. Punch out assembly step for SYSC6006.
  - 2. Find the last card of input for that step.
  - 3. Add a parm of (,TRACE=256) to the last input card, making it the last parm on that input card.
  - 4. Reassemble SYSC6006.
  - 5. Relink NCP (not re-gen)

**Note:** The CA trace entries are pointed to by the 'CHANNEL ADAPTER TRACE TABLE' control block in the handbook (3704, 3705).

## IBM Internal Use Only

NCP 3 VTAM  
5735-SC-300

- Necessary documentation on all problems:
  1. Maintenance list
- Documentation according to problem description:
  - A. Load problems:
    1. Host dump of SSP loader program
    2. 370X dump
    3. I/O trace - GTF/CCW
    4. Load JCL
    5. Stage 1 and 2 listings (**Optional**)
  - B. Dump problems:
    1. Dump JCL
    2. SYSUDUMP of the SSP. Host dump of SSP dump program
  - C. Trace problems:
    1. Console sheet and explanation of traces used with trace JCL, if applicable
    2. SYSUDUMP of the SSP
    3. Host dump of the SSP trace program
  - D. CCU check problems:
    1. 370X dump
    2. 370X panel indications. Display status through panel and record.
  - E. Drop into load state problems:
    1. 370X dump
  - F. NCP ABEND problems:
    1. 370X dump
    2. PIU/BTU trace (**Optional**)
    3. Line trace (**Optional**)
  - G. Loop problems:
    1. Determine where loop occurs (load address compare and the instruction step through panel)
    2. 370X dump
    3. PIU/BTU trace (**Optional**)
    4. Line trace. Started through host. (**Optional**)
    5. CA trace (**Optional**)
  - H. Interface control check problems:
    1. I/O trace - GTF
    2. CA trace
    3. 370X dump

## IBM Internal Use Only

### I. Communication to terminal problems:

1. PIU/BTU trace
2. Line trace
3. 370X dump
4. Stage 1 listing (Optional)

### J. Failing SNA command problems:

1. PIU trace
2. 370X dump
3. Line trace

### K. PEP problems:

1. L2-L3 trace
2. 370X dump
3. Stage 1 listing (Optional)

### • Additional information:

#### A. How to get a CA (Channel Adapter) trace

1. Punch out assembly step for SYSC6006
2. Find the last card of input for that step
3. Add a parm of (,TRACE=256) to the last input card, making it the last parm on that input card
4. Reassemble SYSC6006
5. Relink NCP (non re-gen)

Note: The CA trace entries are pointed to by the 'CHANNEL ADAPTER TRACE TABLE' control block in the handbook (3704, 3705).

## COBOL COMPILER 5736-CB-201

### • Necessary documentation on all problems:

1. Must be at current release and maintenance level.
2. Have available manuals: System Reference Library, COBOL COMPILER and Library, and Programmer's Guide.
3. Compile listing with options: SYM, LISTX and SXREF.

### • Documentation according to problem description:

#### A: General compile time failures:

1. JCL showing DOS,CBL,LST options and core-size for execution.

#### B. Waits:

1. Dump
2. If wait issued for and if I/O, the status of the CCB
3. Linkedit map
4. Any unusual applications (CICS, DL1, SORT, etc)
5. If called and/or calling programs, listing of all programs involved



### IBM Internal Use Only

- C. Compile time program checks:
  - 1. Dump
  - 2. Module and displacement of program check
  - 3. Number of the current source statement being worked on at time of failure
- D. Execution time program checks:
  - 1. Dump
  - 2. Which source statement caused program check using LISTX
- E. Loops:
  - 1. Extent of loop (hi-low addresses)
  - 2. Cancel dump
  - 3. Phase or phases the loop occur in
- F. Compile time error messages:
  - 1. Explanation of message as described by output of error message
  - 2. Dump if supplied with message
- G. Execution time error messages:
  - 1. Refer to Programmer's Guide Appendix I for the action and documentation required.
- H. System type error messages:
  - 1. Documentation as described in appropriate System Messages Manual.

### COBOL LIBRARY 5736 5736-LM-201

- Necessary documentation on all problems:
  - 1. Must be at current release and maintenance level.
  - 2. Have available manuals: System Reference Library, COBOL COMPILER and Library, and Programmer's Guide.
  - 3. Compile listing with options: SYM, LISTX and SXREF.
- Documentation according to problem description:
  - A. General compile time failures:
    - 1. JCL showing DOS,CBL,LST options and core-size for execution.
  - B. Waits:
    - 1. Dump
    - 2. If wait issued for and if I/O, the status of the CCB
    - 3. Linkedit map
    - 4. Any unusual applications (CICS, DL1, SORT, etc)
    - 5. If called and/or calling programs, listing of all programs involved
  - C. Compile time program checks:
    - 1. Dump
    - 2. Module and displacement of program check
    - 3. Number of the current source statement being worked on at time of failure

### IBM Internal Use Only

- D. Execution time program checks:
  - 1. Dump
  - 2. Which source statement caused program check using LISTX
- E. Loops:
  - 1. Extent of loop (hi-low addresses)
  - 2. Cancel dump
  - 3. Phase or phases the loop occurs in
- F. Compile time error messages:
  - 1. Explanation of message as described by output of error message
  - 2. Dump if supplied with message
- G. Execution time error messages:
  - 1. Refer to Programmer's Guide Appendix I for the action and documentation required.
- H. System type error messages:
  - 1. Documentation as described in appropriate System Messages Manual

#### PL1 LIBRARY 5736-LM-461

- Necessary documentation on all problems:
  - 1. Compile options and listing
  - 2. Source and attribute list
  - 3. JCL listing (except for CMS failures)
  - 4. Release and PTF level with any superzap fixes applied
- A. Execution time problems:
  - 1. Dump
  - 2. Linkedit map with XREF option
- B. CMS problems:
  - 1. CMS terminal session log

#### PL1 LIBRARY 5736-LM-561

- Necessary documentation on all problems:
  - 1. Compile options and listing
  - 2. Source and attribute list
  - 3. JCL listing (except for CMS failures)
  - 4. Release and PTF level with any superzap fixes applied
- A. Execution time problems:
  - 1. Dump
  - 2. Linkedit map with XREF option

B. CMS problems:

1. CMS terminal session log

**PL1 COMPILER**  
**5736-PL-161**

● Necessary documentation on all problems:

1. Compile options and listing
2. Source and attribute list
3. JCL listing (except for CMS failures)
4. Release and PTF level with any superzap fixes applied

A. Execution time problems:

1. Dump
2. Linkedit map with XREF option

B. CMS problems:

1. CMS terminal session log

**VIDEO 370**  
**5736-RC-300**

● Necessary documentation on all problems:

Not available

**RPG**  
**5736-RG-101**

● Necessary documentation on all problems:

1. See the general documentation requirements.

**AUTO REPORT**  
**5736-RG-1AR**

● Necessary documentation on all problems:

1. See the general documentation requirements.

**CICS ENTRY**  
**5736-XX-600**

● Necessary documentation on all problems:

1. Maintenance list, including all PTFs and APARs applied

● Documentation according to problem description:

A. File problems:

1. File control program (DFHFPC) listing
2. File control table (DFHFCT) listing
3. Complete CICS/VS dump with trace active

B. Terminal problems:

1. Terminal control program (DFHTCP) listing
2. Terminal control table (DFHTCT) listing
3. Node control program (DFHZCP) listing (EXTM/VTAM only)
4. Complete CICS/VS dump with:
  - a. FE trace active (BTAM only)
  - b. PIU/APL trace (EXTM only)
  - c. I/O and buffer trace (VTAM only)
  - d. Line trace (EXTM/VTAM involved with a remote 370X)
5. Output messages from destination queues
  - a. CSMT and CSTL
  - b. EXML (EXTM only)
6. Terminal error program listings
  - a. DFHTACP/DFHTEP (BTAM only)
  - b. DFHZNAC/DFHNEP (EXTM/VTAM only)

C. Open/close type problems:

1. Destination control table (DFHDCT) listing
2. File control table (DFHFCT) listing
3. Open/close program (DFHOCP) listing
4. Complete CICS/VS dump with trace active

D. Transient data problems:

1. Transient data program (DFHTDP) listing
2. Destination control table (DFHDCT) listing
3. Complete CICS/VS dump with trace active

E. Storage problems:

1. Storage control program (DFHSCP) listing
2. Complete CICS/VS dump (some methods for storage violations are: use of the SVD option in DFHSIT (1.3.0 and later). Generate and use DFHSCP w/recover=no option. An FE trap is available as pseudo APAR PP99108. Code is added to DFHTRP to verify the FAQE chains each time a trace entry is made and abends if chain is bad.

F. Task wait problems:

1. Task control program (DFHKCP) listing
2. Complete CICS/VS dump with trace active

G. Mapping problems:

1. Application program listing(s) that encounter the problem(s)
2. Assembled listing of maps and DSECTS involved
3. Complete CICS/VS dump with trace active

H. Application program problems:

1. Application program listing with:
  - a. Pre-processor input and output (COBOL and PL/1 only)
2. Complete CICS/VS dump (SRT=No if encountering ASRA transaction ABENDS) with trace active

## IBM Internal Use Only

### I. SYSGEN problems:

1. Input to Stage I
2. Output from Stage I

### J. SYSTEM initialization problems:

1. SYSTEM initialization program (DFHISP) or suspected overlay routine (DFHSIA1-DFHSIJ1)
2. Complete CICS/VS dump
3. SYSTEM initialization table (DFHSIT) listing
4. Listing of CICS/VS override parameters

### K. Program control problems:

1. Program control program (DFHPCP) listing
2. Processing program table (DFHPPTO) listing
3. Program control table (DFHPCT) listing
4. Complete CICS/VS dump with trace active
5. Listing of the application program encountering problem

### L. Journal problems:

1. Journal control program (DFHPCP) listing
2. Journal control table (DFHJCT) listing
3. Complete CICS/VS dump with trace active
4. Printout of the journal data set (affected area only)

### M. SYNC point problems:

1. SYNC point program (DFHSPP) listing
2. Listing of program issuing SYNC point
3. Complete CICS/VS dump with trace active

### N. Built-in function problems:

1. Built-in function program (DFHBIF) listing
2. Application program issuing the built-in function macro
3. Complete CICS/VS dump with trace active

### ● Additional information:

For problems requiring a trace, the trace table must be large enough to show failure or the PSR may use auxiliary trace.

## CICS STANDARD 5736-XX-700

### ● Necessary documentation on all problems:

1. Maintenance list, including all PTFs and APARs applied

### ● Documentation according to problem description:

#### A. File problems:

1. File control program (DFHFPCP) listing
2. File control table (DFHFCT) listing
3. Complete CICS/VS dump with trace active

B. Terminal problems:

1. Terminal control program (DFHTCP) listing
2. Terminal control table (DFHTCT) listing
3. Node control program (DFHZCP) listing (EXTM/VTAM only)
4. Complete CICS/VS dump with:
  - a. FE trace active (BTAM only)
  - b. PIU/APL trace (EXTM only)
  - c. I/O and buffer trace (VTAM only)
  - d. Line trace (EXTM/VTAM involved with a remote 370X)
5. Output messages from destination queues
  - a. CSMT and CSTL
  - b. EXML (EXTM only)
6. Terminal error program listings
  - a. DFHTACP/DFHTEP (BTAM only)
  - b. DFHZNAC/DFHNEP (EXTM/VTAM only)

C. Open/close type problems:

1. Destination control table (DFHDCT) listing
2. File control table (DFHFCT) listing
3. Open/close program (DFHOCF) listing
4. Complete CICS/VS dump with trace active

D. Transient data problems:

1. Transient data program (DFHTDP) listing
2. Destination control table (DFHDCT) listing
3. Complete CICS/VS dump with trace active

E. Storage problems:

1. Storage control program (DFHSCP) listing
2. Complete CICS/VS dump (some methods for storage violations are: use of the SVD option in DFHSIT (1.3.0 and later). Generate and use DFHSCP w/recover=no option. An FE trap is available as pseudo APAR PP99108. Code is added to DFHTRP to verify the FAQE chains each time a trace entry is made and ABENDS if chain is bad.

F. Task wait problems:

1. Task control program (DFHKCP) listing
2. Complete CICS/VS dump with trace active

G. Mapping problems:

1. Application program listing(s) that encounter the problem(s)
2. Assembled listing of maps and DSECTS involved
3. Complete CICS/VS dump with trace active

H. Application program problems:

1. Application program listing with:
  - a. Pre-processor input and output (COBOL and PL/1 only)

### IBM Internal Use Only

2. Complete CICS/VS dump (SRT=No if encountering ASRA transaction ABENDS) with trace active

#### I. SYSGEN problems:

1. Input to Stage I
2. Output from Stage I

#### J. SYSTEM initialization problems:

1. SYSTEM initialization program (DFHSIP) or suspected overlay routine (DFHSIA1-DFHSIJ1)
2. Complete CICS/VS dump
3. SYSTEM initialization table (DFHSIT) listing
4. Listing of CICS/VS override parameters

#### K. Program control problems:

1. Program control program (DFHPCP) listing
2. Processing program table (DFHPPTO) listing
3. Program control table (DFHPCT) listing
4. Complete CICS/VS dump with trace active
5. Listing of the application program encountering problem

#### L. Journal problems:

1. Journal control program (DFHPCP) listing
2. Journal control table (DFHJCT) listing
3. Complete CICS/VS dump with trace active
4. Printout of the journal data set (affected area only)

#### M. SYNC point problems:

1. SYNC point program (DFHSPP) listing
2. Listing of program issuing SYNC point
3. Complete CICS/VS dump with trace active

#### N. Built-in function problems:

1. Built-in function program (DFHBIF) listing
2. Application program issuing the built-in function macro
3. Complete CICS/VS dump with trace active

#### ● Additional information:

For problems requiring a trace, the trace table must be large enough to show failure or the PSR may use auxiliary trace.

### COBOL COMPILER

5740-CB-103

#### ● Necessary documentation on all problems:

1. Release level and PTF level of compiler
2. Compilation listing (preferably with DMAP, PMAP, and SXREF options)
3. Copy of system output with JCL listing and messages which may have been outputted

## IBM Internal Use Only

- Documentation according to problem description:
  - A. ABEND or loop problems:
    1. SYSUDUMP output
  - B. Execution time failure problems:
    1. Link map
    2. Determine if it was a batch job, IMS, CICS, etc

### FAST PATH 5740-I1-214

- Necessary documentation on all problems:
  1. IMS release and PTF list of IMS and SCP and VSAM
  2. If problem reproducible, what are the conditions

- Documentation according to problem description:

#### \*\*START OF PROBLEM DETERMINATION\*\*

1. Is this a FAST CHART documented ABEND, if yes use the FAST documentation to locate the failing area and obtain the indicated documentation. If not go to Step 2.
  2. Obtain storage dump of the condition if a dump was not produced. Also a logtape print of associated failing log records, (log record type 40 is most important).
  3. DBDs and PSBs involved with the problem.
  4. Console sheets, master terminal and SCP.
  5. Option: dump of data base involved in the problem if the circumstances warrant it.
  6. When all documentation has been obtained perform a RETAIN search.
- Additional information:
    1. Documentation associated with FAST path consists of two manuals. GH209069 GEN INFO MANUAL. ZZ109828 INST PLAN GUIDE and associated IMS manuals listed in the GEN INFO MANUAL.

### COBOL LIBRARY 5740-LM-103

- Necessary documentation on all problems:
  1. Release level and PTF level of compiler
  2. Compilation listing (preferably with DMAP, PMAP, and SXREF options).
  3. Copy of system output with JCL listing and messages which may have been outputted.
- Documentation according to problem description:
  - A. ABEND or loop problems:
    1. SYSUDUMP output



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**B. Execution time failure problems:**

1. Link map
2. Determine if it was a batch job, IMS, CICS, etc

**SORT MERGE  
5740-SM-105**

● Necessary documentation on all problems:

1. Have maintenance level and current release level
2. Sort installation parameters
3. Console log and SYSOUT
4. Sort control cards or passed parm list
5. JCL
6. Dump (SYSUDUMP or SYSABEND type)

● Documentation according to problem description:

**A. System error messages or ABENDS:**

1. Documentation from messages and codes manual
2. Problem determination tables

**B. Sort error messages:**

1. Documentation from Sort Programmer's Guide (SC334035)

**C. Program checks, ABENDS:**

1. Module and displacement

**D. Incorrect output:**

1. Example of output
2. Input and output reload parameters
3. Any I/O error information from associated devices

**E. Loops:**

1. Extent of loop (hi-low addresses and modules)
2. Dump (cancel)

**F. Waits:**

1. Event wait issued for and if I/O, status of ECB/IOB

**DASDR  
5740-UT-100**

● Necessary documentation on all problems:

1. See the general documentation requirements.

**VSPC VS1  
5740-XR-500**

● Necessary documentation on all problems:

1. Maintenance level - list of all APAR fixes installed

### IBM Internal Use Only

- Documentation according to problem description:
  - A. ABEND or loop (with cancel dump) problems:
    1. Dump
    2. Ensure trace command in VSPC startup procedure is at least trace 4
    3. Console output for VSPC user that was current when dump occurred
  - B. VSPC message problems:
    1. Console output for the VSPC user (ensure that the message ID command was in effect so that the message numbers are printed with the message).
  - C. Wait state or terminal lockup problems:
    1. Dump of VSPC
    2. Dump of VTAM
  - D. Terminal failure problems:
    1. Determine the type of terminal
    2. Secure the terminal output
    3. Output of VTAM buffer trace

### VSPC VS2 5740-XR-600

- Necessary documentation on all problems:
  1. Maintenance level - list of all APAR fixes installed
- Documentation according to problem description:
  - A. ABEND or loop (with cancel dump) problems:
    1. Dump
    2. Ensure trace command in VSPC startup procedure is at least trace 4
    3. Console output for VSPC user that was current when dump occurred
  - B. VSPC message problems:
    1. Console output for the VSPC user (ensure that the message ID command was in effect so that the message numbers are printed with the message).
  - C. Wait state or terminal lockup problems:
    1. Dump of VSPC
    2. Dump of VTAM
  - D. Terminal failure problems:
    1. Determine the type of terminal
    2. Secure the terminal output
    3. Output of VTAM buffer trace

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### JES 2 NJE 5740-XR-800

- Necessary documentation on all problems:
  1. See the general documentation requirements.

### TSO COMMAND PACKAGE 5740-XT-600

- Necessary documentation on all problems:
  1. Maintenance list
  2. Hardcopy log
  3. TSO terminal input and output
- Documentation according to problem description:
  - A. ABEND problems:
    1. SYSABEND or standalone dump
- Additional information:

#### Diagnostic Notes:

1. IKJPRM00 parameters initialize TIOCRPT with values such as max number of TSO users (TSBs), BUFSIZE, number of buffers, etc. IKJPRM00 lives in PARMLIB.
2. SYS1.UADS (user attribute data set) is a list of terminal users authorized to use TSO and contains information about each, such as user ID, password, region size, restrictions on TSO commands, etc. It is maintained by the account command.
3. SVCs used by TSO:
  - SVC93 - TPUT/TGET move data between TIOC and user buffers.
  - SVC101 - QTIP moves data between TIOC and TCAM buffers. Also used by TPUT/TGET. See TCAM logic manuals SY302040 & SY302059 for SVC 101 entry codes.
  - SVC34 - MGCR/QEDIT used when TSO user logs on
  - SVC94 - STCC update TCAM control blocks from user's address space
  - SVC99 - DIAR dynamic allocation
  - SVC95 - TSEVENT, SVC96 STAX, SVC97 breakpoint (used by test)
  - SVC100 - Submit job background

Manuals - SC280748 - User's Guide and Reference  
LY280729 - Logic

### TCAM IMS 5740-XX-C10

- Necessary documentation on all problems:
  1. Any material that the failing function (job, transaction, etc) has produced
  2. CDS list, know the level of TCAM, SCP and IMS.
  3. Locate any documentation produced as a result of the problem and any IMS or SCP console sheets.

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4. If this is IMS R114, obtain line trace for TCAM line group using PTERM=ALL. If not R114, know circumstances of re-creatability.
5. When doc has been obtained perform a RETAIN search, if a possible resolution cannot be found in RETAIN, open incident with a field support.
6. If at this point you cannot locate the failing area contact your local support for assistance. (Sr PSR, RDS etc)

**TCS AF  
5740-XX-D00**

- Necessary documentation on all problems:
  1. See the general documentation requirements.

**RACF  
5740-XX-H00**

- Necessary documentation on all problems:
  1. See the general documentation requirements.

**RMF  
5740-XX-M00**

- Necessary documentation on all problems:
  1. See the general documentation requirements.

**CICS VS  
5740-XX-100**

- Necessary documentation on all problems:
  1. Maintenance list, including all PTFs and APARs applied
- Documentation according to problem description:
  - A. File problems:
    1. File control program (DFHFPC) listing
    2. File control table (DFHFCT) listing
    3. Complete CICS/VS dump with trace active
  - B. Terminal problems:
    1. Terminal control program (DFHTCP) listing
    2. Terminal control table (DFHTCT) listing
    3. Node control program (DFHZCP) listing (EXTM/VTAM only)
    4. Complete CICS/VS dump with:
      - a. FE trace active (BTAM only)
      - b. PIU/APL trace (EXTM only)
      - c. I/O and buffer trace (VTAM only)
      - d. Line trace (EXTM/VTAM involved with a remote 370X)

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5. Output message from destination queues
  - a. CSMT and CSTL
  - b. EXML (EXTM only)
6. Terminal error program listings
  - a. DFHTACP/DFHTEP (BTAM only)
  - b. DFHZNAC/DFHNEP (EXTM/VTAM only)
- C. Open/close type problems:
  1. Destination control table (DFHDCT) listing
  2. File control table (DFHFCT) listing
  3. Open/close program (DFHOCP) listing
  4. Complete CICS/VS dump with trace active
- D. Transient data problems:
  1. Transient data program (DFHTDP) listing
  2. Destination control table (DFHDCT) listing
  3. Complete CICS/VS dump with trace active
- E. Storage problems:
  1. Storage control program (DFHSCP) listing
  2. Complete CICS/VS dump (some methods for storage violations are: use of the SVD option in DFHSIT (1.3.0 and later). Generate and use DFHSCP w/recover=no option. An FE trap is available as pseudo APAR PP99108. Code is added to DFHTRP to verify the FAQE chains each time a trace entry is made and ABENDS if chain is bad.
- F. Task wait problems:
  1. Task control program (DFHKCP) listing
  2. Complete CICS/VS dump with trace active
- G. Mapping problems:
  1. Application program listing(s) that encounter the problem(s)
  2. Assembled listing of maps and DSECTS involved
  3. Complete CICS/VS dump with trace active
- H. Application program problems:
  1. Application program listing with:
    - a. Pre-processor input and output (COBOL and PL/I only)
  2. Complete CICS/VS dump (SRT=no if encountering ASRA transaction ABENDS) with trace active
- I. SYSGEN problems:
  1. Input to Stage I
  2. Output from Stage I
- J. SYSTEM initialization problems:
  1. SYSTEM initialization program (DFHSIP) or suspected overlay routine (DFHSIA1-DFHSIJ1)

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2. Complete CICS/VS dump
3. SYSTEM initialization table (DFHSIT) listing
4. Listing of CICS/VS override parameters

### K. Program control problems:

1. Program control program (DFHPCP) listing
2. Processing program table (DFHPPTO) listing
3. Program control table (DFHPCT) listing
4. Complete CICS/VS dump with trace active
5. Listing of the application program encountering problem

### L. Journal problems:

1. Journal control program (DFHPCP) listing
2. Journal control table (DFHJCT) listing
3. Complete CICS/VS dump with trace active
4. Printout of the journal data set (affected area only)

### M. SYNC point problems:

1. SYNC point program (DFHSPP) listing
2. Listing of program issuing SYNC point
3. Complete CICS/VS dump with trace active

### N. Built-in function problems:

1. Built-in function program (DFHBIF) listing
2. Application program issuing the built-in function macro
3. Complete CICS/VS dump with trace active

### ● Additional information:

For problems requiring a trace, the trace table must be large enough to show failure or the PSR may use auxiliary trace.

## IMS VS 5740-XX-210

### ● Necessary documentation on all problems:

1. Any material that the failing function (job transaction etc) produced.
2. IMS release, PTF level of IMS and SCP.
3. VSAM involved for data base problems.
4. Is problem reproducible and what conditions.

### ● Documentation according to problem description:

#### **\*\*START OF PROBLEM DEFINITION\*\***

1. Is this an OS/VS ABEND (ABEND0C4 DFSDLR00), if not go to Step 3.
2. If yes, determine failing mod and possible cause of ABEND, if IMS mod record documentation associated with module. If other than IMS mod, determine if user or SCP ABENDED.
3. Is ABEND in FAST DIAGRAMS, if not go to Step 4. If in FAST CHARTS use FAST DOC to locate failing area and obtain doc as indicated with FAST or messages and codes under problem determination if any.

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4. Is this undocumented IMS abend, then search RETAIN and EWS. If nothing found, should be APARed as DOC APAR. If not an IMS abend go to Step 5.
5. Was this a user abend, example: possible user application abend or COBOL or PL/I internal abend. If so, return to customer for further problem determination. If not an abend go to Step 6.
6. Was this a pseudo abend (ABENDUXXXX which would have been caught at Step 3). Pseudo being a type logged out to tape. If not an abend, go to Step 7.
7. If not a data base problem go to Step 8, if a data base problem, determine the following:
  - a. Data base structure being used, find PSB and DBD
  - b. Call sequence by using JCB trace, buff handler trace, or DL/I trace.
  - c. If problem is reproducible, recreate using DLI test. Input is MPRH and JCB trace. After failing call is determined, use program to compare and take snaps before and after failing call.
  - d. List associated DBDs and PSBs with failing call.
8. Is this a datacomm problem, if not go to Step 9. If this is a DC problem, determine failing TP network and function:
  - a. Was an abend involved, if yes need copy of save area sets and if ABENDUXXXX see if FAST CHARTS apply.
  - b. If a lost or hung line, try to reproduce with level 4 trace on and locate failing function.
  - c. Required documentation for B and any other DC problem that got to this point. Print appropriate log records. Locate master terminal and system console sheets and any other doc produced by this problem.
  - d. Optional doc: run GTF trace with CCW trace modify on, this assumes problem is reproducible.
9. Is this a MFS problem, if yes doc needed is a list of the failing format, if not go to Step 10.
10. Is this a utility problem, if not go to Step 11. If a utility problem, determine the sequence of events.
  - a. Was there a message involved, if so obtain log sheet.
  - b. Obtain log tape records associated with the failure.
  - c. Have work files available for copy or prob reproduction.
  - d. Optional: have a print of log tape records of monitor utilities, however if statistics, this is required doc.
11. Is this a message problem, if not go to Step 12, if a message use Messages and Codes problem determination items.
12. This is a system problem since not DB, DC or utilities.
  - a. If a wait state problem use the wait state analysis in PLM Volume 3 Diag Section or use SYSGEN Plan issue 7601 January 1976.
  - b. Doc needed would be dumps of control regions, dependent regions or both depending on the failure.
  - c. Determine failing area (checkpoint restart etc).
  - d. Doc needed located log tape records associated with the failure, also map save area sets.

● Additional documentation:

**\*\*SERVICE AIDS FOR DOC REQUIREMENTS\*\***

- A. DFSDDLTO DL/I test program  
R10 1 SPRM SH209027-1 Appendix B
- B. Level 4 trace activated by /TRACE command  
R101 OPRM SH209028
- C. DFSERA10 and exits select and formatting print program  
R101 SPRM SH209027 Appendix B
- D. Buffer handler and retrieve trace

These traces are on only when VSAM buffer pool space is defined. VSAM does not have to be defined in the SCP nor do VSAM data bases have to be present. Instructions for defining VSAM buffer pools are found in:

R101 SPRM SH209027 under 'Defining Buffer Pool' Chapter 1.

- E. More information on these and other diagnostic aids can be found in:  
R101 System Manual Volume 1. LY208004 Chapter 14.
- F. Service aids:

- 1. Modified program request handler (MPRH). The purpose of this program is to convert DL/I calls issued by the application program into the format required by DFSDDLTO. The DLI test program is in DLS under PPS0003 for R101.
- 2. TPERPRT0 (TP error print) this program interprets the 6703 RCDS created by 3270 device dependent modules rtn's. One line per record is produced that summarizes the error. It is primarily aimed at 3270R. In DLS as IMSSA05. Instructions for both service aids can be found as comments in program prologue.

**IMS VS  
5740-XX-211**

● Necessary documentation on all problems:

- 1. Any material that the failing function (job transaction etc) produced.
- 2. IMS release, PTF level of IMS and SCP.
- 3. VSAM involved for data base problems.
- 4. Is problem reproducible and what conditions.

● Documentation according to problem description:

**\*\*START OF PROBLEM DEFINITION\*\***

- 1. Is this an OS/VS ABEND (ABEND0C4 DFSDLR00), if not go to Step 3.



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2. If yes, determine failing mod and possible cause of ABEND, if IMS mod record documentation associated with module. If other than IMS mod determine if user or SCP ABENDED.
3. Is ABEND in FAST DIAG DOC (LY208050). If not go to Step 4. If in FAST CHARTS use FAST DOC to locate failing area and obtain doc as indicated with FAST or messages and codes under problem determination if any.
4. Is this undocumented IMS ABEND, then search RETAIN and EWS. If nothing found, should be APARed as DOC APAR. If not an IMS ABEND go to Step 5.
5. Was this a user ABEND, example: possible user application ABEND or COBOL or PL/I internal ABEND. If so, return to customer for further problem determination. If not an ABEND go to Step 6.
6. Was this a pseudo ABEND (ABENDUXXXX which would have been caught at Step 3). Pseudo being a type logged out to tape. If not an ABEND, go to Step 7.
7. If not a data base problem go to Step 8, if a data base problem, determine the following:
  - a. Data base structure being used, find PSB and DBD.
  - b. Call sequence by using JCB trace, buff handler trace, or DL/I trace.
  - c. If problem is reproducible recreate using DLI test. Input is MPRH and JCB trace. After failing call is determined, use program to compare and take snaps before and after failing call.
  - d. List associated DBDs and PSBs with failing call.
8. Is this a datacomm problem, if not go to Step 9. If this is a DC problem, determine failing TP network and function:
  - a. Was an ABEND involved, if yes need copy of save area sets and if ABENDUXXXX see if FAST CHARTS apply.
  - b. If a lost or hung line, try to reproduce with level 4 trace on and locate failing function.
  - c. Required documentation for B and any other DC problem that got to this point. Print appropriate log records. Locate master terminal and system console sheets and any other doc produced by this problem.
  - d. Optional doc: run GTF trace with CCW trace modify on, this assumes problem is reproducible.
9. Is this a MFS problem, if yes doc needed is a list of the failing format, if not go to Step 10.
10. Is this a utility problem, if not go to Step 11. If a utility problem determine the sequence of events.
  - a. Was there a message involved, if so obtain log sheet.
  - b. Obtain log tape records associated with the failure.
  - c. Have work files available for copy or prob reproduction.
  - d. Optional: have a print of log tape records of monitor utilities, however if statistics, this is required doc.
11. Is this a message problem, if not go to Step 12, if a message use Messages and Codes problem determination items.
12. This is a system problem since not DB, DC or utilities.
  - a. If a wait state problem use the wait state analysis in PLM Volume 3 Diag section or use SYSGEN Plan issue 7601 January 1976.
  - b. Doc needed would be dumps of control regions, dependent regions or both depending on the failure.

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- c. Determine failing area (checkpoint restart etc).
- d. Doc needed located log tape records associated with the failure, also map save area sets.

● Additional documentation:

**\*\*SERVICE AIDS FOR DOC REQUIREMENTS\*\***

A. DFSDDLTO DL/I test program

R113 APRM SH209026 CH 7

B. Level 4 trace activated by /TRACE command

R113 OPRM SH209028

C. DFSERA10 and exits select and formatting print program

R113 UTRM SH209029 CH 8

D. Buffer handler and retrieve trace.

These traces are on only when VSAM buffer pool space is defined. VSAM does not have to be defined in the SCP nor do VSAM data bases have to be present. Instructions for defining VSAM buffer pools are found in:

R113 Inst Guide SH209081 defining buf pool in Step 5.

E. More information on these and other diagnostic aids can be found in:

R113 PLM Volume 3 LY208041

F. Service aids:

1. Modified program request handler (MPRH). The purpose of this program is to convert DL/1 calls issued by the application program into the format required by DFSDDLTO. The DLI test program is in DLS under PPS0003.
2. TPERPRT0 (TP error print) this program interprets the 6703 RCDS created by 3270 device dependent modules rtn's. One line per record is produced that summarizes the error. It is primarily aimed at 3270R. In DLS as IMSSA05. Instructions for both service aids can be found as comments in program prologue.

**IMS VS  
5740-XX-214**

● Necessary documentation on all problems:

1. Any material that the failing function (job transaction etc) produced.
2. IMS release, PTF level of IMS and SCP.
3. VSAM involved for data base problems.
4. Is problem reproducible and what conditions.

