```
000001 A     1 VORTEX SET     1                PUT LAST FOR VORTEX                          V2  05 00001
             2 *   THIS IS A COPYRIGHTED PROGRAM, COPYRIGHT 1973 BY VARIAN DATA MACHINES05 00002
             3 *                                                                            05 00003
             4 *     V.D.M.   PART NO.      92L1105-054B                                    05 00004
             5 *                                                                            05 00005
             6 *                            RELEASED     3-1-74                             05 00006
             7 *                                                                            05 00007
             8 *                                                                            05 00008
             9 *               CC$SCW                                                       05 00009
            10 *                                                                            05 00010
            11 *                                                                            05 00011
            12         TITLE   CC$SCW                                                       05 00012
            13         NLIS                                                                 05 00013
          1443         LIST                                                                 *********
          1444 *                                                                            05 00014
          1445         EJEC                                                                 05 00015
          1446 ********************************************************************************05 00016
          1447 ********************************************************************************05 00017
          1448 **      PROGRAM NAME -                                                      **05 00018
          1449 **              CC$SCW - SET UP LINE CONTROL WORDS                          **05 00019
          1450 **                                                                          **05 00020
          1451 **      ENTRY CONDITIONS -                                                  **05 00021
          1452 **              ENTRY PARAMETERS ARE PASSED BY MEANS OF THE VTAM STACK      **05 00022
          1453 **              STACK (B) = REQUEST ADDRESS                                 **05 00023
          1454 **              STACK (X) = LSD ADDRESS                                     **05 00024
          1455 **              INTERRUPTS DISABLED                                         **05 00025
          1456 **                                                                          **05 00026
          1457 **      CALLING SEQUENCE -                                                  **05 00027
          1458 **              DINTS                                                       **05 00028
          1459 **              JMPM    VTPUSH                                              **05 00029
          1460 **              DATA    CC$SCW                                              **05 00030
          1461 **                                                                          **05 00031
          1462 **      EXIT CONDITIONS -                                                   **05 00032
          1463 **              (A) UNCHANGED                                               **05 00033
          1464 **              (B) LCW ADDRESS                                             **05 00034
          1465 **              (X) UNCHANGED                                               **05 00035
          1466 **              INTERRUPTS ENABLED                                          **05 00036
          1467 **                                                                          **05 00037
          1468 ********************************************************************************05 00038
          1469 ********************************************************************************05 00039
          1470         EJEC                                                                 05 00040
          1471         NAME    CC$SCW                                                       05 00041
          1472         IFF     VORTEX-2                                            V2       05 00042
          1473 CC$SCW  DATA    6                                                   CHV2     05 00043
          1474         IFF     VORTEX-1                                            V2       05 00044
000000 000005 A 1475 CC$SCW  DATA    5                                                       05 00045
          1476         EXT     VTSTAK                                                       05 00046
000001 006037 A 1477         LDXE    VTSTAK                                                  05 00047
000002 000000 E
       000001 A 1478 STACK   SET     X                                                       05 00048
          1479 *       MOVE B REGISTER TO TEMP STACK LOCATION                               05 00049
000003 025002 A 1480         LDB     2,STACK                                                 05 00050
000004 065007 A 1481         STB     7,STACK                                                 05 00051
          1482 *       SET (X) TO LSD ADDRESS                                               05 00052
000005 035003 A 1483         LDX     3,STACK                                                 05 00053
          1484         EXT     CC$FCW                                                       05 00054
          1485         PUSH    CC$FCW          GET LCW ADDRESS                              05 00055
000006 100444 A
000007 100747 A
000010 002000 A
000011 000000 E
000012 000000 E
000013 006037 A 1486         LDXE    VTSTAK                                                  05 00056
000014 000002 E
       000001 A 1487 STACK   SET     X                                                       05 00057
000015 065002 A 1488         STB     2,STACK         SAVE LCW ADDRESS IN STACK WORD 2 (B)    05 00058
          1489         IFF     VORTEX-1                                            V2       05 00059
          1490         GOTO    1                                                   V2       05 00060
          1491         LDB     7,STACK         POINT B AT RQBLK                    V2       05 00061
          1492         LDB     RTIDB,B         POINT B AT REQUESTING TIDB          V2       05 00062
          1493         LDA     TBKEY,B         GET USER MAP KEY                    V2       05 00063
          1494         ANA     BM17                                                V2       05 00064
          1495         STA     10,STACK        STORE IN STACK                      CHV2     05 00065
          1496         JANZ    SC00            MAP ZERO ?                          V2       05 00066
          1497         LDA     18,B            YES                                 V2       05 00067
          1498         ERAI    'TC'                                                V2       05 00068
          1499         JANZ    SC00            TEST FOR 'TC$CEX'                   V2       05 00069
          1500         LDA     19,B                                                V2       05 00070
          1501         ERAI    '$C'                                                V2       05 00071
          1502         JANZ    SC00                                                V2       05 00072
          1503         LDA     20,B                                                V2       05 00073
          1504         ERAI    'EX'                                                V2       05 00074
          1505         JANZ    SC00                                                V2       05 00075
          1506         LDB     7,STACK         TIDB IS TC$CEX                      V2       05 00076
          1507         LDA     11,B            GET USER KEY                        V2       05 00077
          1508         ANA     BM17                                                V2       05 00078
          1509         STA     10,STACK                                            CHV2     05 00079
          1510 SC00    EQU     *                                                   V2       05 00080
          1511 1       CONT                                                        V2       05 00081
000016 025007 A 1512         LDB     7,STACK                                                 05 00082
000017 026002 A 1513         LDB     RFCB,B                                                  05 00083
       000002 A 1514 LCB     SET     B                                                       05 00084
          1515 *    SAVE CHR AND LUN                                                        05 00085
          1516         IFF     VORTEX-2                                            V2       05 00086
          1517         OME     MAP,V$ST2                                           V2       05 00087
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000020 016003 A 1518          LDA     DCCHR,LCB       CHR ADDRESS
000021 055010 A 1519          STA     6,STACK         SAVE CHR HERE
000022 016001 A 1520          LDA     DCBUFF,LCB      PICK UP BUFFER FWA
000023 150460 A 1521          ANA     BR15            MASK OFF SIGN BIT
000024 055006 A 1522          STA     6,STACK         SAVE IN STACK FOR A WHILE
000025 016001 A 1523          LDA     DCBUFF,LCB
000026 026000 A 1524          LDB     DCRECL,LCB      WORD/BYTE LENGTH
               1525          IFF     VORTEX-2                                    V2
               1526          OMB     MAP,V$STO                                   V2
000027 001004 A 1527          JAN     SC01            TEST IF LENGTH EXPRESSED IN BYTES
000030 000032 R
000031 004001 A 1528          ASLB    1               CONVERT WORD COUNT TO BYTE COUNT
000032 005021 A 1529 SC01     TBA                     WORD/BYTE COUNT TO (A)
000033 154217 A 1530          ANA     BM7777
000034 110440 A 1531          ORA     BS15            SET BYTE FLAG TO LEFT BYTE
000035 134215 A 1532          ERA     BM7777          COMPLEMENT BYTE COUNT
000036 055005 A 1533          STA     5,STACK
000037 025007 A 1534          LDB     7,STACK
       000002 R 1535 RQST     SET     B
               1536          FETCHA  RQST,ROPWD,8,4
000040 016001 A
000041 004350 A
000042 150472 A
000043 025002 A 1537          LDB     2,STACK
       000002 A 1538 LCW      SET     B
               1539 *         OP CODE ZERO IS A READ
000044 001010 A 1540          JAZ     SC02
000045 000056 R
               1541 *
               1542 *         SET UP WRITE PORTION OF LCW
               1543 *
               1544 *                 FIRST SETUP OUTPUT ADDRESS AND THEN LENGTH
               1545 *                 THIS ORDER IS IMPORTANT WHEN IN BSC MODE.
000046 015006 A 1546          LDA     6,STACK         MOVE OUTPUT BUFFER ADDRESS FROM STACK
000047 056005 A 1547          STA     LCOBA,LCW       TO LCOBA
000050 015005 A 1548          LDA     5,STACK         MOVE BYTE LENGTH FROM STACK TO LCOBL
000051 056004 A 1549          STA     LCOBL,LCW
               1550          IFF     VORTEX-1                                    V2
               1551          GOTO    1                                           BCV2
               1552          LDA     LCOKE,LCW                                   V2
               1553          ANAI    0177760         CLEAR FORMER MAP KEY        BCV2
               1554          ORA     10,STACK        GET USER MAP KEY
               1555          STA     LCOKE,LCW
               1556 1        CONT
               1557          IFF     VORTEX-2
               1558          GOTO    1
000052 005001 A 1559          TZA                     SET KEY TO ZERO
000053 005000 A 1560          NOP                     LCOKE  NOT YET IMPLEMENTED
               1561 1        CONT
000054 001000 A 1562          JMP     SC05            GO TO PCW SET UP
000055 000203 R
               1563 *
               1564 *         SET UP READ LCW
               1565 *
000056 015006 A 1566 SC02     LDA     6,STACK         MOVE BUFFER ADDRESS FROM
000057 056001 A 1567          STA     LCIBA,LCW       STACK TO LCIBA
000060 015005 A 1568          LDA     5,STACK         LCIBL - BYTE LENGTH
000061 035003 A 1569          ADX     3,STACK         PICK UP LSD ADDRESS
       000001 A 1570 LSD      SET     X               FROM STACK
000062 056000 A 1571          STA     LCIBL,LCW
               1572 *
               1573 *         SET UP INPUT LCW FROM LSD FLAGS
               1574 *
000063 015015 A 1575          LDA     LSCC1,LSD       B. UP LCIC1 AND LCIB
000064 056002 A 1576          STA     LCIC1,LCW
000065 003001 A 1577          TZA                     PLACE WORD 2
000066 025016 A 1578          LDB     LSTEP,LSD       CONTROL TRANSACTION OPERATION
000067 006427 A 1579          BT      RB0+LSTEPB,SC03
000070 000071 R
000071 110440 A 1580          ORA     BS0+LCRCC2
000072 025017 A 1581 SC03     LDB     LSABN,LSD       TERMINATE ON ABNORMAL CONDITION
000073 006427 A 1582          BT      RB0+LSABNB,SC03A
000074 000077 R
000075 110434 A 1583          ORA     BS0+LCHSYB
000076 025014 A 1584 SC03A    LDB     LCHSY,LSD       SET ASYNCHRONOUS/SYNCHRONOUS FLAG
000077 006427 A 1585          BT      RB0+LCHSYB,SC04
000100 000102 R
000101 110433 A 1586          ORA     BC0+LCHSYB
000102 006027 A 1587 SC04     LDBE    XTSTAK
000103 000014 E
               1588          IFF     VORTEX-2                                    V2
               1589          ORA     10,B            MERGE IN MAP KEY            CHV2
000104 026002 A 1590          LDB     2,B
       000002 A 1591 LCW      SET     B
000105 056003 A 1592          STA     LCIKE,LCW
               1593          FETCHA  LSD,LSCPC,LSCRCB,LSCRC2
000106 015017 A
000107 004352 A
000110 150467 A
               1594          SETA    LCW,LCCPC,LCCRCB,LSCRC2
000111 004254 A
000112 136003 A
000113 004354 A
000114 150457 A
000115 004254 A
```

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000116 136003 A
000117 056003 A
                    1595 * SET CHAIN FLAG (IF ON)                                                    05 00165
                    1596         FETCHA  LSD,LSCHN,LSCHNB,LSCHNZ                                     05 00166
000120 015017 A
000121 004350 A
000122 150421 A
                    1597         SETA    LCW,LCCHN,LCCHNB,LCCHNZ                                     05 00167
000123 004256 A
000124 136007 A
000125 004356 A
000126 150421 A
000127 004256 A
000130 136007 A
000131 056007 A
                    1598 *                                                                           05 00168
                    1599 * SET BSC FLAG (IF ON)                                                     05 00169
                    1600         FETCHA  LSD,LSBSC,LSBSCB,LSBSCZ                                 01305 00170
000132 015020 A
000133 004356 A
000134 150421 A
                    1601         SETA    LCW,LCBSC,LCBSCB,LCBSCZ                                 01405 00171
000135 004255 A
000136 136007 A
000137 004355 A
000140 150421 A
000141 004255 A
000142 136007 A
000143 056007 A
                    1602 *                                                                           05 00172
                    1603         FETCHA  LSD,LSPLA,LSPLAB,LSPLAZ    PHYSICAL LINE NUMBER          05 00173
000144 015016 A
000145 150463 A
000146 006027 A 1604         LDBE    VTSTAK                                                          05 00174
000147 000103 E
000150 056011 A 1605         STA     9,B             SAVE PHYSICAL LINE NUMBER                       05 00175
000151 026002 A 1606         LDB     2,B             PUT B BACK TO LCW                               05 00176
                    1607         TESTF   LSD,LSASC,LSASCB,LSASCZ                                     05 00177
000152 015017 A
000153 150432 A
000154 001010 A 1608         JAZ     SC04A                                                           05 00178
000155 000161 R
                    1609         SETF    LCW,LCSMB,LCSMBB,LCSMBZ                                     05 00179
000156 016000 A
000157 110437 A
000160 056000 A
                    1610 *       TEST IF IN CHAIN MODE                                               05 00180
                    1611 SC04A   TESTF   LSD,LSCHN,LSCHNB,LSCHNZ                                 02005 00181
000161 015017 A
000162 150431 A
000163 001010 A 1612         JAZ     SC05            NOT IN CHAIN MODE                               05 00182
000164 000203 R
                    1613 *                                                                           05 00183
                    1614 *     CHAIN THE CHAIN HEADER ONTO THE BUFFER CHAIN TABLE (BCT)              05 00184
                    1615 *                                                                           05 00185
000165 035012 A 1616         LDX     LSCTA,LSD       CONTROLLER TABLE ADDRESS                        05 00186
       000001 A 1617 CTB     SET     X                                                               05 00187
000166 006027 A 1618         LDBE    VTSTAK          STACK POINTER                           D.1     05 00188
000167 000147 E
       000002 A 1619 STACK   SET     B                                                       D.1     05 00189
000170 016011 A 1620         LDA     9,STACK         PHYSICAL LINE NUMBER                    D.1     05 00190
000171 006150 A 1621         ANAI    077             CUT OFF DCM NUMBER                      D.1     05 00191
000172 000077 A
000173 125026 A 1622         ADD     DMBCA,CTB       BUFFER CHAIN TABLE ADDRES               D.1     05 00192
000174 005014 A 1623         TAX                                                                     05 00193
000175 016010 A 1624         LDA     8,STACK         CHR ADDRES                                      05 00194
000176 055000 A 1625         STA     0,X             CHR TO BCT ENTRY                                05 00195
                    1626 *               STORE REQUEST ADDRESS IN THE CHAIN HEADER ( CHR+4)          05 00196
000177 016007 A 1627         LDA     7,STACK         REQUEST ADDRESS                                 05 00197
000200 036010 A 1628         LDX     8,STACK         CHR ADDRESS                                     05 00198
                    1629         IFF     VORTEX-2                                            CHV205 00199
                    1630         DME     MAP,V$ST3                                           CHV205 00200
000201 055004 A 1631         STA     4,X             STORE REQUEST  ADDR. IN CHR+4                   05 00201
                    1632         IFF     VORTEX-2                                            CHV205 00202
                    1633         DME     MAP,V$ST0                                           CHV205 00203
000202 026002 A 1634         LDB     2,STACK         RESTORE B TO LCW                                05 00204
                    1635 *                                                                           05 00205
                    1636 *                                                                           05 00206
000203 006037 A 1637 SC05    LDXE    VTSTAK          SET UP PCW                                      05 00207
000204 000167 E
000205 035003 A 1638         LDX     3,X                                                             05 00208
       000001 A 1639 LSD     SET     X                                                               05 00209
                    1640         DINTS                                                               05 00210
000206 100444 A
000207 100747 A
000210 016006 A 1641         LDA     LCLCB,LCW                                                       05 00211
000211 006150 A 1642         ANAI    075777                                                          05 00212
000212 075777 A
                    1643 *                                                                           05 00213
                    1644 *     SET DS/S FIELD IN PCW DEPENDING UPON LSDSF                            05 00214
                    1645 *                                                                           05 00215
000213 025017 A 1646         LDB     LSDSF,LSD                                                       05 00216
000214 006477 A 1647         BT      RB0+LSDSFB,SC06                                                 05 00217
000215 000217 R
000216 110440 A 1648         ORA     BS0+LCCWSB                                                      05 00218
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000217 005012 A 1649 SC06    TAB                    (B)=PCW                          05 00219
               1650           TESTF   LSD,LSEPF,LSEPFB,LSEPFZ                     05 00220
000220 015016 A
000221 150437 A
000222 001010 A 1651           JAZ     SC08                                       05 00221
000223 000242 R
               1652           TESTF   LSD,LSASY,LSASYB,LSASYZ                     05 00222
000224 015014 A
000225 150434 A
000226 001016 A 1653           JAMZ    SC07                                       05 00223
000227 000241 R
000230 006037 A 1654           LDXE    VTSTAK                                     05 00224
000231 000204 E
       000001 A 1655 STACK     SET     X                                          05 00225
000232 035007 A 1656           LDX     7,STACK                                    05 00226
       000001 A 1657 RQST      SET     X                                          05 00227
               1658           FETCHA  RQST,RDPWD,8,4                             05 00228
000233 015001 A
000234 004350 A
000235 150472 A
000236 140421 A 1659           SUB     ONE                                        05 00229
000237 001010 A 1660           JAZ     SC08                                       05 00230
000240 000242 R
000241 010433 A 1661 SC07      LDA     BS10          SET 'E' BIT                  05 00231
000242 005031 A 1662 SC08      MERGE   031                                        05 00232
