

LOCTR OBJECT TEXT STMT SOURCE STATEMENT COPYRIGTH IBM CORP 1976
3 COPY LOG7A16 ** MAP EC HISTORY **
4 *****
5 *
6 * *** PREREQUISITES ***
7 *
8 * NONE
9 *
10 *****
11 *
12 * *** MODIFICATIONS ***
13 *
14 * CHANGES MADE TO CORRECT ERRORS FOUND WHILE IN TEST
15 *
16 *****
17 *
18 * *** FEA'S INCORPORATED ***
19 *
20 * NONE
21 *
22 *****
23 *
24 * *** SPECIAL INSTRUCTIONS ***
25 *
26 * NONE
27 *
28 *****
29 *
30 * *** E. C. HISTORY ***
31 *
32 * DATE 17AUG78 DATE 10JAN79 DATE DATE
33 * E.C. 755391 E.C. 375222 E.C. E.C.
34 *
35 *****
37 I7A16 START X'2500' START ADDRESS OF ALL 'I' TYPE PROG
38 @UES EQU X'0100' EQUATED VALUE FOR MDI STATEMENT
39 @EXIT EQU X'0101' EQUATED VALUE FOR MDI STATEMENT
40 @STOP EQU X'0102' EQUATED VALUE FOR MDI STATEMENT
41 @GOTO EQU X'0200' EQUATED VALUE FOR MDI STATEMENT
42 @CALL EQU X'0201' EQUATED VALUE FOR MDI STATEMENT
43 @INPT EQU X'0300' EQUATED VALUE FOR MDI STATEMENT
44 @QUXX EQU X'0400' EQUATED VALUE FOR MDI STATEMENT
45 @TUXX EQU X'0500' EQUATED VALUE FOR MDI STATEMENT
46 @NVLD EQU X'0600' EQUATED VALUE FOR MDI STATEMENT
47 EQ EQU X'0000' EQUATE FOR EQUAL
48 NE EQU X'0004' EQUATE FOR NOT EQUAL
49 HI EQU X'0008' EQUATE FOR HIGH
50 NH EQU X'000C' EQUATE FOR NOT HIGH
51 LO EQU X'0010' EQUATE FOR LOW
52 NL EQU X'0014' EQUATE FOR NOT LOW
53 LT EQU X'0018' EQUATE FOR LESS THAN
54 LE EQU X'000C' EQUATE FOR LESS THAN OR EQUAL TO
55 GT EQU X'0008' EQUATE FOR GREATER THAN
56 GE EQU X'0014' EQUATE FOR GREATER THAN OR EQUAL TO
57 ON EQU X'0200' EQUATE FOR ON
58 OF EQU X'0202' EQUATE FOR OFF
59 MX EQU X'0204' EQUATE FOR MIXED
60 EBC EQU X'0000' EQUATE FOR EBCDIC DATA TRANSFER
61 HEX EQU X'0001' EQUATE FOR HEX DATA TRANSFER
62 XTRNL EQU X'0001' EQUATE FOR EXTERNAL REFERENCE
63 ITRNL EQU X'0000' EQUATE FOR INTERNAL REFERENCE
64 PARM EQU X'0000' EQUATE INDICATING PARAMETER
65 DA EQU X'0001' EQUATE FOR DEVICE ADDRESS
66 UA EQU X'0002' EQUATE FOR UNIT ADDRESS
67 DUMMY EQU X'0000' DUMMY EQUATE
69 PID EQU *-X'0D00' ADDRESS OF MDI HEADER
70 PTYPE EQU *-X'22CE' ADDRESS OF PROCESSOR TYPE FIELD
71 STEPNUM EQU PID+X'000C' ADDRESS OF DECIMAL STEP NUMBER
72 OPWD1 EQU PID+X'000E' ADDRESS OF OPTION WORD ONE
73 OPWD2 EQU PID+X'0010' ADDRESS OF OPTION WORD TWO
74 TUSTATUS EQU PID+X'0018' ADDRESS OF TU STATUS WORD
75 TWORK EQU PID+X'001A' ADDRESS OF TU WORK AREA
76 TUPARM1 EQU PID+X'009A' ADDRESS OF PARM 1 POINTER
77 TUPARM2 EQU PID+X'009C' ADDRESS OF PARM 2 POINTER
78 TUPARM3 EQU PID+X'009E' ADDRESS OF PARM 3 POINTER
79 TUPARM4 EQU PID+X'00A0' ADDRESS OF PARM 4 POINTER
80 TUPARM5 EQU PID+X'00A2' ADDRESS OF PARM 5 POINTER
81 TUPARM6 EQU PID+X'00A4' ADDRESS OF PARM 6 POINTER
82 TUPARM7 EQU PID+X'00A6' ADDRESS OF PARM 7 POINTER
83 TUPARM8 EQU PID+X'00A8' ADDRESS OF PARM 8 POINTER
84 TUPARM9 EQU PID+X'00AA' ADDRESS OF PARM 9 POINTER
85 TUPARM10 EQU PID+X'00AC' ADDRESS OF PARM 10 POINTER
86 TUPARM11 EQU PID+X'00AE' ADDRESS OF PARM 11 POINTER
87 TUPARM12 EQU PID+X'00B0' ADDRESS OF PARM 12 POINTER
88 TUPARM13 EQU PID+X'00B2' ADDRESS OF PARM 13 POINTER
89 TUPARM14 EQU PID+X'00B4' ADDRESS OF PARM 14 POINTER
90 TUPARM15 EQU PID+X'00B6' ADDRESS OF PARM 15 POINTER
91 TUPARM16 EQU PID+X'00B8' ADDRESS OF PARM 16 POINTER
92 TUMSGWTR EQU PID+X'00BA' ADDRESS OF -> TO COMMON MSG WRITER
93 TUJA EQU PID+X'00BE' ADDRESS OF UNIT ADDRESS IN EBC
94 TUDA EQU PID+X'00C0' ADDRESS OF DEVICE ADDRESS IN EBC
95 TUBUFF EQU PID+X'00C2' ADDRESS OF LAST USED WORD IN MAP
96 TULAST EQU PID+X'00C4' ADDRESS OF LAST ADDRESSABLE WORD
97 TURESUL EQU PID+X'00C6' ADDRESS OF LENGTH OF TU RESULTS
98 TURESUL EQU PID+X'00C8' ADDRESS OF TU RESULTS FIELD
99 MAPNAME EQU PID+X'00FC' ADDRESS OF MAP NAME FIELD IN HEX
100 TUINPT EQU PID+X'0148' ADDRESS OF SINPT DATA
101 PARMARA EQU PID+X'016E' ADDRESS OF SINPT INPUT AREA
102 @DCADD1 EQU PID+X'01B8' MDI POINTER
103 @DCADD2 EQU PID+X'01BA' MDI POINTER
104 SUPSTAT EQU PID+X'01C4' ADDRESS OF MDI STATUS
105 DEVADD EQU PID+X'01D0' ADDRESS OF DEVICE ADDRESS TABLE 0
106 DEVADD1 EQU PID+X'01DA' ADDRESS OF DEVICE ADDRESS TABLE 1
107 DEVADD2 EQU PID+X'01E4' ADDRESS OF DEVICE ADDRESS TABLE 2
108 DEVADD3 EQU PID+X'01EE' ADDRESS OF DEVICE ADDRESS TABLE 3
109 DEVADD4 EQU PID+X'01F8' ADDRESS OF DEVICE ADDRESS TABLE 4
110 DEVADD5 EQU PID+X'0202' ADDRESS OF DEVICE ADDRESS TABLE 5
111 DEVADD6 EQU PID+X'020C' ADDRESS OF DEVICE ADDRESS TABLE 6
112 DEVADD7 EQU PID+X'0216' ADDRESS OF DEVICE ADDRESS TABLE 7
113 PRINT OFF