## IBM Internal Use Only

- Documentation according to problem description:

### \*\*START OF PROBLEM DEFINITION\*\*

1. Is this an OS/VS ABEND (ABEND0C4 DFSDLR00), if not go to Step 3.
2. Is yes, determine failing mod and possible cause of ABEND, if IMS mod record documentation associated with module. If other than IMS mod determine if user or SCP ABENDED.
3. Is ABEND in FAST DIAG DOC (LY208050). If not go to Step 4. If in FAST CHARTS use FAST DOC to locate failing area and obtain doc as indicated with FAST or messages and codes under problem determination if any.
4. Is this undocumented IMS ABEND, then search RETAIN and EWS. If nothing found, should be APARed as DOC APAR. If not an IMS ABEND go to Step 5.
5. Was this a user ABEND, example: possible user application ABEND or COBOL or PL/I internal ABEND. If so, return to customer for further problem determination. If not an ABEND go to Step 6.
6. Was this a pseudo ABEND (ABENDUXXXX which would have been caught at Step 3). Pseudo being a type logged out to tape. If not an ABEND, go to Step 7.
7. If not a data base problem go to Step 8. if a data base problem, determine the following:
  - a. Data base structure being used, find PSB and DBD.
  - b. Call sequence by using JCB trace, buff handler trace, or DL/I trace.
  - c. If problem is reproducible recreate using DLI test. Input is MPRH and JCB trace. After failing call is determined, use program to compare and take snaps before and after failing call.
  - d. List associated DBDs and PSBs with failing call.
8. Is this a datacomm problem, if not go to Step 9. If this is a DC problem, determine failing TP network and function:
  - a. Was an ABEND involved, if yes need copy of save area sets and if ABENDUXXX see if FAST CHARTS apply.
  - b. If a lost or hung line, try to reproduce with level 4 trace on and locate failing function.
  - c. Required documentation for B and any other DC problem that got to this point. Print appropriate log records. Locate master terminal and system console sheets and any other doc produced by this problem.
  - d. Optional doc: run GTF trace with CCW trace modify on, this assumes problem is reproducible.
9. Is this a MFS problem, if yes doc needed is a list of the failing format, if not go to Step 10.
10. Is this a utility problem, if not go to Step 11. If a utility problem determine the sequence of events.
  - a. Was there a message involved, if so obtain log sheet.
  - b. Obtain log tape records associated with the failure.
  - c. Have work files available for copy or prob reproduction.
  - d. Optional: have a print of log tape records of monitor utilities, however if statistics, this is required doc.
11. Is this a message problem, if not go to Step 12, if a message use Messages and Codes problem determination items.

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12. This is a system problem since not DB, DC or utilities.
- If a wait state problem use the wait state analysis in PLM Volume 3 Diag section or use SYSGEN Plan issue 7601 January 1976.
  - Doc needed would be dumps of control regions, dependent regions or both depending on the failure.
  - Determine failing area (checkpoint restart etc).
  - Doc needed located log tape records associated with the failure, also map save area sets.

● Additional documentation:

**\*\*SERVICE AIDS FOR DOC REQUIREMENTS\*\***

- DFSDDLTO DL/I test program  
R114 APRM SH209026 CH 7
- Level 4 trace activated by /TRACE command  
R114 OPRM SH209028
- DFSERA10 and exits select and formatting print program  
R114 UTRM SH209029 CH 8
- Buffer handler and retrieve trace

These traces are on only when VSAM buffer pool space is defined. VSAM does not have to be defined in the SCP nor do VSAM data bases have to be present. Instructions for defining VSAM buffer pools are found in:

R114 Inst Guide SH209081 defining buf pool in Step 5.

- More information on these and other diagnostic aids can be found in:  
R114 PLM Volume 3 LY208041. UFICHE pseudo mod cards contain labels, DSECTS, record layouts example: type 67.
- Service aids:
  - Modified program request handler (MPRH). The purpose of this program is to convert DL/I calls issued by the application program into the format required by DFSDDLTO. The DLI test program is in DLS under PPS0003 for R114.
  - TPERPRT0 (TP error print) this program interprets the 6703 RCDS created by 3270 device dependent modules rtn's. One line per record is produced that summarizes the error. It is primarily aimed at 3270R. In DLS as IMSSA05. Instructions for both service aids can be found as comments in program prologue.

**GIS**  
**5740-XX-700**

● Necessary documentation on all problems:

- Any material that the failing function (job, transaction, etc) produced.

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2. Have examples of data in other files pertinent to the failure.

- Documentation according to problem description:

**\*\*START OF PROBLEM DETERMINATION\*\***

1. Was this an ABEND, if not go to Step 2. If this was an ABEND, need all data produced by the ABEND (dumps, console sheets etc).
2. Message of the form GISXXX, if not go to Step 3. If this is GISXXX monitor diagnostics obtain proc listing and all pertinent ILS members. If the message is GIS018-GIS024 then go to Step 6.
3. Message of the form LPXXX, if not go to Step 4. If this is LPXXX lang processor diagnostics, obtain PROC listing including all pertinent ILS members. Locate statement and perform in debug mode SNAPA and SNAPB prior and after bad statement.
4. Message PUTnnn, if not go to Step 5. If the form PUTnnn obtain SAVEX, CALL and JCL diagnostics.
5. Message TSMnnn, if not go to Step 6. If the form TSMnnn obtain GIS proc and any doc produced as result of problem.
6. AQF problem message GISXXX, if not go to Step 7. If an AQF problem obtain GIS proc, terminal session output. Format log print of terminal session. Any dumps preceded and IMS and GIS Stage I SYSGENS. Also associated DDTs and DBDs.
7. DDT messages. If not go to Step 8. If a DDT message, obtain GIS proc, DDTs DBD if DLI DDT. Any ABEND dumps.
8. Message SECnnn obtain GIS proc, DDT, DDB if DLI DD and any ABEND dumps.

- Additional information:

1. Facilities available for problem determination:
  - a. XXXX file processor diagnostics, events categories
  - b. GIS procedure
  - c. In debug mode, SNAPA or SNAPB of failing subprocedure.
  - d. XMODMAP PSBs involved with the problem
  - e. Trace
  - f. Any ABEND or system dumps
  - g. Run with recording mode low (REC=L) and non-SRE, if not AR111 or PTF6 of R010.
  - h. DDTs DBDs and DLI trace for DLI files.
  - i. Is user referencing a user ILS file, an example of the data cards that were submitted after the end proc.
  - j. Have examples of data in other files pertinent to failure.

IMS MSC  
5740-XY-211

- Necessary documentation on all problems:

1. Any material that the failing function (job, transaction, etc) produced.
2. CDS list of the IMS system.

- Documentation according to problem description:

**\*\*START OF PROBLEM DEFINITION\*\***

1. Is this a FAST CHART documented ABEND, if yes use the FAST documentation to locate the failing area and obtain the indicated documentation. If not go to Step 2.
2. Obtain log tape of all systems involved with failure.
3. Obtain storage dump of the condition if a dump was not produced. Also a log tape print of associated failing log records, (type 01,03,66,68,6C most important).
4. If problem recreatable turn on MSC trace.
5. Console sheets, master terminal and SCP
6. When all doc has been obtained perform a RETAIN search.
7. If at this point you cannot locate the failing area, contact local support for assistance (Sr PSR, RDS etc).

**RMF 11  
5740-XY-400**

- Necessary documentation on all problems:

1. See the general documentation requirements.

**RES RTAM  
5741-SC-1BB**

- Necessary documentation on all problems:

A. BYSC

1. Maintenance list, current level and all APAR updates
2. All job related output
3. Determine if any user mods are on the system
4. Dump at the time of the failure
5. Procedures performed to cause error
6. RTAM stage one
7. Console log

B. SNA

1. RTAM stage one
2. NCPGEN
3. VTAM configuration
4. GTF trace, trace USR and RNIO options
5. Edit with specific IDS FED or RTAV
6. Dump at the point of failure
7. Console log for complete sessions
8. Maintenance level and updates for RTAM, VTAM and NCP
9. Procedures used at remote workstations which cause error if applicable (eg, cancel button pushed and remote hangs) and error message displayed.

- Documentation according to problem description:

A. Line errors, lost data

1. GTF trace with trace=USR
2. Edit for ID FEE and FED

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- B. Lost terminal or forced LOGOFF
  - 1. LOGON card for remote
  - 2. PARMLIB member for start RTAM if any exists
  - 3. GTF trace, trace=USR
  - 4. Edit IDS FEE and FED
  
- C. Disasterous errors
  - 1. Dump forced by RTAM
  - 2. GTF trace, trace=USR
  - 3. Edit IDS FEE and FED

**RES ACCOUNT FACILITY  
5741-SC-1BC**

- Necessary documentation on all problems:
  - 1. Maintenance list
  - 2. All job related output
  - 3. IEHLIST of SYS1.UADS at the time of failure

**RESTART READER PROC  
5741-SC-1BD**

- Necessary documentation on all problems:
  - 1. Maintenance list
  - 2. Hardcopy log
  - 3. Input JCL and associated output
  - 4. User mods implemented
  
- Documentation according to problem description:
  - A. ABEND problems
    - 1. SYSABEND or STANDALONE dump
  
  - B. I/O errors
    - 1. JESDUMP or QMGRDUMP (reference VS1 Job Management Logic - SY245169)
  
  - C. RDR/WTR/JOB separator problems
    - 1. Copy of the proc - IBM and user

**SYSTEM LOG  
5741-SC-1BE**

- Necessary documentation on all problems:
  - 1. Maintenance list
  - 2. Hardcopy log
  - 3. Input JCL and associated output
  - 4. User mods implemented

- Documentation according to problem description:

- A. ABEND problems

- 1. SYSABEND or STANDALONE dump

- B. I/O errors

- 1. JESDUMP or QMGRDUMP (reference VS1 Job Management Logic - SY245169)

- C. RDR/WTR/JOB separator problems

- 1. Copy of the proc - IBM and user

**WTP**

**5741-SC-1BF**

- Necessary documentation on all problems:

- 1. Maintenance list
  - 2. Hardcopy log
  - 3. Input JCL and associated output
  - 4. User mods implemented

- Documentation according to problem description:

- A. ABEND problems

- 1. SYSABEND or STANDALONE dump

- B. I/O errors

- 1. JESDUMP or QMGRDUMP (reference VS1 Job Management Logic - SY245169)

- C. RDR/WTR/JOB separator problems

- 1. Copy of the proc - IBM and user

**SCHEDULER INIT**

**5741-SC-1BG**

- Necessary documentation on all problems:

- 1. Maintenance list
  - 2. Hardcopy log
  - 3. Input JCL and associated output
  - 4. User mods implemented

- Documentation according to problem description:

- A. ABEND problems

- 1. SYSABEND or STANDALONE dump

- B. I/O errors

- 1. JESDUMP or QMGRDUMP (reference VS1 Job Management Logic - SY245169)



C. RDR/WTR/JOB separator problems

1. Copy of the proc - IBM user

**JOB LIST MANAGER**

**5741-SC-1BJ**

● Necessary documentation on all problems:

1. Maintenance list
2. Hardcopy log
3. Input JCL and associated output
4. User mods implemented

● Documentation according to problem description:

A. ABEND problems

1. SYSABEND or STANDALONE dump

B. I/O errors

1. JESDUMP or QMGRDUMP (reference VS1 Job Management Logic - SY245169)

C. RDR/WTR/JOB separator problems

1. Copy of the proc - IBM and user

**ISSP**

**5741-SC-1BK**

● Necessary documentation on all problems:

1. Maintenance list
2. Hardcopy log
3. Input JCL and associated output
4. User mods implemented

● Documentation according to problem description:

A. ABEND problems

1. SYSABEND or STANDALONE dump

B. I/O errors

1. JESDUMP or QMGRDUMP (reference VS1 Job Management Logic - SY245169)

C. RDR/WTR/JOB separator problems

1. Copy of the proc - IBM and user

**MSS RECOVERY SVC**

**5741-SC-1BZ**

● Necessary documentation on all problems:

1. Maintenance level - SMP listing

## IBM Internal Use Only

2. Console log from primary host and MSS console
3. System configuration - MSCs, SDGs, and VUAs

- Documentation according to problem description:

- A. ABEND type problems

1. System supplied dump
2. Related job output with MSGLEVEL=(1,1)

- B. Loops and waits

1. System dump (STANDALONE or SYSABEND) reflecting the failing addresses of the loop or wait
2. Status of the MSC (Optional)
3. Last order passed to the MSC (from ICB\*SSCB trace) (Optional)

- C. INCORROUT and volume handling problems

1. Related job JCL and SYSOUT (Optional)
2. Listing of the MSVI (Optional)
3. Print of MSVIJRNL (Optional)
4. LISTMSF (Optional)

### J ECS

#### 5741-SC-1B0

- Necessary documentation on all problems:

1. Maintenance list
2. Hardcopy log
3. Input JCL and associated output
4. User mods implemented

- Documentation according to problem description:

- A. ABEND problems

1. SYSABEND or STANDALONE dump

- B. I/O errors

1. JESDUMP or QMGRDUMP (reference VSI Job Management Logic - SY245169)

- C. RDR/WTR/JOB separator problems

1. Copy of the proc - IBM and user

### INPUT STREAM

#### 5741-SC-1B1

- Necessary documentation on all problems:

1. Maintenance list
2. Hardcopy log
3. Input JCL and associated output
4. User mods implemented

## IBM Internal Use Only

- Documentation according to problem description:
  - A. ABEND problems
    - 1. SYSABEND or STANDALONE dump
  - B. I/O errors
    - 1. JESDUMP or QMGRDUMP (reference VSI Job Management Logic - SY245169)
  - C. RDR/WTR/JOB separator problems
    - 1. Copy of the proc - IBM and user

### OUTPUT STREAM 5741-SC-1B2

- Necessary documentation on all problems:
  - 1. Maintenance list
  - 2. Hardcopy log
  - 3. Input JCL and associated output
  - 4. User mods implemented
- Documentation according to problem description:
  - A. ABEND problems
    - 1. SYSABEND or STANDALONE dump
  - B. I/O errors
    - 1. JESDUMP or QMGRDUMP (reference VSI Job Management Logic - SY245169)
  - C. RDR/WTR/JOB separator problems
    - 1. Copy of the proc - IBM and user

### SYSTEM RESTART 5741-SC-1B3

- Necessary documentation on all problems:
  - 1. Maintenance list
  - 2. Hardcopy log
  - 3. Input JCL and associated output
  - 4. User mods implemented
- Documentation according to problem description:
  - A. ABEND problems
    - 1. SYSABEND or STANDALONE dump
  - B. I/O errors
    - 1. JESDUMP or QMGRDUMP (reference VSI Job Management Logic - SY245169)

- C. RDR/WTR/JOB separator problems
  - 1. Copy of the proc - IBM and user

**I/O DEVICE ALLOCATION**  
**5741-SC-1B4**

- Necessary documentation on all problems:
  - 1. Maintenance list
  - 2. Hardcopy log
  - 3. Input JCL and associated output
  - 4. User mods implemented
- Documentation according to problem description:
  - A. ABEND problems
    - 1. SYSABEND or STANDALONE dump
  - B. I/O errors
    - 1. JESDUMP or QMGRDUMP (reference VS1 Job Management Logic - SY245169)
  - C. RDR/WTR/JOB separator problems
    - 1. Copy of the proc - IBM and user

**QUEUE MANAGER**  
**5741-SC-1B5**

- Necessary documentation on all problems:
  - 1. Maintenance list
  - 2. Hardcopy log
  - 3. Input JCL and associated output
  - 4. User mods implemented
- Documentation according to problem description:
  - A. ABEND problems
    - 1. SYSABEND or STANDALONE dump
  - B. I/O errors
    - 1. JESDUMP or QMGRDUMP (reference VS1 Job Management Logic - SY245169)
  - C. RDR/WTR/JOB separator problems
    - 1. Copy of the proc - IBM and user

**INIT DSO**  
**5741-SC-1B6**

- Necessary documentation on all problems:
  - 1. Maintenance list
  - 2. Hardcopy log

## IBM Internal Use Only

3. Input JCL and associated output
4. User mods implemented

- Documentation according to problem description:

- A. ABEND problems

1. SYSABEND or STANDALONE dump

- B. I/O errors

1. JESDUMP or QMGRDUMP (reference VSI Job Management Logic - SY245169)

- C. RDR/WTR/JOB separator problems

1. Copy of the proc - IBM and user

### TERMINATION

5741-SC-1B7

- Necessary documentation on all problems:

1. Maintenance list
2. Hardcopy log
3. Input JCL and associated output
4. User mods implemented

- Documentation according to problem description:

- A. ABEND problems

1. SYSABEND or STANDALONE dump

- B. I/O errors

1. JESDUMP or QMGRDUMP (reference VSI Job Management Logic - SY245169)

- C. RDR/WTR/JOB separator problems

1. Copy of the proc - IBM and user

### COMMANDS

5741-SC-1B8

- Necessary documentation on all problems:

1. Maintenance list
2. Hardcopy log
3. Input JCL and associated output
4. User mods implemented

- Documentation according to problem description:

- A. ABEND problems

1. SYSABEND or STANDALONE dump

**B. I/O errors**

1. JESDUMP or QMGRDUMP (reference VS1 Job Management Logic - SY245169)

**C. RDR/WTR/JOB separator problems**

1. Copy of the proc - IBM and user

**INTERPRETER**

**5741-SC-1B9**

● Necessary documentation on all problems:

1. Maintenance list
2. Hardcopy log
3. Input JCL and associated output
4. User mods implemented

● Documentation according to problem description:

**A. ABEND problems**

1. SYSABEND or STANDALONE dump

**B. I/O errors**

1. JESDUMP or QMGRDUMP (reference VS1 Job Management Logic - SY245169)

**C. RDR/WTR/JOB separator problems**

1. Copy of the proc - IBM and user

**DASD ERP**

**5741-SC-1CA**

● Necessary documentation on all problems:

1. Maintenance level - SMP listing
2. Storage dump which should include:
  - a. IOB, VCB, RQE, UCBEXTWA (Non-MVS)
  - b. IDSB, UCB, IDQ, IDB, EWA (MVS)
3. Console listing
4. GTF trace (Optional)
5. Module Zap dump (Optional)

● Documentation according to problem description:

**A. Loop problems**

1. Internal trace
2. NVC/LPA map (Optional)
3. When GTF trace provided, it must start from the beginning of the loop

**B. ABEND problems**

1. Internal trace
2. NVC/LPA map (Optional)

## IBM Internal Use Only

### C. Inccorout problems

1. IEHDASDR dump of LOGREC (log problems only)
2. EREP output (log problems only)

## UNIT RECORD ERP

### 5741-SC-1CB

#### ● Necessary documentation on all problems:

1. Maintenance level - SMP listing
2. Storage dump which should include:
  - a. IOB, VCB, RQE, UCBEXTWA (Non-MVS)
  - b. IDSB, UCB, IDQ, IDB, EWA (MVS)
3. Console listing
4. GTF trace (**Optional**)
5. Module Zap dump (**Optional**)

#### ● Documentation according to problem description :

##### A. Loop problems

1. Internal trace
2. NVC/LPA map (**Optional**)
3. When GTF trace provided, it must start from the beginning of the loop (**Optional**)

##### B. ABEND problems

1. Internal trace
2. NVC/LPA map (**Optional**)

##### C. Inccorout problems

1. IEHDASDR dump of LOGREC (log problems only)
2. EREP output (log problems only)

## TAPE ERP

### 5741-SC-1CC

#### ● Necessary documentation on all problems :

1. Maintenance level - SMP listing
2. Storage dump which should include:
  - a. IOB, VCB, RQE, UCBEXTWA (Non-MVS)
  - b. IDSB, UCB, IDQ, IDB, EWA (MVS)
3. Console listing
4. GTF trace (**Optional**)
5. Module Zap dump (**Optional**)

#### ● Documentation according to problem description :

##### A. Loop problems

1. Internal trace
2. NVC/LPA map (**Optional**)
3. When GTF trace provided, it must start from the beginning of the loop (**Optional**)

## IBM Internal Use Only

### B. ABEND problems

1. Internal trace
2. NVC/LPA map (**Optional**)

### C. Incore problems

1. IEHDASDR dump of LOGREC (log problems only)
2. EREP output (log problems only)

## OBR/EREP/RDE 5741-SC-1CD

- Necessary documentation on all problems:

1. Maintenance list
2. Hardcopy log
3. Input JCL and associated output
4. User mods implemented

- Documentation according to problem description:

#### A. ABEND problems

1. SYSABEND or STANDALONE dump

#### B. Message problems

1. All documentation as specified under "Problem Determination" in the system messages SRL

## RMS 5741-SC-1CE

- Necessary documentation on all problems:

1. See the required documentation for MVS (5752)
2. Dump of ASID01
3. INCORE LOGREC buffers located and formatted out
4. GTF trace, if problem can be recreated (**Optional**)

## 3851 ERP 5741-SC-1CI

- Necessary documentation on all problems:

1. Maintenance level - SMP listing
2. Console log from primary host and MSS console
3. System configuration - MSCs, SDGs, and VUAs

- Documentation according to problem description:

#### A. ABEND type problems

1. System supplied dump
2. Related job output with MSGLEVEL=(1, 1)



## IBM Internal Use Only

### B. Loops and waits

1. System dump (STANDALONE or SYSABEND) reflecting the failing addresses of the loop or wait
2. Status of the MSC (**Optional**)
3. Last order passed to the MSC (from ICB\*SSCB trace) (**Optional**)

### C. Inconrout and volume handling problems

1. Related job JCL and SYSOUT (**Optional**)
2. Listing of the MSVI (**Optional**)
3. Print of MSVIJRNL (**Optional**)
4. LISTMSF (**Optional**)

## COMMON SUPERVISOR MACROS

### 5741-SC-1CN

● Necessary documentation on all problems:

1. Maintenance list
2. All job related output
3. Determine if any user mods are on the system
4. SYSGEN or job input (**Optional**)
5. Listing of the failing macro (**Optional**)

## FLT PT SIM

### 5741-SC-1CP

● Necessary documentation on all problems:

1. Maintenance list
2. All job related output
3. Determine if any user mods are on the system
4. Input parameters

## CONDITION ASSEMBLY SWITCH

### 5741-SC-1CS

● Necessary documentation on all problems:

1. See the general documentation requirements.

## IPL

### 5741-SC-1CI

● Necessary documentation on all problems:

1. See the general documentation requirements.

## OVERLAY SUPERVISOR

### 5741-SC-1C2

● Necessary documentation on all problems:

1. See the general documentation requirements.

**IOS**  
**5741-SC-1C3**

- Necessary documentation on all problems:
  1. Maintenance list
  2. All job related output
  3. All dumps must be printed using "Print Storage"
  4. Dump of the failing address space with a trace table
  5. User mods implemented
  
- Documentation according to problem description:
  - A. Message, ABEND, and coded wait problems
    1. Follow the guides in the problem determination aids section in the appropriate messages and codes publication
    2. ABENDS OF1 OF2 300 400  
 The only meaningful dump for the above ABENDS are a loop trap at the following labels:
 

ABEND	Label
ABEND0F1	XERX04
ABEND0F2	XERX04
ABEND400	XERX04
ABEND300	DEBVAL

By putting the system into a 1 instruction loop at the instruction that initializes the particular ABEND, you will have preserved the status of the system at time of failure.

**DI DOCS**  
**5741-SC-1C4**

- Necessary documentation on all problems:
  1. Maintenance list
  2. Console log
  3. Determine what user modifications are on the system
  4. Standalone dump as close to failure as possible
  5. Print of pageable DCMs
  6. Nucleus map
  7. Zap dump of any suspected DIDOCS module

**VS1 SUPERVISOR**  
**5741-SC-1C5**

- Necessary documentation on all problems:
  1. Maintenance list
  2. All job related output
  3. All dumps must be printed using "Print Storage"
  4. Dump of the failing address space with a trace table
  5. User mods implemented
  
- Documentation according to problem description:
  - A. Message, ABEND, and coded wait problems
    1. Follow the guides in the problem determination aids section in the appropriate messages and codes publication.

### IBM Internal Use Only

- Supervisor ABENDS 01F 0F2 300 400  
The only meaningful dump for the above ABENDS are a loop trap at the following labels:

ABEND	Label
ABEND0F1	XERX04
ABEND0F2	XERX04
ABEND400	XERX04
ABEND300	DEBVAL

By putting the system into a I instruction loop at the instruction that initializes the particular ABEND, you will have preserved the status of the system at time of failure.

#### B. Loop problems

- Determine the loop addresses and what module(s) the loop is in.
- Provide an analysis of the trace table, identifying the events prior to the loop.

#### C. Wait problems

- Determine which module is waiting
- Determine the reason for the wait (I/O completion, etc)
- If enqueued on resources, determine what if the top task for this resource.

#### D. Communication task problems

- Determine what is in the commtask control blocks (UCM, UCME, WQUE, output queues)
- Console sheet (preferably SYSLOG)

### FETCH 5741-SC-1C7

- Necessary documentation on all problems:
  - See the general documentation requirements.

### NIP 5741-SC-1C8

- Necessary documentation on all problems:
  - Standalone dump
  - Listing of PARMLIB
  - Console log if SYSLOG not used
  - If problem occurs after MSGIEA101A, then have an internal trace of 200 entries.

### JES COMPATIBILITY INTERFACE 5741-SC-1DB

- Necessary documentation on all problems:
  - See the general documentation requirements.

**PASSWORD PROTECT**  
**5741-SC-1DC**

- Necessary documentation on all problems:
  1. See the general documentation requirements.

**3505-3525 SUPPORT**  
**5741-SC-1DD**

- Necessary documentation on all problems:
  1. See the general documentation requirements.

**VSAM**  
**5741-SC-1DE**

- Necessary documentation on all problems:
  1. CDS listing
  2. LISTCAT of correct catalog
- Documentation according to problem description:
  - A. INCORROUT

This is undefinable. Attempt to match with another symptom.
  - B. Wait
    1. Dump showing the wait
  - C. Loop
    1. Dump when PSW is in VSAM mode (ABENDOCX)
    2. SVC GTF trace (**Optional**)
    3. Print of index on tape (**Optional**)
  - D. ABEND problems
    1. Dump at the time of the failure
    2. LISTCAT
    3. Map of control blocks (ACB, RPL, PLH, BUFC)
  - E. Abort codes from AMS (see also the PLM for description)
    1. SNAP dump. (Insert a //AMSDUMP DD SYSOUT=A, and then the first card after SYSIN, PARM TEST (FULL(DLDA))
  - F. Lost records
    1. AMS print for 50 records before and after the missing key
    2. History of the record
    3. DASDR dump of the disk containing the missing area (**Optional**)
    4. AMS print of the index on tape for DL run (**Optional**)
    5. IDATRACE in IDA019R1 showing the PUT of the record

## IBM Internal Use Only

### G. Messages (error codes)

#### ACB

1. Dump in O/C/EOV when error code set
2. LISTCAT

#### RPL

1. Dump in record management where the error is set

#### CATALOG

1. CVT trap dump
2. LISTCAT (Optional)
3. IDATRACE of the catalog (Optional)

### H. Overlays

1. ABEND dump
2. Storage alteration dump (Optional)

#### ● Additional information:

1. Santa Teresa Support will accept any information in DL form.
2. IDATRACE is available in DLL.
3. REG15 gives an AMS abort code if a severe error occurs and nothing else can be done.
4. VSAM PRESSCREEN Guide gives many helpful hints on how to get any of the dumps and traces mentioned. Get one from Region.
5. There is a bucket in RETAIN/SRCH for periodic updates to the PRESSCREEN guide under 'VSAMAI'.

## 3890 DOCUMENT PROCESSOR

### 5741-SC-1DF

#### ● Necessary documentation on all problems:

1. See the general documentation requirements.

## IDCAMS

### 5741-SC-1DK

#### ● Necessary documentation on all problems:

1. CDS listing
2. LISTCAT of correct catalog

#### ● Documentation according to problem description:

##### A. INCORROUT

This is undefinable. Attempt to match with another symptom.

##### B. Wait

1. Dump showing the wait

C. Loop

1. Dump when PSW is in VSAM mode (ABEND0CX)
2. SVC GTF trace (Optional)
3. Print of index on tape (Optional)

D. ABEND problems

1. Dump at the time of the failure
2. LISTCAT
3. Map of control blocks (ACB, RPL, PLH, BUFC)

E. Abort codes from AMS (see also the PLM for description)

1. SNAP dump. (Insert a //AMSDUMP DD SYSOUT=A, and then the first card after SYSIN, PARM TEST (FULL(DLDA))

F. Lost records

1. AMS print for 50 records before and after the missing key
2. History of the record
3. DASDR dump of the disk containing the missing area (Optional)
4. AMS print of the index on tape for DL run (Optional)
5. IDATRACE in IDA019R1 showing the PUT of the record (Optional)

G. Messages (error codes)

ACB

1. Dump in O/C/EOV when error code set
2. LISTCAT

RPL

1. Dump in record management where the error is set

CATALOG

1. CVT trap dump
2. LISTCAT (Optional)
3. IDATRACE of the catalog (Optional)

H. Overlays

1. ABEND dump
2. Storage alteration dump (Optional)

● Additional information:

1. Santa Teresa Support will accept any information in DL form.
2. IDATRACE is available in DLL.
3. REG15 gives an AMS abort code if a severe error occurs and nothing else can be done.
4. VSAM PRESREEN Guide gives many helpful hints on how to get any of the dumps and traces mentioned. Get one from Region.
5. There is a bucket in RETAIN/SRCH for periodic updates to the PRESREEN Guide under 'VSAMAI'.

3886 OCR  
5741-SC-1DL

- Necessary documentation on all problems:
  1. See the general documentation requirements.

3540  
5741-SC-1DN

- Necessary documentation on all problems:
  1. See the general documentation requirements.

MSS  
5741-SC-1DP

- Necessary documentation on all problems:
  1. Maintenance level - SMP listing
  2. Console log from primary host and MSS console
  3. System configuration - MSCs, SDGs, and VUAs
- Documentation according to problem description:
  - A. ABEND type problems
    1. System supplied dump
    2. Related job output with MSGLEVEL=(1, 1)
  - B. Loops and waits
    1. System dump (STANDALONE or SYSABEND) reflecting the failing addresses of the loop or wait
    2. Status of the MSC (Optional)
    3. Last order passed to the MSC (from ICB\*SSCB trace)
  - C. INCORROUT and volume handling problems
    1. Related job JCL and SYSOUT (Optional)
    2. Listing of the MSVI (Optional)
    3. Print of MSVIJRNL (Optional)
    4. LISTMSF (Optional)

MSS  
5741-SC-1DQ

- Necessary documentation on all problems:
  1. Maintenance level - SMP listing
  2. Console log from primary host and MSS console
  3. System configuration - MSCs, SDGs, and VUAs
- Documentation according to problem description:
  - A. ABEND type problems
    1. System supplied dump
    2. Related job output with MSGLEVEL=(1, 1)

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- B. Loops and waits
  - 1. System dump (STANDALONE or SYSABEND) reflecting the failing addresses of the loop or wait
  - 2. Status of the MSC (**Optional**)
  - 3. Last order passed to the MSC (from ICB\*SSCB trace)
- C. INCORROUT and volume handling problems
  - 1. Related job JCL and SYSOUT (**Optional**)
  - 2. Listing of the MSVI (**Optional**)
  - 3. Print of MSVIJRNL (**Optional**)
  - 4. LISTMSF (**Optional**)

**MSS  
5741-SC-1DR**

- Necessary documentation on all problems:
  - 1. Maintenance level - SMP listing
  - 2. Console log from primary host and MSS console
  - 3. System configuration - MSCs, SDGs, and VUAs
- Documentation according to problem description:
  - A. ABEND type problems
    - 1. System supplied dump
    - 2. Related job output with MSGLEVEL=(1, 1)
  - B. Loops and waits
    - 1. System dump (STANDALONE or SYSABEND) reflecting the failing addresses of the loop or wait
    - 2. Status of the MSC (**Optional**)
    - 3. Last order passed to the MSC (from ICB\*SSCB trace) (**Optional**)
  - C. INCORROUT and volume handling problems
    - 1. Related job JCL and SYSOUT (**Optional**)
    - 2. Listing of the MSVI (**Optional**)
    - 3. Print of MSVIJRNL (**Optional**)
    - 4. LISTMSF (**Optional**)

**MSS  
5741-SC-1DS**

- Necessary documentation on all problems:
  - 1. Maintenance level - SMP listing
  - 2. Console log from primary host and MSS console
  - 3. System configuration - MSCs, SDGs, and VUAs
- Documentation according to problem description:
  - A. ABEND type problems
    - 1. System supplied dump
    - 2. Related job output with MSGLEVEL=(1, 1)



**IBM Internal Use Only**

**B. Loops and waits**

1. System dump (STANDALONE or SYSABEND) reflecting the failing addresses of the loop or wait
2. Status of the MSC (**Optional**)
3. Last order passed to the MSC (from ICB\*SSCB trace) (**Optional**)

**C. INCORROUT and volume handling problems**

1. Related job JCL and SYSOUT (**Optional**)
2. Listing of the MSVI (**Optional**)
3. Print of MSVIJRNL (**Optional**)
4. LISTMSF (**Optional**)

**MSS**

**5741-SC-1DT**

● Necessary documentation on all problems:

1. Maintenance level - SMP listing
2. Console log from primary host and MSS console
3. System configuration - MSCs, SDGs, and VUAs

● Documentation according to problem description:

**A. ABEND type problems**

1. System supplied dump
2. Related job output with MSGLEVEL=(1, 1)

**B. Loops and waits**

1. System dump (STANDALONE or SYSABEND) reflecting the failing addresses of the loop or wait
2. Status of the MSC (**Optional**)
3. Last order passed to the MSC (from ICB\*SSCB trace) (**Optional**)

**C. INCORROUT and volume handling problems**

1. Related job JCL and SYSOUT (**Optional**)
2. Listing of the MSVI (**Optional**)
3. Print of MSVIJRNL (**Optional**)
4. LISTMSF (**Optional**)

**MSS**

**5741-SC-1DU**

● Necessary documentation on all problems:

1. Maintenance level - SMP listing
2. Console log from primary host and MSS console
3. System configuration - MSCs, SDGs, and VUAs

● Documentation according to problem description:

**A. ABEND type problems**

1. System supplied dump
2. Related job output with MSGLEVEL=(1, 1)

B. Loops and waits

1. System dump (STANDALONE or SYSABEND) reflecting the failing addresses of the loop or wait
2. Status of the MSC (Optional)
3. Last order passed to the MSC (from ICB\*SSCB trace)

C. INCORROUT and volume handling problems

1. Related job JCL and SYSOUT (Optional)
2. Listing of the MSVI (Optional)
3. Print of MSVIJRNL (Optional)
4. LISTMSF (Optional)

**SAM**

**5741-SC-1D0**

● Necessary documentation on all problems:

1. Maintenance levels - SMP listings
2. Complete list of data set parameters.  
Include the DCB, IOB, and DEB from the dump or the DCB, DD, and open parameters from the job.
3. Timing dependencies regarding normal I/O, EOVS, end of extent, open or close
4. List of any related maintenance that had been applied close to the start of the problem

● Documentation according to problem description:

A. ABEND problems

1. Dump (not a SYSUDUMP)
2. Message accompanying the ABEND, if applicable
3. If the ABEND is an ABEND001:
  - a. Determine what error is indicated (incorrect length, channel program check, data check)
  - b. Determine whether changing the parameters helps the problem (Optional)
  - c. Determine what access method modules are being used (Optional)
4. If the ABEND is an ABEND002:
  - a. Verify that you have valid input data
  - b. If the input is from SMF, check for application of the latest SMF maintenance
  - c. Read in the "FEFS Support Newsletter 76-2," the article on Diagnostic Techniques for VBS Records.