000243 006037 A 1663           LDXE    VTSTAK                                     05 00233
000244 000231 E
       000001 A 1664 STACK     SET     X                                          05 00234
000245 025002 A 1665           LDB     2,STACK                                    05 00235
       000002 A 1666 LCW       SET     B                                          05 00236
               1667           EINTS                                              05 00237
000246 100244 A
000247 100147 A
000250 056006 A 1668           STA     LCLCB,LCW                                  05 00238
               1669           EXT     VTPOP                                      05 00239
000251 001000 A 1670           JMP     VTPOP                                      05 00240
000252 000000 E
               1671 *                                                            05 00241
               1672 *         CONSTANTS                                          05 00242
               1673 *                                                            05 00243
000253 007777 A 1674 BM7777    DATA    07777                                      05 00244
               1675           END                                                05 00245
ENTRY NAMES
000000 R CC$SCW
EXTERNAL NAMES
000012 E CC$FCW  000252 E VTPOP   000011 E VTPUSH  000244 E VTSTAK
SYMBOLS
000044 A APIM    000002 A B       000000 A B0      000001 A B1
000012 A B10     000013 A B11     000014 A B12     000015 A B13
000016 A B14     000017 A B15     000002 A B2      000003 A B3
000004 A B4      000005 A B5      000006 A B6      000007 A B7
000010 A B8      000011 A B9      000000 A BICNUM  000421 A BM1
000472 A BM17    000475 A BM177   000477 A BM1777  000464 A BM3
000473 A BM37    000463 A BM377   000467 A BM7     000474 A BM77
000476 A BM777   000253 R BM7777  000441 A BR0     000442 A BR1
000453 A BR10    000454 A BR11    000455 A BR12    000456 A BR13
000457 A BR14    000460 A BR15    000443 A BR2     000444 A BR3
000445 A BR4     000446 A BR5     000447 A BR6     000450 A BR7
000451 A BR8     000452 A BR9     000421 A BS0     000422 A BS1
000433 A BS10    000434 A BS11    000435 A BS12    000436 A BS13
000437 A BS14    000440 A BS15    000423 A BS2     000424 A BS3
000425 A BS4     000426 A BS5     000427 A BS6     000430 A BS7
000431 A BS8     000432 A BS9     000012 E CC$FCW  000000 R CC$SCW
000000 A CHAFP   000000 A CHAFPB  000020 A CHAFPZ  000001 A CHARP
000000 A CHARPB  000020 A CHARPZ  000002 A CHCFP   000000 A CHCFPB
000020 A CHCFPZ  000003 A CHCRP   000000 A CHCRPB  000020 A CHCRPZ
000004 A CHRBL   000000 A CHRBLB  000020 A CHRBLZ  000047 A CLOCK
000000 A COTAD1  000000 A CTACT   000017 A CTACTB  000001 A CTACTZ
000001 A CTADN   000000 A CTADNB  000020 A CTADNZ  000001 A CTB
000011 A CTBIC   000000 A CTBICB  000020 A CTBICZ  000003 A CTDST
000000 A CTDSTB  000020 A CTDSTZ  000006 A CTDVA   000000 A CTDVAB
000020 A CTDVAZ  000012 A CTFCB   000000 A CTFCBB  000020 A CTFCBZ
000014 A CTFRC   000010 A CTFRCB  000010 A CTFRCZ  000014 A CTFRE
000000 A CTFREB  000010 A CTFREZ  000000 A CTIDB   000000 A CTIDBB
000017 A CTIDBZ  000007 A CTIOA   000000 A CTIOAB  000020 A CTIOAZ
000002 A CTOPM   000000 A CTOPMB  000020 A CTOPMZ  000005 A CTRCN
000000 A CTRCNB  000010 A CTRCNZ  000004 A CTRQB   000000 A CTRQBB
000020 A CTRQBZ  000005 A CTRTR   000010 A CTRTRB  000010 A CTRTRZ
000010 A CTSTA   000000 A CTSTAB  000020 A CTSTAZ  000013 A CTWDS
000000 A CTWDSB  000020 A CTWDSZ  000001 A DCBUFF  000003 A DCCHR
000000 A DCCHRB  000020 A DCCHRZ  000002 A DCCNT   000000 A DCRECL
000747 A DISCLK  000745 A DISMP   000444 A DISPIM  000026 A DMBCA
000000 A DMBCAB  000020 A DMBCAZ  000024 A DMCWA   000000 A DMCWAB
000020 A DMCWAZ  000017 A DMFPA   000000 A DMFPAB  000020 A DMFPAZ
000021 A DMLCA   000000 A DMLCAB  000020 A DMLCAZ  000022 A DMLTA
000000 A DMLTAB  000020 A DMLTAZ  000023 A DMPTA   000000 A DMPTAB
000020 A DMPTAZ  000016 A DMRPA   000000 A DMRPAB  000020 A DMRPAZ
000020 A DMSTA   000000 A DMSTAB  000020 A DMSTAZ  000025 A DMSWA
000000 A DMSWAB  000020 A DMSWAZ  000015 A DMTPA   000000 A DMTPAB
000020 A DMTPAZ  000002 A DSCTAD  000000 A DSDASS  000000 A DSDVDN
000002 A DSLCKO  000001 A DSNAME  000000 A DSNORQ  000002 A DSOPCM
000002 A DSPSTI  000002 A DSREWD  000000 A DSUNAM  000002 A DSUNTN
000424 A EIGHT   000147 A ENACLK  000645 A ENAMP   000244 A ENAPIM
000465 A FIVE    000423 A FOUR    000003 A IBIBF   000017 A IBIBFB
000001 A IBIBFZ  000003 A IBLAS   000000 A IBLASB  000017 A IBLASZ
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000001 A IBLEN  000000 A IBLENB 000020 A IBLENZ 000000 A IBLNK
000000 A IBLNKB 000020 A IBLNKZ 000002 A IBSTA  000000 A IBSTAB
000020 A IBSTAZ 000004 A IBSTS  000000 A IBSTSB 000017 A IBSTSZ
000300 A LC     000003 A LCABN  000013 A LCABNB 000001 A LCABNZ
000003 A LCASY  000012 A LCASYB 000001 A LCASYZ 000002 A LCB
000007 A LCBSC  000015 A LCBSCB 000001 A LCBSCZ 000007 A LCCHN
000016 A LCCHNB 000001 A LCCHNZ 000003 A LCCRC  000014 A LCCRCB
000003 A LCCRCZ 000006 A LCCWB  000014 A LCCWBB 000001 A LCCWBZ
000006 A LCCWC  000015 A LCCWCB 000001 A LCCWCZ 000006 A LCCWD
000013 A LCCWDB 000001 A LCCWDZ 000006 A LCCWI  000016 A LCCWIB
000001 A LCCWIZ 000006 A LCCWP  000012 A LCCWPB 000001 A LCCWPZ
000006 A LCCWR  000011 A LCCWRB 000001 A LCCWRZ 000006 A LCCWS
000017 A LCCWSB 000001 A LCCWSZ 000006 A LCCWT  000010 A LCCWTB
000001 A LCCWTZ 000001 A LCIBA  000000 A LCIBAB 000017 A LCIBAZ
000000 A LCIBF  000017 A LCIBFB 000001 A LCIBFZ 000000 A LCIBL
000000 A LCIBLB 000014 A LCIBLZ 000002 A LCIC1  000010 A LCIC1B
000010 A LCIC1Z 000002 A LCIC2  000000 A LCIC2B 000010 A LCIC2Z
000003 A LCIKE  000000 A LCIKEB 000004 A LCIKEZ 000007 A LCITB
000013 A LCITBB 000001 A LCITBZ 000050 A LCJP   000006 A LCLCB
000000 A LCLCBB 000020 A LCLCBZ 000007 A LCLDB  000014 A LCLDBB
000001 A LCLDBZ 000007 A LCLTB  000017 A LCLTBB 000001 A LCLTBZ
000005 A LC□BA  000000 A LC□BAB 000017 A LC□BAZ 000004 A LC□BF
000017 A LC□BFB 000001 A LC□BFZ 000004 A LC□BL  000000 A LC□BLB
000014 A LC□BLZ 000007 A LC□KE  000000 A LC□KEB 000004 A LC□KEZ
000003 A LCRCC  000017 A LCRCCB 000001 A LCRCCZ 000000 A LCSMB
000016 A LCSMBB 000001 A LCSMBZ 000002 A LCW    000462 A LHW
000017 A LSABN  000015 A LSABNB 000001 A LSABNZ 000017 A LSASC
000011 A LSASCB 000001 A LSASCZ 000014 A LSASY  000013 A LSASYB
000001 A LSASYZ 000020 A LSBSC  000016 A LSBSCB 000001 A LSBSCZ
000015 A LSCC1  000010 A LSCC1B 000010 A LSCC1Z 000015 A LSCC2
000000 A LSCC2B 000010 A LSCC2Z 000017 A LSCHN  000010 A LSCHNB
000001 A LSCHNZ 000017 A LSCRC  000012 A LSCRCB 000003 A LSCRCZ
000012 A LSCTA  000000 A LSCTAB 000020 A LSCTAZ 000001 A LSD
000017 A LSDSF  000017 A LSDSFB 000001 A LSDSFZ 000013 A LSDST
000000 A LSDSTB 000020 A LSDSTZ 000016 A LSEPF  000016 A LSEPFB
000001 A LSEPFZ 000014 A LSLSP  000000 A LSLSPB 000011 A LSLSPZ
000014 A LSMOD  000016 A LSMODB 000002 A LSMODZ 000020 A LSNTO
000010 A LSNTOB 000006 A LSNTOZ 000014 A LSPAR  000014 A LSPARB
000002 A LSPARZ 000016 A LSPLA  000000 A LSPLAB 000010 A LSPLAZ
000002 A LSRCA  000000 A LSRCAB 000020 A LSRCAZ 000003 A LSREM
000000 A LSREMB 000020 A LSREMZ 000016 A LSRRS  000010 A LSRRSB
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000004 A LSRTO  000000 A LSRTOB 000020 A LSRTOZ 000005 A LSSRS
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000020 A LSSWSZ 000016 A LSTER  000017 A LSTERB 000001 A LSTERZ
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000000 A LSWCAB 000020 A LSWCAZ 000007 A LSWEM  000000 A LSWEMB
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000011 A LSXMMB 000002 A LSXMMZ 000017 A LSYNC  000016 A LSYNCB
000001 A LSYNCZ 000020 A LSYNR  000000 A LSYNRB 000010 A LSYNRZ
000017 A LSYNT  000000 A LSYNTB 000010 A LSYNTZ 000046 A MAP
000045 A MP     000045 A MPMR0  000145 A MPMR1  000245 A MPMR2
000345 A MPMR3  000420 A MT     000461 A NEG    000470 A NINE
000421 A ONE    000001 A PCBSL  000011 A PCBSLB 000001 A PCBSLZ
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000014 A PCCTPB 000004 A PCCTPZ 000001 A PCECH  000014 A PCECHB
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000002 A PCNTD  000000 A PCNTDB 000004 A PCNTDZ 000001 A PCPCH
000000 A PCPCHB 000010 A PCPCHZ 000001 A PCSWL  000010 A PCSWLB
000001 A PCSWLZ 000002 A PCTYP  000010 A PCTYPB 000004 A PCTYPZ
000001 A PCXMM  000012 A PCXMMB 000002 A PCXMMZ 000040 A PIM1
000041 A PIM2   000042 A PIM3   000043 A PIM4   000040 A PIM5
000040 A PIM6   000040 A PIM7   000040 A PIM8   000200 A POST
000003 A PSABN  000015 A PSABNB 000001 A PSABNZ 000000 A PSASY
000013 A PSASYB 000001 A PSASYZ 000002 A PSBADT 000000 A PSBEG
000004 A PSBSC  000016 A PSBSCB 000016 A PSBSCZ 000001 A PSCC1
000010 A PSCC1B 000010 A PSCC1Z 000001 A PSCC2  000000 A PSCC2B
000010 A PSCC2Z 000003 A PSCRC  000012 A PSCRCB 000003 A PSCRCZ
000002 A PSDEF  000010 A PSDEFB 000001 A PSDEFZ 000003 A PSDSF
000017 A PSDSFB 000001 A PSDSFZ 000002 A PSDWN  000011 A PSDWNB
000001 A PSDWNZ 000004 A PSEND  000002 A PSEPF  000016 A PSEPFB
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000000 A PSPAR  000014 A PSPARB 000002 A PSPARZ 000002 A PSPLA
000000 A PSPLAB 000010 A PSPLAZ 000001 A PSPROT 000002 A PSTER
000017 A PSTERB 000001 A PSTERZ 000000 A PSXMM  000011 A PSXMMB
000002 A PSXMMZ 000003 A PSYNC  000016 A PSYNCB 000001 A PSYNCZ
000004 A PSYNR  000000 A PSYNRB 000010 A PSYNRZ 000003 A PSYNT
000000 A PSYNTB 000010 A PSYNTZ 000040 A RA0    000000 A RA1
000004 A RADNR  000060 A RB0    000020 A RB1    000002 A RFCB
000463 A RHW    000001 A ROPWD  000001 A ROST   000000 A RSTPR
000003 A RTIDB  000032 R SC01   000056 R SC02   000072 R SC03
000076 R SC03A  000102 R SC04   000161 R SC04A  000203 R SC05
000217 R SC06   000241 R SC07   000242 R SC08   000467 A SEVEN
000466 A SIX    000001 A STACK  000027 A TBATSK 000026 A TBCPTH
000011 A TBENTY 000003 A TBEVNT 000021 A TBID   000014 A TBISA
000015 A TBISB  000017 A TBISP  000020 A TBISRS 000034 A TBIST
000016 A TBISX  000032 A TBKEY  000022 A TBKN1  000023 A TBKN2
000024 A TBKN3  000033 A TBMIMG 000032 A TBNUCL 000002 A TBPL
000004 A TBRSA  000005 A TBRSB  000030 A TBRSE  000007 A TBRSP
000010 A TBRSTS 000006 A TBRSX  000000 A TBS0   000001 A TBS1
000012 A TBS10  000013 A TBS11  000014 A TBS12  000015 A TBS13
000016 A TBS14  000017 A TBS15  000002 A TBS2   000003 A TBS3
000004 A TBS4   000005 A TBS5   000006 A TBS6   000007 A TBS7
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000010 A TBS8   000011 A TBS9   000031 A TBSIZ  000001 A TBST
000025 A TBTLC  000013 A TBTMIN 000012 A TBTMS  000000 A TBTRD
000004 A TCBSL  000011 A TCBSLB 000001 A TCBSLZ 000003 A TCCLN
000000 A TCCLNB 000010 A TCCLNZ 000004 A TCCON  000015 A TCCONB
000001 A TCCONZ 000002 A TCCTA  000000 A TCCTAB 000020 A TCCTAZ
000005 A TCCTP  000014 A TCCTPB 000004 A TCCTPZ 000012 A TCDCC
000000 A TCDCCB 000020 A TCDCCZ 000014 A TCDTO  000000 A TCDTOB
000020 A TCDTOZ 000004 A TCECH  000014 A TCECHB 000001 A TCECHZ
000015 A TCID1  000000 A TCID1B 000020 A TCID1Z 000016 A TCID2
000000 A TCID2B 000020 A TCID2Z 000006 A TCLDF  000014 A TCLDFB
000001 A TCLDFZ 000003 A TCLLN  000010 A TCLLNB 000010 A TCLLNZ
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000000 A TCNTDB 000004 A TCNTDZ 000004 A TCPCH  000000 A TCPCHB
000010 A TCPCHZ 000004 A TCRBC  000017 A TCRBCB 000001 A TCRBCZ
000013 A TCRBF  000000 A TCRBFB 000020 A TCRBFZ 000007 A TCRCA
000000 A TCRCAB 000020 A TCRCAZ 000006 A TCRMD  000000 A TCRMDB
000003 A TCRMDZ 000001 A TCRQH  000000 A TCRQHB 000020 A TCRQHZ
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000000 A TCSTOB 000020 A TCSTOZ 000004 A TCSWL  000010 A TCSWLB
000001 A TCSWLZ 000000 A TCTCD  000000 A TCTCDB 000020 A TCTCDZ
000005 A TCTYP  000010 A TCTYPB 000004 A TCTYPZ 000004 A TCWBC
000016 A TCWBCB 000001 A TCWBCZ 000011 A TCWCA  000000 A TCWCAB
000020 A TCWCAZ 000006 A TCWMD  000003 A TCWMDB 000003 A TCWMDZ
000006 A TCWRS  000011 A TCWRSB 000003 A TCWRSZ 000004 A TCXMM
000012 A TCXMMB 000002 A TCXMMZ 000471 A TEN    000464 A THREE
000002 A TIDSP  000000 A TIDSPB 000007 A TIDSPZ 000002 A TIDWN
000017 A TIDWNB 000001 A TIDWNZ 000000 A TINET  000000 A TINETB
000020 A TINETZ 000003 A TIODN  000017 A TIODNB 000001 A TIODNZ
000003 A TIODP  000000 A TIODPB 000007 A TIODPZ 000003 A TIOSC
000007 A TIOSCB 000010 A TIOSCZ 000002 A TISEC  000007 A TISECB
000010 A TISECZ 000000 A TITU1  000000 A TITU1B 000020 A TITU1Z
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000000 A TPFPAB 000020 A TPFPAZ 000015 A TPRPA  000000 A TPRPAB
000020 A TPRPAZ 000016 A TPWPA  000000 A TPWPAB 000020 A TPWPAZ
000422 A TWO    000403 A V$1MIN 000415 A V$BFC  000075 A V$BGLB
000056 A V$BIC1 000315 A V$BTB  000331 A V$BTBM 000414 A V$BVN
000334 A V$CAM  000353 A V$CKB  000411 A V$CKIT 000310 A V$CKPT
000301 A V$CPL  000076 A V$CRDM 000341 A V$CRDR 000354 A V$CRM
000302 A V$CRS  000360 A V$CTAD 000300 A V$CTL  000351 A V$CTMS
000070 A V$DATE 000355 A V$DSTB 000376 A V$ERFG 000347 A V$FGLB
000306 A V$FLRS 000350 A V$FREE 000332 A V$GFCB 000320 A V$IM
000410 A V$IOA  000412 A V$JCB  000055 A V$JCFG 000077 A V$JCTM
000050 A V$JNAM 000377 A V$JOP  000340 A V$KEY  000054 A V$LCNT
000313 A V$LER  000356 A V$LIT  000317 A V$LLUP 000317 A V$LPP
000307 A V$LRSK 000312 A V$LSAL 000345 A V$LUNT 000316 A V$LUP
000400 A V$LUT1 000401 A V$LUT2 000402 A V$LUT3 000330 A V$MAP
000333 A V$MIMG 000330 A V$MPM  000362 A V$NCTR 000316 A V$NPAG
000413 A V$OCB  000346 A V$OPCF 000311 A V$OPCL 000357 A V$PGT
000363 A V$PIMN 000074 A V$PLCT 000305 A V$PTVB 000361 A V$SCTL
000352 A V$SCV  000375 A V$SLFG 000334 A V$ST0  000335 A V$ST1
000336 A V$ST2  000337 A V$ST3  000303 A V$TB   000342 A V$TBGT
000416 A V$TFC  000314 A V$TJCP 000344 A V$TMN  000343 A V$TMS
000304 A V$UTB  000001 A VORTEX 000252 E VTPOP  000011 E VTPUSH
000244 E VTSTAK 000001 A X      000420 A ZERO
  0 ERRORS ASSEMBLY COMPLETE

1511   1        *
 159   ADAT     *
  38   ANAM     *
  90   ANAN     *
 574   APIM      584   585
 108   B          98   117   289   230   252   255   257  1492  1493
                1497  1500  1503  1507  1513  1514  1535  1538  1589
                1590  1591  1605  1606  1619  1666
  88   B&          82
  83   B&0         40
  80   B&1         78
  44   B&10        42
  76   B&2         74
  72   B&3         70
  68   B&4         66
  64   B&5         62
  60   B&6         58
  56   B&7         54
  52   B&8         50
  48   B&9         46
 543   B0       *
 544   B1       *
 553   B10      *
 554   B11      *
 555   B12      *
 556   B13      *
 557   B14      *
 558   B15      *
 545   B2       *
 546   B3       *
 547   B4       *
 548   B5       *
 549   B6       *
 550   B7       *
 551   B8       *
 552   B9       *
 630   BICNUM   *
 515   BM1         79
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518	BM17	67	1494	1508			
521	BM177	55					
524	BM1777	43					
516	BM3	75					
519	BM37	63					
522	BM377	51					
517	BM7	71					
520	BM77	59					
523	BM777	47					
1674	BM7777	1530	1532				
486	BR0	202					
487	BR1	*					
496	BR10	*					
497	BR11	*					
498	BR12	*					
499	BR13	*					
500	BR14	*					
501	BR15	1521					
488	BR2	*					
489	BR3	*					
490	BR4	*					
491	BR5	*					
492	BR6	*					
493	BR7	*					
494	BR8	*					
495	BR9	*					
470	BS0	195	209	1580	1583	1586	1648
471	BS1	*					
480	BS10	1661					
481	BS11	*					
482	BS12	*					
483	BS13	*					
484	BS14	*					
485	BS15	1531					
472	BS2	*					
473	BS3	*					
474	BS4	*					
475	BS5	*					
476	BS6	*					
477	BS7	*					
478	BS8	*					
479	BS9	*					
0	CC$FCW	1484	1485				
1473	CC$SCW	12	1471				
1397	CHAFP	*					
1398	CHAFPB	*					
1399	CHAFPZ	*					
1401	CHARP	*					
1402	CHARPB	*					
1403	CHARPZ	*					
1405	CHCFP	*					
1406	CHCFPB	*					
1407	CHCFPZ	*					
1409	CHCRP	*					
1410	CHCRPB	*					
1411	CHCRPZ	*					
1413	CHRBL	*					
1414	CHRBLB	*					
1415	CHRBLZ	*					
198	CLEARF	*					
567	CLOCK	569	570				
622	COTAD1	*					
207	CTACT	*					
208	CTACTB	*					
209	CTACTZ	*					
215	CTADN	*					
216	CTADNB	*					
217	CTADNZ	*					
1617	CTB	1622					
251	CTBIC	*					
252	CTBICP	*					
253	CTBICZ	*					
243	CTBOCT	*					
224	CTBSTT	*					
225	CTBSTZ	*					
239	CTDVH	*					
240	CTDVHB	*					
241	CTDVHZ	*					
255	CTFCB	*					
256	CTFCBB	*					
257	CTFCBZ	*					
263	CTFRC	*					
264	CTFRCB	*					
265	CTFRCZ	*					
267	CTFRE	*					
268	CTFREB	*					
269	CTFREZ	*					
211	CTIDN	*					
212	CTIDNB	*					
213	CTIDNZ	*					
243	CTIOC	*					
244	CTIOCB	*					
245	CTIOCZ	*					
219	CTOPM	*					
220	CTOPMB	*					

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721   CTOPMZ   *
735   CTRCN    *
736   CTRCNB   *
737   CTRCNZ   *
727   CTRQB    *
728   CTRQBB   *
729   CTRQBZ   *
731   CTRTR    *
732   CTRTRB   *
733   CTRTRZ   *
747   CTSTA    *
748   CTSTAB   *
749   CTSTAZ   *
759   CTWDS    *
760   CTWDSB   *
761   CTWDSZ   *
688   DCBUFF   1520   1523
691   DCCHR    1518
692   DCCHRB   *
693   DCCHRZ   *
689   DCCNT    *
687   DCRECL   1524
187   DINTS    *
569   DISCLK    189
589   DISMP    *
584   DISPIM    188
813   DMBCA    1622
814   DMBCAB   *
815   DMBCAZ   *
805   DMCWA    *
806   DMCWAB   *
807   DMCWAZ   *
785   DMFPA    *
786   DMFPAB   *
787   DMFPAZ   *
793   DMLCA    *
794   DMLCAB   *
795   DMLCAZ   *
797   DMLTA    *
798   DMLTAB   *
799   DMLTAZ   *
801   DMPTA    *
802   DMPTAB   *
803   DMPTAZ   *
781   DMRPA    *
782   DMRPAB   *
783   DMRPAZ   *
789   DMSTA    *
790   DMSTAB   *
791   DMSTAZ   *
809   DMSWA    *
810   DMSWAB   *
811   DMSWAZ   *
777   DMTPA    *
778   DMTPAB   *
779   DMTPAZ   *
615   DSCTAD   *
601   DSDASS   *
600   DSDVDN   *
612   DSLCKD   *
609   DSNAME   *
608   DSNORQ   *
613   DSOPCM   *
614   DSPSTI   *
610   DSREWD   *
606   DSUNAM   *
611   DSUNTN   *
512   EIGHT     143    167
183   EINTS    *
570   ENACLK    185
590   ENAMP    *
585   ENAPIM    184
  0   ERROR     113    193    200    207
128   FETCHA   *
509   FIVE      149    173
508   FOUR      151    175
251   GETQ     *
1432  IBIBF    *
1433  IBIBFB   *
1434  IBIBFZ   *
1436  IBLAS    *
1437  IBLASB   *
1438  IBLASZ   *
1424  IBLEN    *
1425  IBLENB   *
1426  IBLENZ   *
1420  IBLNK    *
1421  IBLNKB   *
1422  IBLNKZ   *
1428  IBSTA    *
1429  IBSTAB   *
1430  IBSTAZ   *
1440  IBSTS    *
1441  IBSTSB   *
1442  IBSTSZ   *
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378	LC	379	380	381	382	383	384	385	386	387
		388	389	390	391	392	393	394	395	396
		397	398	399	400	401	402	403	404	405
		406	407	408	410	411	412	413	414	415
		416	417	418	419	420	421	422	423	424
		426	427	428	429	434	435	436	437	438
		439	440	447	448	449	452	457	458	459
855	LCABN	*								
856	LCABNB	1583								
857	LCABNZ	*								
859	LCASY	*								
860	LCASYB	1586								
861	LCASYZ	*								
1514	LCB	1518	1520	1523	1524					
923	LCBSC	1601								
924	LCBSCB	1601								
925	LCBSCZ	1601								
919	LCCHN	1597								
920	LCCHNB	1597								
921	LCCHNZ	1597								
851	LCCRC	1594								
852	LCCRCB	1594								
853	LCCRCZ	1594								
895	LCCWB	*								
896	LCCWBB	*								
897	LCCWBZ	*								
891	LCCWC	*								
892	LCCWCB	*								
893	LCCWCZ	*								
899	LCCWD	*								
900	LCCWDB	*								
901	LCCWDZ	*								
887	LCCWI	*								
888	LCCWIB	*								
889	LCCWIZ	*								
903	LCCWP	*								
904	LCCWPB	*								
905	LCCWPZ	*								
907	LCCWR	*								
908	LCCWRB	*								
909	LCCWRZ	*								
883	LCCWS	*								
884	LCCWSB	1648								
885	LCCWSZ	*								
911	LCCWT	*								
912	LCCWTB	*								
913	LCCWTZ	*								
835	LCIBA	1567								
836	LCIBAB	*								
837	LCIBAZ	*								
823	LCIBF	*								
824	LCIBFB	*								
825	LCIBFZ	*								
831	LCIBL	1571								
832	LCIBLB	*								
833	LCIBLZ	*								
839	LCIC1	1576								
840	LCIC1B	*								
841	LCIC1Z	*								
843	LCIC2	*								
844	LCIC2B	*								
845	LCIC2Z	*								
863	LCIKE	1592								
864	LCIKEB	*								
865	LCIKEZ	*								
931	LCITB	*								
932	LCITBB	*								
933	LCITBZ	*								
353	LCJP	354	355	356	363	364	365	366	367	370
879	LCLCB	1641	1668							
880	LCLCBB	*								
881	LCLCBZ	*								
927	LCLDB	*								
928	LCLDBB	*								
929	LCLDBZ	*								
915	LCLTB	*								
916	LCLTBB	*								
917	LCLTBZ	*								
875	LCOBA	1547								
876	LCOBAB	*								
877	LCOBAZ	*								
867	LCOBF	*								
868	LCOBFB	*								
869	LCOBFZ	*								
871	LCOBL	1549								
872	LCOBLB	*								
873	LCOBLZ	*								
935	LCOKE	1552	1555							
936	LCOKEB	*								
937	LCOKEZ	*								
847	LCRCC	*								
848	LCRCCB	1580								
849	LCRCCZ	*								
827	LCSMB	1609								
828	LCSMBB	1609								

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 829   LCSMBZ   1609
1538   LCW      1547  1549  1552  1555  1567  1571  1576  1592  1594
                1597  1601  1609  1641  1668
 503   LHW      *
1049   LSABN    1581
1050   LSABNB   1582
1051   LSABNZ   *
1057   LSASC    1607
1058   LSASCB   1607
1059   LSASCZ   1607
1001   LSASY    1584  1652
1002   LSASYB   1585  1652
1003   LSASYZ   1652
1069   LSBSC    1600
1070   LSBSCB   1600
1071   LSBSCZ   1600
1013   LSCC1    1575
1014   LSCC1B   *
1015   LSCC1Z   *
1017   LSCC2    *
1018   LSCC2B   *
1019   LSCC2Z   *
1061   LSCHN    1596  1611
1062   LSCHNB   1596  1611
1063   LSCHNZ   1596  1611
1053   LSCRC    1593
1054   LSCRCB   1593
1055   LSCRCZ   1593
 985   LSCTA    1616
 986   LSCTAB   *
 987   LSCTAZ   *
1570   LSD      1575  1578  1581  1584  1593  1596  1600  1603  1607
                1611  1616  1646  1650  1652
1041   LSDSF    1646
1042   LSDSFB   1647
1043   LSDSFZ   *
 989   LSDST    *
 990   LSDSTB   *
 991   LSDSTZ   *
1025   LSEPF    1650
1026   LSEPFB   1650
1027   LSEPFZ   1650
1009   LSLSP    *
1010   LSLSPB   *
1011   LSLSPZ   *
 993   LSMOD    *
 994   LSMODB   *
 995   LSMODZ   *
1073   LSNTO    *
1074   LSNTOB   *
1075   LSNTOZ   *
 997   LSPAR    *
 998   LSPARB   *
 999   LSPARZ   *
1037   LSPLA    1603
1038   LSPLAB   1603
1039   LSPLAZ   1603
 953   LSRCA    *
 954   LSRCAB   *
 955   LSRCAZ   *
 957   LSREM    *
 958   LSREMB   *
 959   LSREMZ   *
1033   LSRRS    *
1034   LSRRSB   *
1035   LSRRSZ   *
 949   LSRRT    *
 950   LSRRTB   *
 951   LSRRTZ   *
 961   LSRTO    *
 962   LSRTOB   *
 963   LSRTOZ   *
 965   LSSRS    *
 966   LSSRSB   *
 967   LSSRSZ   *
 981   LSSWS    *
 982   LSSWSB   *
 983   LSSWSZ   *
1021   LSTER    1578
1022   LSTERB   1579
1023   LSTERZ   *
 945   LSTHD    *