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002500 2790
198 DC A(ENTPT) POINT TO MAP ENTRY POINT TABLE
199 *****
200 *****
201 **
202 ** THE FOLLOWING TABLES ARE USED BY THE MDI SUPERVISOR (D3C00)
203 ** TO LOCATE THE CORRECT RULE TO INVOKE, TO OBTAIN THE PROPER
204 ** PARAMETERS TO PASS TO THE TU'S AND TO PASS TO THE OPERATOR
205 ** THE INDICATED MESSAGE(S). THERE ARE FOUR TABLES USED FOR THIS
206 ** PURPOSE THEY ARE:
207 **
208 ** STEP AND RULE ADDRESS TABLE
209 ** THIS TABLE GIVES THE ADDRESS OF THE RULE TO INVOKE AND
210 ** THE ASSOCIATED STEP DECIMAL STEP NUMBER OF THAT RULE.
211 ** ENTRIES ARE AS FOLLOWS:
212 ** A) AN ADDRESS OF THE RULE DC START AREA
213 ** B) THE STEP NUMBER IN DECIMAL
214 ** C) AN EQUATE FOR THE STEP NUMBER
215 **
216 ** RULE INFORMATION TABLE
217 ** THIS TABLE CONTAINS THE REQUIRED INFORMATION TO EXECUTE
218 ** THE APPROPRIATE RULE UNDER MDI. EACH RULE HAS ITS OWN
219 ** UNIQUELY DEFINED AREA INDICATED BELOW. END OF TABLE IS
220 ** INDICATED WITH A X'0000' FOR THE RULE EQUATE.
221 **
222 ** \$QUES
223 ** A) RULE EQUATE X'0100'
224 ** B) ADDRESS OF THE YES LEG RULE
225 **
226 ** \$FIXT
227 ** A) RULE EQUATE X'0101'
228 ** B) ADDRESS OF MESSAGE TO PRINT
229 **
230 ** \$STOP
231 ** A) RULE EQUATE X'0102'
232 ** B) ADDRESS OF MESSAGE
233 **
234 ** \$GOTO
235 ** A) RULE EQUATE X'0200'
236 ** B) ADDRESS OF MESSAGE
237 ** C) NAME OF MAP TO CALL
238 ** D) ENTRY POINT WITHIN GO TO MAP TO USE
239 ** E) INDICATOR FOR EXTERNAL OR INTERNAL REFERENCE
240 **
241 ** \$CALL
242 ** A) RULE EQUATE X'0201'
243 ** B) ADDRESS OF MESSAGE
244 ** C) NAME OF MAP TO CALL
245 ** D) ENTRY POINT WITHIN CALLED MAP TO USE
246 ** E) INDICATOR FOR EXTERNAL OR INTERNAL REFERENCE
247 **
248 ** \$INPT
249 ** A) RULE EQUATE X'0300'
250 ** B) INPUT TYPE (EBCDIC OR HEX)
251 ** C) ADDRESS OF YES LEG RULE
252 ** D) DESTINATION LOCATION OF INPUT DATA
253 ** E) LENGTH OF INPUT DATA
254 ** F) LOWER LIMIT OF GOOD DATA
255 ** G) HIGHER LIMIT OF GOOD DATA
256 **
257 ** \$QUXX
258 ** A) RULE EQUATE X'0400'
259 ** B) ADDRESS OF YES LEG RULE
260 ** C) TU BRANCH TO ADDRESS (INITIAL)
261 ** D) TU BRANCH TO ADDRESS (SECONDARY)
262 ** E) LENGTH OF PARAMETER IN BYTES
263 ** F) PARAMETER TO PASS TO TU
264 ** G) STORE ADDRESS FOR FIRST 8 WORDS OF PARAMETER
265 **
266 ** \$TUXX
267 ** A) RULE EQUATE X'0500'
268 ** B) ADDRESS OF YES LEG RULE
269 ** C) TU BRANCH TO ADDRESS
270 ** D) TYPE OF COMPARE TO MAKE ON RESULTS
271 ** E) LENGTH OF COMPARED RESULTS
272 ** F) MASK FIELD FOR COMPARE
273 ** G) LENGTH OF PARAMETER IN BYTES
274 ** H) PARAMETER TO PASS TO THE TU
275 ** I) STORE ADDRESS FOR FIRST 8 WORDS OF PARAMETER
276 **
277 ** \$NVLD
278 ** A) RULE EQUATE X'0600'
279 **
280 ** ENTRY POINT TABLE
281 ** THIS TABLE CONTAINS THE ENTRY POINTS WITHIN THE MAP THAT
282 ** THE MAP CAN BE ENTERED FROM THESE ENTRY POINTS ARE
283 ** REFERENCED BY NAME AND ADDRESS. ENTRIES ARE AS FOLLOWS:
284 **
285 ** A) NAME OF ENTRY POINT
286 ** B) ADDRESS OF ENTRY POINT RULE TABLE
287 **
288 ** THE ENTRY POINT TABLE END IS INDICATED BY A X'0000'
289 **
290 ** MESSAGE TABLE
291 ** THIS TABLE CONTAINS THE MESSAGE PASSED TO THE OPERATOR
292 ** VIA THE MDI SUPERVISOR. THE TABLE IS AS FOLLOWS:
293 **
294 ** A) EQUATE FOR START OF MESSAGE BLOCK
295 ** B) NUMBER OF LINES OF MESSAGE
296 ** C) LENGTH OF FOLLOWING LINE
297 ** D) FIRST LINE OF MESSAGE
298 ** E) LENGTH OF FOLLOWING LINE
299 ** F) SECOND LINE OF MESSAGE
300 ** G) ETC.
301 **
302 **
303 **
304 **
305 *****

Table with columns: LOCTR, OBJECT TEXT, STMT, SOURCE STATEMENT. Contains assembly code for STEP AND RULE ADDRESS TABLE, including instructions like DC, EQU, and AL2 with various addresses and labels.

Table with columns: LOCTR, OBJECT TEXT, STMT, SOURCE STATEMENT. Contains assembly code for RULE INFORMATION TABLE, including instructions like DC, EQU, STUXX, and \$FIXT with various addresses and labels.

Table with columns: LOCTR, OBJECT TEXT, STMT SOURCE STATEMENT, and COPYRIGHT IBM CORP 1976. Contains assembly code for adapter submap.

Table with columns: LOCTR, OBJECT TEXT, STMT SOURCE STATEMENT, and COPYRIGHT IBM CORP 1976. Contains assembly code for adapter submap, including entry point and message tables.

Table with columns: LOCTR, OBJECT TEXT, STMT, SOURCE STATEMENT, COPYRIGHT IBM CORP 1976. Contains assembly code for adapter submap.

Table with columns: LOCTR, OBJECT TEXT, STMT, SOURCE STATEMENT, COPYRIGHT IBM CORP 1976. Contains assembly code for adapter submap, including interrupt handling and option control words.

Table with columns: LOCTR, OBJECT TEXT, STMT, SOURCE STATEMENT, and COPYRIGHT IBM CORP 1976. Contains assembly code for adapter submap I7A16.

Table with columns: LOCTR, OBJECT TEXT, STMT, SOURCE STATEMENT, and COPYRIGHT IBM CORP 1976. Contains assembly code for adapter submap I7A16A.

LOCTR OBJECT TEXT STMT SOURCE STATEMENT COPYRIGHT IBM CORP 1976
003170 0000 1229 DC A(*-*) FLAG / RECORD#
003172 0000 1230 DC A(*-*) HEAD / CYLINDER#'S
003174 0000 1231 DC A(*-*) SCAN / REPEAT COUNT
003176 31E8 1232 DC A(RSBA) RSB ADDRESS
003178 0000 1233 DC A(*-*) CHAIN ADDRESS
00317A 0100 1234 DC X'0100' BYTE COUNT
00317C 0000 1235 DC A(*-*) WRITE DATA ADDRESS
1236 *
1237 ***** VERIFY DCB *****
1238 *
1239 VRDCB DC X'0019' CONTROL WORD
1240 DC A(*-*) FLAG / RECORD#
1241 DC A(*-*) HEAD / CYLINDER#'S
1242 DC A(*-*) SCAN / REPEAT COUNT
1243 DC A(RSBA) RSB ADDRESS
1244 DC A(*-*) CHAIN ADDRESS
1245 DC A(*-*) BYTE COUNT
1246 DC F'0' NOT USED
1247 *
1248 ***** READ DCB *****
1249 *
1250 RDDCB DC X'2018' READ DCB CONTROL WORD
1251 DC A(*-*) FLAG / RECORD#
1252 DC A(*-*) HEAD / CYLINDER#'S
1253 DC A(*-*) SCAN / REPEAT COUNT
1254 DC A(RSBA) RSB ADDRESS
1255 DC A(*-*) CHAIN ADDRESS
1256 DC X'0100' BYTE COUNT
1257 DC A(*-*) READ DATA ADDRESS
1258 *
1259 ***** WRITE SECTOR ID SKEWED *****
1260 *
1261 WKDCB DC X'002F' CONTROL WORD
1262 DC A(*-*) FLAG / PHYSICAL SECTOR#
1263 DC A(*-*) HEAD / CYLINDER#'S
1264 DC F'0' NOT USED
1265 DC A(RSBA) RSB ADDRESS
1266 DC A(*-*) CHAIN ADDRESS
1267 DC X'0004' BYTE COUNT
1268 DC A(WPSID) ADDR OF SECTOR ID DATA
1269 *
1270 ***** READ SECTOR ID SKEWED *****
1271 *
1272 RKDCB DC X'201D' CONTROL WORD
1273 DC A(*-*) FLAG / PHYSICAL SECTOR#
1274 DC A(*-*) HEAD / CYLINDER#'S
1275 DC F'0' NOT USED
1276 DC A(RSBA) RSB ADDRESS
1277 DC A(*-*) CHAIN ADDRESS
1278 DC X'0004' BYTE COUNT
1279 DC A(SCTID) SECTOR ID DATA ADDRESS
1280 *
1281 ***** READ MULTIPLE SECTOR IDS *****
1282 *
1283 RMDCB DC X'201C' CONTROL WORD
1284 DC A(*-*) FLAG / PHYSICAL SECTOR#
1285 DC A(*-*) HEAD / CYLINDER#'S
1286 DC F'0' NOT USED
1287 DC A(RSPA) RSB ADDRESS
1288 DC A(*-*) CHAIN ADDRESS
1289 DC X'0084' BYTE COUNT
1290 DC A(ID00) DATA AREA ADDRESS
1291 *
1292 ***** CONSTANTS AND DEFINED STORAGE LOCATIONS *****
1293 ZERO0 DC X'0000' CONSTANT ZERO
1294 ONE1 DC X'0001' CONSTANT ONE
1295 RAY DC A(*-*) WRITE PARAMETER POINTER
1296 WDATA DC X'EB6D' WRITE DATA
1297 *
1298 LGSEC DC X'0000' LOGICAL SECTOR #
1299 PHYSC DC X'0000' CONVERTED PHYSICAL SEC #
1300 WRSID DC X'0000' FLAG,SECTOR (WRT SECTOR ID DATA)
1301 DC X'0000' HEAD,CYLINDER
1302 WSIDT DC X'FF34' WRITE SECTOR ID TEST DATA
1303 DC X'5678' *
1304 SCTST DC X'0000' READ SECTOR ID TEST DATA BUFFER
1305 DC X'0000' *
1306 RSBA DC 6A(*-*) RESIDUAL STATUS BLOCK
1307 CTR02 DC X'0000' COUNTER
1308 CTR03 DC X'0000' COUNTER
1309 ID00 DC X'0000' ID ADDRESS TO BE SET BY USER
1310 PDATA DC X'1010' WRITE DIAG WORD 1 DATA PATTERNS
1311 DC X'5555' *
1312 DC X'AAAA' *
1313 DC X'FFFF' *
1314 *
1315 *****4/06/77*****
1316 *
1317 * SUBROUTINE
1318 *
1319 * PURPOSE
1320 *
1321 * COMPARE READ SECTOR ID DATA TO WRITE SECTOR ID DATA
1322 *
1323 * CALLING SEQUENCE
1324 *
1325 * BAL CMPRW,R6 (NORMAL)
1326 *
1327 * RETURN
1328 *
1329 * BXS (R6,2) - NORMAL
1330 *
1331 *
1332 *
1333 *
1334 *
1335 CMPRW MVWI 4,R7 COMPARE BYTE COUNT
1336 MVA SCTID,R3 ADDR OF RD SEC ID DATA
1337 MVA WRSID,R5 ADDR OF WR SEC ID DATA
1338 CFNEN (R3),(R5) COMPARE ID DATA
1339 BE (R6,2) BCH IF WRITE ID DATA OK
1340 B (R6,2) COMPARE ERROR
1341 *****
1342 *
1343 * EXECUTE INPUT & OUTPUT COMMANDS