B. Data errors (out of sequence, missing, duplicate)

1. Assure the latest level of IOS maintenance (Optional)

C. Loop problems:

1. Multi-module
  - a. List of modules involved
  - b. GTF trace (Optional)

## IBM Internal Use Only

2. Inner module
  - a. Determine the cause of the loop and what is preventing break-out.
  - b. SYSABEND dump with failing module

### D. Wait problems

1. Determine what the task is waiting for
2. Dump at the time of the wait
3. GTF trace (Optional)

### ● Additional information:

The module being used can be determined from the DEB + X'34' through the DEB + X'48'. The last two characters of the module IDs are stored there. These characters are then appended to IGG019XX for the full module name.

## O/C/EOV

### 5741-SC-1D1

### ● Necessary documentation on all problems:

1. Maintenance level - SMP listing
2. JCL and console listing

### ● Documentation according to problem description:

#### A. INCORROUT problems

1. Listing of data set (where applicable)
2. Listing of SMF data (where applicable)

#### B. Wait state problems

1. Determine which module is issuing the wait. Provide either a SVC DUMP or a SADUMP as documentation to support your findings.

#### C. Loop problems

1. Determine the looping modules and any associated steps and/or labels.
2. Work area trace

#### D. ABEND problems

1. SYSABEND dump that contains the DEB and the DCB. For MVS, the dump must also include SP230.
2. Work area trace

#### E. Message problems

1. Determine the module that issues the message from the cross-reference listing.

### ● Additional information:

1. Work area trace is documented in:
  - a. Messages and codes, table 2, format 3 or,
  - b. O/C/EOV PLM under problem determination

## IBM Internal Use Only

2. Register usage:
    - a. REG4=work area pointer
    - b. REG2=DCB pointer
    - c. REG3 =base register for all modules except IFG019RA
    - d. REG5=base register for IFG019RA
    - e. REG6=where-to-go table pointer
- Note: On SYSABEND dumps, registers are saved in the second SVRB.
3. WIRJ AREA=X'1C9' contains a 2-character module identifier.
  4. When the data necessary to analyze the problem is not available in the dump, a work area trace, trap, or both will be required.

### BPAM 5741-SC-1D2

- Necessary documentation on all problems:
  1. Maintenance levels - SMP listing
  2. Determine the sequence of events causing the problem.
- Documentation according to problem description:
  - A. ABEND problems
    1. SYSABEND dump
    2. Refer to the system codes problem determination aids for that particular ABEND.
  - B. Message problems
    1. Refer to the system message problem determination aids for that particular message.
  - C. Directory blocks out of sequence - stow problems
    1. IEHDASDR dump of the data set to show the directory blocks before and after the out-of-sequence problem
    2. IEHLIST of the data set before and after the problem (**Optional**)
    3. Listing of the program issuing stow if other than an IBM utility, service aid, or normal close processing (**Optional**)

### CATALOG 5741-SC-1D3

- Necessary documentation on all problems:
  1. CDS listing
  2. LISTCAT of correct catalog
- Documentation according to problem description:
  - A. INCORROUT

This is undefinable. Attempt to match with another symptom.

## IBM Internal Use Only

### B. Wait

1. Dump showing the wait

### C. Loop

1. Dump when PSW is in VSAM mode (ABEND0CX)
2. SVC GTF trace (**Optional**)
3. Print of index on tape (**Optional**)

### D. ABEND problems

1. Dump at the time of the failure
2. LISTCAT
3. Map of control blocks (ACB, RPL, PLH, BUFC)

### E. Abort codes from AMS (See also the PLM for description.)

1. SNAP dump. (Insert a //AMSDUMP DD SYSOUT=A, and then the first card after SYSIN, PARM TEST (FULL(DLDA)))

### F. Lost records

1. AMS print for 50 records before and after the missing key
2. History of the record
3. DASDR dump of the disk containing the missing area (**Optional**)
4. AMS print of the index on tape for DL run (**Optional**)
5. IDATRACE in IDA019R1 showing the PUT of the record

### G. Messages (error codes)

#### ACB

1. Dump in O/C/EOV when error code set
2. LISTCAT

#### RPL

1. Dump in record management where the error is set

#### CATALOG

1. CVT trap dump
2. LISTCAT (**Optional**)
3. IDATRACE of the catalog (**Optional**)

### H. Overlays

1. ABEND dump
2. Storage alteration dump (**Optional**)

### ● Additional information:

1. Santa Teresa Support will accept any information in DL form.
2. IDATRACE is available in DLL.
3. REG15 gives an AMS abort code if a severe error occurs and nothing else can be done.
4. VSAM PRESSCREEN Guide gives many helpful hints on how to get any of the dumps and traces mentioned. Get one from Region.
5. There is a bucket in RETAIN/SRCH for periodic updates to the PRESSCREEN Guide under 'VSAMAI'.

**DADSM**  
**5741-SC-1D4**

- Necessary documentation on all problems:
  1. Maintenance levels - SMP listing
  2. Console listing
  3. JCL for failure job
- Documentation according to problem description:
  - A. ABEND problems
    1. ABEND dump with DADSM work area in core
  - B. Message problems
    1. DASDR dump of the VTOC
  - C. VTOC problems (example, missing space)
    1. DASDR dump of the VTOC

**OCR**  
**5741-SC-1D5**

- Necessary documentation on all problems:
  1. See the general documentation requirements.

**MICR**  
**5741-SC-1D6**

- Necessary documentation on all problems:
  1. Maintenance level - SMP listings
  2. Dump of the problem
  3. All MICR control blocks and MICR trace data
  4. CCW trace of the failure (**Optional**)

**BDAM**  
**5741-SC-1D7**

- Necessary documentation on all problems:
  1. Maintenance levels - SMP listings
  2. Data set parameters (JCL, DCB, DD)
  3. Customer program (**Optional**)
  4. Knowledge of the customer's application
- Documentation according to problem description:
  - A. ABEND problems
    1. SYSABEND dump
    2. Register or address causing the error
  - B. INCORROUT - data dependent
    1. Dump of the cylinder where the failure is occurring

C. Wait problems

1. Determine what the task is waiting for
2. GTF trace of failure (**Optional**)

D. Loop problems

1. Multi-module loop
  - a. GTF trace
2. Inter-module loop
  - a. Determine what is being tested
  - b. Determine what prevents normal breakout

ISAM

5741-SC-1D8

• Necessary documentation on all problems:

1. Maintenance levels - SMP listing
2. Data set parameters (DCB, DD, OPEN)
3. DASDR dump of data set, including index and affected prime and overflow areas

• Documentation according to problem description:

A. ABEND problems

1. SYSABEND dump
2. Register or address causing the error (ABENDOCX type)

B. Wait problems

1. Determine what the task is waiting for
2. GTF trace

C. Loop problems

1. Multi-module loop
  - a. GTF trace
2. Inter-module loop
  - a. Determine what is being tested.
  - b. Determine what prevents normal breakout

D. INCORROUT problems

1. Pattern of failure (specific conditions causing failure)
2. Trace of failure (**Optional**)

JAM

5741-SC-1D9

• Necessary documentation on all problems:

1. See the general documentation requirements.

**EMULATOR CONTROL**  
**5741-SC-1E1**

- Necessary documentation on all problems:
  1. See the general documentation requirements.

**GAM**  
**5741-SC-1G0**

- Necessary documentation on all problems:
  1. Maintenance list
  2. Console log
  3. Determine what user modifications are on the system.
- Documentation according to problem description:
  - A. ABEND problems
    1. SYSABEND dump at time of failure
  - B. Attention handler problems
    1. GTF trace showing terminal activity

**IBCDMPRS**  
**5741-SC-110**

- Necessary documentation on all problems:
  1. CDS PTF list
  2. SYSABEND or STANDALONE dump on all ABEND situations
- Documentation according to problem description:
  - A. Utilities
    1. ABENDS: output including JCL and messages
    2. Message only: all documentation as specified under 'Problem Determination' of associated message in Utility Message SRL GC381005
  - B. Service aids
    1. ABENDS: associated JCL and/or output
    2. Message only: SYSOUT, JCL, associated messages

**IBCDASDI**  
**5741-SC-111**

- Necessary documentation on all problems:
  1. CDS PTF list
  2. SYSABEND or STANDALONE dump on all ABEND situations



## IBM Internal Use Only

- Documentation according to problem description:
  - A. Utilities
    - 1. ABENDS: output including JCL and messages
    - 2. Message only: all documentation as specified under 'Problem Determination' of associated message in Utility Message SRL GC381005
  - B. Service aids
    - 1. ABENDS: associated JCL and/or output
    - 2. Message only: SYSOUT, JCL, associated messages

### IBCPRTBL 5741-SC-112

- Necessary documentation on all problems:
  - 1. CDS PTF list
  - 2. SYSABEND or STANDALONE dump on all ABEND situations
- Documentation according to problem description:
  - A. Utilities
    - 1. ABENDS: output including JCL and messages
    - 2. Message only: all documentation as specified under 'Problem Determination' of associated message in Utility Message SRL GC381005
  - B. Service Aids
    - 1. ABENDS: associated JCL and/or output
    - 2. Message only: SYSOUT, JCL, associated messages

### SSS 5741-SC-1SS

- Necessary documentation on all problems:
  - A. Operation being performed
    - 1. Control statement in full where applicable
    - 2. Macro statement in full where applicable
  - B. Output expected and output received
    - 1. Messages
    - 2. Console log
    - 3. Printer output
    - 4. Component release level
    - 5. Maintenance level
    - 6. SCP release level
    - 7. SCP maintenance level

**SYSGEN**

5741-SC-1S1  
 5741-SC-1S2  
 5741-SC-1S3  
 5741-SC-1S4  
 5741-SC-1S5  
 5741-SC-1S6

- Necessary documentation on all problems:
  1. Maintenance listing
  2. Console log
  3. Determine what user modifications are on the system
  4. Dump of the failing address space with a trace table
  5. All dumps must be printed using 'Print Storage'.

**IEBPTCH/5741-SC-1UA**  
**IEHMOVE/5741-SC-1UC**  
**IEHINIT/5741-SC-1UD**  
**IEHSTAR/5741-SC-1UE**  
**IEHATLAS/5741-SC-1UF**  
**IEBTCRIN/5741-SC-1UG**  
**IEBISAM/5741-SC-1UH**  
**IEBDG/5741-SC-1UJ**  
**IEBCOMPR/5741-SC-1UK**  
**IEBIMAGE/5741-SC-1UM**  
**SGIFA402/5741-SC-1UX**  
**IEHDASDR/5741-SC-1U0**  
**IEHIOSUP/5741-SC-1U1**  
**IEHLIST/5741-SC-1U2**  
**IEHPROGM/5741-SC-1U3**  
**IEBCOPY/5741-SC-1U6**  
**IEBGENER/5741-SC-1U7**  
**IEBUPDTE/5741-SC-1U8**  
**IEBEDIT/5741-SC-1U9**

- Necessary documentation on all problems:
  1. CDS PTF list
  2. SYSABEND or STANDALONE dump on all ABEND situations

- Documentation according to problem description:

**A. Utilities**

1. ABENDS: output including JCL and messages
2. Message only: all documentation as specified under 'Problem Determination' of associated message in Utility Message SRL GC381005

**B. Service aids**

1. ABENDS: associated JCL and/or output
2. Message only: SYSOUT, JCL, associated messages

## IBM Internal Use Only

### CRJE 5741-SC-10A

- Necessary documentation on all problems:
  1. Maintenance list
  2. Hardcopy log
  3. Input JCL and associated output
- Documentation according to problem description:
  - A. ABEND problems
    1. SYSABEND or STANDALONE dump
  - B. Wait problems
    1. S/ZAP dump of module waiting
    2. GTF trace of failure (if in an I/O wait)

### REL LEVEL ID MACRO 5741-SC-10B

- Necessary documentation on all problems:
  1. Maintenance list
  2. All job related JCL, input, and output
  3. Listing of the failing macro

### TOLTEP 5741-SC-10C

- Necessary documentation on all problems:
  1. Maintenance level (SMP listing)
  2. Console log
  3. Storage dump with LPA and LINKEDIT map
  4. SYS1.VTAMLST and start parms (**Optional**)
  5. SYS1.LOGREC (**Optional**)
  6. Line trace of line under test or channel trace for a local device under test
- Not sure if problem is either TOLTEP or VTAM:
  1. Include doc as required for 5741-SC-123 (VTAM)

### POWER WARNING FEATURE 5741-SC-10E

- Necessary documentation on all problems:
  1. See the general documentation requirements.

**SCHEDULER SMF  
5741-SC-100**

- Necessary documentation on all problems:
  1. Maintenance list
  2. Console sheet
  3. Determine what user modifications are on the system
- Documentation according to problem description:
  - A. Bad or missing record problems
    1. List of SMF data set using ditto or IEBPATCH
    2. JCL message data set for bad run of job
    3. Output listing showing bad output
  - B. Bad SMF time problems
    1. Timing is obtained from timer supervisor
  - C. Bad data in SMF record problems
    1. Find source or data using SMF SRL to determine the appropriate component
  - D. ABEND problems
    1. Job listing
    2. Core image dump
    3. Standalone dump (Optional)

**COMMON SUPERVISOR/MAPPING MACROS  
5741-SC-101**

- Necessary documentation on all problems:
  1. Maintenance list
  2. All job related output
  3. Determine if any user mods are on the system
  4. SYSGEN or job input (Optional)
  5. Listing of the failing macro (Optional)

**SMF  
5741-SC-102**

- Necessary documentation on all problems:
  1. Maintenance list
  2. Console sheet
  3. Determine what user modifications are on the system
- Documentation according to problem description:
  - A. Bad or missing record problems:
    1. List of SMF data set using ditto or IEBPATCH
    2. JCL message data set for bad run of job
    3. Output listing showing bad output

## IBM Internal Use Only

- B. Bad SMF time problems
  - 1. Timing is obtained from timer supervisor
- C. Bad data in SMF record problems
  - 1. Find source or data using SMF SRL to determine the appropriate component
- D. ABEND problems
  - 1. Job listing
  - 2. Core image dump
  - 3. Standalone dump (**Optional**)

### ASSEMBLER 5741-SC-103

- Necessary documentation on all problems:
  - 1. Maintenance list
- Documentation according to problem description:
  - A. ABEND problems
    - 1. SYSABEND or STANDALONE dump
    - 2. Hardcopy log
    - 3. Associated assembler output with messages
  - B. Message problems
    - 1. Source program
    - 2. Macro definitions
    - 3. Associated listings

### LINKAGE EDITOR 5741-SC-104

- Necessary documentation on all problems:
  - 1. Maintenance level - SMP listing
  - 2. JCL and control statements
  - 3. SYSPRINT output (XREF and map) of the linkage editor step
- Documentation according to problem description:
  - A. ABEND problems
    - 1. SYSABEND dump
  - B. Message problems
    - 1. Use Linkage Editor Messages SRL (GC381007-4) for problem determination procedures on all MSGIEW0XXX.
    - 2. Determine the Region and size parameters.
    - 3. Verify that all recommendations from messages and codes have been used. (**Optional**)

## IBM Internal Use Only

### C. INCORROUT problems

1. Using the IMBLIST service aid, list OBJ or LISTLOAD option, verify that the input was correct. **(Optional)**
2. Using an appropriate service aid (LISTVTOC, LISTLOAD, or an ABSDUMP), verify that the output was incorrect. **(Optional)**

- Additional information:

1. PSGIM (ZZ25-0511-4), page 2-27, Hint 2 describes how to obtain a trap dump at the time of a message being issued.

### LOADER 5741-SC-105

- Necessary documentation on all problems:

1. Maintenance level - SMP listing
2. JCL and control statements
3. SYSPRINT output (XREF and MAP) of the linkage editor step

- Documentation according to problem description:

#### A. ABEND problems

1. SYSABEND dump

#### B. Message problems

1. Use Linkage Editor Messages SRL (GC381007-4) for problem determination procedures on all MSGIEW0XXX.
2. Determine the Region and size parameters.
3. Verify that all recommendations from messages and codes have been used. **(Optional)**

#### C. INCORROUT problems

1. Using the IMBLIST Service Aid, list OBJ or LISTLOAD option, verify that the input was correct. **(Optional)**
2. Using an appropriate service aid (LISTVTOC, LISTLOAD, or an ABSDUMP), verify that the output was incorrect. **(Optional)**

- Additional information:

1. PSGIM (ZZ25-0511-4), page 2-27, Hint 2 describes how to obtain a trap dump at the time of a message being issued.

### OLTEP 5741-SC-106

- Necessary documentation on all problems:

1. Maintenance list
2. Console log
3. Determine what user modifications are on the system.

## IBM Internal Use Only

- Documentation according to problem description:
  - A. ABEND problems
    - 1. GTF trace of I/O (**Optional**)
    - 2. OLTEP trace (**Optional**)
  - B. Wait state problems
    - 1. A standalone dump (it is more useful than a cancel dump)
  - C. APF problems
    - 1. List of all authorized libraries

### GSP

#### 5741-SC-107

- Necessary documentation on all problems:
  - 1. Maintenance list
  - 2. Console log
  - 3. Determine what user modifications are on the system
- Documentation according to problem description:
  - A. ABEND problems
    - 1. SYSABEND dump at time of failure
  - B. Bad screen problems
    - 1. A series of buffer dumps
    - 2. A series of snap dumps taken at the same time as the buffer dumps
  - C. Attention handler problems
    - 1. GTF trace showing line and terminal activity

### IVP

#### 5741-SC-108

- Necessary documentation on all problems:
  - 1. Maintenance list
  - 2. All job related output

### CHECKPOINT RESTART

#### 5741-SC-109

- Necessary documentation on all problems:
  - 1. Maintenance levels - SMP listing
  - 2. JCL and console listing
  - 3. Problem dump

## IBM Internal Use Only

- Documentation according to problem description:
  - A. Restart problems
    - 1. Control block type problems after restart has been completed
      - a. Dump of the checkpoint data set (**Optional**)
    - 2. Data type problem during restart
      - a. Dump of the checkpoint data set (**Optional**)
      - b. Dump in the module that is doing the function and is detecting the error (**Optional**)

### DSS

5741-SC-110

- Necessary documentation on all problems:
  - 1. Maintenance List
- Documentation according to problem description:
  - A. ABEND problems
    - 1. SYSABEND or STANDALONE dump
    - 2. Associated JCL and/or input
  - B. Message problems
    - 1. SYSOUT
    - 2. JCL
    - 3. Associated messages

### GTF

5741-SC-111

- Necessary documentation on all problems:
  - 1. Maintenance list
  - 2. Console sheet from start of GTF to termination of GTF
  - 3. Determine what user modifications are on the system
- Documentation according to problem description:
  - A. Program check problems
    - 1. Dump with debug option
  - B. Initialization problems
    - 1. Listing of Proc being used
  - C. CCW trace problems
    - 1. Problem must be reproduced without CCW trace



IBM Internal Use Only

HMASPZAP/5741-SC-112  
HMDPRDMP/5741-SC-113  
HMBLIST/5741-SC-114  
HMDSADMP/5741-SC-115  
HMAPTELE/5741-SC-116  
IMCJOBQD/5741-SC-117  
HMDPRDMP EDIT/5741-SC-118  
IMCOSJQD/5741-SC-119

- Necessary documentation on all problems:
  1. Maintenance list
- Documentation according to problem description:
  - A. ABEND problems
    1. SYSABEND or STANDALONE dump
    2. Associated JCL and/or input
  - B. Message problems
    1. SYSOUT
    2. JCL
    3. Associated messages

**BTAM**  
5741-SC-120

- Necessary documentation on all problems:
  1. Maintenance list
  2. BTAM line configuration
  3. Console sheet (when messages involved)
  4. Corezap of failing modules
- Documentation according to problem description:
  - A. Remote type problems
    1. CCW trace of line group
    2. Matching dump of BTAM control blocks to include DEB, DCB, DECB, IOB, UCB
    3. If CPU to CPU, a trace of both CPUs with associated dumps and control blocks
    4. For error recovery, SVC15 trace (GTF) CCW traces and dumps
  - B. Local type problems
    1. SVC116 trace
    2. Dumps as in remote problems that match the trace

**TCAM**  
**5741-SC-121**

- Necessary documentation on all problems:
  1. SMP maintenance list
  2. MCP listing if changed or new and not sent before
  3. Determine as to when problem started
  4. Subtask trace of 300 entries of optionally spooled to comwrite
  5. Copy of all user modifications to TCAM
  6. Post trace (TCAM 10 only) **(Optional)**
  
- Documentation according to problem description:
  - A. ABEND problems
    1. SYSABEND dump (not a UDUMP)
    2. System console log **(Optional)**
  
  - B. Line problems
    1. Line I/O trace - 200 incore entries minimum, optionally spooled to comwrite data set
    2. Dump that matches the line trace entries
    3. Identify the failing resource
    4. S/ZAP dump of ERP modules **(Optional)**
    5. GTF trace of SIO I/O interrupts, SVC3, SVC15, SVC114 **(Optional)**
    6. GTF CCW trace **(Optional)**
  
  - C. Operator control
    1. Console dump that shows TCAM and OP control regions
    2. GTF trace of SVC7 and SVC102 **(Optional)**
    3. Log of commands entered **(Optional)**
  
  - D. Restart problems
    1. SYSABEND dump at restart of TCAM
    2. Dump of the checkpoint data set that was restarted
    3. Message queue dump **(Optional)**
  
  - E. Data dependent - queue problems
    1. Message queue dump
    2. TCAM dump at time of problem
    3. Buffer trace **(Optional)**
  
  - F. Loop problems
    1. The loop - description of addresses
    2. Dump
    3. For a loop in the dispatcher - post trace (TCAM 10 only)
  
  - G. NCP problems or NCP involved
    1. BTU trace of all related resources optionally spooled to comwrite data set (level 5 NCP only)
    2. PIU trace of all related resources optionally spooled to comwrite data set (TCAM 10 only)
    3. NCP dump **(Optional)**

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4. NCP assembly listing (**Optional**)
  5. Line trace in 3704-3705 (**Optional**)
  6. Line I/O trace of NCP/370X (TCAM 10 only) (**Optional**)
- H. Core overlay problems
1. Address stop data dump at the location of the overlay (**Optional**)
- I. Application program problems
1. TCAM dump
  2. Application program dump (**Optional**)
  3. Application program listing (**Optional**)
  4. GTF trace of SVC102 (**Optional**)
- J. VTAM interface problems
1. TPIO trace
  2. VTAM PIU trace (RNIO) (**Optional**)
  3. GTF trace of SVC124 (**Optional**)
  4. Dump including VTAM control blocks and buffers (**Optional**)
  5. TCAM dump (**Optional**)
- K. TIOC/TSO problems
1. Dump of TCAM
  2. Dump including TIOC/TSO control blocks and buffers (**Optional**)
  3. GTF trace of SVC93 through SVC103. (TSO/TIOC SVCs (**Optional**))
- L. Wait state
1. Dump of system showing wait with STCB trace active

## VTAM 5741-SC-123

- Necessary documentation on all problems:
  1. Maintenance list and changes to network
  2. Console log
  3. Storage dump with LPA map and LINKEDIT map
  4. Determine the application (CICS, IMS, etc)
  5. SYS1.VTAMLST and start PARMs (**Optional**)
  6. SYS1.LOGREC (DOS recorder file) (**Optional**)
  7. If I/O is involved, use trace (VTAM RNIO, buffer, line) or system trace for local channel I/O
- Documentation according to problem description:
  - A. Loop problems
    1. Trace of the loop
  - B. Wait state problems
    1. Determine the status of all waiting VTAM related tasks including RPHs and the status of the buffer pools

3600 SUPPORT/5741-SC-124  
CTS RETAIL HOST/5741-SC-126  
CTS SUPERMARKET HOST/5741-SC-127  
CTS SPPS/5741-SC-128  
SPS/KE/5741-SC-129

- Necessary documentation on all problems:
  - A. Operation being performed
    - 1. Control statement in full where applicable
    - 2. Macro statement in full where applicable
  - B. Output expected and output received
    - 1. Messages
    - 2. Console log
    - 3. Printer output
    - 4. Component release level
    - 5. Maintenance level
    - 6. SCP release level
    - 7. SCP maintenance level

**SMP**  
**5741-SC-130**

- Necessary documentation on all problems:
  - 1. See the required documentation for MVS (5752)
  - 2. Listing of history log

**SYSOUT**  
**5742-SC-1B2**

- Necessary documentation on all problems:
  1. Maintenance level - SMP listings
  2. Documentation on the following control blocks: JCT, UCB, CSCB, JFCB, input and output DCBs.
- Documentation according to problem description:
  - A. Loop problems
    1. Storage dump
    2. NUC/LPA map
    3. Module Zap dump
    4. GTF trace (**Optional**)
  - B. ABEND problems
    1. Storage dump
    2. NUC/LPA map
    3. Module Zap dump
    4. GTF trace (**Optional**)
  - C. INCORROUT problems
    1. Storage dump
    2. Module Zap dump
    3. Console log (**Optional**)
    4. GTF trace (**Optional**)

**SYSTEM RESTART/5742-SC-1B3**  
**ALLOCATION/5742-SC-1B4**  
**QUEUE MANAGER/5742-SC-1B5**  
**INITIATOR/5742-SC-1B6**  
**TERMINATION/5742-SC-1B7**  
**INTERPRETER/5742-SC-1B9**

- Necessary documentation on all problems:
  1. Maintenance level - SMP listing
  2. A CDS PTF list should be readily available.
  3. All ABEND problems require a SYSABEND or STAND-ALONE dump.

**SYSTEM COMMAND**  
**5742-SC-1B8**

- Necessary documentation on all problems:
  1. Maintenance level SCP and PTF
  2. All job related output
  3. Hardcopy or SYSLOG output containing command image and message traffic pertinent to the command execution
  4. A copy of the PROC for start and mount commands

**DASD ERP/5742-SC-1CA  
UNIT RECORD ERP/5742-SC-1CB  
TAPE ERP/5742-SC-1CC**

● Necessary documentation on all problems:

1. Maintenance level - SMP listing
2. Storage dump which should include:
  - a. IOB UCB, RQE, UCBEXTWA (Non-MVS)
  - b. IOSB, UCB, IDQ, IDB, EWA (MVS)
3. Console listing
4. GTF trace (**Optional**)
5. Module Zap dump (**Optional**)

● Documentation according to problem description:

A. Loop problems

1. Internal trace
2. NVC/LPA map (**Optional**)
3. When GTF trace provided, it must start from the beginning of the loop. (**Optional**)

B. ABEND problems

1. Internal trace
2. NVC/LPA map (**Optional**)

C. INCORROUT problems

1. IEHDASDR dump of LOGREC (log problems only)
2. EREP output (log problems only)

**OBR/EREP/RDE  
5742-SC-1CD**

● Necessary documentation on all problems:

1. See the required documentation for MVS (5752).

● Documentation according to problem description:

A. Recording problems

1. Dump of master scheduler address spacer
2. Listing of error LOGREC entries

B. Editing problems

1. Edited output
2. History dataset with failing data for DLS run
3. Tourist dataset (EREPI only)

**RMS  
5742-SC-1CE**

● Necessary documentation on all problems:

1. See the required documentation for MVS (5752).

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2. Dump of ASID01
3. INCORE LOGREC buffers located and formatted out
4. GTF trace, if problem can be recreated (**Optional**)
5. Standalone dump
6. User modified PTFs applied
7. Nucleus map
8. Formatted printout of CCH/MCH records at the time of the failure

**EXTENDED SERVICE ROUTINE/5742-SC-1CF**  
**COMMAND SUPERVISOR MACRO/5742-SC-1CN**  
**FLOATING-POINT SIM/5742-SC-1CP**  
**CONDITION ASSEMBLY SWITCH/5742-SC-1CS**  
**BLDL LIST/5742-SC-1CT**  
**IPL/5742-SC-1C1**

- Necessary documentation on all problems:

1. See the required documentation for MVS (5752).

### **OVERLAY SUPERVISOR** **5742-SC-1C2**

- Necessary documentation on all problems:

1. See the general documentation requirements.

### **IOS** **5742-SC-1C3**

- Necessary documentation on all problems:

1. Maintenance levels - SMP listings
2. Record of any additional maintenance (S/ZAPs, etc)
3. General options used
4. Hardware configuration (where applicable)
5. If applicable:
  - a. Frequency of failure
  - b. Data dependencies
  - c. Access method used
  - d. Device dependencies
  - e. Bypass that works

- Documentation according to problem description:

#### **A. ABEND problems**

1. ABENDOCX type
  - a. ABEND dump
  - b. Register or address causing the error
  - c. Determine what code provided the invalid address.
2. ABENDX00 type
  - a. Problem determination area (PDA) ABEND dump

3. Permanent I/O error type (ABEND001, ABEND106-F, ABEND32D)
  - a. Sense and status information
  - b. Seek-search argument - if applicable
  - c. Byte count (**Optional**)
  - d. Layout of CCWs (**Optional**)
- B. INCORROUT problems
  1. Pattern and conditions of failure
  2. Trace of failure (**Optional**)
- C. Message or MNOTE problems
  1. Full content of message, not just the message ID
  2. Stage I SYSOUT (MNOTE)
  3. Determine the test that caused the message
- D. Wait or loop problems
  1. Console or SADUMP at time of the wait or during loop. Not a cancel dump
  2. If wait, determine what the system is waiting for, not necessarily why the system is waiting.
  3. If loop, determine what is preventing a breakout.
  4. If a multi-loop, determine the module names.
- E. Core overlay problems
  1. Determine the instruction or CCW that is causing the overlay. Use branch office or Region assistance.
- F. RQE chaining associated problems
  1. SADUMP from trap for scanning active queue RQETRAP available. XABEND dump, console dump, or SVC dump is not good.
  2. Large incore trace

**DIDOCs**  
**5742-SC-1C4**

- Necessary documentation on all problems:
  1. Maintenance list
  2. LPA map
  3. Console sheet
  4. Standalone dump
  5. SYSGEN options
  6. Map of the nucleus
- Documentation according to problem description:
  - A. Program check problems
    1. Determine what module the program check occurred in.
    2. Provide the failing PSW and registers at time of failure.
    3. Determine what register is bad and where it was loaded or passed from.



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### B. Loop problems

1. Determine the loop addresses and what module(s) the loop is in.
2. Provide an analysis of the trace table, identifying the events prior to the loop.

### C. Wait problems

1. Determine which module is waiting
2. Determine the reason for the wait (I/O completion, etc)
3. If enqueued on resources, determine what is the top task for this resource

### D. Communication task problems

1. Determine what is in the COMMTASK control blocks (UCM, UCME, WQES, output queues)
2. Console sheet (preferably SYSLOG)

### E. IPL problems

1. Console sheet
2. Wait state code

### F. GETMAIN/FREEMAIN problems

1. MSGIEA700, 1, 2 are issued for all failures and are usually found with the JCL output for the failing job.

### • Additional information

1. Make sure resident and transient DCMs are printed on the documentation (transient DCMs are in LPA)
2. SYSABEND or STANDALONE dump

## SUPERVISOR 5742-SC-1C5

### • Necessary documentation on all problems:

1. Maintenance list
2. LPA map
3. Standalone dump
4. Map of the nucleus

### • Documentation according to problem description:

#### A. Program check problems

1. Determine what module the program check occurred in.
2. Provide the failing PSW and registers at time of failure.
3. Determine what register is bad and where it was loaded or passed from.

#### B. Loop problems

1. Determine the loop addresses and what module(s) the loop is on.
2. Provide an analysis of the trace table, identifying the events prior to the loop.

C. Wait problems

1. Determine which module is waiting.
2. Determine the reason for the wait (I/O completion, etc).
3. If enqueued on resources, determine what is the top task for this resource.

D. Communication task problems

1. Determine what is in the COMMTASK control blocks (UCM, UCME, WQES, output queues)
2. Console sheet (preferably SYSLOG)

E. Page supervisor problems

1. For those problems caused by a program check, provide the control blocks associated with the program check.
2. For those problems where a return code is presented (0700, 0701, etc) module IEAPSER (page sup error routine) saves the registers to determine where the error was detected.

