

LOCTR OBJECT TEXT STMT SOURCE STATEMENT COPYRIGHT IBM CORP 1976
3 C3800 START 0
4 *****
5 *
6 * *** PREREQUISITES ***
7 *
8 * NONE
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10 *****
11 *
12 * *** MODIFICATIONS ***
13 *
14 * 1. CORRECT RETRY PROCEDURE FOR 4966 IPL DEVICE.
15 *
16 *****
17 *
18 * *** REA'S INCORPORATED ***
19 *
20 * 27-12167
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22 *****
23 *
24 * *** SPECIAL INSTRUCTIONS ***
25 *
26 * NONE
27 *
28 *****
29 *
30 * *** E. C. HISTORY ***
31 *
32 * DATE 01OCT76 DATE 02DEC76 DATE 22APR77 DATE 10JUN77
33 * E.C. 578468 E.C. 578469 E.C. 578751 E.C. 578625
34 *
35 * DATE 01JUL77 DATE 08AUG78 DATE 06NOV78 DATE 15JAN79
36 * E.C. 578980 E.C. 755404 E.C. 755551 E.C. 375147
37 *
38 *****
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41 *
42 * SYSTEM EQUATES
43 *
44 *****
45 SM EQU 1 SUMMARY MASK DISABLE OR
46 * ENABLE CODE
47 AT EQU 2 ADDRESS TRANSLATOR ENABLE OR
48 * DISABLE CODE
49 *****
50 *
51 * EQUATED NAMES FOR SUPPORTED SVC'S
52 *
53 *****
54 OUT EQU 0 OUT SVC
55 OUTIN EQU 1 OUTIN SVC
56 IDLE EQU 2 IDLE SVC
57 IDLE5 EQU 3 IDLE SVC MODIFIED AS PER SYSTEM TYPE
58 CHNGE EQU 4 CHANGE LEVEL SVC
59 PGMCK EQU 5 ALLOW RETURN ON PROGRAM CHECK SVC
60 EXIT EQU 6 EXIT SVC
61 TERM EQU 7 TERMINATE SVC
62 RESET EQU 8 RESET DEVICE SVC
63 RID EQU 9 READ ID SVC
64 START EQU 10 START CYCLE STEAL SVC
65 STCSS EQU 11 START CYCLE STEAL STATUS SVC
66 PREP EQU 12 PREPARE DEVICE SVC
67 READ0 EQU 13 READ WITH FUNCTION BIT 3 OFF SVC
68 READ1 EQU 14 READ WITH FUNCTION BIT 3 ON SVC
69 RSTAT EQU 15 READ STATUS SVC
70 WRIT0 EQU 16 WRITE WITH FUNCTION BIT 3 OFF SVC
71 WRIT1 EQU 17 WRITE WITH FUNCTION BIT 3 ON SVC
72 CTRL EQU 18 CONTROL SVC
73 RICB EQU 19 RELEASE INTERRUPT CONTROL BLOCK SVC
74 CICB EQU 20 CONNECT INTERRUPT CONTROL BLOCK SVC
75 HIO EQU 21 HALT I/O SVC
76 REQSD EQU 22 REQUEST USE OF DCP DISKETTE SVC
77 ELSD EQU 23 RELEASE USE OF DCP DISKETTE SVC
78 * EQU 24 ** RESERVE FOR FUTURE EXPANSION **
79 ETOH EQU 25 EBCDIC TO HEX SVC (STRING)
80 HTOE EQU 26 HEX TO EBCDIC SVC (STRING)
81 ATOH EQU 27 ASCII TO HEX SVC (STRING)
82 HTOA EQU 28 HEX TO ASCII SVC (STRING)
83 ETOA EQU 29 EBCDIC TO ASCII SVC (STRING)
84 ATOE EQU 30 ASCII TO EBCDIC SVC (STRING)
85 READI EQU 31 READ DATA SETS FOR MDI/UTIL
86 WRITI EQU 32 WRITE DATA SETS FOR UTIL
87 *
88 VLDSV EQU 32 NUMBER OF HIGHEST VALID SVC
89 *****
90 *
91 *
92 * EQUATES USED BY DCP
93 *
94 *****
95 AUTO EQU 0 AUTOMATIC MODE IND
96 TPGSW EQU 0 TERMINATE PGM SW
97 LOOP EQU 1 LOOP PGM IND
98 OFF EQU 2 TURN OPT BITS OFF
99 ON EQU 2 TURN OPT BITS ON
100 UTIL EQU 2 UTILITY REQUESTING DATA
101 LODED EQU 4 PGM LOADED
102 STOP EQU 6 STOP AFTER MSG OUT
103 ALTDV EQU 7 ALTERNATE OUTPUT DEV ASSIGNED
104 NXTVT EQU 8 TAKE NEXT DATA SET IND
105 CONDV EQU 9 INPUT FROM PROGRAMMER'S CONSOLE
106 IRD EQU 10 MDI READ REQUEST
107 RTMDI EQU 11 MDI RETURN REQ
108 TUIDS EQU 12 SAVE THE T.U. I.D.
109 LDIAG EQU 13 LOOP ALL DIAG PACKAGE
110 CNRUN EQU 14 UNIT ADR ASSIGNMENT RUN
111 NLNTL EQU 3 HIGHEST INT LEVEL ON SYSTEM
112 MDTRT EQU 48 MDI IMMEDIATE RETURN IN CNTL BLK
113 OPRD EQU 14 DISP TO PGM OPTION WORD
114 OPRD EQU 14 END OF MESSAGE CHAR (RETURN)
115 EOT EQU X'0D' ATTEM CHAR (X-ON)
116 EOT EQU X'0D' ATTEM CHAR (X-ON)
117 TTBELE EQU X'11' DELETE CHAR (RUBOUT)
118 DLETE EQU X'7F' DELETE CHAR (RUBOUT)
119 PLUS EQU C'+ ' EBCDIC CHARACTER '+' PLUS
120 MINUS EQU C-' ' EBCDIC CHARACTER '-' MINUS

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LOCTR OBJECT TEXT STMT SOURCE STATEMENT COPYRIGHT IBM CORP 1976
003812 241 DBSTG EQU X'13812' DUMPING STORAGE
003813 242 VFCB EQU X'13813' VERIFY CONSOLE DATA ENTRY
003814 243 ENTCB EQU X'13814' ASK FOR DATA ENTRY
003815 244 SVCOD EQU X'13815' TOO MANY SVC CALLS
003816 245 CODE1 EQU X'13816' SHOULD KEYBOARD BE REDEFINED
003817 246 CODE2 EQU X'13817' KEYBOARD BEING DEFINED
248 *****
249 *
250 * THE FOLLOWING EQUATES ARE THE DISPLACEMENT FROM THE
251 * START OF A PROGRAM HEADER OF THE VARIOUS INFORMATION IN
252 * EACH PROGRAM HEADPR
253 *
254 *****
255 HID EQU 0 PROG I.D.
256 DVADR EQU 0 DEVICE TYPE IN DEVICE TABLE
257 DVVTP EQU 1 DEVICE ADDR IN DEVICE TABLE
258 HDDP1 EQU 3 DEVICE DEPENDENT DATA
259 HDDP2 EQU 4 DEVICE DEPENDENT DATA
260 CPUMD EQU 4 CPU MODEL DISPLACEMENT
261 LSADR EQU 6 LAST ADR DISPLACEMENT
262 HPK EQU 6 PROTECT KEY
263 HPK1 EQU 7 PROTECT KEY PLUS ONE
264 HPSA EQU 6 DIAG PROG START ADR
265 INTAR EQU 6 DEVICE INTERRUPT ADR
266 HDVTP EQU 08 DIAG DEV TABLE POINTER
267 EXPNT EQU 17 END OF TABLE IND
268 TEND EQU 18 END OF SECTOR IND
269 SCND EQU 19 C I C B INDICATOR
270 CICBT EQU 20 PASS STRAY INT TO DIAG
271 PASTR EQU 21 MDI MAP I.D DISPLACEMENT
272 CFEPT EQU 08 UNIT ASSIGNED BIT
273 HTUID EQU 18 UNCONDITIONAL RETURN BIT
274 UDTAS EQU 16 CHECK REQUESTED DEV
275 PDTAS EQU 32 I/O CHK IN PSW
276 UNCR1 EQU 0
277 CKDAD EQU 1
278 IOCHK EQU 11
279 NEWAR EQU 15
280 *****
281 *
282 * THE FOLLOWING EQUATES ARE THE OFFSETS INTO EACH ENTRY
283 * FOR THE DATA SPECIFIED. (16 BYTES / ENTRY)
284 *
285 *****
286 CUDA EQU 0 DEVICE ADDRESS
287 CUDT EQU 1 DEVICE TYPE
288 CUDF EQU 2 CONTROL FLAGS
289 CUDD1 EQU 3 DEVICE DEPENDENT DATA -- 1
290 CUDD2 EQU 4 DEVICE DEPENDENT DATA -- 2
291 CUDD3 EQU 5 DEVICE DEPENDENT DATA -- 3
292 CUDD4 EQU 6 DEVICE DEPENDENT DATA -- 4
293 CUDD5 EQU 7 DEVICE DEPENDENT DATA -- 5
294 CUDD6 EQU 8 DEVICE DEPENDENT DATA -- 6
295 CUDD7 EQU 9 DEVICE DEPENDENT DATA -- 7
296 CUDD8 EQU 10 DEVICE DEPENDENT DATA -- 8
297 CUDD9 EQU 11 DEVICE DEPENDENT DATA -- 9
298 CUDDA EQU 12 DEVICE DEPENDENT DATA -- 10
299 CUddb EQU 13 DEVICE DEPENDENT DATA -- 11
300 CUDRI EQU 14 DEVICE READ ID DATA RETURNED
301 CUDDC EQU 17
302 CUDDD EQU 33
303 *****
304 *
305 * THE FOLLOWING EQUATES ARE THE DISPLACEMENTS FROM THE
306 * START OF A QUE BLOCK OF THE VARIOUS INFORMATION.
307 *
308 *****
309 *****
310 QIAR EQU 0 IARB OF CALLING PROGRAM
311 QAKR EQU 2 KEY REG
312 QLSR EQU 4 LSR OF CALLING PROGRAM
313 QRO EQU 6 XRO OF CALLING PROGRAM
314 QR1 EQU 8 XR1 OF CALLING PROGRAM
315 QR2 EQU 10 XR2 OF CALLING PROGRAM
316 QR3 EQU 12 XR3 OF CALLING PROGRAM
317 QR4 EQU 14 XR4 OF CALLING PROGRAM
318 QR5 EQU 16 XR5 OF CALLING PROGRAM
319 QRE EQU 18 XR6 OF CALLING PROGRAM
320 QR7 EQU 20 XR7 OF CALLING PROGRAM
321 OSVC EQU 22 SVC NUMBER OF CALLING PROGRAM
322 ORAL EQU 23 RETURN CODE AND LEVEL ENTERED
323 *
324 QAV1 EQU 24 AVAILABLE WORD 1
325 QAV2 EQU 26 AVAILABLE WORD 2
326 *****
327 *
328 * THE FOLLOWING EQUATES ARE THE DISPLACEMENTS FROM THE START
329 * OF EACH SLOT IN THE DEVICE TABLE TO THE VARIOUS
330 * INFORMATION IN EACH SLOT
331 *****
332 *****
333 *****
334 OAG EQU 2 RETURN ADDRESS IF COND CODE OF
335 * INTERRUPT MATCHES THE COND
336 * CODE AT OCC
337 OAB EQU 4 RETURN ADDRESS IF CONDITION
338 * CODE OF INTERRUPT DOES NOT
339 * MATCH CONDITION CODE AT OCC
340 OCC EQU 7 CONDITION CODE EXPECTED
341 *****
342 *****
343 *****
344 *
345 * THE FOLLOWING IS A MAP OF LOW STG - ALL STG LOCATIONS
346 * UP TO THE SYSTEM LSB'S ARE PERMANENT ASSIGNMENTS.
347 *
348 *****
349 SDCP B INIT INITIALLY BRANCH TO INITIALIZATION
350 SDCP2 EQU SDCP+TWO ROUTINE. INITIALIZATION WILL POINT
351 * IT TO RESTART ROUTINE (RESTR)
352 * NEXT TWO WORDS RESERVED IN HARDWARE
353 DMPSA DC A (LASAD) STARTING DUMP ADDRESS
354 DMPEA DC A (CMDTB) ENDING DUMP ADDRESS
355 MCKPT DC A (PCKLB) MACHINE CHECK LSB POINTER
356 MCKSI DC A (MCKEP) MACHINE CHECK SIA
357 PCKST DC A (PCKLB) PROGRAM CHECK LSB POINTER
358 PCKSI DC A (PCKEP) PROGRAM CHECK SIA

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000010 0284 359 SVCPT DC A (SVCLB) SVC LSB POINTER
000012 079E 360 SVCSI DC A (SVC) SVC SIA
000014 0250 361 PTWSP DC A (PCKLB) POWER FAILURE LSB POINTER
000016 0884 362 PTWSI DC A (PTWEP) POWER FAILURE SIA
000018 0000 363 TRAPT DC A (0) TRACE LSB POINTER
00001A 0000 364 TRASI DC A (0) TRACE SIA
00001C 026C 365 CONPT DC A (CONLB) CONSOLE INT LSB POINTER
00001E 0926 366 CONSI DC A (CONEP) CONSOLE INT SIA
000020 0250 367 SPTPT DC A (PCKLB) SOFT TRAP LSB POINTER
000022 07F4 368 SPTSI DC A (PCKEP) SOFT TRAP SIA
000024 0250 369 SPTST DC A (PCKLB) EXPANSION LSB POINTER
000026 07F4 370 DC A (PCKEP) EXPANSION SIA
000028 0250 371 DC A (PCKLB) EXPANSION LSB POINTER
00002A 07F4 372 DC A (PCKEP) EXPANSION SIA
00002E 07F4 373 DC A (PCKLB) EXPANSION LSB POINTER
000030 03780378037803780 374 DEVT DC 128A (STRIT) DEVICE 00-PP INTERRUPT SIA
000130 03780378037803780 375 DC 128A (STRIT) INITIALLY SET TO STRAY
376 *****
377 *****
378 *****
379 *
380 * THIS PAGE CONTAINS INTERPROGRAM COMMUNICATION AREA. THESE
381 * ENTRIES MUST REMAIN IN THEIR EXACT STORAGE LOCATIONS.
382 *
383 *****
384 LASAD DC A (0) HIGH STORAGE ADDRESS
385 PRTP DC AL1(0) PROCESSOR TYPE
386 DKAD DC AL1(0) DISKETTE DEVICE ADDRESS - IPL
387 * (DCP INDICATORS)
388 INDIC DC B'1000011000000000' INDICATORS USED BY DCP
389 *
390 * BIT 0 - 0=AUTOMATIC MODE
391 * BIT 1 - 1=MANUAL MODE
392 * BIT 2 - 0=T/OPT BITS OFF
393 * BIT 2 - 1=T/OPT BITS ON
394 * BIT 3 - 1=UTILITY REQ FOR DATA
395 * BIT 4 - PGM LOADED
396 * BIT 5 - IPL BIT
397 * BIT 6 - STOP AFTER MSG
398 * BIT 7 - ALT OUT DEV ASSIGNED
399 * BIT 8 - IND TAKE NEXT ENTRY
400 * BIT 9 - INPUT FROM PROG CONSOLE
401 * BIT 10 - SVC READI
402 * BIT 11 - MDI IMMED RET (INT)
403 * BIT 12 - SAVE T.U. I.D.
404 * BIT 13 - LOOP ALL DIAG PACKAGE
405 * BIT 14 - UNIT ASSIGN REQ
406 * BIT 15 - CONVERT TO HEX
407 DCP01 DC A (FNDDS) ADDR OF FIND DATASET ROUTINE
408 DCP02 DC A (DSKRD) ADDR OF READ DISKETTE ROUTINE
409 DCP03 DC A (DSKWR) ADDR OF WRITE DISKETTE ROUTINE
410 DCP04 DC A (DBUF) ADDR OF DISKETTE DATA BUFFER
411 DCP05 DC A (PNDFG) ADDR OF PROGRAM NAME POINTER
412 OPADR DC AL1(0) OUTPUT DEVICE ADDRESS
413 OPTYP DC AL1(0) OUTPUT DEVICE TYPE
414 SEID0 DC A (SEID1) ADDR OF DISKETTE START IDCBA DA
415 SECSZ DC A (4096) DISKETTE SECTOR SIZE - 256 BYTE SECT
416 DKINT DC A (DSKIT) ADDR OF DISKETTE INTERRUPT ROUTINE
417 DCP06 DC A (SCHED) ADDR OF SCHEDULER ROUTINE
418 PIGRN DC AL1(255) CONFIGURATION FUN - INITIALIZATION
419 OPSUB DC AL1(0) OUTPUT DEVICE REMOTE SUB-ADDRESS
420 DCP07 DC A (LP00) ADDR OF PRINT 'INV REQ' MSG ROUTINE
421 * (EXTRA DCP INDICATORS)
422 DCP08 DC B'0000000000000000' INDICATORS USED BY DCP
423 *
424 * BIT 0 - 1=FLP IN CONFIG TABLE
425 * BIT 1 THRU 15=SPARES
426 *****
427 *****
428 *
429 * STORAGE AREA RESERVED FOR LSB'S
430 *
431 *****
432 PCKLB DC 14A(0) MCK, PCK AND PTW LSB
433 CONLB DC 11A(0) CONSOLE LSB
434 CONLV DC A(0) CONSOLE LSB
435 SVCLB DC 14A(0) INITIAL LSB FOR SVC INTERRUPTS
436 DC 14A(0) ADDITIONAL LSB'S FOR SVC INT
437 S7LSB DC 14A(0)
438 DMONE DC F'-1' STOPPER - CONSTANT FOR DOUBLE
439 DC F'-1' MINUS ONE
440 HEXFF EQU DMONE
441 MINON EQU DMONE
442 *
443 * DECODE OPERATOR COMMANDS ROUTINE (OPCMD)
444 * BRANCH TABLE FOR OPERATOR COMMANDS
445 CMDBT EQU *
446 DC A (NORTN) 0 - NO RESPONSE
447 DC A (YSRTN) 1 - YES RESPONSE
448 DC A (AMRTN) 2 - AUTOMATIC MODE
449 DC A (HMRTN) 3 - MANUAL MODE
450 DC A (UILOOP) 4 - LOOP DIAGNOSTIC PACKAGE
451 DC A (ACRTN) 5 - ALTERNATE CONSOLE OFFLINE
452 DC A (RSPGM) 6 - RESUME PROGRAM
453 DC A (SMRTN) 7 - STOP ON MESSAGE
454 DC A (SORTN) 8 - TURN OFF STOP ON MESSAGE
455 DC A (TPPGM) 9 - TERMINATE PROGRAM
456 DC A (BPPGM) A - BEGIN PROGRAM-NO NAME SPECIFIED
457 DC A (BPPGM) B - BEGIN PROGRAM-WITH NAME SPECIFIED
458 DC A (LPPGM) C - LOAD PROGRAM
459 DC A (ONPGM) D - TURN ON OPTION WORD BITS
460 DC A (ONPGB) E - TURN OFF OPTION WORD BITS
461 DC A (REGPM) F - RESPOND TO PROGRAM
462 *****
463 *
464 * THE FOLLOWING IS THE ADDRESSES BRANCHED TO BY THE INITIAL
465 * SVC HANDLER FOR EACH INDIVIDUAL SVC PARAMETER FIELD. THEY
466 * ARE IN ASCENDING NUMERICAL ORDER. ANY NOT SHOWN ARE
467 * INVALID.
468 *
469 *****
470 *****
471 ISVCP EQU *
472 DC A (CONSO) SVC 0 ADDR OF OUT SVC
473 DC A (CONSO) 1 ADDR OF OUTIN SVC
474 DC A (DELAY) 2 ADDR OF IDLE SVC
475 DC A (DELY5) 3 ADDR OF NEW SVC IDLES ROUTINE
476 DC A (CHNG) 4 CHANGE LEVEL SVC

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000306 0A00 - 477 DC A (PGMK) 5 RET PGM CHK TO DIAGNOSTIC PGM SVC.
000309 0A08 478 DC A (EXITA) 6 EXIT WITHOUT RETURN SVC
00030A 0A12 479 DC A (TERMA) 7 TERMINATE SVC RTN
00030C 0A84 480 DC A (OIO) 8 RESET DEVICE SVC
00030E 0A84 481 DC A (OIO) 9 READ ID SVC
000310 0A84 482 DC A (OIO) 10 START CYCLE STEAL SVC
000312 0A84 483 DC A (OIO) 11 START CYCLE STEAL STATUS SVC
000314 0A84 484 DC A (OIO) 12 PREPARE DEVICE SVC
000316 0A84 485 DC A (OIO) 13 READ WITH FUNCTION BIT 3 OFF SVC
000318 0A84 486 DC A (OIO) 14 READ WITH FUNCTION BIT 3 ON SVC
00031A 0A84 487 DC A (OIO) 15 READ STATUS SVC
00031C 0A84 488 DC A (OIO) 16 WRITE WITH FUNCTION BIT 3 OFF SVC
00031E 0A84 489 DC A (OIO) 17 WRITE WITH FUNCTION BIT 3 ON SVC
000320 0A84 490 DC A (OIO) 18 CONTROL SVC
000322 0B14 491 DC A (RCIB1) 19 RELEASE INTERRUPT CONTROL BLOCK SVC
000324 0B50 492 DC A (CICE1) 20 CONNECT INTERRUPT CONTROL BLOCK SVC
000326 0A84 493 DC A (OIO) 21 HALT I/O
000328 0B8C 494 DC A (REOD1) 22 REQUEST DCP DISKETTE SVC
00032A 0B84 495 DC A (RELD1) 23 RELEASE DCP DISKETTE SVC
00032C 0A84 496 DC A (DUMHY) 24 ** RESERVED FOR FUTURE EXPANSION **
00032E 0B8E 497 DC A (ETB) 25 EBCDIC TO HEX SVC
000330 0B8C 498 DC A (HTB) 26 HEX TO EBCDIC SVC
000332 0BFO 499 DC A (ATH) 27 ASCII TO HEX SVC
000334 0BC2 500 DC A (HTA) 28 HEX TO ASCII SVC
000336 0C0A 501 DC A (ETA) 29 EBCDIC TO ASCII SVC
000338 0C18 502 DC A (ATE) 30 ASCII TO EBCDIC SVC
00033A 0C74 503 DC A (IWRAD) 31 READ DATA SETS FOR MDI/UTIL
00033C 0CBC 504 DC A (IWRIT) 32 WRITE DATA SETS FOR UTILITIES
506 *****
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0003BE 0000 611 UIOMS DC A (O) WORK AREA FOR UNEXP I/O
0003C0 0030 612 FOX30 DC X'0030'
0003C2 1A 613 SPT DC X'1A'
0003C3 0F 614 SPT1 DC X'0F'
0003C4 F3C3F0F0 615 MDINM DC C'3C00'
0003C8 40404040 616 TUNAM DC C' '
0003CC C9 617 ICHAR DC C' '
0003CD C4 618 DCHAR DC C'D'
0003CE D6 619 OCHAR DC C'O'
0003CF F3F8C6F14040 620 CPGN1 DC C'38F1'
0003D5 40404040 621 SVNAM DC C' '
0003D9 00 622 STPLG DC X'00'
0003DA 0000 623 LSSVC DC A(*-*)
0003DC F3F8C6F0 624 CONPG DC C'38F0'
0003E0 3E 625 HEX3E DC X'3E'
0003E1 01 626 HEX01 DC X'01'
628 *****
629 *
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751 *****
752 *
753 * NAME SCHEDULER
754 *
755 * PURPOSE THIS ROUTINE DETERMINES WHICH PROGRAM IS TO RUN
756 * NEXT.
757 *
758 * METHOD IT IS CALLED BY A BRANCH TO SCHED
759 *
760 *****
00057E 761 SCHED EQU *
00057E C320 03D9 762 MVB STPLG,R3 IS STPAY INT FLAG ON
000582 1A05 763 JNN SCHD1 J-NO
000584 8028 03C3 03D9 764 MVB SPT1,STPLG CHANGE FLAG
00058A 6802 07D4 765 B SVCRT SVC RETURN
00058E 5820 02D8 766 SCHD1 EQU *
000592 6201 767 SEIMR MINON T/ON ALL INT BITS
000594 4724 0234 768 EN SM ALLOW ANY INTERRUPT PENDING
000598 4F89 769 MVA INDIC,R7 ADR OF DCP IND
00059A 1001 770 TBTR (R7,CONDV) IS THE INPUT FROM CONSOLE
00059C 4024 05B2 771 JOFF SCHD2 B/PASS CONSOLE LSB
0005A0 C824 026C 772 MVA SCHD3,R6 RESIDUAL ADDRESS AFTER LEX
0005A4 1005 773 CW CONLB,R6 INTERRUPT ADDRESS
0005A6 4124 026C 774 JE SCHD2 B/YES WAIT
0005AA C260 0017 775 MVA CONLB,R1 ADR OF CONSOLE LSB
0005AE 5A46 776 MVB (R1,ORAL),R2 GET THE CURRENT LEVEL
0005B0 777 SELB R2,(R1) RELOAD REGS
0005B0 6100 778 SCHD2 EQU *
0005B2 779 LEX ZERO TO RESUME RUNNING
780 SCHD3 EQU *
781 *****
782 *
783 * THE FOLLOWING ROUTINE IS BRANCHED TO AT IPL TIME AND ON A
784 * RESTART OF A DIAGNOSTIC PROGRAM.
785 *
786 *****
0005B2 787 RESTR EQU *
0005B2 582F 0262 788 CEPSR PCKLB+OR6 CLEAR THE PSW
0005B6 4020 000E 07F4 789 MVA PCKEP,PCKSI RESTORE THE PROGRAM CHECK START ADR
0005BC 4020 001E 0926 790 MVA CONEP,CONSI RESTORE CONSOLE
0005C2 4020 001C 026C 791 MVA CONLB,CONPT INTERRUPT POINTERS
0005C8 4724 0234 792 MVA INDIC,R7 ADDRESS OF DCP INDICATORS
0005CC 4F89 793 TBTR (R7,CONDV) TURN OFF PROG CONSOLE BIT
0005CE 0812 794 MVB1 CNTPK-ACFCS,R0 GET NUMBER WORDS TO ZERO ON
0005D0 4124 1794 795 MVA ACFCS,R1 RESTART-ADDR 1ST WORD
0005D4 C255 796 EQU *
0005D6 B8FE 797 RE05 MVBZ (R1)+,R2 ZERO OUT SWITCHES
0005D8 C220 024A 798 JCT RE05,R0 IF NOT DONE LOOP
0005DC 1009 800 MVB FIGRN,R2 IS THIS THE CONFIG RUN
0005DE 4224 03DC 801 JZ RE40 J-NO
0005E2 4324 1800 802 MVA CONPG,R2 ADR OF CONFIG NAME
0005E6 8028 036D 036E 803 MVA PID,R3 ADR OF DIAG AREA
0005EC 6802 0E84 804 MVB OPTB,CMND FORCE A BEGIN PGM
0005F0 805 B BPPG BEGIN CONFIG RUN
0005F0 C220 03E2 806 RE40 EQU *
0005F0 1808 807 MVB INFLD,R2 IS THIS AN INITIAL RUN
0005F6 4F0B 808 JNZ RE50 J-YES
0005F8 1202 809 MVA (R7,LDIAG) IS LOOP DIAGNOSTIC PACKAGE SELECTED
0005FA 4F04 810 JON RE41 J-YES
0005FC 1006 811 TBTR (R7,LODED) IS THERE A PROGRAM LOADED
0005FE 812 JOFF RE50 J-NO
0005FE 4224 0486 813 RE41 EQU *
000602 4324 1800 814 MVA PRPR,R2 IND NO DIAG SPECIFIED
000606 6802 0E80 815 MVA PID,R3 PROG RESIDENT AREA
00060A 816 B BPPGM BEGIN PROGRAM RUN
00060A 4724 051C 817 RE50 EQU *
00060A 6000 818 MVA REMG1,R7 ADR OF WAIT MSG
000610 0D01 819 SVC OUT OUTPUT THE MSG
000612 4724 0234 820 RETRN EQU *
000616 4F07 821 MVB1 ONE,R5 SET REG TO 1
000618 6A10 1766 822 MVA INDIC,R7 ADR OF DCP INDICATORS
00061C 50B0 823 TBTR (R7,ALTDV) IS AN ALTER DEVICE ASSIG
824 BON ACM5G* B-YES
825 J SCHED NO--RETURN TO SCHEDULER
827 *****
828 *
829 * THE FOLLOWING ROUTINE WILL ASSIGN DEVICE ADDRESSES
830 * REQUESTED. IT WILL ALSO ASSIGN A DEVICE ADDRESS FOR
831 * DEVICE TYPES REQUESTED. A MAXIMUM OF 8 DEVICES WILL
832 * BE ASSIGNED IF THEY ARE CHAINED IN THE CONFIGURATION TABLE.
833 *
834 *****
00061E 835 UDTID EQU *
000622 4324 1800 836 MVA PID,R3 ADR OF DIAG PROG
000624 E1C4 837 MVWS (R3,HDVTB),R1 ADR OF DIAG DEV TAB
000628 C060 0001 838 MVB (R1,ONE),R0 ANY DEVICES NEEDED
00062C 68E0 0000 839 BZ (R7) B-NO--RETURN
00062E 812B 0003 03E1 840 CB (R1,THREE),HEX01 IS THIS A TERMINATION
000632 6800 0A5E 841 BE TRMC B-YES
000636 8828 0340 033E 842 MVB DRSVA,DRSV RESTORE THE POINTER
00063C 4028 033E C000 843 STM R6,DRSV SAVE ALL REGS
000642 4624 03E3 844 MVA UDIND,R6 INDICATOR ADDRESS
000646 4901 845 TBTR (R1,CKDAD) REQUESTING A DEV
000648 1003 846 JOFF UDTNO J-NO
00064A 4840 847 TBTS (R6,ZERO) T/ON IND TO LOAD CONFIG TABLE
00064C 4E81 848 TBTR (R6,ONE) RESET THE END OF TABLE INDICATOR
00064E 500A 849 J UDT01 *
000650 850 UDTNO EQU *
000652 4E01 851 TBTR (R6,ONE) REACHED THE END OF TABLE
000654 1003 852 JZ UD00A J-NO
000656 49A0 853 TBTR (R1,PDAS) RESET ASSIGNED BIT
000658 1235 854 JON UDT15 J-IF ON
00065A 507A 855 UDT31 RETURN
00065A 856 UD00A EQU *
00065E 857 TBTR (R6,TWO) IS THE CONFIG TABLE RESIDENT
00065E 1003 858 JZ UDT01 J-NO--REPETCH
00065E 859 UD00A EQU *
00065E 6A08 03B8 860 MVB UDTR2,R2 GET SAVED POINTER
000662 5018 861 J UDT04 *
000664 862 UDT01 EQU *
000664 4020 17EE 03CF 863 MVA CFGN1,FNDPG ADR OF DATA SET TO FIND
000666 4724 0234 864 MVA INDIC,R7 ADR OF DCP INDICATORS
00066E 4F4E 865 TBTS (R7,CNRUN) T/ON IND CONFIG RUN
000670 4020 03E4 068A 866 MVA UDT03,CNFRT RETURN ADR