LOCTR OBJECT TEXT STMT SOURCE STATEMENT COPYRIGHT IBM CORP 1976
1344 * TO EXECUTE ALL I/O COMMANDS FROM A COMMON PLACE.
1345 * EACH OF THESE ENTRIES SET R7 WITH THE ADRS OF ITS PARAMETER
1346 * LIST AND ANY SPECIAL SWITCHES BEFORE BRANCHING TO THE
1347 * SUPVR CALL.
1348 *
1349 * THIS SUBROUTINE WILL CHECK FOR THE FOLLOWING:
1350 *
1351 * 1. LOST INTERRUPTS BY TIMING OUT A COUNTING LOOP
1352 * 2. ERROR INTERRUPTS RECEIVED FROM SUPVR
1353 *
1354 * THIS ROUTINE HAS THE FOLLOWING ENTRIES:
1355 *
1356 * 1 BAL \$RKEW,R6 READ SECTOR ID SKEWED
1357 *
1358 * 2 BAL \$WKEW,R6 WRITE SECTOR ID SKEWED
1359 *
1360 * 3 BAL \$WSEC,R6 WRITE SECTOR ID
1361 *
1362 * 4 BAL \$DIAG,R6 DIAGNOSTIC
1363 *
1364 * 5 BAL XIOCS,R6 CYCLE STEAL STATUS
1365 *
1366 * 6 BAL \$SSEEK,R6 SEEK
1367 *
1368 * 7 BAL \$RECL,R6 RECALIBRATE
1369 *
1370 * 8 BAL \$RDID,R6 READ SECTOR ID
1371 *
1372 * 9 BAL \$RD,R6 READ
1373 *
1374 * 10 BAL \$RDVY,R6 READ VERIFY
1375 *
1376 * 11 BAL \$WRT,R6 WRITE
1377 *
1378 * 12 BAL \$RDIM,R6 READ MULTI SECTOR IDS
1379 *
1380 *****
1381 *
1382 \$SSEEK MVA SKDCB,IODCB SET UP CONTROL BLOCK FOR SVC CALL
1383 J XIO
1384 *
1385 \$RECL MVA CLDCB,IODCB SET UP BLOCK FOR SVC CALL
1386 J XIO
1387 *
1388 \$RDID MVA RSDCB,IODCB SET UP BLOCK FOR SVC CALL
1389 MVB X'BB',R3 SET BUFFER TO B'S
1390 MVA SCTID,R5 SETUP READ SECTOR ID BUFFER ADRS
1391 MVWI 4,R7 SETUP BUFFER LENGTH
1392 MVA R3,(R5) INIT READ SECTOR ID BUFFER
1393 MVA SCTID,RSDCB+14 DATA ADDR
1394 J XIO
1395 *
1396 \$RDIM MVA RMDCB,IODCB SET UP CONTROL BLOCK FOR SVC CALL
1397 MVWI 132,R7 SET BUFFER LENGTH
1398 MVA ID00,R5 SET BUFFER ADDRESS
1399 MVB X'BB',R3 SET CLEAR CHARACTERS
1400 PPN R3,(R5) CLEAR THE BUFFER
1401 J XIO
1402 *
1403 \$RD MVB X'FF',R3 SETRD BUFFER TO ALL F'S
1404 MVA RSDCB+14,R5 SET UP READ BUFFER ADRS
1405 MVA RDDCB+12,R7 SET UP BUFFER LENGTH
1406 PPN R3,(R5) CLEAR READ BUFFER
1407 \$RDS MVA RDCB,IODCB SET UP BLOCK FOR SVC CALL
1408 J XIO
1409 *
1410 \$RDVY MVA VRDCB,IODCB SET UP CONTROL BLOCK FOR SVC CALL
1411 J XIO
1412 *
1413 \$WRT MVA WRDCB,IODCB SET UP CONTROL BLOCK FOR SVC CALL
1414 J XIO
1415 *
1416 \$RKEW MVA RKDCB,IODCB SET UP CONTROL BLOCK FOR SVC CALL
1417 MVB X'BB',R3 SET BUFFER TO B'S
1418 MVA SCTID,R5 SETUP READ SECTOR ID BUFFER ADRS
1419 MVWI 4,R7 SETUP BUFFER LENGTH
1420 MVA R3,(R5) INIT READ SECTOR ID BUFFER
1421 MVA SCTID,RKDCB+14 DATA ADDR
1422 J XIO
1423 *
1424 \$WKEW MVA WKDCB,IODCB SET UP CONTROL BLOCK FOR SVC CALL
1425 MVA WRSID,WKDCB+14 DATA ADDR
1426 J XIO
1427 *
1428 \$WSEC MVA WSDCB,IODCB SET UP CONTROL BLOCK FOR SVC CALL
1429 MVA WRSID,WSDCB+14 DATA ADDR
1430 J XIO
1431 *
1432 \$DIAG MVA DGDCB,IODCB SET UP CONTROL BLOCK FOR SVC CALL
1433 J XIO
1434 *
1435 \$WRT0 MVA R6,LSTIO SAVE IAR FOR RETRY IF REQUESTED
1436 MVB 255,R3 CLEAR CYCLE STATUS BUFFER
1437 MVA CSB0F,R5 * TO ALL ONES *
1438 MVB 22,R7 *
1439 PPN R3,(R5) *
1440 MVA DCB0E,R5 CLEAR DCB BUFFER TO ALL ONES
1441 MVB 16,R7 *
1442 PPN R3,(R5) *
1443 MVWI X'0708',SIOIN OVERLAY OLD CONDITION CODES
1444 MVWZ \$ISB,R3 ZERO OUT OLD ISB VALUE
1445 TBTR (R4,IN) CLEAR INTERRUPT RECEIVED CNTL BIT
1446 TBTR (R4,ER) RESET ANY ERROR BEFORE I/O COMMAND
1447 TBTS (R4,XI) SET EXPECTED INTR CONTROL BIT
1448 MVA IOBLK,R7 SET UP CONTROL BLK FOR SUPR
1449 MVB IOMOD+1,R0 GET IDCBC FUNC/MODIFIER
1450 RBTWI X'00F0',IOMOD REMOVE FUNCTION FROM 'IOMOD'
1451 SRL 4,R0 RIGHT JUSTIFY FUNCTION BITS IN R0
1452 MVA 5,R0 IDCBC FUNCTION = 5?
1453 CBI \$WRT1 ISSUE WRITE SVC 'WRT1'
1454 SVC \$WRT1 ISSUE WRITE DPC '4X' OP
1455 B XIO8-4 GO WAIT FOR THE INTERRUPT
1456 \$WRT1 SVC WRIT1 ISSUE WRITE DPC '5X' OP
1457 B XIO8-4 GO WAIT FOR THE INTERRUPT