 946   LSTHDB   *
 947   LSTHDZ   *
 969   LSWCA    *
 970   LSWCAB   *
 971   LSWCAZ   *
 973   LSWEM    *
 974   LSWEMB   *
 975   LSWEMZ   *
1029   LSWRS    *
1030   LSWRSB   *
1031   LSWRSZ   *
 977   LSWTO    *
 978   LSWTOB   *
```

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 979   LSWTOZ   *
1005   LSXMM    *
1006   LSXMMB   *
1007   LSXMMZ   *
1045   LSYNC    *
1046   LSYNCB   *
1047   LSYNCZ   *
1077   LSYNR    *
1078   LSYNRB   *
1079   LSYNRZ   *
1065   LSYNT    *
1066   LSYNTB   *
1067   LSYNTZ   *
 591   MAP      1517  1526  1630  1633
 588   MP        589   590   592   593   594   595
 592   MPMR0    *
 593   MPMR1    *
 594   MPMR2    *
 595   MPMR3    *
 468   MT        469   470   471   472   473   474   475   476   477
                 478   479   480   481   482   483   484   485   486
                 487   488   489   490   491   492   493   494   495
                 496   497   498   499   500   501   502   503   504
                 505   506   507   508   509   510   511   512   513
                 514   515   516   517   518   519   520   521   522
                 523   524
 502   NEG      *
 513   NINE      141   165
 505   ONE       157   181  1659
   0   P          27    29    30    36    39    41    45    49    53
              57    61    65    69    73    77    81    84    85
              85    86    87    91    92    92    93    94    97
              99   100   101   101   102   103   104   105   106
             107   107   109   109   112   114   115   115   116
             118   118   119   120   121   123   124   125   125
             129   129   130   131   132   132   133   136   137
             138   140   142   144   146   148   150   152   154
             156   160   161   162   164   166   168   170   172
             174   176   178   180   192   194   194   195   196
             196   199   201   201   202   203   203   206   208
             208   209
1329   PCBSL    *
1330   PCBSLB   *
1331   PCBSLZ   *
1317   PCCLN    *
1318   PCCLNB   *
1319   PCCLNZ   *
1341   PCCTP    *
1342   PCCTPB   *
1343   PCCTPZ   *
1321   PCECH    *
1322   PCECHB   *
1323   PCECHZ   *
1313   PCLLN    *
1314   PCLLNB   *
1315   PCLLNZ   *
1349   PCNTD    *
1350   PCNTDB   *
1351   PCNTDZ   *
1337   PCPCH    *
1338   PCPCHB   *
1339   PCPCHZ   *
1333   PCSWL    *
1334   PCSWLB   *
1335   PCSWLZ   *
1345   PCTYP    *
1346   PCTYPB   *
1347   PCTYPZ   *
1325   PCXMM    *
1326   PCXMMB   *
1327   PCXMMZ   *
 575   PIM1     *
 576   PIM2     *
 577   PIM3     *
 578   PIM4     *
 579   PIM5     *
 580   PIM6     *
 581   PIM7     *
 582   PIM8     *
 699   PD31     *
1287   PSABN    *
1288   PSABNB   *
1289   PSABNZ   *
1239   PSAFY    *
1240   PSASYB   *
1241   PSASYZ   *
 670   PSBADT   *
 566   PSBEG    *
1299   PSBSC    *
1300   PSBSCB   *
1301   PSBSCZ   *
1251   PSCC1    *
1252   PSCC1B   *
1253   PSCC1Z   *
1255   PSCC2    *
```

```
1256   PSCC2B   *
1257   PSCC2Z   *
1291   PSCRC    *
1292   PSCRCB   *
1293   PSCRCZ   *
1271   PSDEF    *
1272   PSDEFB   *
1273   PSDEFZ   *
1279   PSDSF    *
1280   PSDSFB   *
1281   PSDSFZ   *
1267   PSDWN    *
1268   PSDWNB   *
1269   PSDWNZ   *
 672   PSEND    *
1263   PSEPF    *
1264   PSEPFB   *
1265   PSEPFZ   *
1247   PSLSP    *
1248   PSLSPB   *
1249   PSLSPZ   *
1231   PSMOD    *
1232   PSMODB   *
1233   PSMODZ   *
 671   PSNSEC   *
1235   PSPAR    *
1236   PSPARB   *
1237   PSPARZ   *
1275   PSPLA    *
1276   PSPLAB   *
1277   PSPLAZ   *
 667   PSPROT   *
1259   PSTER    *
1260   PSTERB   *
1261   PSTERZ   *
1243   PSXMM    *
1244   PSXMMB   *
1245   PSXMMZ   *
1283   PSYNC    *
1284   PSYNCB   *
1285   PSYNCZ   *
1303   PSYNR    *
1304   PSYNRB   *
1305   PSYNRZ   *
1295   PSYNT    *
1296   PSYNTB   *
1297   PSYNTZ   *
  32   PUSH     *
 228   PUTQ     *
 532   RA0      *
 533   RA1      *
 651   RADNR    *
 534   RB0      1579  1582  1585  1647
 535   RB1      *
 649   RFCB     1513
 504   RHW      *
 645   RQPWD    1536  1658
1335   RQST     1536  1658
 642   RSTPR    *
 650   RTIDB    1492
1510   SC00     1496  1499  1502  1505
1529   SC01     1527
1566   SC02     1540
1581   SC03     1579
1584   SC03A    1582
1587   SC04     1585
1611   SC04A    1608
1637   SC05     1562  1612
1649   SC06     1647
1661   SC07     1653
1662   SC08     1651  1660
  96   SETA     *
 111   SETB     *
 191   SETF     *
 511   SEVEN     145   169
 510   SIX       147   171
  26   SPACE    *
1478   STACK    1480  1481  1483  1488  1491  1495  1506  1509  1512
                1519  1522  1533  1534  1537  1546  1548  1554  1566
                1568  1569  1620  1624  1627  1628  1634  1656  1665
 135   SUBAT    *
 280   TBATSK   *
 287   TBCPTH   *
 274   TBENTY   *
 268   TBEVNT   *
 282   TBIO     *
 277   TBISA    *
 278   TBISB    *
 280   TBISP    *
 281   TBISRS   *
 284   TBIST    *
 276   TBISX    *
 242   TBKEY    1493
 283   TBKN1    *
 284   TBKN2    *
```

```
285   TBKN3    *
293   TBMIMG   *
291   TBNUCL   *
267   TBPL     *
269   TBRSA    *
270   TBRSB    *
289   TBRSE    *
272   TBRSP    *
273   TBRSTS   *
271   TBRSX    *
322   TBS0     *
321   TBS1     *
309   TBS10    *
308   TBS11    *
306   TBS12    *
305   TBS13    *
304   TBS14    *
302   TBS15    *
320   TBS2     *
318   TBS3     *
317   TBS4     *
316   TBS5     *
314   TBS6     *
313   TBS7     *
312   TBS8     *
310   TBS9     *
290   TBSIZ    *
266   TBST     *
286   TBTLC    *
 276  TBTMIN   *
 275  TBTMS    *
 265  TBTRD    *
1115  TCBSL    *
1116  TCBSLB   *
1117  TCBSLZ   *
1099  TCCLN    *
1100  TCCLNB   *
1101  TCCLNZ   *
1127  TCCON    *
1128  TCCONB   *
1129  TCCONZ   *
1095  TCCTA    *
1096  TCCTAB   *
1097  TCCTAZ   *
1151  TCCTP    *
1152  TCCTPB   *
1153  TCCTPZ   *
1187  TCDCC    *
1188  TCDCCB   *
1189  TCDCCZ   *
1195  TCDTO    *
1196  TCDTOB   *
1197  TCDTOZ   *
1123  TCECH    *
1124  TCECHB   *
1125  TCECHZ   *
1199  TCID1    *
1200  TCID1B   *
1201  TCID1Z   *
1203  TCID2    *
1204  TCID2B   *
1205  TCID2Z   *
1171  TCLDF    *
1172  TCLDFB   *
1173  TCLDFZ   *
1103  TCLLN    *
1104  TCLLNB   *
1105  TCLLNZ   *
1143  TCNOD    *
1144  TCNODB   *
1145  TCNODZ   *
1139  TCNTD    *
1140  TCNTDB   *
1141  TCNTDZ   *
1107  TCPCH    *
1108  TCPCHB   *
1109  TCPCHZ   *
1135  TCRBC    *
1136  TCRBCB   *
1137  TCRBCZ   *
1191  TCRBF    *
1192  TCRBFB   *
1193  TCRBFZ   *
1175  TCRCA    *
1176  TCRCAB   *
1177  TCRCAZ   *
1155  TCRMD    *
1156  TCRMDB   *
1157  TCRMDZ   *
1091  TCRQH    *
1092  TCRQHB   *
1093  TCRQHZ   *
1163  TCRRS    *
1164  TCRRSB   *
1165  TCRRSZ   *
```

```
1179   TCSTD     *
1180   TCSTDB    *
1181   TCSTDZ    *
1111   TCSWL     *
1112   TCSWLB    *
1113   TCSWLZ    *
1087   TCTCD     *
1088   TCTCDB    *
1089   TCTCDZ    *
1147   TCTYP     *
1148   TCTYPB    *
1149   TCTYPZ    *
1131   TCWBC     *
1132   TCWBCB    *
1133   TCWBCZ    *
1183   TCWCA     *
1184   TCWCAB    *
1185   TCWCAZ    *
1159   TCWMD     *
1160   TCWMDB    *
1161   TCWMDZ    *
1167   TCWRS     *
1168   TCWRSB    *
1169   TCWRSZ    *
1119   TCXMM     *
1120   TCXMMB    *
1121   TCXMMZ    *
 514   TEN         139    163
 205   TESTF     *
 507   THREE       153    177
1375   TIDSP     *
1376   TIDSPB    *
1377   TIDSPZ    *
1367   TIDWN     *
1368   TIDWNB    *
1369   TIDWNZ    *
1391   TINET     *
1392   TINETB    *
1393   TINETZ    *
1379   TIODN     *
1380   TIODNB    *
1381   TIODNZ    *
1387   TIODP     *
1388   TIODPB    *
1389   TIODPZ    *
1383   TIOSC     *
1384   TIOSCB    *
1385   TIOSCZ    *
1371   TISEC     *
1372   TISECB    *
1373   TISECZ    *
1359   TITU1     *
1360   TITU1B    *
1361   TITU1Z    *
1363   TITU2     *
1364   TITU2B    *
1365   TITU2Z    *
1221   TPFPA     *
1222   TPFPAB    *
1223   TPFPAZ    *
1213   TPRPA     *
1214   TPRPAB    *
1215   TPRPAZ    *
1217   TPWPA     *
1218   TPWPAB    *
1219   TPWPAZ    *
 506   TWO         155    179
 440   V$1MIN    *
 458   V$BFC     *
 366   V$BGLB    *
 363   V$BIC1    *
 392   V$BTB     *
 400   V$BTBM    *
 457   V$BVM     *
 406   V$CAM     *
 420   V$CKB     *
 448   V$CKIT    *
 387   V$CKPT    *
 380   V$CPL     *
 367   V$CRDM    *
 410   V$CRDR    *
 421   V$CRM     *
 381   V$CRS     *
 426   V$CTAD    *
 379   V$CTL     *
 418   V$CTMS    *
 364   V$DATE    *
 422   V$DSTB    *
 435   V$ERFG    *
 416   V$FGLB    *
 385   V$FLRS    *
 417   V$FREE    *
 401   V$GFCB    *
 397   V$IM      *
 447   V$IOA     *
```

```
449   V$JCB    *
356   V$JCFG   *
370   V$JCTM   *
354   V$JNAM   *
436   V$JOP    *
407   V$KEY    *
355   V$LCNT   *
390   V$LEP    *
423   V$LIT    *
395   V$LLIP   *
396   V$LPI    *
386   V$LRLK   *
389   V$LSAL   *
414   V$LUNT   *
394   V$LUP    *
437   V$LUT1   *
438   V$LUT2   *
439   V$LUT3   *
399   V$MAP    *
402   V$MIMG   *
398   V$MPM    *
428   V$NCTR   *
393   V$NPAG   *
452   V$OCB    *
415   V$OPCF   *
388   V$OPCL   *
424   V$PGT    *
429   V$PIMN   *
365   V$PLCT   *
384   V$PTVB   *
427   V$SCTL   *
419   V$SCV    *
434   V$SLFG   *
403   V$ST0    1526  1633
404   V$ST1    *
405   V$ST2    1517
406   V$ST3    1630
382   V$TB     *
411   V$TBGT   *
459   V$TFC    *
391   V$TJCP   *
413   V$TMN    *
412   V$TMS    *
383   V$UTB    *
  1   VORTEX   1472  1474  1489  1516  1525  1550  1557  1588  1629
               1632
  0   VTPOP    1669  1670
  0   VTPUSH     33    35
  0   VTSTAK   1476  1477  1486  1587  1604  1618  1637  1654  1663
697   X         232   254  1478  1487  1570  1617  1625  1631  1638
               1639  1655  1657  1664
469   ZERO     *
```

```
                EJEC                                                                    03 00001
*   THIS IS A COPYRIGHTED PROGRAM, COPYRIGHT 1973 BY VARIAN DATA MACHINES               03 00002
*                                                                                       03 00003
*       V.D.M.    PART NO.      92L1105-056B                                          03 00004
*                                                                                       03 00005
*                               RELEASED      3-1-74                                  03 00006
*                                                                                       03 00007
*                                                                                       03 00008
*               CTMX0A                                                                  03 00009
*                                                                                       03 00010
*                                                                                       03 00011
        TITLE   CTMX0A                                                                  03 00012
*****************************************************************************         03 00013
                EJEC                                                                    ********
*   THIS IS A COPYRIGHTED PROGRAM, COPYRIGHT 1973 BY VARIAN DATA MACHINES               ********
*                                                                                       ********
*       V.D.M.    PART NO.      92L1105-005B                                          ********
*                                                                                       ********
*                               RELEASED      3-1-74                                  ********
*                                                                                       ********
*                                                                                       ********
*               VTABL                                                                   ********
*                                                                                       ********
*                                                                                       ********
*                                                                                       ********
SPACE   MAC                                                                             ********
        IFT     P(1),,0                                                                 ********
        SPAC    P(1)-1                                                                  ********
        EMAC                                                                            ********
PUSH    MAC                                                                             ********
        EXT     VTPUSH                                                                  ********
        DINTS                                                                           ********
        JMPM    VTPUSH                                                                  ********
        DATA    P(1)                                                                    ********
        EMAC                                                                            ********
ANAM    MAC                                                                             ********
        IFF     P(0),,3                                                                 ********
        GOTO    B&0                                                                     ********
        IFT     P(1),,10                                                                ********
        GOTO    B&10                                                                    ********
        ANA     BM1777                                                                  ********
B&10    CONT                                                                            ********
        IFT     P(1),,9                                                                 ********
        GOTO    B&9                                                                     ********
        ANA     BM777                                                                   ********
B&9     CONT                                                                            ********
        IFT     P(1),,8                                                                 ********
        GOTO    B&8                                                                     ********
        ANA     BM377                                                                   ********
B&8     CONT                                                                            ********
        IFT     P(1),,7                                                                 ********
        GOTO    B&7                                                                     ********
        ANA     BM177                                                                   ********
B&7     CONT                                                                            ********
        IFT     P(1),,6                                                                 ********
        GOTO    B&6                                                                     ********
        ANA     BM77                                                                    ********
B&6     CONT                                                                            ********
        IFT     P(1),,5                                                                 ********
        GOTO    B&5                                                                     ********
        ANA     BM37                                                                    ********
B&5     CONT                                                                            ********
        IFT     P(1),,4                                                                 ********
        GOTO    B&4                                                                     ********
        ANA     BM17                                                                    ********
B&4     CONT                                                                            ********
        IFT     P(1),,3                                                                 ********
        GOTO    B&3                                                                     ********
        ANA     BM7                                                                     ********
B&3     CONT                                                                            ********
        IFT     P(1),,2                                                                 ********
        GOTO    B&2                                                                     ********
        ANA     BM3                                                                     ********
B&2     CONT                                                                            ********
        IFT     P(1),,1                                                                 ********
        GOTO    B&1                                                                     ********
        ANA     BM1                                                                     ********
B&1     CONT                                                                            ********
        IFT     P(1),11,11                                                              ********
        GOTO    B&                                                                      ********
B&0     CONT                                                                            ********
        IFT     P(1),,0                                                                 ********
        ANAM    P(1)-1,P(2)*2+1,0                                                       ********
        IFF     P(1),,0                                                                 ********
        ANAI    P(2)                                                                    ********
B&      CONT                                                                            ********
        EMAC                                                                            ********
ANAN    MAC                                                                             ********
        IFT     P(1),,0                                                                 ********
        ANAN    P(1)-1,P(2)*2+1                                                         ********
        IFF     P(1),,0                                                                 ********
        ANAI    -P(2)-1                                                                 ********
        EMAC                                                                            ********
```

```
 96 SETA    MAC
 97         IFF       P(4),,16
 98         GOTO      B
 99         IFT       P(3),,0
100         LRLA      P(3)
101         ERA       P(2),P(1)
102         IFT       P(3),,0
103         LSRA      P(3)
104         ANAM      P(4)
105         IFT       P(3),,0
106         LRLA      P(3)
107         ERA       P(2),P(1)
108 B       CONT
109         STA       P(2),P(1)
110         EMAC
111 SETB    MAC
112         IFF       P(1),,2
113         **ERROR**
114         IFF       P(4),,16
115         STB       P(2),P(1)
116         IFF       P(4),,16
117         GOTO      B
118         LDA       P(2),P(1)
119         IFT       P(3),,0
120         LRLA      16-P(3)
121         ANAN      P(4),0
122         MERGE     031
123         IFT       P(3),,0
124         LRLA      P(3)
125         STA       P(2),P(1)
126 B       CONT
127         EMAC
128 FETCHA  MAC
129         LDA       P(2),P(1)
130         IFT       P(3),,0
131         LSRA      P(3)
132         IFT       0,P(3)+P(4),15
133         ANAM      P(4),0
134         EMAC
135 SUBAT   MAC
136         IFF       P(1),11,11
137         SUBI      P(1)
138         IFT       9,P(1),10
139         SUB       TEN
140         IFT       8,P(1),9
141         SUB       NINE
142         IFT       7,P(1),8
143         SUB       EIGHT
144         IFT       6,P(1),7
145         SUB       SEVEN
146         IFT       5,P(1),6
147         SUB       SIX
148         IFT       4,P(1),5
149         SUB       FIVE
150         IFT       3,P(1),4
151         SUB       FOUR
152         IFT       2,P(1),3
153         SUB       THREE
154         IFT       1,P(1),2
155         SUB       TWO
156         IFT       0,P(1),1
157         SUB       ONE
158         EMAC
159 ADAT    MAC                 ADD ATTRIBUTE DESCRIBED BY P(1), AND P(2)
160         IFF       P(1),11,11
161         ADDI      P(1)
162         IFT       9,P(1),10
163         ADD       TEN
164         IFT       8,P(1),9
165         ADD       NINE
166         IFT       7,P(1),8
167         ADD       EIGHT
168         IFT       6,P(1),7
169         ADD       SEVEN
170         IFT       5,P(1),6
171         ADD       SIX
172         IFT       4,P(1),5
173         ADD       FIVE
174         IFT       3,P(1),4
175         ADD       FOUR
176         IFT       2,P(1),3
177         ADD       THREE
178         IFT       1,P(1),2
179         ADD       TWO
180         IFT       0,P(1),1
181         ADD       ONE
182         EMAC
183 EINTS   MAC
184         EXC       ENAPIM
185         EXC       ENACLK
186         EMAC
187 DINTS   MAC
188         EXC       DISPIM
189         EXC       DISCLK
190         EMAC
```

```
                191 SETF    MAC
                192         IFT       P(4),,1          ERROR IF NOT ONE BIT FLAG
                193         **ERROR**
                194         LDA       P(2),P(1)
                195         ORA       BS0+P(3)
                196         STA       P(2),P(1)
                197         EMAC
                198 CLEARF  MAC
                199         IFT       P(4),,1
                200         **ERROR**                  ERROR IF NOT ONE BIT FLAG
                201         LDA       P(2),P(1)
                202         ANA       BR0+P(3)
                203         STA       P(2),P(1)
                204         EMAC
                205 TESTF   MAC                        TEST FLAG MACRO
                206         IFT       P(4),,1
                207         **ERROR**
                208         LDA       P(2),P(1)        PICK UP WORD CONTAINING FLAG
                209         ANA       BS0+P(3)
                210         EMAC
                211         EJEC
                212 **                PUTQ ADDS AN ITEM TO A FIFO TYPE QUEUE.