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867 TBTR (R6,ZERO) IS THE CONFIG TABLE RESIDENT
868 BNZ LP06 B-YES
869 MVD UDTR4,R4 RELOAD SECTOR ADR
870 MVA UDT0A,CNFRT RETURN ADR
871 B LP07B REREAD CORRECT SECTOR
872 UDT03 EQU *
873 MVD (R1,0AV1),UDTR4 SAVE THE POINTER
874 MVA DBUF+VHDLF,R2 ADJUST PAST HEADER
875 *
876 MVB DRSV1,R1 RESTORE R1
877 MVB (R1,ONE),R0 NUM OF DEVICES TO ASSIGN
878 TBTS (R6,TWO) THE CONFIG TABLE IS RESIDENT
879 UDT06 EQU *
880 TBTR (R1,CKDAD) IS A SPECIFIC DEV REQ
881 UDT14 JOFF UDT14 J-NO
882 TBTS (R6,THREE) IND A SPECIFIC DEVICE IS REQUESTED
883 ABI TWO,R1 BUMP R1
884 TBTR (R1,UDTAS) RESET ASSIGNED BIT
885 UDT07 EQU *
886 CW (R1),(R2) IS THIS THE SPECIFIC ONE
887 UDT24 J-YES
888 TBTR (R2,TBEND) END OF THE TABLE
889 JON UDT57 J-YES
890 TBTR (R2,SCEND) END OF SECTOR
891 JON UDT35 J-YES--GO GET NEXT SECTOR
892 ABI SIXTN,R2 BUMP TO NEXT ENTRY
893 J UDT07 TRY THE NEXT ENTRY
894 UDT14 EQU *
895 ABI TWO,R1 BUMP R1
896 MVWS (R1,ZERO),R3 IS THIS A ZERO ENTRY
897 JZ UD30A B-YES
898 TBTR (R1,UDTAS) WAS A DEVICE ASSIGNED
899 JOFF U18 J-NO
900 *
901 UDT15 EQU *
902 TBTR (R6,FOUR) WAS THE ALT CON ASSIGNED
903 JZ UDT18 J-NO
904 MVA INDIC,R7 ADR OF DCP INDICATORS
905 TBTS (R7,ALTDV) T/ON THIS IND
906 MVB INTAD,ACVTR* RESTORE INT ADR
907 TBTR (R6,FIVE) DID DCP T/ON THE STOP BIT
908 JZ UDT16 J-NO
909 UDT16 EQU *
910 MVA REASG,R7 T/OFF IND
911 SVC OUT ADR OF MSG TO OUTPUT
912 *
913 UDT18 EQU *
914 TBTR (R6,ONE) PRINT THE MSG
915 UDT51 J-IF TABLE END
916 *
917 TBTR (R6,THREE) IS THIS THE END OF TABLE
918 JNZ UDT07 IS-IF TABLE END
919 MVWS (R2,ZERO),R3 IS A SPECIFIC DEVICE REQUESTED
920 JZ UDT19 J-YES
921 CB (R1,DVTYP),(R2,CUDT) IS THIS A ZERO ENTRY
922 JE UDT21 J-YES--IGNORE IT
923 UDT30 IS THIS THE TYPE NEEDED
924 UDT30A J-YES
925 *
926 UDT19 EQU *
927 TBTR (R2,TBEND) END OF THE TABLE
928 JON UDT57 J-YES
929 TBTR (R2,SCEND) END OF SECTOR
930 JON UDT35 J-YES--GO GET NEXT SECTOR
931 ABI SIXTN,R2 BUMP TO NEXT ENTRY
932 U18 *
933 UDT21 EQU *
934 CB OPADR,(R2) IS THE ALT DEV UP FOR TEST
935 JNE UDT27 J-NO
936 MVA INDIC,R5 ADR FOR DCP INDICATORS
937 TBTR (R5,ALTDV) WAS AN ALT DEV ASSIGNED
938 JOFF UDT27 J-NO
939 MVA ALCON,R7 ADR OF MSG TO BE PRINTED
940 SVC OUT PRINT THE MSG
941 TBTR (R5,ALTDV) RESET THE ALT DEV ASSIG IND
942 TBTS (R6,FOUR) DCP TURNED ALT CON OFF
943 JON UDT25 T/ON THE STOP BIT
944 TBTS (R6,FIVE) J-IT WAS ON
945 UDT25 EQU *
946 MVA ACVTR*,INTAD DCP TURNED ON THE STOP BIT
947 MVA STRIT,ACVTR* SAVE THE ADR
948 * STRAY INTERRUPT ADR
949 *
950 UDT27 EQU *
951 MVB TEN,R7 NUM OF BYTES TO MOVE
952 MVBFN (R2),(R1) MOVE THE DATA
953 M10,R2 ADJUST POINTER
954 M10,R1 AGAIN
955 TBTS (R1,UDTAS) SET THE ASSIGNED BIT
956 TBTR (R2,TBEND) END OF THE TABLE
957 JON UDT37 J-YES
958 TBTR (R2,SCEND) END OF SECTOR
959 JON UDT35 J-YES--GO GET NEXT SECTOR
960 TBTR (R1,EXPNT) MULTIPLE ENTRIES
961 JOFF UDT30 J-NO
962 MVB1 ZERO,R0 CLEAR R0
963 UDT29A ABI SIXTN,R2 BUMP TO NEXT ENTRY
964 *
965 UDT30 EQU *
966 TBTR (R1,UDTAS) BUMP R1
967 UDT21 CONTINUE
968 UDT30 EQU *
969 UDT30A EQU *
970 UDT30 EQU *
971 UDT30 EQU *
972 UDT30 EQU *
973 UDT30 EQU *
974 UDT30 EQU *
975 UDT30 EQU *
976 UDT30 EQU *
977 UDT30 EQU *
978 UDT30 EQU *
979 UDT30 EQU *
980 UDT30 EQU *

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000770 4020 03E4 077A 981 MVA UDT36,CNFRT RETURN ADR
000776 6802 0F1E 982 B LP07A GET THE NEXT SECTOR
00077A 983 UDT36 EQU *
00077A 984 MVD (R1,QAV1),UDTR4 SAVE THE SECTOR POINTER
000780 D020 17F4 985 SAV,R0 RESTORE THIS REG
000784 4224 1330 986 MVA DBUF+CHDLG,R2 POINT TO DATA
000788 4910 987 TBT (R1,UDTAS) WAS A DEVICE ASSIGNED
00078A 10AB 988 JOFF U18 CONTINUE
00078C 4911 989 TBT (R1,EXPNT) CHAIN BIT ON
00078E 12DA 990 JON UD29A J-YES
000790 4E03 991 TRT (R6,THREE) IS A SPECIFIC DEVICE REQUESTED
000792 188A 992 JNZ UDT07 J-YES
000794 0102 993 ABI TWO,R1 BUMP R1
000796 50D9 994 J UD30A CONTINUE
000798 4E82 995 UDT37 EQU *
00079A 4E41 996 TBTR (R6,TWO) RESET THE CONFIG TABLE LOADED BIT
00079C 50DB 997 TBTS (R6,ONE) SET THE END OF TABLE INDICATOR
998 J UDT31 TERMINATE SEARCH
1000 *****
1001 * NAME INITIAL SVC HANDLER
1002 *
1003 * PURPOSE THIS ROUTINE HANDLES THE INITIAL SVC. IT
1004 * DETERMINES WHO SHOULD GET CONTROL AND PASSES
1005 * CONTROL TO THAT INDIVIDUAL SVC ROUTINE.
1006 *
1007 *
1008 * METHOD THIS ROUTINE BUILDS A QUE BLOCK AND PASSES THE
1009 * ADDRESS OF THAT BLOCK TO THE INDIVIDUAL SVC
1010 * ROUTINE IN XR1.
1011 *
1012 *****
1013 SVC EQU *
1014 MVW SVCPT,R1 ADDR OF SVC LSB POINTER
1015 MVA DMONE,R4 ADR OF THE END OF LSB'S
1016 CW R4,R1 END OF THE LSB'S YET
1017 JNE SVC05 B-NO
1018 MVWI SVCOD,R4 PUT CODE IN R4
1019 * SECON R4 PUT THE CODE IN LIGHTS
1020 J
1021 SVC05 EQU *
1022 AWI TWEN8,SVCPT BUMP TO NEXT LSB
1023 CPCL R4 COPY CURRENT LEVEL
1024 MVB R4,(R1,QRAL) SET LEVEL FOR RETURN
1025 MVWS (R1,QIAR),R3 ADDR OF SVC
1026 ABI M2,R3 PACK UP 2 BYTES
1027 MVB (R3,ONE),R4 MOVE SVC NUMBER INTO QUE BLK
1028 MVB R4,(R1,QSVC)
1029 SV10 EQU *
1030 CBI WLDV,R4 IS THIS A VALID SVC
1031 JP SVCPT J-NO RETURN
1032 SLL ONE,R4 DOUBLE FOR 2 BYTE PARA
1033 B (R4,ISVCP)* BRANCH TO INDIVIDUAL SVC ROUTINE
1034 *
1035 * RETURN HERE TO RETURN TO NSI
1036 *
1037 SVCRT EQU *
1038 MVB PRTSW,R3 IS THE PRINT SW ON
1039 JNZ SVCR1 J-YES
1040 MVB STFLG,R3 IS THE STPAY INT FLAG ON
1041 JZ SVCR1 J-NO
1042 MVBZ STFLG,R3 CLEAR THE FLAG
1043 J SVCR2 RETURN
1044 SVCR1 EQU *
1045 MVW R1,SVCPT RESET LSB POINTER TO FREED LSB
1046 MVB (R1,QRAL),R2 GET THE RETURN LEVEL
1047 SELB R2,(R1) RETURN TO CALLER - NSI
1048 SVCR2 EQU *
1049 B SCHD1 RETURN
1050 *****
1051 * NAME PCKEP
1052 *
1053 * PURPOSE PROGRAM CHECK INTERRUPT HANDLER
1054 *
1055 * METHOD DETERMINE IF PROGRAM CHECKS WILL BE HANDLED
1056 * BY THE DIAGNOSTIC PROGRAM.
1057 *ON RETURN TO THE DIAGNOSTIC PROGRAM
1058 * R7 = IAR WHERE PROGRAM CHECK OCCURRED
1059 * R6 = PSW AT THE TIME OF THE INTERRUPT.
1060 * RETURN IS THROUGH THE DIAGNOSTIC PROGRAM
1061 * PROGRAM CHECK-ENTRY POINT.
1062 *
1063 * ON TERMINATION THE PSW, IAR, AND
1064 * PROGRAM ID ARE PRINTED IN THE PROG-CK MSG.
1065 *
1066 *
1067 *
1068 *****
1069 PCKEP EQU *
1070 CPPSR PCKLB+QR6 SAVE PSW
1071 MVA PCKLB,R1 ADDR OF PROGRAM CHECK LSB
1072 MVWI PCKCD,MCKMG PROG CHECK CODE
1073 MVWI PKLAB,MCKM1 MOVE PC TO MESSAGE
1074 MVW HRTA,R0 SEE IF DIAGNOSTIC PROGRAM WILL HANDLE
1075 JZ PCK20 IF NOT BR
1076 PCK10 EQU *
1077 MVWS (R1,QIAR),R7 PLACE PROGRAM CHECK IAR IN XR7
1078 MVB (R1,QR7) TO RETURN TO DIAGNOSTIC PROGRAM
1079 MVWS R0,(R1,QIAR) SET PROGRAM CHECK RET ADDR
1080 CPCL R1 GET THE CURRENT LEVEL
1081 SELB R1,PCKLB RETURN TO CALLER
1082 PCK20 EQU *
1083 MVB IDCB,R7 ADR OF LAST IDCB
1084 ABI ONE,R7 GET DEV ADR
1085 MVB (R7),DIPR MOVE ADR TO IDCB
1086 IO DIPRE UN-PREPARE THE DEVICE
1087 MVA RTNCR,R7 PREPARE TO CONVERT RTN NUM
1088 SVC HTOE PREPARE TO CONVERT CHECKPOINT
1089 MVA HTOE
1090 MVB (R1,QR6),PRTBU CONVERT PSW
1091 MVA HSWC,R7 CONVERT BLOCK
1092 MVB (R1,QIAR),PRTBU CONVERT IAR
1093 SVC HTOE CONVERT BLOCK
1094
1095
1096

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00084C 9038 17BE 1724 1097 MVD IDCB*,PRTBU CONVERT IDCB
000852 4724 0394 1098 MVA DCBCV,R7 CONVERT BLOCK
000856 601A 1099 SVC HTOE
000858 6808 180A 1100 MVW RTNE,R0 SETTING
00085C E340 1101 MVWS (R1,QIAR),R3 THE REGISTERS
00085E 6C08 17BE 1102 MVW IDCB,R4 FOR THE
000862 E249 1103 MVWS (R1,QR6),R2 PROGRAMMER'S
000864 6908 180C 1104 MVW CKPT,R1 CONSOLE
000868 4724 04DA 1105 MVA MCKMA,R7 MESSAGE ADDRESS
00086C 500D 1106 J PTW1 PRINT PROGRAM CHECK MESSAGE
1107 *****
1108 * NAME MCKEP
1109 *
1110 * PURPOSE THE MACHINE CHECK INTERRUPT HANDLER
1111 *
1112 * METHOD PRINTS A MESSAGE TO INDICATE A MACHINE CHECK
1113 *
1114 *
1115 *****
1116 MCKEP EQU *
1117 CPPSR PCKLB+QR6 SAVE PSW
1118 MVWI MCKCD,MCKMG MACHINE CHECK CODE
1119 MVWI MCKLB,MCKM1 MC TO THE MESSAGE
1120 MVA PCKLB,R1 ADR OF LSB
1121 J PCK20
1122 *****
1123 * NAME PTWEP
1124 *
1125 * PURPOSE POWER - THERMAL WARNING INTERRUPT HANDLER
1126 *
1127 * METHOD SET A SWITCH INDICATING TO DCP THAT A POWER - THERMAL
1128 * INTERRUPT HAS OCCURRED.
1129 *
1130 *
1131 *****
1132 PTWEP EQU *
1133 MVA PTMS,R7 ADR OF MESSAGE THERMAL SWITCH
1134 EQU
1135 PTW1 EQU *
1136 IO HLTIO RESET ALL CHANNEL ACTIVITY
1137 MVWZ PRTSW,R6 RESET THE PRINT BUSY SW
1138 SVC OUT
1139 MVA INDIC,R7 ADDRESS OF DCP INDICATORS
1140 TBT (R7,AUTO) AUTO MODE
1141 JON PTW2 J/NO - MANUAL MODE
1142 SVC TERM TERMINATE THIS PGM
1143 PTW2 EQU *
1144 MVRI THREE,R7 LEVEL THREE
1145 SVC CHNGE CHANGE LEVEL
1146 B TERMC TERMINATE
1147 *****
1148 * NAME OUT/OUTIN (SVC 0/1)
1149 *
1150 * PURPOSE THIS ROUTINE IS ENTERED WHEN AN OUT, OR OUTIN
1151 * SVC IS ISSUED. IT WILL DISPLAY THE WORD IMMEDIATELY
1152 * PRECEDING THE USER MESSAGE IN THE CONSOLE LED'S.
1153 * IF THE SVC WAS OUTIN IT WILL ACCEPT DATA KEYPED IN
1154 * THROUGH THE CONSOLE AND RETURN IT TO THE USER.
1155 *
1156 * METHOD
1157 *
1158 *
1159 *****
1160 CONSO EQU *
1161 EN SM ENABLE THE SUMMARY MASK
1162 MVW PRTSW,R0 IS THE PRINT SW ON
1163 JNZ CONSO J-YES WAIT YOUR TURN
1164 DIS SM DISABLE INTERRUPTS
1165 CB OUT1,(R1,QSVC) SEE IF OUT/IN SVC
1166 JNE OOU1 B-NO
1167 MVB HEXPF,INPRC SET THE OUT/IN INPROC IND
1168 MVB R7,SAVE7 SAVE R7
1169 MVA INDIC,R6 DCP INDICATORS
1170 TBT (R6,AUTO) IN AUTOMATIC MODE
1171 JOFF SVCR1 YES RETURN TO CALLER
1172 TBT (R7,MDIRT) MDI OUT IN
1173 JOFF OOU1 J-NO
1174 TBTS (R6,RTMDI) SET IND FOR DCP
1175 OOU1 EQU *
1176 IR R3,R7 DATA ADR TO R3
1177 MVW (R3,M2),GRPT SAVE
1178 OOU10 EQU *
1179 MVB (R3),R3 GET DATA BUFFER ADDR
1180 MVB R3,REPSV ADR OF MESSAGE TO PRINT
1181 ABI M2,R3 GET THE CODE
1182 MVWS (R3),R4 SET WORD TO DISPLAY
1183 SECON R4 SET LIGHTS WITH DATA IN XR4
1184 ABI TWO,R3 RETURN R3 TO MESSAGE ADR
1185 MVA INDIC,R7 ADR OF DCP INDICATORS
1186 TBT (R7,ALTDV) IS ALT OUT ASSIGNED
1187 BON ACENT* B-YES
1188 TBT (R7,STOP) STOP AFTER MSG ON
1189 JOFF CONS1 B-NO
1190 MVA GRPT,R7 ADR OF PRINT CNTRL
1191 TBT (R7,NINE) IS THIS AN ERROR MSG
1192 JON CONS2 J-YES
1193 CONS1 EQU *
1194 JNE DUMMY SEE IF IN/OUT SVC
1195 MVB DUMMY IF NOT RETURN TO CALLER
1196 MVW SAVE7,R7 RESTORE REGISTER
1197 TBT (R7,MDIRT) IS THIS AN MDI OUT/IN
1198 JON DUMMY B-YES IMMEDIATE RETURN
1199 CONS2 EQU *
1200 MVD (R1,QR2),R2 RESTORE THESE REGS
1201 MVD (R1,QR4),R4 RESTORE THESE REGS
1202 MVD (R1,QR6),R6 RESTORE THESE REGS
1203 MVD (R1,QR0),R0 RESTORE THESE REGS
1204 MVB ZERO,R7 GO TO LEVEL ZERO TO SET
1205 SVC CHNGE OVERLAY IAR FOR LEVEL ZERO
1206 MVBI THREE,R7 RETURN TO LEVEL THREE
1207 SVC CHNGE TO CONTINUE
1208 EN SM ENABLE THE SUMMARY MASK
1209 J CHNG1 WAIT FOR INSTRUCTIONS
1210 *****
1211 *
1212 *
1213 *
1214 *

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LOCTR OBJECT TEXT          STMT SOURCE STATEMENT          COPYRIGHT IBM CORP 1976
1215 * THIS ROUTINE IS ENTERED WHEN A CONSOLE INTERRUPT OCCURS. *
1216 * *****
1217 *****
1218 CONEPE EQU *
1219 DIS SM          DISABLE INTERRUPTS
1220 CPCL R2         GET CURRENT LEVEL
1221 MVA R2,CONLV  SAVE IT IN CONSOLE LSB
1222 CPCON R3,CONLV READ DATA ENTERED BY CONSOLE
1223 MVA R3,CNDAT  SAVE DATA READ
1224 RBTWI HFF00,R3 REMOVE UNUSED BITS
1225 CWI SCHAR,R3  DUMP STORAGE REQUESTED
1226 BE DSRTN      BR/YES
1227 MVA CN20,CONSI CHANGE ENTRY ADDRESS AND
1228 MVA PCKLB,CONPT LSB POINTER FOR CONSOLE INTERRUPT
1229 MVW R3,R0     COUNT TO R0
1230 RBTB MKF0,R3  SAVE
1231 MVB R3,CNND   COMMAND
1232 SRL FOUR,R0  POSITION COUNT
1233 CBI TWELV,R3 MULTI WORD COMMAND
1234 JLGT CN10    BR/YES - GO REQUEST DATA
1235 MVB CN10    SET COUNT TO ONE
1236 CBI TEN,R3   ONE WORD COMMAND
1237 JLGT CN10   BR/YES - GO REQUEST DATA
1238 MVB ZER0,R0 SET COUNT TO ZERO
1239 EQU *
1240 CN10 MVB R0,CNCT SAVE COUNT
1241 JZ CN30     BR/ALL DATA ENTERED-VERIFY INPUT
1242 CN11 EQU *
1243 MVB ENTCD,R4 SET CONSOLE LEDS TO X'3814'
1244 CN12 EQU *
1245 SECON R4   ENTER MORE DATA
1246 *
1247 B SCHED   RETURN TO SCHEDULER
1248 *
1249 CN20 EQU *
1250 DIS SM          DISABLE INTERRUPTS
1251 CPCON R3       READ DATA ENTERED BY CONSOLE
1252 MVW R3,CNDAT  SAVE DATA READ
1253 MVA CNVTX,R7  ADDRESS OF CONVERT TABLE
1254 SVC HTOE      CONVERT INPUT TO EBCDIC
1255 AWI FOUR,CNVTZ INCREMENT OUTPUT ADDRESS
1256 MVB CNCT,R0  GET WORD COUNT
1257 ABI M1,R0     DECREMENT WORD COUNT
1258 J CN10       GO REQUEST DATA
1259 EQU *
1260 CN30 MVB HEX00,CNVTZ* PLACE END OF DATA CHARACTER
1261 MVA CN40,CONSI CHANGE ENTRY ADDRESS FOR CONSOLE
1262 *
1263 MVB VFYCD,R4 SET CONSOLE LEDS TO X'3813'
1264 J CN12       VERIFY INPUT
1265 CN40 EQU *
1266 DIS SM          DISABLE INTERRUPTS
1267 CPCON R3       READ DATA ENTERED BY CONSOLE
1268 MVA CONEP,CONSI RESTORE ENTRY ADDRESS AND
1269 MVA CONLB,CONPT LSB POINTER FOR CONSOLE INTERRUPT
1270 MVA PRBUB,R2  ADDRESS OF INPUT DATA
1271 MVB R2,CNVTZ  RESTORE DATA ADDRESS
1272 MVB R1,SN     SET CONSOLE LEDS TO X'FFFF'
1273 MVA INDIC,R7  ADR OF DCP IND
1274 TBTS (R7,CNDV) SET CONSOLE INPUT SWITCH
1275 CW CNDAT,R3  DATA UNCHANGED
1276 JNE CN11     BR/NO - RUBOUT
1277 SECON R4     WRITE TO LEDS
1278 MVWZ PRTSW,R0 ZERO PRINT SWITCH
1279 MVB TNO,R7   SET UP TO INSURE EXIT IS
1280 SVC CHNGE   ON LEVEL TWO
1281 *
1282 B OPCM      GO PROCESS COMMAND
1283 *
1284 *****
1285 *****
1286 * NAME DUMMY (RESERVED SVC'S 3/24) *
1287 *
1288 * PURPOSE RETURNS CONTROL TO PROGRAM AT NSI. *
1289 *
1290 * METHOD BRANCH TO SVC RETURN. *
1291 *
1292 *****
1293 *****
1294 DUMMY EQU *
1295 B SVCRT      SVC RETURN
1296 *****
1297 *****
1298 * NAME IDLE (SVC 2) *
1299 *
1300 * PURPOSE SVC ROUTINE TO ALLOW THE USER TO DELAY A *
1301 * PERIOD OF 200 USEC ON A 4955 PROCESSOR. *
1302 * THE DELAY WILL BE 600 USEC ON A 4953 PROCESSOR. *
1303 *
1304 * METHOD GO INTO PROGRAM LOOP FOR THE TIME SPECIFIED ABOVE. *
1305 *
1306 *****
1307 *****
1308 DELAY EQU *
1309 MVB SIXT4,R7 COUNT FOR THE DELAY
1310 JCT *R7     DELAY
1311 J DUMMY    SVC RETURN
1312 *****
1313 *****
1314 * NAME IDLE5 (SVC 3) *
1315 *
1316 * PURPOSE SVC ROUTINE TO ALLOW THE USER TO DELAY A *
1317 * PERIOD OF 500+ USEC ON ANY PROCESSOR TYPE. *
1318 *
1319 * METHOD GO INTO PROGRAM LOOP FOR THE TIME SPECIFIED ABOVE. *
1320 *
1321 *****
1322 *****
1323 DLYCT DC X'00D6' COUNT FOR DELAY
1324 DLY5 EQU *
1325 MVW DLYCT,R7 MOVE COUNT FOR THE DELAY
1326 DLY1 JCT *R7 DELAY
1327 J DUMMY    RETURN VIA DUMMY
1328 JCT DLY1,R7 DELAY
1329 J DUMMY    RETURN VIA DUMMY
1330 *****
1331 *****
1332 *

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LOCTR OBJECT TEXT          STMT SOURCE STATEMENT          COPYRIGHT IBM CORP 1976
1333 * NAME CHNGE (SVC 4) *
1334 *
1335 * PURPOSE THIS SVC ALLOWS A DIAGNOSTIC PROGRAM TO RESUME *
1336 * RUNNING FOLLOWING THE COMPLETION OF THE SVC ON *
1337 * ANY INTERRUPT LEVEL HE DESIRES. *
1338 *
1339 * METHOD *
1340 *
1341 *****
1342 CHNG EQU *
1343 MVWS (R1,QR7),R7 GET LEVEL TO RETURN ON
1344 JN DUMMY      BR IF NEG LEVEL
1345 CBI NINTL,R7  SEE IF HIGHER THAN HIGHEST
1346 * LEVEL INSTALLED
1347 JP DUMMY      IF SO BR
1348 CHNGO EQU *
1349 MVW R1,SVCPT  RESTORE SVC POINTER
1350 SELB R7,(R1)  RETURN WITH LEVEL CHANGED
1351 CHNG1 EQU *
1352 E SCHD2      RETURN
1353 *****
1354 *****
1355 * NAME PGCK (SVC 5) *
1356 *
1357 * PURPOSE ALLOWS THE USER TO SET A RETURN ADDRESS IN CASE *
1358 * HE CAUSES A PROGRAM CHECK. *
1359 *
1360 * METHOD DCP SAVES THE RETURN ADDRESS IN THE *
1361 * PROGRAM HEADER AND IF A PROGRAM CHECK IS CAUSED *
1362 * BY THIS PROGRAM IN THE FUTURE, CONTROL IS RETURNED *
1363 * TO THE DIAGNOSTIC PROGRAM AT THIS ADDRESS. *
1364 *
1365 *****
1366 *****
1367 PGMK EQU *
1368 MVW (R1,QR7),HRTA SAVE PROGRAM CHECK RETURN ADDR
1369 J DUMMY      SVC RETURN
1370 *****
1371 *****
1372 * NAME EXIT (SVC 6) *
1373 *
1374 * PURPOSE EXIT CURRENT LEVEL AND NOT BE SCHEDULED FOR A *
1375 * RECALL. *
1376 *
1377 * METHOD *
1378 *
1379 *****
1380 *****
1381 *****
1382 EXITA EQU *
1383 MVW R1,SVCPT  RESET THE POINTER
1384 ABI M28,R1   ADJUST R1
1385 EN SM       ENABLE THE SUMMARY MASK
1386 J CHNG1     RETURN TO DIAG PROG
1387 *****
1388 *****
1389 * NAME TERM (SVC 7) *
1390 *
1391 * PURPOSE TERMINATE DIAGNOSTIC PROGRAM *
1392 *
1393 * METHOD *
1394 *
1395 *****
1396 *****
1397 TERMA EQU *
1398 MVA SVCLB,SVCPT RESTORE THE SVC POINTER
1399 MVA PID,R7   ADR OF PROGRAM I.D.
1400 ABI OPWRD,R7 DISPL TO OPTION WORD
1401 TBTR (R7,TPGSW) IS THE TERM PGM ON
1402 JON TERMB   J-YES
1403 MVB RECD1,RTNE INDICATE DCP
1404 MVWZ CKPT,R7 ZERO THE CHECK POINT
1405 MVB CIGR,R7 TEST CONFIG RUN IND
1406 JNZ TERM   J-END OF INITIALIZING
1407 MVA INDIC,R7 ADR OF DCP INDICATORS
1408 MVA PRPR,R2  IND NO DIAG SPECIFIED
1409 MVA PID,R3   PROG RESIDENT AREA
1410 TBT (R7,LOOP) IS LOOP PGM OPT ON
1411 BON BPPGM   B-YES--GO RERUN PGM
1412 TBT (R1,CKDAD) IS A SPECIFIC DEV REQ
1413 JOFF TERMB  J-NO
1414 MVA UDIND,R7 IND ADR
1415 TBTR (R7,TWO) RESET THE CONFIG TABLE LOADED BIT
1416 TERMB EQU *
1417 BAL UDTID,R7 TRY TO ASSIGN A DEVICE
1418 TBT (R1,UNCRT) IS UNCONDITIONAL RETURN ON
1419 BON BPP2    GO BEGIN THE PGM AGAIN
1420 TBT (R1,PDTAS) WAS AN ADR ASSIGNED
1421 BON BPP2   YES--GO BEGIN AGAIN
1422 TERMC EQU *
1423 MVA PRPRM,R7 ADR OF PRINT PARAM
1424 SVC OUT     GO PRINT MESSAGE
1425 MVA UDIND,R7 IND ADR
1426 TBTR (R7,ONE) T/ON END OF TABLE IND
1427 MVB INDIC,R7 ADR OF DCP INDICATORS
1428 TBTR (R7,LOD) RESET LOADED BIT
1429 TBTR (R7,FLIPS) RESET SAVE T.U BIT
1430 MVBZ FIGN,R2 RESET IND
1431 BNZ RESTR  B-RESTART
1432 TBT (R7,AUTO) ARE WE IN AUTO MODE
1433 B BOFF LP05A B-YES--GO WITH NEXT PGM
1434 B RETRN    RETURN TO SCHEDULER
1435 *****
1436 *****
1437 * NAME OIO ROUTINE (SVC 8/9/10/11/12/13/14/15/16/17/18/21) *
1438 *
1439 * PURPOSE THE FOLLOWING ROUTINE IS THE ENTRY POINT FOR THE *
1440 * RESET, RID, START, SCSS, PREP, READ, READ1, RSTAT, *
1441 * WRT0, WRT1, CTRL AND HIO SVC ROUTINE. THIS *
1442 * ROUTINE BUILDS THE IDCB AND SET UP THE DCB IF *
1443 * USED AND THEN ISSUES THE IO INSTRUCTION. *
1444 *
1445 * METHOD ALL SVC'S ENTER AT THE SAME POINT AND DECODE THE *
1446 * PARAMETERS THAT ARE IN COMMON AND THEN JUMP AHEAD *
1447 * TO DO THEIR OWN INDIVIDUAL FUNCTION. *
1448 *
1449 *****
1450 *****