● Additional information

1. Make certain that the areas and control blocks connected with the problem are in the documentation. It may be necessary to do a storage to storage print of selected areas.

**FETCH**

5742-SC-1C7

● Necessary documentation on all problems:

1. Maintenance level - SMP listing
2. Nucleus map and LPA listing
3. All job related output

● Documentation according to problem description:

A. Loop problems

1. INCORE trace
2. STANDALONE dump

B. I/O loop problems

1. DASDR dump of the member
2. GTF trace (Optional)

C. ABEND106-E, ABEND106-F, ABEND22D, ABEND32D

1. SYSABEND dump
2. DASDR dump of the member

D. ABEND problems

1. SYSABEND dump

PASSWORD PROTECT/5742-SC-IOC  
3505/3525 READER/5742-SC-1DD

- Necessary documentation on all problems:
  1. See the general documentation requirements.

**VSAM**  
**5742-SC-1DE**

- Necessary documentation on all problems:
  1. CDS listing
  2. LISTCAT of correct catalog
- Documentation according to problem description:
  - A. INCORROUT
    1. This is undefinable. Attempt to match with another symptom.
  - B. Wait
    1. Dump showing the wait
  - C. Loop
    1. Dump when PSW is in VSAM mode (ABEND0CX)
    2. SVC GTF trace (Optional)
    3. Print of index on tape (Optional)
  - D. ABEND problems
    1. Dump at the time of the failure
    2. LISTCAT
    3. Map of control blocks (ACB, RPL, PLH, BUFC)
  - E. Abort codes from AMS (see also the PLM for description)
    1. SNAP dump. (Insert a //AMSDUMP DD SYSOUT=A, and then the first card after SYSIN, PARM TEST (FULL(DLDA))
  - F. Lost records
    1. AMS print for 50 records before and after the missing key
    2. History of the record
    3. DASDR dump of the disk containing the missing area (Optional)
    4. AMS print of the index on tape for DL run (Optional)
    5. IDATRACE in IDA019R1 showing the PUT of the record (Optional)
  - G. Messages (error codes)

ACB

    1. Dump in O/C/EOV when error code set
    2. LISTCAT

RPL

    1. Dump in record management where the error is set

CATALOG

1. CVT trap dump
2. LISTCAT (Optional)
3. IDATRACE of the catalog (Optional)

H. Overlays

1. ABEND dump
2. Storage alteration dump (Optional)

● Additional information:

1. Santa Teresa Support will accept any information in DL form.
2. IDATRACE is available in DLL.
3. REG15 gives an AMS abort code if a severe error occurs and nothing else can be done.
4. VSAM Prescreen Guide gives many helpful hints on how to get any of the dumps and traces mentioned. Get one from Region.
5. There is a bucket in GENSOFT/SFF for periodic updates to the Prescreen Guide under 'VSAMA1'.

ACCESS METHOD SERVICES

5742-SC-1DK

● Necessary documentation on all problems:

1. CDS listing
2. LISTCAT of correct catalog

● Documentation according to problem description:

A. INCORROUT

1. This is undefinable. Attempt to match with another symptom.

B. Wait

1. Dump showing the wait

C. Loop

1. Dump when PSW is in VSAM mode (ABENDOCX)
2. SVC GTF trace (Optional)
3. Print of index on tape (Optional)

D. ABEND problems

1. Dump at the time of the failure
2. LISTCAT
3. Map of control blocks (ACB, RPL, PLH, BUFC)

E. Abort codes from AMS (see also the PLM for description)

1. SNAP dump. (Insert a //AMSDUMP DD SYSOUT=A, and then the first card after SYSIN, PARM TEST(FULL(DLDA))

F. Lost records

1. AMS print for 50 records before and after the missing key
2. History of the record

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3. DASDR dump of the disk containing the missing area (**Optional**)
4. AMS print of the index on tape for DL run (**Optional**)
5. IDATRACE in IDA019R1 showing the PUT of the record (**Optional**)

#### G. Messages (error codes)

##### ACB

1. Dump in O/C/EOV when error code set
2. LISTCAT

##### RPL

1. Dump in record management where the error is set

##### CATALOG

1. CVT trap dump
2. LISTCAT (**Optional**)
3. IDATRACE of the catalog (**Optional**)

#### H. Overlays

1. ABEND dump
2. Storage alteration dump (**Optional**)

#### • Additional information:

1. Santa Teresa Support will accept any information in DL form.
2. IDATRACE is available in DLL.
3. REG15 gives an AMS abort code if a severe error occurs and nothing else can be done.
4. VSAM Prescreen Guide gives many helpful hints on how to get any of the dumps and traces mentioned. Get one from Region.
5. There is a bucket in GENSOFT/SFF for periodic updates to the Prescreen Guide under 'VSAMAI'.

#### MSS

5742-SC-1DP  
5742-SC-1DQ  
5742-SC-1DR  
5742-SC-1DS  
5742-SC-1DT  
5742-SC-1DU

#### • Necessary documentation on all problems:

1. Maintenance level - SMP listing
2. Console log from primary host and MSS console
3. System configuration - MSCs, SDGs, and VUAs

#### • Documentation according to problem description:

##### A. ABEND type problems

1. System supplied dump
2. Related job output with MSGLEVEL=(1, 1)

##### B. Loops and waits

1. System dump (STANDALONE or SYSABEND) reflecting the failing addresses of the loop or wait

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2. Status of the MSC (Optional)
3. Last order passed to the MSC (from ICB\*SSCB trace) (Optional)

#### C. INCORROUT and volume handling problems

1. Related job JCL and SYSOUT (Optional)
2. Listing of the MSVI (Optional)
3. Print of MSVIJRNL (Optional)
4. LISTMSF (Optional)

### SAM

#### 5742-SC-1D0

- Necessary documentation on all problems:

1. Maintenance levels - SMP listings
2. Complete list of data set parameters. Include the DCB, IOB, and DEB from the dump or the DCB, DD, and open parameters from the job
3. Timing dependencies regarding normal I/O, EOVS, end of extent, open or close.
4. List of any related maintenance that had been applied close to the start of the problem

- Documentation according to problem description:

#### A. ABEND problems

1. Dump (not a SYSUDUMP)
2. Message accompanying the ABEND, if applicable.
3. If the ABEND is an ABEND001:
  - a. Determine what error is indicated (incorrect length, channel program check, data check).
  - b. Determine whether changing the parameters helps the problem (Optional)
  - c. Determine what access method modules are being used. (Optional)
4. If the ABEND is an ABEND002:
  - a. Verify that you have valid input data.
  - b. If the input is from SMF, check for application of the latest SMF maintenance.
  - c. Read in the "FEFS Support Newsletter 76-2," the article on Diagnostic Techniques for VBS Records.

#### B. Data errors (out of sequence, missing, duplicate)

1. Assure the latest level of IOS maintenance. (Optional)

#### C. Loop problems

1. Multi-module
  - a. List of modules involved
  - b. GTF trace (Optional)

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2. Inner module
  - a. Determine the cause of the loop and what is preventing break-out.
  - b. SYSABEND dump with failing module

### D. Wait problems

1. Determine what the task is waiting for.
2. Dump at the time of the wait.
3. GTF trace (**Optional**)

### ● Additional information:

1. The module being used can be determined from the DEB + X'34' through the DEB + X'48'. The last two characters of the module IDs are stored there. These characters are then appended to IGG019XX for the full module name.

## O/C/EOV 5742-SC-1D1

### ● Necessary documentation on all problems:

1. Maintenance level - SMP listing
2. JCL and console listing

### ● Documentation according to problem description:

#### A. INCORROUT problems

1. Listing of data set (where applicable)
2. Listing of SMF data (where applicable)

#### B. Wait state problems

1. Determine which module is issuing the wait. Provide either a SVC DUMP or a SADUMP as documentation to support your findings.

#### C. Loop problems

1. Determine the looping modules and any associated steps and/or labels.
2. Work area trace

#### D. ABEND problems

1. SYSABEND dump that contains the DEB and the DCB. For MVS, the dump must also include SP230.
2. Work area trace

#### E. Message problems

1. Determine the module that issues the message from the cross-reference listing.

### ● Additional information:

1. Work area trace is documented in:
  - a. Messages and codes, table 2, format 3 or;
  - b. O/C/EOV PLM under problem determination

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2. Register usage:
  - a. REG4=work area pointer
  - b. REG2=DCB pointer
  - c. REG3=base register for all modules except IFG019RA
  - d. REG5=base register for IFG019RA
  - e. REG6=where-to-go table pointer

Note: On SYSABEND dumps, registers are saved in the second SVRB.

3. WORK AREA=X'1C9' contains a 2-character module identifier.
4. When the data necessary to analyze the problem is not available in the dump, a work area trace, trap, or both will be required.

### BPAM 5742-SC-1D2

- Necessary documentation on all problems:
  1. Maintenance levels - SMP listing
  2. Determine the sequence of events causing the problem.
- Documentation according to problem description:
  - A. ABEND problems
    1. SYSABEND dump
    2. Refer to the system codes problem determination aids for that particular ABEND.
  - B. Message problems
    1. Refer to the system message problem determination aids for that particular message.
  - C. Directory blocks out of sequence - stow problems
    1. IEHDASDR dump of the data set to show the directory blocks before and after the out-of-sequence problem
    2. IEHLIST of the data set before and after the problem (**Optional**)
    3. Listing of the program issuing stow if other than an IBM utility, service aid, or normal close processing.

### CATALOG 5742-SC-1D3

- Necessary documentation on all problems:
  1. CDS listing
  2. LISTCAT of correct catalog
- Documentation according to problem description:
  - A. INCORROUT
    1. This is undefinable. Attempt to match with another symptom.
  - B. Wait
    1. Dump showing the wait



## IBM Internal Use Only

### C. Loop

1. Dump when PSW is in VSAM mode (ABENDOCX)
2. SVC GTF trace (**Optional**)
3. Print of index on tape (**Optional**)

### D. ABEND problems

1. Dump at the time of the failure
2. LISTCAT
3. Map of control blocks (ACB, RPL, PLH, BUFC)

### E. Abort codes from AMS. (See also the PLM for description.)

1. SNAP dump. (Insert a //AMSDUMP DD SYSOUT=A, and then the first card after SYSIN, PARM TEST(FULL(DLDA))

### F. Lost records

1. AMS print for 50 records before and after the missing key
2. History of the record
3. DASDR dump of the disk containing the missing area (**Optional**)
4. AMS print of the index on tape for DL run (**Optional**)
5. IDATRACE in IDA019R1 showing the PUT of the record (**Optional**)

### G. Messages (error codes)

#### ACB

1. Dump in O/C/EOV when error code set
2. LISTCAT

#### RPL

1. Dump in record management where the error is set

#### CATALOG

1. CVT trap dump
2. LISTCAT (**Optional**)
3. IDATRACE of the catalog (**Optional**)

### H. Overlays

1. ABEND dump
2. Storage alteration dump (**Optional**)

### ● Additional information:

1. Santa Teresa Support will accept any information in DL form.
2. IDATRACE is available in DLL.
3. REG15 gives an AMS abort code if a severe error occurs and nothing else can be done.
4. VSAM Prescreen Guide gives many helpful hints on how to get any of the dumps and traces mentioned. Get one from Region.
5. There is a bucket in GENSOFT/SFF for periodic updates to the Prescreen Guide under 'VSAMAI'.

**DADSM**  
**5742-SC-1D4**

- Necessary documentation on all problems:
  1. Maintenance levels - SMP listing
  2. Console listing
  3. JCL for failure job
  
- Documentation according to problem description:
  - A. ABEND problems
    1. ABEND dump with DADSM work area in core
  - B. Message problems
    1. DASDR dump of the VTOC
  - C. VTOC problems (example, missing space)
    1. DASDR dump of the VTOC

**OCR**  
**5742-SC-1D5**

- Necessary documentation on all problems
  1. See the general documentation requirements.

**MICR**  
**5742-SC-1D6**

- Necessary documentation on all problems:
  1. Maintenance level - SMP listings
  2. Dump of the problem
  3. All MICR control blocks and MICR trace data
  4. CCW trace of the failure (**Optional**)

**BDAM**  
**5742-SC-1D7**

- Necessary documentation on all problems:
  1. Maintenance levels - SMP listings
  2. Data set parameters (JCL, DCB, DD)
  3. Customer program (**Optional**)
  4. Knowledge of the customer's application
  
- Documentation according to problem description:
  - A. ABEND problems
    1. SYSABEND dump
    2. Register or address causing the error
  - B. INCORROUT - data dependent
    1. Dump of the cylinder where the failure is occurring

## IBM Internal Use Only

- C. Wait problems
  - 1. Determine what the task is waiting for.
  - 2. GTF trace of failure (Optional)
- D. Loop problems
  - 1. Multi-module loop
    - a. GTF trace
  - 2. Inter-module loop
    - a. Determine what is being tested
    - b. Determine what prevents normal breakout

### ISAM 5742-SC-1D8

- Necessary documentation on all problems:
  - 1. Maintenance levels - SMP listing
  - 2. Data set parameters (DCB, DD, OPEN)
  - 3. DASDR dump of data set, including index and affected prime and overflow areas
- Documentation according to problem description:
  - A. ABEND problems
    - 1. SYSABEND dump
    - 2. Register or address causing the error (ABENDOCX type)
  - B. Wait problems
    - 1. Determine what the task is waiting for
    - 2. GTF trace
  - C. Loop problems
    - 1. Multi-module loop
      - a. GTF trace
    - 2. Inter-module loop
      - a. Determine what is being tested.
      - b. Determine what prevents normal breakout
  - D. INCORROUT problems
    - 1. Pattern of failure (specific conditions causing failure)
    - 2. Trace of failure (Optional)

### GAM 5742-SC-1G0

- Necessary documentation on all problems:
  - 1. Maintenance list
  - 2. BTAM line configuration

**IBM Internal Use Only**

3. Console sheet (when messages involved)
4. Corezap of failing modules

● Documentation according to problem description:

A. Remote type problems

1. CCW trace of line group
2. Matching dump of BTAM control blocks to include DEB, DCB, DECB, IOB, UCB
3. If CPU-to-CPU, a trace of both CPUs with associated dumps and control blocks
4. For error recovery, SVC15 trace (GTF)

B. Local type problems

1. SVC116 trace
2. Dumps as in remote problems that match the trace

● Additional information:

1. The SPR generally requests that you have documentation available as needed to APAR a problem before you contact him. See FE PSGIN ZZ25-0511 page 2-35 for these requirements for BTAM.

**IBCDMPRS/5742-SC-110**  
**IBCDASDI/5742-SC-111**  
**IBCPRTBL/5742-SC-112**

● Necessary documentation on all problems:

1. CDS PTF list
2. SYSABEND or STANDALONE dump on all ABEND situations.

● Documentation according to problem description:

A. Utilities

1. ABENDS: output including JCL and messages
2. Message only: all documentation as specified under 'Problem Determination' of associated message in Utility Message SRL GC38-1005.

B. Service aids

1. ABENDS: associated JCL and/or output
2. Message only: SYSOUT, JCL, associated messages

**SSS**  
**5742-SC-1SS**

● Necessary documentation on all problems:

A. Operation being performed

1. Control statement in full where applicable
2. Macro statement in full where applicable

## IBM Internal Use Only

### B. Output expected and output received

1. Messages
2. Console log
3. Printer output
4. Component release level
5. Maintenance level
6. SCP release level
7. SCP maintenance level

#### **SYSGEN**

5742-SC-1S1  
5742-SC-1S2  
5742-SC-1S3

- Necessary documentation on all problems:

1. Printed SYSOUT from Stage I
2. Full text of error message (the same message issued from different macros contains different text).

- Documentation according to problem description:

#### A. Message and INCORROUT problems

1. Assembler error or SYSOUT MNOTE' \*\* Stage I \*\*
  - a. Identify the last macro called before message occurred (see FE PSGIM 'APAR Procedures, SYSGEN Macro Identification'). The Gen Macro prints the name and the COMPID of the macro being called as a macro comment.
2. Error messages or incorrect \*\*Stage II\*\*
  - a. Identify whether the error is due to a Stage II macro or if it is bad input from Stage I. If Stage II is determined to be in error, contact the appropriate component (SYSGEN does not have any Stage II macros).
  - b. If bad input from Stage I is the problem determine whether you are doing a SYSGEN or applying PTFs with SMP.
    - For PTF application, the Stage II input is being supplied by SMP from the CDS. Verify that the CDS has been correctly updated from the last SYSGEN.
    - For SYSGEN, determine whether it is a full or partial (I/O, NUC, PROCESSOR).
    - For partial SYSGEN, check if the user specified the required unchanged values the same as the last full SYSGEN (see SYSGEN SRL for values that must be specified but not changed).
    - For full SYSGEN, identify Stage I macros that created the bad Stage II input. Check the COMPID of the Stage I macro.

**SUPERVISOR SYSGEN/5742-SC-1S4**  
**SCHEDULER SYSGEN/5742-SC-1S5**  
**SERVICE AID SYSGEN/5742-SC-1S6**

- Necessary documentation on all problems:

1. SYSGEN input and output
2. Listing of the failing macros

TSO EDIT/5742-SC-1T0  
 TSO TEST/5742-SC-1T1  
 TSO UTILITY/5742-SC-1T2  
 TSO DATA MANAGEMENT/5742-SC-1T3  
 TSO SCHEDULER/5742-SC-1T4  
 LINK GO PROMPTER/5742-SC-1T5  
 TSO SUPERVISOR/5742-SC-1T7  
 TSO TRACE/5742-SC-1T9

● Necessary documentation on all problems:

1. Maintenance list
2. Hardcopy log
3. TSO terminal input and output

● Documentation according to problem description:

A. ABEND problems:

1. SYSABEND or STANDALONE dump

● Additional information:

Diagnostic Notes:

1. IDJPRM00 parameters initialize TIOCRPT with values such as max number of TSO users (TSBs), BUFSIZE, number of buffers, etc. IKJPRM00 lives in PARMLIB.
2. SYS1.UADS (user attribute data set) is a list of terminal users authorized to use TSO and contains information about each, such as user ID, password, region size, restrictions on TSO commands, etc. It is maintained by the account command.
3. SVCs used by TSO:

SVC93 - TPUT/TGET move data between TIOC and user buffers

SVC101 - QTIP moves data between TIOC and TCAM buffers.

Also used by TPUT/TGET. See TCAM logic manuals SY30-2040 and SY30-2059 for SVC101 entry codes.

SVC34 - MGCR/QEDIT used when TSO user logs on

SVC94 - STCC update TCAM control blocks from users address space

SVC99 - DAIR dynamic allocation

SVC95 - TSEVENT, SVC96 STAX, SVC97 breakpoint (used by test)

SVC100 - Submit job background

4. TSO control blocks and how to get to

CVT → TSCVT → TIOCRPT

TSCVT → TJB → TSB

TJB → RCB → TJBX → DSE

TJBX → TAXE → TAIE

TJBX → QPL

TSCVT → DPA → DCA → RQEL

TCB → JSCB → PSCB → UPT

TIOCRPT is initialized with the parms from IKJPRM00 and contains many threshold values, free buffer list, flag byte, number of buffers on free queue, etc.

TSB contains information pertaining to the terminals user's status. It contains flag bytes, pointer to buffers, number of buffers, physical line size, etc.

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DAPL and DAPB - At entrance to DAIR, REG1 points to DAPL which points to DAPL. DAPL contains addresses of PSCB, UPT (user profile table), ECT, ECB, DAPB. DAPB contains codes defining requested operation. - CPPL - The control block interface between the command processor and the TMP (terminal monitor program) and is pointed to by REG1. CPPL contains address of command buffer, UPT, PSCB, and ECT (environment control table).

Traces: Previously mentioned SVCs, particularly SVC93 and SVC101, can be traced by GTF to get a picture of what is happening. For line, terminal, INCORROUT, etc, type problems, it is important sometimes to get traces such as 3705 EP level 2 and 3 traces or 3705 NCP line and channel traces. Also, host traces, such as TCAM sub-task, line or buffer traces are sometimes important.

Notes: TMP is the interface from terminal users to get all command processors. IKJSCAN checks to see what kind of command. IKJPARSE checks operands in buffer and also prompts the terminal user.

IEBTPCH/5742-SC-1UA  
JEHMOVE/5742-SC-1UC  
IEHINIT/5742-SC-1UD  
IEHSTATR/5742-SC-1UE  
IEHATLAS/5742-SC-1UF  
IEBTCRIN/5742-SC-1UG  
IEBISAM/5742-SC-1UH  
IEBDG/5742-SC-1UJ  
IEBCOMPR/5742-SC-1UK  
SGIFHA02/5742-SC-1UX  
IEHDASDR/5742-SC-1U0  
IEHLIST/5742-SC-1U2  
IEHPROGM/5742-SC-1U3  
IEBCOPY/5742-SC-1U6  
IEBGENER/5742-SC-1U7  
IEBUPDTE/5742-SC-1U8  
IEBEDIT/5742-SC-1U9

- Necessary documentation on all problems:

1. CDS PTF list
2. SYSABEND or STANDALONE dump on all ABEND situations

- Documentation according to problem description:

#### A. Utilities

1. ABENDS: Output including JCL and messages
2. Message only: All documentation as specified under 'Problem Determination' of associated message in Utility Message SRL GC38-1005.

#### B. Service aids

1. ABENDS: Associated JCL and/or output
2. Message only: SYSOUT, JCL, associated messages

**RELEASE LEVEL MACRO**  
**5742-SC-10B**

- Necessary documentation on all problems:

1. See the required documentation for MVS (5752).

**TOLTEP**  
**5742-SC-10C**

- Necessary documentation on all problems:

1. Maintenance level (SMP listing)
2. Console log
3. Storage dump with LPA and LINKEDIT map
4. SYS1.VTAMLST and start parms (Optional)
5. SYS1.LOGREC (Optional)
6. Line trace of line under test or channel trace for a local device under test

- Not sure if problem is either TOLTEP or VTAM:

1. Include doc as required for 5742-SC-123 (VTAM)

**POWER WARNING FEATURE**  
**5742-SC-10E**

- Necessary documentation on all problems:

1. See the required documentation for MVS (5752).

**SCHEDULER SMF**  
**5742-SC-100**

- Necessary documentation on all problems:

1. Maintenance level - SCP and PTF tape
2. Maintenance list
3. Hardcopy log
4. Input JCL and associated output

- Documentation according to problem description:

A. ABEND problems

1. SYSABEND or STANDALONE dump

**MAPPING MACROS**  
**5742-SC-101**

- Necessary documentation on all problems:

1. See the required documentation for MVS (5752).
2. Listing of failing macro(s)



SMF  
5742-SC-102

- Necessary documentation on all problems:
  1. See the required documentation for MVS (5752).
- Documentation according to problem description:
  - A. Message, ABEND and code waits
    1. Follow the guides in the problem determination aids section in the appropriate messages and codes publication.
  - B. Record content problems
    1. A copy of the record as formatted by the user data generator program
    2. Zap dump of the record image from SYS1.MAN data set
  - C. Mapping macro problems
    1. An assembler listing of user programs or user exit containing the mapping macros
  - D. SMF dump program (IFASMFDP) problems
    1. Zap dump of record being processed from SYS1.MAN data set at the time of the error
    2. Dump of output data set produced by IFASMFDP
    3. Any hardcopy or SYSLOG data pertaining to the SMF failure
  - E. Waiting on SMF resource problems
    1. Standalone dump containing
      - a. ASID01, CPUdata, CVTdata, QBCTRACE, SUMMARY, FORMAT
      - b. ASID holding SMF resource
      - c. ASID(s) of task(s) that have ABENDED and are on resource queue (**Optional**)
- Additional information:
  1. The SMF components are not responsible for the data content of all SMF records. The SMF publication (GC28-0754 or GC28-0706) includes in the record description, the module name which creates the record. This information is essential in identifying the failing component.

ASSEMBLER  
5742-SC-103

- Necessary documentation on all problems:
  1. Maintenance list
- Documentation according to problem description:
  - A. ABEND PROBLEMS
    1. SYSABEND or STANDALONE dump

2. Hardcopy log
3. Associated assembler output with messages

B. Message problems

1. Source program
2. Macro definitions
3. Associated listings

**LINKAGE EDITOR/5742-SC-104  
LOADER/5742-SC-105**

● Necessary documentation on all problems:

1. Maintenance level - SMP listing
2. JCL and control statements
3. SYSPRINT output (XREF and MAP) of the linkage editor step

● Documentation according to problem description:

A. ABEND problems

1. SYSABEND dump

B. Message problems

1. Use Linkage Editor Messages SRL (GC38-1007) for problem determination procedures on all MSGIEW0XXX.
2. Determine the Region and size parameters.
3. Verify that all recommendations from messages and codes have been used. **(Optional)**

C. INCORROUT problems

1. Using the IMBLIST service aid, list OBJ or LISTLOAD option, verify that the input was correct. **(Optional)**
2. Using an APPROPRIATE service aid (LISTVTOC, LISTLOAD, or an ABSDUMP), verify that the output was incorrect.

● Additional information

1. PSGIN (ZZ25-0511), page 2-27, Note 2 describes how to obtain a trap dump at the time of a message being issued.

**OLTEP  
5742-SC-106**

● Necessary documentation on all problems:

1. ABEND dump
2. Console log
3. Determine what user modifications are on the system
4. PTF fix list

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- Documentation according to problem description:
  - A. Failure during initialization
    - 1. If OLTEP fails during initialization, check that the correct editor (OLTEP editor or OS/VS linkage editor) has been used for the system installed. Check that all steps of authorization have been done correctly. Have all linkage editor output.
  - B. Return codes/OLTs
    - 1. Use the OLTEP trace function, if available, to trace return codes. Trace can be used to debug OLTs by tracing the on-line tests use of the OLTEP macro instructions. Have all trace output with the console sheet and dump.
  - C. IO related problems
    - 1. A trace of IO activity to the device being tested
  - D. ABEND problems
    - 1. GTF trace of I/O (Optional)
    - 2. OLTEP trace (Optional)
  - E. APF problems
    - 1. List of all authorized libraries
- Additional information
  - 1. Map of nucleus (Optional)
  - 2. Printer output (Optional)

Debugging notes: The ABEND PSW and registers for OLTEP are not in the usual place in an ABEND dump. They are in the IFDOLT00 STAE routine save area.

**GSP**  
**5742-SC-107**

- Necessary documentation on all problems
  - 1. See the required documentation for MVS (5752)
  - 2. Dump of GTF address space
  - 3. Dump of the current address space (Optional)

**IVP**  
**5742-SC-108**

- Necessary documentation on all problems:
  - 1. See the required documentation for MVS (5752).

**CHECKPOINT RESTART**  
**5742-SC-109**

- Necessary documentation on all problems:
  1. Maintenance levels - SMP listing
  2. JCL and console listing
  3. Problem dump
  
- Documentation according to problem description:
  - A. Restart problems
    1. Control block type problems after restart has been completed.
      - a. Dump of the checkpoint data set (**Optional**)
    2. Data type problem during restart
      - a. Dump of the checkpoint data set (**Optional**)
      - b. Dump in the module that is doing the function and is detecting the error (**Optional**)

**DSS**  
**5742-SC-110**

- Necessary documentation on all problems:
  1. Maintenance list
  
- Documentation according to problem description:
  - A. ABEND problems
    1. SYSABEND or STANDALONE dump
    2. Associated JCL and/or input
  - B. Message problems
    1. SYSOUT
    2. JCL
    3. Associated messages

Note: If a PTF has been recently applied, ensure that the DSS utility (IQADUM00) has been run correctly.

**GTF**  
**5742-SC-111**

- Necessary documentation on all problems:
  1. A list of all PTFs applied
  2. Description of any unsupported changes to GTF (ie, CCWTRACE)
  3. A list of SU/ICRs on the base system
  4. Operator (master) console listings from the start of GTF to the time of the dump or termination.

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- Documentation according to problem description:
  - A. The following documentation is required for all APARs on the indicated system:
    - 1. Listing of software entries from SYS1.LOGREC (MVS only)
    - 2. Mapping of the nucleus and the link pack area (SVS/MVS) only
  - B. For problems starting GTF or initialization problems
    - 1. Copy of the PROC used to start GTF, if any PROC other than the standard PROC supplied with the system is used.
    - 2. ABDUMP or an SVCDUMP
    - 3. Listing of SYS1.PARMLIB member, trace options supplied by SYS1.PARMLIB member.
  - C. Abnormal termination after initialization is complete:
    - 1. ABDUMP or SVCDUMP
    - 2. Listing of at least the last few records, using PRDMP/EDIT of the GTF dataset. This listing must be from the trace dataset created by the run of GTF for which the dump was taken.
  - D. For problems involving loops, wait states, or failure to terminate
    - 1. Display control register 8 before taking a dump
    - 2. STANDALONE dump (SADUMP)
    - 3. An instruction step/PSW display (at least a skeleton) if looping
    - 4. Listing of the GTF trace dataset using PRDMP/EDIT. This listing must be from the GTF trace dataset created by the run for which the dump was taken.
  - E. If GTF is not tracing an event or is gathering incomplete or incorrect data for an event
    - 1. Display control register 8 during GTF execution (if possible)
    - 2. Send the GTF trace dataset.
    - 3. A PRDMP/EDIT listing of the trace data and dump (using a utility) of the same trace dataset, if the trace dataset cannot be sent.
  - F. Documentation errors
    - 1. Reference the order number, level of the publication and the page number(s) in question.
    - 2. Provide the order number(s), level, and page number(s) for publications supporting your contention.
  - G. For CCWTRACE problems
    - 1. Problem must be reproduced without CCWTRACE.

AMASPZAP  
5742-SC-112

- Necessary documentation on all problems:
  - 1. All printer output from a run that shows the error.

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2. Statement of expected results, and where different from actual results.
  3. PTF level of module in error, or PTF list output if module identity is uncertain.
  4. SU dependency, if any
  5. Special environment (TSO, VSAM, etc)
- Documentation according to problem description:
    - A. For loop or ABEND problems
      1. SYSUDUMP if ABEND or loop
      2. GTF trace for larger loop
      3. Single-step trace or trap dump for small loop
      4. Console record if it contains messages related to problem
      5. Control statements causing ABENDs or loop, if not already in the SYSPRINT output
      6. SPZAP dump (DUMPT) of module for verification of version
      7. Object deck (or tape copy) of module (and of co-requisite versions of other modules, if any), if PTF level is old or unknown
      8. Documentation references when problem involves discrepancy between program operation and documentation
    - B. Documentation errors
      1. Reference the order number, level of the publication(s) and the page number(s) in question.
      2. Provide the order number(s), level, and the page number(s) for publications supporting your contention.

**AMDPRDMP  
5742-SC-113**

- Necessary documentation on all problems:
  1. All printer output from a run that shows the error
  2. Statement of expected results, and where different from actual results
  3. PTF level of module in error, or PTF list output if module identity is uncertain
  4. SU dependency, if any
  5. Special environment (TSO, VSAM, etc)
- Documentation according to problem description:
  - A. When improper output is received
    1. Copy of dump dataset on 1600 bpi tape, unless problem is at interpretation of a control statement or of the PARM field of the EXEC statement
  - B. For loop or ABEND problems
    1. SYSUDUMP if ABEND or loop
    2. GTF trace for larger loop
    3. Single-step trace or trap dump for small loop
    4. Console record if it contains messages related to problem
    5. Control statements causing ABENDs or loop, if not already in the SYSPRINT output
    6. SPZAP dump (DUMPT) of module for verification of version

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7. Object deck (or tape copy) of module (and of co-requisite versions of other modules, if any) , if PTF level is old or unknown.
  8. Documentation references when problem involves discrepancy between program operation and documentation,(Optional)
- C. Documentation errors
1. Reference the order number, level of the publication(s) and the page number(s) in question.
  2. Provide the order number(s), level, and the page number(s) for publications supporting your connection. (Optional)

### AMBLIST

5742-SC-114

- Necessary documentation on all problems:
  1. Maintenance List
- Documentation according to problem description:
  - A. ABEND problems
    1. SYSABEND or Standalone Dump
    2. Associated JCL and/or Input
  - B. Message problems
    1. SYSOUT
    2. JCL
    3. Associated Messages

### AMDSADMP

5742-SC-115

- Necessary documentation on all problems:
  1. CDS listing (or PTF list, at least of SADMP PTFs)
  2. Brief discussion of why the described error symptoms indicate an error in SADMP as opposed to a legitimate reaction of SADMP to a hardware or input problem.
  3. Brief description of portion of hardware configuration that applies to SADMP. List model numbers of SADMP residence, volume device, dump output device, and indicate which devices are in what type of shared configuration (if any).
  4. Description of unsupported modifications to SADMP code (if any)
  5. SU/ICR list (if any applied)
- Documentation according to problem description:
  - A. If problem occurs during execution of SADMP
    1. Take a SADMP of the SADMP. This can usually be accomplished by using different SADMP options for the second SADMP. For example a problem which occurs for a SADMP which is IPLed from a disk residence volume. The disk resident version can be used to take a diagnostic dump of the failing tape resident version. Note, only a real dump is required for the second SADMP. The second SADMP should output to a 1600 bpi tape.