                213 *                 THE QUEUE HEADER CONTAINS TWO ENTRIES:
                214 *                 1. A FRONT POINTER
                215 *                 2. A REAR POINTER
                216 *
                217 *                 ENTRY:CONDITIONS:
                218 *                                    X REG CONTAINS ITEM ADDRESS
                219 *                                    B REG CONTAINS QUEUE HEADER ADDR.
                220 *
                221 *                 CALL: PUTQ
                222 *
                223 *                 RETURN CONDITIONS:
                224 *                                    A REG CONTAINS ZERO
                225 *                                    X REG NO CHANGE
                226 *                                    B REG NO CHANGE
                227 *
                228 PUTQ    MAC
                229         STXE*     1,B
                230         STX       1,B
                231         TZA
                232         STA       0,X
                233         EMAC
                234 *
                235 *
                236 **      TITLE     GETQ
                237 *                 GETQ USES THE SAME QUEUE BUILT BY PUTQ.
                238 *                 IT REMOVES THE FIRST ITEM FROM THE QUEUE.
                239 *
                240 *                 ENTRY CONDITIONS:
                241 *                                    B REG CONTAINS QUEUE HEADER ADDRESS
                242 *
                243 *                 CALL: GETQ
                244 *
                245 *                 EXIT CONDITIONS:
                246 *                                    A REG DESTROYED
                247 *                                    B REG NOT CHANGED
                248 *                                    X REG IS ZERO IF QUEUE WAS EMPTY ELSE
                249 *                                          ADDRESS OF ITEM REMOVED
                250 *
                251 GETQ    MAC
                252         LDX       0,B
                253         JXZ       *+7
                254         LDA       0,X
                255         STA       0,B
                256         JANZ      *+3
                257         STB       1,B
                258         EMAC
                259 *
                260 ********************************************************************************
                261 ****      TIDB SETUP                                                          ***
                262 *                                                                             ***
                263 ********************************************************************************
000000  A       265 TBTRD   EQU       0          TASK THREAD
000001  A       266 TBST    EQU       1          TASK STATUS
000002  A       267 TBPL    EQU       2          STATUS CONT. (BITS15-6),PRIORITY LEVEL(5-0)
000003  A       268 TBEVNT  EQU       3          INTERRUPT EVENT
000004  A       269 TBRSA   EQU       4          A          REENTRANT AND SUSPEND STACK
000005  A       270 TBRSB   EQU       5          B          REENTRANT AND SUSPEND STACK
000006  A       271 TBRSX   EQU       6          X          REENTRANT AND SUSPEND STACK
000007  A       272 TBRSP   EQU       7          OF/P       REENTRANT AND SUSPEND STACK
000010  A       273 TBRSTS  EQU       8          TEMP. STG. REENTRANT AND SUSPEND STACK
000011  A       274 TBENTY  EQU       9          TASK ENTRY LOCATION
000012  A       275 TBTMS   EQU       10         TIME COUNTER - CLOCK RESOLUTION IN 5MS INCR
000013  A       276 TBTMIN  EQU       11         TIME COUNTER - CLOCK MINUTE INCREMENTS
000014  A       277 TBISA   EQU       12         A          INTERRUPT STACK
000015  A       278 TBISB   EQU       13         B          INTERRUPT STACK
000016  A       279 TBISX   EQU       14         X          INTERRUPT STACK
000017  A       280 TBISP   EQU       15         OF/P       INTERRUPT STACK
000020  A       281 TBISRS  EQU       16         REENT. STACK  INTERRUPT STACK
000021  A       282 TBID    EQU       17         BLK ALLOC(15-10),I/O THR(9-5),I/O ACT(4-0)
000022  A       283 TBKN1   EQU       18         TASK NAME
000023  A       284 TBKN2   EQU       19         TASK NAME
000024  A       285 TBKN3   EQU       20         TASK NAME
000025  A       286 TBTLC   EQU       21         1ST LOC. OF TASK ALLOCATABLE
```

```
000026 A   287  TBCPTH  EQU      22          BACKGROUND TASK QUEUE                                  *********
000027 A   288  TBATSK  EQU      23          TIDB LOC. OF ACTIVATING TASK                           *********
000030 A   289  TBRSE   EQU      24          TASK ERROR CODE                                        *********
000031 A   290  TBSIZ   SET      25          TASK SIZE                                        V2    *********
000032 A   291  TBNUCL  SET      26          TASK NUCLEUS FLAGS                               V2    *********
000032 A   292  TBKEY   SET      26          TASK MAP KEY                                     V2    *********
000033 A   293  TBMIMG  SET      27          TASK MAP IMAGE ADDRESS                           V2    *********
000034 A   294  TBIST   SET      28          TASK INTERRUPT STATUS                            V2    *********
           295          EJEC                                                                       *********
           296  **********************************************************************************************
           297  *                                                                                   *********
           298  ****     TASK STATUS DESCRIPTION  (BIT SET WORD 1)                                ***********
           299  *                                                                                   *********
           300  **********************************************************************************************
000017 A   302  TBS15   EQU      15          INTERRUPT SUSPEND                                      *********
000016 A   304  TBS14   EQU      14          TASK SUSPEND                                           *********
000015 A   305  TBS13   EQU      13          TASK ABORT                                             *********
000014 A   306  TBS12   EQU      12          TASK EXIT                                              *********
000013 A   308  TBS11   EQU      11          TIDB CORE RESIDENT                                     *********
000012 A   309  TBS10   EQU      10          CORE RESIDENT TASK                                     *********
000011 A   310  TBS9    EQU      9           FOREGROUND TASK                                        *********
000010 A   312  TBS8    EQU      8           TASK PROTECTED                                         *********
000007 A   313  TBS7    EQU      7           TASK SCHEDULED BY TIME DELAY                           *********
000006 A   314  TBS6    EQU      6           TIME DELAY ACTIVE                                      *********
000005 A   316  TBS5    EQU      5           TASK WAITING TO BE LOADED                              *********
000004 A   317  TBS4    EQU      4           TASK ERROR                                             *********
000003 A   318  TBS3    EQU      3           TASK INTERRUPT EXPECTED                                *********
000002 A   320  TBS2    EQU      2           OVERLAY TASK                                           *********
000001 A   321  TBS1    EQU      1           UPON TERMINATION ACTIVATE TASK SCHED TASK              *********
000000 A   322  TBS0    EQU      0           TASK SEARCH-ALLOCATED-LOADED                           *********
           323          EJEC                                                                       *********
           324  **********************************************************************************************
           325  *                                                                                   *********
           326  ***      TASK STATUS DESCRIPTION  (BIT SET WORD 2)                                ***********
           327  *                                                                                   *********
           328  **********************************************************************************************
           330  *        BIT 15   -  TASK OPENED                                                    *********
           332  *        BIT 14   -  UNUSED                                                         *********
           333  *        BIT 13   -  OVERLAY LOAD                                                   *********
           334  *        BIT 12   -  TASK WAITING FOR BACKGROUND TASK I/O TO COMPLETE               *********
           335  *                    TASK LOCKED-OUT UNTIL BG I/O COMPLETE OR BIT 11                *********
           336  *                    IS SET (ALLOCATABLE SPACE AVAILABLE)                           *********
           338  *        BIT 11   -  DEFINES THAT ALLOCATABLE SPACE IS AVAILABLE, TRY               *********
           339  *                    ALLOCATING TASK AGAIN.  OVERRIDES BIT 12 SET OR                *********
           340  *                    BIT 5 IN STATUS WORD.                                          *********
           341  *        BIT 10   -  BACKGROUND TASK BEING WRITTEN ON CHECKPOINT FILE.              *********
           342  *        BIT  9   -  TASK WAITING FOR A TIDB TO COME AVAILABLE FOR                  *********
           343  *                    SCHEDULING.                                                    *********
           345  *        BIT  8 TO 6  - UNUSED                                                      *********
           346          EJEC                                                                       *********
           347  **********************************************************************************************
           348  *                                                                                   *********
           349  ***      JOB PROCESSOR LOW CORE EQUATES                                           ***********
           350  *                                                                                   *********
           351  **********************************************************************************************
000050 A   353  LCJP    EQU      050                                                                *********
000050 A   354  V$JNAM  EQU      LCJP        JCP NAME                                               *********
000054 A   355  V$LCNT  EQU      LCJP+4      LINE COUNT                                             *********
000055 A   356  V$JCFG  EQU      LCJP+5      JCP FLAGS                                              *********
           357  *                            BIT 2-0    = LOAD AND GO FLAGS                        *********
           358  *                            BIT  3     = DUMP FLAG  1=DUMP, 0=NO DUMP             *********
           359  *                            BIT  4     = DUMP FLAG IF LOAD AND GO                 *********
           360  *                            BIT 9-5    = UNUSED                                   *********
           361  *                            BIT 15-10  = BG EXTRA CORE BLOCKS TO ALLOC            *********
000056 A   363  V$BIC1  EQU      LCJP+6      BIC INTERRUPT ADDRESS TABLE  (10 WORDS)                *********
000070 A   364  V$DATE  EQU      LCJP+16     JCP DATE RECORD                                        *********
000074 A   365  V$PLCT  EQU      LCJP+20     PERMIT LINE COUNT                                      *********
000075 A   366  V$BGLB  EQU      LCJP+21     JCP LIB KEY AND LU NO. (BACKGROUND LIB)                *********
000076 A   367  V$CRDM  EQU      LCJP+22     CARD KEYPUNCH I/O, 0=026, 1=029                        *********
           368  *                            BIT 0 = SYSTEM NOMINAL KEYPUNCH MODE.                  *********
           369  *                            BIT 9 = CURRENT JOB KEYPUNCH MODE.                     *********
000077 A   370  V$JCTM  EQU      LCJP+23     TEMP. STORAGE FOR TIMER BLOCK                          *********
           371          EJEC                                                                       *********
           372  **********************************************************************************************
           373  *                                                                                   *********
           374  ****     LOW CORE DESCRIPTION                                                     ***********
           375  *                                                                                   *********
           376  **********************************************************************************************
000300 A   378  LC      EQU      0300                                                               *********
000300 A   379  V$CTL   EQU      LC          CURRENT TASK TIDB LOCATION                             *********
000301 A   380  V$CPL   EQU      LC+1        CURRENT PRIORITY LEVEL                                 *********
000302 A   381  V$CRS   EQU      LC+2        CURRENT REENTRANT STACK POINTER                        *********
000303 A   382  V$TB    EQU      LC+3        POINTER TO HIGHEST PRIORITY TIDB                       *********
000304 A   383  V$UTB   EQU      LC+4        POINTER TO UNUSED TASK TIDB                            *********
000305 A   384  V$PTVB  EQU      LC+5        POINTER TO NEXT ENTRY IN REENTRANT STACK               *********
000306 A   385  V$FLRS  EQU      LC+6        FIRST LOC. OF REENTRANT STACK                          *********
000307 A   386  V$LRSK  EQU      LC+7        LAST LOC. OF REENTRANT STACK+1                         *********
000310 A   387  V$CKPT  EQU      LC+8        CHECKPOINT FLAG  1=ON, 0=OFF                           *********
000311 A   388  V$OPCL  EQU      LC+9        LOC. OF TIDB FOR OPCOM TASK                            *********
000312 A   389  V$LSAL  EQU      LC+10       LOC. OF TIDB FOR SYSTEM SAL TASK                       *********
000313 A   390  V$LER   EQU      LC+11       LOC. OF TIDB FOR SYSTEM ERROR TASK                     *********
000314 A   391  V$TJCP  EQU      LC+12       LOC. OF TIDB FOR JOB CONTROL PROCESSOR TASK            *********
000315 A   392  V$BTB   EQU      LC+13       LOC. OF CURRENT ACTIVE BACKGROUND TSK TIDB             *********
000316 A   393  V$NPAG  SET      LC+14       NO OF AVAILABLE PAGES IN V$PAGE                        *********
000316 A   394  V$LUP   EQU      LC+14       LOC. OF 1ST UNPROTECTED WORD                           *********
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000317 A  395 V$LLUP  EQU     LC+15    LOC. OF LAST UNPROTECTED WORD                          ********
000317 A  396 V$LPP   SET     LC+15    LAST TESTED WORD IN V$PAGE                        V2   ********
000320 A  397 V$IM    EQU     LC+16    INTERRUPT MASK  (8 WORDS)                             ********
000330 A  398 V$MPM   EQU     LC+24    MEMORY PROTECT MASK  (4 WORDS)                         ********
000330 A  399 V$MAP   SET     LC+24    MAP KEY AVAILABILITY MASK                         V2   ********
000331 A  400 V$BTBM  SET     LC+25    BOTTOM PAGE NUMBER OF VORTEX II                   V2   ********
000332 A  401 V$GFCB  SET     LC+26    GLOBAL FCB PAGE NUMBER                            V2   ********
000333 A  402 V$MIMG  SET     LC+27    MAP 0 IMAGE ADDRESS                               V2   ********
000334 A  403 V$ST0   SET     LC+28    MAP CONTROL WORDS                                 V2   ********
000335 A  404 V$ST1   SET     LC+29                                                      V2   ********
000336 A  405 V$ST2   SET     LC+30                                                      V2   ********
000337 A  406 V$ST3   SET     LC+31                                                      V2   ********
000340 A  407 V$KEY   SET     LC+32    CURRENT MAP KEY                                   V2   ********
000334 A  408 V$CAM   EQU     LC+28    CORE ALLOCATION MASK  (4 WORDS)                        ********
          409 *       EQU     LC+32    UNUSED                                                 ********
000341 A  410 V$CRDR  EQU     LC+33    CORE RESIDENT DIRECTORY LOCATION                       ********
000342 A  411 V$TBGT  EQU     LC+34    TOP OF THREAD OF BG TSK WAITING TO BE ALLOC            ********
000343 A  412 V$TMS   EQU     LC+35    TIME OF DAY IN 5 MILLISECOND INCREMENTS                ********
000344 A  413 V$TMN   EQU     LC+36    TIME OF DAY IN MINUTE INCREMENTS                       ********
000345 A  414 V$LUNT  EQU     LC+37    ADDR. OF LOGICAL UNIT NAME TABLE                       ********
000346 A  415 V$OPCF  EQU     LC+38    OPCOM LOCKOUT FLAG                                     ********
000347 A  416 V$FGLB  EQU     LC+39    KEY AND LU NO. FOR FOREGROUND LIB                      ********
000350 A  417 V$FREE  EQU     LC+40    FREE RUNNING COUNTER INCR. IN MICROSECONDS             ********
000351 A  418 V$CTMS  EQU     LC+41    CLOCK RESOLUTION IN 5 MILLISECOND INCR.                ********
000352 A  419 V$SCV   EQU     LC+42    CLOCK SELECTED COUNT VALUE (1 TO 4095)                 ********
000353 A  420 V$CKB   EQU     LC+43    BASIC CLOCK INTERRUPT RATE IN MICROSECONDS             ********
000354 A  421 V$CRM   EQU     LC+44    CLOCK RESOLUTION INCR. FOR 1 MINUTE.                   ********
000355 A  422 V$DSTB  EQU     LC+45    BASE ADDR. FOR DST BLOCK                               ********
000356 A  423 V$LIT   EQU     LC+46    LAST LOCATION OF BACKGROUND LITERAL TABLE              ********
000357 A  424 V$PGT   SET     LC+47    ADDRESS OF V$PAGE                                 V2   ********
          425 *       EQU     LC+47    UNUSED                                                 ********
000360 A  426 V$CTAD  EQU     LC+48    BASE ADDR. FOR CONTROLLER ADDR. TABLE                  ********
000361 A  427 V$SCTL  EQU     LC+49    CURRENT CONTROLLER IN SCAN                             ********
000362 A  428 V$NCTR  EQU     LC+50    NO. OF CONTROLLERS                                     ********
000363 A  429 V$RIMN  EQU     LC+51    EXTERNAL DEVICE ADDRESS TABLE FOR PIMS                 ********
          430 *                        (8 WORDS DEFINED IN PIM NO ORDER)                      ********
          431 *  JMP V$IOST EQU LC+59  STAT ENTRY                                        V2   ********
          432 *       EQU     LC+59    UNUSED                                                 ********
          433 *       EQU     LC+60    UNUSED                                                 ********
000375 A  434 V$SLFG  EQU     LC+61    SAL TASK BUSY FLAG      1=BUSY, 0=NOT BUSY             ********
000376 A  435 V$ERFG  EQU     LC+62    ERROR TASK BUSY FLAG    1=BUSY, 0=NOT BUSY             ********
000377 A  436 V$JOP   EQU     LC+63    JCP OPERATING FLAG                                     ********
000400 A  437 V$LUT1  EQU     LC+64    START LUN ADDR FOR JCP/OPCOM ASSIGNABLE                ********
000401 A  438 V$LUT2  EQU     LC+65    START LUN ADDR FOR UNASSIGNABLE                        ********
000402 A  439 V$LUT3  EQU     LC+66    START LUN ADDR FOR OPCOM ASSIGNABLE                    ********
000403 A  440 V$1MIN  EQU     LC+67    32767 - (60000/(5*V$CTMS)) + 1                         ********
          441 *  JMP V$IOC EQU LC+52   IOC ENTRY                                         V2   ********
          442 *  JMP V$EXEC EQU LC+53  V$EXEC ENTRY                                      V2   ********
          443 *       EQU     LC+68    UNUSED                                                 ********
          444 *       EQU     LC+69    UNUSED                                                 ********
          445 *       EQU     LC+70    UNUSED                                                 ********
          446 *       EQU     LC+71    UNUSED                                                 ********
000410 A  447 V$IOA   EQU     LC+72    I/O ALGORITHM                                          ********
000411 A  448 V$CKIT  EQU     LC+73    CLOCK INT. IN PIM BEFORE LOCKOUT FLAG.                 ********
000412 A  449 V$JCB   EQU     LC+74    ALL SYSTEM BACKGROUND PROGRAMS AND JCP USE             ********
          450 *                        THIS SYSTEM BUFFER TO READ DIRECTIVES AND              ********
          451 *                        SOURCE RECORDS IN.                                     ********
000413 A  452 V$OCB   EQU     LC+75    OPCOM WILL READ OPERATOR KEY-IN REQUESTS               ********
          453 *                        IN THIS BUFFER.  IF JCP IS SET NOT ACTIVE              ********
          454 *                        AND A 1 DIRECTIVE IS INPUTED, OPCOM                    ********
          455 *                        WILL MOVE THE DIRECTIVE TO V$JCB BEFORE                ********
          456 *                        SCHEDULING JCP.                                        ********
000414 A  457 V$BVN   EQU     LC+76    BOTTOM OF VORTEX NUCLEUS                               ********
000415 A  458 V$BFC   EQU     LC+77    TOP OF FG RES. AREA/BOTTOM OF FG BLK COMM.             ********
000416 A  459 V$TFC   EQU     LC+78    TOP OF FG BLK COMMON/TOP OF VORTEX CORE.               ********
          460 *       EQU     LC+79    UNUSED                                                 ********
          461         EJEC                                                                    ********
          462 ************************************************************************@*********
          463 *                                                                              ********
          464 ****    MASK TABLE DESCRIPTION                                                  ********
          465 *                                                                              ********
          466 ************************************************************************************
000420 A  468 MT      SET     0420                                                           ********
000420 A  469 ZERO    EQU     MT       ZERO WORD                                             ********
000421 A  470 BS0     EQU     MT+1     BIT MASK CONTENTS 000001                              ********
000422 A  471 BS1     EQU     MT+2                       000002                              ********
000423 A  472 BS2     EQU     MT+3                       000004                              ********
000424 A  473 BS3     EQU     MT+4                       000010                              ********
000425 A  474 BS4     EQU     MT+5                       000020                              ********
000426 A  475 BS5     EQU     MT+6                       000040                              ********
000427 A  476 BS6     EQU     MT+7                       000100                              ********
000430 A  477 BS7     EQU     MT+8                       000200                              ********
000431 A  478 BS8     EQU     MT+9                       000400                              ********
000432 A  479 BS9     EQU     MT+10                      001000                              ********
000433 A  480 BS10    EQU     MT+11                      002000                              ********
000434 A  481 BS11    EQU     MT+12                      004000                              ********
000435 A  482 BS12    EQU     MT+13                      010000                              ********
000436 A  483 BS13    EQU     MT+14                      020000                              ********
000437 A  484 BS14    EQU     MT+15                      040000                              ********
000440 A  485 BS15    EQU     MT+16                     0100000                              ********
000441 A  486 BR0     EQU     MT+17    BIT MASK CONTENTS  0177776                            ********
000442 A  487 BR1     EQU     MT+18                       0177775                            ********
000443 A  488 BR2     EQU     MT+19                       0177773                            ********
000444 A  489 BR3     EQU     MT+20                       0177767                            ********
000445 A  490 BR4     EQU     MT+21                       0177757                            ********
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000446 A   491 BR5     EQU     MT+22
000447 A   492 BR6     EQU     MT+23
000450 A   493 BR7     EQU     MT+24
000451 A   494 BR8     EQU     MT+25
000452 A   495 BR9     EQU     MT+26
000453 A   496 BR10    EQU     MT+27
000454 A   497 BR11    EQU     MT+28
000455 A   498 BR12    EQU     MT+29
000456 A   499 BR13    EQU     MT+30
000457 A   500 BR14    EQU     MT+31
000460 A   501 BR15    EQU     MT+32
000461 A   502 NEG     EQU     MT+33
000462 A   503 LHW     EQU     MT+34
000463 A   504 RHW     EQU     MT+35
000421 A   505 ONE     EQU     MT+1
000422 A   506 TWO     EQU     MT+2
000464 A   507 THREE   EQU     MT+36
000423 A   508 FOUR    EQU     MT+3
000465 A   509 FIVE    EQU     MT+37
000466 A   510 SIX     EQU     MT+38
000467 A   511 SEVEN   EQU     MT+39
000424 A   512 EIGHT   EQU     MT+4
000470 A   513 NINE    EQU     MT+40
000471 A   514 TEN     EQU     MT+41
000421 A   515 BM1     EQU     MT+1
000464 A   516 BM3     EQU     MT+36
000467 A   517 BM7     EQU     MT+39
000472 A   518 BM17    EQU     MT+42
000473 A   519 BM37    EQU     MT+43
000474 A   520 BM77    EQU     MT+44
000475 A   521 BM177   EQU     MT+45
000433 A   522 BM377   EQU     MT+35
000476 A   523 BM777   EQU     MT+46
000477 A   524 BM1777  EQU     MT+47
           525         EJEC
           526 ********************************************************************************
           527 *
           528 ****     BIT TEST BIT DESIGNATION
           529 *
           530 ********************************************************************************
000040 A   532 RA0     EQU     040             BT JUMPS WHEN A REGISTER IS 0
000000 A   533 RA1     EQU     000             BT JUMPS WHEN A REGISTER IS 1
000060 A   534 RB0     EQU     060             BT JUMPS WHEN B REGISTER IS 0
000020 A   535 RB1     EQU     020             BT JUMPS WHEN B REGISTER IS 1
           537 ********************************************************************************
           538 *
           539 **       THE BIT CHECKED
           540 *
           541 ********************************************************************************
000000 A   543 B0      EQU     0
000001 A   544 B1      EQU     1
000002 A   545 B2      EQU     2
000003 A   546 B3      EQU     3
000004 A   547 B4      EQU     4
000005 A   548 B5      EQU     5
000006 A   549 B6      EQU     6
000007 A   550 B7      EQU     7
000010 A   551 B8      EQU     8
000011 A   552 B9      EQU     9
000012 A   553 B10     EQU     10
000013 A   554 B11     EQU     11
000014 A   555 B12     EQU     12
000015 A   556 B13     EQU     13
000016 A   557 B14     EQU     14
000017 A   558 B15     EQU     15
           559         EJEC
           560 ********************************************************************************
           561 *
           562 ****     DEVICE AND FUNCTION CODES
           563 *
           564 ********************************************************************************
           566 ****     REAL TIME CLOCK
000047 A   567 CLOCK   EQU     047             DEVICE NUMBER 047
           568 *
000747 A   569 DISCLK  EQU     0700+CLOCK      DISABLE CLOCK
000147 A   570 ENACLK  EQU     0100+CLOCK      ENABLE CLOCK
           572 *
           573 ****     PIM
000044 A   574 APIM    EQU     044             ALL PIMS DEVICE NUMBER
000040 A   575 PIM1    EQU     040
000041 A   576 PIM2    EQU     041
000042 A   577 PIM3    EQU     042
000043 A   578 PIM4    EQU     043
000040 A   579 PIM5    EQU     040
000040 A   580 PIM6    EQU     040
000040 A   581 PIM7    EQU     040
000040 A   582 PIM8    EQU     040
           583 *
000444 A   584 DISPIM  EQU     0400+APIM
000244 A   585 ENAPIM  EQU     0200+APIM
           587 ****     MEMORY PROTECT
000045 A   588 MP      EQU     045             DEVICE ADDRESS 045
000745 A   589 DISMP   EQU     0700+MP         DISABLE MEMORY PROTECT
000645 A   590 ENAMP   EQU     0600+MP         ENABLE MEMORY PROTECT
000046 A   591 MAP     SET     046             MEMORY MAP DEVICE ADDRESS  V2

                                0177737
                                0177677
                                0177577
                                0177377
                                0176777
                                0175777
                                0173777
                                0167777
                                0157777
                                0137777
                                0077777
SET ALL BITS
LEFT HALF WORD MASK 0177400
RIGHT HALF WORD MASK    0377
CONTAINS NUMBER  1
CONTAINS NUMBER  2
CONTAINS NUMBER  3
CONTAINS NUMBER  4
CONTAINS NUMBER  5
CONTAINS NUMBER  6
CONTAINS NUMBER  7
CONTAINS NUMBER  8
CONTAINS NUMBER  9
CONTAINS NUMBER 10
BIT MASK WORD 00001
BIT MASK WORD  00003
BIT MASK WORD  00007
BIT MASK WORD  00017
BIT MASK WORD  00037
BIT MASK WORD  00077
BIT MASK WORD  00177
BIT MASK WORD  00377
BIT MASK WORD  00777
BIT MASK WORD  01777
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000045 A   592 MPMR0   EQU     0000+MP       SELECT MASK REGISTER 0