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1458 *
1459 \$DGRV MVA WRDCB,IODCB SET UP CONTROL BLK FOR SVC CALL
1460 * B XIODG ISSUE START CS DIAG CMD
1461 *
1462 \$DGRD MVA RDDCB,IODCB SET UP CONTROL BLK FOR SVC CALL
1463 MVA RDDCB+12,R7 GET NO. OF BYTES TO CLEAR
1464 MVA RDDCB+14,R5 ADDR OF READ BUFFER
1465 MVB I X'FF',R3 CLEAR TO F'S
1466 * R3,(R5)
1467 B XIODG ISSUE START CS DIAG CMD
1469 COPY T7AXEQ 09MAP78
1470 PRINT OFF
2034 T7AXEQ
2035 *****29JUL76**
2036 **
2037 ** SUB-ROUTINE
2038 **
2039 ** EXECUTE INPUT AND OUTPUT COMMANDS
2040 **
2041 ** PURPOSE
2042 **
2043 ** TO EXECUTE ALL I/O COMMANDS FROM A COMMON PLACE.
2044 ** THIS SUBROUTINE WILL DO THE FOLLOWING FUNCTIONS:
2045 **
2046 ** 1. SAVE THE ADDRESS THAT POINTS TO THE INSTRUCTION THAT STARTED
2047 ** THE I/O COMMAND.
2048 ** 2. SAVES THE DCB BLOCK USED UNLESS IT IS A START CYCLE STATUS
2049 ** ISSUED BY THIS SUBROUTINE.
2050 ** 3. CLEAR OUT THE CYCLE STEAL STATUS STORAGE UNLESS THE
2051 ** START CYCLE STATUS WAS ISSUED BY THIS SUBROUTINE.
2052 ** 4. RESETS THE INTERRUPT INDICATOR AND CHECKS FOR ANY INTERRUPT
2053 ** SINCE THE LAST EXPECTED INTERRUPT. IF AN INTERRUPT IS FOUND,
2054 ** MYSTERY INTERRUPT (MI) CONTROL BIT IS SET.
2055 ** 5. MOVES THE ADDRESS OF THE I/O CONTROL BLOCK IN R7, SET THE
2056 ** EXPECTED INTERRUPT CONTROL BIT AND ISSUE THE 'SVC START'.
2057 ** 6. WHEN THE SUPVR RETURNS AFTER ISSUING THE I/O COMMAND, TIMING
2058 ** STARTS TO DETERMINE A LOST INTERRUPT.
2059 ** 7. EXCEPT THE INTERRUPT AND GATHER INFORMATION TO DETERMINE IF IT
2060 ** WAS AN ERROR OR OKAY AND EXIT OFF THE INTERRUPT LEVEL.
2061 ** 8. CHECK IF THERE WAS A WRONG INTERRUPT LEVEL.
2062 ** 9. CHECK IF AN ERROR WAS EXPECTED AND IF THERE WAS RETURN.
2063 ** 10. CHECK IF THERE WAS AN ERROR CONDITION, IF NOT RETURN.
2064 ** 11. CHECK TO SEE IF THE EXERCISER IS TO BE TERMINATED.
2065 ** 12. CHECK IF A CYCLE STEAL OPERATION WAS IN PROGRESS THAT WAS
2066 ** ISSUED BY THIS SUBROUTINE.
2067 ** 13. CHECK THE ISB BITS THAT ARE ON. IF BIT 0 IS ON, ISSUE A
2068 ** CYCLE STEAL STATUS COMMAND. CHECK FOR ANY OTHER BIT BEING ON,
2069 ** COUNT IT AND SET UP THE PROPER ERROR MESSAGE TO BE PRINTED.
2070 **
2071 ** CALLING SEQUENCE
2072 **
2073 ** THIS ROUTINE HAS THE FOLLOWING ENTRIES:
2074 **
2075 ** --> BAL XIO OR XEQ ANY CYCLE STEAL COMMAND, MOD=0
2076 ** --> BAL XIO1 MOD PARM PRELOADED IN 'IOMOD'
2077 ** --> BAL XIOCS,R6 OR XEQ START CYCLE STEAL STATUS, MOD=F
2078 ** --> BAL XIOCS-4,R6 AUTO CS STATUS (FOLLOWING OTHER XIO
2079 ** - AND DOES NOT POST INTERRUPT STATUS)
2080 **
2081 ** RETURN CONTROL
2082 **
2083 ** BXS (R6,2) RETURN TO USER NO ERROR
2084 ** OR B (R6) * RETURN AND RETRY ON ERROR
2085 ** *****
2087 ** XIO MVWZ IOMOD,R3 SET MOP OR 0 FOR CYCLE STEAL OP
2088 ** J XIO1 CS I/O'S ARE NOT RETRIED
2089 **
2090 ** XIODG MVWI X'000D',IOMOD SET MODIFIER FOR DIAGNOSTIC OPS
2091 ** J XIO1 GO TO CS OPS
2092 **
2093 ** TBTR (R4,CE) RESET CS STATUS INTER ERROR INDICAT.
2094 ** TBTS (R4,CS) SET 'CYCLE STEAL STATUS' IN PROGRESS
2095 ** XIOCS MVA CSDCB,IODCB SET UP CONTROL BLOCK FOR SVC CALL
2096 ** MVWI X'000F',IOMOD SET CYCLE STEAL MODIFIER
2097 ** TBT (R4,CS) IS CS IN PROGRESS, ERROR CONDITION
2098 ** * YES, BYPASS SAVING I/O ADRS
2099 ** XIO1 MVW R6,I\$STIO SAVE IAR FOR RETRY IF REQUESTED
2100 ** MVA DCB,R3 SET UP TO ADRS TO MOVE DCB TABLE
2101 ** MVW IODCB,R5 * AND THE FROM ADRS, ALONG WITH
2102 ** MVB I 26,R7 * THE NUMBER OF MOVES
2103 ** MVFN (R5),(R3) MOVE 1 STATUS WORD AND ADJUST
2104 ** MVB I 25,R3 CLEAR CYCLE STATUS BUFFER
2105 ** MVA CSBUF,R5 * TO ALL ONES *
2106 ** MVB I 26,R7 *
2107 ** PFN R3,(R5) *
2108 ** MVWI X'0708',SIOIN OVERLAY OLD CONDITION CODES
2109 ** MVWZ \$ISB,R3 ZERO OUT OLD ISB VALUE
2110 **
2111 ** TBTR (R4,ER) RESET ANY ERROR BEFORE I/O COMMAND
2112 ** TBTR (R4,IN) CLEAR INTERRUPT RECEIVED CNTL BIT
2113 ** XIO2 MVA IOBLK,R7 SET UP CONTROL BLOCK FOR SUPVR
2114 ** TBTR (R4,\$LE) RESET LEVEL ERROR INDICATOR
2115 ** TBTS (R4,XI) SET EXPECTED INTR CONTROL BIT
2116 ** SVC START CALL SUPVR FOR I/O COMMAND
2117 **
2118 ** TBTR (R4,NI) IS AN INTR EXPECTED
2119 ** BN (R6,2) * NO, RETURN TC USER
2120 **
2121 ** THE INTR SHOULD OCCUR WHILE RETURNING IN THE NEXT SECTION
2122 **
2123 ** MVWI 0,R5 SET UP WORK REG FOR 'LOST INTR'
2124 ** XIO8 TBTR (R4,IN) HAS INTERRUPT BEEN RECEIVED
2125 ** JON XIOCK * YES, CHECK IF ALL WAS SATISFACTORY
2126 ** SVC IDLE ALLOW ANOTHER PROGRAM A CHANCE TO RUN
2127 ** SUPVR WILL RETURN HERE
2128 ** SVC IDLE ALLOW ANOTHER PROGRAM A CHANCE TO RUN
2129 ** SUPVR WILL RETURN HERE
2130 ** ADVANCE TIME OUT COUNT
2131 ** JNZ XIO8 BCH IF TIME OUT NOT REACHED
2132 ** TBTS (R4,ER) SET ON ERROR CONTROL BIT
2133 ** B (R6) * ER 'NO INTERRUPT'
2134 ** *****03FEB76**
2137 ** SUBROUTINE

LOCTR OBJECT TEXT STMT SOURCE STATEMENT COPYRIGHT IBM CORP 1976
2138 **
2139 ** I/O EXECUTE ERROR HANDLING ROUTINE
2140 **
2141 ** PURPOSE
2142 **
2143 ** THIS ROUTINE WILL COLLECT INFORMATION TO HELP DETERMINE THE
2144 ** PROBLEM THAT WAS FOUND WHEN THE I/O COMMAND WAS ISSUED BY THE
2145 ** SUPERVISOR AND IT WAS NOT ACCEPTED.
2146 **
2147 ** CALLING SEQUENCE
2148 **
2149 ** SUPVR WILL ENTER WHEN AN ERROR OCCURS ON AN I/O COMMAND
2150 **
2151 ** RETURN CONTROL
2152 **
2153 ** B (R6) * RETURN TO USERS ERROR HANDLER
2154 **
2155 ** *****
2157 ** CC 0= DEVICE NOT ATTACHED
2158 ** FOR 1= DEVICE BUSY
2159 ** I/O 2= DEVICE BUSY AFTER RESET
2160 ** 3= COMMAND REJECT
2161 ** 4= INTERVENTION REQUIRED
2162 ** 5= INTERFACE DATA CHECK
2163 ** 6= CONTROLLER BUSY
2164 ** 7= I/O COMMAND EXCEPTED
2165 **
2166 ** XIOER CPLSR R3 COPY STATUS ANY LEVEL INTO R3
2167 ** SRL 13,R3 POSITION CC CODE TO BITS 13-15
2168 ** MVA OPIN1,R4 SET UP BASE ADRS
2169 ** B (R6) * IS CS IN PROGRESS
2170 ** *****
2171 ** *****14APR76**
2172 **
2173 ** SUB-ROUTINE
2174 **
2175 ** ERROR INTERRUPT RUNS ON INTERRUPT LEVEL '\$INTL'
2176 **
2177 ** PURPOSE
2178 **
2179 ** THIS ROUTINE WILL BE ENTERED WHEN THE SUPVR DETECTS AN ERROR
2180 ** OR THE INTERRUPTING CONDITION CODE DOES NOT AGREE WITH THE
2181 ** EXPECTED CODE.
2182 **
2183 ** CALLING SEQUENCE
2184 **
2185 ** SUPVR WILL ENTER WHEN AN ERROR OCCURS ON AN I/O INTERRUPT
2186 **
2187 ** RETURN CONTROL
2188 **
2189 ** SVC EXIT RETURN TO USER VIA SUPVR
2190 **
2191 ** *****
2193 ** CC 0= CONTROLLER END ISB 0= ADD STATUS
2194 ** FOR 1= PROGRAM CONTROL INTERRUPT BITS 1= CMD REJECT
2195 ** INTR 2= EXCEPTION INTERRUPT INTR 2= INCDR LENGTH
2196 ** 3= DEVICE END INTERRUPT INTR 3= STG SPEC CK
2197 ** 4= ATTENTION INTERRUPT INTR 4= STG DATA CK
2198 ** 5= ATTENTION / PROGRAM CNTL INTR 5= INV STG ADRS
2199 ** 6= ATTENTION / EXCEPTION INTR 6= PROTECT CK
2200 ** 7= ATTENTION / DEVICE END INTR 7= I-FACE DATA
2201 **
2202 ** INTER CPLSR R3 COPY STATUS ANY LEVEL INTO R3
2203 ** SRL 13,R3 POSITION INDICATORS IN R3
2204 ** MVA OPIN1,R4 SET UP BASE ADRS
2205 ** TBT (R4,CS) IS CS IN PROGRESS
2206 ** JOFF INTES * NO
2207 ** TBTS (R4,CE) TURN ON CYCLE STEAL INTER ERROR
2208 ** MVW R7,DEV4 SAVE CS ERR ISB VALUE, BITS 0-7
2209 ** MVB R3,DEV4+1 * AND THE COND CODE
2210 ** J INTR1
2211 ** INTES TBT (R4,XE) TEST EXPECTED ATTEN / ERROR IND
2212 ** JOFF INTET BCH IF NOT EXPECTED
2213 ** CBI 4,R3 IS THIS AN 'ATTENTION' INTR
2214 ** JE INTR1 * YES, BCH TO END INTR SEQUENCE
2215 ** INTET TBTS (R4,ER) SET ERROR ON I/O COMMAND CNTL BIT
2216 ** J INTR1
2217 **
2218 ** THE ERROR INTERRUPT USES THE SAME
2219 ** ENDING SEQUENCE AS THE NORMAL INTR
2220 ** *****14APR76**
2221 **
2222 ** SOUBROUTINE
2223 **
2224 ** OKAY INTERRUPT RUNS ON INTERRUPT LEVEL '\$INTL'
2225 **
2226 ** PURPOSE
2227 **
2228 ** TO CHECK THE INTERRUPT AND CONTINUE THE TEST
2229 **
2230 ** CALLING SEQUENCE
2231 **
2232 ** SUPERVISOR WILL ENTER HERE IF INTR CC IS AS REQUESTED
2233 ** THE ERROR INTERRUPT HANDLER WILL BRANCH TO THIS ROUTINE
2234 ** AFTER THE SPECIAL PART HAS BEEN COMPLETED AND THE
2235 ** COMMON SECTION IS HANDLED HERE.
2236 **
2237 ** RETURN CONTROL
2238 **
2239 ** SVC EXIT RETURN TO USER VIA SUPVR
2240 **
2241 ** *****
2243 ** INTOK CPLSR R3 COPY STATUS ANY LEVEL INTO R3
2244 ** SRL 13,R3 POSITION INDICATORS IN R3
2245 ** MVA OPIN1,R4 SET UP BASE ADRS
2246 ** INTR1 TBTS (R4,IN) SET INTERRUPT RECEIVED
2247 ** TBT (R4,CS) IS 'CS IN PROGRESS' ON
2248 ** JON INTR2 * YES, BCH AROUND UPDATE
2249 ** MVB R3,\$IOIN+1 SAVE INTERRUPTING CC CODE
2250 ** MVW R7,\$ISB SAVE INTR STATUS AND DEV ADRS
2251 ** EQU *
2252 ** CPCL R5 CURRENT LEVEL COPIED BY DCP
2253 ** SLL 4,R5 POSITION INTR LEVEL AND PUT
2254 ** ABI 1,R5 * IN 'I' BIT