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000A84 73E7 QIO EQU *
000A84 6B0D 17F4 IR R3,R7 CHANGE THE REGS
000A86 E040 MVW R3,SAV SAVE FOR LATER
000A8A E040 MVWS (R1,QIAR),R0 GFT SVC ADDR + 2
000A8C 00FE ABI M2,R0 SVC ADDR
000A8E A0C4 MVWS R0,(R3,EIGHT) PLACE SVC ADDR IN DIAGNOSTIC PROGRAM
000A90 680D 03DA MVW R0,LSSVC SAVE LAST SVC ISSUED BY DIAG
000A94 D5E0 0004 MVD (R3,FOUR),R5 SAVE PARA 3 AND 4
000A98 C7F0 0000 MVB (R3),R7 GET DEV ADDR
000A9C D3C0 MVD (R3),R3 SAVE PARA 1 AND 2
000A9E 1461 OI10 EQU *
000A9E A74C MVWS R7,(R1,QAV1) SAVE DEV ADDR IN SLOT BUILDING
000AA0 C360 0016 MVB (R1,OSVC),R3 GET SVC NUMBER
000AA4 8368 035A 0018 MVB (R3,COMD-RESET),(R1,QAV1) MOVE COMMAND INTO IDCB
000AAA F309 CBI RID,R3 SEE IF RESET OR READ ID
000AAC 1113 JP OI40 IF NOT PP
000AAE E042 OI20 EQU *
000AAE 4264 0018 MVWS (R1,QLSR),R0 GET DIAGNOSTIC PROGRAM LSR
000AB0 6A0D 17BE MVA (R1,QAV1),R2 SAVE THE IDCB ADR
000AB4 684C 0000 MVW R2,IDCB
000AB8 70DE IC (R2)
000ABE 6F04 0AC4 CPLSR R0 ISSUE I/O
000AC2 A440 BCC SEVEN,OI25 SAVE INDICATORS
000AC4 E44D MVWS R4,(R1,QIAR) BR IF I/O OK
000AC6 6B08 17F4 EQU * SET ERROR RET ADDR
000ACA A4C5 MVWS (R1,QAV2),R4 2ND WORD IDCB
000ACC 7803 0010 MVW SAV,R3 RESTORE THE REG
000ACC A042 OI27 EQU * MOVE INTO PARA LIST
000AD0 5081 OI28 EQU * T/ON SUMMARY MASK
000AD2 5081 OI40 EQU * SET DIAGNOSTIC PROGRAM LSR
000AD4 F315 CBI HIO,R3 SVC RETURN
000AD6 1804 JNE OI45 HALT I/O SVC
000AD8 9068 0360 0018 MVD HLTIO,(R1,QAV1) J-NO
000ADE 50E7 J OI20 ADR OF IDCB
000AE0 F30B OI43 EQU * ISSUE THE I/O
000AE2 1107 CBI STCSS,R3 START CYCLE STEAL OR CYCLE
000AE4 1004 JP OI70 STEAL STATUS-IF NOT BR
000AE6 7EC4 FF00 RETWI HFP00,R6 BR IF START CYCLE STEAL STATUS
000AEA C669 0018 OB R6,(R1,QAV1) ISOLATE MODIFIER
000AEE A54D OI45 EQU * SET IN IDCB
000AF0 50DE MVWS R5,(R1,QAV2) SAVE THE DCB ADR
000AF2 F30C J OI20 GO ISSUE I/O
000AF4 1805 CBI PREP,R3 SEE IF PREPAPE
000AF6 350E JNE OI80 IF NOT BR
000AF8 351A SRLD ONE,R5 SHIFT I BIT TO XR6
000AFA 350D SRL THREE,R5 SHIFT OUT UNUSED BITS
000AFC A54D MVWS R5,(R1,QAV2) SHIFT I BIT BACK IN XR5
000AFE 50D7 J OI20 SET IN IDCB
000B00 F30F OI80 EQU * GO ISSUE IO
000B00 1105 CBI RSTAT,R3 SEE IF READ0, READ1 OR RSTAT
000B04 7DA4 FF00 JP OI90 IF NOT JUMP
000B08 5669 0018 RETWI HFP00,R5 ISOLATE MODIFIER
000B0C 50D0 OB R5,(R1,QAV1) SET IN IDCB
000B0E A54D OI90 J OI20 GO ISSUE I/O
000B10 764A MVWS R5,(R1,QAV2) MOVE DATA WORD TO IDCB
000B12 50F8 MVW R6,R5 MOVE MODIFIER TO XR5
000B12 50F8 J OI85 PLACE IN IDCB

1518 * NAME RCIB (SVC 19)
1519 *
1520 *
1521 *
1522 * PURPOSE THIS SVC RELEASES THE DIAGNOSTIC PROGRAM FROM ANY
1523 * RESPONSIBILITY IN HANDLING INTERRUPTS FOR THE
1524 * DEVICE SPECIFIED BY XR7.
1525 *
1526 * METHOD THE DEVICE TABLE IS SCANNED FOR THE DEVICE ADDR
1527 * IN XR7, IF FOUND AND THE DEVICE WAS ASSIGNED TO
1528 * THE DIAGNOSTIC PROGRAM REQUESTING THE RELEASE, A
1529 * RESET I/O AND A PREPAPE I/O WITH I BIT OFF IS
1530 * ISSUED TO THAT DEVICE AND ANY DCB BLOCKS ARE FREED
1531 * THE SLOT IN THE DEVICE TABLE IS ZEROED.
1532 *

1534 RCIB1 EQU *
1535 MVA PID,R3 START OF DIAG PGM
1536 MVWS (R3,HDVTB),R2 DEV TABLE START
1537 MVB CIBC,R4 WAS ANY DEVICES CONNECTED
1538 JZ OI28 J-NO
1539 ABI TWO,R2 BUMP PAST CNTRL CHAR
1540 MVWS (R1,QR7),R3 ADR OF ICB
1541 MVA DVTAB,R0 SAVE AREA FOR CIBC ADR
1542 RCIB3 EQU *
1543 CB (R2),R3 IS THIS THE DEV TO RELEASE
1544 JE RCIB4 J-YES--THIS IS IT
1545 ABI TEN,R2 BUMP TO NEXT DEV
1546 ABI TWO,R0 BUMP TABLE
1547 J RCIB3
1548 RCIB4 EQU *
1549 TBTR (R2,CICBT) T/ON THE IND
1550 JOFF RCIB5 J-NOT CONNECTED
1551 MVWI ZERO,(R0) SAVE ICB POINTER
1552 ABI M1,R4 REDUCE COUNT BY ONE
1553 MVB R4,CICNT PUT THE COUNT BACK
1554 RCIB5 EQU *
1555 MVB R3,DIPR MOVE DEVICE ADDR INTO PREPARE
1556 MVA DIPRE,IDCB SAVE THE IDCB ADR
1557 IO DIPRE,IO RESET I BIT
1558 J OI28 GO RETURN

1560 *
1561 *
1562 * NAME CIBC (SVC 20)
1563 *
1564 * PURPOSE RETURN ZERO RESULT INDICATOR
1565 *
1566 * METHOD MOVE ZERO TO CONDITION CODE

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000B50 4324 1800 MVA PID,R3 START OF DIAG PGM
000B54 E2C4 MVWS (R3,HDVTB),R2 DEV TABLE START
000B56 0202 ABI TWO,R2 BUMP PAST CNTRL CHAR
000B58 E34A MVWS (R1,QR7),R3 ADR OF ICB
000B5A 4424 03E6 MVA DVTAB,R4 SAVE AREA FOR CIBC ADR'S
000B5E 83B3 0000 MVA (R1,QR7),R3
000B62 1003 JE RCIB4 IS THIS THE DEV TO CONNECT
000B64 020A ABI TEN,R2 J-YES--THIS IS IT
000B66 0402 ABI TWO,R4 BUMP TO NEXT DEV
000B68 50FA J RCIB3 BUMP TABLE
000B6A EQU * J-CHECK THE NEXT ONE
000B6A 688D 0000 MVB R3,(R4)
000B6E 4A54 TBTS (P2,CICBT) SAVE ICB POINTER
000B70 1205 JON CIBC6 T/ON THE IND
000B72 C220 1796 MVB CJCNT,R2 BR/IF ON BYPASS UPDATE
000B76 0201 MVB ONE,R2 PUT THE COUNT IN A REG
000B7C C228 1796 MVB R2,CICNT BUMP COUNT BY ONE
000B7C EQU * PUT THE COUNT BACK
000B7C 0F01 MVEI ONE,R7 SET ZERO CODE
000B7E 3759 SLL ELEV,R7 POSITION FOR ZERO RESULTS
000B80 E442 MVWS (R1,QLSR),R4 GET LSR
000B82 7C84 1800 RPTWI NEGZF,R4 RESET NEG AND ZERO INDICATOR
000B86 7781 OW R7,R4 SET INDICATORS FOR RET TO PROGRAM
000B88 A442 MVWS R4,(R1,QLSR) SET DIAGNOSTIC PROGRAM LSR
000B8A 50A3 J OI28 RETURN

1567 *
1568 *
1569 * NAME REQSD (SVC 22)
1570 *
1571 *
1572 * PURPOSE THIS SVC IS USED BY THE DISKETTE DIAG PGM
1573 * TO REQUEST USE OF THE DCP DISKETTE.
1574 *
1575 * METHOD CONTROL IS RETURNED TO THE DIAGNOSTIC PROGRAM
1576 * AND THE DIAGNOSTIC PROGRAM MAY USE IT AS A NORMAL
1577 * DEVICE TO TEST. CYLINDER 1-3 AND 74-76 ARE
1578 * ALLOCATED FOR DISKETTE DIAGNOSTIC USE. NO OTHER AREA
1579 * MAY BE MODIFIED BY THE DISKETTE DIAGNOSTIC.
1580 *
1581 * CALLING SEQUENCE
1582 *
1583 * MVA PARA,R7 ADDRESS PARA LIST
1584 * SVC REQSD SVC TO GAIN CONTROL DCP DISKETTE
1585 *
1586 * *PARA DC A (DEVAD) BYTE ADDR OF DISKETTE DEV ADDR
1587 * DC A (0) CYLINDER HEAD PRESENTLY AT-SET.
1588 * SET BY DCP UPON RET.
1589 *
1590 *
1591 *
1592 *
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1681 *
1682 *
1683 *

000B8C 7764 0000 0233 MVB R7,R3 GET ADR OF DISKETTE DEVICE ADDR
000B8E 873E CNE (R7),DKAD SEE IF REQUESTING DCP DISKETTE
000B94 189E JNE OI28 IF NOT BR
000B96 88E8 142E 0002 MVB PCYLA,(R3,TWO) SET CYL NOW ON IN DIAGNOSTIC PROGRAM
000B9C 4020 0246 0D1C MVA ST01,DKINT SET DISKETTE INT TO GO TO DIAG PROG
000BA2 5097 J OI28 GO RETURN

1628 *
1629 *
1630 * NAME RELSD (SVC 23)
1631 *
1632 *
1633 * PURPOSE THIS SVC IS USED BY THE DISKETTE DIAGNOSTIC TO
1634 * RELEASE CONTROL OF THE DCP DISKETTE. IT MUST FOLLOW
1635 * A REQSD SVC.
1636 * METHOD WHEN THE DIAGNOSTIC PROGRAM HAS COMPLETED
1637 * TESTING THE DCP DISKETTE, HE MUST RELEASE
1638 * CONTROL FOR THE DCP TO USE.
1639 *
1640 * CALLING SEQUENCE
1641 *
1642 * MVA PARA,R7 ADDR PARA LIST
1643 * SVC RELSD SVC TO RELEASE DCP DISKETTE
1644 *
1645 * *PARA DC A (DEVAD) BYTE ADDR OF DISKETTE DEV ADDR
1646 * DC A (CYI) CYLINDER DIAGNOSTIC PROGRAM LEFT THE
1647 * HEAD AT.
1648 *
1649 *
1650 * THE PARA LIST FOR THE RELSD AND THE REQSD SVC SHOULD BE THE
1651 * SAME PARA LIST. THIS IS ADVISABLE IF THE DISKETTE REQUESTING
1652 * IS NOT THE DCP DISKETTE. IN THAT CASE THESE TWO SVC ARE NO-OPED
1653 * IF THE TWO PARA LIST ARE THE SAME, THE DIAG PROGRAM WILL BE
1654 * SETTING ITS OWN CYLINDER LEFT AT.
1655 *
1656 *
1657 *
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1681 *
1682 *
1683 *

000BA4 73E7 0000 0233 MVB R3,R7 CHANGE REGISTERS
000BA6 E4C1 MVWS (R3,TWO),R4 GET WHERE HEAD PRESENTLY AT
000BA8 833F 0000 0233 CB (R3),DKAD SEE IF PELEASING DCP DISKETTE
000BAE 1891 JNE OI28 IF NOT GO RETURN
000BB0 4020 0246 1246 MVA DSKIT,DKINT RESTORE DCP INT ADR
000BB6 6C0D 142E MVB R4,PCYLA SET CYL HEAD NOW ON
000BBA 508B J OI28 SVC RETURN

1666 *
1667 *
1668 * NAME HTOE/HTOA (SVC 26/28)
1669 *
1670 * PURPOSE SVC ROUTINE TO CONVERT A STRING OF HEX BYTES
1671 * TO ASCII (HTOA) OR EBCDIC (HTOE) CHARACTERS.
1672 *
1673 * METHOD HTOA/HTOE-
1674 * REGISTER 7 POINTS TO THE CONTROL BLOCK.
1675 *
1676 * CALLING SEQUENCE
1677 *
1678 * XR7 POINTS TO LABEL
1679 *
1680 * SVC HTOE OR HTOA
1681 *
1682 * *LABEL DC A (COUNT) NUMBER OF BYTES OF HEX DATA
1683 * DC A (DADDR) DATA ADDRESS (HEX)
1684 * DC A (BADDR) BUFFER ADDRESS (ASCII OR EBCDIC)

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1684 *
1685 *****
000B8C 4724 0448 1686 HTE EQU *
000B8C 5002 1687 MVA EBCDI,R7 ADDR OF EBCDIC TABLE
000B8C 5002 1688 J HTE1 CONTINUE
000B8C 4724 040E 1689 HTA EQU *
000B8C 71A4 1690 MVA ASC11,R7 ADDR OF ASCII TABLE
000B8C E04A 1691 EQU *
000B8C E600 1692 MVW R1,R5 SAVE CONTENTS R1
000B8C E101 1693 MVWS (R1,QR7),R0 ADDR OF CONTROL BLOCK
000B8C R002 1694 MVWS (R0,ZERO),R6 BYTES OF DATA
000B8C C350 1695 MVWS (R0,TWO),R1 ADDR OF DATA-SOURCE
000B8C 724A 1696 MVWS (R0,FOUR),R0 ADDR OF BUFFER-SINK
000B8C 3341 1697 HTE2 EQU *
000B8C 3225 1698 MVB (R1)+,R3 BYTE OF DATA
000B8C 3362 1700 SW R2,R2 ZERO REG
000B8C 7748 1701 SLL EIGHT,R3 POSITION DATA
000B8C 7768 1702 SLLD FOUR,R2 POSITION DATA
000B8C 8204 1703 SRL TWELV,R3 POSITION DATA
000B8C 8304 1704 AW R7,R2 FIRST CHARACTER ADDR
000B8C BEF6 1705 AW R7,R3 SECOND CHARACTER ADDR
000B8C 7524 1706 MVB (R2),(R0)+ MOVE 1ST CHAR TO BUFFER
000B8C 50E9 1707 MVB (R3),(R0)+ MOVE 2ND CHAR TO BUFFER
000B8C 50E9 1708 JCT HTE2,R6 NEXT HEX BYTE
000B8C 50E9 1709 MVW R5,R1 RESTORE CONTENTS R1
000B8C 50E9 1710 HTERT EQU *
000B8C 50E9 1711 J REL11 SVC RETURN
1712 *****
1713 *
1714 * NAME ETOH/ATOH/ETOA/ATOE (SVC 25/27/29/30)
1715 *
1716 * PURPOSE SVC ROUTINE TO CONVERT A STRING OF ASCII (ATOH)
1717 * OR EBCDIC (ETOH) CHARACTERS TO HEX, OR ASCII
1718 * CHARACTERS TO EBCDIC (ATOE) OR EBCDIC CHARACTERS
1719 * TO ASCII (ETOA).
1720 *
1721 * METHOD REGISTER 7 POINTS TO THE CONTROL BLOCK.
1722 *
1723 * CALLING SEQUENCE
1724 * XR7 POINTS TO LABEL
1725 *
1726 * SVC ETOH OR ATOH OF ETOA OR ATOE
1727 *
1728 * LABEL DC A (COUNT) NUMBER OF CHARACTERS
1729 * DC A (DADDR) DATA ADDRESS-SOURCE
1730 * DC A (BADDR) BUFFER ADDRESS-SINK
1731 *
1732 *****
000B88 4020 035A 0448 1733 ETH EQU *
000B88 5003 1734 MVA EBCDI,WORK ADDR OF EBCDIC TABLE
000B88 5003 1735 J ETH1 CONTINUE
000B88 4020 035A 040E 1736 ATH EQU *
000B88 4020 035C 03FC 1737 MVA ASC11,WORK ADDR OF ASCII TABLE
000B88 4020 035E 0010 1738 EQU *
000B88 402C 0234 0001 1739 MVW HEXTA,WORK1 ADDR OF HEX TABLE
000B88 5013 1740 MVWI SIXTN,WORK2 LENGTH OF TABLE
000B88 4020 035A 0448 1741 OWI ONE,INDIC INDICATE CONVERT TO HEX
000B88 4020 035C 040E 1742 J ETA2 CONTINUE
000B88 4020 035A 0448 1743 ETA EQU *
000B88 4020 035C 040E 1744 MVA EBCDI,WORK ADDR OF EBCDIC TABLE
000B88 5006 1745 MVA ASC11,WORK1 ADDR OF ASCII TABLE
000B88 4020 035A 040E 1746 J ETA1 CONTINUE
000B88 4020 035A 040E 1747 ATE EQU *
000B88 4020 035C 0448 1748 MVA ASC11,WORK ADDR OF ASCII TABLE
000B88 4020 035C 0448 1749 MVA EBCDI,WORK1 ADDR OF EBCDIC TABLE
000B88 4020 035E 0039 1750 ETA1 EQU *
000B88 402D 0234 0001 1751 MVWI FIFT7,WORK2 LENGTH OF TABLE
000B88 71A4 1752 RBTWI ONE,INDIC INDICATE CONVERT TO NON-HEX
000B88 E04A 1753 EQU *
000B88 E600 1754 MVW R1,R5 SAVE CONTENTS R1
000B88 E101 1755 MVWS (R1,QR7),R0 ADDR OF CONTROL BLOCK
000B88 E002 1756 MVWS (R0,ZERO),R6 BYTES OF DATA
000B88 C418 1757 MVWS (R0,TWO),R1 ADDR OF DATA-SOURCE
000B88 C418 1758 MVWS (R0,FOUR),R0 ADDR OF BUFFER-SINK
000B88 4424 0100 1759 ETA3 EQU *
000B88 6B08 035A 1760 MVWI TWOS6,R4 SET REGISTER
000B88 6A08 035C 1761 ETA4 EQU *
000B88 6F08 035E 1762 MVW WORK,R3 CONVERT-FROM TABLE
000B88 8353 1763 MVW WORK1,R2 TO TABLE
000B88 1002 1764 MVW WORK2,R7 LENGTH OF TABLE
000B88 0201 1765 ETA5 EQU *
000B88 BFPC 1766 CB (R3)+,(R1) Q/IS THIS THE CHARACTER
000B88 C486 1767 JE ETA6 YES/GO USE IT
000B88 0101 1768 ABI ONE,R2 NO/SET UP FOR NEXT
000B88 402B 0234 0001 1769 JCT ETA5,R7 TRY NEXT
000B88 1007 1770 ETA6 EQU *
000B88 7C07 0100 1771 AB (R2),R4 ADD IN CONVERTED DATA
000B88 1004 1772 ABI ONE,R1 INCREMENT DATA ADDRESS
000B88 3421 1773 TWI ONE,INDIC Q/CONVERTING TO HEX
000B88 BEEB 1774 JZ ETA7 NO/NOT HEX
000B88 C418 1775 TWI TWOS6,R4 Q/LEFT HALF BYTE
000B88 5002 1776 JZ ETA7 NO/RIGHT HALF BYTE
000B88 C418 1777 SLL FOUR,R4 SHIFT DATA
000B88 BEE5 1778 JCT ETA4,R6 NEXT BYTE
000B88 7524 1779 MVB E4,(R0)+ SAVE LEFT HALF BYTE
000B88 50A3 1780 J ETA8 FINISHED
000B88 50A3 1781 ETA7 EQU *
000B88 50A3 1782 MVB R4,(R0)+ SAVE CONVERTED DATA
000B88 50A3 1783 JCT ETA3,R6 NEXT BYTE
000B88 50A3 1784 ETA8 EQU *
000B88 50A3 1785 MVW R5,R1 RESTORE CONTENTS R1
000B88 50A3 1786 ETA9 EQU *
000B88 50A3 1787 J REL11 SVC RETURN
1788 *****
1789 *
1790 * NAME IREAD (SVC 31)
1791 *
1792 * PURPOSE TO READ THE CONFIGURATION TABLE INTO STG
1793 * OR TO LOAD A MAP FOR THE MDI SUPERVISOR.
1794 *
1795 * METHOD REGISTER 7 POINTS TO A CONTROL BLOCK.
1796 *
1797 *
1798 *****
000C74 1800 IREAD EQU *

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000C74 72E7 1801 IR R2,R7 CHANGE REGS
000C74 D128 17F4 1802 MVD R1,SAV RESTORE REGS
000C74 4724 0234 1803 MVA INDIC,R7 DCP INDICATORS
000C74 0201 1804 ABI ONE,R2 BUMP TO DATA SET NAME
000C80 6A0D 17EE 1805 MVW R2,FNDPG ADDR OF DATA SET TO FIND
000C84 4F4A 1806 TBTS (R7,IRD) SET INDICATOR
000C86 0804 1807 MVBI FOUR,R0 NUM OF BYTES
000C88 4324 03D5 1808 MVA SVNAM,R3 MOVE NAME TO THIS ADR
000C8C 1809 IRADO EQU *
000C8C 82D4 1810 MVB (R2)+,(R3)+ MOVE NAME TO PROPER ADR
000C8E B8FE 1811 JCT IRADO,R0 MOVE ALL THE NAME
000C90 C185 1812 MVVBZ (R2),R1 INSURE A 0 AFTER THE NAME
000C92 6802 0EF2 1813 B LP06 GO LOAD THE DATA SET
000C96 1814 IRAD1 EQU *
000C96 D120 17F4 1815 MVD SAV,R1 RESTORE REG'S
000C9A 0205 1816 ABI FIVE,R2 UPDATE PAST NAME
000C9C A548 1817 MVWS R5,(R1,QR5) SAVE CONDITION
000C9E 6B0D 1724 1818 MVW R3,PRTBU NEXT AVAIL STG ADR
000CA2 4324 1724 1819 MVA PRTBU,R3 ADDR OF DATA
000CA6 0D02 1820 KVBI TWO,R5 BYTES TO MOVE
000CA8 1821 IRAD2 EQU *
000CA8 8394 1822 MVB (R3)+,(R2)+ MOVE THE ADR
000CAA BDFE 1823 JCT IRAD2,R5 TO THE SAVE AREA
000CAC 0804 1824 MVBI FOUR,R0 NUMBER OF BYTES
000CAE 4224 03D5 1825 MVA SVNAM,R2 ADDR OF H.D.I. NAME
000CB2 4324 055F 1826 MVBI PRGN1,R3 MOVE NAME TO THIS ADR
000CB6 1827 IRAD5 EQU *
000CB6 82D4 1828 MVB (R2)+,(R3)+ MOVE NAME TO PROPER ADR
000CB8 B8FE 1829 JCT IRAD5,R0 MOVE ALL BYTES
000CBA 50DB 1830 J ETA9 SVC RETURN
1831 *****
1832 *
1833 * NAME IWRIT (SVC 32)
1834 *
1835 * PURPOSE TO WRITE DATA SETS FOR THE UTILITY PROGRAMS
1836 *
1837 * METHOD REGISTER 7 POINTS TO A CONTROL BLOCK.
1838 *
1839 *****
000CBC 690D 17F4 1842 IWRIT EQU *
000CBC 8938 0014 17EE 1843 MVB R1,SAV SAVE R1
000CC0 4724 0234 1844 MVW (R1,QR7)*,FNDPG ADDR OF NAME OF DATA SET TO FIND
000CCA 4F4E 1845 MVA INDIC,R7 ADDR OF DCP INDICATORS
000CCC 4020 03E4 0CD6 1846 TBTS (R7,CNRUN) IND CONFIG TABLE REQ
000CD2 6802 0EF2 1847 MVA IWR10,CNFRRT RETURN ADR
000CD6 1848 B LP06 GO GET THE TABLE
000CD6 6A08 17F4 1849 IWR10 EQU *
000CD6 E38A 1850 MVB SAV,R2 GET THE INITIAL POINTER
000CDA 0302 1851 MVWS (R2,QR7),R3 ADDR OF NEW TABLE
000CDE D2C0 1852 ABI TWO,R3 ADDR OF NEW TABLE
000CE0 1853 MVD (R3),R2 PUT ADR IN R2
000CE0 000C 1854 IWR15 EQU *
000CE2 000C 1855 ABI TWELV,R0 BUMP TO THE
000CE2 CD10 1856 IWR17 EQU *
000CE4 1857 MVW (R0)+,R5 WORD COUNT OF THIS SECTOR
000CE4 8A14 1858 IWR20 EQU *
000CE6 03FF 1859 MVW (R2)+,(R0)+ MOVE IN THE NEW TABLE
000CE8 1001 1860 ABI M1,R3 WORD COUNT FOR FULL TABLE
000CEA EDFC 1861 JZ IWR30 WHEN WORD COUNT IS EXHAUSTED QUIT
000CEA 1862 JCT IWR20,R5 KEEP IT MOVING
000CF0 6F03 11C8 1863 IWR30 EQU *
000CF0 75A7 1864 BAL DSKWR,R7 GO WRITE THIS SECTOR
000CF2 6801 0F6C 1865 IR R5,5 ANY ERRORS
000CF6 7367 1866 BNZ LP49 IF ERROR--TO PRINT MSG
000CFA 100E 1867 IR R3,R3 TEST FOR ZERO BYTE COUNT
000CF8 D460 0018 1868 JZ IWR40 J-BYTE COUNT EXHAUSTED
000CFE 0401 1869 MVD (R1,QA0V1),R4 PREPARE
000D00 05FF 1870 ABI ONE,R4 TO GET THE
000D02 1009 1871 ABI M1,R5 NEXT SECTOR
000D04 D468 0018 1872 JZ IWR40 J-TO END IF THATS ALL
000D08 6F03 11C2 1873 MVD R4,(R1,QA0V1) SAVE THE NEW COMPUTATIONS
000D0C 75A7 1874 BAL DSKWR,R7 GO GET THE NEXT SECTOR
000D0E 6801 0F6C 1875 IR R5,5 ANY PROBLEMS
000D12 0002 1876 BNZ LP45 E-YES--GO PRINT THE MSG
000D14 50E6 1877 J TWO,R0 BUMP POINTER
000D16 50E6 1878 J IWR17 GO REWRITE THIS SECTOR
000D18 6908 17F4 1879 IWR40 EQU *
000D1A 50AB 1880 MVB SAV,R1 RESTORE R1
1881 J ETA9 SVC RETURN
1882 *****
1883 *
1884 * NAME STRIT
1885 *
1886 * PURPOSE THIS ROUTINE HANDLES INTERRUPTS FROM ALL DEVICES
1887 * NOT ASSIGNED TO THE DCP AND PASSES
1888 * CONTROL TO THE PROGRAM ASSIGNED THAT DEVICE.
1889 *
1890 * METHOD XR7 AND THE INDICATORS SET BY THE INTERRUPT ARE
1891 * PASSED TO THE DIAGNOSTIC PROGRAM WHICH THE DEVICE
1892 * INTERRUPTING IS ASSIGNED TO. IF IT IS A STRAY
1893 * INTERRUPT, THE DEVICE IS RESET. CONTROL IS THEN
1894 * RETURNED TO THE DIAGNOSTIC PROGRAM INTERRUPTED.
1895 *
1896 *****
000D1C 700F 1897 ST01 EQU *
000D1C 6301 1898 CPLSR R0 GET INDICATORS SET BY INT
000D20 4124 02BC 1899 DIS SM DISABLE INTERRUPTS
000D20 4124 02BC 1900 MVA STLSB,R1 ADDR OF A QUE BLOCK TO USE TO
1901 * BUILD LSB BR TO DIAGNOSTIC
1902 * PROGRAM WITH
1903 *
1904 * MVWS R7,(R1,QR7) SAVE ISB AND DEVICE ADDR
1905 * RBTB HEXFF,R0 RESET LOW ORDER 8 BITS OF LSR
1906 * BUILDING
1907 *
1908 * MVA PID,R3 PROG START
1909 * MVWS (R3,HDVTB),R3 DEV TABLE START
1910 * MVB (R3,ONE),R5 GET THE NUMBER OF DEVICES
1911 * ABI TWO,R3 RUMP PAST CNTRL
1912 * MVA DVTAB,R2 SAVED CICB POINTERS
1913 * TB (R3,PASTR) IS THE PASS STRAY BIT ON
1914 * JON ST25 J-YES
1915 *
1916 * MVB R3,R4 SAVE R3
1917 * CB (R3),R7 IS THIS THE DEVICE
1918 * JE ST20 J-YES