000145 A   593 MPMR1   EQU     0100+MP       SELECT MASK REGISTER 1
000245 A   594 MPMR2   EQU     0200+MP       SELECT MASK REGISTER 2
000345 A   595 MPMR3   EQU     0300+MP       SELECT MASK REGISTER 3
           596         EJEC
           597 *  DEVICE SPECIFICATION TABLE, DST
           598 *    DST FOR EACH DEVICE,AND EACH RMD PARTITION
           599 *
000000 A   600 DSDVDN EQU     0             DEVICE DOWN INDICATOR,1=DOWN  BIT 15
000000 A   601 DSDASS EQU     0             DEVICE ASSGNMT INDICATOR,BITS 14-13
           602 *                              00 ASSIGNABLE BY JCP AND OPCOM
           603 *                              01 ASSIGNABLE BY OPCOM ONLY
           604 *                              10 UNASSIGNABLE
           605 *                              00 UNUSED
000000 A   606 DSUNAM EQU     0             DEV NAME,CH.3 B12-10,CH.4 B9-4
           607 *                            ADD 0260 TO GET ASCII CHARACTER
000000 A   608 DSNORQ EQU     0             DEVICE REQUEST COUNTER, BITS 3-0.
000001 A   609 DSNAME EQU     1             DEVICE NAME,2 ASCII CHAR.
000002 A   610 DSREWD EQU     2             DEVICE REWIND INDICATOR,1=REWIND,BIT 15
000002 A   611 DSUNTN EQU     2             DEVICE UNIT NO. ,BITS 14-13
000002 A   612 DSLCKO EQU     2             PARTITION LOCKOUT FLAG BIT 12
000002 A   613 DSOPCM EQU     2             OPCOM DEVICE INDICATOR,BIT 11
000002 A   614 DSPSTI EQU     2             INDEX TO PST,BITS 10-6.
000002 A   615 DSCTAD EQU     2             INDEX TO COTAD,CONTRLLR ADDR TABLE,B5-0.
           616 *
           617 *
           618         EJEC
           619 *  CONTROLLER ADDRESS TABLE,COTAD
           620 *    1 ENTRY FOR EACH CTBL.
           621 *
000000 A   622 COTAD1 EQU     0             BASE ADDRESS FOR CONTROLLER TABLE
           623 *
           624         EJEC
           625 *   BIC FLAG TABLE
           626 *    1 ENTRY FOR EACH BIC ,EACH CONTROLLER TABLE,CTBL, WHICH
           627 *      UTILIZES A BIC CONTAINS AN ADDRESS,CTBICB, POINTING
           628 *      TO ITS BIC ENTRY.
           629 *
000000 A   630 BICNUM EQU     0             BIC NUMBER FOR THIS ENTRY.
           631 *                            POSITIVE VALUE MEANS BIC IS AVAILABLE
           632 *                            NEGATIVE VALUE,COMPLEMENTED BIC NO.,
           633 *                              MEANS BIC IS CURRENTLY IN USE.
           634 *
           635 *
           636 *
           637 *
           638         EJEC
           639 *   REQUEST BLOCK , RQBLK
           640 *     1 FOR EACH IOC REQUEST. RQBLKS ARE QUEUED ACCORDING TO TASK
           641 *       PRIORITY TO CTBL.
000000 A   642 RSTPR  EQU     0             BIT 15 = I/O COMPLETED INDICATOR.
           643 *                            BITS14-5,DRIVER STATUS
           644 *                            BITS 4-0, REQUESTING TASK PRIORITY.
000001 A   645 RQPWD  EQU     1             BIT 15 = WAIT OPTION
           646 *                            BITS14-12, MODE,USED BY DRIVERS
           647 *                            BITS 11-8,OP-CODE
           648 *                            BITS 7-0, LOGICAL UNIT NO.
000002 A   649 RFCB   EQU     2             FCB OR DCB ADDR.
000003 A   650 RTIDB  EQU     3             REQUESTING TASK TIDB ADDR.
000004 A   651 RADNR  EQU     4             ADDR.OF NEXT RQBLK IN QUEUE.,0= NONE.
           652 *
           653         EJEC
           654 *
           655 *     PARTITION SPECIFICATION TABLE, PST
           656 *
           657 *       A PST EXISTS FOR EACH ROTATING MEMORY DEVICE. EACH PARTITION
           658 *       ON THE RMD HAS A FIVE WORD ENTRY IN THE PST. THE PARTITION'S
           659 *       PST ENTRY NUMBER IS SPECIFIED IN THE DEVICE SPECIFICATION
           660 *       TABLE,DST,THUS LINKING THE PST WITH A LOGICAL UNIT NUMBER.
           661 *       THE EFFECTIVE ADDR FOR AN ENTRY IS FOUND AS FOLLOWS:
           662 *
           663 *           PST ADDR. FOR ENTRY = (ENTRY NO. * 4 ) + 1 + PST BASE ADDR
           664 *
           665 *
000000 A   666 PSBEG  EQU     0               PARTITION BEGINNING ADDR.
000001 A   667 PSPROT EQU     1               BIT 15, PROTECT FLAG
           668 *                              BITS 14-8, UNUSED
           669 *                              BITS 7-0, PROTECT KEY
000002 A   670 PSBADT EQU     2               ADDR.OF BAD TRACK TABLE
000003 A   671 PSNSEC EQU     3               ADDR.OF NEXT AVAILABLE SECTOR IN PARTITN
000004 A   672 PSEND  EQU     4               PARTITION END ADDR + 1. ALSO BEGINNING
           673 *                                ADDR FOR NEXT PARTITION.
           674 *
           675 *
           676         EJEC
           677 *
           678 *     DATA CONTROL BLOCK, DCB
           679 *
           680 *       A DCB IS REFERENCED BY EACH I/O REQUEST BLOCK,RQBLK, SPECIFY-
           681 *        ING A NON-ROTATING MEMORY DEVICE. DCB CONTAINS ADDITION INFOR-
           682 *        MATION NECESSARY TO COMPLETE THE I/O OPERATION.
           683 *       DCB IS A FIXED LENGTH TABLE OF 3 WORDS EACH. THE FCB IS THE DCB
           684 *       EQUIVALENT FOR RMD.
           685 *
           686 *
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000000 A  687 DCRECL  EQU      0                RECORD LENGTH
000001 A  688 DCBUFF  EQU      1                USER BUFFER AREA
000002 A  689 DCCNT   EQU      2                NO. OF COUNTS,USE FOR FUNC REQUESTS.
          690 **          CHR      3             15-0  CHR ADDRESS
000003 A  691 DCCHR   EQU      3
000000 A  692 DCCHRB  EQU      0
000020 A  693 DCCHRZ  EQU      16
          694 *
          695 *
          696 *
000001 A  697 X       EQU      1
000002 A  698 B       EQU      2
000200 A  699 POST    EQU      0200             POST INDEXING FLAG
          700         EJEC
          701 ********************************************************************************
          702 **       TABLE NAME IS CTB     (CONTROLLER TABLE          )                   ********
          703 ********************************************************************************
          704 **     FIELD              WORD              BIT              DESCRIPTION      **********
          705 **                                                                           **********
          706 **          ACT              0              15-15   CONTROLLER ACTIVE FLAG    **********
000000 A  707 CTACT   EQU      0                                                           *********
000017 A  708 CTACTB  EQU      15                                                          *********
000001 A  709 CTACTZ  EQU      1                                                           *********
          710 **          IDB              0               0-14   DRIVER TIDB ADDR          **********
000000 A  711 CTIDB   EQU      0                                                           *********
000000 A  712 CTIDBB  EQU      0                                                           *********
000017 A  713 CTIDBZ  EQU      15                                                          *********
          714 **          ADN              1               0-15   CTBL THREAD               **********
000001 A  715 CTADN   EQU      1                                                           *********
000000 A  716 CTADNB  EQU      0                                                           *********
000020 A  717 CTADNZ  EQU      16                                                          *********
          718 **          OPM              2               0-15   OP CODE MASK              **********
000002 A  719 CTOPM   EQU      2                                                           *********
000000 A  720 CTOPMB  EQU      0                                                           *********
000020 A  721 CTOPMZ  EQU      16                                                          *********
          722 **          DST              3               0-15   ADDRESS OF DST            **********
000003 A  723 CTDST   EQU      3                                                           *********
000000 A  724 CTDSTB  EQU      0                                                           *********
000020 A  725 CTDSTZ  EQU      16                                                          *********
          726 **          RQB              4               0-15   CURRENT REQUEST BLOCK     **********
000004 A  727 CTRQB   EQU      4                                                           *********
000000 A  728 CTRQBB  EQU      0                                                           *********
000020 A  729 CTRQBZ  EQU      16                                                          *********
          730 **          RTR              5               8-15   RETRY CONSTANT            **********
000005 A  731 CTRTR   EQU      5                                                           *********
000010 A  732 CTRTRB  EQU      8                                                           *********
000010 A  733 CTRTRZ  EQU      8                                                           *********
          734 **          RCN              5               0- 7   V$ERR RETRY COUNTER      **********
000005 A  735 CTRCN   EQU      5                                                           *********
000000 A  736 CTRCNB  EQU      0                                                           *********
000010 A  737 CTRCNZ  EQU      8                                                           *********
          738 **          DVA              6               0-15   DEVICE ADDRESS            **********
000006 A  739 CTDVA   EQU      6                                                           *********
000000 A  740 CTDVAB  EQU      0                                                           *********
000020 A  741 CTDVAZ  EQU      16                                                          *********
          742 **          IOA              7               0-15   I/O ALGORITHM VALUE       **********
000007 A  743 CTIOA   EQU      7                                                           *********
000000 A  744 CTIOAB  EQU      0                                                           *********
000020 A  745 CTIOAZ  EQU      16                                                          *********
          746 **          STA              8               0-15   DRIVER STATUS             **********
000010 A  747 CTSTA   EQU      8                                                           *********
000000 A  748 CTSTAB  EQU      0                                                           *********
000020 A  749 CTSTAZ  EQU      16                                                          *********
          750 **          BIC              9               0-15   BIC FLAG TABLE ADDRESS    **********
000011 A  751 CTBIC   EQU      9                                                           *********
000000 A  752 CTBICB  EQU      0                                                           *********
000020 A  753 CTBICZ  EQU      16                                                          *********
          754 **          FCB              10              0-15   FCB/DCB ADDRESS           **********
000012 A  755 CTFCB   EQU      10                                                          *********
000000 A  756 CTFCBB  EQU      0                                                           *********
000020 A  757 CTFCBZ  EQU      16                                                          *********
          758 **          WDS              11              0-15   NO. WDS. TRANSFERRED      **********
000013 A  759 CTWDS   EQU      11                                                          *********
000000 A  760 CTWDSB  EQU      0                                                           *********
000020 A  761 CTWDSZ  EQU      16                                                          *********
          762 **          FRC              12              8-15   FREQUENCY CONSTANT        **********
000014 A  763 CTFRC   EQU      12                                                          *********
000010 A  764 CTFRCB  EQU      8                                                           *********
000010 A  765 CTFRCZ  EQU      8                                                           *********
          766 **          FRE              12              0- 7   FREQUENCY COUNT          **********
000014 A  767 CTFRE   EQU      12                                                          *********
000000 A  768 CTFREB  EQU      0                                                           *********
000010 A  769 CTFREZ  EQU      8                                                           *********
          770         EJEC                                                              *********
          771 ********************************************************************************
          772 **       TABLE NAME IS DMT     (DEVICE MANAGEMENT TABLE   )                   ********
          773 ********************************************************************************
          774 **     FIELD              WORD              BIT              DESCRIPTION      **********
          775 **                                                                           **********
          776 **          TPA              13              0-15   TRANSMIT PRIMITIVE ADDRESS**********
000015 A  777 DMTPA   EQU      13                                                          *********
000000 A  778 DMTPAB  EQU      0                                                           *********
000020 A  779 DMTPAZ  EQU      16                                                          *********
          780 **          RPA              14              0-15   RECEIVE PRIMITIVE ADDRESS **********
000016 A  781 DMRPA   EQU      14                                                          *********
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```
000000 A   782 DMRPAB EQU     0
000020 A   783 DMRPAZ EQU     16
           784 **          FPA          15          0-15   FUNCTION PRIMITIVE ADDRESS
000017 A   785 DMFPA  EQU     15
000000 A   786 DMFPAB EQU     0
000020 A   787 DMFPAZ EQU     16
           788 **          STA          16          0-15   STATUS PRIMITIVE ADDRESS
000020 A   789 DMSTA  EQU     16
000000 A   790 DMSTAB EQU     0
000020 A   791 DMSTAZ EQU     16
           792 **          LCA          17          0-15   LCW BASE ADDRESS
000021 A   793 DMLCA  EQU     17
000000 A   794 DMLCAB EQU     0
000020 A   795 DMLCAZ EQU     16
           796 **          LTA          18          0-15   LOGICALLINE TABLE BASE ADD
000022 A   797 DMLTA  EQU     18
000000 A   798 DMLTAB EQU     0
000020 A   799 DMLTAZ EQU     16
           800 **          PTA          19          0-15   PHYSICAL LINE TABLE BASE A
000023 A   801 DMPTA  EQU     19
000000 A   802 DMPTAB EQU     0
000020 A   803 DMPTAZ EQU     16
           804 **          CWA          20          0-15   CONTROL WORD ADDR
000024 A   805 DMCWA  EQU     20
000000 A   806 DMCWAB EQU     0
000020 A   807 DMCWAZ EQU     16
           808 **          SWA          21          0-15   STATUS WORD ADDR
000025 A   809 DMSWA  EQU     21
000000 A   810 DMSWAB EQU     0
000020 A   811 DMSWAZ EQU     16
           812 **          BCA          22          0-15   BUFFER CHAIN TABLE ADDRESS
000026 A   813 DMBCA  EQU     22
000000 A   814 DMBCAB EQU     0
000020 A   815 DMBCAZ EQU     16
           816             EJEC
           817 ********************************************************************************
           818 **       TABLE NAME IS LCW     (LINE CONTROL WORDS          )
           819 ********************************************************************************
           820 **     FIELD              WORD              BIT              DESCRIPTION
           821 **
           822 **          IBF            0              15-15   INPUT BLOCK FLAG
000000 A   823 LCIBF  EQU     0
000017 A   824 LCIBFB EQU     15
000001 A   825 LCIBFZ EQU     1
           826 **          SMB            0              14-14   SET 2**7 ON
000000 A   827 LCSMB  EQU     0
000016 A   828 LCSMBB EQU     14
000001 A   829 LCSMBZ EQU     1
           830 **          IBL            0               0-11   INPUT BUFFER LENG.
000000 A   831 LCIBL  EQU     0
000000 A   832 LCIBLB EQU     0
000014 A   833 LCIBLZ EQU     12
           834 **          IBA            1               0-14   INPUT BUFFER ADDR
000001 A   835 LCIBA  EQU     1
000000 A   836 LCIBAB EQU     0
000017 A   837 LCIBAZ EQU     15
           838 **          IC1            2               8-15   INPUT CONTROL CH 1
000002 A   839 LCIC1  EQU     2
000010 A   840 LCIC1B EQU     8
000010 A   841 LCIC1Z EQU     8
           842 **          IC2            2               0- 7   INPUT CONTROL CH 2
000002 A   843 LCIC2  EQU     2
000000 A   844 LCIC2B EQU     0
000010 A   845 LCIC2Z EQU     8
           846 **          RCC            3              15-15   TERM ON CONT CHAR
000003 A   847 LCRCC  EQU     3
000017 A   848 LCRCCB EQU     15
000001 A   849 LCRCCZ EQU     1
           850 **          CRC            3              12-14   NO BYTES IN CRC
000003 A   851 LCCRC  EQU     3
000014 A   852 LCCRCB EQU     12
000003 A   853 LCCRCZ EQU     3
           854 **          ABN            3              11-11   TERM ON ABN COND
000003 A   855 LCABN  EQU     3
000013 A   856 LCABNB EQU     11
000001 A   857 LCABNZ EQU     1
           858 **          ASY            3              10-10   SYNC/ASYNC FLAG
000003 A   859 LCASY  EQU     3
000012 A   860 LCASYB EQU     10
000001 A   861 LCASYZ EQU     1
           862 **          IKE            3               0- 3   INPUT MAP BITS
000003 A   863 LCIKE  EQU     3
000000 A   864 LCIKEB EQU     0
000004 A   865 LCIKEZ EQU     4
           866 **          OBF            4              15-15   OUTPUT BLOCK FLAG
000004 A   867 LCOBF  EQU     4
000017 A   868 LCOBFB EQU     15
000001 A   869 LCOBFZ EQU     1
           870 **          OBL            4               0-11   OUTPUT BUFFER LENG.