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00333DA CD24 30FC 2254+ CW \$INTL,R5 IS THIS THE CORRECT INTR LEVEL IL
00333DE 1002 2255+ JE INTR3 * YES, GO EXIT THIS LEVEL IL
00333E0 4C66 2256+ TBTS (R4,SLE) SET INTR LEVEL ERROR CONTROL BIT IL
00333E2 4C61 2257+ TBTS (R4,ER) SET ERROR ON I/O COMMAND CNTL BIT IL
00333E4 4CA2 2258+INTR3 TBTR (R4,XI) WAS INTERRUPT EXPECTED IL
00333E6 1204 2259+ INTRX INTRX * YES, EXIT OFF THIS INTR LEVEL IL
00333E8 4C60 2260+ TBTS (R4,MI) * NO, SET MYSTERY INTR CONTROL BIT IL
00333EA F304 2261+ CBI 4,R3 ATTENTION INTERRUPT? IL
00333EC 1001 2262+ JE INTRX YES IL
00333EE 4C66 2263+ TBTS (R4,NG) ERROR UNEXPECTED INTERRUPT IL
00333F0 6006 2264+INTRX SVC EXIT THIS LEVEL VIA SUPVR TO PGM IL
2265+*****03FEB76**
2266+*****
2267+** THIS IS THE CONTINUATION OF EXECUTE I/O AFTER THE INTERRUPT
2268+** HAS BEEN SERVICED. THE EXERCISER FINDS AN INTERRUPT HAS BEEN
2269+** RECEIVED AND BRANCHES HERE TO CHECK FOR ANY ERROR CONDITIONS.
2270+**
2271+**
2272+**
2273+XIOCK TBTR (R4,XE) WAS AN ERROR EXPECTED
2274+ BN (R6,2) * YES, EXIT THIS ROUTINE
2275+ TBTR (R4,CS) WAS AUTO CS IN PROGRESS
2276+ JOFF XIOCV * NO, CONTINUE CHECKING
2277+ TBTR (R4,CE) IS CS IN AN ERR CONDITION
2278+ JOFF XIOCC * NO, BCH
2279+ B (R6,*) CS ERROR
2280+XIOCO TBTS (R4,CSA) TURN ON CS STATS AVAIL FLAG
2281+ BXS (R6,2) GO TO USER
2282+XIOCV TBT (R4,ER) WAS ERROR INTR CONTROL BIT ON
2283+ JOFF XIOCX * NO, EXIT THIS ROUTINE
2284+**
2285+ MVB \$IOIN+1,R5 GET LAST INTR CC CODE
2286+ CBI 2,R5 IS THIS CC=2
2287+ JE XIOCO YES
2288+ CBI 6,R5 IS THIS CC=6
2289+ BNE (R6,*) * NO, BCH TO ERROR HANDLER
2290+XIOCO MVB \$ISB,R5 GET LAST ISB DATA BYTE AND IF CS
2291+ BN XIOCS-4 * AVAILABLE, GO AND GET IT
2292+ B (R6,*) ERROR
2293+XIOCX MVWZ OPTN3,R3 CLEAR OUT OPTION 3 CNTL BITS
2294+ BXS (R6,2) RETURN TO USER VIA REG 6
2295+**
2296+** I/O PARAMETER LIST
2297+**
2298+XIOBLK DC A (DEVADD) ADRS OF DEVICE ADRS
2299+ DC A (XIOER) ERROR ROUTINE ADRS
2300+XIODCB DC A (*-*) DCB ADRS OR LEVEL & INTR
2301+XIOHOD DC A (*-*) MODIFIER
2302+ DC A (*-*) ADRS OF LAST SVC CALL
2303+XIOISP DC A (*-*) SECOND WORD OF LAST IDCB
2304+**
2305+** INTERRUPT CONTROL BLOCK FOR I/O COMMANDS
2306+**
2307+INTBL DC A (DEVADD) ADRS OF DEVICE ADRS
2308+ DC A (INTOK) INTERRUPT OK RETURN ADRS
2309+ DC A (INTERR) INTERRUPT ERROR ADRS
2310+INTCC DC X'0003' INTERRUPT CODE EXPECTED
2311+*****11MAY76**
2312+**
2313+** SUBROUTINE
2314+**
2315+**
2316+** CONNECT INTERRUPT CONTROL BLOCK & PREPARE DEVICE
2317+**
2318+** PURPOSE
2319+**
2320+** TO CONNECT THE INTERRUPT CONTROL BLOCK TO THIS DEVICE AND
2321+** PREPARE ON THE DESIRED INTERRUPT LEVEL AND TO ALLOW THE DEVICE
2322+** TO INTERRUPT.
2323+**
2324+** CALLING SEQUENCE
2325+**
2326+** THIS SUBROUTINE HAS THE FOLLOWING ENTRIES:
2327+**
2328+** --> BAL \$CONC,R6 CLEAR DEV DEP STG AND CONNECT I/O BLK
2329+** --> BAL \$CONC,R6 PREPARE DEVICE ONLY, ALREADY CONNECT
2330+**
2331+** RETURN CONTROL
2332+**
2333+** BXS (R6,2) RETURN TO USER VIA REG 6 IF OKAY
2334+** OR B (R6,*) IF THE DEVICE COULD NOT BE CONNECTED
2335+**
2336+*****
2337+\$CONC MVB 6,R7 NUMBER OF BYTE TO CLEAR
2338+ MVB 0,R3 * AND THE DATA TO USE
2339+ MVA DEV1,R5 * ALONG WITH THE ADRS TO USE
2340+ FFN R3,(R5) *
2341+ MVWZ OPTN3,R3 CLEAR OLD CONTROLS FOR NEW ROUTINE
2342+ MVA INTBL,R7 SET R7 TO CONTROL BLOCK AND
2343+ SVC CIBC * CONNECT IT TO THIS DEVICE
2344+ BN (R6,*) ERROR RETURN TO USER
2345+**
2346+\$CONC MVW \$INTL,IODCB PUT IN LEVEL & INTR PARAMETER
2347+ MVA IOBLK,R7 SET R7 TO CONTROL BLOCK TO PREPARE
2348+ MVWI X'0708', \$IOIN INITIALIZE CONDITION CODE STORAGE
2349+ MVWZ \$ISB,R3 * AND CLEAR OLD ISB VALUE
2350+ MVA R6,LSTIO SET UP ADDRESS THAT STARTED LAST I/O
2351+ SVC PRP * AND CALL ON SUPVR
2352+ BXS (R6,2) RETURN TO USER
2353+*****06APR76**
2354+**
2355+** SUBROUTINE
2356+**
2357+** DISCONNECT THE INTERRUPT CONTROL BLOCK AND LOG ERRORS
2358+**
2359+** PURPOSE
2360+**
2361+** DISCONNECT THE INTERRUPT CONTROL BLOCK TO THIS DEVICE AND
2362+** SET THE 'NO GOOD' CONTROL BIT, THEN LOG THE DATA THAT HAS
2363+** BEEN FOUND TO HELP THE OPERATOR DEFINE THE ERROR CONDITION.
2364+**
2365+** CALLING SEQUENCE
2366+**
2367+** THIS SUBROUTINE HAS THE FOLLOWING ENTRIES:
2368+**
2369+** --> B \$SERF\$ SET 'NG' BIT AND CONVERT DATA TO LOG
2370+**