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000D44 0202 1918 ABI TWO,R2 BUMP CIBC POINTER
000D46 030A 1919 ABI TEN,R3 BUMP TABLE POINTER
000D48 4C11 1920 TBT (R4,SEVTN) WAS THE CHAIN BIT ON
000D4A 12F9 1921 JON ST05 B/YES DONT DECREMENT THE COUNT
000D4C BDF8 1922 JCT ST05,R5 J-CHECK THEM ALL
000D4E 1923 ST05A EQU *
000D4E C520 03D9 1924 MVB STFLG,R5 IS THE STRAY INT IN PROC
000D52 1818 1925 JNZ ST10 J-YES--IGNORE THIS ONE
000D54 6D08 179C 1926 MVW PRTSW,R5 IS THE PRINTER BUSY
000D58 1815 1927 JNZ ST10 J-YES--IGNORE THIS ONE
000D5A C728 037B 1928 MVR R7,SIRS DEVICE ADR TO RESET
000D5E 8928 0014 03BE 1929 MVW (R1,QR7),UIOMS GET THE ISB
000D64 4724 039A 1930 MVWS (R1,QR7),R0 SAVE THE ISB
000D66 4724 039A 1931 UNEXP,R7 CONTROL BLOCK FOR CONVERT
000D6A 601A 1932 SVC HTOE GO TO CONVERT
000D6C 8028 02D8 03D9 1933 MVB HEXFF,STFLG T/ON INDICATOR
000D72 4724 0556 1934 MVA UNFIO,R7 GET THE MSG ADR
000D76 6000 1935 SVC OUT GO OUT PUT THE MSG
000D78 680C 037A 1936 IO SIRST IDCB-ISSUE RESET
000D7C 4524 0160 1937 MVWI THP52,R5 NUM OF SVC IDLE'S
000D80 1938 ST06 EQU *
000D80 6002 1939 SVC IDLE WAIT FOR THE RESET TO SETTLE
000D82 BDFE 1940 JCT ST06,R5
000D84 1941 ST10 EQU *
000D84 6201 1942 EN SM ENABLE INTERRUPTS
000D86 6802 05P0 1943 EN SCHD2 RETURN
000D8A 1944 ST20 EQU *
000D8A 4B10 1945 TBT (R3,SIXTN) WAS IT ASSIGNED
000D8C 10E0 1946 JOFF ST05A J-NO STRAY
000D8E 4B14 1947 TBT (R3,CICBT) WAS IT CONNECTED
000D90 10DE 1948 JOFF ST05A J-NO STRAY
000D92 1949 ST25 EQU *
000D92 7801 00D0 1950 AWI TWO08,R0 SET IN PROCESS FLAG BIT
000D96 A042 1951 MVWS R0,(R1,QLSR) SAVE LSR BUILT
000D98 CA80 1952 MVW (R2),R2 UPDATE TO CIBC
000DA2 8868 03DA 0012 1953 MVW LSSVC,(R1,QR6) TO THIS DEV IN DIAGNOSTIC PROB XR6
000DA4 306A 1954 SEL THRTN,R0 ISOLATE INT COND CODE
000DA2 E781 1955 ST30 EQU *
000DA2 1956 MVWS (R2,ORG),R7 GET DIAGNOSTIC PROGRAM RET ADDR IF
1957 * COND CODE EQUALS EXPECTED
1958 * COND CODE
1959 * COND CODE SAME AS EXPECTED
1960 * IF SO BR
1961 * GET ERROR RETURN ADDR
000DA4 C0A4 0007 1962 ST40 EQU *
000DA8 1001 1963 MVWS R7,(R1,QIAR) SET RETURN ADDR OF PROGRAM
000DA8 E782 1964 CPCL R3 GET LEVEL INTERRUPTED ON
000DAC A740 1965 MVWS R3,(R1,QR5) SAVE THE INT LEVEL
000DAE 7878 1966 SELB R3,(R1) GO TO DIAGNOSTIC PROGRAM HANDLING INT
000DB0 A348 1968 *****
000DB2 5B46 1969 *****
1970 * NAME OPCMD
1971 *
1972 * PURPOSE DECODE THE OPERATOR REQUEST AND BRANCH TO THE
1973 * PROPER ROUTINE TO HANDLE IT.
1974 *
1975 * METHOD R2 = ADDRESS OF THE BUFFER PASSED BY THE INPUT
1976 * SERVICE ROUTINE.
1977 *
1978 * ON BRANCHING TO THE SPECIFIED ROUTINE,
1979 * R2 WILL POINT TO THE 1ST NON-SPACE CHARACTER
1980 * PAST THE OPTION WORD.
1981 *
1982 *****
000DB4 821F 0481 1983 OPCMD EQU *
000DB4 10FD 1984 CB (R2)+,EBCBK FIND 1ST NON-SPACE CHAR AFTER
000DBA 02FF 1985 JE OPCMD LOOP TILL FOUND
000DBA C180 1986 ABI M1,R2 GET ADDR NON-SPACE CHAR
000DBE F1E2 1987 MVB (R2),R1 COMMAND
000DC0 6800 147E 1988 CBI CHARS,R1 DUMP STORAGE REQUESTED
000DC4 0810 1989 BE DSRTN BR/YES
000DC6 0900 1990 MVBI SIXTN,R0 NUMBER OF COMMANDS
000DC8 81A3 0448 1991 MVBI ZERO,R1 ZERO REG FOR POINTER
000DCC 1003 1992 OPCM1 EQU *
000DCC 0101 1993 CB (R1,EBCDI),(R2) FIND EBCDIC COMMAND
000DCE 0101 1994 JE OPCM2 BR/THIS IS THE ONE
000DD0 E8FB 1995 ABI ONE,R1 INCREMENT POINTER
000DD2 507D 1996 JCT OPCM1,R0 CHECK THE NEXT ONE
000DD4 1997 J LP00 INV REQ MESSAGE
000DD4 8128 03FC 036E 1998 OPCM2 EQU *
000DDA 0201 1999 MVB (R1,HEXTA),CMND GET THE COMMAND IN HEX
000DDC 821B 0481 2000 ABI ONE,R2 STEP PAST THE COMMAND
000DDC 10FD 2001 OPCM3 EQU *
000DE0 02FF 2002 CB (R2)+,EBCBK FIND 1ST NON-SPACE CHAR AFTER
000DE2 02FF 2003 JE OPCM3 LOOP TILL FOUND
000DE4 4324 1800 2004 ABI M1,R2 GET ADDR NON-SPACE CHAR
000DE8 C120 036E 2005 OPCM EQU *
000DEC 3109 2006 MVA PTD,R3 ADDRESS OF PROGRAM START
2007 MVB CMND,R1 GET THE COMMAND
2008 SLL ONE,R1 MULTIPLY BY TWO
2009 *
2010 E (R1,CMDB)* BRANCH TO PROPER ROUTINE
2011 *
2012 *****
2013 * NAME NORTN
2014 *
2015 * PURPOSE RESPOND WITH NO TO PROBLEM PROGRAM
2016 *
2017 * METHOD THE EBCDIC EQUIVALENT OF 'N' IS PASSED
2018 * TO THE PROBLEM PROGRAM AS A RESPONSE X'D5'.
2019 *
2020 * CALLING SEQUENCE
2021 *
2022 * 0
2023 *
2024 * WHERE 0 IS THE NO COMMAND CODE
2025 *
2026 *****
2027 *
2028 *****
2029 NORTN EQU *
2030 MVW NORES,(R2) SET RESPONSE TO C'N'
2031 NORT1 EQU *
2032 MVB HEX00,(R2,ONE) SET IN TERMINATE CHARACTER
2033 B REPGM GO TO PROGRAM RESPONSE

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2035 *****
2036 *****
2037 * NAME YSRTN
2038 *
2039 * PURPOSE RESPOND WITH YES TO PROBLEM PROGRAM
2040 *
2041 * METHOD THE EBCDIC EQUIVALENT OF 'Y' IS PASSED
2042 * TO THE PROBLEM PROGRAM AS A RESPONSE X'E8'.
2043 *
2044 * CALLING SEQUENCE
2045 *
2046 * 1
2047 *
2048 * WHERE 1 IS THE YES COMMAND CODE
2049 *
2050 *****
2051 YSRTN EQU *
2052 MVB YSRRES,(R2) SET RESPONSE TO C'Y'
2053 J NORT1 GO TO PROGRAM RESPONSE
2054 *****
2055 *****
2056 *
2057 * NAME AMRTN
2058 *
2059 * PURPOSE SET ON AUTOMATIC MODE
2060 *
2061 * METHOD THE AUTOMATIC MODE SWITCH IS TURNED
2062 * ON IN THE DCP INDICATORS.
2063 *
2064 * CALLING SEQUENCE
2065 *
2066 * 2
2067 *
2068 * WHERE 2 IS THE AUTOMATIC MODE COMMAND CODE
2069 *
2070 *****
2071 AMRTN EQU *
2072 MVA INDIC,R7 ADR OF DCP IND
2073 TBT (R7,LODED) TEST PGM LOADED BIT
2074 JON LP00 RETURN
2075 TBTR (R7,AUTO) RESET BIT TO AUTO MODE
2076 J MRTN1 RETURN
2077 *****
2078 *
2079 * NAME MMRTN
2080 *
2081 * PURPOSE SET ON MANUAL MODE
2082 *
2083 * METHOD THE MANUAL MODE SWITCH IS TURNED
2084 * ON IN THE DCP INDICATORS.
2085 *
2086 * CALLING SEQUENCE
2087 *
2088 * 3
2089 *
2090 * WHERE 3 IS THE MANUAL MODE COMMAND CODE
2091 *
2092 *****
2093 *****
2094 MMRTN EQU *
2095 MVA INDIC,R7 ADR OF DCP IND
2096 TBT (R7,LODED) TEST PGM LOADED BIT
2097 JON LP00 RETURN
2098 TBTS (R7,AUTO) SET BIT TO MANUAL MODE
2099 TBTR (R7,NXTVT) RESET NEXT ENTRY BIT IF ON
2100 TBTR (R7,LDIAG) RESET LOOP DIAGNOSTIC PACKAGE
2101 MRTN1 EQU *
2102 MVWI RECD1,R4 DCP ENTER CODE
2103 SECON R4 WRITE TO THE LIGHTS
2104 B RETRN PRINT ENTER MESSAGE
2105 *****
2106 *
2107 * NAME ULOOP
2108 *
2109 * PURPOSE SET ON LOOP DIAGNOSTIC PACKAGE
2110 *
2111 * METHOD THE LOOP DIAG PACKAGE IS TURNED
2112 * ON IN THE DCP INDICATORS.
2113 *
2114 * CALLING SEQUENCE
2115 *
2116 * 4
2117 *
2118 * WHERE 4 IS THE LOOP DIAGNOSTIC PACKAGE INDICATOR
2119 *
2120 *****
2121 *****
2122 ULOOP EQU *
2123 MVA INDIC,R7 ADR OF DCP IND
2124 TBTS (R7,LDIAG) SET BIT TO LOOP DIAG PACKAGE
2125 J MRTN1 PRINT ENTER
2126 *****
2127 *
2128 * NAME ACRTN
2129 *
2130 * PURPOSE RESET THE ALTERNATE ASSIGNMENT
2131 *
2132 * METHOD THE ALTERNATE CONSOLE SWITCH IS TURNED
2133 * OFF. THE STOP ON MESSAGE IS TURNED ON.
2134 * AND AN UN-PREPARE IS ISSUED TO THE DEVICE.
2135 *
2136 * CALLING SEQUENCE
2137 *
2138 * 5
2139 *
2140 * WHERE 5 IS THE ALTERNATE CONSOLE COMMAND CODE
2141 *
2142 *****
2143 *****
2144 ACRTN EQU *
2145 MVB OPADR,R3 ADR OF ALT CONSOLE
2146 MVB R3,DIPR PUT IT IN THE UN-PREP IDCIB
2147 MVWZ PRTSW,R3 POSITION FOR WORD ADR
2148 MVA STRT1,ACVTR* CHANGE INT VECTOR
2149 IO DIPRE ISSUE THE I/O
2150 MVA INDIC,R7 ADR OF DCP INDICATORS
2151 TBTR (R7,ALTDV) RESET ALT DEV IND
2152 TBTS (R7,STOP) T/ON STOP ON MSG BIT
000E00 80A0 046A 2051
000E04 50F8 2053
000E06 4724 0234 2072
000E0A 4F04 2073
000E0C 1260 2074
000E0E 4F80 2075
000E10 5007 2076
000E12 4724 0234 2094
000E12 4F04 2095
000E16 4F04 2096
000E18 125A 2097
000E1A 4F04 2098
000E1C 4F88 2099
000E1E 4F88 2100
000E20 4424 3800 2102
000E24 7890 2103
000E26 6802 0610 2104
000E2A 4724 0234 2123
000E2A 4F4D 2124
000E30 50F7 2125
000E32 C320 0240 2144
000E32 C328 0357 2145
000E36 CB25 179C 2147
000E3E 4030 178E 0378 2148
000E44 680C 0356 2149
000E48 4724 0234 2150
000E4C 4F87 2151
000E4E 4F46 2152

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000E50 50E7 2153 J MRTN1 RETURN
2155 *****
2156 *****
2157 * NAME RSPGM
2158 *
2159 * PURPOSE ALLOW THE OPERATOR TO RESUME A DIAGNOSTIC PROGRAM
2160 * THAT HAS BEEN HALTED.
2161 *
2162 * METHOD
2163 *
2164 * CALLING SEQUENCE
2165 *
2166 * 6
2167 *
2168 * WHERE 6 IS THE RESUME PROGRAM COMMAND CODE
2169 *
2170 *
2171 *****
2172 RSPGM EQU *
2173 MVW SVCPT,R1 RESET R1 TO POINT
2174 ABI M28,R1 AT SVC LSB
2175 MVA INDIC,R7 ADR FOR DCP INDICATORS
2176 TBT (R7,LODED) IS PGM LOADED IND ON
2177 JOFF BPPGM B-NO--PRINT MSG
2178 B SVCRT B-NO--RETURN BY SVC
2179 *****
2180 *
2181 *
2182 * NAME SMRTN
2183 *
2184 * PURPOSE STOP AFTER EACH MESSAGE DISPLAYED ON THE
2185 * PROGRAMMER'S CONSOLE.
2186 *
2187 * METHOD THE STOP AFTER EACH MESSAGE SWITCH IS TURNED
2188 * ON IN THE DCP INDICATORS.
2189 *
2190 * CALLING SEQUENCE
2191 *
2192 * 7
2193 *
2194 * WHERE 7 IS THE STOP AFTER MESSAGE COMMAND CODE
2195 *
2196 *****
2197 SMRTN EQU *
2198 MVA INDIC,R7 ADR OF DCP IND
2199 TBTS (R7,STOP) SET BIT TO STOP AFTER MSG
2200 J MRTN1 RETURN
2201 *****
2202 *
2203 *
2204 * NAME SORTN
2205 *
2206 * PURPOSE RESET STOP AFTER EACH MESSAGE DISPLAYED ON THE
2207 * PROGRAMMER'S CONSOLE.
2208 *
2209 * METHOD THE STOP AFTER EACH MESSAGE SWITCH IS TURNED
2210 * OFF IN THE DCP INDICATORS.
2211 *
2212 * CALLING SEQUENCE
2213 *
2214 * 8
2215 *
2216 * WHERE 8 IS THE STOP AFTER MESSAGE OFF COMMAND CODE
2217 *
2218 *****
2219 SORTN EQU *
2220 MVA INDIC,R7 ADR OF DCP IND
2221 TBTR (R7,STOP) RESET STOP IND
2222 J MRTN1 RETURN
2223 *****
2224 *
2225 *
2226 * NAME TPPGM
2227 *
2228 * PURPOSE TERMINATE PROGRAM VIA OPERATOR REQUEST
2229 *
2230 * METHOD THE TERMINATE SWITCH IS TURNED ON IN THE
2231 * PROGRAM HEADER.
2232 *
2233 * CALLING SEQUENCE
2234 *
2235 * 9
2236 *
2237 * WHERE 9 IS THE TERMINATE PROGRAM COMMAND CODE
2238 *
2239 *****
2240 TPPGM EQU *
2241 ABI OPWRD,R3 DISP TO OPTION WORD
2242 TBTS (R3,TPGSW) SET TERM PROGRAM OPTION BIT
2243 MVA INDIC,R7 GET DCP INDICATORS
2244 TBTR (R7,LOOP) RESET LOOP IND IF ON
2245 J MRTN1 RETURN TO CALLER
2246 *****
2247 *
2248 *
2249 * NAME BPPGM
2250 *
2251 * PURPOSE THIS ROUTINE IS USED TO START A PROGRAM ALREADY
2252 * LOADED INTO STG.
2253 *
2254 * METHOD A QUE BLOCK IS GENERATED AND PLACED ON LEVEL
2255 * 3 RETURN QUE. THE PROGRAM WILL BE STARTED AT
2256 * THE ADDRESS SPECIFIED IN THE DIAGNOSTIC PROGRAM'S
2257 * INITIAL EXECUTION POINTER.
2258 *
2259 * CALLING SEQUENCE
2260 *
2261 * A
2262 * B 'NAME'
2263 *
2264 * WHERE A IS THE BEGIN COMMAND - AUTO MODE
2265 * B IS THE BEGIN COMMAND - MANUAL MODE
2266 * NAME IS THE FOUR HEX DIGIT PROGRAM ID.
2267 *
2268 *****
2269 BPPGM EQU *
2270 MVW FIGRN,R7 RESET THE INIT LOAD IND
2271 BPPG EQU *

000E52 6908 0010
000E56 01E4
000E58 4724 0234
000E5C 4F04
000E5E 1010
000E60 6802 07D4

000E64 4724 0234
000E68 4F46
000E6A 50DA

000E6C 4724 0234
000E70 4F86
000E72 50D6

000E74 030E
000E76 4B40
000E78 4724 0234
000E7C 4F81
000E7E 50D0

000E80 C725 024A
000E84

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000E84 4020 0010 0284 2272 MVA SVCLB,SVCPT RESET LSB POINTER
000E8A 4724 0234 2273 MVA INDIC,R7 ADR OF DCP INDICATORS
000E8B 80A3 049A 2274 CB HEX00,(R2) IS THIS A REQ FOR A DIAG
000E92 1005 2275 JE BPPA J-NO--GET THE FIRST ONE
000E94 8028 02D8 03E2 2276 MVB HEXFFF,INTLD T/ON IND TO TAKE THIS ONE
000E9A 4F00 2277 TBT (R7,AUTO) ARE WE IN AUTO MODE
000E9C 1018 2278 JOFF LP00 J-YES-RETURN
000E9E *
000E9E 4F04 2279 BPPA EQU *
000EA0 1019 2280 TBT (R7,LODED) IS A PGM LOADED
000EA2 80A3 049A 2281 JOFF LP01 B-NO--GO LOAD
000EA6 1007 2282 CB HEX00,(R2) WAS A DIAGNOSTIC SPECIFIED
000EA8 4024 055F 2283 JE BPP1 J-NO--BEGIN THE ONE LOADED
000EAC 7284 2284 MVA PRGN1,R0 ADR FOR PROG NAME
000EAE 0D04 2285 MVW R2,R4 MOVE POINTER TO R4
000EB0 * 2286 MVB I FOUR,R5 BYTE COUNT
000EB0 8417 2287 BPPG1 EQU *
000EB2 1810 2288 CB (R4)+,(R0)+ COMPARE THE NAMES
000EB4 BDFD 2289 JNE LP01 GO GET PGM
000EB6 * 2290 JCT BPPG1,R5
000EB6 4724 0512 2291 BPP1 EQU *
000EB6 6000 2292 MVA PARL5,R7 STARTED MESSAGE
000EBC * 2293 SVC OUT PRINT MESSAGE
000EBC 6201 2294 BPP2 EQU *
000EBC 0F03 2295 EN SM
000EBC 6004 2296 MVB I THREE,R7 ENABLE THE SUMMARY MASK
000EC0 * 2297 SVC CHANGE SET UP FOR LEVEL 3
000EC2 6872 0006 2298 B (R3,HP5A)* CHANGE LEVEL
2299 ***** START THE DIAGNOSTIC PROGRAM
2300 *****
2301 *
2302 * NAME LPPGM
2303 *
2304 * PURPOSE THIS ROUTINE LOADS A PROGRAM INTO STG.
2305 * IT DOES NOT START THE PROGRAM
2306 *
2307 * METHOD THE VTOC IS SEARCHED FOR THE NAME KEYED IN BY
2308 * THE OPERATOR AND WHEN FOUND IT IS LOADED INTO
2309 * THE LOCATION SPECIFIED IN THE HEADER.
2310 *
2311 * CALLING SEQUENCE
2312 *
2313 * C 'NAME'
2314 *
2315 * WHERE C IS THE COMMAND TO LOAD A PROGRAM
2316 * NAME IS THE FOUR HEX DIGIT PROGRAM ID.
2317 *
2318 *****
2319 LPPGM EQU *
2320 MVA INDIC,R7 DCP INDICATORS
2321 TBT (R7,AUTO) IN AUTO MODE?
2322 JON LP01 B-NO--O.K.
2323 EQU *
2324 MVA INCMD,R7 INV REQ MSG ADR
2325 J LP55 RETURN TO SCHED
2326 LP01 EQU *
2327 MVA PRGN1,R0 ADR FOR PROG NAME
2328 MVB I FIVE,R7 BYTE COUNT
2329 LP05 EQU *
2330 MVB (R2)+,(R0)+ PUT DIAGNOSTIC NAME IN SAVE AREA
2331 JZ LP005 J-ON ZERO ENTRY
2332 JCT LP05,R7 CONTINUE FOR ALL THE NAME
2333 LP005 EQU *
2334 ABI M1,R0 BACK ONE BYTE
2335 MVB EBCBK,(R0) REPLACE HEX00 WITH BLANK
2336 LP05A EQU *
2337 MVA PRGN1,FNDPG ADR OF DATA SET NAME TO FIND
2338 MVA UDIND,R5 ADR OF IND
2339 TBTS (R5,ZERO) T/ON IND TO LOAD CONFIG TABLE
2340 LP06 EQU *
2341 TETR (R7,NXTVT) RESET NEXT BIT
2342 MVA PCKLB,R1 QUE BLOCK ADR
2343 MVW R6,PRTBU SAVE R6
2344 BAL FNDDS,R7 GO FIND IN VTOC
2345 MVW PRTBU,R6 RESTORE R6
2346 IR R3,R5 SET INDICATORS
2347 JZ LP07 BR IF FOUND
2348 CBI IWO,R5 IS IT A DISKETTE ERROR
2349 JE LP49 J-YES
2350 MVA INDIC,R7 GET DCP INDICATORS
2351 TBTR (R7,IRD) IS THE SVC REQ THIS
2352 BON IRAD1 B-YES
2353 J LP49 J-DECODE C.C.
2354 LP07 EQU *
2355 MVWS (R0,BOE),R4 SAVE 1ST SECTOR ADDR DATA SET
2356 MVWS (R0,EOE),R5 SAVE END ADR +1
2357 SW R4,R5 GET THE SECTOR NUMBER
2358 LP07A EQU *
2359 MVD R4,(R1,QAV1) SAVE
2360 LP07B EQU *
2361 MVA INDIC,R7 ADR OF DCP INDICATORS
2362 TBT (R7,CNRUN) IS THIS THE CONFIG TABLE
2363 JON LP08 J-YES
2364 MVD (R0)+,PRGN SAVE THE PROGRAM NAME
2365 MVB (R0),PRGN+FOUR FIVE BYTES
2366 LP08 EQU *
2367 BAL DSKRD,R7 GO READ SECTOR
2368 IR R5,R5 SET INDICATORS
2369 JNZ LP49 BR IF DISKETTE ERROR
2370 MVA INDIC,R7 ADR OF DCP INDICATORS
2371 TBTR (R7,CNRUN) WAS THIS THE CONFIG TABLE
2372 BON CHEBK B-YES
2373 MVA DBUF+VHDLG,R0 ADDR OF INFORMATION PAST HEADER
2374 LP09 EQU *
2375 MVB (R0)+,R3 PROGRAM LOAD ADR
2376 MVW (R0)+,R7 PROGRAM LOAD ADR
2377 SLL ONE,R7 NUM OF DATA BYTES
2378 MVFN (R0),(R3) DATA WORD
2379 MVD (R1,QAV1),R4 GET SECTOR ADDR AND NUMBER SECT
2380 ABI ONE,R4 UPDATE SECTOR ADDR
2381 ABI M1,R5 SEE IF READ ALL SECTORS
2382 JZ LP100 IF SO BR
2383 MVD R4,(R1,QAV1) SAVE
2384 BAL DSKRD,R7 GO READ NEXT SECTOR
2385 IR R5,R5 SET THE INDICATORS
2386 JNZ LP49 BR IF ERROR

LOCTR	OBJECT TEXT	STMT	SOURCE STATEMENT	COPYRIGHT IBM CORP 1976
000F66	4024 132C	2387	MVA DBUF,R0	ADR OF DISKETTE BUFFER
000F6A	50EE	2388	J LP09	GO PROCESS SECTOR
000F6C	4724 04FC	2389	EQU *	
000F70	F502	2390	MVA LPB,R7	SET UP TO PRINT MSG 4
000F72	100F	2391	CBI TWO,R5	SEE IF DISKETTE ERROR
000F74	4724 0234	2392	JE LP55	BR IF ERR
000F78	4F8E	2393	MVA INDIC,R7	ADR OF DCP INDICATORS
000F7A	1202	2394	TBTR (R7,CNRUN)	IS THIS A CONFIG TABLE
000F7C	4F00	2395	JON LP50	J-YES
000F7E	100B	2396	TBT (R7,AUTO)	IN AUTO MODE
000F80	0F04	2397	JOFF LP60	J-YES
000F82	4624 0504	2398	EQU *	
000F86	6808 17EE	2399	MVBI FOUR,R7	LENGTH OF NAME
000F8A	2BC4	2400	MVA LPG5A,R6	DESTINATION ADDRESS
000F8C	03FC	2401	MVW FNDDPG,R3	ADDRESS OF NAME LOCATION
000F8E	4724 050A	2402	MVFN (R3),(R6)	MOVE NAME
000F92	6000	2403	ABI M4,R3	RESET POINTER
000F94	5048	2404	MVA LPC,R7	SET UP TO PRINT MSG 5
000F96	4F0D	2405	EQU *	
000F98	1003	2406	SVC OUT	
000F9A	4F8C	2407	J LP120	RETURN TO ENTER
000F9C	6802 05B2	2408	EQU *	
000FA0	4724 051C	2409	TBT (R7,LDIAG)	IS LOOP DIAG PACKAGE ON
000FA4	50F6	2410	JOFF LP70	J-NO
000FA6	C625 056A	2411	TBTR (R7,TUIDS)	RESET INDICATOR
000FA8	4624 1808	2412	B RESTR	B-YES--START OVER
000FAE	0808 0000	2413	EQU *	
000FB2	0802	2414	MVA REMG1,R7	ADR OF DCP READY MSG
000FB4	4E10	2415	J LP55	
000FB6	1013	2416	EQU *	
000FB8	862B 0001 03E0	2417	MVBZ PRGNB,R6	MSG STOPPER
000FBC	1007	2418	MVA DEVPT,R6	POINTER TO DEVICE TABLE
000FBE	6F08 055E	2419	MVW (R6),R6	GET THE TABLE ADDRESS
000FC0	7FE4 FFC3	2420	ABI TWO,R6	BUMP TO DEVICE TYPE
000FC2	CF24 03C0	2421	TBT (R6,UDTAS)	WAS A DEVICE ASSIGNED
000FC4	1008	2422	JOFF LP105	J-NO
000FCE	8608 0573	2423	CB (R6,ONE),HEX3E	ARE YOU SURE
000FD2	4724 03A6	2424	JE LP104	J-RIGHT YOU ARE
000FD6	601A	2425	MVW PRGN,R7	ADDRESS OF THE PROGRAM NAME
000FDB	8028 0481 056A	2426	RBTWI ZER3C,R7	CLEAR THE UNWANTED BITS
000FDE	802E 03CE 055E	2427	CW FOX30,R7	IS THIS A DIAGNOSTIC
000FE2	1006	2428	JE LP105	J-YES
000FE4	4724 03AC	2429	EQU *	
000FE6	6019	2430	MVB (R6),PRGNA	SET UP ADR TO BE CONVERTED
000FE8	4724 057C	2431	MVA DEVAD,R7	CONTROL BLOCK
000FF0	6000	2432	SVC HTOE	CONVERT TO PRINT
000FF2	4624 0234	2433	MVB EBCBK,PRGNE	T/OFF MESSAGE STOPPER
000FF4	4E44	2434	EQU *	
000FF6	4E8A	2435	CB OCHAR,PRGN	IS THIS AN OVERLAY
000FF8	6A00 0C96	2436	JE LP103	J-YES
000FFA	C320 024A	2437	MVA CNVNM,R7	CONTROL BLOCK
000FFC	1802	2438	SVC ETOH	CONVERT TO PRINT
001000	C325 03E2	2439	MVA LPD,R7	SET UP TO PRINT THE LOADED MSG
001002	6F03 061E	2440	SVC OUT	PRINT THE MSG
001004	4E8C	2441	EQU *	
001006	1003	2442	MVA INDIC,R6	ADR FOR DCP INDICATORS
001008	90E8 03C8 0012	2443	TBTS (R6,LODED)	T/ON LOADED BIT
001010	4800	2444	TBTR (R6,TRD)	IS MDI MAP READ SVC
001012	6800 0EB6	2445	BON IR01	B-YES
001014	802B 036E 036D	2446	MVB FIGEN,R3	CONFIG RUN?
001016	6800 0EB6	2447	JNZ LP106	J-YES
001018	001026	2448	MVBZ INTLD,R3	CLEAR INITIAL LOAD IND
001020	6802 0610	2449	EQU *	
001022	4800	2450	BAL UDTID,R7	TRY TO ASSIGN A DEVICE
001024	6800	2451	TBTR (R6,TUIDS)	IS SAVE T.U. I.D.'S ON
001026	802B 036E 036D	2452	JOFF LP107	J-NO
001028	6800 0EB6	2453	MVD TUNAM,(R3,HTUID)	GIVE THE NAME TO MDI
001030	4800	2454	EQU *	
001032	6800	2455	TBT (R6,AUTO)	IN AUTOMATIC MODE
001034	802B 036E 036D	2456	BOFF BPP	B-YES--BEGIN DIAGNOSTIC PGM
001036	6800 0EB6	2457	CB CMD,OPTB	WAS THE COMND A ** B **
001038	4800	2458	BE BPP1	B-YES
001040	6802 0610	2459	EQU *	
001042	4800	2460	B RETRN	PRINT ENTER MSG
001044	6802 0610	2461	*****	*****
001046	4800	2462	NAME OOPGM	
001048	6802 0610	2463	PURPOSE SET BITS OFF/ON IN DIAGNOSTIC PGM OPTION WORDS.	
001050	4800	2464	METHOD THE OPTION WORDS KEYED IN ARE USED AS A MASK TO SET OR RESET BITS IN THE SPECIFIED DIAGNOSTIC PROGRAM OPTION WORDS.	
001052	6802 0610	2465	CALLING SEQUENCE	
001054	4800	2466	D XXXXXXXY	
001056	6802 0610	2467	E XXXXXXXY	
001058	4800	2468	WHERE D IS THE COMMAND TO SET BITS ON IN A DIAGNOSTIC PROGRAM'S OPTION WORDS.	
001060	6802 0610	2469	E IS THE COMMAND TO SET BITS OFF IN A DIAGNOSTIC PROGRAM'S OPTION WORDS.	
001062	4800	2470	XXXX IS THE BITS IN HEX TO SET OFF OR ON 1ST WORD	
001064	6802 0610	2471	YYYY IS THE BITS IN HEX TO SET OFF OR ON 2ND WORD	
001066	4800	2472	*****	*****
001068	6802 0610	2473	ONPGM EQU *	
001070	4724 0234	2474	MVA INDIC,R7	GET ADR OF DCP INDICATORS
001072	4F82	2475	TBTS (R7,ON)	T/ON INDICATOR
001074	5003	2476	J A10	CONTINUE
001076	4724 0234	2477	EQU *	
001078	4F82	2478	MVA INDIC,R7	SET ADR OF DCP INDICATORS
001080	4F00	2479	TBTR (R7,OFF)	SET THIS BIT OFF
001082	1202	2480	EQU *	
001084	6802 0ECE	2481	TBT (R7,AUTO)	IN AUTO MODE
001086	4800	2482	JON A20	B-NO
001088	6802 0ECE	2483	B LP00	PRINT THE MSG
001090	C025 172F	2484	EQU *	
001092	D025 1730	2485	MVBZ PRTPF,R0	SET AN END CHAR
001094	0F00	2486	MVDZ PRBUF,R0	CLEAR THE DATA AREA
001096	0C00	2487	MVBI ZERO,R7	CLEAR R7
001098	0C00	2488	MVBI ZERO,R4	CLEAR R4
00104C	6A0D 03A2	2501	MVW R2,CNVT1	TARGET AREA