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2. Include output of initialization jobs which generated the SADMP program being run. The real dump program is distributed as a MACRO, allowing users to assemble different variations of executable dump programs. Therefore, it is imperative that the assembler output (this is part of the initialization job's output) be included.
- B. If problem concerns completeness or correctness of SADMP output
1. Include dump output tape.
  2. Specifically identify which data seems to be missing or incorrect (eg, real main storage locations X'1000' through X'2000' are missing) and why it should be in the dump (if missing) or why it is incorrect.
  3. Cite names, order numbers and page numbers of relevant passages in IBM publications to support information given in the preceding item.
- C. If problem involves resident volume (always for initialization problems or IPL problems)
1. If residence volume is a tape, include the tape (1600 bpi).
  2. If residence volume is a DASD, include a dump generated via the following procedure: use the dump feature of the IEHDASDR utility to dump cyl 0 head 0 of the residence volume and the SYS1.PAGEDUMP dataset from the residence volume.
- D. If SADMP is improperly looping
1. For small loops (roughly 50 instructions or less), obtain a trace of the loop. This can be accomplished by using the display PSW feature of the hardware alter/display capability in conjunction with hardware instruction step capability.
  2. For larger loops obtain a skeleton trace of the loop. This can be accomplished by using the display PSW feature of the hardware alter/display capability.
  3. If SADMP is running under VM/370, obtain a complete trace via the TRACE ALL PRINTER CP command. This should be done for both large and small loops. The ADSTOP CP command can be used to prevent excessive repetition of the loop.
- E. If problem directly involves a page dataset
1. Use the LISTVTOC feature with FORMAT option of the IEHLIST utility to obtain a listing of the dataset information from the volume on which the page dataset resides. **(Optional)**
  2. Use dump feature of the IEHDASDR utility to obtain dump of the first few and the last few tracks on the page dataset. **(Optional)**
- F. If problem concerns SADMP handling of I/O status
1. Stop the program immediately after the status is stored and display (via the alter/display facility) the CSW (if CSW handling is in question) or the sense data (if sense data handling is in question). **(Optional)**
  2. If possible, obtain supporting status information from hardware indicators. **(Optional)**



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3. Cite the appropriate IBM publication by name, order number and page numbers to support a claim that SADMP incorrectly implements error handling procedures.

Note: For particular problems of this type, some or all of the above three items may become required. However, such a determination usually cannot be made until after the change team has reviewed the APAR as originally submitted.

- G. If problem occurs during initialization of a SADMP
  1. If an ABEND is involved, include an BENDA dump.
  2. Include the JCL and output listings for the initialization jobs.
- H. If problem occurs during IPL and no versions of SADMP will IPL
  1. Obtain a dump for real storage locations X'0' through X'200' and X'7000' through X'7100' by using the display feature of the hardware alter/display facility immediately after the failure.
- I. For all non-publication problems
  1. Listing of operator console communications (**Optional**)
  2. Dump of module/macro in error from SYS1.LINKLIB/SYS1.MACLIB (**Optional**)
- J. For documentation errors
  1. Indicate the order number, level of the publication and the page numbers in question.
  2. Provide the order numbers, level and page numbers for publications supporting your contention. (**Optional**)

### AMAPTFLE 5742-SC-116

- Necessary documentation on all problems:
  1. Maintenance list
- Documentation according to problem description:
  - A. ABEND problems
    1. SYSABEND or STANDALONE dump
    2. Associated JCL and/or input
  - B. Message problems
    1. SYSOUT
    2. JCL
    3. Associated messages

**AMDPRDMP EDIT**  
**5742-SC-118**

- Necessary documentation on all problems:
  1. Maintenance list
  2. Description of any unsupported changes to PRDMP/EDIT
  3. A list of all SU/ICRs on the base system
  4. All output from PRDMP/EDIT
  
- Documentation according to problem description:
  - A. Abnormal termination, wait state and loop problems
    1. ABDUMP or STANDALONE dump
    2. An instruction step display PSW trace of the loop
  
  - B. Improper PRDMP/EDIT output:
    1. Marked up PRDMP/EDIT output
    2. The input data set which is either a GTF trace data set if possible or a STANDALONE dump
    3. A dump of the GTF trace data set using a utility if trace data set is not sent.
  
  - C. Documentation errors
    1. Reference the order number, level of the publication and page numbers in question.
    2. Provide the order numbers, level, and page numbers of the publications supporting your contention. **(Optional)**

**BTAM**  
**5742-SC-120**

- Necessary documentation on all problems:
  1. Maintenance list
  2. BTAM line configuration
  3. Console sheet (when messages involved)
  4. Corezap of failing modules
  
- Documentation according to problem description:
  - A. Remote type problems
    1. CCW trace of line group
    2. Matching dump of BTAM control blocks to include DEB, DCB, DECB, IOB, UCB
    3. If CPU to CPU, a trace of both CPUs with associated dumps and control blocks
    4. For error recovery, SVC15 trace (GTF) CCW traces and dumps.
  
  - B. Local type problems
    1. SVC116 trace
    2. Dumps as in remote problems that match the trace

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### TCAM 5742-SC-121

- Necessary documentation on all problems:
  1. SMP maintenance list
  2. MCP listing if changed or new and not sent before
  3. Determine as to when problem started
  4. Subtask trace of 300 entries of optionally spooled to Comwrite
  5. Copy of all user modifications to TCAM
  6. Post trace (TCAM 10 only) (**Optional**)
  
- Documentation according to problem description:
  - A. ABEND problems
    1. SYSABEND dump (not a UDUMP)
    2. System console log (**Optional**)
  
  - B. Line problems
    1. Line I/O trace - 200 incore entries minimum, optionally spooled to Comwrite data set
    2. Dump that matches the line trace entries
    3. Identify the failing resource
    4. S/ZAP dump of ERP modules (**Optional**)
    5. GTF trace of SIO I/O interrupts, SVC3, SVC15, SVC114 (**Optional**)
    6. GTF CCW trace (**Optional**)
  
  - C. Operator control
    1. Console dump that shows TCAM and OP control regions
    2. GTF trace of SVC7 and SVC102 (**Optional**)
    3. Log of commands entered (**Optional**)
  
  - D. Restart problems
    1. SYSABEND dump at restart of TCAM
    2. Dump of the checkpoint data set that was restarted
    3. Message queue dump (**Optional**)
  
  - E. Data dependent - queue problems
    1. Message queue dump
    2. TCAM dump at time of problem
    3. Buffer trace (**Optional**)
  
  - F. Loop problems
    1. The loop - description of addresses
    2. Dump
    3. For a loop in the dispatcher - post trace (TCAM 10 only)
  
  - G. NCP problems or NCP involved
    1. BTU trace of all related resources optionally spooled to Comwrite data set. (Level 5 NCP only)
    2. PIU trace of all related resources optionally spooled to Comwrite data set. (TCAM 10 only)
    3. NCP dump (**Optional**)

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4. NCP assembly listing (**Optional**)
5. Line trace in 3704-3705 (**Optional**)
6. Line I/O trace of NCP/370X (TCAM 10 only)

#### H. Core overlay problems

1. Address stop data dump at the location of the overlay (**Optional**)

#### I. Application program problems

1. TCAM dump
2. Application program dump (**Optional**)
3. Application program listing (**Optional**)
4. GTF trace of SVC102 (**Optional**)

#### J. VTAM interface problems

1. TPIO trace
2. VTAM PIU trace (RNIO) (**Optional**)
3. GTF trace of SVC124 (**Optional**)
4. Dump including VTAM control blocks and buffers (**Optional**)
5. TCAM dump (**Optional**)

#### K. TIOC/TSO problems

1. Dump of TCAM
2. Dump including TIOC/TSO control blocks and buffers (**Optional**)
3. GTF trace of SVC93 through SVC103. (TSO/TIOC SVCs) (**Optional**)

#### L. Wait state

1. Dump of system showing wait with STCB trace active

### MACRO 5742-SC-122

● Necessary documentation on all problems:

1. See the general documentation requirements

### VTAM 5742-SC-123

● Necessary documentation on all problems:

1. Maintenance list and changes to network
2. Console log
3. Storage dump with LPA map and LINKEDIT map
4. Determine the application (CICS, IMS, etc)
5. SYS1.VTAMLST and start PARMS (**Optional**)
6. SYS1.LOGREC (DOS recorder file) (**Optional**)
7. If I/O is involved, use trace (VTAM RNIO, buffer, line) or system trace for local channel I/O

● Documentation according to problem description:

#### A. Loop problems

1. Trace of the loop

B. Wait state problems

1. Determine the status of all waiting VTAM related tasks including RPHs and the status of the buffer pools.

**SMP**

5742-SC-130

- Necessary documentation on all problems:

1. See the required documentation for MVS (5752)
2. Listing of history log
3. Dump of GTF address space
4. Dump of current address space (**Optional**)

**3350 API**

5742-SC-131

- Necessary documentation on all problems:

1. See the general documentation requirements.

[ 1285-1287/5744-AE-100  
1410 EMULATOR/5744-AG-100  
1401 EMULATOR/5744-AH-100

- Necessary documentation on all problems:

1. See the general documentation requirements.

EP/VS  
5744-AN-100

- Necessary documentation on all problems:
  1. Maintenance list - release of EP, PTFs applied to EP, PTFs applied to SSP, S/ZAPS applied.
  2. Configuration list - type of 3704/3705 (I or II), type of channel adapter(s), type of scanner(s).
- Documentation according to problem description:
  - A. Load of EP into 3704/3705 fails:
    1. STANDALONE dump of 3704/3705
    2. GTF/CCW trace of host (**Optional**)
  - B. Interface or channel control checks:
    1. STANDALONE dump of 3704/3705
    2. Level 2 and level 3 line trace of EP at time of failure
    3. GTF/CCW trace of host (**Optional**)
  - C. Hardstop/program check:
    1. Dump of 3704/3705 at time of failure
    2. Level 2 and level 3 line trace of EP at time of failure (**Optional**)
  - D. Performance problems:
    1. Dump of 3704/3705 at time of degraded performance
    2. Level 2 and level 3 line trace of EP during degradation
  - E. General 3704/3705 internal failures (bad sense, line failures, modem sequence problems, data sensitive failures, EP looping, incorrect PCF states)
    1. Level 2 and level 3 trace at time of failure
    2. Dump of 3705 - either STANDALONE or DYNADUMP
    3. GTF/CCW trace of host at time of failure (**Optional**)
    4. Specify line speed, MODEM and terminal type, conditions prior to failure
  - F. Host SSP failures (assembler, dynamic and STANDALONE dumps)
    1. Dump of the failing module in host
    2. Output listings displaying failure symptoms

DOS EMULATOR/5744-AS-100  
3735 MACRO/5744-AZ-100  
DISK COPY VS1/5744-BJ-100  
DISK COPY VS2/5744-BL-100

- Necessary documentation on all problems:
  1. See the general documentation requirements.

**DISK INTEL SYSTEM  
5744-BK-1**

- Necessary documentation on all problems:
  1. Maintenance list
  2. Determine what user mods or SYS/7 programs are on
- Documentation according to problem description:
  - A. ABEND problems
    1. SYSABEND or STANDALONE dump
  - B. Wait state problems
    1. STANDALONE dump
  - C. Lost data or transfer
    1. GTF trace

3790 HOST SUPPORT/5744-BZ-100  
3790 HOST SUPPORT/5744-BZ-200  
3790 HOST SUPPORT/5744-BZ-300  
3600 HOST SUPPORT/5744-CA-100  
3600 HOST SUPPORT/5744-CA-200  
3600 HOST SUPPORT/5744-CA-300  
BATCH TRANSFER/5744-CG-100  
BATCH TRANSFER/5744-CG-200  
BATCH TRANSFER/5744-CH-100

- Necessary documentation on all problems:
  - A. Operation being performed
    1. Control statement in full where applicable
    2. Macro statement in full where applicable
  - B. Output expected and output received
    1. Message
    2. Console log
    3. Printer output
    4. Component release level
    5. Maintenance level
    6. SCP release level
    7. SCP maintenance level

**INDICATE TERMINATE  
5745-SC-AIT**

- Necessary documentation on all problems:
  1. Be prepared with documentation to APAR.
  2. Have programming history available.
    - a. Release level
    - b. PTF preventive service level
    - c. APAR fixes applied
    - d. Information relating to when problem began

## IBM Internal Use Only

3. Any doc previously requested by the SPR or change team
4. Any additional doc that the PSR feels relates to problem

● Documentation according to problem description:

A. Loops

a. Small loops

1. Console log
2. STANDALONE dump
3. SDAID instruction trace with general registers or PSW display with general registers via the console in instruction step mode. (See SADP manual GC335380, Section 3 for details.)

b. Large loops

1. Periodic PSW display with general registers
2. STANDALONE dump
3. Console log

B. Waits

1. STANDALONE dump
2. Console log

C. INCORROUT

1. Information relating to the application that created the incorrect output
2. Console log
3. Failing jobstream including source deck or listing

D. Intermittent errors

1. EREP printout covering the time of the failure
2. Associated documentation for the specific error. (See loops, waits, etc.)
3. Console logs from all occurrences of the problem

E. PROGCK

1. STANDALONE dump (see also Messages manual GC335379 and SADP)
2. Console log

F. Messages

1. If the condition described by the message does exist, gather the doc described in the manual.
2. If the message is erroneously issued, get a dump at the time the message is issued (see SADP).
3. Console log

### VSAM SERVICE PROGRAM 5745-SC-AMS

● Necessary documentation on all problems:

1. PID level (eg, R330E)
2. LISTCAT ALL



IBM Internal Use Only

- Documentation according to problem description:
  - A. Program check
    - 1. Dump with SVA
  - B. Error codes
    - 1. SNAP009 with record management errors
    - 2. SNAP001 with catalog error codes
    - 3. SNAP006 with open errors
    - 4. SNAP003 with close errors
    - 5. A full dump with error code in VSAM block (**Optional**)
  - C. Loops
    - 1. PDAIDS of SVCs
    - 2. 10 (minimum) PSWs while in a loop
    - 3. SDAIDS of BR trace (**Optional**)
    - 4. Print of VSAM index if R/M loop
    - 5. Print of SVA (may be gotten from old dump of SVA)
  - D. INCORROUT
    - 1. JCL
    - 2. Description of job
  - E. AMS problems
    - 1. Complete job stream (JCL and 'all' messages)

3350 AP1  
5745-SC-APC

- Necessary documentation on all problems:
  - 1. Be prepared with documentation to APAR.
  - 2. Have programming history available.
    - a. Release level
    - b. PTF preventive service level
    - c. APAR fixes applied
    - d. Information relating to when problem began
  - 3. Any doc previously requested by the PSR or change team
  - 4. Any additional doc that the PSR feels relates to problem
  - 5. Console log

- Documentation according to problem description:
  - A. Loops
    - a. Small loops
      - 1. PSW display including general registers
      - 2. STANDALONE dump
    - b. Large loops
      - 1. Periodic PSW display with general registers
      - 2. STANDALONE dump

- B. Waits
  - 1. STANDALONE dump
- C. INCORROUT
  - 1. Information relating to the application that created the incorrect output
- D. Intermittent errors
  - 1. EREP printout covering the time of the failure
  - 2. Associated documentation for the specific error. (See loops, waits, etc.)
- E. PROGCK
  - 1. STANDALONE dump (see also Messages manual GC335379 and SADP)
- F. Messages
  - 1. If the condition described by the message does exist, gather the doc described in the manual
  - 2. If the message is erroneously issued, get a dump at the time the message is issued (see SADP).

**ASSEMBLER  
5745-SC-ASM**

- Necessary documentation on all problems:
  - 1. Be prepared with documentation to APAR
  - 2. Have programming history available
    - a. Release level
    - b. PTF preventive service level
    - c. APAR fixes applied
    - d. Information relating to when problem began
  - 3. Any doc previously requested by the SPR or change team
  - 4. Any additional doc that the PSR feels relates to problem
- Documentation according to problem description:
  - A. Loops
    - a. Small loops
      - 1. Console log
      - 2. STANDALONE dump
      - 3. SDAID instruction trace with general registers or PSW display with general registers via the console in instruction step mode. (See SADP manual GC335380, Section 3 for details.)
      - 4. LINKEDIT map for assembler
      - 5. Source deck of the program being assembled or a listing of the source. (Note: Try to create the least complicated test case.)
    - b. Large loops
      - 1. Periodic PSW display with general registers
      - 2. STANDALONE dump

## IBM Internal Use Only

3. Console log
4. LINKEDIT map of assembler
5. Source deck that failed or listing of source deck that failed.  
(Note: Try to create the least complicated case.)

### B. Waits

1. STANDALONE dump
2. Console log
3. LINKEDIT map of assembler
4. Source deck that failed or listing of source deck that failed.  
(Note: Try to create the least complicated case.)

### C. INCORROUT

1. Information relating to the application that created the incorrect output
2. Console log
3. Failing jobstream including source deck or listing

### D. Intermittent errors

1. EREP printout covering the time of the failure
2. Associated documentation for the specific error. (See loops, waits, etc.)
3. Console logs from all occurrences of the problem

### E. PROGCK

1. STANDALONE dump (see also Messages manual GC335379 and SADP)
2. Console Log
3. LINKEDIT map of assembler
4. Source deck or listing being assembled when PROGCK occurred

### F. Messages

1. If the condition described by the message does exist, gather the doc described in the manual.
2. If the message is erroneously issued, get a dump at the time the message is issued (see SADP).
3. Console log
4. LINKEDIT map of assembler
5. Source deck of listing being assembled when PROGCK occurred

## BTAM 5745-SC-BTM

### ● Necessary documentation on all problems:

1. Maintenance list
2. BTAM line configuration
3. Console sheet (when messages involved)
4. Corezap of failing modules

### ● Documentation according to problem description:

#### A. Remote type problems

1. CCW trace of line group
2. Matching dump of BTAM control blocks to include DEB, DCB, DECB, IOB, UCB

### IBM Internal Use Only

3. If CPU to CPU, a trace of both CPUs with associated dumps and control blocks
4. For error recovery, SVC15 trace (GFT) CCW traces and dumps.

#### B. Local type problems

1. SVC115 trace
2. Dumps as in remote problems that match the trace

**CHECKPOINT RESTART/5745-SC-CKR  
DIRECT ACCESS METHOD/5745-SC-DAM  
DISKETTE IOCS/5745-SC-DIO  
DIST PROGRAM/5745-SC-DIS  
DISK ERP/5745-SC-DKE**

#### ● Necessary documentation on all problems:

1. Be prepared with documentation to APAR
2. Have programming history available
  - a. Release level
  - b. PTF preventive service level
  - c. APAR fixes applied
  - d. Information relating to when problem began
3. Any doc previously requested by the SPR or change team
4. Any additional doc that the PSR feels relates to problem
5. Console log

#### ● Documentation according to problem description:

##### A. Loops

- a. Small loops
  1. PSW display including general registers
  2. STANDALONE dump
- b. Large loops
  1. Periodic PSW display with general registers
  2. STANDALONE dump

##### B. Waits

1. STANDALONE dump

##### C. INCORROUT

1. Information relating to the application that created the incorrect output
2. The job stream including assignments

##### D. Intermittent errors

1. EREP printout covering the time of the failure
2. Associated documentation for the specific error. (See loops, waits, etc.)

##### E. PROGCK

1. STANDALONE dump (see also Messages manual GC335379 and SADP)

## IBM Internal Use Only

### F. Messages

1. If the condition described by the message does exist, gather the doc described in the manual.
2. If the message is erroneously issued, get a dump at the time the message is issued (see SADP).

### DISK OPERATING CONSOLE 5745-SC-DOC

#### ● Necessary documentation on all problems:

1. Be prepared with documentation to APAR.
2. Have programming history available.
  - a. Release level
  - b. PTF preventive service level
  - c. APAR fixes applied
  - d. Information relating to when problem began
3. Any doc previously requested by the SPR or change team
4. Any additional doc that the PSR feels relates to problem
5. Print log output if print log available

#### ● Documentation according to problem description:

##### A. Loops

- a. Small loops
  1. PSW display including general registers
  2. STANDALONE dump
- b. Large loops
  1. Periodic PSW display with general registers or SDAID branch trace
  2. STANDALONE dump

##### B. Waits

1. STANDALONE dump

##### C. INCORROUT

1. Information relating to the application that created the incorrect output

##### D. Intermittent errors

1. EREP printout covering the time of the failure
2. Associated documentation for the specific error. (See loops, waits, etc.)

##### E. PROGCK

1. STANDALONE dump (see also Messages manual GC335379 and SADP)

F. Messages

1. If the condition described by the message does exist, gather the doc described in the manual.
2. If the message is erroneously issued, get a dump at the time the message is issued (see SADP).

**SEQUENTIAL DISK IO  
5745-SC-DSK**

• Necessary documentation on all problems:

1. Be prepared with documentation to APAR.
2. Have programming history available.
  - a. Release level
  - b. PTF preventive service level
  - c. APAR fixes applied
  - d. Information relating to when problem began
3. Any doc previously requested by the SPR or change team
4. Any additional doc that the PSR feels relates to problem
5. LINKEDIT map of the failing job
6. Failing jobstream including IO assignments and extent info
7. Assembler listing or compiler output from program creation
8. Console log

• Documentation according to problem description:

A. Loops

a. Small loops

1. PSW display including general registers
2. STANDALONE dump

b. Large loops

1. Periodic PSW display with general registers
2. STANDALONE dump

B. Waits

1. STANDALONE dump

C. INCORROUT

1. Information relating to the application that created the incorrect output

D. Intermittent errors

1. EREP printout covering the time of the failure
2. Associated documentation for the specific error. (See loops, waits, etc.)

E. PROGCK

1. STANDALONE dump (see also Messages manual GC335379 and SADP)

F. Messages

1. If the condition described by the message does exist, gather the doc described in the manual.
2. If the message is erroneously issued, get a dump at the time the message is issued (see SADP).

**1401-10 EMULATOR  
5745-SC-EML**

● Necessary documentation on all problems:

1. Release and maintenance level
2. SYSLOG and SYSLST output
3. Emulator generation parameters
4. Emulator control cards
5. JCL

● Documentation according to problem description:

A. System error messages

1. Documentation as described by the DOS message manual
2. Dump

B. Emulator error messages

1. Documentation as described in the Emulator SRL GC335384
2. Dump
3. If error is in 1400 code, then the user should assist in problem determination or point out the emulator function he feels is causing the problem.

C. Program check

1. Module and displacement of the PROGCK
2. Dump

D. Incorrect output

1. Example of the incorrect output
2. The input records associated with the problem
3. Any SYSREC information associated with the failing job

E. Loop

1. Extent of the loop (hi-lo addresses and modules)
2. Dump

F. Wait

1. The event the wait was issued for and, if for IO, the status of the CCB and error queue

**EREP**  
**5745-SC-ERP**

## ● Necessary documentation on all problems:

1. Be prepared with documentation to APAR.
2. Have programming history available.
  - a. Release level
  - b. PTF preventive service level
  - c. APAR fixes applied
  - d. Information relating to when problem began
3. Any doc previously requested by the SPR or change team
4. Any additional doc that the PSR feels relates to problem
5. LINKEDIT map of EREP
6. EREP printout whenever possible
7. Console log

## ● Documentation according to problem description:

## A. Loops

## a. Small loops

1. Instruction trace with general registers
2. STANDALONE dump

## b. Large loops

1. Periodic PSW display with general registers
2. STANDALONE dump

## B. Waits

1. STANDALONE dump

## C. INCORROUT

1. Information relating to the application that created the incorrect output
2. EREP output if possible

## D. Intermittent errors

1. Associated documentation for the specific error. (See loops, waits, etc.)

## E. PROGCK

1. STANDALONE dump (see also Messages manual GC335379 and SADP)

## F. Messages

1. If the condition described by the message does exist, gather the doc described in the manual.
2. If the message is erroneously issued, get a dump at the time the message is issued (see SADP).



**MOD 20 EMULATOR  
5745-SC-E20**

- Necessary documentation on all problems:
  1. Release and maintenance level
  2. SYSLOG and SYSLST output
  3. Emulator generation parameters
  4. Emulator control cards
  5. JCL
  
- Documentation according to problem description:
  - A. System error messages
    1. Documentation as described by the DOS Message manual
    2. Dump
  
  - B. Emulator error messages
    1. Documentation as described in the Emulator SRL GC335388
    2. Dump
    3. If error is in MOD 20 code, then the user should assist in problem determination or point out the emulator function he feels is causing the problem.
  
  - C. Program check
    1. Module and displacement of the PROGCK
    2. Dump
  
  - D. Incorrect output
    1. Example of the incorrect output
    2. The input records associated with the problem
    3. Any SYSREC information associated with the failing job
  
  - E. Loop
    1. Extent of the loop (hi-lo addresses and modules)
    2. Dump
  
  - F. Wait
    1. The event the wait was issued for and, if for IO, the status of the CCB and error queue
    2. Dump

**COMP IO MODS  
5745-SC-IOM**

- Necessary documentation on all problems:
  1. Be prepared with documentation to APAR.
  2. Have programming history available.
    - a. Release level
    - b. PTF preventive service level
    - c. APAR fixes applied
    - d. Information relating to when problem began

## IBM Internal Use Only

3. Any doc previously requested by the SPR or change team
4. Any additional doc that the PSR feels relates to problem
5. Console log

● Documentation according to problem description:

A. Loops

a. Small loops

1. Instruction trace with general registers
2. STANDALONE dump

b. Large loops

1. Periodic PSW display with general registers
2. STANDALONE dump

B. Waits

1. STANDALONE dump

C. INCORROUT

1. Information relating to the application that created the incorrect output
2. Jobstream with all assignments

D. Intermittent errors

1. EREP printout covering the time of the failure
2. Associated documentation for the specific error. (See loops, waits, etc.)

E. PROGCK

1. STANDALONE dump (see also Messages manual GC335379 and SADP)

F. Messages

1. If the condition described by the message does exist, gather the doc described in the manual.
2. If the message is erroneously issued, get a dump at the time the message is issued (see SADP).

**IOCS DEVICE INDICATOR**  
**5745-SC-IOX**

- Necessary documentation on all problems:
  1. Be prepared with documentation to APAR.
  2. Have programming history available.
    - a. Release level
    - b. PTF preventive service level
    - c. APAR fixes applied
    - d. Information relating to when problem began
  3. Any doc previously requested by the SPR or change team
  4. Any additional doc that the PSR feels relates to problem
  5. Console log
  
- Documentation according to problem description:
  - A. Loops
    - a. Small loops
      1. Instruction trace with general registers
      2. STANDALONE dump
    - b. Large loops
      1. Periodic PSW display with general registers
      2. STANDALONE dump
  - B. Waits
    1. STANDALONE dump
  - C. INCORROUT
    1. Information relating to the application that created the incorrect output
    2. Jobstream with all assignments
  - D. Intermittent errors
    1. EREP printout covering the time of the failure
    2. Associated documentation for the specific error. (See loops, waits, etc.)
  - E. PROGCK
    1. STANDALONE dump (see also Messages manual GC335379 and SADP)
  - F. Messages
    1. If the condition described by the message does exist, gather the doc described in the manual.
    2. If the message is erroneously issued, get a dump at the time the message is issued (see SADP).

**IPL BUFFER LOADER  
5745-SC-IPL**

- Necessary documentation on all problems:

1. Be prepared with documentation to APAR.
2. Have programming history available.
  - a. Release level
  - b. PTF preventive service level
  - c. APAR fixes applied
  - d. Information relating to when problem began
3. Any doc previously requested by the SPR or change team
4. Any additional doc that the PSR feels relates to problem
5. Console log

- Documentation according to problem description:

A. Loops

a. Small loops

1. PSW display including general registers
2. STANDALONE dump

b. Large loops

1. Periodic PSW display with general registers
2. STANDALONE dump

B. Waits

1. STANDALONE dump

C. INCORROUT

1. Information relating to the application that created the incorrect output

D. Intermittent errors

1. EREP printout covering the time of the failure
2. Associated documentation for the specific error. (See loops, waits, etc.)

E. PROGCK

1. STANDALONE dump (see also Messages manual GC335379 and SADP)

F. Messages

1. If the condition described by the message does exist, gather the doc described in the manual.
2. If the message is erroneously issued, get a dump at the time the message is issued (see SADP).

INDEX SEQUENCE  
5745-SC-ISM

- Necessary documentation on all problems:
  1. Be prepared with documentation to APAR.
  2. Have programming history available.
    - a. Release level
    - b. PTF preventive service level
    - c. APAR fixes applied
    - d. Information relating to when problem began
  3. Any doc previously requested by the SPR or change team
  4. Any additional doc that the PSR feels relates to problem
  5. Console log
- Documentation according to problem description:
  - A. Loops
    - a. Small loops
      1. Instruction trace with general registers
      2. STANDALONE dump
    - b. Large loops
      1. Periodic PSW display with general registers
      2. STANDALONE dump
  - B. Waits
    1. STANDALONE dump
  - C. INCORROUT
    1. Details concerning the application involved and the creation of any files used in this application
    2. Jobstream with all assignments including extent information
  - D. Intermittent errors
    1. EREP printout covering the time of the failure
    2. Associated documentation for the specific error. (See loops, waits, etc.)
  - E. PROGCK
    1. STANDALONE dump (see also Messages manual GC335379 and SADP)
  - F. Messages
    1. If the condition described by the message does exist, gather the doc described in the manual.
    2. If the message is erroneously issued, get a dump at the time the message is issued (see SADP).

**JOB CONTROL  
5745-SC-JCL**

## ● Necessary documentation on all problems:

1. Be prepared with documentation to APAR.
2. Have programming history available.
  - a. Release level
  - b. PTF preventive service level
  - c. APAR fixes applied
  - d. Information relating to when problem began
3. Any doc previously requested by the SPR or change team
4. Any additional doc that the PSR feels relates to problem
5. LINKEDIT map of job control
6. Failing jobstream including IO assignments and extent info
7. Console log

## ● Documentation according to problem description:

## A. Loops

- a. Small loops
  1. Instruction trace with general registers
  2. STANDALONE dump
- b. Large loops
  1. Periodic PSW display with general registers
  2. STANDALONE dump

## B. Waits

1. STANDALONE dump

## C. INCORROUT

1. Information relating to the application that created the incorrect output

## D. Intermittent errors

1. EREP printout covering the time of the failure
2. Associated documentation for the specific error. (See loops, waits, etc.)

## E. PROGCK

1. STANDALONE dump (see also Messages manual GS335379 and SADP)

## F. Messages

1. If the condition described by the message does exist, gather the doc described in the manual.
2. If the message is erroneously issued, get a dump at the time the message is issued (see SADP).

**LIBRARY SERVICE MAINTENANCE**  
**5745-SC-LBR**

● Necessary documentation on all problems:

1. Be prepared with documentation to APAR.
2. Have programming history available.
  - a. Release level
  - b. PTF preventive service level
  - c. APAR fixes applied
  - d. Information relating to when problem began
3. Any doc previously requested by the SPR or change team
4. Any additional doc that the PSR feels relates to problem
5. Console log

● Documentation according to problem description:

A. Loops

a. Small loops

1. Instruction trace with general registers
2. STANDALONE dump

b. Large loops

1. Periodic PSW display with general registers
2. STANDALONE dump

B. Waits

1. STANDALONE dump

C. INCORROUT

1. Information relating to the application that created the incorrect output

D. Intermittent errors

1. EREP printout covering the time of the failure
2. Associated documentation for the specific error. (See loops, waits, etc.)

E. PROGCK

1. STANDALONE dump (see also Messages manual GC335379 and SADP)

F. Messages

1. If the condition described by the message does exist, gather the doc described in the manual.
2. If the message is erroneously issued, get a dump at the time the message is issued (see SADP).

**LINKEDIT**  
**5745-SC-LNK**

- Necessary documentation on all problems:
  1. Be prepared with documentation to APAR.
  2. Have programming history available
    - a. Release level
    - b. PTF preventive service level
    - c. APAR fixes applied
    - d. Information relating to when problem began
  3. Any doc previously requested by the SPR or change team
  4. Any additional doc that the PSR feels relates to problem
  5. LINKEDIT map of linkage editor
  6. Console log
  
- Documentation according to problem description:
  - A. Loops
    - a. Small loops
      1. Instruction trace with general registers
      2. STANDALONE dump
    - b. Large loops
      1. Periodic PSW display with general registers
      2. STANDALONE dump
  - B. Waits
    1. STANDALONE dump
  - C. INCORROUT
    1. Information relating to the application that created the incorrect output
    2. Jobstream with all assignments
  - D. Intermittent errors
    1. EREP printout covering the time of the failure
    2. Associated documentation for the specific error. (See loops, waits, etc.)
  - E. PROGCK
    1. STANDALONE dump (see also Messages manual GC335379 and SADP)
  - F. Messages
    1. If the condition described by the message does exist, gather the doc described in the manual.
    2. If the message is erroneously issued, get a dump at the time the message is issued (see SADP).



MCR IOCS  
5745-SC-MCR

- Necessary documentation on all problems:
  1. Be prepared with documentation to APAR.
  2. Have programming history available
    - a. Release level
    - b. PTF preventive service level
    - c. APAR fixes applied
    - d. Information relating to when problem began
  3. Any doc previously requested by the SPR or change team
  4. Any additional doc that the PSR feels relates to problem
  5. Console log
  
- Documentation according to problem description:
  - A. Loops
    - a. Small loops
      1. Instruction trace with general registers
      2. STANDALONE dump
    - b. Large loops
      1. Periodic PSW display with general registers
      2. STANDALONE dump
  - B. Waits
    1. STANDALONE dump
  - C. INCORROUT
    1. Information relating to the application that created the incorrect output
    2. Jobstream with all assignments
  - D. Intermittent errors
    1. EREP printout covering the time of the failure
    2. Associated documentation for the specific error. (See loops, waits, etc.)
  - E. PROGCK
    1. STANDALONE dump (see also Messages manual GC335379 and SADP)
  - F. Messages
    1. If the condition described by the message does exist, gather the doc described in the manual.
    2. If the message is erroneously issued, get a dump at the time the message is issued (see SADP).