LOCTR OBJECT TEXT STMT SOURCE STATEMENT COPYRIGHT IBM CORP 1976
2371+** --> B \$CONX RETURN TO MDI SUPERVISOR TO TEST STS
2372+**
2373+** RETURN CONTROL
2374+**
2375+** B TURTN* RETURN TO MDI
2376+** OR B (R6)* IF THE DEVICE COULD NOT BE CONNECTED
2377+**
2378+*****
2379+\$ERR\$ MVWI X'8000',TUSTATUS SET ON 'NO GOOD' STATUS BIT
2380+ MVA HEBLK,R7 GET ADRS OF CONTROL BLOCK
2381+ SVC HTOE CONVERT HEX TO EBC VIS DCP
2382+ MVWI X'4040',TWORK+116
2383+ MVWI X'4040',TWORK+118
2384+ MVWI X'4040',TWORK+120
2385+\$PRNT MVB 4,R5
2386+ MVA TWORK,R3 SET UP BUFFER STORAGE
2387+ MVW R3,BUFPT
2388+ MVA LINE1,R1
2389+ MVB 4,R7
2390+ MVB 8,R6
2391+MVBUF MVFN (R3),(R1)
2392+ MVB 4,R7
2393+ MVB X'40',R2
2394+ MVB R2,(R1)+
2395+ JCT MVBUF,R6
2396+ MVB 8,R6
2397+ ANI 4,R1
2398+ JCT MVBUF,R5
2399+ MVWI PIDMSG10,PID+2
2400+ MVA PAKETU,@DCADD1
2401+ MVA DC2PT,@DCADD2
2402+ OWI BIT0080,SUPSTAT
2403+ MVA \$TUID,R3 SET UP BUFFER STORAGE
2404+ BAL TUMSGWTR*,R7 GO TO MESSAGE WRITER
2405+**
2406+\$CONX EQU *
2407+ MVB DEVADD,R7 GET DEVICE ADDRESS FROM MDI
2408+ SVC RIBC RELEASE INTERRUPT CONTROL BLOCK
2409+ B TURTN* RETURN TO MDI SUPERVISOR
2410+**
2411+BEGIN DC A(0009) NUMBER OF LINES TO PRINT
2412+ DC A(0008) LINE LENGTH = 8 CHAR
2413+ DC C'** ABORT'
2414+ DC A(0040) LINE LENGTH = 40 CHAR
2415+ DC C'TUID IOIN ISB INST SECT ID DATA CSCC '
2416+ DC A(0040) LINE LENGTH = 40 CHAR
2417+LINE1 DC C'
2418+ DC A(0040) LINE LENGTH = 40 CHAR
2419+ DC C'CNTRL DCB1 DCB2 DCB3 DCB4 CHAD BYCT ADRS '
2420+ DC A(0040) LINE LENGTH = 40 CHAR
2421+LINE2 DC C'
2422+ DC A(0040) LINE LENGTH = 40 CHAR
2423+ DC C'CS-0 CS-1 CS-2 CS-3 CS-4 CS-5 CS-6 CS-7 '
2424+ DC A(0040) LINE LENGTH = 40 CHAR
2425+LINE3 DC C'
2426+ DC A(0040) LINE LENGTH = 40 CHAR
2427+ DC C'CS-8 CS-9 CS-A CS-B CS-C '
2428+ DC A(0040) LINE LENGTH = 40 CHAR
2429+LINE4 DC C'
2430+**
2431+XIOBLK DC A (*-*)
2432+DC2PT DC A (BEGIN)
2433+FLXTU DC X'0101'
2434+PAKETU DC X'0101'
2435+PIDMSG10 EQU X'F1F0'
2436+BIT0080 EQU X'0080'
2437+**
2438+** DATA CONTROL BLOCK FOR CONVERTING HEX TO EBCDIC
2439+**
2440+HEBLK DC A(58) NUMBER OF BYTES TO CONVERT
2441+ DC A (\$TUID) FROM ADRS
2442+ DC A (TWORK) AND THE TO ADRS
2443+ COPY T7A28 19MAY78
2444 T7A28 TUIT X7A28
2445+*****06FEB76**
2446+**
2447+** TEST UNIT
2448+**
2449+** WRITE DIAGNOSTIC REGISTER 1 LOOP
2450+**
2451+** PURPOSE
2452+**
2453+** WRITE TO CAP DIAGNOSTIC WORD 1 USING DATA PATTERN PASSED
2454+** TO TEST UNIT BY MAP. NO RESULTS WORDS ARE RETURNED.
2455+**
2456+** CALLING SEQUENCE
2457+**
2458+** MDI=\$TUXX,'T7A28,REPT=L7A28,PLNG=4,PARM=XXXX'
2459+**
2460+** RETURN CONTROL
2461+**
2462+** B TURTN* RETURN TO MDI SUPERVISOR
2463+**
2464+*****
2465+T7A28 MVW R7,TURTN SAVE RETURN ADDRESS
2466+ MVWI X'7A28', \$TUID SAVE TU ID FOR DISPLAY
2467+ MVA OPTN1,R4 SET UP POINTER ADRS IN R4
2468+ BAL \$CONC,R6 CLEAR DEV DEP STG AND CONNECT I/O BL
2469+ DC A (X7A28) ERROR ADRS FOR INVALID PREP
2470+**
2471 L7A28 TBTS (R4,XE) SET EXP ERROR CNTL BIT ON
2472 MVW TUPARM1*,IODCB LOAD DATA PATTERN IN 2ND WD OF IDCB
2473 MVWI X'0048',IOMOD SETUP WRITE DIAG WD 1 IDCB MOD
2474 BAL \$WRT0,R6 WRITE DIAG WORD 1
2475 DC A (X7A28) RETURN TO MDI IF ERROR
2476 X7A28 B TURTN* RETURN TO MDI
2478 COPY T7A29 19MAY78
2479 T7A29 TUIT X7A29
2480+*****06FEB76**
2481+**
2482+** TEST UNIT
2483+**
2484+** WRITE/READ DIAGNOSTIC REGISTER 1 LOOP
2485+**

LOCTR	OBJECT TEXT	STMT	SOURCE STATEMENT	COPYRIGHT IBM CORP 1976
		2486**	PURPOSE	
		2487**		
		2488**	WRITE TO CAP DIAGNOSTIC WORD 1 USING DATA PATTERN PASSED	
		2489**	TO TEST UNIT BY THE MAP AND THEN READ DIAGNOSTIC WORD 1.	
		2490**	NO RESULT WORDS ARE RETURNED.	
		2491**		
		2492**	CALLING SEQUENCE	
		2493**		
		2494**	MDI=\$TUXX,'T7A29,REPT=L7A29,PLNG=4,PARM=XXXX'	
		2495**		
		2496**	RETURN CONTROL	
		2497**		
		2498**	B TURTN*	RETURN TO MDI SUPERVISOR
		2499**		
		2500**	*****	*****
003676	6F0D 30FE	2501*	T7A29 MVW R7,TURTN	SAVE RETURN ADDRESS
00367A	4020 30BC 7A29	2502*	MVWI X'7A29',STUID	SAVE TU ID FOR DISPLAY
003680	4424 30B6	2503*	MVA OPTN1,R4	SET UP POINTER ADRS IN R4
003684	6E03 3440	2504*	BAL \$CONC,R6	CLEAR DEV DEP STG AND CONNECT I/O BL
003688	36BC	2505*	DC A(X7A29)	ERROR ADRS FOR INVALID PREP
		2506**		
00368A	883R 189A 3430	2507	L7A29 MVW TUPARM1*,IODCB	MOVE PATTERN TO 2ND WD OF IODCB
003690	4020 3432 0048	2508	MVWI X'0048',IOMOD	SETUP WRITE DIAG WD 1 IODCB MOD
003696	4C64	2509	TBTS (R4,XE)	SET EXPT ERROR CNTL BIT ON
003698	6E03 32B8	2510	BAL \$WRTO,R6	WRITE DIAG WORD 1
00369C	36BC	2511	DC A(X7A29)	RETURN TO MDI IF ERROR
00369E	4CA1	2512	TBTR (R4,ER)	INTERRUPT ERROR?
0036A0	120D	2513	JON X7A29	YES - RETURN TO MDI
0036A2	4020 318E 2088	2514	MVWI X'2088',RDDCB	LOAD READ DIAG WORD 1 CNTL WD
0036A8	4020 319A 0002	2515	MVWI 2,RDDCB+12	SETUP BYTE CNT TO READ WD 1
0036AE	4020 319C 36C0	2516	MVA DATBF,RDDCB+14	SETUP ADDR OF READ BUFFER
0036B4	4C64	2517	TBTS (R4,XE)	SET EXPT ERROR CNTL BIT ON
0036B6	6E03 3308	2518	BAL \$DGRD,R6	READ DIAG WORD 1
0036BA	36BC	2519	DC A(X7A29)	RETURN TO MDI IF ERROR
0036BC	6812 30FE	2520	X7A29 B TURTN*	RETURN TO MDI
		2521*		
0036C0	0000	2522	DATBF DC A(*-*)	
000000		2524	END	