LOCTR	OBJECT TEXT	STMT	SOURCE STATEMENT	COPYRIGHT IBM CORP 1976
001050	C494	2502	A45 EQU *	
001052	1002	2503	CB (R2)+,R4	END OF DATA
001054	0701	2504	JE A47	J-YES
001056	50FC	2505	ABI ONE,R7	BUMP THE COUNT
001058	6F0D 03A0	2506	J A45	
00105C	4724 03A0	2507	EQU *	
001060	6019	2508	MVW R7,CNVT	BYTE COUNT
001062	0020 1730	2509	MVA CNVT,R7	ADR OF CONTROL BLOCK
001064	4724 0234	2510	SVC ETOH	CONVERT
001066	4F82	2511	MVA PRBUF,R0	MAKE THE DATA ACCESSABLE
001068	4F00	2512	MVA INDIC,R7	ADR OF DCP INDICATORS
00106A	1203	2513	TBTR (R7,OFF)	RESETTING OPTION BITS
00106C	D0EA 000E	2514	JON A50	B-YES
00106E	5002	2515	RBTD R0,(R3,OPWRD)	RESET SPECIFIED BITS DIAGNOSTIC PROGRAM OPTION WORDS
001072	5002	2516	J A60	
001074	D0E9 000E	2517	EQU *	
001076	6802 0E20	2518	OD R0,(R3,OPWRD)	T/ON OPTION BITS
001078		2519	EQU *	
00107C		2520	B MRTN1	RETURN
001080		2521	*****	*****
001082		2522	NAME REPGM	
001084		2523	PURPOSE THIS PROGRAM ALLOWS THE OPERATOR TO RESPOND TO A DIAGNOSTIC PROGRAM REQUEST FOR INFORMATION. IT IS USED AS THE RESPONSE PORTION OF THE SVC OUTIN ROUTINE.	
001086		2524	METHOD ROUTINE WILL CONVERT THE DATA ASKED FOR BY THE DIAGNOSTIC PROGRAM TO THE POPMAP REQUESTED AND PLACE IT IN THE DIAGNOSTIC PROGRAM BUFFER AND RETURN TO THE DIAGNOSTIC PROGRAM.	
001088		2525	CALLING SEQUENCE	
001090		2526	F XXXXXXXX	
001092		2527	WHERE F IS THE RESPOND TO A PROGRAM COMMMND. XXXX IS THE DATA REQUESTED BY THE PROGRAM	
001094		2528	*****	*****
001096	C125 1798	2529	REPGM EQU *	
001098	4804	2530	MVBZ INPRC,R1	IS AN OUT/IN IN PROC
00109A	4724 17F6	2531	JNZ B01	B-YES
00109C	6000	2532	MVA PRL2,R7	MESSAGE ADR
00109E	50CE	2533	SVC OUT	
0010A0	6908 0010	2534	EQU *	
0010A2	01E4	2535	J LP120	RETURN TO ENTER
0010A4	D128 17F4	2536	MVW SVCPT,R1	RESET R1 TO POINT AT SVC LSB
0010A6	72C4	2537	ABI M28,R1	SAVE REGS TO BE USED
0010A8	6B08 17F8	2538	MVD R1,SAV	SAVE BUFFER ADDR
0010AA		2539	MVW R2,R6	GET PARA ADDR
0010AC		2540	MVW SAVE7,P3	
0010AE		2541	*****	*****
0010B0		2542	RETURN INPUT TO PROGRAM AS ERCDIC DATA	
0010B2	C0E0 0007	2543	EQU *	
0010B4	1811	2544	MVB (R3,SEVEN),R0	GET CONVERSION FACTOR
0010B6	E7C2	2545	JNZ B40	BR IF NOT EBCDIC
0010B8	F740	2546	EQU *	
0010BA	1901	2547	MVWS (R3,FOUR),P7	GET MAX NUMBER CHARS
0010BC	0F40	2548	EQU *	
0010BE	E3C1	2549	CB SIXT4,R7	SEE IF ASKING OVER 64 CHARS
0010C0	2E64	2550	JNP B12	IF NOT BR
0010C2	6908 17F4	2551	MVBI SIXT4,R7	SET MAX AT 64
0010C4	4724 0234	2552	EQU *	
0010C6	6B08 17F8	2553	MVWS (R3,TWO),R3	GET BUFFER ADDR
0010C8	4B30	2554	MVFN (R6),(R3)	MOVE RESPONSE INTO DIAGNOSTIC PROGRAM
0010CA	6800 07D4	2555	EQU *	
0010CC	6802 057E	2556	MVW SAV,R1	FELOAD REGISTER 1
0010CE		2557	MVA INDIC,R7	ADDRESS OF DCP INDICATORS
0010D0		2558	MVW SAVE7,R3	RESTORE REG 7
0010D2		2559	TBT (R3,MDIRT)	RESET MDI BIT IN CTRL BLOCK
0010D4		2560	BOFF SVCRT	RETURN VIA SVC RETURN
0010D6		2561	B SCHED	RETURN TO SCHEDULER
0010D8		2562	*****	*****
0010DA		2563	RETURN INPUT TO PROGRAM AS HEX DATA	
0010DC	748A	2564	EQU *	
0010DE	6D08 17F6	2565	SW R4,R4	ZERO R4
0010E0	80A3 049A	2566	EQU *	
0010E2	1004	2567	MVW SAV2,R5	RESET R5
0010E4	80A7 0481	2568	CB HEX00,(R2)	TERMINATION CHARACTER
0010E6	18F8	2569	JE B42	YES/COMPLETE DATA
0010E8	02FF	2570	CB EBCBK,(R2)+	FIELD DEFINITION CHARACTER
0010EA	764A	2571	JNE B41	NO/CONTINUE TO LOOK FOR ONE POINT TO BLANK
0010EC	F200	2572	ABI M1,R2	
0010EE	1015	2573	EQU *	
0010F0	6A0D 03B2	2574	SW R6,R2	FIND BYTE COUNT
0010F2	7204	2575	CB ZERO,R2	DATA COUNT EQUAL ZERO
0010F4	580D 03B4	2576	JE B44	YES/COMPLETE
0010F6	74A8	2577	MVW R2,REVT	PLACE COUNT IN CONTROL BLOCK
0010F8	D0D0 03B6	2578	MVW R2,R0	AND SAVE FOR LATER
0010FA	4724 03B2	2579	MVW R6,REVT1	UPDATE BUFFER ADDRESS
0010FC	6019	2580	AW R4,R5	BUFFER ADDRESS
0010FE	7648	2581	MVW R5,REVT2	ADDRESS OF CONTROL BLOCK
001100	80A7 0481	2582	SVC ETOH	CONVERT TO HEX
001102	10FD	2583	AW R6,R2	ADJUST DATA ADDRESS
001104	02FF	2584	EQU *	
001106	7204	2585	CB EBCBK,(R2)+	CHARACTER A BLANK
001108	0001	2586	JE B43	YES/SKIP TO NEXT NON-BLANK
00110A	300A	2587	ABI M1,P2	POINT TO FIRST NON-BLANK CHARACTER
00110C	7088	2588	MVW R2,R6	RESET R2
00110E	50DF	2589	ABI ONE,R0	ADD ONE FOR ODD COUNTS
001110	A44A	2590	SW ONE,R0	HALF CHARACTER COUNT=HEX BYTE COUNT
001112	6E08 17F6	2591	R0,R4	TOTAL HEX BYTE COUNT
001114	50C9	2592	J B41	DO NEXT SET
001116		2593	EQU *	
001118		2594	MVWS R4,(R1,QR7)	SET NUMBER OF BYTES FOR PROGRAM
00111A		2595	MVW SAV2,R6	BUFFER ADDRESS
00111C		2596	J B10	MOVE HEX DATA TO DIAGNOSTIC

LOCTR OBJECT TEXT

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2618 *****
2619 *
2620 * THE FOLLOWING IS THE DESCRIPTION OF THE DIAGNOSTIC
2621 * DISKETTE FORMAT:
2622 * START END
2623 * CYL TRK CYL TRK DESCRIPTION
2624 * 0 0 0 1 IPL PROGRAM
2625 * 1 0 0 1 DISKETTE DIAGNOSTIC TEST TRACKS
2626 * 4 0 5 1 CPU TEST PROGRAM (PROC1)
2627 * 6 0 7 1 CPU TEST PROGRAM (PROC2)
2628 * 8 0 9 1 CPU TEST PROGRAM (PROC3)
2629 * 10 0 10 1 DCP PROGRAM (DCP0)
2630 * 11 0 11 1 VTOC (DIRECTORY)
2631 * 12 0 73 1 PROBLEM PROGRAM SPACE
2632 * MDI
2633 * MAPS AND TUS
2634 * DCP UTILITIES
2635 * OTHER DIAGNOSTICS
2636 * DISKETTE DIAGNOSTIC TEST TRACKS
2637 *
2638 *****
2639 *
2640 * THE FOLLOWING IS THE FORMAT OF A VTOC ENTRY:
2641 *
2642 * EACH ENTRY IS 32 BYTES IN LENGTH WITH 8 ENTRIES/SECTOR.
2643 *
2644 * BYTES DESCRIPTION
2645 * 0-5 DATASET NAME IN EBCDIC.
2646 * 6-7 BEGINNING RECORD NUMBER OF THE PROGRAM (BOE).
2647 * 8-9 ENDING RECORD NUMBER+1 OF THE PROGRAM (EOE).
2648 * 10-11 RESERVED (USED IN PRGDS ENTRY AS EOD).
2649 * 12 TYPE OF DATASET - 'P' PROGRAM DATASET.
2650 *
2651 * 13-16 RESERVED.
2652 * 17 PATCH COUNT (TIMES PROGRAM HAS BEEN PATCHED).
2653 * 18-24 PROGRAM PART NUMBER.
2654 * 25-31 PROGRAM EC NUMBER.
2655 *
2656 *****
2657 *
2658 * THE FOLLOWING IS THE METHOD OF RECORD NUMBERING:
2659 *
2660 * ALL RECORDS ARE GIVEN A UNIQUE NUMBER 0-2309. NUMBERING
2661 * STARTS AT CYLINDER 0 TRACK 0 RECORD 1 (0) AND GOES
2662 * TO CYLINDER 76 TRACK 1 RECORD 15 (2309). SEQUENCING
2663 * GOES FROM TRACK 0 RECORD 15 TO TRACK 1 RECORD 1 THEN TO
2664 * THE NEXT CYLINDER TRACK 0.
2665 *
2666 *****
2667 *
2668 * THE FOLLOWING IS THE METHOD OF RECORD NUMBERING:
2669 *
2670 * ALL RECORDS ARE GIVEN A UNIQUE NUMBER 0-2309. NUMBERING
2671 * STARTS AT CYLINDER 0 TRACK 0 RECORD 1 (0) AND GOES
2672 * TO CYLINDER 76 TRACK 1 RECORD 15 (2309). SEQUENCING
2673 * GOES FROM TRACK 0 RECORD 15 TO TRACK 1 RECORD 1 THEN TO
2674 * THE NEXT CYLINDER TRACK 0.
2675 *
2676 *****
2677 *
2678 * THE FOLLOWING IS THE METHOD OF RECORD NUMBERING:
2679 *
2680 * ALL RECORDS ARE GIVEN A UNIQUE NUMBER 0-2309. NUMBERING
2681 * STARTS AT CYLINDER 0 TRACK 0 RECORD 1 (0) AND GOES
2682 * TO CYLINDER 76 TRACK 1 RECORD 15 (2309). SEQUENCING
2683 * GOES FROM TRACK 0 RECORD 15 TO TRACK 1 RECORD 1 THEN TO
2684 * THE NEXT CYLINDER TRACK 0.
2685 *
2686 *****
2687 *
2688 * THE FOLLOWING IS THE METHOD OF RECORD NUMBERING:
2689 *
2690 * ALL RECORDS ARE GIVEN A UNIQUE NUMBER 0-2309. NUMBERING
2691 * STARTS AT CYLINDER 0 TRACK 0 RECORD 1 (0) AND GOES
2692 * TO CYLINDER 76 TRACK 1 RECORD 15 (2309). SEQUENCING
2693 * GOES FROM TRACK 0 RECORD 15 TO TRACK 1 RECORD 1 THEN TO
2694 * THE NEXT CYLINDER TRACK 0.
2695 *
2696 *****
2697 *
2698 * THE FOLLOWING IS THE METHOD OF RECORD NUMBERING:
2699 *
2700 * ALL RECORDS ARE GIVEN A UNIQUE NUMBER 0-2309. NUMBERING
2701 * STARTS AT CYLINDER 0 TRACK 0 RECORD 1 (0) AND GOES
2702 * TO CYLINDER 76 TRACK 1 RECORD 15 (2309). SEQUENCING
2703 * GOES FROM TRACK 0 RECORD 15 TO TRACK 1 RECORD 1 THEN TO
2704 * THE NEXT CYLINDER TRACK 0.
2705 *
2706 *****
2707 *
2708 * THE FOLLOWING IS THE METHOD OF RECORD NUMBERING:
2709 *
2710 * ALL RECORDS ARE GIVEN A UNIQUE NUMBER 0-2309. NUMBERING
2711 * STARTS AT CYLINDER 0 TRACK 0 RECORD 1 (0) AND GOES
2712 * TO CYLINDER 76 TRACK 1 RECORD 15 (2309). SEQUENCING
2713 * GOES FROM TRACK 0 RECORD 15 TO TRACK 1 RECORD 1 THEN TO
2714 * THE NEXT CYLINDER TRACK 0.
2715 *
2716 *****
2717 *
2718 * THE FOLLOWING IS THE METHOD OF RECORD NUMBERING:
2719 *
2720 * ALL RECORDS ARE GIVEN A UNIQUE NUMBER 0-2309. NUMBERING
2721 * STARTS AT CYLINDER 0 TRACK 0 RECORD 1 (0) AND GOES
2722 * TO CYLINDER 76 TRACK 1 RECORD 15 (2309). SEQUENCING
2723 * GOES FROM TRACK 0 RECORD 15 TO TRACK 1 RECORD 1 THEN TO
2724 * THE NEXT CYLINDER TRACK 0.
2725 *
2726 *****
2727 *
2728 * THE FOLLOWING IS THE METHOD OF RECORD NUMBERING:
2729 *
2730 * ALL RECORDS ARE GIVEN A UNIQUE NUMBER 0-2309. NUMBERING
2731 * STARTS AT CYLINDER 0 TRACK 0 RECORD 1 (0) AND GOES
2732 * TO CYLINDER 76 TRACK 1 RECORD 15 (2309). SEQUENCING
2733 * GOES FROM TRACK 0 RECORD 15 TO TRACK 1 RECORD 1 THEN TO
2734 * THE NEXT CYLINDER TRACK 0.

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00110E
00110E A74D
001110 4724 03E3
001114 4F82
001116
001116 4424 014A

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LOCTR OBJECT TEXT

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00111A 6B08 17EE 2734 MVW FNDPG,R3 ADR OF DATA SET NAME
00111E 2735 FN10 EQU *
00111E 9F51 2736 JAL DSKRD,R7 READ A VTOC SECTOR
001120 75A7 2737 IR R5,R5 SET CONDITION CODES
001122 182C 2738 JNZ FN40 BR IF DISKETTE ERROR
001124 0F08 2739 FN20 MVBI NDFPS,R7 NUMBER DATA SET DEFINED/RECORD
001126 E500 2740 EQU *
001128 102C 2741 JZ WS (R0),R5 SEE IF END OF ENTRIES IN VTOC
00112A 830B 0481 2742 CB (R3),EBCBK IF SO BR
00112E 102B 2743 JE FN60 WAS A DIAGNOSTIC SPECIFIED
001130 4224 0234 2744 MVA INDIC,R2 B-NO--TAKE THE FIRST ONE
001134 4A08 2745 TBT (R2,NXTVT) ADR OF DCP INDICATORS
001136 1227 2746 JON FN60 TAKE NEXT IND ON
001138 2747 FN22 EQU * B-YES--TAKE THIS ONE
001138 E604 2748 MVWS (R0,EOE),R6 SAVE EOE
00113A 7044 2749 MVA R0,R2 ADR OF HEX PID
00113C 0201 2750 ABI ONE,R2 BUMP PAST 1ST CHAR
00113E 0D04 2751 MVBI FOUR,R5 BYTE COUNT
001140 8397 2752 EQU *
001142 1816 2753 JNE FN30 (R3+),(R2)+ SEE IF DATA SET NAME IS THE SAME
001144 BDFD 2754 JCT FN25,R5 B-NO NOT THIS ONE
001146 4224 0234 2755 MVA INDIC,R2 FINISH THE DATA SET NAME
00114A 4A83 2756 TBTR (R2,UTIL) ADR OF DCP INDICATORS
00114C 1238 2757 JON FN70 UTILITY REQUESTING DATA
00114E 4A0A 2758 TBT (R2,IRD) J-YES
001150 1236 2759 JON FN70 IS SVC REQ DATA SET
001152 4A0E 2760 TBT (R2,CNRUN) J-YES--THIS IS THE ONE
001154 1234 2761 JON FN70 CONFIG TABLE REQ
001156 4A00 2762 TBT (R2,AUTO) J-YES
001158 1007 2763 JOFP FN25 IN AUTOMATIC MODE
00115A 7064 2764 JNE R0,R3 B-YES
00115C 832B 000C 03CD 2765 CB (R1,DSTYP),DCHAR IS THIS AN EXEC PGM
001162 1815 2766 JNE FN60A B-YES
001164 6802 0ECE 2767 B INV REQ MESSAGE
001166 2768 FN27 EQU *
001168 C520 03E2 2769 MVB INTLD,R5 IS THE INITIAL LOAD IND ON
00116C 1810 2770 JNZ FN60A J-YES--TAKE THIS ONE
00116E 4A48 2771 TBTS (R2,NXTVT) SET IND TO TAKE NEXT ENTRY
001170 0020 2772 EQU *
001172 6B08 17EE 2773 MVB LVTE,R0 UPDATE TO NEXT ENTRY
001174 82D7 2774 JCT FNDPG,R3 RESET NAME POINTER
001176 0A01 2775 ABI FN20,R7 LOAD FROM ALL DATA SETS ON SECT
001178 50D1 2776 EQU * UPDATE TO NEXT SECTOR
00117C 2777 FN40 EQU * CONTINUE
00117E 75A7 2778 IR R5,R5
00117F 6832 001A 2779 B (R1,QAV2)* SET INDICATORS TO REFLECT XRS
001182 0D01 2780 MVBI ONE,R5 RETURN TO CALLING RTN
001184 50FB 2781 J FN40 SET DATA SET NOT FOUND
001186 2782 FN60 EQU * GO RETURN
001188 800B 03CD 2783 CB (R0),DCHAR DIAGNOSTIC PGM
00118A 18F2 2784 JNE FN30 B-NO
00118C 4A88 2785 TBTR (R2,NXTVT) RESET BIT IF ON
00118E 4724 0234 2786 MVA INDIC,R7 ADR OF DCP INDICATORS
001192 800B 03CC 2787 CB (R0),ICHAR T.U. I.D.
001196 1813 2788 JNE FN70 J-NO
001198 4020 17EE 03C4 2789 MVA MDINM,FNDPG MDI SUP NAME
00119E 4F4C 2790 TBTS (R7,TUIDS) SET INDICATOR FOR DCP
0011A0 4324 055F 2791 MVA PRGN1,R3 TU ID
0011A4 4224 03C8 2792 MVA TUNAM,R2 SAVE FOR MDI
0011A8 0F04 2793 MVBI FOUR,R7 NUMBER OF BYTES
0011AA 2794 FN6A EQU *
0011AC 8394 2795 MVB (R3+),(R2)+ MOVE A
0011AE BFFE 2796 JCT FNGA,R7 BYTE AT A TIME
0011B0 0F04 2800 MVBI FOUR,R7 BYTES TO BE MOVED
0011B4 4324 03C4 2801 MVA MDINM,R3 MDI SUPER NAME
0011B8 4224 055F 2802 MVA PRGN1,R2 SAVE THE DATA SET NAME
0011BA 8394 2803 EQU *
0011BC BFFE 2804 MVB (R3+),(R2)+ MOVE THE NAME
0011BE 50AC 2805 JCT FNGDD,R7 MOVE ALL BYTES
0011C0 0D00 2806 J FN50 GO FIND MDI SUP
0011C2 50DD 2807 EQU *
0011C4 2808 FN70 EQU *
0011C6 2809 MVBI ZERO,R5 SET DATA SET FOUND
0011C8 2810 J FN40 GO RETURN
0011CA 2811 *****
0011CC 2812 *****
0011CE 2813 *****
0011D0 2814 *****
0011D2 2815 * THE FOLLOWING ROUTINE IS ENTERED BY THE DCP TO DO
0011D4 2816 * A READ FROM THE DCP DISKETTE INTO ITS OWN BUFFER.
0011D6 2817 *****
0011D8 2818 *****
0011DA 2819 *****
0011DC 2820 *****
0011DE 2821 *****
0011E0 2822 *****
0011E2 2823 *****
0011E4 2824 *****
0011E6 2825 *****
0011E8 2826 *****
0011EA 2827 *****
0011EC 2828 * FROM THE LABEL DSK10 ON IS A COMMON ROUTINE TO SET UP THE
0011EE 2829 * DCBS AND ISSUE THE IO COMMAND TO THE DISKETTE. IT ALSO CHECKS
0011F0 2830 * THE CONDITION CODE AFTER THE I/O AND DOES ERROR RECOVERY.
0011F2 2831 *****
0011F4 2832 *****
0011F6 2833 *****
0011F8 2834 *****
0011FA 2835 *****
0011FC 2836 *****
0011FE 2837 *****
001200 2838 *****
001202 2839 *****
001204 2840 *****
001206 2841 *****
001208 2842 *****
00120A 2843 *****
00120C 2844 *****
00120E 2845 *****
001210 2846 *****
001212 2847 *****
001214 2848 *****
001216 2849 *****

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001202 6E0D 17BE 2850 MVW R6,IDCB SAVE THE IDCB ADR
001206 68CC 0000 2851 IO (R6) ISSUE I/O TO DISKETTE
00120A 2852 IS12 EQU * SEVEN,SCHED GO TO SCHED IF I/O OK
00120B 2853 EQU *
00120E 2854 IS20 EQU *
00120E 4020 17BE 1312 2855 MVA DKRST,IDCB SAVE THE IDCB ADR
001214 680C 1312 2856 IO DKRST ISSUE RESET
001218 4020 17BE 130E 2857 MVA DSKPR,IDCB SAVE THE IDCB ADR
00121E 680C 130E 2858 IO DSKPR ISSUE PREPARE
001222 6F05 1238 2859 BNCC SEVEN,IS25 BR IF IN ERROR
001226 0F00 2860 MVBI ZERO,R7 INITIALIZE R7 TO 0
001228 2861 IS22 EQU *
001228 6E0D 17BE 2862 MVW R6,IDCB SAVE THE IDCB ADR
00122C 68CC 0000 2863 IO (R6) RE-ISSUE THE IO
001230 6A05 120A 2864 BNCC TWO,IS12 IF NOT CC = BUSY AFTER RESET THEN
2865 * GO TEST FOR CC = 7
2866 * ELSE ADD TO RETRY/DELAY COUNTER
2867 * LOOP UNTIL OVERFLOW OR CC NOT = 2
001234 0701 2868 IS25 EQU *
001236 11F8 2869 JP IS22 SET DISKETTE ERROR CODE
001238 4020 1328 0002 2870 MVWI TWO,DKR5 RESTORE INT ADR
00123E 4020 0246 1246 2871 MVA DSKIT,DKINT RESTORE INT ADR
001244 5005 2872 J DK04 RETURN TO CALLING RTN
2873 *****
2874 * THE FOLLOWING ROUTINE HANDLES INTERRUPTS FROM THE
2875 * DCP CONTROLLED DISKETTE.
2876 *
2877 *
2878 *****
2879 DSKIT EQU *
2880 BNCC THREE,DK10 BR IF NOT DEVICE END INT
2881 MVWI ZERO,DKR5 SET DISKETTE I/O OK
2882 DK04 EQU *
2883 LMB DKSJ RET TO RTN REQUESTING I/O
2884 DK10 EQU *
2885 BCC FOUR,SCHED DISKETTE JUST BECAME READY
2886 MVA CALIB,R6 GET RECALIBRATE ADR
2887 MVA DK12,DKINT NEW INTERRUPT ADR
2888 J IS10 RE-CALIBRATE THE DISKETTE
2889 DK12 EQU *
2890 BNCC THREE,IS10 BR/ERROR - RETRY
2891 MVA DSKIT,DKINT RESTORE ORIGINAL INTERRUPT ADR
2892 MVWI ZERO,PCYLA HOME POSITION
2893 J DSK20 PEISSUE THE I/O
2894 *****
2895 * THE FOLLOWING ROUTINE BUILDS AND SETS THE SEEK CONTROL
2896 * WORD IN THE SEEK DCB AND THE HEAD/SECT AND N/CYL WORDS
2897 * IN READ, WRITE AND VERIFY DCBS.
2898 *
2899 *
2900 * THE SECTOR ADDR IS PASSED TO THIS ROUTINE IN XR4 AND IT
2901 * COMPUTES THE SEEK INFORMATION FROM WHERE THE HEAD
2902 * PRESENTLY IS.
2903 *
2904 *
2905 *****
2906 SEEK EQU *
2907 MVW PCYLA,R6 GET WHERE HEAD PRESENTLY AT
2908 MVW DKR4,R4 GET SECTOR # GOING TO
2909 MVB SECSZ,R0 WHAT IS THE SECTOR SIZE
2910 JNZ SE03 BR/256 BYTE SECTOR
2911 DE SPT,R4 COMPUTE TRACK # (128 BYTE SECTOR)
2912 J SE10 SKIP
2913 SE03 EQU *
2914 DB SPT1,R4 COMPUTE TRACK # (256 BYTE SECTOR)
2915 JEV SE10 BR/HEAD 0
2916 CWT TWO56,R5 SET HEAD 1 IN H-R WORD
2917 SE10 EQU *
2918 SEL ONE,R4 CONVERT TRACK # TO CYLINDER #
2919 MVW R4,PCYLA SET WHERE GOING
2920 ABI ONE,R5 SET RECORD NUMBER TO BE 1-15
2921 OW SECSZ,R4 SET THE SECTOR SIZE BIT
2922 MVD R4,SKW4 SET SEEK N/CYL, HEAD/SECT WORDS
2923 MVD R4,RDW4 SET READ N/CYL, HEAD/SECT WORDS
2924 MVD R4,WRW4 SET WRITE N/CYL, HEAD/SECT WORDS
2925 MVD R4,VFW4 SET VERIFY N/CYL, HEAD/SECT WORDS
2926 RBTWI FOUR,R4 RESET THE SECTOR SIZE BIT
2927 SW R6,R4 GET NUMBER CYLINDERS TO MOVE
2928 JP SE20 BR/POSITIVE DIRECTION
2929 CMR R4 GET POS MOVEMENT
2930 AWI TWOK,R4 SET REVERSE SEEK
2931 SE20 EQU *
2932 MVW R4,SKW2 SET SEEK CONTROL WORD IN SEEK DCB
2933 BXS (R7) RETURN TO CALLING RTN
2934 *
2935 * DISKETTE DCB'S
2936 *
2937 *
2938 * VERIFY DCB
2939 VDCB DC X'000C' DCB CONTROL WORD
2940 DC A(0) SEEK CONTROL WORD
2941 DC A(0) FORMAT DATA WORD
2942 VFW4 DC A(0) N/CYLINDER WORD
2943 DC A(0) HEAD/SECTOR WORD
2944 DC A(0) CHAIN ADDRESS
2945 DC A(256) BYTE COUNT
2946 DC A(0) DATA ADDRESS
2947 * RECALIBRATE DCB
2948 RECAL DC X'0007'
2949 * SEEK DCB
2950 SEDCB DC X'8005' DCB CONTROL WORD
2951 SKW2 DC A(0) SEEK CONTROL WORD
2952 DC A(0) FORMAT DATA WORD
2953 SKW4 DC A(0) N/CYLINDER WORD
2954 DC A(0) HEAD/SECTOR WORD
2955 SKW6 DC A(0) CHAIN ADDRESS
2956 DC A(0) BYTE COUNT
2957 ADDCB DC A(SKW6) CHAIN ADDR ADDRESS
2958 * READ DCB
2959 RDCB DC X'2009' DCB CONTROL WORD
2960 RDW2 DC A(0) SEEK CONTROL WORD
2961 DC A(0) FORMAT DATA WORD
2962 RDW4 DC A(0) N/CYLINDER WORD
2963 DC A(0) HEAD/SECTOR WORD
2964 DC A(0) CHAIN ADDRESS
2965 DC A(256) BYTE COUNT
2966 DC A(DBUF) DATA ADDRESS

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2967 * WRITE DCB
2968 WRDCB DC X'8001' DCB CONTROL WORD
2969 WRW2 DC A(0) SEEK CONTROL WORD
2970 DC A(0) FORMAT DATA WORD
2971 WRW4 DC A(0) N/CYLINDER WORD
2972 DC A(0) HEAD/SECTOR WORD
2973 DC A(VDCB) CHAIN ADDRESS
2974 DC A(256) BYTE COUNT
2975 DC A(DBUF) DATA ADDRESS
2976 *
2977 * DISKETTE IDCB'S
2978 *
2979 *
2980 * START IDCB
2981 SEIDB DC X'7000' START IDCB
2982 SEID1 EQU SEIDB+ONE
2983 DCBAD DC A(SEIDB) ADDR SEEK DCB
2984 * START IDCB - RECALIBRATE
2985 CALIB DC X'7000' RECALIBRATE IDCB
2986 DC A(RECAL)
2987 * PREPARE IDCB
2988 DSKPR DC X'6000' PREPARE DISKETTE IDCB
2989 DC X'0005'
2990 * RESET IDCB
2991 DKRST DC X'6F00' RESET DISKETTE IDCB
2992 *
2993 * DISKETTE ROUTINE REGISTER SAVE AREA
2994 *
2995 DKSJ DC A(DKHL) TEA
2996 DKSJ2 DC A(DKHL) HLA
2997 DC A(DKLL) LLA
2998 DKLL DC A(0)
2999 DKR7 DC A(0) REGISTER 7
3000 DKR0 DC A(0) 0
3001 DKR1 DC A(0) 1
3002 DKR2 DC A(0) 2
3003 DKR3 DC A(0) 3
3004 DKR4 DC A(0) 4
3005 DKR5 DC A(0) 5
3006 DKR6 DC A(0) 6
3007 DKHL EQU *
3008 *
3009 * DISKETTE SECTOR DATA BUFFER
3010 *
3011 DBUF DC 128A(0) DISKETTE BUFFER AREA
3012 ASCDT EQU DBUF DATA STORE AREA
3013 DSCOD EQU DBUF+TWO MESSAGE CODE
3014 DSBUF EQU DBUF+FOUP START OF STORAGE DUMP OUTPUT BUFFER
3015 *
3016 * DISKETTE DATA CONSTANTS
3017 *
3018 DKRTY DC A(0) DISKETTE RETRY COUNT
3019 PCHLA DC A(PCPCY) CYLINDER HEAD PRESENTLY AT
3020 *****
3021 *****
3022 *****
3023 *****
3024 ***** START DCP PATCH AREA *****
3025 *****
3026 *****
3027 *****
3028 DCPND EQU *
3029 OVST EQU C3800+5246
3030 PATCH DC (OVST-DCPND) X'00' PATCH AREA
3031 *****
3032 *****
3033 *****
3034 ***** END DCP PATCH AREA *****
3035 *****
3036 *****
3037 *****
3038 *****
3039 ORG C3800+5246 START DUMP STORAGE ROUTINE ADDRESS
3040 *****
3041 *
3042 * NAME DSRTN
3043 *
3044 * PURPOSE DUMP STORAGE TO ALTERNATE CONSOLE
3045 *
3046 * METHOD THE START ADDRESS OF THE AREA TO BE DUMPED IS
3047 * OBTAINED FROM STORAGE LOCATION X'0004' AND
3048 * THE END ADDRESS OF THE AREA TO BE DUMPED IS
3049 * OBTAINED FROM STORAGE LOCATION X'0006'.
3050 *
3051 *
3052 * NOTE * THIS ROUTINE WILL BE OVERLAYED IF A REMOTE *
3053 * * DISPLAY STATION IS THE ALTERNATE CONSOLE TO *
3054 * * BE ASSIGNED. *
3055 * *****
3056 *
3057 * CALLING SEQUENCE
3058 *
3059 * S FROM THE ALTERNATE CONSOLE
3060 * O0E2 FROM THE PROGRAMMERS CONSOLE
3061 *
3062 * WHERE S OR O0E2 IS THE COMMAND TO DUMP STORAGE
3063 *
3064 *****
3065 * THE REMOTE DISPLAY OVERLAY WILL START HERE
3066 *
3067 *
3068 DSRTN EQU *
3069 MVA SVCLB,SVCPT RESET SVC POINTER
3070 MVWZ PRTSW,R0 ZERO PRINT SWITCH
3071 MVBI TWO,R7 SET UP TO INSURE EXECUTION IS
3072 CHNGE SVC ON LEVEL TWO
3073 MVW DMPSA,R1 START DUMP ADDRESS
3074 RBTB SPT1,R1 FORCE TO OUTPUT BOUNDRY
3075 *
3076 DSRT1 EQU *
3077 MVA DPSTG,DSCOD DUMP STORAGE MESSAGE CODE
3078 MVA DSBUF,R2 OUTPUT BUFFER ADDRESS
3079 MVBI BLANK,R3 BLANK
3080 MVA NINE,R4 COUNT
3081 MVW R1,ASCDT STORAGE ADDRESS AS DATA
3082 MVA ASCDT,ASCIN RESTORE CONTROL BLOCK
3083 MVW R2,ASCBF OUTPUT ADDRESS
3084 ABI TWO,R2 INCREMENT OUTPUT ADDRESS