OCR IOCS  
5745-SC-OCR

- Necessary documentation on all problems:
  1. Be prepared with documentation to APAR.
  2. Have programming history available.
    - a. Release level
    - b. PTF preventive service level
    - c. APAR fixes applied
    - d. Information relating to when problem began
  3. Any doc previously requested by the SPR or change team
  4. Any additional doc that the PSR feels relates to problem
  5. Console log
- Documentation according to problem description:
  - A. Loops
    - a. Small loops
      1. Instruction trace with general registers
      2. STANDALONE dump
    - b. Large loops
      1. Periodic PSW display with general registers
      2. STANDALONE dump
  - B. Waits
    1. STANDALONE dump
  - C. INCORROUT
    1. Information relating to the application that created the incorrect output
    2. Jobstream with all assignments
  - D. Intermittent errors
    1. EREP printout covering the time of the failure
    2. Associated documentation for the specific error. (See loops, waits, etc.)
  - E. PROGCK
    1. STANDALONE dump (see also Messages manual GC335379 and SADP)
  - F. Messages
    1. If the condition described by the message does exist, gather the doc described in the manual.
    2. If the message is erroneously issued, get a dump at the time the message is issued (see SADP).

**OLTEP**  
**5745-SC-OLT**

- Necessary documentation on all problems:
  1. Be prepared with documentation to APAR.
  2. Have programming history available.
    - a. Release level
    - b. PTF preventive service level
    - c. APAR fixes applied
    - d. Information relating to when problem began
  3. Any doc previously requested by the SPR or change team
  4. Any additional doc that the PSR feels relates to problem
  5. Console log at the time of the failure
  6. Console log and list output from generation of OLTEP
  
- Documentation according to problem description:
  - A. Loops
    - a. Small loops
      1. Instruction trace with general registers
      2. STANDALONE dump
    - b. Large loops
      1. Periodic PSW display with general registers
      2. STANDALONE dump
  - B. Waits
    1. STANDALONE dump
  - C. INCORROUT
    1. Information relating to the application that created the incorrect output
  - D. Intermittent errors
    1. EREP printout covering the time of the failure unless OLTs are run standalone
    2. Associated documentation for the specific error. (See loops, waits, etc.)
  - E. PROGCK
    1. STANDALONE dump (see also Messages manual GC335379 and SADP)
  - F. Messages
    1. If the condition described by the message does exist, gather the doc described in the manual.
    2. If the message is erroneously issued, get a dump at the time the message is issued (see SADP).

**PROBLEM DETERMINATION AIDS**  
**5745-SC-PDA**

## ● Necessary documentation on all problems:

1. Be prepared with documentation to APAR.
2. Have programming history available.
  - a. Release level
  - b. PTF preventive service level
  - c. APAR fixes applied
  - d. Information relating to when problem began
3. Any doc previously requested by the SPR or change team
4. Any additional doc that the PSR feels relates to problem
5. LINKEDIT map of PDAIDS.
6. Console log

## ● Documentation according to problem description:

## A. Loops

## a. Small loops

1. Instruction trace with general registers
2. STANDALONE dump

## b. Large loops

1. Periodic PSW display with general registers
2. STANDALONE dump

## B. Waits

1. STANDALONE dump

## C. INCORROUT

1. Information relating to the application that created the incorrect output
2. Jobstream that produced the incorrect output

## D. Intermittent errors

1. EREP printout covering the time of the failure
2. Associated documentation for the specific error. (See loops, waits, etc.)

## E. PROGCK

1. STANDALONE dump (see also Messages manual GC335379 and SADP)

## F. Messages

1. If the condition described by the message does exist, gather the doc described in the manual.
2. If the message is erroneously issued, get a dump at the time the message is issued (see SADP).

PAPER TAPE  
5745-SC-PTP

- Necessary documentation on all problems:
  1. Be prepared with documentation to APAR.
  2. Have programming history available.
    - a. Release level
    - b. PTF preventive service level
    - c. APAR fixes applied
    - d. Information relating to when problem began
  3. Any doc previously requested by the SPR or change team
  4. Any additional doc that the PSR feels relates to problem
  5. Console log
  
- Documentation according to problem description:
  - A. Loops
    - a. Small loops
      1. Instruction trace with general registers
      2. STANDALONE dump
    - b. Large loops
      1. Periodic PSW display with general registers
      2. STANDALONE dump
  - B. Waits
    1. STANDALONE dump
  - C. INCORROUT
    1. Information relating to the application that created the incorrect output
    2. Jobstream that produced the incorrect output
  - D. Intermittent errors
    1. EREP printout covering the time of the failure
    2. Associated documentation for the specific error. (See loops, waits, etc.)
  - E. PROGCK
    1. STANDALONE dump (see also Messages manual GC335379 and SADP)
  - F. Messages
    1. If the condition described by the message does exist, gather the doc described in the manual.
    2. If the message is erroneously issued, get a dump at the time the message is issued (see SADP).

**POWER/VS  
5745-SC-PWR**

● Necessary documentation on all problems:

1. Be prepared with documentation to APAR.
2. Have programming history available.
  - a. Release level
  - b. PTF preventive service level
  - c. APAR fixes applied
  - d. Information relating to when problem began
  - e. Any doc previously requested by the change team
  - f. Console log
  - g. POWER/VS GEN parameters
  - h. POWER/VS partition dump
  - i. For RJE, an internal RJE trace on the failing line

● Documentation according to problem description:

A. Loops

- a. Small loops
  1. SDAID instruction trace with general registers or PSW display with general registers while stepping through the loop. (See SADP manual Section 3.)
  2. STANDALONE dump
- b. Large loops
  1. Periodic PSW display with general registers
  2. STANDALONE dump

B. Waits

1. STANDALONE dump

C. INCORROUT

1. Information relating to the application that created the incorrect output
2. The complete jobstream including assignments
3. Information used in localizing the problem (see PWR PLM)

D. PROGCK

1. STANDALONE dump (see also Messages manual GC335379 and SADP)

E. Messages

1. If the condition described by the message does exist, gather the doc described in the manual.
2. If the message is erroneously issued, get a dump at the time the message is issued (see SADP).

Note: Be aware that there is a diagnostic chart in the POWER/VS PLM SY33-8576 that will assist you in solving the problem and defining the documentation needed.

**QTAM**  
**5745-SC-QTM**

- Necessary documentation on all problems:
  1. Maintenance list
  2. BTAM line configuration
  3. Console sheet (when messages involved)
  4. Corezap of failing modules
- Documentation according to problem description:
  - A. Remote type problems
    1. CCW trace of line group
    2. Matching dump of BTAM control blocks to include DEB, DCB, DECB, IOB, UCB
    3. If CPU to CPU, a trace of both CPUs with associated dumps and control blocks
    4. For error recovery, SVC15 trace (GFT) CCW traces and dumps
  - B. Local type problems
    1. SVC116 trace
    2. Dumps as in remote problems that match the trace

**RMSR**  
**5745-SC-RMS**

- Necessary documentation on all problems:
  1. Be prepared with documentation to APAR.
  2. Have programming history available.
    - a. Release level
    - b. PTF preventive service level
    - c. APAR fixes applied
    - d. Information relating to when problem began
  3. Any doc previously requested by the SPR or change team
  4. Any additional doc that the PSR feels relates to problem
  5. Console log
  6. EREP output
  7. Supervisor listing
- Documentation according to problem description:
  - A. Loops
    - a. Small loops
      1. Instruction trace with general registers
      2. STANDALONE dump
    - b. Large loops
      1. Periodic PSW display with general registers
      2. STANDALONE dump

B. Waits

1. STANDALONE dump

C. INCORROUT

1. Information relating to the application that created the incorrect output

D. Intermittent errors

1. Associated documentation for the specific error. (See loops, waits, etc.)

E. PROGCK

1. STANDALONE dump (see also Messages manual GC335379 and SADP)

F. Messages

1. If the condition described by the message does exist, gather the doc described in the manual.
2. If the message is erroneously issued, get a dump at the time the message is issued (see SADP).

CTS RETAIL HOST/5745-SC-RTL  
CTS SUPERMARKET HOST/5745-SC-SMK  
CTS SPPS/5745-SC-SPP  
SSS/5745-SC-SSS

- Necessary documentation on all problems:

A. Operation being performed

1. Control statement in full where applicable
2. Macro statement in full where applicable

B. Output expected and output received

1. Messages
2. Console log
3. Printer output
4. Component release level
5. Maintenance level
6. SCP release level
7. SCP maintenance level

**SUPERVISOR**  
5745-SC-SUP

- Necessary documentation on all problems:

1. Be prepared with documentation to APAR.
2. Have programming history available.
  - a. Release level
  - b. PTF preventive service level
  - c. APAR fixes applied
  - d. Information relating to when problem began



### IBM Internal Use Only

3. Any doc previously requested by the SPR or change team
4. Any additional doc that the PSR feels relates to problem
5. Failing supervisor listing
6. Console log

• Documentation according to problem description:

A. Loops

a. Small loops

1. SDAID instruction trace with general registers or PSW display with general registers via console while instruction stepping through loop. (See SADP for details.)
2. STANDALONE dump

b. Large loops

1. Periodic PSW display with general registers
2. STANDALONE dump

B. Waits

1. STANDALONE dump

C. INCORROUT

1. Information relating to the application that created the incorrect output

D. Intermittent errors

1. EREP printout covering the time of the failure
2. Associated documentation for the specific error. (See loops, waits, etc.)

E. PROGCK

1. STANDALONE dump (see also Messages manual GC335379 and SADP)

F. Messages

1. If the condition described by the message does exist, gather the doc described in the manual.
2. If the message is erroneously issued, get a dump at the time the message is issued (see SADP).

### MAGNETIC TAPE IOCS 5745-SC-TAP

• Necessary documentation on all problems:

1. Be prepared with documentation to APAR.
2. Have programming history available.
  - a. Release level
  - b. PTF preventive service level
  - c. APAR fixes applied
  - d. Information relating to when problem began

## IBM Internal Use Only

3. Any doc previously requested by the SPR or change team
4. Any additional doc that the PSR feels relates to problem
5. Failing jobstream including IO assignments and extent information
6. Console log

● Documentation according to problem description:

A. Loops

a. Small loops

1. PSW display including general registers
2. STANDALONE dump

b. Large loops

1. Periodic PSW display with general registers
2. STANDALONE dump

B. Waits

1. STANDALONE dump

C. INCORROUT

1. Information relating to the application that created the incorrect output

D. Intermittent errors

1. EREP printout covering the time of the failure
2. Associated documentation for the specific error. (See loops, waits, etc.)

E. PROGCK

1. STANDALONE dump (see also Messages manual GC335379 and SADP)

F. Messages

1. If the condition described by the message does exist, gather the doc described in the manual.
2. If the message is erroneously issued, get a dump at the time the message is issued (see SADP).

### TOLTEP 5745-SC-TLT

● Necessary documentation on all problems:

1. Be prepared with documentation to APAR.
2. Have programming history available.
  - a. Release level
  - b. PTF preventive service level
  - c. APAR fixes applied
  - d. Information relating to when problem began
3. Any doc previously requested by the SPR or change team

## IBM Internal Use Only

4. Any additional doc that the PSR feels relates to problem
  5. EREP output
  6. Console log
- Documentation according to problem description:
    - A. Loops
      - a. Small loops
        1. PSW display including general registers
        2. STANDALONE dump
      - b. Large loops
        1. Periodic PSW display with general registers
        2. STANDALONE dump
    - B. Waits
      1. STANDALONE dump
    - C. INCORROUT
      1. Information relating to the application that created the incorrect output
    - D. Intermittent errors
      1. Associated documentation for the specific error. (See loops, waits, etc.)
    - E. PROGCK
      1. STANDALONE dump (see also Messages manual GC335379 and SADP)
    - F. Messages
      1. If the condition described by the message does exist, gather the doc described in the manual.
      2. If the message is erroneously issued, get a dump at the time the message is issued (see SADP).

### **TAPE ERP 5745-SC-TPE**

- Necessary documentation on all problems:
  1. Be prepared with documentation to APAR.
  2. Have programming history available.
    - a. Release level
    - b. PTF preventive service level
    - c. APAR fixes applied
    - d. Information relating to when problem began
  3. Any doc previously requested by the SPR or change team
  4. Any additional doc that the PSR feels relates to problem
  5. EREP output covering the time of the failure
  6. Failing jobstream including IO assignments and extent information
  7. Console log

● Documentation according to problem description:

A. Loops

a. Small loops

1. PSW display including general registers
2. STANDALONE dump

b. Large loops

1. Periodic PSW display with general registers
2. STANDALONE dump

B. Waits

1. STANDALONE dump

C. INCORROUT

1. Information relating to the application that created the incorrect output

D. Intermittent errors

1. Associated documentation for the specific error. (See loops, waits, etc.)

E. PROGCK

1. STANDALONE dump (see also Messages manual GC335379 and SADP)

F. Messages

1. If the condition described by the message does exist, gather the doc described in the manual.
2. If the message is erroneously issued, get a dump at the time the message is issued (see SADP).

**SYSTEM UTILITIES**  
**5745-SC-UTL**

● Necessary documentation on all problems:

1. Be prepared with documentation to APAR.
2. Have programming history available.
  - a. Release level
  - b. PTF preventive service level
  - c. APAR fixes applied
  - d. Information relating to when problem began
3. Any doc previously requested by the SPR or change team
4. Any additional doc that the PSR feels relates to problem

## IBM Internal Use Only

- Documentation according to problem description:

- A. Loops

- a. Small loops

- 1. PSW display including general registers
    - 2. STANDALONE dump

- b. Large loops

- 1. Periodic PSW display with general registers
    - 2. STANDALONE dump

- B. Waits

- 1. STANDALONE dump
  - 2. Console log

- C. INCORROUT

- 1. Information relating to the application that created the incorrect output
  - 2. Console log

- D. Intermittent errors

- 1. EREP printout covering the time of the failure
  - 2. Associated documentation for the specific error. (See loops, waits, etc.)
  - 3. Console log

- E. PROGCK

- 1. STANDALONE dump (see also Messages manual GC335379 and SADP)

- F. Messages

- 1. If the condition described by the message does exist, gather the doc described in the manual.
  - 2. If the message is erroneously issued, get a dump at the time the message is issued (see SADP).

## MAINTENANCE SYSTEM HISTORY

### 5745-SC-UTS

- Necessary documentation on all problems:

- 1. Be prepared with documentation to APAR.
  - 2. Have programming history available
    - a. Release level
    - b. PTF preventive service level
    - c. APAR fixes applied
    - d. Information relating to when problem began
  - 3. Any doc previously requested by the SPR or change team
  - 4. Any additional doc that the PSR feels relates to problem
  - 5. Console log
  - 6. Listing of history file

● Documentation according to problem description:

A. Loops

a. Small loops

1. PSW display including general registers
2. STANDALONE dump

b. Large loops

1. Periodic PSW display with general registers
2. STANDALONE dump

B. Waits

1. STANDALONE dump

C. INCORROUT

1. Information relating to the application that created the incorrect output

D. Intermittent errors

1. EREP printout covering the time of the failure
2. Associated documentation for the specific error. (See loops, waits, etc.)

E. PROGCK

1. STANDALONE dump (see also Messages manual GC33 5379 and SADP)

F. Messages

1. If the condition described by the message does exist, gather the doc described in the manual.
2. If the message is erroneously issued, get a dump at the time the message is issued (see SADP).

**VSAM**  
**5745-SC-VSM**

● Necessary documentation on all problems:

1. PID level (eg, R330E)
2. LISTCAT ALL

● Documentation according to problem description:

A. Program check

1. Dump with SVA

B. Error codes

1. SNAP009 with record management errors
2. SNAP001 with catalog error codes
3. SNAP006 with open errors
4. SNAP003 with close errors
5. A full dump with error code in VSAM block (**Optional**)

## IBM Internal Use Only

### C. Loops

1. PDAIDS of SVCs
2. 10 (Minimum) PSWs while in a loop
3. SDAIDS of BR trace (**Optional**)
4. Print of VSAM index if R/M loop
5. Print of SVA (may be gotten from old dump of SVA)

### D. INCORROUT

1. JCL
2. Description of job

### E. AMS problems

1. Complete jobstream (JCL and 'all' messages)

## VTAM

### 5745-SC-VTM

- Necessary documentation on all problems:

1. Maintenance list and changes to network
2. Console log
3. Storage dump with LPA map and LINKEDIT map
4. Determine the application (CICS, IMS, etc)
5. SYS1.VTAMLST and start PARMs (**Optional**)
6. SYS1.LOGREC (DOS recorder file) (**Optional**)
7. If I/O is involved, use trace (VTAM RNIO, buffer, line) or system trace for local channel I/O

- Documentation according to problem description:

#### A. Loop problems

1. Trace of the loop

#### B. Wait state problems

1. Determine the status of all waiting VTAM related tasks including RPHs and the status of the buffer pools.

## 3600 HOST SUPPORT

### 5745-SC-124

- Necessary documentation on all problems:

#### A. Operation being performed

1. Control statement in full where applicable
2. Macro statement in full where applicable

#### B. Output expected and output received

1. Messages
2. Console log
3. Printer output
4. Component release level
5. Maintenance level
6. SCP release level
7. SCP maintenance level

**COBOL COMPILER**  
**5746-CB-100**

- Necessary documentation on all problems:
  1. Must be at current release and maintenance level
  2. Have available manuals: System Reference Library, COBOL Compiler and Library, and Programmer's Guide.
  3. Compile listing with options: SYM, LISTX and SXREF
  
- Documentation according to problem description:
  - A. General compile time failures
    1. JCL showing DOS,CBL,LST options and core-size for execution
  
  - B. Waits
    1. Dump
    2. If wait issued for and if I/O, the status of the CCB
    3. LINKEDIT map
    4. Any unusual applications (CICS, DL1, SORT, etc)
    5. If called and/or calling programs, listing of all programs involved
  
  - C. Compile time program checks
    1. Dump
    2. Module and displacement of program check
    3. Number of the current source statement being worked on at time of failure
  
  - D. Execution time program checks
    1. Dump
    2. Which source statement caused program check using LISTX
  
  - E. Loops
    1. Extent of loop (hi-low addresses)
    2. Cancel dump
    3. Phase or phases the loop occurs in
  
  - F. Compile time error messages
    1. Explanation of message as described by output of error msg
    2. Dump if supplied with message
  
  - G. Execution time error messages
    1. Refer to Programmer's Guide Appendix I for the action and documentation required.
  
  - H. System type error messages
    1. Documentation as described in appropriate System Messages



**FORTRAN LIBRARY**  
**5746-LM-302**

- Necessary documentation on all problems:
  1. See the general documentation requirements.

**COBOL LIBRARY**  
**5746-LM-400**

- Necessary documentation on all problems:
  1. Must be at current release and maintenance level
  2. Have available manuals: System Reference Library, COBOL Compiler and Library, and Programmer's Guide.
  3. Compile listing with options: SYM, LISTX and SXREF
- Documentation according to problem description:
  - A. General compile time failures
    1. JCL showing DOS,CBL,LST options and core-size for execution
  - B. Waits
    1. Dump
    2. If wait issued for and if I/O, the status of the CCB
    3. LINKEDIT map
    4. Any unusual applications (CICS, DL1, SORT, etc)
    5. If called and/or calling programs, listing of all programs involved
  - C. Compile time program checks
    1. Dump
    2. Module and displacement of program check
    3. Number of the current source statement being worked on at time of failure
  - D. Execution time program checks
    1. Dump
    2. Which source statement caused program check using LISTX
  - E. Loops
    1. Extent of loop (hi-low addresses)
    2. Cancel dump
    3. Phase or phases the loop occurs in
  - F. Compile time error messages
    1. Explanation of message as described by output of error msg
    2. Dump if supplied with message
  - G. Execution time error messages
    1. Refer to Programmer's Guide Appendix I for the action and documentation required.

H. System type error messages

1. Documentation as described in appropriate System Messages

**SORT MERGE**  
**5746-SM-104**

- Necessary documentation on all problems:

1. Maintenance level (current level)
2. SYSLOG and SYSLST output
3. SORT control cards or passed parameter list
4. JCL

- Documentation according to problem description:

A. Program checks

1. Dump
2. Module and displacement of program check

B. SORT error messages

1. Documentation as described by SORT Programmer's Guide (SC334028)
2. Dump

C. System error messages

1. Documentation as described by the DOS Messages manual
2. Dump

D. Incorrect output

1. Example of the incorrect output
2. Input records associated with the incorrect output
3. Any SYSREC information associated with the failing job

E. Loops

1. Extent of loop (high-low addresses and modules involved)
2. Dump

F. Waits

1. Dump
2. The event that the wait was issued for and if I/O, the status of the CCB and error queue

**DOS VSPC**  
**5746-XR-300**

- Necessary documentation on all problems:

1. Maintenance level - list of all APAR fixes installed

## IBM Internal Use Only

- Documentation according to problem description:
  - A. ABEND or loop (with cancel dump) problems
    - 1. Dump
    - 2. Ensure trace command in VSPC startup procedure is at least trace 4.
    - 3. Console output for VSPC user that was current when dump occurred
  - B. VSPC message problems
    - 1. Console output for the VSPC user (ensure that the message ID command was in effect so that the message numbers are printed with the message.
  - C. Wait state or terminal lockup problems
    - 1. Dump of VSPC
    - 2. Dump of VTAM
  - D. Terminal failure problems
    - 1. Determine the type of terminal
    - 2. Secure the terminal output
    - 3. Output of VTAM buffer trace

### EXTM 5746-XX-B00

- Necessary documentation on all problems
  - 1. See the general documentation requirements.

### DL1 5746-XX-100

- Necessary documentation on all problems:
  - 1. Maintenance level
  - 2. Listing of program involved
  - 3. Problem history (ie, any release change, PTF application, APAR application, DB crash)
- Documentation according to problem description:
  - A. Initialization failure problems
    - 1. Dump
    - 2. PSB/DBD generation listings
    - 3. Listing of DLZOLI00 on line or DLZRRC00 batch
  - B. Loop problems
    - 1. Listing of program(s) looping
    - 2. Trace of the loop (SDAID branch trace)
    - 3. Matching dump

- C. Scheduling problems
  - 1. Dump at time of failure
  - 2. User program
- D. Data base failures (INCORROUT):
  - 1. Dump at the point of failure
  - 2. DLZTRACE output
  - 3. DLZTRACE output with compare card SNAP dumps (if recreatable)
- E. Error messages or return codes
  - 1. Dump at the point of failure
  - 2. DLZTRACE leading up to the point of failure
  - 3. Knowledge of call sequence (last three calls)
  - 4. Refer to guidelines in DL/1 DEBUG (Fast Charts)
- F. Multiple partition support problems
  - 1. Dump output from CICS/VS (DL1, DL11, and DL12)
  - 2. CICS trace table
  - 3. Listing for DLZBPC, DLZMPC, and DLZMPI

**CICS/VS**  
**5746-XX-300**

- Necessary documentation on all problems:
  - 1. Maintenance list, including all PTFs and APARs applied
- Documentation according to problem description:
  - A. File problems
    - 1. File control program (DFHFCP) listing
    - 2. File control table (DFHFCT) listing
    - 3. Complete CICS/VS dump with trace active
  - B. Terminal problems
    - 1. Terminal control program (DFHTCP) listing
    - 2. Terminal control table (DFHTCT) listing
    - 3. Node control program (DFHZCP) listing (EXTM/VTAM only)
    - 4. Complete CICS/VS dump with:
      - a. FE trace active (BTAM only)
      - b. PIU/APL trace (EXTM only)
      - c. I/O and buffer trace (VTAM only)
      - d. Line trace (EXTM/VTAM involved with a remote 370X)
    - 5. Output messages from destination queues
      - a. CSMT and CSTL
      - b. EXML (EXTM only)
    - 6. Terminal error: program listings
      - a. DFHTACP/DFHTEP (BTAM only)
      - b. DFHZNAC/DFHNEP (EXTM/VTAM only)

## IBM Internal Use Only

### C. Open/close type problems

1. Destination control table (DFHDCT) listing
2. File control table (DFHFCT) listing
3. Open/close program (DFHOCP) listing
4. Complete CICS/VS dump with trace active

### D. Transient data problems

1. Transient data program (DFHTDP) listing
2. Destination control table (DFHDCT) listing
3. Complete CICS/VS dump with trace active

### E. Storage problems

1. Storage control program (DFHSCP) listing
2. Complete CICS/VS dump (some methods for storage violations are: use of the SVD option in DFHSIT (1.3.0 and later)). Generate and use DFHSCP w/recover=no option. An FE trap is available as pseudo APAR PP99108. Code is added to DFHTRP to verify the FAQE chains each time a trace entry is made and ABENDS if chain is bad.

### F. Task wait problems

1. Task control program (DFHKCP) listing
2. Complete CICS/VS dump with trace active

### G. Mapping problems

1. Application program listing(s) that encounter the problem(s)
2. Assembled listing of maps and DSECTS involved
3. Complete CICS/VS dump with trace active

### H. Application program problems

1. Application program listing with:
  - a. Pre-processor input and output (COBOL and PL/I only)
2. Complete CICS/VS dump (SRT=No if encountering ASRA transaction ABENDs) with trace active

### I. SYSGEN problems

1. Input to Stage I
2. Output from Stage I

### J. SYSTEM initialization problems

1. SYSTEM initialization program (DFHSIP) or suspected overlay routine (DFHSIA1-DFHSIJ1)
2. Complete CICS/VS dump
3. SYSTEM initialization table (DFHSIT) listing
4. Listing of CICS/VS override parameters

### K. Program control problems

1. Program control program (DFHPCP) listing
2. Processing program table (DFHPPTO) listing
3. Program control table (DFHPCT) listing
4. Complete CICS/VS dump with trace active
5. Listing of the application program encountering problem

## IBM Internal Use Only

### L. Journal problems:

1. Journal control program (DFHPCP) listing
2. Journal control table (DFHJCT) listing
3. Complete CICS/VS dump with trace active
4. Printout of the journal data set (affected area only)

### M. SYNC point problems

1. SYNC point program (DFHSPP) listing
2. Listing of program issuing SYNC point
3. Complete CICS/VS dump with trace active

### N. Built-in function problems

1. Built-in function program (DFHBIF) listing
2. Application program issuing the built-in function macro
3. Complete CICS/VS dump with trace active

#### • Additional information:

For problems requiring a trace, the trace table must be large enough to show failure or the PSR may use auxiliary trace.

## DLI ENTRY 5746-XX-700

#### • Necessary documentation on all problems:

1. Maintenance level
2. Listing of program involved
3. Problem history (ie, any release change, PTF application, APAR application, DB crash)

#### • Documentation according to problem description:

##### A. Initialization failure problems

1. Dump
2. PSB/DBD generation listings
3. Listing of DLZOL100 online or DLZRRC00 batch

##### B. Loop problems

1. Listing of program(s) looping
2. Trace of the loop
3. Matching dump

##### C. Scheduling problems

1. Dump at time of failure

## EP 5747-AG-100

#### • Necessary documentation on all problems

1. Maintenance list - release of EP, PTFs applied to EP, PTFs applied to SSP, S/ZAPs applied
2. Configuration list - type of 3704/3705 (I or II), type of channel adapter(s), type of scanner(s)

### IBM Internal Use Only

- Documentation according to problem description:
  - A. Load of EP into 3704/3705 fails
    - 1. STANDALONE dump of 3704/3705
    - 2. GTF/CCW trace of host (**Optional**)
  - B. Interface or channel control checks
    - 1. STANDALONE dump of 3704/3705
    - 2. Level 2 and level 3 line trace of EP at time of failure
    - 3. GTF/CCW trace of host (**Optional**)
  - C. Hardstop/program check
    - 1. Dump of 3704/3705 at time of failure
    - 2. Level 2 and level 3 line trace of EP at time of failure (**Optional**)
  - D. Performance problems
    - 1. Dump of 3704/3705 at time of degraded performance
    - 2. Level 2 and level 3 line trace of EP during degradation
  - E. General 3704/3705 internal failures (bad sense, line failures, MODEM sequence problems, data sensitive failures, EP looping, incorrect PCF states)
    - 1. Level 2 and level 3 trace at time of failure
    - 2. Dump of 3705 - either STANDALONE or DYNADUMP
    - 3. GTF/CCW trace of host at time of failure (**Optional**)
    - 4. Specify line speed, MODEM and terminal type, conditions prior to failure
  - F. Host SSP failures (assembler, dynamic and STANDALONE dump)
    - 1. Dump of the failing module in host
    - 2. Output listings displaying failure symptoms

3735 MACROS/5747-AZ-100  
3790 HOST SUPPORT/5747-BQ-100  
3600 HOST SUPPORT/5747-BR-100  
BATCH TRANSFER/5747-BW100  
SSS LEVEL 4/5747-CC-600

- Necessary documentation on all problems:
  - A. Operation being performed
    - 1. Control statement in full where applicable
    - 2. Macro statement in full where applicable
  - B. Output expected and output received
    - 1. Messages
    - 2. Console log
    - 3. Printer output
    - 4. Component release level
    - 5. Maintenance level
    - 6. SCP release level
    - 7. SCP maintenance level

**VS/APL**  
**5748-AP-101**

- Necessary documentation on all problems:

1. Identify the system type, CMS or VSPC
2. Identify the component level
3. Identify maintenance level
4. Identify any auxiliary processors in use
5. Identify if APL microcode is in use

- Documentation according to problem description:

A. INCORROUT problems

1. Identify the failing APL statement and indicate the results received versus the results expected. Reference the APL language manual for additional help.

B. Other problems

1. Consult the diagnostic aids section of the VS APL PLM for information on how to obtain various dumps and how to interpret them.

**VSPC FORTRAN**  
**5748-FO-211**

- Necessary documentation on all problems:

1. See the general documentation requirements.

**VS/BASIC**  
**5748-XX-111**

- Necessary documentation on all problems:

1. Identify System Type (TSO, BATCH, VSPC, etc)
2. Maintenance level
3. Identify failure as compile or execute

**VM/370 CP**  
**5749-DM-K00**

- Necessary documentation on all problems:

1. Maintenance list
2. Verify that all known errors against a PLC have been applied.
3. If using display, user should spool console to printer for output.
4. CP LOADLIST. This LOADLIST is the one generated at SYSGEN time.
5. If using IPCs, provide the problem report (**Optional**)

- Documentation according to problem description:

A. Loop problems

1. Determine the modules involved
2. Console output



## IBM Internal Use Only

- B. Message, ABEND, coded wait problems:
  - 1. Follow the suggested action in the appropriate system message SRL.
  - 2. Supply any output received showing the failure.
  - 3. Console output
  - 4. For ABENDS in CP, A CP ABEND dump
- C. TP related problems
  - 1. 3704/3705 trace (**Optional**)

### IPCS 5749-DM-M00

- Necessary documentation on all problems:
  - 1. Maintenance list
  - 2. Verify that all known errors against a PLC have been applied.
  - 3. If using display, user should spool console to printer for output.
- Documentation according to problem description:
  - A. Loop, ABEND, waits
    - 1. CMS dump
    - 2. Modules involved, if looping
  - B. INCORROUT
    - 1. Supply any output received showing the failure.

### VM/370 CMS 5749-DM-S00

- Necessary documentation on all problems:
  - 1. Maintenance list
  - 2. Verify that all known errors against a PLC have been applied.
  - 3. If using display, user should spool console to printer for output.
  - 4. Console output
  - 5. CMS LOADLIST
- Documentation according to problem description:
  - A. Loop problems
    - 1. Determine the modules involved.
  - B. Message, ABEND, coded wait problems
    - 1. Follow the suggested action in the appropriate system messages SRL.
    - 2. For ABENDS in CMS, CMS ABEND dump (dump 0 - end)

**VM/370 RSCS  
5749-DM-T00**

- Necessary documentation on all problems:
  1. Maintenance list
  2. Verify that all known errors against a PLC have been applied.
  3. If using display, user should spool console to printer for output.
- Documentation according to problem description:
  - A. Loop problems
    1. Determine the modules involved.
  - B. Message, ABEND, coded wait problems
    1. Follow the suggested action in the appropriate system messages SRL.
    2. For ABEND, dump RSCS virtual machine with dump 0 - end.
  - C. TP related problems
    1. Provide the RSCS command "CMD Log" output showing failing sequence.

**CMS/VSAM  
5749-SC-VSM**

- Necessary documentation on all problems:
  1. See the general documentation requirements.

**VM/370 EREP  
5749-SC-1CD**

- Necessary documentation on all problems:
  1. Maintenance list
  2. Verify that all known errors against a PLC have been applied.
  3. If using display, user should spool console to printer for output.
  4. Any EREP output obtained
  5. Determine the physical configuration. This can be obtained from DMKRIO assembly or listing of card deck.
  6. CP LOADLIST
- Documentation according to problem description:
  - A. Loop problems
    1. Determine the modules involved.
    2. CMS dump
  - B. Message, ABEND, coded wait problems:
    1. Follow the suggested action in the appropriate system messages SRL.
    2. CMS dump

## IBM Internal Use Only

### C. Bad output record problems

1. DDR dump or error recording cylinder of history tape

### VM/370 ASSEMBLER 5749-SC-103

- Necessary documentation on all problems:

1. PLC level and any additional fixes applied

- Documentation according to problem description:

#### A. ABEND problems

1. CMS dump of the failure

#### B. Message problems

1. Source program
2. Macro definitions (if related)
3. Output from assembler

REQUIRED DOCUMENTATION FOR MVS (5752)

5752-SC-\*\*\*

GENERAL DOCUMENTATION

1. List of applied maintenance at the time of the failure. (PTF list)
2. All job related output
3. PSR should be aware of any user mods, user exits, and products with other than CLASS A service that are included in his system.
4. If a dump is included, the following must be done:
  - a. SVC dump will have nucleus, SQA, CSA, trace table, and current address space printed.
  - b. Standalone dump will include information from a store status and will be edited with the following options: CPUDATA, CVTDATA, QCBTRACE, summary and format.
  - c. If analysis of the dump is required by the programming service, the PSR must be prepared to set up a DLS connection.
  - d. Maps of nucleus and LPA that were current at the time of the failure and match the dump.