000004 A   871 LCOBL  EQU     4
000000 A   872 LCOBLB EQU     0
000014 A   873 LCOBLZ EQU     12
           874 **          OBA            5               0-14   OUTPUT BUFFER ADDR
000005 A   875 LCOBA  EQU     5
000000 A   876 LCOBAB EQU     0
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```
000017 A  877 LCDBAZ EQU      15
          878 **          LCB          6          0-15   LINE CONTROL BYTE
000006 A  879 LCLCB  EQU      6
000000 A  880 LCLCBB EQU      0
000020 A  881 LCLCBZ EQU      16
          882 **          CWS          6         15-15   PCW S BIT
000006 A  883 LCCWS  EQU      6
000017 A  884 LCCWSB EQU      15
000001 A  885 LCCWSZ EQU      1
          886 **          CWI          6         14-14   PCW I BIT
000006 A  887 LCCWI  EQU      6
000016 A  888 LCCWIB EQU      14
000001 A  889 LCCWIZ EQU      1
          890 **          CWC          6         13-13   PCW C BIT
000006 A  891 LCCWC  EQU      6
000015 A  892 LCCWCB EQU      13
000001 A  893 LCCWCZ EQU      1
          894 **          CWB          6         12-12   PCW AR/B BIT
000006 A  895 LCCWB  EQU      6
000014 A  896 LCCWBB EQU      12
000001 A  897 LCCWBZ EQU      1
          898 **          CWD          6         11-11   PCW DTR BIT
000006 A  899 LCCWD  EQU      6
000013 A  900 LCCWDB EQU      11
000001 A  901 LCCWDZ EQU      1
          902 **          CWP          6         10-10   PCW E/P BIT
000006 A  903 LCCWP  EQU      6
000012 A  904 LCCWPB EQU      10
000001 A  905 LCCWPZ EQU      1
          906 **          CWR          6          9- 9   PCW R BIT
000006 A  907 LCCWR  EQU      6
000011 A  908 LCCWRB EQU      9
000001 A  909 LCCWRZ EQU      1
          910 **          CWT          6          8- 8   PCW T BIT
000006 A  911 LCCWT  EQU      6
000010 A  912 LCCWTB EQU      8
000001 A  913 LCCWTZ EQU      1
          914 **          LTB          7                 15-15   OUTPUT BREAKS FLAG
000007 A  915 LCLTB  EQU      7
000017 A  916 LCLTBB EQU      15
000001 A  917 LCLTBZ EQU      1
          918 **          CHN      7                     14-14   CHAIN FLAG
000007 A  919 LCCHN  EQU      7
000016 A  920 LCCHNB EQU      14
000001 A  921 LCCHNZ EQU      1
          922 **          BSC      7                     13-13   BSC FLAG
000007 A  923 LCBSC  EQU      7
000015 A  924 LCBSCB EQU      13
000001 A  925 LCBSCZ EQU      1
          926 **          LDB          7                 12-12 LAST DATA BLOCK  FLAG ,CHN
000007 A  927 LCLDB  EQU      7
000014 A  928 LCLDBB EQU      12
000001 A  929 LCLDBZ EQU      1
          930 **          ITB      7                    11-11   ITB WAS SENT FLAG                BSC
000007 A  931 LCITB  EQU      7
000013 A  932 LCITBB EQU      11
000001 A  933 LCITBZ EQU      1
          934 **          OKE          7                 0- 3   OUTPUT MAP BITS
000007 A  935 LCOKE  EQU      7
000000 A  936 LCOKEB EQU      0
000004 A  937 LCOKEZ EQU      4
          938          SPEC
          939 ********************************************************************************
          940 **        TABLE NAME IS LSD      (LINE SERVICE DESCRIPTOR    )
          941 ********************************************************************************
          942 **     FIELD              WORD              BIT              DESCRIPTION
          943 **
          944 **          THD          0          0-15   LSD THREAD CELL
000000 A  945 LSTHD  EQU      0
000000 A  946 LSTHDB EQU      0
000020 A  947 LSTHDZ EQU      16
          948 **          RRT          1          0-15   REQUEST THREAD
000001 A  949 LSRRT  EQU      1
000000 A  950 LSRRTB EQU      0
000020 A  951 LSRRTZ EQU      16
          952 **          RCA          2          0-15   READ COMPLETION ADDRESS
000002 A  953 LSRCA  EQU      2
000000 A  954 LSRCAB EQU      0
000020 A  955 LSRCAZ EQU      16
          956 **          REM          3          0-15   READ EVENT MASK
000003 A  957 LSREM  EQU      3
000000 A  958 LSREMB EQU      0
000020 A  959 LSREMZ EQU      16
          960 **          RTO          4          0-15   READ TIME OUT
000004 A  961 LSRTO  EQU      4
000000 A  962 LSRTOB EQU      0
000020 A  963 LSRTOZ EQU      16
          964 **          SRS          5          0-15   STATIC RECEIVE STATUS
000005 A  965 LSSRS  EQU      5
000000 A  966 LSSRSB EQU      0
000020 A  967 LSSRSZ EQU      16
          968 **          WCA          6          0-15   WRITE COMPLETION ADDRESS
000006 A  969 LSWCA  EQU      6
000000 A  970 LSWCAB EQU      0
000020 A  971 LSWCAZ EQU      16
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                  972 **          WEM          7
000007 A          973 LSWEM   EQU      7
000000 A          974 LSWEMB  EQU      0
000020 A          975 LSWEMZ  EQU      16
                  976 **          WTO          8
000010 A          977 LSWTO   EQU      8
000000 A          978 LSWTOB  EQU      0
000020 A          979 LSWTOZ  EQU      16
                  980 **          SWS          9
000011 A          981 LSSWS   EQU      9
000000 A          982 LSSWSB  EQU      0
000020 A          983 LSSWSZ  EQU      16
                  984 **          CTA          10
000012 A          985 LSCTA   EQU      10
000000 A          986 LSCTAB  EQU      0
000020 A          987 LSCTAZ  EQU      16
                  988 **          DST          11
000013 A          989 LSDST   EQU      11
000000 A          990 LSDSTB  EQU      0
000020 A          991 LSDSTZ  EQU      16
                  992 **          MOD          12
000014 A          993 LSMOD   EQU      12
000016 A          994 LSMODB  EQU      14
000002 A          995 LSMODZ  EQU      2
                  996 **          PAR          12
000014 A          997 LSPAR   EQU      12
000014 A          998 LSPARB  EQU      12
000002 A          999 LSPARZ  EQU      2
                 1000 **          ASY          12
000014 A         1001 LSASY   EQU      12
000013 A         1002 LSASYB  EQU      11
000001 A         1003 LSASYZ  EQU      1
                 1004 **          XMM          12
000014 A         1005 LSXMM   EQU      12
000011 A         1006 LSXMMB  EQU      9
000002 A         1007 LSXMMZ  EQU      2
                 1008 **          LSP          12
000014 A         1009 LSLSP   EQU      12
000000 A         1010 LSLSPB  EQU      0
000011 A         1011 LSLSPZ  EQU      9
                 1012 **          CC1          13
000015 A         1013 LSCC1   EQU      13
000010 A         1014 LSCC1B  EQU      8
000010 A         1015 LSCC1Z  EQU      8
                 1016 **          CC2          13
000015 A         1017 LSCC2   EQU      13
000000 A         1018 LSCC2B  EQU      0
000010 A         1019 LSCC2Z  EQU      8
                 1020 **          TER          14
000016 A         1021 LSTER   EQU      14
000017 A         1022 LSTERB  EQU      15
000001 A         1023 LSTERZ  EQU      1
                 1024 **          EPF          14
000016 A         1025 LSEPF   EQU      14
000016 A         1026 LSEPFB  EQU      14
000001 A         1027 LSEPFZ  EQU      1
                 1028 **          WRS          14
000016 A         1029 LSWRS   EQU      14
000013 A         1030 LSWRSB  EQU      11
000003 A         1031 LSWRSZ  EQU      3
                 1032 **          RRS          14
000016 A         1033 LSRRS   EQU      14
000010 A         1034 LSRRSB  EQU      8
000003 A         1035 LSRRSZ  EQU      3
                 1036 **          PLA          14
000016 A         1037 LSPLA   EQU      14
000000 A         1038 LSPLAB  EQU      0
000010 A         1039 LSPLAZ  EQU      8
                 1040 **          DSF          15
000017 A         1041 LSDSF   EQU      15
000017 A         1042 LSDSFB  EQU      15
000001 A         1043 LSDSFZ  EQU      1
                 1044 **          YNC          15
000017 A         1045 LSYNC   EQU      15
000016 A         1046 LSYNCB  EQU      14
000001 A         1047 LSYNCZ  EQU      1
                 1048 **          ABN          15
000017 A         1049 LSABN   EQU      15
000015 A         1050 LSABNB  EQU      13
000001 A         1051 LSABNZ  EQU      1
                 1052 **          CRC          15
000017 A         1053 LSCRC   EQU      15
000012 A         1054 LSCRCB  EQU      10
000003 A         1055 LSCRCZ  EQU      3
                 1056 **          ASC          15
000017 A         1057 LSASC   EQU      15
000011 A         1058 LSASCB  EQU      9
000001 A         1059 LSASCZ  EQU      1
                 1060 **          CHN          15
000017 A         1061 LSCHN   EQU      15
000010 A         1062 LSCHNB  EQU      8
000001 A         1063 LSCHNZ  EQU      1
                 1064 **          YNT          15
000017 A         1065 LSYNT   EQU      15
000000 A         1066 LSYNTB  EQU      0
```

0-15	WRITE EVENT MASK	**********
0-15	WRITE TIMEOUT	**********
0-15	STATIC WRITE STATUS	**********
0-15	CCM CONTROLLER TABLE ADDRE	**********
0-15	DYNAMIC STATUS	**********
14-15	MODEM TYPE	**********
12-13	PARITY MODE	**********
11-11	ASYNC/SYNC FLAG	**********
9-10	TRANSMISSION MODE	**********
0- 8	LINE SPEED	**********
8-15	CONTROL CHARACTER 1	**********
0- 7	CONTROL CHARACTER 2	**********
15-15	TERMINATE ON CONTROL CHARA	**********
14-14	E/P FLAG	**********
11-13	WRITE REQUEST STATUS	**********
8-10	READ REQUEST STATUS	**********
0- 7	PHYSICAL LINE ADDRESS	**********
15-15	D/S FLAG	**********
14-14	INPUT SYNC CONTROL	**********
13-13	STOP RQST ON ABN STATUS	**********
10-12	NO. OF CRC BYTES	**********
9- 9	7-BIT ASCII MODE FLAG	**********
8-8	SET IF CHAIN MODE	**********
0- 7	XMIT SYNC CHAR	**********

```
000010 A 1067 LSYNTZ EQU     8
         1068 **        BSC      16          14-14  SET IF BSC ADAPTER
000020 A 1069 LSBSC   EQU     16
000016 A 1070 LSBSCB  EQU     14
000001 A 1071 LSBSCZ  EQU     1
         1072 **        NTO      16          8-13   NO. TERM. OPEN ON LINE
000020 A 1073 LSNTO   EQU     16
000010 A 1074 LSNTOB  EQU     8
000006 A 1075 LSNTOZ  EQU     6
         1076 **        YNR      16          0- 7   RECV SYNC CHAR
000020 A 1077 LSYNR   EQU     16
000000 A 1078 LSYNRB  EQU     0
000010 A 1079 LSYNRZ  EQU     8
         1080          EJEC
         1081 ********************************************************************************
         1082 **       TABLE NAME IS TCD     (TERMINAL CNTRLR DESCRIPTOR)
         1083 ********************************************************************************
         1084 **     FIELD          WORD          BIT          DESCRIPTION
         1085 **
         1086 **        TCD      0           0-15   ADRS OF NEXT TCD IN QUEUE
000000 A 1087 TCTCD   EQU     0
000000 A 1088 TCTCDB  EQU     0
000020 A 1089 TCTCDZ  EQU     16
         1090 **        RQH      1           0-15   HEAD OF REQUEST QUEUE
000001 A 1091 TCRQH   EQU     1
000000 A 1092 TCRQHB  EQU     0
000020 A 1093 TCRQHZ  EQU     16
         1094 **        CTA      2           0-15   ADRS OF CONTRLR TBL FOR TC
000002 A 1095 TCCTA   EQU     2
000000 A 1096 TCCTAB  EQU     0
000020 A 1097 TCCTAZ  EQU     16
         1098 **        CLN      3           0- 7   LUN FOR THE CCM
000003 A 1099 TCCLN   EQU     3
000000 A 1100 TCCLNB  EQU     0
000010 A 1101 TCCLNZ  EQU     8
         1102 **        LLN      3           8-15   LOGICAL LINE NUMBER
000003 A 1103 TCLLN   EQU     3
000010 A 1104 TCLLNB  EQU     8
000010 A 1105 TCLLNZ  EQU     8
         1106 **        PCH      4           0- 7   PROMPTING CHAR FOR TERMINL
000004 A 1107 TCPCH   EQU     4
000000 A 1108 TCPCHB  EQU     0
000010 A 1109 TCPCHZ  EQU     8
         1110 **        SWL      4           8- 8   1 SWITCHED LN, 0 NOT SWITC
000004 A 1111 TCSWL   EQU     4
000010 A 1112 TCSWLB  EQU     8
000001 A 1113 TCSWLZ  EQU     1
         1114 **        BSL      4           9- 9   1 BIN SYNC LN, 0 ASYNC
000004 A 1115 TCBSL   EQU     4
000011 A 1116 TCBSLB  EQU     9
000001 A 1117 TCBSLZ  EQU     1
         1118 **        XMM      4           10-11  TRANSMISSION MODE
000004 A 1119 TCXMM   EQU     4
000012 A 1120 TCXMMB  EQU     10
000002 A 1121 TCXMMZ  EQU     2
         1122 **        ECH      4           12-12  1 NO ECHO, 0 ECHO FULL DUP
000004 A 1123 TCECH   EQU     4
000014 A 1124 TCECHB  EQU     12
000001 A 1125 TCECHZ  EQU     1
         1126 **        CON      4           13-13  1 PHYS CON MADE, 0 NOT MAD
000004 A 1127 TCCON   EQU     4
000015 A 1128 TCCONB  EQU     13
000001 A 1129 TCCONZ  EQU     1
         1130 **        WBC      4           14-14  0 WD COUNT FOR WRITE, 1 BY
000004 A 1131 TCWBC   EQU     4
000016 A 1132 TCWBCB  EQU     14
000001 A 1133 TCWBCZ  EQU     1
         1134 **        RBC      4           15-15  0 WORD COUNT FOR READ, 1 B
000004 A 1135 TCRBC   EQU     4
000017 A 1136 TCRBCB  EQU     15
000001 A 1137 TCRBCZ  EQU     1
         1138 **        NTD      5           0- 3   NO. DEVICES THIS TERMINAL
000005 A 1139 TCNTD   EQU     5
000000 A 1140 TCNTDB  EQU     0
000004 A 1141 TCNTDZ  EQU     4
         1142 **        NOD      5           4- 7   NO. DEVICES OPEN THIS TERM
000005 A 1143 TCNOD   EQU     5
000004 A 1144 TCNODB  EQU     4
000004 A 1145 TCNODZ  EQU     4
         1146 **        TYP      5           8-11   TSO/TCM TYPE
000005 A 1147 TCTYP   EQU     5
000010 A 1148 TCTYPB  EQU     8
000004 A 1149 TCTYPZ  EQU     4
         1150 **        CTP      5           12-15  TRANSMISSION CODE TYPE
000005 A 1151 TCCTP   EQU     5
000014 A 1152 TCCTPB  EQU     12
000004 A 1153 TCCTPZ  EQU     4
         1154 **        RMD      6           0- 2   MODE OF READ OPERATION
000006 A 1155 TCRMD   EQU     6
000000 A 1156 TCRMDB  EQU     0
000003 A 1157 TCRMDZ  EQU     3
         1158 **        WMD      6           3- 5   MODE OF WRITE OPERATION
000006 A 1159 TCWMD   EQU     6
000003 A 1160 TCWMDB  EQU     3
000003 A 1161 TCWMDZ  EQU     3
```

```
                1162 **              RRS                6          6- 8   READ REQUEST STATUS
000006  A       1163 TCRRS   EQU       6
000006  A       1164 TCRRSB  EQU       6
000003  A       1165 TCRRSZ  EQU       3
                1166 **              WRS                6          9-11   WRITE REQUEST STATUS
000006  A       1167 TCWRS   EQU       6
000011  A       1168 TCWRSB  EQU       9
000003  A       1169 TCWRSZ  EQU       3
                1170 **              LDF                6         12-12   LINE DISCONNECT FLAG
000006  A       1171 TCLDF   EQU       6
000014  A       1172 TCLDFB  EQU       12
000001  A       1173 TCLDFZ  EQU       1
                1174 **              RCA                7          0-15   CCM READ RQST BLOCK ADRS
000007  A       1175 TCRCA   EQU       7
000000  A       1176 TCRCAB  EQU       0
000020  A       1177 TCRCAZ  EQU       16
                1178 **              STO                8          0-15   READ TIMEOUT VALUE
000010  A       1179 TCSTO   EQU       8
000000  A       1180 TCSTOB  EQU       0
000020  A       1181 TCSTOZ  EQU       16
                1182 **              WCA                9          0-15   CCM WRITE RQST BLOCK ADRS
000011  A       1183 TCWCA   EQU       9
000000  A       1184 TCWCAB  EQU       0
000020  A       1185 TCWCAZ  EQU       16
                1186 **              DCC               10          0-15   DYNAMIC CHAR COUNT FOR REA
000012  A       1187 TCDCC   EQU       10
000000  A       1188 TCDCCB  EQU       0
000020  A       1189 TCDCCZ  EQU       16
                1190 **              RBF               11          0-15   DYNAMIC READ BUFR ADRS
000013  A       1191 TCRBF   EQU       11
000000  A       1192 TCRBFB  EQU       0
000020  A       1193 TCRBFZ  EQU       16
                1194 **              DTO               12          0-15   DYNAMIC READ TIMEOUT VALUE
000014  A       1195 TCDTO   EQU       12
000000  A       1196 TCDTOB  EQU       0
000020  A       1197 TCDTOZ  EQU       16
                1198 **              ID1               13          0-15   1ST 2 CHAR OF TUID
000015  A       1199 TCID1   EQU       13
000000  A       1200 TCID1B  EQU       0
000020  A       1201 TCID1Z  EQU       16
                1202 **              ID2               14          0-15   2ND 2 CHAR OF TUID
000016  A       1203 TCID2   EQU       14
000000  A       1204 TCID2B  EQU       0
000020  A       1205 TCID2Z  EQU       16
                1206                 EJEC
                1207 ********************************************************************************
                1208 **       TABLE NAME IS TPT     (TCM PROCESSOR TABLE       )
                1209 ********************************************************************************
                1210 **     FIELD                WORD                BIT              DESCRIPTION
                1211 **
                1212 **              RPA               13          0-15   READ PROCESSOR ADDRESS
000015  A       1213 TPRPA   EQU       13
000000  A       1214 TPRPAB  EQU       0
000020  A       1215 TPRPAZ  EQU       16
                1216 **              WPA               14          0-15   WRITE PROCESSOR ADDRESS
000016  A       1217 TPWPA   EQU       14
000000  A       1218 TPWPAB  EQU       0
000020  A       1219 TPWPAZ  EQU       16
                1220 **              FPA               15          0-15   FUNC PROCESSOR ADDRESS
000017  A       1221 TPFPA   EQU       15
000000  A       1222 TPFPAB  EQU       0
000020  A       1223 TPFPAZ  EQU       16
                1224                 EJEC
                1225 ********************************************************************************
                1226 **       TABLE NAME IS PSD     (PROTOTYPE LSD                )
                1227 ********************************************************************************
                1228 **     FIELD                WORD                BIT              DESCRIPTION
                1229 **
                1230 **              MOD               0          14-15   MODEM TYPE
000000  A       1231 PSMOD   EQU       0
000016  A       1232 PSMODB  EQU       14
000002  A       1233 PSMODZ  EQU       2
                1234 **              PAR               0          12-13   PARITY MODE
000000  A       1235 PSPAR   EQU       0
000014  A       1236 PSPARB  EQU       12
000002  A       1237 PSPARZ  EQU       2
                1238 **              ASY               0          11-11   SYNC/ASYNC FLAG
000000  A       1239 PSASY   EQU       0
000013  A       1240 PSASYB  EQU       11
000001  A       1241 PSASYZ  EQU       1
                1242 **              XMM               0           9-10   TRANSMISSION MODE
000000  A       1243 PSXMM   EQU       0
000011  A       1244 PSXMMB  EQU       9
000002  A       1245 PSXMMZ  EQU       2
                1246 **              LSP               0           0- 8   LINE SPEED
000000  A       1247 PSLSP   EQU       0
000000  A       1248 PSLSPB  EQU       0
000011  A       1249 PSLSPZ  EQU       9
                1250 **              CC1               1           8-15   CONTROL CHARACTER 1
000001  A       1251 PSCC1   EQU       1
000010  A       1252 PSCC1B  EQU       8
000010  A       1253 PSCC1Z  EQU       8
                1254 **              CC2               1           0- 7   CONTROL CHARACTER 2
000001  A       1255 PSCC2   EQU       1
000000  A       1256 PSCC2B  EQU       0
```

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000010 A 1257 PSCC2Z EQU      8
         1258 **        TER          2          15-15   READ TERMINATION CONTROL
000002 A 1259 PSTER   EQU      2
000017 A 1260 PSTERB  EQU      15
000001 A 1261 PSTERZ  EQU      1
         1262 **        EPF          2          14-14   E/P BIT IN DCM
000002 A 1263 PSEPF   EQU      2
000016 A 1264 PSEPFB  EQU      14
000001 A 1265 PSEPFZ  EQU      1
         1266 **        DWN          2           9- 9   LINE DOWN FLAG
000002 A 1267 PSDWN   EQU      2
000011 A 1268 PSDWNB  EQU      9
000001 A 1269 PSDWNZ  EQU      1
         1270 **        DEF          2           8- 8   LINE DEFINED FLAG
000002 A 1271 PSDEF   EQU      2
000010 A 1272 PSDEFB  EQU      8
000001 A 1273 PSDEFZ  EQU      1
         1274 **        PLA          2           0- 7   PHYSICAL LINE ADDRESS
000002 A 1275 PSPLA   EQU      2
000000 A 1276 PSPLAB  EQU      0
000010 A 1277 PSPLAZ  EQU      8
         1278 **        DSF          3          15-15   DS/S BIT IN DCM
000003 A 1279 PSDSF   EQU      3
000017 A 1280 PSDSFB  EQU      15
000001 A 1281 PSDSFZ  EQU      1
         1282 **        YNC          3          14-14   RESYNC ON READ
000003 A 1283 PSYNC   EQU      3
000016 A 1284 PSYNCB  EQU      14
000001 A 1285 PSYNCZ  EQU      1
         1286 **        ABN          3          13-13   ERROR STOP FLAG
000003 A 1287 PSABN   EQU      3
000015 A 1288 PSABNB  EQU      13
000001 A 1289 PSABNZ  EQU      1
         1290 **        CRC          3          10-12   INPUT CRC COUNT
000003 A 1291 PSCRC   EQU      3
000012 A 1292 PSCRCB  EQU      10
000003 A 1293 PSCRCZ  EQU      3
         1294 **        YNT          3           0- 7   SYNC XMIT BYTE
000003 A 1295 PSYNT   EQU      3
000000 A 1296 PSYNTB  EQU      0
000010 A 1297 PSYNTZ  EQU      8
         1298 **        BSC                     14-14   BSC ADAPTER USED
000004 A 1299 PSBSC   EQU      4
000016 A 1300 PSBSCB  EQU      14
000016 A 1301 PSBSCZ  EQU      14
         1302 **        YNR          4           0- 7   SYNC RECV BYTE
000004 A 1303 PSYNR   EQU      4
000000 A 1304 PSYNRB  EQU      0
000010 A 1305 PSYNRZ  EQU      8
         1306          EJEC
         1307 **********************************************************************
         1308 **      TABLE NAME IS PCD     (PROTOTYPE TCD              )
         1309 **********************************************************************
         1310 **    FIELD              WORD              BIT              DESCRIPTION
         1311 **
         1312 **        LLN          0           8-15   LOGICAL LINE NUMBER
000000 A 1313 PCLLN   EQU      0
000010 A 1314 PCLLNB  EQU      8
000010 A 1315 PCLLNZ  EQU      8
         1316 **        CLN          0           0- 7   LOGICAL UNIT OF CCM
000000 A 1317 PCCLN   EQU      0
000000 A 1318 PCCLNB  EQU      0
000010 A 1319 PCCLNZ  EQU      8
         1320 **        ECH          1          12-12   ECHO ON FULL DUPLEX
000001 A 1321 PCECH   EQU      1
000014 A 1322 PCECHB  EQU      12
000001 A 1323 PCECHZ  EQU      1
         1324 **        XMM          1          10-11   TRANSMISSION MODE
000001 A 1325 PCXMM   EQU      1
000012 A 1326 PCXMMB  EQU      10
000002 A 1327 PCXMMZ  EQU      2
         1328 **        BSL          1           9- 9   BISYNC FLAG