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0014B2 88A8 14E8 0002 3084 MVW DSBNK, (R2,TWO) PUT IN BLANK SPACER
0014B8 4724 14EA 3085 MVA ASCTB,R7 CONTROL BLOCK ADDRESS
0014BC 3086 DSRT2 EQU *
0014BC 601A 3087 SVC HTOF CONVERT
0014BE 0204 3088 ABI FOUR, R2 INCREMENT BUFFER ADDRESS
0014C0 C398 3089 MVB R3, (R2)+ PLACE BLANK AND INCREMENT
0014C2 C398 3090 MVB R3, (R2)+ PLACE BLANK AND INCREMENT
0014C4 690D 14EC 3091 MVW R1, ASCBN STORAGE DATA ADDRESS
0014C8 6A0D 14EE 3092 MVW R2, ASCBN OUTPUT BUFFER ADDRESS
0014CC 0102 3093 ABI TWO, R1 INCREMENT STORAGE ADDRESS
0014CE BCF6 3094 JCT DSRT2, R4 REST OF LINE
0014D0 01FE 3095 ABI M2, R1 CORRECT STORAGE ADDRESS
0014D2 C085 3096 MVBZ (R2), R0 TERMINATION CHARACTER
0014D4 4724 17F2 3097 MVA DSTG, R7 CONTROL BLOCK ADDRESS
0014D8 6000 3098 SVC OUT PRINT LINE
0014DA 7127 3099 IR R1, R1 WRAP AROUND STORAGE ADDRESSES
0014DC 1003 3100 JZ DSRT3 BR/YES-TERMINATE DUMP
0014DE C924 0006 3101 CW DMPEA, R1 DUMP COMPLETE
0014E2 17D8 3102 JLLT DSRT1 BR/NO CONTINUE
0014E4 6802 0610 3103 EQU *
3104 DSRT3 EQU *
3105 *
3106 * DUMP STORAGE DATA CONVERSION CONTROL BLOCK
3107 *
3108 DSBNK DC C' ' BLANK
3109 ASCTB DC A(2) DATA BYTE COUNT
3110 ASCIN DC A(*-*) DATA ADDRESS
3111 ASCBP DC A(*-*) BUFFER ADDRESS
3112 ORG C3800+5360 START ALTERNATE CONSOLE ADDRESS
3113 *****
3114 *
3115 * NAME ALTERNATE CONSOLE SUPPORT
3116 *
3117 *
3118 * PURPOSE THIS AREA WILL BE OVERLAYED AT INITIALIZATION WITH
3119 * THE ALTERNATE CONSOLE SUPPORT ROUTINE.
3120 *
3121 * THE ALTERNATE CONSOLE ROUTINE WILL WORK IN CONJUNCTION
3122 * WITH THE PROGRAMMERS CONSOLE. ALTERNATE CONSOLE DEVICES
3123 * SUPPORTED ARE THE TTY, DISPLAY STATION, PRINTER AND REMOTE
3124 * DISPLAY STATION.
3125 *
3126 * IF THE REMOTE DISPLAY IS SELECTED AS THE ALTERNATE CONSOLE
3127 * THEN THE DUMP STORAGE ROUTINE WILL ALSO BE OVERLAYED FROM
3128 * THE POINT INDICATED.
3129 *
3130 *****
3131 0014F0
3132 ALTCS EQU *
3133 ORG C3800+5922 START ALTERNATE CONSOLE DATA
3134 *****
3135 *
3136 * THE FOLLOWING AREA CONTAINS THOSE CONSTANTS REQUIRED
3137 * FOR THE ALTERNATE CONSOLE ROUTINE WHICH WILL BE READ
3138 * INTO STORAGE AS OVERLAYS.
3139 * THE CONSTANTS IN THIS AREA MUST REMAIN IN THE SAME
3140 * STORAGE LOCATIONS BECAUSE OF PROGRAM INTERFACES.
3141 *
3142 *****
3143 * PRINT BUFFER
3144 *
3145 CRPRT DC X'0D0A' 66 CHARACTER PRINT BUFFER
3146 PRTPU DC 66C' '
3147 PRTPF EQU PRTPU+ELEVN
3148 PRBUF EQU PRTPU+TWELV
3149 *****
3150 *
3151 * ALTERNATE CONSOLE ROUTINE ENTRY POINTS
3152 *
3153 *****
3154 *
3155 ACMSG DC A(*-*) ADDRESS TO OUTPUT ENTER MESSAGE
3156 ACENT DC A(*-*) ALTERNATE CONSOLE RTN
3157 ACINT DC A(*-*) ALT CON INTRPT RTN
3158 *****
3159 *
3160 *****
3161 *
3162 * THE FOLLOWING ARE THE IDCBS USED BY THE ALTERNATE CONSOLE.
3163 * THE DEVICE ADDRESS WILL BE INSERTED AT INITIALIZATION TIME.
3164 *
3165 *****
3166 * ALIGN WORD
3167 WIDCB DC X'5000' ALTERNATE CONSOLE WRITE
3168 DC X'0000'
3169 CIDCB DC X'5000' ALTERNATE CONSOLE SPECIAL
3170 DC X'0000'
3171 ACRES DC X'6F00' ALTERNATE CONSOLE RESET
3172 DC X'0000'
3173 RIDCB DC X'1000' ALTERNATE CONSOLE READ
3174 DC X'0000'
3175 ACPRE DC X'6000' ALTERNATE CONSOLE PREPARE-LEVEL 2
3176 DC X'0005'
3177 WIDC3 EQU WIDCB+THREE
3178 RIDC3 EQU RIDCB+THREE
3179 ACPR1 EQU ACPRE+ONE
3180 ORG C3800+6016
3181 *****
3182 *
3183 *
3184 * THE FOLLOWING AREA CONTAINS THOSE CONSTANTS REQUIRED
3185 * FOR THE ALTERNATE CONSOLE ROUTINE AND SHARED BY DCP.
3186 * THE CONSTANTS IN THIS AREA MUST REMAIN IN THE SAME
3187 * STORAGE LOCATIONS BECAUSE OF PROGRAM INTERFACES.
3188 *
3189 *****
3190 AC SCH DC A(SCHED) ADDRESS OF SCHEDULER ROUTINE
3191 ACIND DC A(INDIC) DCP INDICATORS
3192 ACSVP DC A(SVCPT) SVC INTRPT POINTER
3193 ACSVR DC A(SVCRD) SVC RETURN
3194 ACOPC DC A(OPCMD) OPERATOR COMMAND ROUTINE
3195 ACCON DC A(CONSO) CONSOLE ROUTINE
3196 ACSTR DC A(SRIT) STRAY INTERRUPT ROUTINE
3197 ACVTR DC A(*-*) ALT CON VECTOR ADDR-INIT
3198 PRBA DC A(0) ALT CONSOLE CONTROL FLD 1
3199 NLSW DC X'01' ALT CONSOLE CONTROL FLD 2
3200 OUT1 DC X'01' SVC OPEPAND FOR OUTIN SVC
3201 *****
3202 *
3203 *
3204 *
3205 * THE FOLLOWING ARE SWITCHES THAT MUST BE RESET TO ZERO

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3206 * FOLLOWING A SYSTEM RESET AND START *
3207 *
3208 *****
3209 * ALIGN WORD
3210 ACPCS DC X'00' ALT CONSOLE CONTROL FLD 3
3211 ACIMS DC X'00' ALT CONSOLE CONTROL FLD 4
3212 CICNT DC X'00' COUNT OF ACTIVE CICB'S
3213 DC X'00' SPARE
3214 INPRC DC X'00' IND OUT/IN IN PROCESS
3215 DC X'00' SPARE
3216 GRPT DC A(0) ALT CONSOLE CONTROL FLD 5
3217 GRPT1 EQU GRPT+ONE
3218 PRTSW DC A(0) ALTERNATE CONSOLE BUSY
3219 ENTSW DC A(0) ALT CONSOLE CONTROL FLD 6
3220 ACWCT DC A(0) ALT CONSOLE CONTROL FLD 7
3221 DEAT DC A(0) ALT CONSOLE CONTROL FLD 8
3222 HRTA DC A(0) PRG CHK ADR FOR DIAG
3223 CNTBK EQU *
3224 INVT1 DC A(ONE) BYTE COUNT
3225 INVT2 DC A(PRTBU) ADR OF DATA TO CONVERT
3226 INVT3 DC A(PRTBU) TARGET AREA
3227 HLTVC DC A(TWO) BYTE COUNT
3228 DC A(THRE) ADR OF DATA TO CONVERT
3229 HALCV DC A(MSG8A) TARGET AREA
3230 DC A(TWO) BYTE COUNT
3231 HALCV DC A(CKPT) ADR OF DATA TO CONVERT
3232 DC A(MSG9A) TARGET AREA
3233 PGCTL DC AL1(255) DISPLAY PAGE CONTROL - INITIALLY ON
3234 PGLCT DC AL1(0) DISPLAY PAGE CONTROL - LINE COUNT
3235 SPARE DC A(0) NOT USED
3236 RPSV DC A(0) MESSAGE ADDRESS SAVE AREA
3237 IDCB DC A(*-*) ADDRESS OF LAST IDCBS ISSUED BY DCP
3238 DC A(RPCD2) ERROR CODE
3239 RGP2 DC C'NO REPLY EXP' EOM AND DCP MSG CNTL FLD
3240 MSG8 DC C'NAP='
3241 MSG8A DC C'XXXX'
3242 MSG9 DC C'STEP='
3243 MSG9A DC C'XXXX'
3244 DC X'00C0' EOM AND DCP MSG CNTL FLD
3245 RPRL2 DC A(RPG2) ADDRESS OF MESSAGE
3246 INTAD DC A(*-*) ALT CON INT ADDR SAVE AREA
3247 ACPRG DC A(PRGN) POINTER TO PROGRAM NAME
3248 ACPRS DC A(PRGN5) AND LAST CHARACTER
3249 FNDPG DC A(*-*) ADDRESS OF PROG TO BE FOUND
3250 DSTG DC X'0080' DCP MSG CNTL FLD
3251 SAV DC A(DSBUF) ADDRESS OF MESSAGE
3252 SAV2 DC A(0) REGISTER
3253 SAV7 DC A(0) SAVE AREAS
3254 DC A(ACNG) ERROR CODE
3255 ACNGM DC X'00C0' EOM AND DCP MSG CNTL FLD
3256 ACNGH DC A(ACNG1) ADDRESS OF MESSAGE
3257 ORG C3800+6144 ORIGIN FOR DIAGNOSTIC PROGRAM
3258 *****
3259 *
3260 * THE FOLLOWING ROUTINE IS ENTERED IMMEDIATELY AFTER LOADING
3261 * THE ROUTINE DETERMINES THE STG SIZE IF A TTY IS TO BE
3262 * USED AND WHICH DISKETTE FILE IS ASSIGNED TO THE USER.
3263 * CONTROL IS THEN PASSED TO RESTR
3264 *
3265 *****
3266 *
3267 * TO OVERLAY INITIALIZATION
3268 * ROUTINE.
3269 *
3270 DUMMY PROGRAM HEADER
3271 PID DC CL4'3800' PROGRAM IDENTIFIER
3272 DEVPT EQU PID+EIGHT DEVICE TABLE ADDRESS
3273 RTNE EQU PID+TEN CURRENT ROUTINE NUMBER
3274 CKPT EQU PID+TWELV CURRENT CHECK POINT NUMBER
3275 OVLAY EQU * START FOR STOP CODE OVERLAY
3276 *
3277 *
3278 * EQUATES USED FOR INITIALIZATION
3279 *
3300 ADEV EQU 48 DEVICE INTRPT VECTORS START ADDRESS
3301 DSOVA EQU 7680 ALT CONSOLE OVERLAY START ADDRESS
3302 DSKID EQU X'0106' 4964 HARD WIRED READ ID
3303 PELID EQU X'0126' 4966 HARD WIRED READ ID
3304 PSCSZ EQU 256 4966 SECTOR SIZE - 256 BYTE SECTOR
3305 BASPR EQU 32 BASIC PROCESSOR MASK
3306 PRC22 EQU 34 PROCESSOR
3307 P22CT EQU 35 DELAY COUNT
3308 PRC23 EQU 35 PROCESSOR
3309 P23CT EQU 41 DELAY COUNT
3310 *
3311 *
3312 * DO NOT MOVE THESE TWO INSTRUCTIONS *****
3313 *
3314 DLYIN J DLY1 THESE TWO INSTRUCTIONS ARE USED TO
3315 DLY1 TBT (R4,SEVTN) ADJUST THE IDLE5 TIME - OVERLAY
3316 *
3317 *****
3318 *
3319 * DO NOT MOVE THIS CONSTANT *****
3320 *
3321 TREDG DC X'3D00' SAVE THIS CONSTANT
3322 DC A(0) SAVE THIS CONSTANT
3323 *
3324 *****
3325 * ALTERNATE CONSOLE OVERLAY - SVC READI CONTROL BLOCK
3326 *
3327 * ALIGN WORD
3328 DC X'00' END INDICATOR
3329 DS20V DC C'380C' SPECIAL DISPLAY OVERLAY
3330 DC A(*-*) NEXT AVAIL STORAGE
3331 *****
3332 *
3333 * DETERMINE DISKETTE TYPE AND INSURE PROPER I/O SEEK CODE
3334 *
3335 *
3336 * ALIGN WORD
3337 EQU *
3338 MVB HKAD, R0 DISKETTE ADR
3339 RBTWI DF00, R0 RESET HIGH ORDER BYTE

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LOCTR	OBJECT TEXT	STMT	SOURCE STATEMENT	COPYRIGHT IBM CORP 1976
00181C	0B04	3340	MVBI FOUR,R3	NUMBER IDCB DISKETTE
00181E	4124 1307	3341	MVA SEID1,R1	ADDR 1ST IDCB
001822		3342	EQU *	
001822	C048	3343	IDSK EQU	
001824	0104	3344	MVB RO,(R1)	MOVE DEVICE ADDR INTO IDCB
001826	5RFD	3345	ABI FOUR,R1	UPDATE TO NEXT IDCB
001828	3009	3346	JCT IDSK,R3	DO ALL IDCB
00182A	0030	3347	SLL ONE,R0	WORD DISPLACEMENT
00182C	4000 0246	3348	ADEV1,R0	DISPLACE INTO VECTOR TABLE
001830	4020 0246 1246	3349	MVA DKINT,(R0)	INTERPUPT ADDRESS
		3350	MVA DSKIT,DKINT	MOVE IN DISKETTE INT ADR
		3351	*	
001836	402P 0230 0126	3352	CWI PELID,LASAD	IS IPL SOURCE A 4966
00183C	1811	3353	JNE IDSK0	BR/NO - ASSUME 4964
00183E	4020 0244 0100	3354	MVWI PSCSZ,SECSZ	SECTOR SIZE CONSTANT FOR 4966
001844	4724 0032	3355	MVWI PSE03,R7	LENGTH OF SEEK OVERLAY
001848	4124 19R0	3356	MVA PSE03,R1	SEEK ROUTINE OVERLAY ADDRESS
00184C	4224 1276	3357	MVA SEEK,R2	SEEK ROUTINE ADDRESS
001850	2944	3358	MVFN (R1),(R2)	MOVE ROUTINE
001852	4724 0032	3359	MVWI PDLEN,R7	LENGTH OF DCB OVERLAY
001856	4124 19E2	3360	MVA PDCE,R1	DCB OVERLAY ADDRESS
00185A	4224 12D4	3361	MVA RECAL,R2	DCB ADDRESS
00185E	2944	3362	MVFN (R1),(R2)	MOVE DCB
		3363	IDSK0 EQU *	
001860	0900	3364	MVBI ZERO,R1	SET TO OK BLOCK
001862	6B08 1800	3365	MVW PID,R3	GET DCP SIZE
001866		3366	EQU *	
001866	5924 049A	3367	IDSK1 EQU	
00186A	0101	3368	SESK R1,HEX00	SET DCP STORAGE KEY OF 0
00186C	BBFC	3369	ABI ONE,R1	UPDATE CORE BLOCK ADDR
00186E	0C00	3370	JCT IDSK1,R3	BR/DO REST
001870	7890	3371	MVBI ZERO,R4	RESET CONSOLE LIGHTS TO ALL
001872	4024 05B2	3372	SECON R4	OFF
001876	680D 0002	3373	MVA RESTR,P0	RESET THE RESTART ADDR TO THE
		3374	MVW RO,SDCP2	RESTART RTN
		3375	*	
		3376	TEST FOR ALTERNATE CONSOLE SUPPORT AND TYPE	
		3377	AND SAVE CPU MODEL NUMBER	
		3378	*	
00187A	4020 17EE 03CF	3379	MVA CPGN1,FNDPG	ADR OF NAME OF DATA SET TO FIND
001880	4724 0234	3380	MVA INDIC,R7	ADR OF DCP INDICATORS
001884	4F4E	3381	TBTS (R7,CNRUN)	IND CONFIG TABLE REG
001886	4F84	3382	TBTR (R7,LODED)	RESET THE LOADED BIT
001888	4020 03E4 1892	3383	MVA ALTO0,CNFR1	RETURN ADR
00188E	6802 0EF2	3384	B LP06	GO GET THE TABLE
001892		3385	ALTO0 EQU *	
001892	0A20	3386	MVBI BASPR,R2	BASIC PROCESSOR MASK
001894	6504	3387	FOUR DIAG	GET THE PROCESSOR TYPE
001896	7201	3388	OW R2,R0	SET THE DEVICE TYPE
001898	C028 0232	3389	MVB RO,PR1YP	SAVE IT IN LOW STORAGE
00189C	F023	3390	CBI PR23,R0	IS THIS A TYPE 23 PROCESSOR
0018A0	4020 09E0 0029	3391	JNE ALTO1	BRANCH IF NOT
0018A6	5008	3392	MVWI P22CT,DLYCT	SET DELAY COUNT FOR PROCESSOR 23
0018A8		3393	J ALTO2	CONTINUE
0018A8	F022	3394	ALTO1 EQU *	
0018AA	1806	3395	CBI PRC22,R0	IS THIS A TYPE 22 PROCESSOR
0018AC	4020 09E0 0008	3396	JNE ALTO2	BRANCH IF NOT
0018B2	9028 1804 09E6	3397	MVWI P22CT,DLYCT	SET DELAY COUNT FOR PROCESSOR 22
0018B8		3398	MVD DLYIN,DLY1	REPLACE INSTRUCTIONS - ADJUST
0018B8	4124 133A	3399	ALTO2 EQU *	
0018BC	4724 024E	3400	MVA DEBUF+IHDLR,R1	MOVE PAST HEADER
0018C0	812B 0011 1808	3401	MVA DCPO8,R7	ADR OF EXTRA DCP INDICATORS
0018C6	1004	3402	CE (R1,CUDDC),TFEDG	IS THIS A FLP ENTRY
0018C8	812B 0021 1808	3403	JE ALTO1	J-YES
0018CE	1801	3404	CE (R1,CUDDD),TFEDG	IS THIS A FLP ENTRY
0018D0		3405	JNE ALTOB	J-NO
0018D0	4F40	3406	ALTOA EQU *	
0018D2		3407	TBTS (R7,ZERO)	SET THE INDICATOR
0018D2	E043	3408	ALTOB EQU *	
0018D4	7803 3000	3409	MVWS (R1,CUDD4),P0	GET STORAGE SIZE
0018D8	680D 0230	3410	OWI H3000,P0	INSURE AT LEAST 16K
0018DC	E044	3411	MVW RO,LASAD	STORE IT IN LOW STORAGE
0018DE	C160 000A	3412	MVWS (R1,CUDD6),R0	GET CONSOLE DEVICE ADDRESS/TYP
0018E2	6802 1950	3413	MVB (R1,CUDD8),R1	GET FPMOTE SUB-ADDRESS
0018E6		3414	B ALTO3	BRANCH OVER PATCH AREA
0018E6	0000000000000000	3415	INEND EQU *	
0018E6		3416	ACCHG EQU C3800+6480	
0018E6		3417	PTCH1 DC (ACCHG-INEND)X'00'	
0018E6		3418	ORG C3800+6480	
001950		3419	ALTO3 EQU *	
001950	7007	3420	RO,R0	IS THERE AN ENTRY
001952	6800 195E	3421	IR ALTO4	B-NO--NO ALT DEV
001956	680D 0240	3422	MVW RO,OPADR	SAVE DEVICE ADDRESS/TYP
00195A	C128 024B	3423	MVB R1,OPSUB	SAVE REMOTE SUB-ADDRESS
00195E		3424	ALTO4 EQU *	
00195E	4724 180D	3425	MVA DS20V,R7	ADDRESS OF OVLY RTN NAME
001962	601F	3426	SVC READI	READ IT
001964	75A7	3427	IR R5,R5	OVERLAY RTN FOUND
001966	1804	3428	JNZ ALTO5	BR/YES - GO TO OVERLAY
001968	6F03 1E00	3429	BAL DSOVA,R7	BRANCH TO ALTERNATE CONSOLE OVERLAY
00196C	5001	3430	*	
00196E	5006	3431	J ALTO5	BR/ERROR RET - NO ALTERNATE CONSOLE
001970		3432	J ALTO6	BR/GOOD RET - ALTERNATE CONSOLE
001970	C825 0240	3433	ALTO5 EQU *	
001974	1003	3434	MVWZ OPADR,R0	RESET ALTERNATE ASSIGNMENT
001976	4724 17FE	3435	JZ ALTO6	BR/NO ALTERNATE CONSOLE ASSIGNED
00197A	6000	3436	MVA ACNGM,R7	ADDRESS OF ALTERNATE BAL CODE
00197C	4724 0234	3437	SVC OUT	PUT IT IN THE LEDS
001980	4F84	3438	ALTO6 EQU *	
001982	6301	3439	MVA INDIC,R7	ADDRESS OF DCP INDICATORS
001984	0864	3440	TBTR (R7,LODED)	RESET PROGRAM LOADED INDICATOR
001986	4424 1804	3441	SM DIS	DISABLE MASKS
00198A	6F08 0230	3442	MVBI STPCD,R0	GET THE STOP CODE
00198E	7FE3 3FFE	3443	MVA OVLAY,R4	GET THE END OF DCP
001992	74EA	3444	MVW LASAD,R7	LAST ADDRESSABLE WORD
001994	8828 19AA 1730	3445	OWI H3FFE,R7	ADJUST THE RIGHT SIDE
00199A	9028 19AC 1732	3446	SW R4,R7	BYTE COUNT
0019A0	4020 000E 05B2	3447	MVW ALTO7,PRBUF	MOVE INSTRUCTIONS
0019A6	6802 1730	3448	MVD ALTO8,PRBUF+TWO	TO ANOTHER AREA
0019AA		3449	MVA RESTR,PCKSI	SET A NEW PCK START ADR
0019AC	288C	3450	B PRBUF	GO EXECUTE THEM
		3451	ALTO7 EQU *	
		3452	MVFN RO,(R4)	SET THE REST OF STG TO STOP CODE
		3453	ALTO8 EQU *	

C3800 - DIAGNOSTIC CONTROL PROGRAM (DCP) P/N=1635013 EC=375147 PAGE 15A

LOCTR	OBJECT TEXT	STMT	SOURCE STATEMENT	COPYRIGHT IBM CORP 1976
0019AC	6802 05B2	3454	B RESTR	GO TO RESTART ROUTINE
		3455	*	
		3456	4966	SEEK ROUTINE OVERLAY
		3457	*	
		3458	PSE03 EQU *	
0019B0	6C08 1326	3459	MVW DKR4,R4	GET SECTOR # GOING TO
0019B4	C020 0244	3460	MVB SECSZ,R0	WHAT IS THE SECTOR SIZE
0019B8	1803	3461	JNZ PSE03	BR/256 BYTE SECTOR
0019BA	EC22 03C2	3462	DB SPT,R4	COMPUTE TPACK # (128 BYTE SECTOR)
0019BE	5005	3463	PSE10 EQU *	SKIP
0019C0		3464	PSE03 EQU *	
0019C0	EC22 03C3	3465	DB SPT1,R4	COMPUTE TRACK # (256 BYTE SECTOR)
0019C4	1302	3466	JEV PSE10	BR/HEAD 0
0019C6	7C83 0800	3467	OWI TWOK,R4	SET HEAD 1 - POS/HEAD/CYL WD
0019CA		3468	PSE10 EQU *	
0019CA	7C83 1000	3469	OWI FOURK,R4	SET DISKETTE POS # - POS/HEAD/CYL WD
0019CE	340A	3470	SRL ONE,R4	CONVERT TRACK # TO CYLINDER #
0019D0	0501	3471	ABI ONE,R5	SET RECORD NUMBER TO BE 1-15
0019D2	6D09 0244	3472	OW SECSZ,R5	SET THE SECTOR SIZE BIT
0019D6	7564	3473	MVW R5,R3	CHANGE REGISTERS
0019D8	D328 12E8	3474	MVD R3,RDW2	SET READ N/SECT, POS/HEAD/CYL WORDS
0019DC	D328 12F8	3475	MVD R3,RW2	SET WRITE N/SECT, POS/HEAD/CYL WORDS
0019E0	5700	3476	BXS (R7)	RETURN TO CALLING RTN
0019E2		3477	PSEND EQU *	
000032		3478	PSLEN EQU PSEND-PSE03	
		3479	*	
		3480	4966	DCB OVERLAY
		3481	*	
		3482	RECALIBRATE HOME DCB	
0019E2	0001	3483	DC X'0001'	DCB CONTROL WORD
0019E4	0000	3484	DC X'0000'	DCB CONTROL WORD - NOT USED
0019E6	0000	3485	DC A(0)	N/SECTOR WORD
0019E8	0000	3486	DC A(0)	DISKETTE POS #/HEAD/CYLINDER WORD
0019EA	0000	3487	DC A(0)	FORMAT DATA WORD
0019EC	0000	3488	DC A(0)	RESIDUAL STATUS ADDRESS
0019EE	0000	3489	DC A(0)	CHAIN ADDRESS
0019F0	0000	3490	DC A(0)	BYTE COUNT
0019F2	1308	3491	DC A(0)	IDCB DCB ADDRESS
0019F4	2810	3492	DC A(0)	
0019F6	0000	3493	DC A(0)	
0019F8	0000	3494	DC A(0)	
0019FA	0000	3495	DC A(0)	
0019FC	12C4	3496	DC A(0)	
0019FE	0000	3497	DC A(0)	
001A00	0100	3498	DC A(0)	
001A02	132C	3499	DC A(0)	
001A04	0822	3500	DC A(256)	
001A06	0000	3501	DC A(0)	
001A08	0000	3502	DC A(0)	
001A0A	0000	3503	DC A(0)	
001A0C	12C4	3504	DC A(0)	
001A0E	0000	3505	DC A(0)	
001A10	0100	3506	DC A(0)	
001A12	132C	3507	DC A(0)	
001A14		3508	DC A(0)	
000032		3509	DC A(0)	
001814		3510	DC A(256)	
		3511	DC A(0)	
		3512	DC A(0)	
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		3549	DC A(0)	
		3550	DC A(0)	
		3551	DC A(0)	
		3552	DC A(0)	
		3553	DC A(0)	
		3554	DC A(0)	
		3555		

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DECLARED	NAME	ATTRIBUTES AND REFERENCES
3415	ACCHG	ADDRESS. HEX LOCATION(00001950) IN CSECT(C3800) LENGTH(1)
3156	ACENT	ADDRESS. HEX LOCATION(00001768) IN CSECT(C3800) LENGTH(2)
3210	ACFCS	ADDRESS. HEX LOCATION(00001794) IN CSECT(C3800) LENGTH(1)
3155	ACMSG	ADDRESS. HEX LOCATION(00001766) IN CSECT(C3800) LENGTH(2)
227	ACNG	ABSOLUTE. HEX VALUE(00003801)
3275	ACNGM	ADDRESS. HEX LOCATION(000017FE) IN CSECT(C3800) LENGTH(2)
3273	ACNG1	ADDRESS. HEX LOCATION(000017FC) IN CSECT(C3800) LENGTH(2)
3175	ACPRE	ADDRESS. HEX LOCATION(0000177C) IN CSECT(C3800) LENGTH(2)
2144	ACRTN	ADDRESS. HEX LOCATION(00000E32) IN CSECT(C3800) LENGTH(1)
3197	ACVTR	ADDRESS. HEX LOCATION(0000178E) IN CSECT(C3800) LENGTH(2)
2957	ADDCB	ADDRESS. HEX LOCATION(000012E4) IN CSECT(C3800) LENGTH(2)
3300	ADEVT	ABSOLUTE. HEX VALUE(00000030)
722	ALCON	ADDRESS. HEX LOCATION(0000052E) IN CSECT(C3800) LENGTH(2)
233	ALTCN	ABSOLUTE. HEX VALUE(00003807)
103	ALTDV	ABSOLUTE. HEX VALUE(00000007)
719	ALTRC	ADDRESS. HEX LOCATION(00000520) IN CSECT(C3800) LENGTH(12)
3405	ALTOA	ADDRESS. HEX LOCATION(000018D0) IN CSECT(C3800) LENGTH(1)
3407	ALTOB	ADDRESS. HEX LOCATION(000018D2) IN CSECT(C3800) LENGTH(1)
3384	ALTOO	ADDRESS. HEX LOCATION(00001892) IN CSECT(C3800) LENGTH(1)
3393	ALTO1	ADDRESS. HEX LOCATION(000018A8) IN CSECT(C3800) LENGTH(1)
3398	ALTO2	ADDRESS. HEX LOCATION(000018B8) IN CSECT(C3800) LENGTH(1)
3418	ALTO3	ADDRESS. HEX LOCATION(00001950) IN CSECT(C3800) LENGTH(1)
3423	ALTO4	ADDRESS. HEX LOCATION(0000195E) IN CSECT(C3800) LENGTH(1)
3433	ALTO5	ADDRESS. HEX LOCATION(00001970) IN CSECT(C3800) LENGTH(1)
3438	ALTO6	ADDRESS. HEX LOCATION(0000197C) IN CSECT(C3800) LENGTH(1)
3451	ALTO7	ADDRESS. HEX LOCATION(000019AA) IN CSECT(C3800) LENGTH(1)
3453	ALTO8	ADDRESS. HEX LOCATION(000019AC) IN CSECT(C3800) LENGTH(1)
2071	AMRTN	ADDRESS. HEX LOCATION(00000E06) IN CSECT(C3800) LENGTH(1)
3111	ASCBF	ADDRESS. HEX LOCATION(000014EE) IN CSECT(C3800) LENGTH(2)
3012	ASCDT	ADDRESS. HEX LOCATION(0000132C) IN CSECT(C3800) LENGTH(2)
3110	ASCIN	ADDRESS. HEX LOCATION(000014EC) IN CSECT(C3800) LENGTH(2)
3109	ASCTB	ADDRESS. HEX LOCATION(000014EA) IN CSECT(C3800) LENGTH(2)
646	ASC11	ADDRESS. HEX LOCATION(0000040E) IN CSECT(C3800) LENGTH(36)
1747	ATE	ADDRESS. HEX LOCATION(00000C18) IN CSECT(C3800) LENGTH(1)
1736	ATH	ADDRESS. HEX LOCATION(00000BF0) IN CSECT(C3800) LENGTH(1)
95	AUTO	ABSOLUTE. HEX VALUE(00000000)
2492	A10	ADDRESS. HEX LOCATION(00001038) IN CSECT(C3800) LENGTH(1)
2496	A20	ADDRESS. HEX LOCATION(00001040) IN CSECT(C3800) LENGTH(1)
2502	A45	ADDRESS. HEX LOCATION(00001050) IN CSECT(C3800) LENGTH(1)
2507	A47	ADDRESS. HEX LOCATION(00001058) IN CSECT(C3800) LENGTH(1)
2518	A50	ADDRESS. HEX LOCATION(00001074) IN CSECT(C3800) LENGTH(1)
2520	A60	ADDRESS. HEX LOCATION(00001078) IN CSECT(C3800) LENGTH(1)
3305	BASPR	ABSOLUTE. HEX VALUE(00000020)
191	BOE	ABSOLUTE. HEX VALUE(00000006)
236	BPCD5	ABSOLUTE. HEX VALUE(0000380A)
707	BPG5	ADDRESS. HEX LOCATION(0000050E) IN CSECT(C3800) LENGTH(2)
2279	BPPA	ADDRESS. HEX LOCATION(00000E9E) IN CSECT(C3800) LENGTH(1)
2271	BPFG	ADDRESS. HEX LOCATION(00000E84) IN CSECT(C3800) LENGTH(1)
2269	BPPGM	ADDRESS. HEX LOCATION(00000E80) IN CSECT(C3800) LENGTH(1)
2287	BPPG1	ADDRESS. HEX LOCATION(00000E80) IN CSECT(C3800) LENGTH(1)
2291	BPP1	ADDRESS. HEX LOCATION(00000EB6) IN CSECT(C3800) LENGTH(1)
2294	BPP2	ADDRESS. HEX LOCATION(00000EBC) IN CSECT(C3800) LENGTH(1)
737	BPRG	ADDRESS. HEX LOCATION(00000558) IN CSECT(C3800) LENGTH(2)
2552	B01	ADDRESS. HEX LOCATION(0000108A) IN CSECT(C3800) LENGTH(1)
2564	B10	ADDRESS. HEX LOCATION(000010A0) IN CSECT(C3800) LENGTH(1)