DOCUMENTATION ACCORDING TO THE PROBLEM DESCRIPTION

Messages, ABENDS, and Coded waits

1. Minimum additional documentation needed is listed with the problem determination aids in the various messages and codes publications.

Loops, Uncoded waits, and INCORROUT

1. Console listing - time beginning 15 to 30 minutes prior to the problem occurrence.
2. Execute the LOGREC edit routine using the SPOTCHK or TIMESEQ parameter, time beginning 15 to 30 minutes prior to the problem occurrence.
3. Dump of the involved address space(s).
4. For loop, at least partial trace. (Modules involved)
5. PSR should locate and format the incore LOGREC buffers.
6. LISTVTOC of pack(s) containing the involved data set. (Optional)

ADDITIONAL DOCUMENTATION

Additional documentation will be indicated by component, or group of components, where the same documentation is needed.

## IBM Internal Use Only

### DLIB LOAD/INSTALL 5752-BD-TST

- Necessary documentation on all problems:
  1. See the required documentation for MVS (5752).
  2. Output listings from the install process.

### JES3 5752-SC-1BA

- Necessary documentation on all problems:
  1. Maintenance level - SMP listings
  2. Failing JCL
  3. Initialization deck listing
  4. JES3 formatted dump with trace table entries
  5. MLOG before failure took place and including the time of dump. If the job causing the failure can be identified, include the MLDG history of that job.
- Documentation according to problem description:
  - A. IOS problems
    1. Standalone dump of the failing VS2 system
    2. VS2 nucleus LOADMOD map
  - B. Initialization problems
    1. Listing of JES3OUT data set
    2. Dump of the system using the INTDEBUG service aid
  - C. Input service problems
    1. Bad control block problems
      - a. Rerun the job with `//*Process CBPRNT` and `//*Process OUTSERV` cards
    2. JCL processing problems
      - a. Rerun the job with `//*Format PR,DDName=JCLIN` in order to print the job's JCL
  - D. RJP problems
    1. Turn on RJP trace facility for the failing line. Save the MLOG output. **(Optional)**
  - E. GMS problems
    1. Issue the following commands for all main processors:
      - \*I G,Main-Processor-Name,G
      - \*I G,Main-Processor-Name,S
      - \*I G,Main-Processor-Name,C
    2. Get a display listing for the job in question. **(Optional)**
    3. Modify SELECT to display = MLOG. **(Optional)**

## F. MDS problems

1. Determine the existence of a particular job in one of the following queues:

MDS Allocate	(A)
UNAVAILABLE	(U)
ERROR	(E)
RESTART	(R)

By issuing an \*I, Q or \*I, S, (A, V, E, R) command.  
If a job is present on one of these queues, list the reasons why the job is there by issuing the command \*I, S, (A/V/E/R), J = Jobnumber.

2. Incorrect volume, data set, or device management problems:
  - a. Run DC DSP with the DMP option to capture the status of the resident resource. **(Optional)**
3. Improper JCL handling problems:
  - a. Rerun the failing job with //EXEC PGM=JSTTEST**(Optional)**
4. Job related problems:
  - a. Run DC DSP with SNP option **(Optional)**
  - b. Run failing job with //\* Process RI and/or //\*Process CI, both followed by a DEBUG=ALL Parameter Card **(Optional)**
  - c. Run failing job with //\* Process CEPRNT Card **(Optional)**
5. Setup problems:
  - a. Rerun job with //EXEC PGM=JSTTEST
  - b. Run failing job with //\* Process OUTSERV Card

## G. RI/CI problems

1. Job related problems:
  - a. Run failing job with //\* Process RI and/or //\* Process CI, both followed by a DEBUG = All Card
  - b. Run failing job with //\* Process CBPRNT
2. Setup problems:
  - a. Rerun job with //EXEC PGM=JSTTEST
  - b. Run failing job with //\* Process OUTSERV
  - c. Supply information on User Exits

- H. DJC problems
  - 1. Provide DISPLAY DJC output
  - 2. Provide description of DJC Network and all **//\*NET Cards**
- I. Output service problems
  - 1. Rerun the failing job with **//\* Process Control Cards**. Process CBRNT just before output service (**Optional**)
- J. CTC problems
  - 1. For processor to processor communication problems, dump both systems with JES3 formatted. (**Optional**)
  - 2. If JES3 can not be formatted, provide a printout of CSA with IMDPRDMP. (**Optional**)
- K. Spool I/O error problems
  - 1. Dump including all of SQA and CSA
  - 2. A history of the problem

JES2  
5752-SC-1BH

- Necessary documentation on all problems:
  - 1. HASP-JES2 generation or initialization parms
  - 2. System log showing time before and after failure
  - 3. List of HASP-JES2 maintenance
  - 4. Standalone or SVCDUMP for any situation where a dump is normally required (ie, ABEND or wait.) The dump should contain as minimum - the JES2 address space or HASP region, related user address space, NUC, CSA, LPA MAP
- Required documentation for problems involving HASPRTAM:
  - 1. A trace of line activity. Acceptable data includes: MVS CCWTRACE, 3705 TRACE, or trace using GTF TRACEMACROS
  - 2. Console sheet from remote terminal if there is a console
- Required documentation for problems in HASPXEQ or HASPSSSM:
  - 1. JCL from related user programs
- Required documentation for multi-spool problems (JES2 only):
  - 1. Reassemble module HASPMISC specifying &DEBUG=YES
  - 2. Recreate the failure using this option if possible
  - 3. Supply generation or initialization parms for all systems
- Required documentation for HASPPRPU or HASPRDR problems:
  - 1. JCL for jobs involved
  - 2. System output from failing jobs
  - 3. Listing of applicable modules for HASP and non-JES2 systems

Note: If user modifications are present, a listing of each modified module directly or indirectly involved in the failure.

**MSS RECOVERY**  
**5752-SC-1BZ**

- Necessary documentation on all problems:
  1. Maintenance level - SMP listing
  2. Console log from primary host and MSS console
  3. System configuration - MSCs, SDGs, and VUAs
- Documentation according to problem description:
  - A. ABEND type problems
    1. System supplied dump
    2. Related job output with MSGLEVEL=(1,1)
  - B. Loops and waits
    1. System dump (STANDALONE or SYSABEND) reflecting the failing addresses of the loop or wait
    2. Status of the MSC(Optional)
    3. Last order passed to the MSC (from ICB\*SSCB trace)(Optional)
  - C. INCORROUT and volume handling problems
    1. Related job JCL and SYSOUT(Optional)
    2. Listing of the MSVI(Optional)
    3. Print of MSVIJRNL(Optional)
    4. LISTMSF(Optional)

**EXTERNAL WRITER**  
**5752-SC-1B2**

- Necessary documentation on all problems:
  1. See the general documentation requirements.

<b>SYSTEM SECURITY SUPPORT/5752-SC-1B1</b> <b>SCHEDULER RESTART/5752-SC-1B3</b> <b>ALLOCATION UNALLOCATION/5752-SC-1B4</b> <b>SWA MANAGER/5752-SC-1B5</b> <b>INITIATOR TERMINATOR/5752-SC-1B6</b> <b>CONVERTER INTERPRETER/5752-SC-1B9</b>
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- Necessary documentation on all problems:
  1. See the required documentation for MVS (5752).



SYSTEM COMMAND (SVC34)  
5752-SC-1B8

- Necessary documentation on all problems:
  1. See the required documentation for MVS (5752)
  2. Hardcopy or SysLog output containing command image and message traffic pertinent to the command execution
  3. A copy of the proc for start and mount commands
- Additional information:
  1. In the case of control (K) commands which are not hard-copied, and MSGRT in entry area, it is necessary to have an exact handwritten copy of the command plus any information pertaining to cursor pointers or underscores that may occur in the console entry area.
  2. Note that the execution processors for some commands are handled by components other than SC-1B8.

DASD ERP/5752-SC-1CA  
UNIT RECORD ERP/5752-SC-1CB  
TAPE ERP/5752-SC-1CC

- Necessary documentation on all problems:
  1. Maintenance level - SMP Listing
  2. Storage dump, which should include:
    - a. IOB VCB, RQE, UCBEXTWA (Non-MVS)
    - b. IDSB, UCB, IDQ, IDB, EWA (MVS)
  3. Console Listing
  4. GTF Trace (**Optional**)
  5. Module Zap Dump (**Optional**)
- Documentation according to problem description:
  - A. Loop problems
    1. Internal Trace
    2. NVC/LPA Map (**Optional**)
    3. When GTF trace provided, it must start from the beginning of the loop (**Optional**)
  - B. ABEND problems
    1. Internal Trace
    2. NVC/LPA Map (**Optional**)
  - C. INCORROUT problems
    1. IEHDASDR dump of LOGREC (Log problems only)
    2. EREP output (Log problems only)

**OBR/EREP/RDE**  
**5752-SC-1CD**

- Necessary documentation on all problems:
  1. See the required documentation for MVS (5752)
- Documentation according to problem description:
  - A. Recording problems
    1. Dump of master schedule address space
    2. Listing of error LOGREC entries
  - B. Editing problems
    1. Edited output
    2. History dataset with failing data for DLS run
    3. Tourist dataset (EREP1 only)

**RMS/5752-SC-1CE**  
**EXTENDED SVC ROUTER/5752-SC-1CF**

- Necessary documentation on all problems:
  1. See the required documentation for MVS (5752)
  2. Dump of ASID01
  3. INCORE LOGREC buffers located and formatted out
  4. GTF trace, if problem can be recreated (**Optional**)

**SVC 109**  
**5752-SC-1CG**

- Necessary documentation on all problems:
  1. See the required documentation for MVS (5752)

**VIRTUAL STORAGE MANAGER**  
**5752-SC-1CH**

- Necessary documentation on all problems:
  1. See the required documentation for MVS (5752)
  2. Full dump of failing address with a trace table. The INCORE LOGREC buffer should be located and formatted.

**3851 DSMERP**  
**5752-SC-1CI**

- Necessary documentation on all problems:
  1. Maintenance level - SMP listing
  2. Console log from primary host and MSS console
  3. System configuration - MSCs, SDGs, and VUAs

## IBM Internal Use Only

- Documentation according to problem description:
  - A. ABEND type problems
    - 1. System supplied dump
    - 2. Related job output with MSGLEVEL=(1,1)
  - B. Loops and waits
    - 1. System dump (STANDALONE or SYSABEND) reflecting the failing addresses of the loop or wait
    - 2. Status of the MSC (Optional)
    - 3. Last order passed to the MSC (from ICB\*SSCB trace) (Optional)
  - C. INCORROUT and volume handling problems
    - 1. Related job JCL and SYSOUT (Optional)
    - 2. Listing of the MSVI (Optional)
    - 3. Print of MSVIJRN (Optional)
    - 4. LISTMSF (Optional)

CONTENTS SUPERVISOR/5752-SC-1CJ  
TASK MANAGER/5752-SC-1CL  
RECOVERY TERMINATION/5752-SC-1CM  
EXT FLOATING POINT/5752-SC-1CP  
MF/1 5752-SC-1CQ  
REGION CONTROL TASK/5752-SC-1CU  
TIMER SUPERVISOR/5752-SC-1CV  
SYSTEM RESOURCE MANAGER/5752-SC-1CX  
RADIX PARTITION/5752-SC-1CY

- Necessary documentation on all problems:
  - 1. See the required documentation for MVS (5752)

### COMMTASK 5752-SC-1CK

- Necessary documentation on all problems:
  - 1. See the required documentation for MVS (5752)
  - 2. Dump of ASID01 and ASIDs involved at time of failure
  - 3. GFT Trace (Optional)
- Documentation according to problem description:
  - A. Message processing
    - 1. Console log from failing console
  - B. COMMTASK macros (ie, WTO, DOM, etc)
    - 1. Macro expansions
    - 2. Standalone dump at entry to ABTERM
    - 3. Map of the nucleus
    - 4. List of any user modifications or PTFs applied

**REAL STORAGE MANAGER**  
**5752-SC-1CR**

- Necessary documentation on all problems:
  1. See the required documentation for MVS (5752)
  2. Output from FE Service Aids RSMDATA and LOGDATA (if installed). At a minimum, the INCORE LOGREC buffer must be located and formatted out.

**AUX STORAGE MANAGER**  
**5752-SC-1CW**

- Necessary documentation on all problems:
  1. See the required documentation for MVS (5752)
  2. Output of ASMDATA (for standalone dumps)

**MP RECONFIGURATION**  
**5752-SC-1CZ**

- Necessary documentation on all problems:
  1. See the required documentation for MVS (5752)
  2. Dump of the master scheduler address space

**OVERLAY SUPERVISOR**  
**5752-SC-1C2**

- Necessary documentation on all problems:
  1. Region and LSQA
  2. DASDR dump of the segment involved. (Disk address can be calculated using the TTR from NOTE LIST and DEB extent.)
  3. LINKEDIT map of the program
  4. List of the LINKEDIT control cards

**IOS**  
**5752-SC-1C3**

- Necessary documentation on all problems:
  1. See the required documentation for MVS (5752)
  2. Dump of the failing address space with a trace table. If unsure of the failing address space, dump ASID01.
- Documentation according to problem description:
  1. For ABENDCOD problems, install "IOSTRACE"

**DIDOCs**  
**5752-SC-1C4**

- Necessary documentation on all problems:
  1. See the required documentation for MVS (5752)
  2. Load Module dump of IGC0007B, with all CSECTS
  3. Linkedit map of IGC0007B
  4. GTF trace (**Optional**)

**SUPERVISOR**  
**5752-SC-1C5**

- Necessary documentation on all problems:
  1. See the required documentation for MVS (5752)
  2. Make certain that the areas and control blocks connected with the problem are in the documentation. It may be necessary to do a storage to storage print of selected areas.

**EXCP**  
**5752-SC-1C6**

- Necessary documentation on all problems:
  1. See the required documentation for MVS (5752)

**FETCH**  
**5752-SC-1C7**

- Necessary documentation on all problems:
  1. Maintenance level - SMP listing
  2. Nucleus map and LPA listing
  3. All job related output
- Documentation according to problem description:
  - A. Loop problems
    1. INCORE trace
    2. STANDALONE dump
  - B. I/O loop problems
    1. DASDR dump of the member
    2. GTF trace (**Optional**)
  - C. ABEND106-E, ABEND106-F, ABEND22D, ABEND32D
    1. SYSABEND dump
    2. DASDR dump of the member
  - D. ABEND problems
    1. SYSABEND dump

NIP/5752-SC-1C8  
IPL/5752-SC-1C9

- Necessary documentation on all problems:

1. See the required documentation for MVS (5752)

### BLOCK PROCESSOR 5752-SC-1DA

- Necessary documentation on all problems:

1. CDS listing
2. LISTCAT of correct catalog

- Documentation according to problem description:

#### A. INCORROUT

This is undefinable. Attempt to match with another symptom.

#### B. Wait

1. Dump showing the wait

#### C. Loop

1. Dump when PSW is in VSAM mode (ABENDOCX)
2. SVC GTF trace (**Optional**)
3. Print of index on tape (**Optional**)

#### D. ABEND problems

1. Dump at the time of the failure
2. LISTCAT
3. Map of control blocks (ACB, RPL, PLH, BUFC)

#### E. ABORT codes from AMS (See also the PLM for description)

1. SNAP dump (Insert a //AMSDUMP DD SYSOUT=A, and then the first card after SYSIN, PARM TEST(FULL(DLDA)))

#### F. Lost records

1. AMS print for 50 records before and after the missing key
2. History of the record
3. DASDR dump of the disk containing the missing area (**Optional**)
4. AMS print of the index on tape for DL run (**Optional**)
5. IDATRACE in IDA019R1 showing the PUT of the record (**Optional**)

G. Messages (error codes)

ACB

1. Dump in O/C/EOV when error code set
2. LISTCAT

RPL

1. Dump in record management where the error is set

CATALOG

1. CVT trap dump
2. LISTCAT (Optional)
3. IDATRACE of the catalog (Optional)

H. Overlays

1. ABEND dump
2. Storage alteration dump (Optional)

• Additional information:

1. Santa Teresa Support will accept any info in DL form.
2. IDATRACE is available in DLL.
3. REG15 gives an AMS ABORT code if a severe error occurs and nothing else can be done.
4. VSAM PRESSCREEN GUIDE gives many helpful hints on how to get any of the dumps and traces mentioned. Get one from region.
5. There is a bucket in RETAIN/SRCH for periodic updates to the prescreen guide under 'VSAMAI'.

**SAM SUBSYSTEM INTERFACE/5752-SC-1DB**  
**PASSWORD PROTECT/5752-SC-1DC**

• Necessary documentation on all problems:

1. See the general documentation requirements.

**3505/3525 READER**  
**5752-SC-1DD**

• Necessary documentation on all problems:

1. See the required documentation for MVS (5752)

**VSAM**  
**5752-SC-1DE**

• Necessary documentation on all problems:

1. CDS listing
2. LISTCAT of correct catalog

• Documentation according to problem description:

A. INCORROUT

This is undefinable. Attempt to match with another symptom.

B. Wait

1. Dump showing the wait

C. Loop

1. Dump when PSW is in VSAM mode (ABEND0CX)
2. SVC GTF trace (Optional)
3. Print of index on tape (Optional)

D. ABEND problems

1. Dump at the time of the failure
2. LISTCAT
3. Map of control blocks (ACB, RPL, PLH, BUFC)

E. ABORT codes from AMS(See also the PLM for description)

1. SNAP dump (Insert a //AMSDUMP DD SYSOUT=A, and then the first card after SYSIN, PARM TEST(FULL(DLDA))

F. Lost records

1. AMS print for 50 records before and after the missing key
2. History of the record
3. DASDR dump of the disk containing the missing area (Optional)
4. AMS print of the index on tape for DL run (Optional)
5. IDATRACE in IDA019R1 showing the PUT of the record

G. Messages (error codes)

ACB

1. Dump in O/C/EOV when error code set
2. LISTCAT

RPL

1. Dump in record management where the error is set

CATALOG

1. CVT trap dump
2. LISTCAT (Optional)
3. IDATRACE of the catalog (Optional)

H. Overlays

1. ABEND dump
2. Storage alteration dump (Optional)



• Additional information:

1. Santa Teresa Support will accept any info in DL form.
2. IDATRACE is available in DLL.
3. REG15 gives an AMS ABORT code if a severe error occurs and nothing else can be done.
4. VSAM PRESSCREEN GUIDE gives many helpful hints on how to get any of the dumps and traces mentioned. Get one from region.
5. There is a bucket in RETAIN/SRCH for periodic updates to the prescreen guide under 'VSAMAI'.

**3890 DOCUMENT PROCESSOR**  
**5752-SC-1DF**

• Necessary documentation on all problems:

1. See the required documentation for MVS (5752)

**VBP (VIQ)**  
**5752-SC-1DG**

• Necessary documentation on all problems:

1. Maintenance level - SMP listing
2. Link Map of IDDWT load module (VIO only)
3. CVT or the address contained at X'314' (CVTPWI)
4. Data set parameters (DCB or ACB parameters)

• Documentation according to problem description:

A. ABEND problems

1. SYSABEND Dump
2. Register, address, and module that ABEND (for an ABEND0CX type)
3. Register or control block field that causes the coded ABEND (for a Non-ABEND0CX type) (Optional)

B. Loop problems

1. Determine the I/O consecutive loop instruction address.

C. Wait problems

1. Determine the reason for the wait (what is the ECB waiting on) (Optional)
2. GTF Trace (Optional)

D. INCORROUT problems

1. Sample of the bad output
2. Sample of the good output

**CATALOG CONTROLLER  
5752-SC-1DH**

- Necessary documentation on all problems:
  1. CDS listing
  2. LISTCAT of correct catalog
- Documentation according to problem description:
  - A. INCORROUT
 

This is undefinable. Attempt to match with another symptom.
  - B. Wait
    1. Dump showing the wait
  - C. Loop
    1. Dump when PSW is in VSAM mode (ABEND0CX)
    2. SVC GTF trace (Optional)
    3. Print of index on tape (Optional)
  - D. ABEND problems
    1. Dump at the time of the failure
    2. LISTCAT
    3. Map of control blocks (ACB, RPL, PLH, BUFC)
  - E. ABORT codes from AMS (See also the PLM for description)
    1. SNAP dump. (Insert a //AMSDUMP DD SYSOUT=A, and then the first card after SYSIN, PARM TEST(FULL(DLDA)))
  - F. Lost records
    1. AMS print for 50 records before and after the missing key
    2. History of the record
    3. DASDR dump of the disk containing the missing area (Optional)
    4. AMS print of the index on tape for DL run (Optional)
    5. IDATRACE in IDA019R1 showing the PUT of the record
  - G. Messages (error codes)
 

ACB

    1. Dump in O/C/EOV when error code set
    2. LISTCAT

RPL

    1. Dump in record management where the error is set

CATALOG

    1. CVT trap dump
    2. LISTCAT (Optional)
    3. IDATRACE of the catalog (Optional)

H. Overlays

1. ABEND dump
2. Storage alteration dump (**Optional**)

• Additional information:

1. Santa Teresa Support will accept any info in DL form.
2. IDATRACE is available in DLL.
3. REG15 gives an AMS ABORT code if a severe error occurs and nothing else can be done.
4. VSAM PRESSCREEN GUIDE gives many helpful hints on how to get any of the dumps and traces mentioned. Get one from region.
5. There is a bucket in RETAIN/SRCH for periodic updates to the prescreen guide under 'VSAMAI'.

**WINDOW INTERCEPT**  
5752-SC-1DJ

• Necessary documentation on all problems:

1. See the general documentation requirements.

**ACCESS METHOD SERVICES**  
5752-SC-1DK

• Necessary documentation on all problems:

1. CDS listing
2. LISTCAT of correct catalog

• Documentation according to problem description:

A. INCORROUT

This is undefinable. Attempt to match with another symptom.

B. Wait

1. Dump showing the wait

C. Loop

1. Dump when PSW is in VSAM mode (ABENDOCX)
2. SVC GTF trace (**Optional**)
3. Print of index on tape (**Optional**)

D. ABEND problems

1. Dump at the time of the failure
2. LISTCAT
3. Map of control blocks (ACB, RPL, PLH, BUFC)

IBM Internal Use Only

E. ABORT codes from AMS (See also the PLM for description)

1. SNAP dump (Insert a //AMSDUMP DD SYSOUT=A, and then the first card after SYSIN, PARM TEST(FULL(DLDA))

F. Lost records

1. AMS print for 50 records before and after the missing key
2. History of the record
3. DASDR dump of the disk containing the missing area (Optional)
4. AMS print of the index on tape for DL run (Optional)
5. IDATRACE in IDA019R1 showing the PUT of the record (Optional)

G. Messages (error codes)

ACB

1. Dump in O/C/EOV when error code set
2. LISTCAT

RPL

1. Dump in record management where the error is set

CATALOG

1. CVT trap dump
2. LISTCAT (Optional)
3. IDATRACE of the catalog (Optional)

H. Overlays

1. ABEND dump
2. Storage alteration dump (Optional)

• Additional information:

1. Santa Teresa Support will accept any info in DL form.
2. IDATRACE is available in DLL.
3. REG15 gives an AMS ABORT code if a severe error occurs and nothing else can be done.
4. VSAM PRESSCREEN GUIDE gives many helpful hints on how to get any of the dumps and traces mentioned. Get one from region.
5. There is a bucket in RETAIN/SRCH for periodic updates to the prescreen guide under 'VSAMAI'.

3886 OCR/5752-SC-1DL  
3540/5752-SC-1DN

• Necessary documentation on all problems:

1. See the required documentation for MVS (5752).

**MSS**

5752-SC-1DP  
5752-SC-1DQ  
5752-SC-1DR  
5752-SC-1DS  
5752-SC-1DT  
5752-SC-1DU

- Necessary documentation on all problems:
  1. Maintenance level - SMP listing
  2. Console log from primary host and MSS console
  3. System configuration - MSCs, SDGs, and VUAs
  
- Documentation according to problem description:
  - A. ABEND type problems
    1. System supplied dump
    2. Related job output with MSGLEVEL=(1,1)
  
  - B. Loops and Waits
    1. System dump (STANDALONE or SYSABEND) reflecting the failing addresses of the loop or wait
    2. Status of the MSC (Optional)
    3. Last order passed to the MSC (from ICB\*SSCB trace)
  
  - C. INCORROUT and volume handling problems
    1. Related job JCL and SYSOUT (Optional)
    2. Listing of the MSVI (Optional)
    3. Print of MSVIJRNL (Optional)
    4. LISTMSF (Optional)

**SAM**

5752-SC-1D0

- Necessary documentation on all problems:
  1. Maintenance levels - SMP Listings
  2. Complete list of data set parameters. Include the DCB, IOB, and DEB from the dump or the DCB, DD, and open parameters from the job.
  3. Timing dependencies regarding normal I/O, EOVS, End of Extent, Open or Close
  4. List of any related maintenance that had been applied close to the start of the problem

**OPEN/CLOSE/EOV**  
**5752-SC-1D1**

- Necessary documentation on all problems:
  1. Maintenance level - SMP Listings
  2. Complete list of data parameters. Include the DCB, IOB, and DEB from the dump or the DCB, DD, and open parameters from the job.
  3. Timing dependencies regarding normal I/O, EOV, end of extent, open or close.
  4. List of any related maintenance applied close to the start of the problem.
  
- Documentation according to problem description:
  - A. ABEND problems
    1. Dump (Not a SYSUDUMP)
    2. Message accompanying the ABEND, if applicable
    3. If the ABEND is an ABEND001:
      - a. Determine what error is indicated (incorrect length, channel program check, data check).
      - b. Determine whether changing the parameters helps. **(Optional)**
      - c. Determine what access method modules are being used. **(Optional)**
    4. If the ABEND is an ABEND002:
      - a. Verify that you have valid input data.
      - b. If the input is from SMF, check for the application of the latest SMF maintenance.
      - c. Read in the 'FEFS Support Newsletter 76-2' the article on Diagnostic Techniques for VBS Records.
  - B. Data errors (out of sequence, missing, duplicate)
    1. Assure the latest level of IOS maintenance
  - C. Loop problems
    1. Multi-module
      - a. List of modules involved
      - b. GTF trace **(Optional)**
    2. Inner module
      - a. Determine the cause of the loop and what prevents break-out
      - b. SYSABEND dump with the failing module
  - D. Wait problems
    1. Determine what the task is waiting for
    2. Dump at the time of the wait
    3. GTF trace **(Optional)**

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- Additional information:

1. The module being used can be determined from the DEB + x'34' through the DEB + x'48'. The last 2 characters of the module IDs are stored there. These characters are then appended to IGG019XX for the full module name.

### BPAM

#### 5752-SC-1D2

- Necessary documentation on all problems:

1. Maintenance levels - SMP listing
2. Determine the sequence of events causing the problem

- Documentation according to problem description:

A. ABEND problems

1. SYSABEND Dump
2. Refer to the system codes problem determination aids for that particular ABEND.

B. Message problems

1. Refer to the system messages problem determination aids for that particular message.

C. Directory blocks out of sequence - stow problems

1. IEHDASDR dump of the data set to show the directory blocks before and after the out-of-sequence problem
2. IEHLIST of the data set before and after the problem (**Optional**)
3. Listing of the program issuing stow if other than an IBM utility, service aid, or normal close processing (**Optional**)

### DADSM

#### 5752-SC-1D4

- Necessary documentation on all problems:

1. Maintenance levels - SMP listing
2. Console listing
3. JCL for failure job

- Documentation according to problem determination:

A. ABEND problems

1. ABEND dump with DADSM work area in core

B. Message problems

1. DASDR dump of the VTOC

C. VTOC problems (example, missing space)

1. DASDR dump of the VTOC

**OCR**  
**5752-SC-1D5**

- Necessary documentation on all problems:
  1. Maintenance List
  2. Hardcopy log
  3. Input JCL and associated output
- Documentation according to problem description:
  - A. ABEND problems
    1. SYSABEND or Standalone Dump

**MICR**  
**5752-SC-1D6**

- Necessary documentation on all problems:
  1. Maintenance level - SMP Listings
  2. Dump of the problem
  3. All MICR control blocks and MICR trace data
  4. CCW trace of the failure (**Optional**)

**BDAM**  
**5752-SC-1D7**

- Necessary documentation on all problems:
  1. Maintenance levels - SMP Listings
  2. Data set Parameters (JCL, DCB, DD)
  3. Customer program (**Optional**)
  4. Knowledge of the customer's application
- Documentation according to problem description:
  - A. ABEND problems
    1. SYSABEND Dump
    2. Register or address causing the error
  - B. INCORROUT - data dependent
    1. Dump of the cylinder where the failure is occurring
  - C. Wait problems
    1. Determine what the task is waiting for
    2. GTF trace of failure (**Optional**)
  - D. Loop problems
    1. Multi-module loop
      - a. GTF Trace
    2. Inter-module loop
      - a. Determine what is being tested
      - b. Determine what prevents normal break-out



**ISAM**  
5752-SC-1D8

- Necessary documentation on all problems:
  1. Maintenance levels - SMP Listing
  2. Data Set Parameters (DCB, DD, OPEN)
  3. DASDR Dump of Data Set, including index and affected prime and overflow areas
- Documentation according to problem description:
  - A. ABEND problems
    1. SYSABEND Dump
    2. Register or address causing error the (ABEND0CX type)
  - B. Wait problems
    1. Determine what the task is waiting for
    2. GTF Trace
  - C. Loop problems
    1. Multi-module loop
      - a. GTF Trace
    2. Inter-module loop
      - a. Determine what is being tested
      - b. Determine what prevents normal break-out
  - D. INCORROUT problems
    1. Pattern of failure (specific conditions causing failure)
    2. Trace of failure (**Optional**)

**EMULATOR CONTROL**  
5752-SC-1E1

- Necessary documentation on all problems:
  1. See the general documentation requirements.

**GAM**  
5752-SC-1G0

- Necessary documentation on all problems:
  1. See the required documentation for MVS (5752)
  2. Virtual dump of GAM address space at the time of the failure
  3. GTF Trace, tracing all I/O to terminal addresses (**Optional**)

IBCDMPRS/5752-SC-110  
 IBCDASDI/5752-SC-111  
 ICAPRTEL/5752-SC-112

- Necessary documentation on all problems:
  1. See the required documentation for MVS (5752)
  2. JCL and utility control statements
  3. Macro or source listing for assembler

SSS  
 5752-SC-1SS

- Necessary documentation on all problems:
  - A. Operation being performed
    1. Control statement in full where applicable
    2. Macro statement in full where applicable
  - B. Output expected and output received
    1. Messages
    2. Console log
    3. Printer output
    4. Component release level
    5. Maintenance level
    6. SCP release level
    7. SCP maintenance level

SYSGEN/5752-SC-1S1  
 3330 STARTER/5752-SC-1S2  
 2314 STARTER/5752-SC-1S3  
 SUPERVISOR SYSGEN/5752-SC-1S4  
 SCHEDULER SYSGEN/5752-SC-1S5  
 SERVICE AID SYSGEN/5752-SC-1S6

- Necessary documentation on all problems:
  1. See the required documentation for MVS (5752).
  2. SYSGEN input and output
  3. Listing of failing macro(s)

TSO/5752-SC-1T0  
 TSO/5752-SC-1T1  
 TSO/5752-SC-1T2  
 TSO/5752-SC-1T3  
 TSO/5752-SC-1T4  
 TSO/5752-SC-1T5

- Necessary documentation on all problems:
  1. See the required documentation for MVS (5752).
  2. User's terminal output, including messages
  3. If JOBLIB or STEPLIB DD is used in logon procedure, provide a listing of the members
  4. If the user is locked out or hung up, provide a console dump of user and TCAM memories.

**TSO-**  
**5752-SC-1T9**

- Necessary documentation on all problems:
  1. Maintenance level (SMP listing)
  2. Console log
  3. Dump of core storage including CSA
- Documentation according to problem description:
  - A. VTIOC problems
    1. Dump of the VTIOC address space
  - B. TCAS problems
    1. Dump of the TCAS address space
  - C. Unsure if problem is VTIOC or TCAS
    1. Include documentation as required for 5752-SC-123 (VTAM)

**UTILITIES:**  
5752-SC-1UA  
5752-SC-1UC  
5752-SC-1UD  
5752-SC-1UE  
5752-SC-1UF  
5752-SC-1UG  
5752-SC-1UH  
5752-SC-1UJ  
5752-SC-1UK  
5752-SC-1UM  
5752-SC-1UX  
5752-SC-1UY  
5752-SC-1U0  
5752-SC-1U2  
5752-SC-1U3  
5752-SC-1U6  
5752-SC-1U7  
5752-SC-1U8  
5752-SC-1U9

- Necessary documentation on all problems:
  1. See the required documentation for MVS (5752).
  2. JCL and utility control statements
  3. Macro or source listing for assembler

**TOLTEP**  
**5752-SC-10C**

- Necessary documentation on all problems:
  1. See the general documentation requirements.

**POWER WARNING FEATURE**  
**5752-SC-10E**

- Necessary documentation on all problems:
  1. See the required documentation for MVS (5752).