000001 A 1329 PCBSL   EQU      1
000011 A 1330 PCBSLB  EQU      9
000001 A 1331 PCBSLZ  EQU      1
         1332 **        SWL          1           8- 8   SWITCHED LINE FLAG
000001 A 1333 PCSWL   EQU      1
000010 A 1334 PCSWLB  EQU      8
000001 A 1335 PCSWLZ  EQU      1
         1336 **        PCH          1           0- 7   TERMINAL PROMPT BYTE
000001 A 1337 PCPCH   EQU      1
000000 A 1338 PCPCHB  EQU      0
000010 A 1339 PCPCHZ  EQU      8
         1340 **        CTP          2          12-15   CODE TYPE
000002 A 1341 PCCTP   EQU      2
000014 A 1342 PCCTPB  EQU      12
000004 A 1343 PCCTPZ  EQU      4
         1344 **        TYP          2           8-11   TCD/TCM TYPE
000002 A 1345 PCTYP   EQU      2
000010 A 1346 PCTYPB  EQU      8
000004 A 1347 PCTYPZ  EQU      4
         1348 **        NTD          2           0- 3   NUMBER OF DEVICES
000002 A 1349 PCNTD   EQU      2
000000 A 1350 PCNTDB  EQU      0
000004 A 1351 PCNTDZ  EQU      4
```

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                1352          EJEC
                1353 ********************************************************************************
                1354 **       TABLE NAME IS TIB     (TERMINAL INDEX BLOCK      )                   *
                1355 ********************************************************************************
                1356 **     FIELD              WORD                BIT              DESCRIPTION     *
                1357 **                                                                             *
                1358 **           TU1              0              0-15   FIRST TWO CHARS OF TUID    *
000000  A       1359 TITU1   EQU       0                                                            *
000000  A       1360 TITU1B  EQU       0                                                            *
000020  A       1361 TITU1Z  EQU       16                                                           *
                1362 **           TU2              1              0-15   SECOND TWO CHARACS OF TUID*
000001  A       1363 TITU2   EQU       1                                                            *
000000  A       1364 TITU2B  EQU       0                                                            *
000020  A       1365 TITU2Z  EQU       16                                                           *
                1366 **           DWN              2             15-15   TERMINAL DOWN FLAG        *
000002  A       1367 TIDWN   EQU       2                                                            *
000017  A       1368 TIDWNB  EQU       15                                                           *
000001  A       1369 TIDWNZ  EQU       1                                                            *
                1370 **           SEC              2              7-14   SECTOR POINTER            *
000002  A       1371 TISEC   EQU       2                                                            *
000007  A       1372 TISECB  EQU       7                                                            *
000010  A       1373 TISECZ  EQU       8                                                            *
                1374 **           DSP              2              0- 6   DISPLACEMENT              *
000002  A       1375 TIDSP   EQU       2                                                            *
000000  A       1376 TIDSPB  EQU       0                                                            *
000007  A       1377 TIDSPZ  EQU       7                                                            *
                1378 **           ODN              3             15-15   OLD DOWN FLAG             *
000003  A       1379 TIODN   EQU       3                                                            *
000017  A       1380 TIODNB  EQU       15                                                           *
000001  A       1381 TIODNZ  EQU       1                                                            *
                1382 **           OSC              3              7-14   OLD SECTOR POINTER        *
000003  A       1383 TIOSC   EQU       3                                                            *
000007  A       1384 TIOSCB  EQU       7                                                            *
000010  A       1385 TIOSCZ  EQU       8                                                            *
                1386 **           ODP              3              0- 6   OLD DISPLACEMENT          *
000003  A       1387 TIODP   EQU       3                                                            *
000000  A       1388 TIODPB  EQU       0                                                            *
000007  A       1389 TIODPZ  EQU       7                                                            *
                1390 **           NET              0              0-15   NUMBER OF ENTRIES         *
000000  A       1391 TINET   EQU       0                                                            *
000000  A       1392 TINETB  EQU       0                                                            *
000020  A       1393 TINETZ  EQU       16                                                           *
                1394 *                                                                              *
                1395 ** CHAIN HEADER   CHR                                                          *
                1396 **           AFP              0            15-0   ACTIVE CHAIN FRONT POINTER *
000000  A       1397 CHAFP   EQU       0                                                            *
000000  A       1398 CHAFPB  EQU       0                                                            *
000020  A       1399 CHAFPZ  EQU       16                                                           *
                1400 **           ARP              1            15-0   ACTIVE CHAIN REAR  POINTER *
000001  A       1401 CHARP   EQU       1                                                            *
000000  A       1402 CHARPB  EQU       0                                                            *
000020  A       1403 CHARPZ  EQU       16                                                           *
                1404 **           CFP              2            15-0   COMPLETE CHAIN FRONT POINTER*
000002  A       1405 CHCFP   EQU       2                                                            *
000000  A       1406 CHCFPB  EQU       0                                                            *
000020  A       1407 CHCFPZ  EQU       16                                                           *
                1408 **           CRP              3            15-0   COMPLETE CHAIN REAR  POINTER*
000003  A       1409 CHCRP   EQU       3                                                            *
000000  A       1410 CHCRPB  EQU       0                                                            *
000020  A       1411 CHCRPZ  EQU       16                                                           *
                1412 **           RBL              4           15-0   REQUEST BLOCK ADDRESS        *
000004  A       1413 CHRBL   EQU       4                                                            *
000000  A       1414 CHRBLB  EQU       0                                                            *
000020  A       1415 CHRBLZ  EQU       16                                                           *
                1416 ************************************                                           *
                1417 **       IBH -INTERFACE BLOCK HEADER                                           *
                1418 ************************************                                           *
                1419 **           LNK              0            15-0   LINK TO NEXT IBH           *
000000  A       1420 IBLNK   EQU       0                                                            *
000000  A       1421 IBLNKB  EQU       0                                                            *
000020  A       1422 IBLNKZ  EQU       16                                                           *
                1423 **           LEN              1            15-0   DATA BLOK LENGTH IN BYTES  *
000001  A       1424 IBLEN   EQU       1                                                            *
000000  A       1425 IBLENB  EQU       0                                                            *
000020  A       1426 IBLENZ  EQU       16                                                           *
                1427 **           STA              2            15-0   DATA STARTING ADDRESS      *
000002  A       1428 IBSTA   EQU       2                                                            *
000000  A       1429 IBSTAB  EQU       0                                                            *
000020  A       1430 IBSTAZ  EQU       16                                                           *
                1431 **           IBF              3           15-15   INPUT BUF FLAG 0=LEFT BYTE *
000003  A       1432 IBIBF   EQU       3                                                            *
000017  A       1433 IBIBFB  EQU       15                                                           *
000001  A       1434 IBIBFZ  EQU       1                                                            *
                1435 **           LAS              3            14-0   NEXT WORD TO BE FILLED     *
000003  A       1436 IBLAS   EQU       3                                                            *
000000  A       1437 IBLASB  EQU       00                                                           *
000017  A       1438 IBLASZ  EQU       15                                                           *
                1439 **           STS              4            15-0   STATUS  WORD               *
000004  A       1440 IBSTS   EQU       4                                                            *
000000  A       1441 IBSTSB  EQU       0                                                            *
000017  A       1442 IBSTSZ  EQU       15                                                           *
                1443          LIST                                                                  *
000015  A       1444 DMTPA   EQU       13                                                           *
000016  A       1445 DMRPA   EQU       14                                                           *
000017  A       1446 DMFPA   EQU       15                                                           *
                                                                                                    03 00014
                                                                                                    03 00015
                                                                                                    03 00016
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                000020 A 1447 DMSTA   EQU     16                                                      03 00017
                000021 A 1448 DMLCA   EQU     17                                                      03 00018
                000022 A 1449 DMLTA   EQU     18                                                      03 00019
                000023 A 1450 DMPTA   EQU     19                                                      03 00020
                000024 A 1451 DMCWA   EQU     20                                                      03 00021
                000026 A 1452 DMBCA   EQU     22                                                      03 00022
                         1453 ************************************************************************03 00023
                         1454 *                                                                      03 00024
                         1455 *                                                                      03 00025
                         1456         CJEC                                                           03 00026
                         1457 ************************************************************************03 00027
                         1458 *       PROGRAM NAME -                                                *03 00028
                         1459 *               CTMX0A - 520X DCM CONTROLLER TABLE                    *03 00029
                         1460 *                                                                     *03 00030
                         1461 ************************************************************************03 00031
                         1462         NAME    CTMX0A                                                 03 00032
                000000 R 1463 CTMX0A EQU     *                                                      03 00033
                         1464 *                                                                      03 00034
                         1465 *       WORD 00 CTIDB - TIDB ADDRESS                                   03 00035
                         1466 *                                                                      03 00036
                         1467         EXT     TBMX0A                                                 03 00037
000000 000000 E          1468         DATA    TBMX0A                                                 03 00038
                         1469 *                                                                      03 00039
                         1470 *       WORD 01 CTADN - CONTROLLER TABLE THREAD                        03 00040
                         1471 *                                                                      03 00041
000001 000027 R          1472         DATA    CTEND                                                  03 00042
                         1473 *                                                                      03 00043
                         1474 *       WORD 02 CTOPM - OP CODE MASK                                   03 00044
                         1475 *                                                                      03 00045
                000001 A 1476 VRD     EQU     1               READ   ************************************03 00046
                000002 A 1477 VWT     EQU     2               WRITE  * THESE VALUES ARE USED TO GENERATE*03 00047
                000040 A 1478 VFU     EQU     32              FUNC   * THE OP CODE MASK FOR V$IOC       *03 00048
                000100 A 1479 VOP     EQU     64              OPEN   *                                  *03 00049
                000200 A 1480 VCL     EQU     128             CLOSE  ************************************03 00050
                         1481 *                                                                      03 00051
                         1482 *                                                                      03 00052
000002 000343 A          1483         DATA    VRD+VWT+VFU+VOP+VCL                                    03 00053
                         1484 *                                                                      03 00054
                         1485 *       WORD 03-05 - SET BY SYSGEN AND IOC                             03 00055
                         1486 *                                                                      03 00056
000003                   1487         BSS     3                                                      03 00057
                         1488 *                                                                      03 00058
                         1489 *       WORD 06 CTDVA - DEVICE ADDRESS                                 03 00059
                         1490 *                                                                      03 00060
                         1491         EXT     #AMX0A                                                 03 00061
000006 000000 E          1492         DATA    #AMX0A                                                 03 00062
                         1493 *                                                                      03 00063
                         1494 *       WORD 07-08 - SET BY SYSGEN AND IOC                             03 00064
                         1495 *                                                                      03 00065
000007                   1496         BSS     2                                                      03 00066
                         1497 *                                                                      03 00067
                         1498 *       WORD 09 CTBIC - BIC FLAG TABLE ADDRESS                         03 00068
                         1499 *                                                                      03 00069
                         1500         EXT     !BMX0A                                                 03 00070
000011 000000 E          1501         DATA    !BMX0A                                                 03 00071
                         1502 *                                                                      03 00072
                         1503 *       WORD 10-12 - SET BY SYSGEN AND IOC                             03 00073
                         1504 *                                                                      03 00074
000012                   1505         BSS     3                                                      03 00075
                         1506 *                                                                      03 00076
                         1507 *       END OF STANDARD CONTROLLER TABLE                               03 00077
                         1508         CJEC                                                           03 00078
                         1509 *         START OF DEVICE MANAGEMENT TABLE                             03 00079
                         1510 *                                                                      03 00080
                         1511 *                                                                      03 00081
000015                   1512         ORG     CTMX0A+DMTPA  TRANSMIT PROCEDURE ADDRESS               03 00082
                         1513         EXT     C52XMT                                                 03 00083
000015 000000 E          1514         DATA    C52XMT                                                 03 00084
                         1515 *                                                                      03 00085
                         1516 *                                                                      03 00086
                         1517 *                                                                      03 00087
000016                   1518         ORG     CTMX0A+DMRPA  RECEIVE PROCEDURE ADDRESS                03 00088
                         1519         EXT     C52RCV                                                 03 00089
000016 000000 E          1520         DATA    C52RCV                                                 03 00090
                         1521 *                                                                      03 00091
                         1522 *                                                                      03 00092
                         1523 *                                                                      03 00093
000017                   1524         ORG     CTMX0A+DMFPA  FUNC PROCEDURE ADDRESS                   03 00094
                         1525         EXT     C52FUN                                                 03 00095
000017 000000 E          1526         DATA    C52FUN                                                 03 00096
                         1527 *                                                                      03 00097
                         1528 *                                                                      03 00098
                         1529 *                                                                      03 00099
000020                   1530         ORG     CTMX0A+DMSTA  STATUS PROCEDURE ADDRESS                 03 00100
                         1531         EXT     C52SST                                                 03 00101
000020 000000 E          1532         DATA    C52SST                                                 03 00102
                         1533 *                                                                      03 00103
                         1534 *                                                                      03 00104
                         1535 *                                                                      03 00105
000021                   1536         ORG     CTMX0A+DMLCA  LCW BASE ADDRESS                         03 00106
                         1537         EXT     V$LCW0                                          D.1    03 00107
000021 000000 E          1538         DATA    V$LCW0                                          D.1    03 00108
                         1539 *                                                                      03 00109
                         1540 *                                                                      03 00110
                         1541 *                                                                      03 00111
```

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000022              1542          ORG     CTMX0A+DMLTA  LOGICAL LINE TABLE ADDRESS                    03 00112
                    1543          EXT     C52LLT                                                      03 00113
000022 000000 E     1544          DATA    C52LLT                                                      03 00114
                    1545  *                                                                           03 00115
                    1546  *                                                                           03 00116
                    1547  *                                                                           03 00117
000023              1548          ORG     CTMX0A+DMPTA  PHYSICAL LINE TABLE ADDRESS                   03 00118
                    1549          EXT     C52PL0                                                D.1   03 00119
000023 000000 E     1550          DATA    C52PL0                                                D.1   03 00120