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DECLARED	NAME	ATTRIBUTES AND REFERENCES
2570	B12	ADDRESS. HEX LOCATION(000010A8) IN CSECT(C3800) LENGTH(1)
2583	B40	ADDRESS. HEX LOCATION(000010C2) IN CSECT(C3800) LENGTH(1)
2585	B41	ADDRESS. HEX LOCATION(000010C4) IN CSECT(C3800) LENGTH(1)
2592	B42	ADDRESS. HEX LOCATION(000010D6) IN CSECT(C3800) LENGTH(1)
2604	B43	ADDRESS. HEX LOCATION(000010F4) IN CSECT(C3800) LENGTH(1)
2613	B44	ADDRESS. HEX LOCATION(00001106) IN CSECT(C3800) LENGTH(1)
2985	CALIB	ADDRESS. HEX LOCATION(0000130A) IN CSECT(C3800) LENGTH(2)
620	CFGN1	ADDRESS. HEX LOCATION(000003CF) IN CSECT(C3800) LENGTH(6)
122	CHARS	ABSOLUTE. HEX VALUE(000000E2)
213	CHDLG	ABSOLUTE. HEX VALUE(00000004)
1342	CHNG	ADDRESS. HEX LOCATION(000009EE) IN CSECT(C3800) LENGTH(1)
58	CHNGE	ABSOLUTE. HEX VALUE(00000004)
1351	CHNG1	ADDRESS. HEX LOCATION(000009FC) IN CSECT(C3800) LENGTH(1)
270	CICBT	ABSOLUTE. HEX VALUE(00000014)
1569	CICB1	ADDRESS. HEX LOCATION(00000B50) IN CSECT(C3800) LENGTH(1)
1575	CICB3	ADDRESS. HEX LOCATION(00000B5E) IN CSECT(C3800) LENGTH(1)
1581	CICB4	ADDRESS. HEX LOCATION(00000B6A) IN CSECT(C3800) LENGTH(1)
1588	CICB6	ADDRESS. HEX LOCATION(00000B7C) IN CSECT(C3800) LENGTH(1)
3212	CICNT	ADDRESS. HEX LOCATION(00001796) IN CSECT(C3800) LENGTH(1)
277	CKDAD	ABSOLUTE. HEX VALUE(00000001)
3293	CKPT	ADDRESS. HEX LOCATION(0000180C) IN CSECT(C3800) LENGTH(1)
572	CKPTC	ADDRESS. HEX LOCATION(00000382) IN CSECT(C3800) LENGTH(2)
445	CNDTB	ADDRESS. HEX LOCATION(000002DC) IN CSECT(C3800) LENGTH(1)
554	CMND	ADDRESS. HEX LOCATION(0000036E) IN CSECT(C3800) LENGTH(1)
555	CMCT	ADDRESS. HEX LOCATION(0000036F) IN CSECT(C3800) LENGTH(1)
556	CNDAT	ADDRESS. HEX LOCATION(00000370) IN CSECT(C3800) LENGTH(2)
635	CNFRF	ADDRESS. HEX LOCATION(000003E4) IN CSECT(C3800) LENGTH(2)
110	CNRUN	ABSOLUTE. HEX VALUE(0000000E)
3223	CNTBK	ADDRESS. HEX LOCATION(000017A6) IN CSECT(C3800) LENGTH(1)
600	CNVNM	ADDRESS. HEX LOCATION(000003AC) IN CSECT(C3800) LENGTH(2)
592	CNVV	ADDRESS. HEX LOCATION(000003A0) IN CSECT(C3800) LENGTH(2)
558	CNVTX	ADDRESS. HEX LOCATION(00000372) IN CSECT(C3800) LENGTH(2)
560	CNVTZ	ADDRESS. HEX LOCATION(00000376) IN CSECT(C3800) LENGTH(2)
593	CNVT1	ADDRESS. HEX LOCATION(000003A2) IN CSECT(C3800) LENGTH(2)
1239	CN10	ADDRESS. HEX LOCATION(00000964) IN CSECT(C3800) LENGTH(1)
1242	CN11	ADDRESS. HEX LOCATION(0000096A) IN CSECT(C3800) LENGTH(1)
1244	CN12	ADDRESS. HEX LOCATION(0000096E) IN CSECT(C3800) LENGTH(1)
1249	CN20	ADDRESS. HEX LOCATION(00000974) IN CSECT(C3800) LENGTH(1)
1259	CN30	ADDRESS. HEX LOCATION(00000990) IN CSECT(C3800) LENGTH(1)
1265	CN40	ADDRESS. HEX LOCATION(000009A2) IN CSECT(C3800) LENGTH(1)
540	COMD	ADDRESS. HEX LOCATION(00000362) IN CSECT(C3800) LENGTH(1)
105	CONDV	ABSOLUTE. HEX VALUE(00000009)
1218	CONEP	ADDRESS. HEX LOCATION(00000926) IN CSECT(C3800) LENGTH(1)
433	CONLB	ADDRESS. HEX LOCATION(0000026C) IN CSECT(C3800) LENGTH(2)
434	CONLV	ADDRESS. HEX LOCATION(00000282) IN CSECT(C3800) LENGTH(2)
624	CONPG	ADDRESS. HEX LOCATION(000003DC) IN CSECT(C3800) LENGTH(4)
365	CONPT	ADDRESS. HEX LOCATION(000001C) IN CSECT(C3800) LENGTH(2)
366	CONSI	ADDRESS. HEX LOCATION(000001E) IN CSECT(C3800) LENGTH(2)
1162	CONSO	ADDRESS. HEX LOCATION(000008A4) IN CSECT(C3800) LENGTH(1)
1195	CONS1	ADDRESS. HEX LOCATION(000008FA) IN CSECT(C3800) LENGTH(1)
1201	CONS2	ADDRESS. HEX LOCATION(0000090A) IN CSECT(C3800) LENGTH(1)
301	CUDDC	ABSOLUTE. HEX VALUE(00000011)
302	CUDD	ABSOLUTE. HEX VALUE(00000021)
292	CUDD4	ABSOLUTE. HEX VALUE(00000006)
294	CUDD6	ABSOLUTE. HEX VALUE(00000008)
296	CUDD8	ABSOLUTE. HEX VALUE(0000000A)

DECLARED	NAME	ATTRIBUTES AND REFERENCES
287	CU DT	3412 ABSOLUTE. HEX VALUE(00000001)
3	C3800	920 CSECT. START(00000000) LENGTH(6676) ESDID(1)
3011	DBUF	3 3029 3039 3113 3133 3181 3277 3415 3417 ADDRESS. HEX LOCATION(0000132C) IN CSECT(C3800) LENGTH(2)
2983	DCBAD	410 874 936 2373 2387 2836 2966 2975 3012 ADDRESS. HEX LOCATION(00001308) IN CSECT(C3800) LENGTH(2)
584	DCBCV	3493 ADDRESS. HEX LOCATION(00000394) IN CSECT(C3800) LENGTH(2)
618	DCHAR	1098 ADDRESS. HEX LOCATION(000003CD) IN CSECT(C3800) LENGTH(1)
210	DCPCY	2767 2787 ABSOLUTE. HEX VALUE(0000000A)
3028	DCPND	3019 ADDRESS. HEX LOCATION(00001430) IN CSECT(C3800) LENGTH(1)
713	DCPWM	3030 ADDRESS. HEX LOCATION(00000516) IN CSECT(C3800) LENGTH(4)
422	DCPO8	716 ADDRESS. HEX LOCATION(0000024E) IN CSECT(C3800) LENGTH(2)
1308	DELAY	3400 ADDRESS. HEX LOCATION(000009DA) IN CSECT(C3800) LENGTH(1)
1326	DELY1	474 ADDRESS. HEX LOCATION(000009E6) IN CSECT(C3800) LENGTH(2)
1324	DELY5	1328 3397 ADDRESS. HEX LOCATION(000009E2) IN CSECT(C3800) LENGTH(1)
596	DEVAD	475 ADDRESS. HEX LOCATION(000003A6) IN CSECT(C3800) LENGTH(2)
3291	DEVPT	2431 ADDRESS. HEX LOCATION(00001808) IN CSECT(C3800) LENGTH(1)
529	DIPR	2418 ADDRESS. HEX LOCATION(00000357) IN CSECT(C3800) LENGTH(1)
528	DIPRE	1085 1555 2146 ADDRESS. HEX LOCATION(00000356) IN CSECT(C3800) LENGTH(2)
386	DKAD	529 1086 1556 1557 2149 ADDRESS. HEX LOCATION(00000233) IN CSECT(C3800) LENGTH(1)
3007	DKHL	1622 1658 3338 ADDRESS. HEX LOCATION(0000132C) IN CSECT(C3800) LENGTH(1)
416	DKINT	2995 2996 ADDRESS. HEX LOCATION(00000246) IN CSECT(C3800) LENGTH(2)
2998	DKLL	1625 1660 2870 2887 2891 3348 3349 ADDRESS. HEX LOCATION(0000131A) IN CSECT(C3800) LENGTH(2)
2991	DKRST	2997 ADDRESS. HEX LOCATION(00001312) IN CSECT(C3800) LENGTH(2)
3018	DKRTY	2855 2856 ADDRESS. HEX LOCATION(0000142C) IN CSECT(C3800) LENGTH(2)
3004	DKR4	2837 2848 ADDRESS. HEX LOCATION(00001326) IN CSECT(C3800) LENGTH(2)
3005	DKR5	2908 3460 ADDRESS. HEX LOCATION(00001328) IN CSECT(C3800) LENGTH(2)
2995	DKSV	2869 2881 ADDRESS. HEX LOCATION(00001314) IN CSECT(C3800) LENGTH(2)
2996	DKSV2	2839 2840 2883 ADDRESS. HEX LOCATION(00001316) IN CSECT(C3800) LENGTH(2)
2882	DK04	2839 ADDRESS. HEX LOCATION(00001250) IN CSECT(C3800) LENGTH(1)
2884	DK10	2871 ADDRESS. HEX LOCATION(00001254) IN CSECT(C3800) LENGTH(1)
2889	DK12	2880 ADDRESS. HEX LOCATION(00001264) IN CSECT(C3800) LENGTH(1)
1323	DLYCT	2887 ADDRESS. HEX LOCATION(000009E0) IN CSECT(C3800) LENGTH(2)
3314	DLYIN	1325 3391 3396 ADDRESS. HEX LOCATION(00001804) IN CSECT(C3800) LENGTH(2)
3315	DLYI1	3397 ADDRESS. HEX LOCATION(00001806) IN CSECT(C3800) LENGTH(2)
438	DMONE	3314 ADDRESS. HEX LOCATION(000002D8) IN CSECT(C3800) LENGTH(2)
354	DMPEA	440 441 1015 ADDRESS. HEX LOCATION(00000006) IN CSECT(C3800) LENGTH(2)
353	DMPSA	3101 ADDRESS. HEX LOCATION(00000004) IN CSECT(C3800) LENGTH(2)
241	DPSTG	3073 ABSOLUTE. HEX VALUE(00003812)
513	DRSV	3076 ADDRESS. HEX LOCATION(0000033E) IN CSECT(C3800) LENGTH(2)
514	DRSVA	842 843 971 ADDRESS. HEX LOCATION(00000340) IN CSECT(C3800) LENGTH(2)
525	DRSVH	842 ADDRESS. HEX LOCATION(00000356) IN CSECT(C3800) LENGTH(1)
516	DRSVL	513 514 ADDRESS. HEX LOCATION(00000344) IN CSECT(C3800) LENGTH(2)
519	DRSV1	515 ADDRESS. HEX LOCATION(0000034A) IN CSECT(C3800) LENGTH(2)
3108	DSBNK	876 ADDRESS. HEX LOCATION(000014E8) IN CSECT(C3800) LENGTH(2)
3014	DSBUF	3084 ADDRESS. HEX LOCATION(00001330) IN CSECT(C3800) LENGTH(1)
3013	DSCOD	3077 3266 ADDRESS. HEX LOCATION(0000132E) IN CSECT(C3800) LENGTH(1)
2879	DSKIT	3076 ADDRESS. HEX LOCATION(00001246) IN CSECT(C3800) LENGTH(1)
2988	DSKPR	416 1660 2870 2891 3349 ADDRESS. HEX LOCATION(0000130E) IN CSECT(C3800) LENGTH(2)
2819	DSKPD	2841 2842 2857 2858 ADDRESS. HEX LOCATION(000011C2) IN CSECT(C3800) LENGTH(1)
2833	DSKWR	408 1874 2367 2384 2736 ADDRESS. HEX LOCATION(000011C8) IN CSECT(C3800) LENGTH(1)
2835	DSK10	409 1864 ADDRESS. HEX LOCATION(000011CC) IN CSECT(C3800) LENGTH(1)
2844	DSK20	2821 ADDRESS. HEX LOCATION(000011F4) IN CSECT(C3800) LENGTH(1)
3301	DSOVA	2893 ABSOLUTE. HEX VALUE(00001E00)
3068	DSRTN	3429 ADDRESS. HEX LOCATION(0000147E) IN CSECT(C3800) LENGTH(1)
3075	DSRT1	1226 1989 ADDRESS. HEX LOCATION(00001494) IN CSECT(C3800) LENGTH(1)
3086	DSRT2	3102 ADDRESS. HEX LOCATION(000014BC) IN CSECT(C3800) LENGTH(1)

DECLARED	NAME	ATTRIBUTES AND REFERENCES
3103	DSRT3	3094 ADDRESS. HEX LOCATION(000014E4) IN CSECT(C3800) LENGTH(1)
3266	DSTG	3100 ADDRESS. HEX LOCATION(000017F2) IN CSECT(C3800) LENGTH(2)
195	DSTYP	3097 ABSOLUTE. HEX VALUE(0000000C)
3329	DS20V	2767 ADDRESS. HEX LOCATION(0000180D) IN CSECT(C3800) LENGTH(5)
1294	DUMMY	3424 ADDRESS. HEX LOCATION(000009D6) IN CSECT(C3800) LENGTH(1)
636	DVTAB	496 1197 1200 1311 1327 1329 1344 1347 1369 ADDRESS. HEX LOCATION(000003E6) IN CSECT(C3800) LENGTH(2)
257	DVTYP	1483 ABSOLUTE. HEX VALUE(00000001)
121	EBBK	920 ABSOLUTE. HEX VALUE(00000040)
651	EBCBK	3078 ADDRESS. HEX LOCATION(00000481) IN CSECT(C3800) LENGTH(1)
649	EBCDI	1984 2002 2335 2433 2588 2605 2743 ADDRESS. HEX LOCATION(00000448) IN CSECT(C3800) LENGTH(36)
137	EIGHT	652 653 1687 1734 1744 1749 1993 ABSOLUTE. HEX VALUE(00000008)
140	ELEVN	966 1456 1700 3291 ABSOLUTE. HEX VALUE(0000000E)
243	ENTCD	1590 3147 ABSOLUTE. HEX VALUE(00003814)
193	EOE	1243 ABSOLUTE. HEX VALUE(00000008)
688	ERMS1	2356 2749 ADDRESS. HEX LOCATION(000004DE) IN CSECT(C3800) LENGTH(8)
1743	ETA	691 ADDRESS. HEX LOCATION(00000C0A) IN CSECT(C3800) LENGTH(1)
1750	ETA1	501 ADDRESS. HEX LOCATION(00000C24) IN CSECT(C3800) LENGTH(1)
1753	ETA2	1746 ADDRESS. HEX LOCATION(00000C30) IN CSECT(C3800) LENGTH(1)
1759	ETA3	1742 ADDRESS. HEX LOCATION(00000C3A) IN CSECT(C3800) LENGTH(1)
1761	ETA4	1783 ADDRESS. HEX LOCATION(00000C3E) IN CSECT(C3800) LENGTH(1)
1765	ETA5	1778 ADDRESS. HEX LOCATION(00000C4A) IN CSECT(C3800) LENGTH(1)
1770	ETA6	1769 ADDRESS. HEX LOCATION(00000C52) IN CSECT(C3800) LENGTH(1)
1781	ETA7	1767 ADDRESS. HEX LOCATION(00000C6C) IN CSECT(C3800) LENGTH(1)
1784	ETA8	1774 1776 ADDRESS. HEX LOCATION(00000C70) IN CSECT(C3800) LENGTH(1)
1786	ETA9	1780 ADDRESS. HEX LOCATION(00000C72) IN CSECT(C3800) LENGTH(1)
1733	ETH	1830 1881 ADDRESS. HEX LOCATION(00000EB8) IN CSECT(C3800) LENGTH(1)
1738	ETH1	497 ADDRESS. HEX LOCATION(00000BF6) IN CSECT(C3800) LENGTH(1)
79	ETOH	1735 ABSOLUTE. HEX VALUE(00000019)
1382	EXITA	2438 2510 2602 ADDRESS. HEX LOCATION(00000A08) IN CSECT(C3800) LENGTH(1)
267	EXPNT	478 ABSOLUTE. HEX VALUE(00000011)
157	FIFT7	956 989 ABSOLUTE. HEX VALUE(00000039)
418	FIGRN	1751 ADDRESS. HEX LOCATION(0000024A) IN CSECT(C3800) LENGTH(1)
134	FIVE	800 1405 1430 2270 2446 ABSOLUTE. HEX VALUE(00000005)
2728	FNDDS	747 906 942 1816 2328 ADDRESS. HEX LOCATION(0000110E) IN CSECT(C3800) LENGTH(1)
3263	FNDPG	407 2344 ADDRESS. HEX LOCATION(000017EE) IN CSECT(C3800) LENGTH(2)
2732	FN05	411 863 1805 1844 2337 2401 2734 2776 2794 ADDRESS. HEX LOCATION(00001116) IN CSECT(C3800) LENGTH(1)
2735	FN10	2808 ADDRESS. HEX LOCATION(0000111E) IN CSECT(C3800) LENGTH(1)
2740	FN20	2779 ADDRESS. HEX LOCATION(00001126) IN CSECT(C3800) LENGTH(1)
2753	FN25	2777 ADDRESS. HEX LOCATION(00001140) IN CSECT(C3800) LENGTH(1)
2770	FN27	2756 ADDRESS. HEX LOCATION(00001168) IN CSECT(C3800) LENGTH(1)
2774	FN30	2765 ADDRESS. HEX LOCATION(00001170) IN CSECT(C3800) LENGTH(1)
2780	FN40	2755 2788 ADDRESS. HEX LOCATION(0000117C) IN CSECT(C3800) LENGTH(1)
2783	FN50	2738 2785 2811 ADDRESS. HEX LOCATION(00001182) IN CSECT(C3800) LENGTH(1)
2799	FN6A	2742 ADDRESS. HEX LOCATION(000011AA) IN CSECT(C3800) LENGTH(1)
2786	FN60	2801 ADDRESS. HEX LOCATION(00001186) IN CSECT(C3800) LENGTH(1)
2790	FN60A	2744 2747 ADDRESS. HEX LOCATION(0000118E) IN CSECT(C3800) LENGTH(1)
2805	FN60D	2768 2772 ADDRESS. HEX LOCATION(00001188) IN CSECT(C3800) LENGTH(1)
2809	FN70	2807 ADDRESS. HEX LOCATION(000011BE) IN CSECT(C3800) LENGTH(1)
133	FOUR	2759 2761 2763 2793 ABSOLUTE. HEX VALUE(00000004)
167	FOURK	584 746 907 939 1232 1255 1458 1696 1701 ABSOLUTE. HEX VALUE(00001000)
612	FOX30	1758 1777 1807 1824 2286 2365 2399 2565 2752 ADDRESS. HEX LOCATION(000003C0) IN CSECT(C3800) LENGTH(2)
3216	GRPT	2926 3470 ADDRESS. HEX LOCATION(0000179A) IN CSECT(C3800) LENGTH(2)
266	HDVTB	1179 1192 3217 ABSOLUTE. HEX VALUE(00000008)

CROSS-REFERENCE LISTING

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DECLARED	NAME	ATTRIBUTES AND REFERENCES
440	HEXFF	ADDRESS. HEX LOCATION (000002D8) IN CSECT (C3800) LENGTH (2)
644	HEXTA	ADDRESS. HEX LOCATION (000003FC) IN CSECT (C3800) LENGTH (17)
668	HEX00	ADDRESS. HEX LOCATION (0000049A) IN CSECT (C3800) LENGTH (2)
626	HEX01	ADDRESS. HEX LOCATION (000003E1) IN CSECT (C3800) LENGTH (1)
625	HEX3E	ADDRESS. HEX LOCATION (000003E0) IN CSECT (C3800) LENGTH (1)
171	HFF00	ABSOLUTE. HEX VALUE (0000FF00)
75	HIO	ABSOLUTE. HEX VALUE (00000015)
537	HLTIO	ADDRESS. HEX LOCATION (00000360) IN CSECT (C3800) LENGTH (2)
264	HPSA	ABSOLUTE. HEX VALUE (00000006)
3222	HRTA	ADDRESS. HEX LOCATION (000017A4) IN CSECT (C3800) LENGTH (2)
1689	HTA	ADDRESS. HEX LOCATION (00000BC2) IN CSECT (C3800) LENGTH (1)
1686	HTE	ADDRESS. HEX LOCATION (00000BBC) IN CSECT (C3800) LENGTH (1)
1691	HTE1	ADDRESS. HEX LOCATION (00000BC6) IN CSECT (C3800) LENGTH (1)
1697	HTE2	ADDRESS. HEX LOCATION (00000BD0) IN CSECT (C3800) LENGTH (1)
80	HTOE	ABSOLUTE. HEX VALUE (0000001A)
273	HTUID	ABSOLUTE. HEX VALUE (00000012)
170	H3FFE	ABSOLUTE. HEX VALUE (00003FFE)
169	H3000	ABSOLUTE. HEX VALUE (00003000)
580	IARCV	ADDRESS. HEX LOCATION (0000038E) IN CSECT (C3800) LENGTH (2)
617	ICHAR	ADDRESS. HEX LOCATION (000003CC) IN CSECT (C3800) LENGTH (1)
3244	IDCB	ADDRESS. HEX LOCATION (000017BE) IN CSECT (C3800) LENGTH (2)
56	IDLE	ABSOLUTE. HEX VALUE (00000002)
3342	IDSK	ADDRESS. HEX LOCATION (00001822) IN CSECT (C3800) LENGTH (1)
3363	IDSK0	ADDRESS. HEX LOCATION (00001860) IN CSECT (C3800) LENGTH (1)
3366	IDSK1	ADDRESS. HEX LOCATION (00001866) IN CSECT (C3800) LENGTH (1)
215	IHDLP	ABSOLUTE. HEX VALUE (0000000E)
691	INCMD	ADDRESS. HEX LOCATION (000004E8) IN CSECT (C3800) LENGTH (2)
388	INDIC	ADDRESS. HEX LOCATION (00000234) IN CSECT (C3800) LENGTH (2)
3414	INEND	ADDRESS. HEX LOCATION (000018E6) IN CSECT (C3800) LENGTH (1)
3337	INIT	ADDRESS. HEX LOCATION (00001814) IN CSECT (C3800) LENGTH (1)
3214	INPRC	ADDRESS. HEX LOCATION (00001798) IN CSECT (C3800) LENGTH (1)
3258	INTAD	ADDRESS. HEX LOCATION (000017E8) IN CSECT (C3800) LENGTH (2)
633	INTLD	ADDRESS. HEX LOCATION (000003E2) IN CSECT (C3800) LENGTH (1)
232	INVCD	ABSOLUTE. HEX VALUE (00003806)
1809	IRAD0	ADDRESS. HEX LOCATION (00000C8C) IN CSECT (C3800) LENGTH (1)
1814	IRAD1	ADDRESS. HEX LOCATION (00000C96) IN CSECT (C3800) LENGTH (1)
1821	IRAD2	ADDRESS. HEX LOCATION (00000CA8) IN CSECT (C3800) LENGTH (1)
1827	IRAD5	ADDRESS. HEX LOCATION (00000CB6) IN CSECT (C3800) LENGTH (1)
106	IRD	ABSOLUTE. HEX VALUE (0000000A)
1800	IREAD	ADDRESS. HEX LOCATION (00000C74) IN CSECT (C3800) LENGTH (1)
471	ISVCP	ADDRESS. HEX LOCATION (000002FC) IN CSECT (C3800) LENGTH (1)
2847	IS10	ADDRESS. HEX LOCATION (000011FA) IN CSECT (C3800) LENGTH (1)
2852	IS12	ADDRESS. HEX LOCATION (0000120A) IN CSECT (C3800) LENGTH (1)
2861	IS22	ADDRESS. HEX LOCATION (00001228) IN CSECT (C3800) LENGTH (1)
2868	IS25	ADDRESS. HEX LOCATION (00001238) IN CSECT (C3800) LENGTH (1)
1842	IWRIT	ADDRESS. HEX LOCATION (00000CBC) IN CSECT (C3800) LENGTH (1)
1849	IWR10	ADDRESS. HEX LOCATION (00000CD6) IN CSECT (C3800) LENGTH (1)
1856	IWR17	ADDRESS. HEX LOCATION (00000CE2) IN CSECT (C3800) LENGTH (1)
1858	IWR20	ADDRESS. HEX LOCATION (00000CE4) IN CSECT (C3800) LENGTH (1)
1863	IWR30	ADDRESS. HEX LOCATION (00000CEC) IN CSECT (C3800) LENGTH (1)
1879	IWR40	ADDRESS. HEX LOCATION (00000D16) IN CSECT (C3800) LENGTH (1)
384	LASAD	ADDRESS. HEX LOCATION (00000230) IN CSECT (C3800) LENGTH (2)
109	LDIAG	ABSOLUTE. HEX VALUE (0000000D)

CROSS-REFERENCE LISTING

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DECLARED	NAME	ATTRIBUTES AND REFERENCES
101	LODED	ABSOLUTE. HEX VALUE (00000004)
97	LOOP	ABSOLUTE. HEX VALUE (00000001)
697	LPB	ADDRESS. HEX LOCATION (000004FC) IN CSECT (C3800) LENGTH (2)
704	LPC	ADDRESS. HEX LOCATION (0000050A) IN CSECT (C3800) LENGTH (2)
237	LPCD4	ABSOLUTE. HEX VALUE (0000380B)
238	LPCD5	ABSOLUTE. HEX VALUE (0000380C)
749	LPD	ADDRESS. HEX LOCATION (0000057C) IN CSECT (C3800) LENGTH (2)
694	LPG4	ADDRESS. HEX LOCATION (000004EC) IN CSECT (C3800) LENGTH (14)
700	LPG5	ADDRESS. HEX LOCATION (00000500) IN CSECT (C3800) LENGTH (4)
701	LPG5A	ADDRESS. HEX LOCATION (00000504) IN CSECT (C3800) LENGTH (4)
2319	LPPGM	ADDRESS. HEX LOCATION (00000EC6) IN CSECT (C3800) LENGTH (1)
2323	LP00	ADDRESS. HEX LOCATION (00000ECE) IN CSECT (C3800) LENGTH (1)
2333	LP005	ADDRESS. HEX LOCATION (00000EE0) IN CSECT (C3800) LENGTH (1)
2326	LP01	ADDRESS. HEX LOCATION (00000ED4) IN CSECT (C3800) LENGTH (1)
2329	LP05	ADDRESS. HEX LOCATION (00000EDA) IN CSECT (C3800) LENGTH (1)
2336	LP05A	ADDRESS. HEX LOCATION (00000EE6) IN CSECT (C3800) LENGTH (1)
2340	LP06	ADDRESS. HEX LOCATION (00000EF2) IN CSECT (C3800) LENGTH (1)
2354	LP07	ADDRESS. HEX LOCATION (00000F18) IN CSECT (C3800) LENGTH (1)
2358	LP07A	ADDRESS. HEX LOCATION (00000F1E) IN CSECT (C3800) LENGTH (1)
2360	LP07B	ADDRESS. HEX LOCATION (00000F22) IN CSECT (C3800) LENGTH (1)
2366	LP08	ADDRESS. HEX LOCATION (00000F32) IN CSECT (C3800) LENGTH (1)
2374	LP09	ADDRESS. HEX LOCATION (00000F48) IN CSECT (C3800) LENGTH (1)
2416	LP100	ADDRESS. HEX LOCATION (00000FA6) IN CSECT (C3800) LENGTH (1)
2441	LP103	ADDRESS. HEX LOCATION (00000FF2) IN CSECT (C3800) LENGTH (1)
2429	LP104	ADDRESS. HEX LOCATION (00000FCE) IN CSECT (C3800) LENGTH (1)
2434	LP105	ADDRESS. HEX LOCATION (00000FDE) IN CSECT (C3800) LENGTH (1)
2449	LP106	ADDRESS. HEX LOCATION (00001008) IN CSECT (C3800) LENGTH (1)
2454	LP107	ADDRESS. HEX LOCATION (00001016) IN CSECT (C3800) LENGTH (1)
2459	LP120	ADDRESS. HEX LOCATION (00001026) IN CSECT (C3800) LENGTH (1)
2389	LP49	ADDRESS. HEX LOCATION (00000F6C) IN CSECT (C3800) LENGTH (1)
2398	LP50	ADDRESS. HEX LOCATION (00000F80) IN CSECT (C3800) LENGTH (1)
2405	LP55	ADDRESS. HEX LOCATION (00000F92) IN CSECT (C3800) LENGTH (1)
2408	LP60	ADDRESS. HEX LOCATION (00000F96) IN CSECT (C3800) LENGTH (1)
2413	LP70	ADDRESS. HEX LOCATION (00000FA0) IN CSECT (C3800) LENGTH (1)
623	LSSVC	ADDRESS. HEX LOCATION (000003DA) IN CSECT (C3800) LENGTH (2)
211	LVTE	ABSOLUTE. HEX VALUE (00000020)
229	MCKCD	ABSOLUTE. HEX VALUE (00003803)
1117	MCKEP	ADDRESS. HEX LOCATION (0000086E) IN CSECT (C3800) LENGTH (1)
183	MCKLB	ABSOLUTE. HEX VALUE (0000D4C3)
685	MCKMA	ADDRESS. HEX LOCATION (000004DA) IN CSECT (C3800) LENGTH (2)
672	MCKMG	ADDRESS. HEX LOCATION (0000049E) IN CSECT (C3800) LENGTH (2)
673	MCKM1	ADDRESS. HEX LOCATION (000004A0) IN CSECT (C3800) LENGTH (3)
675	MCKM3	ADDRESS. HEX LOCATION (000004A8) IN CSECT (C3800) LENGTH (5)
677	MCKM4	ADDRESS. HEX LOCATION (000004B2) IN CSECT (C3800) LENGTH (5)
679	MCKM7	ADDRESS. HEX LOCATION (000004BC) IN CSECT (C3800) LENGTH (5)
681	MCKM8	ADDRESS. HEX LOCATION (000004C6) IN CSECT (C3800) LENGTH (5)
683	MCKM9	ADDRESS. HEX LOCATION (000004D0) IN CSECT (C3800) LENGTH (8)
615	MDINH	ADDRESS. HEX LOCATION (000003C4) IN CSECT (C3800) LENGTH (4)
113	MDIRT	ABSOLUTE. HEX VALUE (00000030)
441	MINON	ADDRESS. HEX LOCATION (000002D8) IN CSECT (C3800) LENGTH (2)
645	MKFO	ADDRESS. HEX LOCATION (0000040D) IN CSECT (C3800) LENGTH (1)
2094	MMRTN	ADDRESS. HEX LOCATION (00000E12) IN CSECT (C3800) LENGTH (1)
2101	MRTN1	ADDRESS. HEX LOCATION (00000E20) IN CSECT (C3800) LENGTH (1)
3251	MSG8A	ADDRESS. HEX LOCATION (000017D5) IN CSECT (C3800) LENGTH (5)
3253	MSG9A	ADDRESS. HEX LOCATION (000017DF) IN CSECT (C3800) LENGTH (5)
174	M1	ABSOLUTE. HEX VALUE (FFFFFFF)