**SCHEDULER SMF**  
**5752-SC-100**

- Necessary documentation on all problems:
  1. Maintenance List
  2. Hardcopy Log
  3. Input JCL and Associated Output
- Documentation according to problem description:
  - A. ABEND problems
    1. SYSABEND or Standalone Dump

**MAPPING MACROS**  
**5752-SC-101**

- Necessary documentation on all problems:
  1. See the required documentation for MVS (5752).
  2. Listing of failing macro(s).

**SMF**  
**5752-SC-102**

- Necessary documentation on all problems:
  1. See the required documentation for MVS (5752).
- Documentation according to problem description:
  - A. Record content problems
    1. A copy of the record as formatted by the user data generator program.
  - B. SMF Dump Program (IFASMFDP) problems
    1. ZAP dump of record being processed from SYS1.MAN data set at the time of the error
    2. Dump of output data set produced by IFASMFDP
    3. Any hardcopy or SYSLOG data pertaining to the SMF failure
  - C. Waiting on SMF resource problems
    1. Standalone dump containing:
      - a. ASID01, CPUDATA, CVTDATA, QBCTRACE, SUMMARY, FORMAT
      - b. ASID holding SMF resource
      - c. ASID(s) of task(s) that have ABENDED and are on resource queue (**Optional**)

- Additional information:
  1. The SMF components are not responsible for the data content of all SMF records. The SMF publication (GC280754 or GC280706) includes in the record description, the module name which creates the record. This information is essential in identifying the failing component.

**ASSEMBLER  
5752-SC-103**

- Necessary documentation on all problems:
  1. Maintenance List
- Documentation according to problem description:
  - A. ABEND problems
    1. SYSABEND or standalone dump
    2. Hardcopy log
  - B. Message problems
    1. Source program
    2. Macro definitions
    3. Associated listings

**LINKAGE EDITOR  
5752-SC-104**

- Necessary documentation on all problems:
  1. Maintenance level - SMP listing
  2. JCL and Control Statements
  3. SYSPRINT Output (XREF and MAP) of the Linkage Editor Step
- Documentation according to problem description:
  - A. ABEND problems
    1. SYSABEND Dump
  - B. Message problems
    1. Use Linkage Editor messages SRL (GC381007-4) for problem determination procedures on all MSGIEW0XXX.
    2. Determine the region and size parameters.
    3. Verify that all recommendations from messages and codes have been used. **(Optional)**
  - C. INCORROUT problems
    1. Using the IMBLIST Service Aid, list OBJ or listload option, verify that the input was correct. **(Optional)**
    2. Using an appropriate Service Aid (LISTVTOC, LISTLOAD, or an ABSDUMP), verify that the output was incorrect. **(Optional)**

- Additional information:

1. PSGIM (ZZ25-0511-4), Page 2-27, Hint 2, describes how to obtain a trap dump at the time of a message being issued.

**LOADER**  
5752-SC-105

- Necessary documentation on all problems:

1. Maintenance Level - SMP Listing
2. JCL and Control Statements
3. SYSPRINT Output (XREF and MAP) of the Linkage Editor Step

- Documentation according to problem description:

A. ABEND problems

1. SYSABEND Dump

B. Message problems

1. Use Linkage Editor messages SRL (GC381007-4) for problem determination procedures on all MSGIEW0XXX.
2. Determine the region and size parameters.
3. Verify that all recommendations from messages and codes have been used. (Optional)

C. INCORROUT problems

1. Using the IMBLIST Service Aid, list OBJ or listload option, verify that the input was correct. (Optional)
2. Using an appropriate Service Aid (LISTVTOC, LISTLOAD, or an ABSDUMP), verify that the output was incorrect. (Optional)

- Additional information:

1. PSGIM (ZZ25-0511-3), Page 2-27, Hint 2, describes how to obtain a trap dump at the time of a message being issued.

**OLTEP**  
5752-SC-106

- Necessary documentation on all problems:

1. Maintenance List
2. Console Log
3. Determine what user modifications are on the system

- Documentation according to problem description:

A. ABEND problems

1. GTF trace of I/O (Optional)
2. OLTEP trace (Optional)

B. Wait state problems

1. A Standalone dump (it is more useful than a cancel dump)

C. APF problems

1. List of all authorized libraries

**GSP**

**5752-SC-107**

- Necessary documentation on all problems:
  1. See the required documentation for MVS (5752).
  2. Virtual dump of GSP address space at time of failure
  3. Incorrect display (buffer dump)
  4. User source, or reasonable subset thereof, causing the problem.

**IVP**

**AFFECTED COMPONENT IDS:**

**5752-SC-108**

- Necessary documentation on all problems:
  1. See the required documentation for MVS (5752).

**CHECKPOINT RESTART**

**5752-SC-109**

- Necessary documentation on all problems:
  1. Maintenance levels - SMP listing
  2. JCL and console listing
  3. Problem dump
- Documentation according to problem description:
  - A. Restart problems
    1. Control block type problems after restart has been completed
      - a. Dump of the checkpoint Dataset (**Optional**)
    2. Data type problem during restart
      - a. Dump of the checkpoint Dataset (**Optional**)
      - b. Dump in the module that is doing the function and is detecting the error (**Optional**)

**DSS**

**5752-SC-110**

- Necessary documentation on all problems:
  1. See the required documentation for MVS (5752).
  2. If a PTF has been recently applied, insure that the DSS Utility (IQADUM00) has been correctly run.

**GTF**  
**5752-SC-111**

- Necessary documentation on all problems:
  1. See the required documentation for MVS (5752).
  2. Dump of GTF address space
  3. Dump of current address space (Optional)

**AMASPZAP/5752-SC-112**  
**AMDPRDMP/5752-SC-113**  
**AMBLIST/5752-SC-114**  
**AMDSADMP/5752-SC-115**  
**AMAPTFLE/5752-SC-116**  
**AMDPRDMP EDIT/5752-SC-118**

- Necessary documentation on all problems:
  1. Maintenance List
- Documentation according to problem description:
  - A. ABEND problems
    1. SYSABEND or Standalone Dump
    2. Associated JCL and/or Input
  - B. Message problems
    1. SYSOUT
    2. JCL
    3. Associated Messages

**BTAM**  
**5752-SC-120**

- Necessary documentation on all problems:
  1. Maintenance list
  2. BTAM line configuration
  3. Console sheet (when messages involved)
  4. Corezap of failing modules
- Documentation according to problem description:
  - A. Remote type problems
    1. CCW trace of line group
    2. Matching dump of BTAM control blocks to include DEB, DCB, DECB, IOB, UCB
    3. If CPU to CPU, a trace of both CPUs with associated dumps and control blocks
    4. For Error Recovery, SVC15 trace (GTF) CCW traces and dumps
  - B. Local type problems
    1. SVC116 trace
    2. Dumps as in remote problems that match the trace



- Additional information:

The SPR generally requests that you have documentation available as needed to APAR a problem before you contact him. See FE PSGIM ZZ25-0511 Page 2-35 for these requirements for BTAM.

**TCAM  
5752-SC-121**

- Necessary documentation on all problems:
  1. SMP maintenance list
  2. MCP listing if changed or new and not sent before
  3. Determine as to when problem started
  4. Subtask trace of 300 entries of optionally spooled to Comwrite
  5. Copy of all user modifications to TCAM
  6. Post trace (TCAM 10 only) (Optional)
- Documentation according to problem description:
  - A. ABEND problems
    1. SYSABEND dump (not a UDUMP)
    2. System console log (Optional)
  - B. Line problems
    1. Line I/O trace - 200 incore entries minimum, optionally spooled to Comwrite dataset
    2. Dump that matches the line trace entries
    3. Identify the failing resource
    4. S/ZAP dump of ERP modules (Optional)
    5. GTF trace of SIO I/O interrupts, SVC3, SVC15, SVC114 (Optional)
    6. GTF CCW trace (Optional)
  - C. Operator control
    1. Console dump that shows TCAM and OP control regions
    2. GTF trace of SVC7 and SVC102 (Optional)
    3. Log of commands entered (Optional)
  - D. Restart problems
    1. SYSABEND dump at restart of TCAM
    2. Dump of the checkpoint dataset that was restarted
    3. Message queue dump (Optional)
  - E. Data dependent - queue problems
    1. Message queue dump
    2. TCAM dump at time of problem
    3. Buffer trace (Optional)
  - F. Loop problems
    1. The loop - description of addresses
    2. Dump
    3. For a loop in the dispatcher - post trace (TCAM 10 only)

- G. NCP problems or NCP involved
  - 1. BTU trace of all related resources optionally spooled to Com-write dataset. (Level 5 NCP only)
  - 2. PIU trace of all related resources optionally spooled to Com-write dataset. (TCAM 10 only)
  - 3. NCP dump (Optional)
  - 4. NCP assembly listing (Optional)
  - 5. Line trace in 3704-3705 (Optional)
  - 6. Line I/O trace of NCP/370X (TCAM 10 only) (Optional)
- H. Core overlay problems
  - 1. Address stop data dump at the location of the overlay (Optional)
- I. Application program problems
  - 1. TCAM dump
  - 2. Application program dump (Optional)
  - 3. Application program listing (Optional)
  - 4. GTF trace of SVC102 (Optional)
- J. VTAM interface problems
  - 1. TPIO trace
  - 2. VTAM PIU trace (RNIO) (Optional)
  - 3. GTF trace of SVC124 (Optional)
  - 4. Dump including VTAM control blocks and buffers (Optional)
  - 5. TCAM dump (Optional)
- K. TIOC/TSO problems
  - 1. Dump of TCAM
  - 2. Dump including TIOC/TSO control blocks and buffers (Optional)
  - 3. GTF trace of SVC93 through SVC103. (TSO/TIOC SVCs) (Optional)
- L. Wait state
  - 1. Dump of system showing wait with STCB trace active

**VTAM**  
5752-SC-123

- Necessary documentation on all problems:
  - 1. Maintenance list and changes to network
  - 2. Console log
  - 3. Storage dump with LPA Map and LINKEDIT Map
  - 4. Determine the application (CICS, IMS, etc)
  - 5. SYS1.VTAMLST and start PARMs (Optional)
  - 6. SYS1.LOGREC (DOS Recorder File) (Optional)
  - 7. If I/O is involved, use trace (VTAM RNIO, Buffer, Line) or system trace for local channel I/O
- Documentation according to problem description:
  - A. Loop problems
    - 1. Trace of the loop

B. Wait state problems

1. Determine the status of all waiting VTAM related tasks including RPHs and the status of the buffer pools.

**INDUSTRY SYSTEMS:**

5752-SC-124  
5752-SC-126  
5752-SC-127  
5752-SC-128  
5752-SC-129

- Necessary documentation on all problems:
  1. Component and SCP maintenance and release level
  2. Operation being performed
    - a. SSS - Control statement in full
    - b. PVS - Macro statement (verification program to run w/o box)
  3. Output expected and received
    - a. Messages
    - b. Console log
    - c. Printer output (printout from the job that was run)

**SMP**

5752-SC-130

- Necessary documentation on all problems:
  1. See the required documentation for MVS (5752).
  2. Listing of history log
  3. Dump of GTF address space
  4. Dump of current address space (**Optional**)

**3350 AP-1**

5752-SC-131

- Necessary documentation on all problems:
  1. See the general documentation requirements.

**FORTRAN H**

5799-AA-W01

- Necessary documentation on all problems:
  1. See the general documentation requirements.

3705ASCII  
5799-AF-Z00

- Necessary documentation on all problems:
  1. Maintenance list - release of EP, PTFs applied to EP, PTFs applied to SSP, S/ZAPs applied
  2. Configuration list - type of 3704/3705 (I or II), type of channel adapter(s), type of scanner(s)
- Documentation according to problem description:
  - A. Load of EP into 3704/3705 fails
    1. Standalone dump of 3704/3705
    2. GTF/CCW trace of host (**Optional**)
  - B. Interface or channel control checks
    1. Standalone dump of 3704/3705
    2. Level 2 and level 3 line trace of EP at time of failure
    3. GTF/CCW trace of host (**Optional**)
  - C. Hardstop/Program check
    1. Dump of 3704/37-5 at time of failure
    2. Level 2 and level 3 line trace of EP at time of failure (**Optional**)
  - D. Performance problems
    1. Dump of 3704/3705 at time of degraded performance
    2. Level 2 and level 3 line trace of EP during degradation
  - E. General 3704/3705 internal failures (bad sense, line failures, modem sequence problems, data sensitive failures, EP looping, incorrect PCF states)
    1. Level 2 and level 3 trace at time of failure
    2. Dump of 3705 - either STANDALONE or DYNADUMP
    3. GTF/CCW trace of host at time of failure (**Optional**)
    4. Specify line speed, modem and terminal type, conditions prior to failure.
  - F. Host SSP failures (assembler, dynamic and STANDALONE dumps)
    1. Dump of the failing module in host
    2. Output listings displaying failure symptoms

NCP PRPG/5799-AQ-R00  
BSC SWIFT/5799-AQ-T00  
NCP PRPG/5799-AQ-Y00

- Necessary documentation on all problems:
  1. See the general documentation requirements.

DASD ERP/5799-AR-GCA  
UNIT RECORD ERP/5799-AR-GCB  
SVC91/5799-AR-GCC

- Necessary documentation on all problems:
  1. Maintenance Level - SMP Listing
  2. Storage dump which should include:
    - a. IOB, VCB, RQE, UCBEEXTWA (Non-MVS)
    - b. IDSB, UCB, IDQ, IDB, EWA (MVS)
  3. Console listing
  4. GTF Trace (**Optional**)
  5. Module Zap Dump (**Optional**)
  
- Documentation according to problem description:
  - A. Loop problems
    1. Internal Trace
    2. NVC/LPA Map (**Optional**)
    3. When GTF trace provided, it must start from the beginning of the loop. (**Optional**)
  
  - B. ABEND problems
    1. Internal Trace
    2. NVC/LPA Map (**Optional**)
  
  - C. INCORROUT problems
    1. IEHDASDR dump of LOGREC (Log problems only)
    2. EREP output (Log problems only)

**SUPERVISOR**  
**5799-AR-GC2**

- Necessary documentation on all problems:
  1. Maintenance list
  2. LPA Map
  
- Documentation according to problem description:
  - A. Program check problems
    1. Determine what module the program check occurred in
    2. Provide the failing PSW and registers at time of failure
    3. Determine what register is bad and where it was loaded or passed from
  
  - B. Loop problems
    1. Determine the loop addresses and what module(s) the loop is in
    2. Provide an analysis of the trace table, identifying the events prior to the loop

C. Wait problems

1. Determine which module is waiting
2. Determine the reason for the wait (I/O completion, etc)
3. If enqueued on resources, determine what is the top task for this resource.

D. Communication task problems

1. Determine what is in the Commtask control blocks (UCM, UCME, WQES, Output Queues)
2. Console sheet (preferably SysLog)

**IOS**

**5799-AR-GC3**

• Necessary documentation on all problems:

1. Maintenance Levels - SMP Listings
2. Record of any additional maintenance (S/ZAPs, etc)
3. General options used
4. Hardware configuration (where applicable)
5. If applicable
  - a. Frequency of failure
  - b. Data dependencies
  - c. Access method used
  - d. Device dependencies
  - e. Bypass that works

• Documentation according to problem description:

A. ABEND problems

1. ABENDOCX Type
  - a. ABEND Dump
  - b. Register or address causing the error
  - c. Determine what code provided the invalid address
2. ABENDX00 Type
  - a. Problem determination area (PDA) ABEND Dump
3. Permanent I/O error type (ABEND001, ABEND106-F, ABEND32D)
  - a. Sense and status information
  - b. Seek-search argument - if applicable
  - c. Byte count (**Optional**)
  - d. Lay out of CCWs (**Optional**)

B. INCORROUT problems

1. Pattern and conditions of failure
2. Trace of failure (**Optional**)

C. Message or Mnote problems

1. Full content of message, not just the message ID
2. Stage I SYSOUT (MNOTE)
3. Determine the test that caused the message

## IBM Internal Use Only

- D. Wait or loop problems
  - 1. Console or SADUMP at time of the wait or during loop.  
Not a cancel dump.
  - 2. If wait, determine what the system is waiting for, not necessarily why the system is waiting.
  - 3. If loop, determine what is preventing a break-out.
  - 4. If a multi-loop, determine the module names
- E. Coreoverlay problems
  - 1. Determine the instruction or CCW that is causing the overlay.  
Use Branch Office or Region assistance.
- F. RQE chaining associated problems
  - 1. SADUMP from trap for scanning active queue RQETRAP available. XABEND dump, console dump, or SVC dump is not good.
  - 2. Large incore trace

### SCHEDULER 5799-AR-GC5

- Necessary documentation on all problems:
  - 1. Maintenance List
  - 2. Hardcopy log
  - 3. Input JCL and associated output
  - 4. User mods implemented
- Documentation according to problem description:
  - A. ABEND problems
    - 1. SYSABEND or STANDALONE dump
  - B. I/O errors
    - 1. JESDUMP or QMGRDUMP (reference VS1 Job Management Logic - SY245169)
  - C. RDR/WTR/JOB separator problems
    - 1. Copy of the PROC - IBM and user

### SYSGEN 5799-AR-GC9

- Necessary documentation on all problems:
  - 1. Maintenance list
  - 2. Determine what user mods are on the systems
  - 3. All input, output parms
  - 4. Console log
  - 5. Listing of the macro involved

SAM DAM PAM/5799-AR-GD2  
OLTEP/5799-AR-GD3  
DADSM/5799-AR-GD4

- Necessary documentation on all problems:
  1. See the general documentation requirements.

**OBR EREP**  
**5799-AR-GD7**

- Necessary documentation on all problems:
  1. Maintenance list
- Documentation according to problem description:
  - A. ABEND problems
    1. SYSABEND or Standalone dump
    2. JCL
    3. Associated messages or SYSOUT
  - B. Message problems
    1. All documentation as specified under Problem Determination in the messages SRL

**RMS**  
**5799-AR-GD9**

- Necessary documentation on all problems:
  1. Maintenance list
  2. All job related output
  3. User mods
  4. Dump of ASID01
  5. Incore LOGREC buffers located and formatted out
  6. GTF trace, if problem can be recreated

**ISAM**  
**5799-AR-GIO**

- Necessary documentation on all problems:
  1. See the general documentation requirements.

**AP-1**  
**5799-AR-GSC**

- Necessary documentation on all problems:
  1. Maintenance list
  2. All job related output
  3. User mods
  4. All references in problem determination section of SRL



- Documentation according to problem description:

- A. ABEND problems

1. Dump (Not a SYSUDUMP)
2. Message accompanying the ABEND, if applicable
3. If the ABEND is an ABEND001:
  - a. Determine what error is indicated (incorrect length, channel program check, data check).
  - b. Determine whether changing the parameters helps the problem. **(Optional)**
  - c. Determine what access method modules are being used. **(Optional)**
4. If the ABEND is an ABEND002:
  - a. Verify that you have valid input data.
  - b. If the input is from SMF, check for application of the latest SMF maintenance.
  - c. Read in the "FEFS Support Newsletter 76-2," the article on Diagnostic Techniques for VBS Records.

- B. Data errors (Out of sequence, missing, duplicate)

1. Assure the latest level of IOS maintenance **(Optional)**

- C. Loop problems

1. Multi-module
  - a. List of modules involved
  - b. GTF Trace **(Optional)**
2. Inner module
  - a. Determining the cause of the loop and what is preventing break-out
  - b. SYSABEND dump with failing module

- D. Wait problems

1. Determine what the task is waiting for
2. Dump at the time of the wait
3. GTF Trace **(Optional)**

- Additional information:

1. The module being used can be determined from the DEB + X'34' through the DEB + X'48'. The last 2 characters of the module IDs are stored there. These characters are then appended to IGG019XX for the full module name.

IEHATLAS/5799-AR-GUH  
IEHDASDR/5799-AR-GUK  
SVC98ST/5799-AR-GUN  
IEBCOPY/5799-AR-GUY  
IBCDMPRS/5799-AR-GU2  
IBCDASDI/5799-AR-GU3  
IEHLIST/5799-AR-GU5

- Necessary documentation on all problems:
  1. CDS PTF list
  2. For all ABEND problems, a SYSABEND or Standalone dump

VM370 RESOURCE/5799-AR-Q00  
FILM READER/5799-WA-A00  
2740 CTL PK/5799-WA-B00  
PSHRPQ/5799-WA-GC0  
5930 BTAM/5799-WG-F00  
5930 BTAM/5799-WG-G00  
5930 BTAM/5799-WG-H00  
5930 BTAM/5799-WG-J00  
5930 BTAM/5799-WG-K00  
5930 BTAM/5799-WG-L00  
3890 SUPPORT/5799-WJ-W00

- Necessary documentation on all problems:
  1. See the general documentation requirements.

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## **80-002**

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## **SUPPORT CENTER UPDATE**

### ***Section 4***

#### ***Support Center Operational Assistance***

##### **Duty Manager**

The Duty Manager is always available to help resolve any unusual or unforeseen situations. You may request IBM management involvement at any time while working with the Support Center.

##### **Status Desk**

The Status Desk provides quick access to "open problem" data where problem diagnosis or technical assistance is not required. The Status Desk handles the following types of information:

- The present status of an APAR or PTF.
- Requesting a call from Level 2 for further action on a problem previously handled by Level 2.
- Problem record updating or closing.
- Changes in severity of problem.

##### **Control Desk**

The Control Desk provides two main functions:

1. It handles calls directly from the dispatching function that are in some way unusual. For example, the Control Desk would receive calls

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about procedural questions or would help clarify access code mismatches.

2. The Control Desk acts as the focal point within the IBM Support Center for all inquiries concerning services provided by both Level 1 and Level 2. The Control Desk will take appropriate action to alleviate any concerns and help assure customer satisfaction. Should you wish to talk with the duty manager, you would simply indicate this to the representative at the Control Desk.

If at any time you do not believe your problem is being handled properly by the IBM Support Center, contact the "control desk". Your concern will be brought to the attention of the responsible support group manager.

### ***Your Feedback Can Help Improve IBM Software Service***

Considerable effort is made to ensure your satisfaction with the preventive and corrective service provided by IBM. Your suggestions for improving software service are appreciated.

Field Engineering management in your local branch office have primary responsibility for your satisfaction with IBM software service. They are prepared to discuss both local and support center service. However, dissatisfaction with specific experiences in working with the IBM Support Center often can be addressed most effectively if reported immediately to the control desk in the center. Call the Support Center as usual, and indicate you wish to speak to someone at the control desk. You may request IBM management

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involvement at any time while working with the support center. Your concern will be addressed promptly.

Suggestions for improving IBM software service may also be communicated via the feedback form included with this update.

***Complex Problems May Involve Multiple Queues***

Complex problems may require the involvement of more than one level 2 representative before the problem can be resolved. For example, teleprocessing and communication products may involve several component interfaces. Our goal is to avoid reassigning a caller to multiple support groups. In some instances, however, providing the best resource to resolve the problem may involve transferring the call to another support location. When the problem must be transferred, a call will be made to assure agreement and ensure responsibility for the problem is accepted. In order to minimize these transfers when the source of the problem has not been identified, both level 1 and level 2 groups will recommend that a PSR be dispatched to provide problem source identification assistance.

***Problem Documentation***

A software problem can manifest itself in many different ways. Also, multiple defects can show up

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with similar symptoms depending on the user environment.

The Support Center representatives have available to them documentation for the programs they support. It is necessary, however, for them to know the exact internal conditions occurring within your system at the time of failure. Therefore, precise documentation may be necessary to enable th level 2 representative to pinpoint the exact source of the problem.

A description of the documentation needed to resolve most problems has been developed by level 2 support groups for their respective products. This information is published in Section 3 of the Programming Systems General Information Manual (Form #ZZ25-0511). Typical documentation required includes:

- Systems Error Messages
- Storage Dump
- Operator Messages
- Trace Information

The level 1 representative can assist you in determining the type of information normally required to resolve a problem. Level 2 support representatives may, in some cases, require additional specific documentation based on the nature and complexity of the problem. For example, a level 2 representative may ask you to run a trace program in addition to the normal dump in order to obtain a snapshot of your system characteristics at an earlier point in the failure cycle. Extensive or unusual requirements will be reviewed with you by the level 2 representative requesting the information.

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Effective documentation preparation will make your interaction with the support center more productive by reducing problem resolution time.

***DOS/VSE And VM/370 System IPO/E  
Package Deliverable***

The DOS/VSE and VM/370 System IPO/Es have individual orderable components which include program products, SCPs, and FDPs/IUPs. In addition, the System IPO/Es include JCL, programming, documentation and procedures which are referred to as package deliverables.

Examples of package deliverables are:

- Sample & Examples
- Program Directory
- Planning Guide
- Base Install Jobs (VSE/POWER JCL)
- Automatic Systems Initialization (ASI) Procedures (VSE)
- VM/370 Install Procedures

The following is a summary of the service related activity provided by the IBM Support Center for the System IPO/E package deliverables.

**Preventive Service Planning:** When you plan to install IBM software via System IPO/E, you should first contact the IBM Support Center for information on known problems with the contents of System IPO/E. FE has established preventive service planning information (buckets) for these problems.



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**Problem Resolution:** If a problem occurs in a System IPO/E you should identify the failing portion and call the IBM Support Center. If you are unable to identify what is causing the problem, the IBM Support Center should be contacted and assistance requested. If the IBM Support Center is unable to resolve the problem, you will be requested to contact your DP branch office for assistance. All locally provided assistance for the System IPO/E package deliverables will be provided by your DP Branch Office.


This does not change the way in which the individual components of the System IPO/E are currently supported.



## **FEEDBACK FROM IBM SUPPORT CENTER USER**



Please use this form for your suggestions on improving IBM Support Center operations. The service categories below may help formulate your suggestions. (Questions or comments which require immediate attention should be directed to the Support Center Control Desk.)



IBM reserves the right to use or distribute any of the feedback information received as it deems proper and without obligation. The names and locations of contributors will be kept confidential. Thank you for your interest and ideas.

Form is printed on reverse side.



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(Identifying information optional)

NAME: \_\_\_\_\_  
TITLE: \_\_\_\_\_  
COMPANY: \_\_\_\_\_  
ADDRESS: \_\_\_\_\_  
\_\_\_\_\_

- Installation Planning Assistance
- Problem Determination Assistance
- Problem Source Identification Assistance
- Problem Diagnosis and Resolution Assistance
- Preventive Service Assistance

\_\_\_\_\_  
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\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

( ) I would like clarification on how to utilize the IBM Support Center. (Your request will be forwarded to your DP Marketing Branch Office. Please include identifying information above.)

Mail to:

IBM CORPORATION  
Field Engineering Division  
360 Hamilton Avenue  
White Plains, NY 10601

Attn: Manager of Support Systems

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# IBM SUPPORT CENTER UPDATE

TNL: ZZ25-0607

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**80-002**

Attached is IBM Support Center Update 80-002.

Contents include:

- Operational Assistance
- Feedback Can Help
- Complex Problems/Multiple Queues
- Problem Documentation
- DOS/VSE & VM/370 System IPO/E Package Deliverables

Please file this update in Section 4 of your Programming Systems General Information Manual (PSGIM).

Replace current Section 4 Table of Contents (80-001) with attached Table of Contents (80-002).

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Your views about this publication will help improve its usefulness; this form will be sent to the author for appropriate action. All comments and suggestions become the property of IBM.

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Identify page(s) requiring correction and then indicate specific change desired. Use other side of page if required.

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# IBM<sup>®</sup> Technical Newsletter

TNL: ZZ25-0539-0

Date: 03/01/81

Base: ZZ25-0511-6

IBM Field Engineering  
Programming System  
General Information

This TNL provides replacement pages for the subject publication.

## Remove Pages

iii

iv

2-6A thru 2-6M

## Add Pages

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2-6.1 thru 2-6.13

A change to the text or to an illustration is indicated by a vertical line to the left of the change. Absence of a vertical line on a page bearing a revised notice means only that the existing copy has been moved or that a minor typographical error has been corrected.

Please file this cover letter at the back of the handbook to provide a record of changes.

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THIS TNL: ZZ25-0518-12  
DATE: OCTOBER 1, 1980  
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PREVIOUS TNLS  
SECTION 1: NONE  
SECTION 2: ZZ25-0534, ZZ25-0535  
          ZZ25-0536 & ZZ25-0538  
SECTION 3: NONE

IBM FIELD ENGINEERING  
PROGRAMMING SYSTEM  
GENERAL INFORMATION

THIS TECHNICAL NEWSLETTER IS A COMPLETE REPLACEMENT  
FOR SECTION 1.

\*\*\*\*\*  
\*ATTENTION!!! \*  
\* \*  
\*APAR MAILER ENVELOPE FORM NUMBER G229-3573 IS \*  
\*PRESENTLY UNAVAILABLE. \*  
\* \*  
\*THE AVAILABILITY WILL BE ANNOUNCED IN A FUTURE TNL.\*  
\*\*\*\*\*

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**IBM** TECHNICAL NEWSLETTER

THIS TNL: ZZ25-0518-11  
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BASE PUBLICATION: ZZ25-0511-5/6

PREVIOUS TNLS  
SECTION 1: NONE  
SECTION 2: ZZ25-0534, ZZ25-0535  
          ZZ25-0536 & ZZ25-0538  
SECTION 3: NONE

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THIS TNL: ZZ25-0518-10  
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PREVIOUS TNLS  
SECTION 1: NONE  
SECTION 2: ZZ25-0534, ZZ25-0535  
          ZZ25-0536 & ZZ25-0538  
SECTION 3: NONE

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          Z225-0536 & Z225-0538  
SECTION 3: NONE

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PREVIOUS TNLS

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Z225-0536 & Z225-0538

SECTION 3: NONE

IBM FIELD ENGINEERING  
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THE DATE OF THIS TNL IS FOR REFERENCE AND IDENTIFICATION PURPOSES.  
THIS TNL SHOULD BE USED IMMEDIATELY UPON RECEIPT.

NOTE: PAGES 1-45 AND 1-46 SHOULD BE REVIEWED IN THIS TNL.

THE INFORMATION CONTAINED IN THE PROGRAM ID PORTION OF THIS  
TNL IS NOW AVAILABLE AS AN FE MIS FILE. THE FILE IS NAMED  
FESNX AND REFLECTS THE LATEST INFORMATION AVAILABLE. FESNX  
ALSO REFLECTS THE FESN AND RELEASE VALUES USED IN THE PSAR  
EDITS. ACCESS TO THE FILE HAS BEEN GIVEN TO THE BRANCH  
OFFICE PSTAR USER. OTHER MIS USERS WHO NEED ACCESS TO THE  
FILE SHOULD SUBMIT AN FE MIS ACCESS REQUEST FORM (Z150-0161).

# IBM / Technical Newsletter

This TNL No. ZZ25-0538-0  
Date: 4/15/80  
Base Pub No. ZZ25-0511-5/6  
Previous TNLs:  
Sec. 1, ZZ25-0518-08  
Sec. 2, ZZ25-0534-0537

IBM Field Engineering  
Programming System  
General Information

This TNL provides replacement pages for the subject publication.

Remove Pages	Add Pages
iii thru viii 2-7 thru 2-22N	iii thru viii 2-7 thru 2-22.45

The Program Support Activities & Responsibilities section of the PSGIM, utilizing a new highly readable print style is replaced with this TNL.

It is our intent to publish a completely updated edition of this handbook using this new improved print style. Distribution is scheduled for 3rd quarter of 1980.

#### Note:

A change to the text or to an illustration is indicated by a vertical line to the left of the change. Absence of a vertical line on a page bearing a 'revised' notice means only that existing copy has been moved or that a minor typographical error has been corrected.

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THIS TNL: Z225-0518-07  
DATE: MARCH 1, 1980  
BASE PUBLICATION: Z225-0511-6

PREVIOUS TNLS  
SECTION 1: NCNE  
SECTION 2: Z225-0534, Z225-0535  
& Z225-0536

IBM FIELD ENGINEERING  
PROGRAMMING SYSTEM  
GENERAL INFORMATION

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INSERT PAGES 1-44 THROUGH 1-138



**IBM** TECHNICAL NEWSLETTER

This TNL: ZZ25-0537-0

Date: 2/15/80

Base Publication: ZZ25-0511-6

Previous TNLS:

Section 1: ZZ25-0518

Section 2: ZZ25-0534

ZZ25-0535

ZZ25-0536

IBM Field Engineering  
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General Information

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The Technical Newsletter TNL ZZ25-0536-0, dated 1/1/80, which contains replacement pages for section 2 of the subject publication, will be replaced with pages utilizing the larger normal size print.

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PREVIOUS TNLS  
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SECTION 2: ZZ25-0534 & ZZ25-0535

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Section 2: ZZ25-0534  
ZZ25-0535

IBM Field Engineering  
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This Technical Newsletter provides replacement pages for Section 2 of the subject publication.

Remove pages

iii thru xvi  
2-7 thru 2-21  
2-59  
  
2-123  
2-125 thru 2-127  
2-129

Add new pages

iii thru xix  
2-7 thru 2-22N  
2-59  
2-66A  
2-76C & 2-76D  
2-123  
2-125 thru 2-129  
2-131  
2-133 thru 2-139

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THIS TNL: ZZ25-0518-04  
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SECTION 1: NONE (PREVIOUS TNLS  
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REMOVE PAGES	ADD NEW PAGES
iii THRU v	iii,iv,v,vl,v2
2-6A,2-6B	2-6A,2-6B
2-6K,2-6L	2-6K,2-6L
2-44A,2-44B	2-44A,2-44B

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2-6A THROUGH 2-6M  
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SECTION 2: NONE

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