DECLARED	NAME	CROSS-REFERENCE LISTING	COPYRIGHT IBM CORP 1976
		ATTRIBUTES AND REFERENCES	
2337	\$CONC	ADDRESS. HEX LOCATION (00003440) IN CSECT (I7A16) LENGTH(2)	
1462	\$DGRD	ADDRESS. HEX LOCATION (00003308) IN CSECT (I7A16) LENGTH(6)	
1043	\$INTL	ADDRESS. HEX LOCATION (000030FC) IN CSECT (I7A16) LENGTH(2)	
1008	\$IOIN	ADDRESS. HEX LOCATION (000030BE) IN CSECT (I7A16) LENGTH(2)	
1009	\$ISB	ADDRESS. HEX LOCATION (000030C0) IN CSECT (I7A16) LENGTH(2)	
993	\$LE	ABSOLUTE. HEX VALUE (00000026)	
1007	\$TUID	ADDRESS. HEX LOCATION (000030BC) IN CSECT (I7A16) LENGTH(2)	
1435	\$WRTO	ADDRESS. HEX LOCATION (000032B8) IN CSECT (I7A16) LENGTH(4)	
1456	\$WRTO	ADDRESS. HEX LOCATION (000032F8) IN CSECT (I7A16) LENGTH(2)	
42	@CALL	ABSOLUTE. HEX VALUE (00000201)	
102	@DCADD1	ADDRESS. HEX LOCATION (000019B8) IN CSECT (I7A16) LENGTH(1)	
103	@DCADD2	ADDRESS. HEX LOCATION (000019BA) IN CSECT (I7A16) LENGTH(1)	
39	@FIXT	ABSOLUTE. HEX VALUE (00000101)	
45	@TUXX	ABSOLUTE. HEX VALUE (00000500)	
2411	BEGIN	ADDRESS. HEX LOCATION (000034E0) IN CSECT (I7A16) LENGTH(2)	
2436	BIT0080	ABSOLUTE. HEX VALUE (00000080)	
2431	BUFPT	ADDRESS. HEX LOCATION (0000363C) IN CSECT (I7A16) LENGTH(2)	
997	CE	ABSOLUTE. HEX VALUE (0000002A)	
1082	CICB	ABSOLUTE. HEX VALUE (00000014)	
1179	CLDCB	ADDRESS. HEX LOCATION (0000311E) IN CSECT (I7A16) LENGTH(2)	
995	CS	ABSOLUTE. HEX VALUE (00000028)	
996	CSA	ABSOLUTE. HEX VALUE (00000029)	
1026	CSBUF	ADDRESS. HEX LOCATION (000030DC) IN CSECT (I7A16) LENGTH(1)	
1217	CSDCB	ADDRESS. HEX LOCATION (0000315E) IN CSECT (I7A16) LENGTH(2)	
2522	DATBF	ADDRESS. HEX LOCATION (000036C0) IN CSECT (I7A16) LENGTH(2)	
1016	DCBUF	ADDRESS. HEX LOCATION (000030CC) IN CSECT (I7A16) LENGTH(1)	
2432	DC2PT	ADDRESS. HEX LOCATION (0000363E) IN CSECT (I7A16) LENGTH(2)	
105	DEVADD	ADDRESS. HEX LOCATION (000019D0) IN CSECT (I7A16) LENGTH(1)	
1011	DEV1	ADDRESS. HEX LOCATION (000030C4) IN CSECT (I7A16) LENGTH(2)	
1014	DEV4	ADDRESS. HEX LOCATION (000030CA) IN CSECT (I7A16) LENGTH(2)	
1168	DGDCB	ADDRESS. HEX LOCATION (0000310E) IN CSECT (I7A16) LENGTH(2)	
67	DUMMY	ABSOLUTE. HEX VALUE (00000000)	
726	ENTPT	ADDRESS. HEX LOCATION (00002790) IN CSECT (I7A16) LENGTH(1)	
988	ER	ABSOLUTE. HEX VALUE (00000021)	
1068	EXIT	ABSOLUTE. HEX VALUE (00000006)	
2434	FAKETU	ADDRESS. HEX LOCATION (00003642) IN CSECT (I7A16) LENGTH(2)	
754	F00057	ADDRESS. HEX LOCATION (000027A2) IN CSECT (I7A16) LENGTH(1)	
784	F00059	ADDRESS. HEX LOCATION (00002916) IN CSECT (I7A16) LENGTH(1)	
774	F00061	ADDRESS. HEX LOCATION (0000289A) IN CSECT (I7A16) LENGTH(1)	
764	F00063	ADDRESS. HEX LOCATION (0000281E) IN CSECT (I7A16) LENGTH(1)	
794	F00069	ADDRESS. HEX LOCATION (00002992) IN CSECT (I7A16) LENGTH(1)	
804	F00074	ADDRESS. HEX LOCATION (00002A0E) IN CSECT (I7A16) LENGTH(1)	
814	F00079	ADDRESS. HEX LOCATION (00002A8A) IN CSECT (I7A16) LENGTH(1)	
824	F00088	ADDRESS. HEX LOCATION (00002B06) IN CSECT (I7A16) LENGTH(1)	
834	F00090	ADDRESS. HEX LOCATION (00002B82) IN CSECT (I7A16) LENGTH(1)	
844	F00099	ADDRESS. HEX LOCATION (00002BFE) IN CSECT (I7A16) LENGTH(1)	
854	F00105	ADDRESS. HEX LOCATION (00002C7A) IN CSECT (I7A16) LENGTH(1)	
864	F00107	ADDRESS. HEX LOCATION (00002CF6) IN CSECT (I7A16) LENGTH(1)	
874	F00116	ADDRESS. HEX LOCATION (00002D72) IN CSECT (I7A16) LENGTH(1)	
884	F00122	ADDRESS. HEX LOCATION (00002DEE) IN CSECT (I7A16) LENGTH(1)	
904	F00131	ADDRESS. HEX LOCATION (00002EE6) IN CSECT (I7A16) LENGTH(1)	
908	F00137	ADDRESS. HEX LOCATION (00002EFA) IN CSECT (I7A16) LENGTH(1)	
916	F00143	ADDRESS. HEX LOCATION (00002F50) IN CSECT (I7A16) LENGTH(1)	
894	F00145	ADDRESS. HEX LOCATION (00002E6A) IN CSECT (I7A16) LENGTH(1)	

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DECLARED	NAME	ATTRIBUTES AND REFERENCES
928	F00147	ADDRESS. HEX LOCATION(00002FBA) IN CSECT(I7A16) LENGTH(1)
924	F00149	ADDRESS. HEX LOCATION(00002FA6) IN CSECT(I7A16) LENGTH(1)
938	F00151	ADDRESS. HEX LOCATION(00003036) IN CSECT(I7A16) LENGTH(1)
2440	HEBLK	ADDRESS. HEX LOCATION(00003644) IN CSECT(I7A16) LENGTH(2)
1088	HTOE	ABSOLUTE. HEX VALUE(0000001A)
1064	IDLE	ABSOLUTE. HEX VALUE(00000002)
1309	ID00	ADDRESS. HEX LOCATION(000031F8) IN CSECT(I7A16) LENGTH(2)
990	IN	ABSOLUTE. HEX VALUE(00000023)
2307	INTBL	ADDRESS. HEX LOCATION(00003438) IN CSECT(I7A16) LENGTH(2)
2202	INTER	ADDRESS. HEX LOCATION(0000339C) IN CSECT(I7A16) LENGTH(2)
2211	INTES	ADDRESS. HEX LOCATION(000033B4) IN CSECT(I7A16) LENGTH(2)
2215	INTET	ADDRESS. HEX LOCATION(000033BC) IN CSECT(I7A16) LENGTH(2)
2242	INTOK	ADDRESS. HEX LOCATION(000033C0) IN CSECT(I7A16) LENGTH(2)
2264	INTRX	ADDRESS. HEX LOCATION(000033F0) IN CSECT(I7A16) LENGTH(2)
2245	INTR1	ADDRESS. HEX LOCATION(000033C8) IN CSECT(I7A16) LENGTH(2)
2250	INTR2	ADDRESS. HEX LOCATION(000033D6) IN CSECT(I7A16) LENGTH(1)
2258	INTR3	ADDRESS. HEX LOCATION(000033E4) IN CSECT(I7A16) LENGTH(2)
2298	IOBLK	ADDRESS. HEX LOCATION(0000342C) IN CSECT(I7A16) LENGTH(2)
2300	IODCB	ADDRESS. HEX LOCATION(00003430) IN CSECT(I7A16) LENGTH(2)
2301	IOMOD	ADDRESS. HEX LOCATION(00003432) IN CSECT(I7A16) LENGTH(2)
37	I7A16	CSECT. START(00002500) LENGTH(4546) ESDID(1)
2417	LINE1	ADDRESS. HEX LOCATION(00003518) IN CSECT(I7A16) LENGTH(40)
1010	LSTIO	ADDRESS. HEX LOCATION(000030C2) IN CSECT(I7A16) LENGTH(2)
987	MI	ABSOLUTE. HEX VALUE(00000020)
2391	MVBUF	ADDRESS. HEX LOCATION(000034A4) IN CSECT(I7A16) LENGTH(2)
999	NG	ABSOLUTE. HEX VALUE(0000002C)
994	NI	ABSOLUTE. HEX VALUE(00000027)
441	N00001	ADDRESS. HEX LOCATION(000025A0) IN CSECT(I7A16) LENGTH(2)
453	N00002	ADDRESS. HEX LOCATION(000025B2) IN CSECT(I7A16) LENGTH(2)
465	N00003	ADDRESS. HEX LOCATION(000025C4) IN CSECT(I7A16) LENGTH(2)
477	N00004	ADDRESS. HEX LOCATION(000025D6) IN CSECT(I7A16) LENGTH(2)
480	N00005	ADDRESS. HEX LOCATION(000025DA) IN CSECT(I7A16) LENGTH(2)
483	N00006	ADDRESS. HEX LOCATION(000025DE) IN CSECT(I7A16) LENGTH(2)
486	N00007	ADDRESS. HEX LOCATION(000025E2) IN CSECT(I7A16) LENGTH(2)
489	N00008	ADDRESS. HEX LOCATION(000025E6) IN CSECT(I7A16) LENGTH(2)
501	N00009	ADDRESS. HEX LOCATION(000025FA) IN CSECT(I7A16) LENGTH(2)
504	N00010	ADDRESS. HEX LOCATION(000025FE) IN CSECT(I7A16) LENGTH(2)
516	N00011	ADDRESS. HEX LOCATION(00002612) IN CSECT(I7A16) LENGTH(2)
519	N00012	ADDRESS. HEX LOCATION(00002616) IN CSECT(I7A16) LENGTH(2)
531	N00013	ADDRESS. HEX LOCATION(0000262C) IN CSECT(I7A16) LENGTH(2)
534	N00014	ADDRESS. HEX LOCATION(00002630) IN CSECT(I7A16) LENGTH(2)
546	N00015	ADDRESS. HEX LOCATION(00002646) IN CSECT(I7A16) LENGTH(2)
558	N00016	ADDRESS. HEX LOCATION(0000265E) IN CSECT(I7A16) LENGTH(2)
561	N00017	ADDRESS. HEX LOCATION(00002662) IN CSECT(I7A16) LENGTH(2)
564	N00018	ADDRESS. HEX LOCATION(00002666) IN CSECT(I7A16) LENGTH(2)
576	N00019	ADDRESS. HEX LOCATION(0000267C) IN CSECT(I7A16) LENGTH(2)
588	N00020	ADDRESS. HEX LOCATION(00002694) IN CSECT(I7A16) LENGTH(2)
591	N00021	ADDRESS. HEX LOCATION(00002698) IN CSECT(I7A16) LENGTH(2)
603	N00022	ADDRESS. HEX LOCATION(000026B0) IN CSECT(I7A16) LENGTH(2)
606	N00023	ADDRESS. HEX LOCATION(000026B4) IN CSECT(I7A16) LENGTH(2)
609	N00024	ADDRESS. HEX LOCATION(000026B8) IN CSECT(I7A16) LENGTH(2)
621	N00025	ADDRESS. HEX LOCATION(000026CE) IN CSECT(I7A16) LENGTH(2)
633	N00026	ADDRESS. HEX LOCATION(000026E6) IN CSECT(I7A16) LENGTH(2)
636	N00027	ADDRESS. HEX LOCATION(000026EA) IN CSECT(I7A16) LENGTH(2)
648	N00028	ADDRESS. HEX LOCATION(00002702) IN CSECT(I7A16) LENGTH(2)