DECLARED	NAME	ATTRIBUTES AND REFERENCES
		977 1257 1272 1552 1860 1871 1986 2004 2334
178	M10	2381 2591 2607 2848 ABSOLUTE. HEX VALUE (FFFFFFF6)
175	M2	945 950 ABSOLUTE. HEX VALUE (FFFFFFFE)
180	M28	1026 1179 1183 1455 3095 ABSOLUTE. HEX VALUE (FFFFFFE4)
177	M4	1384 2174 2554 ABSOLUTE. HEX VALUE (FFFFFFFC)
212	NDFPS	2403 ABSOLUTE. HEX VALUE (00000008)
125	NEGZR	2739 ABSOLUTE. HEX VALUE (00001800)
138	NINE	1592 ABSOLUTE. HEX VALUE (00000009)
112	NINTL	1193 3079 ABSOLUTE. HEX VALUE (00000003)
652	NORES	1345 ADDRESS. HEX LOCATION (0000045F) IN CSECT (C3800) LENGTH (1)
2029	NORTN	2030 ADDRESS. HEX LOCATION (00000DF2) IN CSECT (C3800) LENGTH (1)
2031	NORT1	446 ADDRESS. HEX LOCATION (00000DF6) IN CSECT (C3800) LENGTH (1)
104	NXTVT	2053 ABSOLUTE. HEX VALUE (00000008)
337	OAB	2099 2341 2746 2773 2789 ABSOLUTE. HEX VALUE (00000004)
334	OAG	1967 ABSOLUTE. HEX VALUE (00000002)
340	OCC	1956 ABSOLUTE. HEX VALUE (00000007)
619	OCHAR	1959 ADDRESS. HEX LOCATION (000003CE) IN CSECT (C3800) LENGTH (1)
98	OPF	2435 ABSOLUTE. HEX VALUE (00000002)
2489	OPPGM	2491 2513 ADDRESS. HEX LOCATION (00001032) IN CSECT (C3800) LENGTH (1)
1451	OIO	460 ADDRESS. HEX LOCATION (00000A84) IN CSECT (C3800) LENGTH (1)
1467	OI20	480 481 482 483 484 485 486 487 488 ADDRESS. HEX LOCATION (00000AAF) IN CSECT (C3800) LENGTH (1)
1475	OI25	1488 1497 1505 1512 ADDRESS. HEX LOCATION (00000AC4) IN CSECT (C3800) LENGTH (1)
1482	OI28	1473 ADDRESS. HEX LOCATION (00000AD2) IN CSECT (C3800) LENGTH (1)
1484	OI40	1538 1558 1595 1623 1626 1659 1664 ADDRESS. HEX LOCATION (00000AD4) IN CSECT (C3800) LENGTH (1)
1489	OI43	1466 ADDRESS. HEX LOCATION (00000AE0) IN CSECT (C3800) LENGTH (1)
1495	OI45	1485 ADDRESS. HEX LOCATION (00000AEE) IN CSECT (C3800) LENGTH (1)
1498	OI70	1492 ADDRESS. HEX LOCATION (00000AF2) IN CSECT (C3800) LENGTH (1)
1506	OI80	1491 ADDRESS. HEX LOCATION (00000B00) IN CSECT (C3800) LENGTH (1)
1509	OI85	1500 ADDRESS. HEX LOCATION (00000B04) IN CSECT (C3800) LENGTH (1)
1513	OI90	1516 ADDRESS. HEX LOCATION (00000B0E) IN CSECT (C3800) LENGTH (1)
99	ON	1508 ABSOLUTE. HEX VALUE (00000002)
130	ONE	2487 ABSOLUTE. HEX VALUE (00000001)
		525 565 744 821 838 848 851 877 913 976 997 1027 1032 1084 1235 1426 1501 1503 1586 1589 1741 1752 1768 1772 1773 1804 1870 1909 1995 2000 2008 2032 2377 2380 2423 2505 2609 2610 2751 2778 2784 2866 2918 2920 2982 3179 3217 3225 3346 3368 3471 3472
2485	ONPGM	ADDRESS. HEX LOCATION (0000102A) IN CSECT (C3800) LENGTH (1)
412	OPADR	459 ADDRESS. HEX LOCATION (00000240) IN CSECT (C3800) LENGTH (1)
2005	OPCM	931 2145 3421 3434 ADDRESS. HEX LOCATION (00000DF4) IN CSECT (C3800) LENGTH (1)
1983	OPCMD	1282 ADDRESS. HEX LOCATION (00000DB4) IN CSECT (C3800) LENGTH (1)
1992	OPCM1	1985 3194 ADDRESS. HEX LOCATION (00000DC8) IN CSECT (C3800) LENGTH (1)
1998	OPCM2	1996 ADDRESS. HEX LOCATION (00000DD4) IN CSECT (C3800) LENGTH (1)
2001	OPCM3	1994 ADDRESS. HEX LOCATION (00000DDC) IN CSECT (C3800) LENGTH (1)
419	OPSUB	2003 ADDRESS. HEX LOCATION (0000024B) IN CSECT (C3800) LENGTH (1)
553	OPTB	3422 ADDRESS. HEX LOCATION (0000036D) IN CSECT (C3800) LENGTH (1)
114	OPWRD	804 2457 ABSOLUTE. HEX VALUE (0000000E)
54	OUT	1400 2241 2515 2519 ABSOLUTE. HEX VALUE (00000000)
		819 911 937 1139 1424 1935 2293 2406 2440
3201	OUT1	2549 3098 3437 ADDRESS. HEX LOCATION (00001793) IN CSECT (C3800) LENGTH (1)
1177	OU01	1167 1196 ADDRESS. HEX LOCATION (000008CE) IN CSECT (C3800) LENGTH (1)
3295	OVLAY	1168 1175 ADDRESS. HEX LOCATION (00001804) IN CSECT (C3800) LENGTH (1)
3029	OVST	3443 ADDRESS. HEX LOCATION (0000147E) IN CSECT (C3800) LENGTH (1)
710	PARL5	3030 ADDRESS. HEX LOCATION (00000512) IN CSECT (C3800) LENGTH (2)
271	PASTR	2292 ABSOLUTE. HEX VALUE (00000015)
228	PCKCD	1912 ABSOLUTE. HEX VALUE (00003802)
1069	PCKEP	1072 ADDRESS. HEX LOCATION (000007F4) IN CSECT (C3800) LENGTH (1)
432	PCKLB	358 368 370 372 374 790 ADDRESS. HEX LOCATION (00000250) IN CSECT (C3800) LENGTH (2)
		355 357 361 367 369 371 373 789 974
		1070 1071 1081 1118 1121 1228 2342

DECLARED	NAME	ATTRIBUTES AND REFERENCES
358	PCKSI	ADDRESS. HEX LOCATION (0000000E) IN CSECT (C3800) LENGTH (2)
1082	PCK20	790 3449 ADDRESS. HEX LOCATION (0000081A) IN CSECT (C3800) LENGTH (1)
3019	PCYLA	1075 1122 ADDRESS. HEX LOCATION (0000142E) IN CSECT (C3800) LENGTH (2)
3484	PDCB	1624 1662 2892 2907 2919 ADDRESS. HEX LOCATION (000019E2) IN CSECT (C3800) LENGTH (2)
3512	PDEND	3359 3513 ADDRESS. HEX LOCATION (00001A14) IN CSECT (C3800) LENGTH (1)
3513	PDLEN	3513 ABSOLUTE. HEX VALUE (00000032)
275	PDTAS	3358 ABSOLUTE. HEX VALUE (00000020)
3303	PELID	853 1420 ABSOLUTE. HEX VALUE (00000126)
1367	PGMK	3351 ADDRESS. HEX LOCATION (00000A00) IN CSECT (C3800) LENGTH (1)
3290	PID	477 ADDRESS. HEX LOCATION (00001800) IN CSECT (C3800) LENGTH (4)
194	PKLAB	803 815 836 1399 1409 1535 1570 1907 2006 3291 3292 3293 3365 ABSOLUTE. HEX VALUE (0000D7C3)
3148	PRBUF	1073 ADDRESS. HEX LOCATION (00001730) IN CSECT (C3800) LENGTH (1)
3306	PRC22	594 2498 2511 3447 3448 3450 ABSOLUTE. HEX VALUE (00000022)
3308	PRC23	3394 ABSOLUTE. HEX VALUE (00000023)
66	PREP	3389 ABSOLUTE. HEX VALUE (0000000C)
738	PRG	1499 ADDRESS. HEX LOCATION (0000055A) IN CSECT (C3800) LENGTH (1)
740	PRGN	749 ADDRESS. HEX LOCATION (0000055E) IN CSECT (C3800) LENGTH (12)
742	PPGNA	744 745 746 747 2364 2365 2425 2435 3260 ADDRESS. HEX LOCATION (00000573) IN CSECT (C3800) LENGTH (7)
741	PRGNB	597 598 2430 ADDRESS. HEX LOCATION (0000056A) IN CSECT (C3800) LENGTH (9)
744	PRGN1	2417 2433 ADDRESS. HEX LOCATION (0000055F) IN CSECT (C3800) LENGTH (1)
747	PRGN5	601 1826 2284 2327 2337 2796 2804 ADDRESS. HEX LOCATION (00000563) IN CSECT (C3800) LENGTH (1)
661	PRMS	3261 ADDRESS. HEX LOCATION (00000484) IN CSECT (C3800) LENGTH (2)
662	PRPR	664 ADDRESS. HEX LOCATION (00000486) IN CSECT (C3800) LENGTH (2)
664	PRPRM	814 1408 ADDRESS. HEX LOCATION (00000488) IN CSECT (C3800) LENGTH (2)
3147	PRTBF	1423 ADDRESS. HEX LOCATION (0000172F) IN CSECT (C3800) LENGTH (1)
3146	PRTBU	2497 ADDRESS. HEX LOCATION (00001724) IN CSECT (C3800) LENGTH (1)
3218	PRTSW	560 577 581 585 1091 1094 1097 1270 1818 1819 2343 2345 3147 3148 3226 3227 ADDRESS. HEX LOCATION (0000179C) IN CSECT (C3800) LENGTH (2)
385	PRTYP	1038 1138 1164 1278 1926 2147 3070 ADDRESS. HEX LOCATION (00000232) IN CSECT (C3800) LENGTH (1)
3304	PSCSZ	3388 ABSOLUTE. HEX VALUE (00000100)
3459	PSEEK	3353 ADDRESS. HEX LOCATION (000019B0) IN CSECT (C3800) LENGTH (1)
3478	PSEND	3355 3479 ADDRESS. HEX LOCATION (000019E2) IN CSECT (C3800) LENGTH (1)
3465	PSE03	3479 ADDRESS. HEX LOCATION (000019C0) IN CSECT (C3800) LENGTH (1)
3469	PSE10	3462 ADDRESS. HEX LOCATION (000019CA) IN CSECT (C3800) LENGTH (1)
3479	PSPEN	3464 3467 ABSOLUTE. HEX VALUE (00000032)
231	PSTER	3354 ABSOLUTE. HEX VALUE (00003805)
576	PSWCV	660 ADDRESS. HEX LOCATION (00000388) IN CSECT (C3800) LENGTH (2)
670	PTMS	1092 ADDRESS. HEX LOCATION (0000049C) IN CSECT (C3800) LENGTH (2)
667	PTMSG	1135 ADDRESS. HEX LOCATION (0000048C) IN CSECT (C3800) LENGTH (14)
1134	PTWEP	670 ADDRESS. HEX LOCATION (00000884) IN CSECT (C3800) LENGTH (1)
230	PTWMG	362 ABSOLUTE. HEX VALUE (00003804)
1136	PTW1	666 ADDRESS. HEX LOCATION (00000888) IN CSECT (C3800) LENGTH (1)
1144	PTW2	1106 ADDRESS. HEX LOCATION (0000089C) IN CSECT (C3800) LENGTH (1)
3307	P22CT	1142 ABSOLUTE. HEX VALUE (00000008)
3309	P23CT	3394 ABSOLUTE. HEX VALUE (00000029)
324	QAV1	3391 ABSOLUTE. HEX VALUE (00000018)
325	QAV2	873 984 1462 1464 1469 1487 1494 1511 1869 1873 2359 2379 2383 ABSOLUTE. HEX VALUE (0000001A)
310	QIAR	1476 1496 1504 1514 2729 2782 ABSOLUTE. HEX VALUE (00000000)
312	QLSR	1025 1077 1079 1094 1101 1454 1474 1963 ABSOLUTE. HEX VALUE (00000004)
322	QRAL	1468 1481 1591 1594 1951 ABSOLUTE. HEX VALUE (00000017)
313	QR0	776 1024 1046 ABSOLUTE. HEX VALUE (00000006)
315	QR2	1205 ABSOLUTE. HEX VALUE (0000000A)
317	QR4	1202 ABSOLUTE. HEX VALUE (0000000E)
318	QR5	1203 ABSOLUTE. HEX VALUE (00000010)
319	QR6	1817 1965 ABSOLUTE. HEX VALUE (00000012)
		789 1070 1091 1103 1118 1204 1953

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DECLARED	NAME	ATTRIBUTES AND REFERENCES
320	QR7	ABSOLUTE. HEX VALUE (0000014) 1078 1343 1368 1540 1573 1693 1755 1844 1851
321	QSVC	ABSOLUTE. HEX VALUE (0000016) 1028 1167 1196 1463
1534	RCIB1	ADDRESS. HEX LOCATION (00000B14) IN CSECT (C3800) LENGTH (1) 491
1542	RCIB3	ADDRESS. HEX LOCATION (00000B28) IN CSECT (C3800) LENGTH (1) 1547
1548	RCIB4	ADDRESS. HEX LOCATION (00000B32) IN CSECT (C3800) LENGTH (1) 1544
1554	RCIB5	ADDRESS. HEX LOCATION (00000B40) IN CSECT (C3800) LENGTH (1) 1550
2959	RDCB	ADDRESS. HEX LOCATION (000012E6) IN CSECT (C3800) LENGTH (2) 2820
2960	RDW2	ADDRESS. HEX LOCATION (000012E8) IN CSECT (C3800) LENGTH (2) 3475
2962	RDW4	ADDRESS. HEX LOCATION (000012EC) IN CSECT (C3800) LENGTH (2) 2923
85	READI	ABSOLUTE. HEX VALUE (0000001F) 3425
725	REAS	ADDRESS. HEX LOCATION (00000532) IN CSECT (C3800) LENGTH (10) 728
728	REASG	ADDRESS. HEX LOCATION (0000053E) IN CSECT (C3800) LENGTH (2) 910
2948	RECAL	ADDRESS. HEX LOCATION (000012D4) IN CSECT (C3800) LENGTH (2) 2980 3360
226	RECD1	ABSOLUTE. HEX VALUE (00003800) 712 1403 2102
1655	RELD1	ADDRESS. HEX LOCATION (00000BA4) IN CSECT (C3800) LENGTH (1) 495
1663	REL11	ADDRESS. HEX LOCATION (00000BBA) IN CSECT (C3800) LENGTH (1) 1710 1787
716	REMG1	ADDRESS. HEX LOCATION (0000051C) IN CSECT (C3800) LENGTH (2) 818 2414
2545	REPGM	ADDRESS. HEX LOCATION (0000107C) IN CSECT (C3800) LENGTH (1) 468 2033
1620	REQD1	ADDRESS. HEX LOCATION (00000B8C) IN CSECT (C3800) LENGTH (1) 494
234	RES	ABSOLUTE. HEX VALUE (00003808) 724
62	RESET	ABSOLUTE. HEX VALUE (00000008) 1464
788	RESTR	ADDRESS. HEX LOCATION (000005B2) IN CSECT (C3800) LENGTH (1) 1431 2412 3372 3449 3454
820	RETRN	ADDRESS. HEX LOCATION (00000610) IN CSECT (C3800) LENGTH (1) 1434 2104 2460 3104
604	REVT	ADDRESS. HEX LOCATION (000003B2) IN CSECT (C3800) LENGTH (2) 2592 2601
605	REVT1	ADDRESS. HEX LOCATION (000003B4) IN CSECT (C3800) LENGTH (2) 2598
606	REVT2	ADDRESS. HEX LOCATION (000003B6) IN CSECT (C3800) LENGTH (2) 2600
797	RE05	ADDRESS. HEX LOCATION (000005D4) IN CSECT (C3800) LENGTH (1) 799
806	RE40	ADDRESS. HEX LOCATION (000005F0) IN CSECT (C3800) LENGTH (1) 801
813	RE41	ADDRESS. HEX LOCATION (000005FE) IN CSECT (C3800) LENGTH (1) 810
817	RE50	ADDRESS. HEX LOCATION (0000060A) IN CSECT (C3800) LENGTH (1) 808 812
63	RID	ABSOLUTE. HEX VALUE (00000009) 1465
3173	RIDCB	ADDRESS. HEX LOCATION (00001778) IN CSECT (C3800) LENGTH (2) 3178
240	RPCD2	ABSOLUTE. HEX VALUE (00003810) 3246
3247	RPG2	ADDRESS. HEX LOCATION (000017C2) IN CSECT (C3800) LENGTH (12) 3256
3256	RPRL2	ADDRESS. HEX LOCATION (000017E6) IN CSECT (C3800) LENGTH (2) 2548
3242	RPSV	ADDRESS. HEX LOCATION (000017BC) IN CSECT (C3800) LENGTH (2) 1182
2172	RSPGM	ADDRESS. HEX LOCATION (00000E52) IN CSECT (C3800) LENGTH (1) 452
69	RSTAT	ABSOLUTE. HEX VALUE (0000000F) 1507
107	PTMDI	ABSOLUTE. HEX VALUE (0000000B) 1176
568	RTNCV	ADDRESS. HEX LOCATION (0000037C) IN CSECT (C3800) LENGTH (2) 1087
3292	RTNE	ADDRESS. HEX LOCATION (0000180A) IN CSECT (C3800) LENGTH (1) 569 1100 1403 3230
0	RO	REGISTER. HEX VALUE (00000000) 795 799 838 877 958 967 973 985 1074 1079 1100 1164 1205 1229 1232 1235 1238 1240 1256 1257 1278 1454 1455 1456 1457 1468 1472 1480 1481 1541 1546 1551 1694 1695 1696 1696 1705 1706 1755 1756 1757 1758 1758 1779 1782 1807 1811 1824 1829 1855 1857 1857 1859 1859 1877 1899 1905 1930 1950 1951 1954 1959 1990 1996 2284 2288 2327 2330 2334 2335 2355 2356 2364 2365 2373 2375 2375 2376 2376 2378 2387 2497 2498 2511 2515 2519 2562 2597 2609 2610 2611 2741 2749 2750 2766 2775 2787 2792 2836 2839 3070 3096 3338 3339 3343 3346 3347 3348 3372 3373 3387 3388 3389 3394 3408 3409 3410 3411 3419 3419 3421 3434 3442 3452 3461
0	R1	REGISTER. HEX VALUE (00000001) 775 776 777 796 798 837 838 840 845 853 873 876 877 880 883 884 886 895 896 898 920 948 950 951 956 961 966 974 984 987 989 993 1014 1016 1024 1025 1028 1045 1046 1047 1071 1077 1078 1079 1080 1081 1091 1094 1101 1103 1104 1121 1167 1196 1202 1203 1204 1205 1343 1349 1350 1368 1383 1384 1412 1418 1420 1454 1462 1463 1464 1468 1469 1474 1476 1480 1487 1494 1496 1504 1511 1514 1540 1573 1591 1594 1692 1693 1695 1698 1708 1754 1755 1757 1766 1772 1785 1802 1812 1815 1817 1843 1844 1869 1873 1880 1901 1904

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DECLARED	NAME	ATTRIBUTES AND REFERENCES
0	R2	REGISTER. HEX VALUE (00000002) 776 777 798 800 802 807 814 860 874 886 888 890 892 918 920 924 926 928 931 948 949 952 954 959 964 969 986 1046 1047 1033 1202 1220 1221 1270 1271 1408 1430 1469 1470 1471 1536 1539 1543 1545 1549 1571 1572 1576 1578 1583 1585 1586 1587 1699 1699 1701 1703 1705 1763 1768 1771 1801 1804 1805 1810 1812 1816 1822 1825 1828 1850 1851 1853 1859 1911 1918 1952 1952 1952 1952 1956 1959 1961 1984 1986 1987 1993 2000 2002 2004 2030 2032 2052 2274 2282 2285 2330 2501 2503 2556 2587 2589 2591 2593 2594 2596 2597 2603 2605 2607 2608 2745 2746 2750 2751 2754 2757 2758 2760 2762 2764 2773 2789 2797 2800 2804 2806 3077 3082 3083 3084 3088 3089 3090 3092 3096 3356 3357 3366 3361 3365 3387
0	R3	REGISTER. HEX VALUE (00000003) 762 823 815 836 837 896 918 1025 1026 1027 1038 1040 1042 1101 1178 1179 1181 1181 1181 1181 1182 1183 1184 1186 1222 1223 1224 1225 1229 1230 1231 1233 1236 1251 1252 1267 1275 1409 1452 1453 1456 1458 1459 1460 1460 1463 1464 1465 1477 1478 1485 1490 1499 1507 1535 1536 1540 1543 1555 1570 1571 1573 1576 1582 1621 1624 1656 1657 1658 1698 1700 1702 1704 1706 1762 1766 1808 1810 1818 1819 1822 1826 1828 1851 1852 1853 1860 1867 1867 1907 1908 1908 1909 1912 1915 1916 1917 1945 1947 1964 1965 1966 2006 2155 2161 2167 2181 2242 2258 2275 2378 2401 2402 2403 2446 2448 2453 2515 2519 2557 2562 2565 2571 2571 2572 2576 2577 2734 2743 2754 2766 2767 2776 2796 2800 2803 2806 3078 3089 3090 3340 3345 3365
0	R4	REGISTER. HEX VALUE (00000004) 869 975 976 1015 1016 1018 1019 1023 1024 1027 1028 1030 1032 1033 1102 1184 1185 1203 1243 1245 1263 1272 1277 1474 1476 1478 1537 1552 1553 1574 1579 1582 1582 1591 1592 1732 1868 1877 1862 1760 1771 1772 1773 1775 2288 2355 2357 2359 2379 2380 2383 2500 2503 2584 2584 2599 2611 2614 2733 2778 2908 2911 2914 2918 2919 2921 2922 2923 2924 2925 2926 2927 2929 2930 2932 3079 3094 3315 3370 3371 3443 3446 3452 3460 3463 3466 3468 3470 3471
0	R5	REGISTER. HEX VALUE (00000005) 821 933 934 938 940 977 1458 1496 1501 1502 1503 1504 1510 1511 1514 1515 1692 1708 1754 1785 1817 1820 1823 1857 1862 1865 1865 1871 1875 1875 1909 1922 1924 1926 1937 1940 2286 2290 2338 2338 2346 2346 2348 2356 2357 2368 2368 2791 2805 2805 2805 2805 2805 2805 2757 2737 2741 2752 2756 2771 2781 2781 2784 2810 2820 2834 2838 2916 2920 3426 3426 3472
0	R6	REGISTER. HEX VALUE (00000006) 772 773 843 844 847 848 851 857 867 878 882 901 906 913 916 939 942 970 991 996 997 1138 1171 1172 1176 1204 1493 1494 1515 1694 1707 1756 1778 1783 2343 2345 2400 2402 2417 2418 2419 2419 2419 2419 2420 2421 2423 2430 2442 2443 2444 2451 2455 2556 2572 2598 2603 2608 2615 2749 2840 2846 2850 2853 2862 2863 2886 2907 2927
0	R7	REGISTER. HEX VALUE (00000007) 769 770 793 794 809 811 818 822 823 839 864 865 903 904 908 910 936 947 979 980 1077 1078 1083 1084 1085 1087 1089 1092 1095 1098 1105 1135 1140 1141 1145 1170 1174 1178 1187 1188 1190 1192 1193 1198 1199 1206 1208 1253 1273 1274 1279 1309 1310 1325 1326 1328 1343 1345 1350 1399 1400 1401 1404 1405 1407 1410 1414 1415 1417 1423 1425 1426 1427 1428 1429 1432 1452 1459 1462 1589 1590 1593 1621 1622 1656 1687 1690 1703 1704 1764 1769 1801 1833 1806 1841 1846 1864 1874 1904 1916 1928 1931 1934 1956 1961 1963 2072 2073 2075 2095 2096 2098 2099 2100 2123 2124 2150 2151 2152 2175 2176 2198 2199 2220 2221 2243 2244 2270 2273 2277 2280 2292 2296 2320 2321 2324 2328 2332 2341 2344 2350 2351 2361 2362 2367 2370 2371 2376 2377 2384 2390 2393 2394 2396 2399 2404 2409 2411 2414 2425 2426 2427 2431 2437 2439 2450 2486 2487 2490 2491 2493 2499 2505 2508 2509 2512 2513 2548 2565 2567 2569 2575 2601 2729 2730 2731 2736 2739 2777 2781 3075 3088 3097 3097 3097 3097 3097 3097 2933 3075 3088 3097 3097 3097 3097 3097 3097 3400 3406 3424 3429 3436 3439 3440 3444 3445 3446 3477
3268	SAV	ADDRESS. HEX LOCATION (000017F4) IN CSECT (C3800) LENGTH (2) 973 985 1453 1477 1802 1815 1843 1850 1880
3270	SAVE7	ADDRESS. HEX LOCATION (000017F8) IN CSECT (C3800) LENGTH (2) 1170 1198 2557 2576
3269	SAV2	ADDRESS. HEX LOCATION (000017F6) IN CSECT (C3800) LENGTH (2) 2586 2615
269	SCEND	ABSOLUTE. HEX VALUE (0000013) 890 926
123	SCHAR	ABSOLUTE. HEX VALUE (00000E2) 1225
766	SCHD1	ADDRESS. HEX LOCATION (0000058E) IN CSECT (C3800) LENGTH (1)

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DECLARED	NAME	ATTRIBUTES AND REFERENCES
968	UDT31	ADDRESS. HEX LOCATION(0000074E) IN CSECT(C3800) LENGTH(1) 855 914 998
972	UDT35	ADDRESS. HEX LOCATION(00000758) IN CSECT(C3800) LENGTH(1) 891 927 955
983	UDT36	ADDRESS. HEX LOCATION(0000077A) IN CSECT(C3800) LENGTH(1) 981
995	UDT37	ADDRESS. HEX LOCATION(00000798) IN CSECT(C3800) LENGTH(1) 889 925 953 978
856	UD00A	ADDRESS. HEX LOCATION(0000065A) IN CSECT(C3800) LENGTH(1) 852
960	UD29A	ADDRESS. HEX LOCATION(00000744) IN CSECT(C3800) LENGTH(1) 990
965	UD30A	ADDRESS. HEX LOCATION(0000074A) IN CSECT(C3800) LENGTH(1) 897 922 994
732	UIMSG	ADDRESS. HEX LOCATION(00000550) IN CSECT(C3800) LENGTH(1) 590
611	UIOMS	ADDRESS. HEX LOCATION(000003BE) IN CSECT(C3800) LENGTH(2) 589 1929
2122	ULOOP	ADDRESS. HEX LOCATION(00000E2A) IN CSECT(C3800) LENGTH(1) 450
276	UNCRT	ABSOLUTE. HEX VALUE(00000000)
735	UNEIO	ADDRESS. HEX LOCATION(00000556) IN CSECT(C3800) LENGTH(2) 1418
588	UNEXP	ADDRESS. HEX LOCATION(0000039A) IN CSECT(C3800) LENGTH(2) 1934
731	UNXPC	ADDRESS. HEX LOCATION(00000542) IN CSECT(C3800) LENGTH(14) 1931
100	UTIL	ABSOLUTE. HEX VALUE(00000003) 735
235	UXP	ABSOLUTE. HEX VALUE(00003809) 2758
915	U18	ADDRESS. HEX LOCATION(000006E2) IN CSECT(C3800) LENGTH(1) 730
2939	VDCB	ADDRESS. HEX LOCATION(000012C4) IN CSECT(C3800) LENGTH(2) 899 929 988
2942	VPW4	ADDRESS. HEX LOCATION(000012CA) IN CSECT(C3800) LENGTH(2) 2973 3099 3508
242	VFYCD	ABSOLUTE. HEX VALUE(00003813) 2925
214	VHDLG	ABSOLUTE. HEX VALUE(0000000A) 1263
216	VHDLP	ABSOLUTE. HEX VALUE(0000001E) 2373
88	VLDSV	ABSOLUTE. HEX VALUE(00000020) 874
206	VTOCA	ABSOLUTE. HEX VALUE(0000014A) 1030
3167	WIDCB	ADDRESS. HEX LOCATION(0000176C) IN CSECT(C3800) LENGTH(2) 2733
533	WORK	ADDRESS. HEX LOCATION(0000035A) IN CSECT(C3800) LENGTH(2) 3177
534	WORK1	ADDRESS. HEX LOCATION(0000035C) IN CSECT(C3800) LENGTH(2) 1734 1737 1744 1748 1762
535	WORK2	ADDRESS. HEX LOCATION(0000035E) IN CSECT(C3800) LENGTH(2) 1739 1745 1749 1763
2968	WRDCB	ADDRESS. HEX LOCATION(000012F6) IN CSECT(C3800) LENGTH(2) 1740 1751 1764
2969	WRW2	ADDRESS. HEX LOCATION(000012F8) IN CSECT(C3800) LENGTH(2) 2834
2971	WRW4	ADDRESS. HEX LOCATION(000012FC) IN CSECT(C3800) LENGTH(2) 3476
653	YSRES	ADDRESS. HEX LOCATION(0000046A) IN CSECT(C3800) LENGTH(1) 2924
2051	YSPTN	ADDRESS. HEX LOCATION(00000E00) IN CSECT(C3800) LENGTH(1) 2052
129	ZERO	ABSOLUTE. HEX VALUE(00000000) 447
172	ZER3C	ABSOLUTE. HEX VALUE(0000F3C3) 779 847 867 896 918 958 1206 1238 1551 1694 1756 1991 2339 2499 2500 2594 2810 2860 2881 2892 3364 3370 3406

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