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DECLARED	NAME	ATTRIBUTES AND REFERENCES
651	N00029	ADDRESS. HEX LOCATION(00002706) IN CSECT(I7A16) LENGTH(2)
654	N00030	ADDRESS. HEX LOCATION(0000270A) IN CSECT(I7A16) LENGTH(2)
666	N00031	ADDRESS. HEX LOCATION(0000271E) IN CSECT(I7A16) LENGTH(2)
678	N00032	ADDRESS. HEX LOCATION(00002736) IN CSECT(I7A16) LENGTH(2)
684	N00033	ADDRESS. HEX LOCATION(00002742) IN CSECT(I7A16) LENGTH(2)
696	N00034	ADDRESS. HEX LOCATION(0000275A) IN CSECT(I7A16) LENGTH(2)
699	N00035	ADDRESS. HEX LOCATION(0000275E) IN CSECT(I7A16) LENGTH(2)
711	N00036	ADDRESS. HEX LOCATION(00002776) IN CSECT(I7A16) LENGTH(2)
714	N00037	ADDRESS. HEX LOCATION(0000277A) IN CSECT(I7A16) LENGTH(2)
720	N00038	ADDRESS. HEX LOCATION(00002786) IN CSECT(I7A16) LENGTH(2)
723	N00039	ADDRESS. HEX LOCATION(0000278A) IN CSECT(I7A16) LENGTH(2)
58	OP	ABSOLUTE. HEX VALUE(00000202) 492 507 522 537 549 567 579 594 612
57	ON	ABSOLUTE. HEX VALUE(00000200) 624 639 657 669 687 702
952	OPTN1	ADDRESS. HEX LOCATION(000030B6) IN CSECT(I7A16) LENGTH(2)
975	OPTN3	ADDRESS. HEX LOCATION(000030BA) IN CSECT(I7A16) LENGTH(2)
101	PARMARA	ADDRESS. HEX LOCATION(0000196E) IN CSECT(I7A16) LENGTH(1) 451 463 475 499 514 529 544 556 574 586 601 619 631 646 664 676 694 709
69	PID	ADDRESS. HEX LOCATION(00001800) IN CSECT(I7A16) LENGTH(1) 70 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112 2399
2435	PIDMSG10	ABSOLUTE. HEX VALUE(0000F1F0)
1074	PREP	ABSOLUTE. HEX VALUE(0000000C)
1250	RDDCB	ADDRESS. HEX LOCATION(0000318E) IN CSECT(I7A16) LENGTH(2) 1404 1405 1407 1462 1463 1464 2514 2515 2516
1081	RICB	ABSOLUTE. HEX VALUE(00000013)
1272	RKDCB	ADDRESS. HEX LOCATION(000031AE) IN CSECT(I7A16) LENGTH(2)
1283	RMDCB	ADDRESS. HEX LOCATION(000031BE) IN CSECT(I7A16) LENGTH(2)
1306	RSBA	ADDRESS. HEX LOCATION(000031E8) IN CSECT(I7A16) LENGTH(2) 1172 1188 1199 1210 1232 1243 1254 1265 1276
1195	RSDCB	ADDRESS. HEX LOCATION(0000313E) IN CSECT(I7A16) LENGTH(2) 1388 1393
0	R0	REGISTER. HEX VALUE(00000000) 1449 1451 1452
0	R1	REGISTER. HEX VALUE(00000001) 2388 2391 2394 2397
0	R2	REGISTER. HEX VALUE(00000002) 2393 2394
0	R3	REGISTER. HEX VALUE(00000003) 1335 1337 1389 1392 1399 1400 1403 1406 1417 1420 1436 1439 1442 1444 1465 1466 2087 2100 2103 2104 2107 2109 2166 2167 2168 2202 2203 2209 2213 2242 2243 2248 2261 2293 2338 2340 2341 2349 2386 2387 2391 2403
0	R4	REGISTER. HEX VALUE(00000004) 1445 1446 1447 2093 2094 2097 2111 2112 2114 2115 2118 2124 2132 2204 2205 2207 2211 2215 2244 2245 2246 2256 2257 2258 2260 2263 2273 2274 2277 2280 2282 2467 2471 2509 2512
0	R5	REGISTER. HEX VALUE(00000005) 1336 1337 1390 1392 1398 1400 1404 1406 1418 1420 1437 1439 1440 1442 1464 1466 2101 2103 2105 2107 2123 2130 2252 2253 2254 2285 2286 2288 2290 2339 2340 2385 2398
0	R6	REGISTER. HEX VALUE(00000006) 1338 1339 1435 2099 2119 2133 2169 2274 2279 2281 2289 2292 2294 2344 2350 2352 2390 2395 2396 2468 2474 2504 2510 2518
0	R7	REGISTER. HEX VALUE(00000007) 1054 1334 1391 1397 1405 1419 1438 1441 1448 1463 2102 2106 2113 2208 2249 2337 2342 2347 2380 2389 2392 2404 2407 2465 2501
1015	SCTID	ADDRESS. HEX LOCATION(000030C4) IN CSECT(I7A16) LENGTH(2) 1202 1279 1335 1390 1393 1418 1421
1206	SKDCB	ADDRESS. HEX LOCATION(0000314E) IN CSECT(I7A16) LENGTH(2)
1072	START	ABSOLUTE. HEX VALUE(0000000A)
104	SUPSTAT	ADDRESS. HEX LOCATION(000019C4) IN CSECT(I7A16) LENGTH(1)
92	TUMSGWTR	ADDRESS. HEX LOCATION(000018BA) IN CSECT(I7A16) LENGTH(1)
76	TUPARM1	ADDRESS. HEX LOCATION(0000189A) IN CSECT(I7A16) LENGTH(1)
1044	TURTN	ADDRESS. HEX LOCATION(000030FE) IN CSECT(I7A16) LENGTH(2) 2472 2507
74	TUSTATUS	ADDRESS. HEX LOCATION(00001818) IN CSECT(I7A16) LENGTH(1) 2409 2465 2476 2501 2520
75	TUWORK	ADDRESS. HEX LOCATION(0000181A) IN CSECT(I7A16) LENGTH(1) 2379
1053	T7A02	ADDRESS. HEX LOCATION(00003106) IN CSECT(I7A16) LENGTH(6) 2382 2383 2384 2386 2442 443 455 467 491 506 521 536 548 566 578 593 611 623 638 656 668 686 701
1239	VRDCB	ADDRESS. HEX LOCATION(0000317E) IN CSECT(I7A16) LENGTH(2) 1410

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1261	WKDCB	ADDRESS. HEX LOCATION (0000319E) IN CSECT (I7A16) LENGTH (2) 1424 1425
1228	WRDCB	ADDRESS. HEX LOCATION (0000316E) IN CSECT (I7A16) LENGTH (2) 1413 1459
1078	WRITO	ABSOLUTE. HEX VALUE (00000010) 1454
1079	WRIT1	ABSOLUTE. HEX VALUE (00000011) 1456
1300	WRSID	ADDRESS. HEX LOCATION (000031DC) IN CSECT (I7A16) LENGTH (2) 1191 1268 1336 1425 1429
1184	WSDCB	ADDRESS. HEX LOCATION (0000312E) IN CSECT (I7A16) LENGTH (2) 1428 1429
991	XE	ABSOLUTE. HEX VALUE (00000024) 2211 2273 2471 2509 2517
989	XI	ABSOLUTE. HEX VALUE (00000022) 1447 2115 2258
2087	XIO	ADDRESS. HEX LOCATION (0000331E) IN CSECT (I7A16) LENGTH (4) 1383 1386 1394 1401 1408 1411 1414 1422 1426 1430 1433
2273	XIOCK	ADDRESS. HEX LOCATION (000033F2) IN CSECT (I7A16) LENGTH (2) 2125
2280	XIOCO	ADDRESS. HEX LOCATION (00003404) IN CSECT (I7A16) LENGTH (2) 2278
2290	XIOCQ	ADDRESS. HEX LOCATION (0000341A) IN CSECT (I7A16) LENGTH (4) 2287
2095	XIOCS	ADDRESS. HEX LOCATION (00003330) IN CSECT (I7A16) LENGTH (6) 2291
2282	XIOCV	ADDRESS. HEX LOCATION (00003408) IN CSECT (I7A16) LENGTH (2) 2276
2293	XIOCX	ADDRESS. HEX LOCATION (00003426) IN CSECT (I7A16) LENGTH (4) 2283
2090	XIODG	ADDRESS. HEX LOCATION (00003324) IN CSECT (I7A16) LENGTH (6) 1460 1467
2166	XIOER	ADDRESS. HEX LOCATION (00003390) IN CSECT (I7A16) LENGTH (2) 2299
2099	XIO1	ADDRESS. HEX LOCATION (00003340) IN CSECT (I7A16) LENGTH (4) 2088 2091
2112	XIO2	ADDRESS. HEX LOCATION (00003366) IN CSECT (I7A16) LENGTH (2) 2098
2124	XIO8	ADDRESS. HEX LOCATION (0000337C) IN CSECT (I7A16) LENGTH (2) 1455 1457 2131
62	XTRNL	ABSOLUTE. HEX VALUE (00000001) 682 718
2476	X7A28	ADDRESS. HEX LOCATION (00003672) IN CSECT (I7A16) LENGTH (4) 2469 2475
2520	X7A29	ADDRESS. HEX LOCATION (000036BC) IN CSECT (I7A16) LENGTH (4) 2505 2511 2513 2519

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