                    1551  *                                                                           03 00121
                    1552  *                                                                           03 00122
                    1553  *                                                                           03 00123
000024              1554          ORG     CTMX0A+DMCWA  CONTROL AND STATUS WORDS                      03 00124
000024 000000 A     1555          DATA    0,0                                                         03 00125
000025 000000 A
                    1556  *                                                                           03 00126
000026              1557          ORG     CTMX0A+DMBCA  BUFFER CHAIN TABLE ADDRESS [BCT]              03 00127
                    1558          EXT     BCTX0A                                                      03 00128
000026 000000 E     1559          DATA    BCTX0A                                                      03 00129
       000027 R     1560  CTEND   EQU     *                                                           03 00130
                    1561          END                                                                 03 00131
ENTRY NAMES
000000 R CTMX0A
EXTERNAL NAMES
000011 E !BMX0A 000006 E #AMX0A 000026 E BCTX0A 000017 E C52FUN
000022 E C52LLT 000023 E C52PL0 000016 E C52RCV 000020 E C52SST
000015 E C52XMT 000000 E TBMX0A 000021 E V$LCW0
SYMBOLS
000011 E !BMX0A 000006 E #AMX0A 000044 A APIM   000002 A B
000000 A B0     000001 A B1     000012 A B10    000013 A B11
000014 A B12    000015 A B13    000016 A B14    000017 A B15
000002 A B2     000003 A B3     000004 A B4     000005 A B5
000006 A B6     000007 A B7     000010 A B8     000011 A B9
000026 E BCTX0A 000000 A BICNUM 000421 A BM1    000472 A BM17
000475 A BM177  000477 A BM1777 000464 A BM3    000473 A BM37
000463 A BM377  000467 A BM7    000474 A BM77   000476 A BM777
000441 A BR0    000442 A BR1    000453 A BR10   000454 A BR11
000455 A BR12   000456 A BR13   000457 A BR14   000460 A BR15
000443 A BR2    000444 A BR3    000445 A BR4    000446 A BR5
000447 A BR6    000450 A BR7    000451 A BR8    000452 A BR9
000421 A BS0    000422 A BS1    000433 A BS10   000434 A BS11
000435 A BS12   000436 A BS13   000437 A BS14   000440 A BS15
000423 A BS2    000424 A BS3    000425 A BS4    000426 A BS5
000427 A BS6    000430 A BS7    000431 A BS8    000432 A BS9
000017 E C52FUN 000022 E C52LLT 000023 E C52PL0 000016 E C52RCV
000020 E C52SST 000015 E C52XMT 000000 A CHAFP  000000 A CHAFPB
000020 A CHAFPZ 000001 A CHARP  000000 A CHARPB 000020 A CHARPZ
000002 A CHCFP  000000 A CHCFPB 000020 A CHCFPZ 000003 A CHCRP
000000 A CHCRPB 000020 A CHCRPZ 000004 A CHRBL  000000 A CHRBLB
000020 A CHRBLZ 000047 A CLOCK  000000 A COTAD1 000000 A CTACT
000017 A CTACTB 000001 A CTACTZ 000001 A CTADN  000000 A CTADNB
000020 A CTADNZ 000011 A CTBIC  000000 A CTBICB 000020 A CTBICZ
000003 A CTDST  000000 A CTDSTB 000020 A CTDSTZ 000006 A CTDVA
000000 A CTDVAB 000020 A CTDVAZ 000027 R CTEND  000012 A CTFCB
000000 A CTFCBB 000020 A CTFCBZ 000014 A CTFRC  000010 A CTFRCB
000010 A CTFRCZ 000014 A CTFRE  000000 A CTFREB 000010 A CTFREZ
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000000 A CTIOAB 000020 A CTIOAZ 000000 R CTMX0A 000002 A CTOPM
000000 A CTOPMB 000020 A CTOPMZ 000005 A CTRCN  000000 A CTRCNB
000010 A CTRCNZ 000004 A CTRQB  000000 A CTRQBB 000020 A CTRQBZ
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000000 A CTSTAB 000020 A CTSTAZ 000013 A CTWDS  000000 A CTWDSB
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000745 A DISMP  000444 A DISPIM 000026 A DMBCA  000000 A DMBCAB
000020 A DMBCAZ 000024 A DMCWA  000000 A DMCWAB 000020 A DMCWAZ
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000000 A DMLCAB 000020 A DMLCAZ 000022 A DMLTA  000000 A DMLTAB
000020 A DMLTAZ 000023 A DMPTA  000000 A DMPTAB 000020 A DMPTAZ
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000020 A DMSWAZ 000015 A DMTPA  000000 A DMTPAB 000020 A DMTPAZ
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000001 A DSNAME 000000 A DSNORQ 000002 A DSOPCM 000002 A DSPSTI
000002 A DSREWD 000000 A DSUNAM 000002 A DSUNTN 000424 A EIGHT
000147 A ENACLK 000645 A ENAMP  000244 A ENAPIM 000465 A FIVE
000423 A FOUR   000003 A IBIBF  000017 A IBIBFB 000001 A IBIBFZ
000003 A IBLAS  000000 A IBLASB 000017 A IBLASZ 000001 A IBLEN
000000 A IBLENB 000020 A IBLENZ 000000 A IBLNK  000000 A IBLNKB
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000004 A IBSTS  000000 A IBSTSB 000017 A IBSTSZ 000300 A LC
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000012 A LCASYB 000001 A LCASYZ 000007 A LCBSC  000015 A LCBSCB
000001 A LCBSCZ 000007 A LCCHN  000016 A LCCHNB 000001 A LCCHNZ
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000014 A LCCWBB 000001 A LCCWBZ 000006 A LCCWC  000015 A LCCWCB
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000006 A LCCWI  000016 A LCCWIB 000001 A LCCWIZ 000006 A LCCWP
000012 A LCCWPB 000001 A LCCWPZ 000006 A LCCWR  000011 A LCCWRB
000001 A LCCWRZ 000006 A LCCWS  000017 A LCCWSB 000001 A LCCWSZ
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000000 A LCIBAB 000017 A LCIBAZ 000000 A LCIBF  000017 A LCIBFB
000001 A LCIBFZ 000000 A LCIBL  000000 A LCIBLB 000014 A LCIBLZ
000002 A LCIC1  000010 A LCIC1B 000010 A LCIC1Z 000002 A LCIC2
000000 A LCIC2B 000010 A LCIC2Z 000003 A LCIKE  000000 A LCIKEB
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000017 A LCLTBB 000001 A LCLTBZ 000005 A LCOBA  000000 A LCOBAB
000017 A LCOBAZ 000004 A LCOBF  000017 A LCOBFB 000001 A LCOBFZ
000004 A LCOBL  000000 A LCOBLB 000014 A LCOBLZ 000007 A LCOKE
000000 A LCOKEB 000004 A LCOKEZ 000003 A LCRCC  000017 A LCRCCB
000001 A LCRCCZ 000000 A LCSMB  000016 A LCSMBB 000001 A LCSMBZ
000462 A LHW    000017 A LSABN  000015 A LSABNB 000001 A LSABNZ
000017 A LSASC  000011 A LSASCB 000001 A LSASCZ 000014 A LSASY
000013 A LSASYB 000001 A LSASYZ 000020 A LSBSC  000016 A LSBSCB
000001 A LSBSCZ 000015 A LSCC1  000010 A LSCC1B 000010 A LSCC1Z
000015 A LSCC2  000000 A LSCC2B 000010 A LSCC2Z 000017 A LSCHN
000010 A LSCHNB 000001 A LSCHNZ 000017 A LSCRC  000012 A LSCRCB
000003 A LSCRCZ 000012 A LSCTA  000000 A LSCTAB 000020 A LSCTAZ
000017 A LSDSF  000017 A LSDSFB 000001 A LSDSFZ 000013 A LSDST
000000 A LSDSTB 000020 A LSDSTZ 000016 A LSEPF  000016 A LSEPFB
000001 A LSEPFZ 000014 A LSLSP  000000 A LSLSPB 000011 A LSLSPZ
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000010 A LSNTOB 000006 A LSNTOZ 000014 A LSPAR  000014 A LSPARB
000002 A LSPARZ 000016 A LSPLA  000000 A LSPLAB 000010 A LSPLAZ
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000000 A LSREMB 000020 A LSREMZ 000016 A LSRRS  000010 A LSRRSB
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000000 A LSSRSB 000020 A LSSRSZ 000011 A LSSWS  000000 A LSSWSB
000020 A LSSWSZ 000016 A LSTER  000017 A LSTERB 000001 A LSTERZ
000000 A LSTHD  000000 A LSTHDB 000020 A LSTHDZ 000006 A LSWCA
000000 A LSWCAB 000020 A LSWCAZ 000007 A LSWEM  000000 A LSWEMB
000020 A LSWEMZ 000016 A LSWRS  000013 A LSWRSB 000003 A LSWRSZ
000010 A LSWTO  000000 A LSWTOB 000020 A LSWTOZ 000014 A LSXMM
000011 A LSXMMB 000002 A LSXMMZ 000017 A LSYNC  000016 A LSYNCB
000001 A LSYNCZ 000020 A LSYNR  000000 A LSYNRB 000010 A LSYNRZ
000017 A LSYNT  000000 A LSYNTB 000010 A LSYNTZ 000046 A MAP
000045 A MP     000045 A MPMR0  000145 A MPMR1  000245 A MPMR2
000345 A MPMR3  000420 A MT     000461 A NEG    000470 A NINE
000421 A ONE    000001 A PCBSL  000011 A PCBSLB 000001 A PCBSLZ
000000 A PCCLN  000000 A PCCLNB 000010 A PCCLNZ 000002 A PCCTP
000014 A PCCTPB 000004 A PCCTPZ 000001 A PCECH  000014 A PCECHB
000001 A PCECHZ 000000 A PCLLN  000010 A PCLLNB 000010 A PCLLNZ
000002 A PCNTD  000000 A PCNTDB 000004 A PCNTDZ 000001 A PCPCH
000000 A PCPCHB 000010 A PCPCHZ 000001 A PCSWL  000010 A PCSWLB
000001 A PCSWLZ 000002 A PCTYP  000010 A PCTYPB 000004 A PCTYPZ
000001 A PCXMM  000012 A PCXMMB 000002 A PCXMMZ 000040 A PIM1
000041 A PIM2   000042 A PIM3   000043 A PIM4   000040 A PIM5
000040 A PIM6   000040 A PIM7   000040 A PIM8   000200 A POST
000003 A PSABN  000015 A PSABNB 000001 A PSABNZ 000000 A PSASY
000013 A PSASYB 000001 A PSASYZ 000002 A PSBADT 000000 A PSBEG
000004 A PSBSC  000016 A PSBSCB 000016 A PSBSCZ 000001 A PSCC1
000010 A PSCC1B 000010 A PSCC1Z 000001 A PSCC2  000000 A PSCC2B
000010 A PSCC2Z 000003 A PSCRC  000012 A PSCRCB 000003 A PSCRCZ
000002 A PSDEF  000010 A PSDEFB 000001 A PSDEFZ 000003 A PSDSF
000017 A PSDSFB 000001 A PSDSFZ 000002 A PSDWN  000011 A PSDWNB
000001 A PSDWNZ 000004 A PSEND  000002 A PSEPF  000016 A PSEPFB
000001 A PSEPFZ 000000 A PSLSP  000000 A PSLSPB 000011 A PSLSPZ
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000000 A PSPAR  000014 A PSPARB 000002 A PSPARZ 000002 A PSPLA
000000 A PSPLAB 000010 A PSPLAZ 000001 A PSPROT 000002 A PSTER
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000002 A PSXMMZ 000003 A PSYNC  000016 A PSYNCB 000001 A PSYNCZ
000004 A PSYNR  000000 A PSYNRB 000010 A PSYNRZ 000003 A PSYNT
000000 A PSYNTB 000010 A PSYNTZ 000040 A RA0    000000 A RA1
000004 A RADNR  000060 A RB0    000020 A RB1    000002 A RFCB
000463 A RHW    000001 A ROFWD  000000 A RSTPR  000003 A RTIDB
000467 A SEVEN  000466 A SIX    000027 A TBATSK 000026 A TBCPTH
000011 A TBENTY 000003 A TBEVNT 000021 A TBIO   000014 A TBISA
000015 A TBISB  000017 A TBISP  000020 A TBISRS 000034 A TBIST
000016 A TBISX  000032 A TBKEY  000022 A TBKN1  000023 A TBKN2
000024 A TBKN3  000033 A TBMIMG 000000 E TBMSGW 000032 A TBNUCL
000002 A TBPL   000004 A TBRSA  000005 A TBRSB  000030 A TBRSE
000007 A TBRSP  000010 A TBRSTS 000006 A TBRSX  000000 A TBS0
000001 A TBS1   000012 A TBS10  000013 A TBS11  000014 A TBS12
000015 A TBS13  000016 A TBS14  000017 A TBS15  000002 A TBS2
000003 A TBS3   000004 A TBS4   000005 A TBS5   000006 A TBS6
000007 A TBS7   000010 A TBS8   000011 A TBS9   000031 A TBSIZ
000001 A TBST   000025 A TBTLC  000013 A TBTMIN 000012 A TBTMS
000000 A TBTRD  000004 A TCBSL  000011 A TCBSLB 000001 A TCBSLZ
000003 A TCCLN  000000 A TCCLNB 000010 A TCCLNZ 000004 A TCCON
000015 A TCCONB 000001 A TCCONZ 000002 A TCCTA  000000 A TCCTAB
000020 A TCCTAZ 000005 A TCCTP  000014 A TCCTPB 000004 A TCCTPZ
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000000 A TCDTOB 000020 A TCDTOZ 000004 A TCECH  000014 A TCECHB
000001 A TCECHZ 000015 A TCID1  000000 A TCID1B 000020 A TCID1Z
000016 A TCID2  000000 A TCID2B 000020 A TCID2Z 000006 A TCLDF
000014 A TCLDFB 000001 A TCLDFZ 000003 A TCLLN  000010 A TCLLNB
000010 A TCLLNZ 000005 A TCNOD  000004 A TCNODB 000004 A TCNODZ
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000000 A TCPCHB 000010 A TCPCHZ 000004 A TCRBC  000017 A TCRBCB
000001 A TCRBCZ 000013 A TCRBF  000000 A TCRBFB 000020 A TCRBFZ
000007 A TCRCA  000000 A TCRCAB 000020 A TCRCAZ 000006 A TCRMD
000000 A TCRMDB 000003 A TCRMDZ 000001 A TCRQH  000000 A TCRQHB
000020 A TCRQHZ 000006 A TCRRS  000006 A TCRRSB 000003 A TCRRSZ
000010 A TCSTO  000000 A TCSTOB 000020 A TCSTOZ 000004 A TCSWL
000010 A TCSWLB 000001 A TCSWLZ 000000 A TCTCD  000000 A TCTCDB
000020 A TCTCDZ 000005 A TCTYP  000010 A TCTYPB 000004 A TCTYPZ
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000004 A TCWBC   000016 A TCWBCB 000001 A TCWBCZ 000011 A TCWCA
000000 A TCWCAB  000020 A TCWCAZ 000006 A TCWMD  000003 A TCWMDB
000003 A TCWMDZ  000006 A TCWRS  000011 A TCWRSB 000003 A TCWRSZ
000004 A TCXMM   000012 A TCXMMB 000002 A TCXMMZ 000471 A TEN
000464 A THREE   000002 A TIDSP  000000 A TIDSPB 000007 A TIDSPZ
000002 A TIDWN   000017 A TIDWNB 000001 A TIDWNZ 000000 A TINET
000000 A TINETB  000020 A TINETZ 000003 A TIODN  000017 A TIODNB
000001 A TIODNZ  000003 A TIODP  000000 A TIODPB 000007 A TIODPZ
000003 A TIOSC   000007 A TIOSCB 000010 A TIOSCZ 000002 A TISEC
000007 A TISECB  000010 A TISECZ 000000 A TITU1  000000 A TITU1B
000020 A TITU1Z  000001 A TITU2  000000 A TITU2B 000020 A TITU2Z
000017 A TPFPA   000000 A TPFPAB 000020 A TPFPAZ 000015 A TPRPA
000000 A TPRPAB  000020 A TPRPAZ 000016 A TPWPA  000000 A TPWPAB
000020 A TPWPAZ  000422 A TWO    000403 A V$1MIN 000415 A V$BFC
000075 A V$BGLB  000056 A V$BIC1 000315 A V$BTB  000331 A V$BTBM
000414 A V$BVN   000334 A V$CAM  000353 A V$CKB  000411 A V$CKIT
000310 A V$CKPT  000301 A V$CPL  000076 A V$CRDM 000341 A V$CRDR
000354 A V$CRM   000302 A V$CRS  000360 A V$CTAD 000300 A V$CTL
000351 A V$CTMS  000070 A V$DATE 000355 A V$DSTB 000376 A V$ERFG
000347 A V$FGLB  000306 A V$FLRS 000350 A V$FREE 000332 A V$GFCB
000320 A V$IM    000410 A V$IOA  000412 A V$JCB  000055 A V$JCFG
000077 A V$JCTM  000050 A V$JNAM 000377 A V$JOP  000340 A V$KEY
000054 A V$LCNT  000021 E V$LCW0 000313 A V$LER  000356 A V$LIT
000317 A V$LLUP  000317 A V$LPP  000307 A V$LRSK 000312 A V$LSAL
000345 A V$LUNT  000316 A V$LUP  000400 A V$LUT1 000401 A V$LUT2
000402 A V$LUT3  000330 A V$MAP  000333 A V$MIMG 000330 A V$MPM
000362 A V$NCTR  000316 A V$NPAG 000413 A V$OCB  000346 A V$OPCF
000311 A V$OPCL  000357 A V$PGT  000363 A V$PIMN 000074 A V$PLCT
000305 A V$PTVB  000361 A V$SCTL 000352 A V$SCV  000375 A V$SLFG
000334 A V$ST0   000335 A V$ST1  000336 A V$ST2  000337 A V$ST3
000303 A V$TB    000342 A V$TBGT 000416 A V$TFC  000314 A V$TJCP
000344 A V$TMN   000343 A V$TMS  000304 A V$UTB  000200 A VCL
000040 A VFU     000100 A VOP    000001 A VRD    000002 A VWT
000001 A X       000420 A ZERO
  0 ERRORS ASSEMBLY COMPLETE

    0   !BMX0A  1500  1501
    0   #AMX0A  1491  1492
  159   ADAT     *
   38   ANAM     *
   90   ANAN     *
  574   APIM      584   585
  108   B          98   117   229   230   252   255   257
   88   B&         82
   83   B&0        40
   80   B&1        78
   44   B&10       42
   76   B&2        74
   72   B&3        70
   68   B&4        66
   64   B&5        62
   60   B&6        58
   56   B&7        54
   52   B&8        50
   48   B&9        46
  543   B0       *
  544   B1       *
  553   B10      *
  554   B11      *
  555   B12      *
  556   B13      *
  557   B14      *
  558   B15      *
  545   B2       *
  546   B3       *
  547   B4       *
  548   B5       *
  549   B6       *
  550   B7       *
  551   B8       *
  552   B9       *
    0   BCTX0A  1558  1559
  630   BICNUM   *
  515   BM1        79
  518   BM17       67
  521   BM177      55
  524   BM1777     43
  516   BM3        75
  519   BM37       63
  522   BM377      51
  517   BM7        71
  520   BM77       59
  523   BM777      47
  486   BR0       202
  487   BR1      *
  496   BR10     *
  497   BR11     *
  498   BR12     *
  499   BR13     *
  500   BR14     *
  501   BR15     *
  488   BR2      *
  489   BR3      *
  490   BR4      *
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 491   BR5       *
 492   BR6       *
 493   BR7       *
 494   BR8       *
 495   BR9       *
 470   BS0        195    209
 471   BS1       *
 480   BS10      *
 481   BS11      *
 482   BS12      *
 483   BS13      *
 484   BS14      *
 485   BS15      *
 472   BS2       *
 473   BS3       *
 474   BS4       *
 475   BS5       *
 476   BS6       *
 477   BS7       *
 478   BS8       *
 479   BS9       *
   0   C52FUN    1525   1526
   0   C52LLT    1543   1544
   0   C52PL0    1549   1550
   0   C52RCV    1519   1520
   0   C52SST    1531   1532
   0   C52XMT    1513   1514
1397   CHAFP     *
1398   CHAFPB    *
1399   CHAFPZ    *
1401   CHARP     *
1402   CHARPB    *
1403   CHARPZ    *
1405   CHCFP     *
1406   CHCFPB    *
1407   CHCFPZ    *
1409   CHCRP     *
1410   CHCRPB    *
1411   CHCRPZ    *
1413   CHRBL     *
1414   CHRBLB    *
1415   CHRBLZ    *
 198   CLEARF    *
 567   CLOCK      569    570
 622   COTAD1    *
 707   CTACT     *
 708   CTACTB    *
 709   CTACTZ    *
 715   CTADN     *
 716   CTADNB    *
 717   CTADNZ    *
 751   CTBIC     *
 752   CTBICB    *
 753   CTBICZ    *
 723   CTDST     *
 724   CTDSTB    *
 725   CTDSTZ    *
 739   CTDVA     *
 740   CTDVAB    *
 741   CTDVAZ    *
1560   CTE4D     1472
 755   CTF.B     *
 756   CTF.BB    *
 757   CTF.BZ    *
 763   CTFRC     *
 764   CTFRCB    *
 765   CTFRCZ    *
 767   CTFREA    *
 768   CTFREB    *
 769   CTFREZ    *
 711   CTIDB     *
 712   CTIDBB    *
 713   CTIDBZ    *
 743   CTI.A     *
 744   CTI.AB    *
 745   CTI.AZ    *
1463   CTM.0A       12   1462   1512   1518   1524   1530   1536   1542   1548
                  1554   1557
 719   CTOPM     *
 720   CTOPMB    *
 721   CTOPMZ    *
 735   CTRCN     *
 736   CTRCNB    *
 737   CTRCNZ    *
 727   CTRDB     *
 728   CTRDBB    *
 729   CTRDBZ    *
 731   CTRER     *
 732   CTRERB    *
 733   CTRERZ    *
 747   CTSTA     *
 748   CTSTAB    *
 749   CTSTAZ    *
 759   CTWDS     *
 760   CTWDSB    *
```

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761   CTWDSZ  *
688   DCBUFF  *
691   DCCHR   *
692   DCCHRB  *
693   DCCHRZ  *
689   DCCNT   *
687   DCRECL  *
187   DINTS   *
569   DISCLK   189
589   DISMP   *
584   DISPIM   188
813   DMBCA   1557
814   DMBCAB  *
815   DMBCAZ  *
805   DMCWA   1554
806   DMCWAB  *
807   DMCWAZ  *
785   DMFPA   1524
786   DMFPAB  *
787   DMFPAZ  *
793   DMLCA   1536
794   DMLCAB  *
795   DMLCAZ  *
797   DMLTA   1542
798   DMLTAB  *
799   DMLTAZ  *
801   DMPTA   1548
802   DMPTAB  *
803   DMPTAZ  *
781   DMRPA   1518
782   DMRPAB  *
783   DMRPAZ  *
789   DMSTA   1530
790   DMSTAB  *
791   DMSTAZ  *
809   DMSWA   *
810   DMSWAB  *
811   DMSWAZ  *
777   DMTPA   1512
778   DMTPAB  *
779   DMTPAZ  *
615   DSCTAD  *
601   DSDASS  *
600   DSDVDN  *
612   DSLCKD  *
609   DSNAME  *
608   DSNORQ  *
613   DSOPCM  *
614   DSPSTI  *
610   DSREWD  *
606   DSUNAM  *
611   DSUNTN  *
512   EIGHT    143   167
183   EINTS   *
570   ENACLK   185
590   ENAMP   *
585   ENAPIM   184
  0   ERROR    113   193   200   207
128   FETCHA  *
509   FIVE     149   173
508   FOUR     151   175
251   GETQ    *
1432  IBIBF   *
1433  IBIBFB  *
1434  IBIBFZ  *
1436  IBLAS   *
1437  IBLASB  *
1438  IBLASZ  *
1424  IBLEN   *
1425  IBLENB  *
1426  IBLENZ  *
1420  IBLNK   *
1421  IBLNKB  *
1422  IBLNKZ  *
1428  IBSTA   *
1429  IBSTAB  *
1430  IBSTAZ  *
1440  IBSTS   *
1441  IBSTSB  *
1442  IBSTSZ  *
 378  LC       379   380   381   382   383   384   385   386   387
                388   389   390   391   392   393   394   395   396
                397   398   399   400   401   402   403   404   405
                406   407   408   410   411   412   413   414   415
                416   417   418   419   420   421   422   423   424
                426   427   428   429   434   435   436   437   438
                439   440   447   448   449   452   457   458   459
 855  LCABN   *
 856  LCABNB  *
 857  LCABNZ  *
 859  LCASY   *
 860  LCASYB  *
 861  LCASYZ  *
 923  LCBSC   *
 924  LCBSCB  *
```

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925   LCBSCZ   *
919   LCCHN    *
920   LCCHNB   *
921   LCCHNZ   *
851   LCCRC    *
852   LCCRCB   *
853   LCCRCZ   *
895   LCCWB    *
896   LCCWBB   *
897   LCCWBZ   *
891   LCCWC    *
892   LCCWCB   *
893   LCCWCZ   *
899   LCCWD    *
900   LCCWDB   *
901   LCCWDZ   *
887   LCCWI    *
888   LCCWIB   *
889   LCCWIZ   *
903   LCCWP    *
904   LCCWPB   *
905   LCCWPZ   *
907   LCCWR    *
908   LCCWRB   *
909   LCCWRZ   *
883   LCCWS    *
884   LCCWSB   *
885   LCCWSZ   *
911   LCCWT    *
912   LCCWTB   *
913   LCCWTZ   *
835   LCIBA    *
836   LCIBAB   *
837   LCIBAZ   *
823   LCIBF    *
824   LCIBFB   *
825   LCIBFZ   *
831   LCIBL    *
832   LCIBLB   *
833   LCIBLZ   *
839   LCIC1    *
840   LCIC1B   *
841   LCIC1Z   *
843   LCIC2    *
844   LCIC2B   *
845   LCIC2Z   *
863   LCIKE    *
864   LCIKEB   *
865   LCIKEZ   *
931   LCITB    *
932   LCITBB   *
933   LCITBZ   *
353   LCJP      354   355   356   363   364   365   366   367   370
879   LCLCB    *
880   LCLCBB   *
881   LCLCBZ   *
927   LCLDB    *
928   LCLDBB   *
929   LCLDBZ   *
915   LCLTB    *
916   LCLTBB   *
917   LCLTBZ   *
875   LCOBA    *
876   LCOBAB   *
877   LCOBAZ   *
867   LCOBF    *
868   LCOBFB   *
869   LCOBFZ   *
871   LCOBL    *
872   LCOBLB   *
873   LCOBLZ   *
935   LCOKE    *
936   LCOKEB   *
937   LCOKEZ   *
847   LCRCC    *
848   LCRCCB   *
849   LCRCCZ   *
827   LCSMB    *
828   LCSMBB   *
829   LCSMBZ   *
503   LHW      *
1049  LSABN    *
1050  LSABNB   *
1051  LSABNZ   *
1057  LSASC    *
1058  LSASCB   *
1059  LSASCZ   *
1001  LSASY    *
1002  LSASYB   *
1003  LSASYZ   *
1069  LSBSC    *
1070  LSBSCB   *
1071  LSBSCZ   *
1013  LSCC1    *
1014  LSCC1B   *
```

```
1015  LSCC1Z   *
1017  LSCC2    *
1018  LSCC2B   *
1019  LSCC2Z   *
1061  LSCHN    *
1062  LSCHNB   *
1063  LSCHNZ   *
1053  LSCRC    *
1054  LSCRCB   *
1055  LSCRCZ   *
 985  LSCTA    *
 986  LSCTAB   *
 987  LSCTAZ   *
1041  LSDSF    *
1042  LSDSFB   *
1043  LSDSFZ   *
 989  LSDST    *
 990  LSDSTB   *
 991  LSDSTZ   *
1025  LSEPF    *
1026  LSEPFB   *
1027  LSEPFZ   *
1009  LSLSP    *
1010  LSLSPB   *
1011  LSLSPZ   *
 993  LSMOD    *
 994  LSMODB   *
 995  LSMODZ   *
1073  LSNTO    *
1074  LSNTOB   *
1075  LSNTOZ   *
 997  LSPAR    *
 998  LSPARB   *
 999  LSPARZ   *
1037  LSPLA    *
1038  LSPLAB   *
1039  LSPLAZ   *
 953  LSRCA    *
 954  LSRCAB   *
 955  LSRCAZ   *
 957  LSREM    *
 958  LSREMB   *
 959  LSREMZ   *
1033  LSRRS    *
1034  LSRRSB   *
1035  LSRRSZ   *
 949  LSRRT    *
 950  LSRRTB   *
 951  LSRRTZ   *
 961  LSRTO    *
 962  LSRTOB   *
 963  LSRTOZ   *
 965  LSSRS    *
 966  LSSRSB   *
 967  LSSRSZ   *
 981  LSSWS    *
 982  LSSWSB   *
 983  LSSWSZ   *
1021  LSTER    *
1022  LSTERB   *
1023  LSTERZ   *
 945  LSTHD    *
 946  LSTHDB   *
 947  LSTHDZ   *
 969  LSWCA    *
 970  LSWCAB   *
 971  LSWCAZ   *
 973  LSWEM    *
 974  LSWEMB   *
 975  LSWEMZ   *
1029  LSWRS    *
1030  LSWRSB   *
1031  LSWRSZ   *
 977  LSWTO    *
 978  LSWTOB   *
 979  LSWTOZ   *
1005  LSXMM    *
1006  LSXMMB   *
1007  LSXMMZ   *
1045  LSYNC    *
1046  LSYNCB   *
1047  LSYNCZ   *
1077  LSYNR    *
1078  LSYNRB   *
1079  LSYNRZ   *
1065  LSYNT    *
1066  LSYNTB   *
1067  LSYNTZ   *
 591  MAP      *
 588  MP        589   590   592   593   594   595
 592  MPMR0    *
 593  MPMR1    *
 594  MPMR2    *
 595  MPMR3    *
 468  MT        469   470   471   472   473   474   475   476   477
```

```
                  478   479   480   481   482   483   484   485   486
                  487   488   489   490   491   492   493   494   495
                  496   497   498   499   500   501   502   503   504
                  505   506   507   508   509   510   511   512   513
                  514   515   516   517   518   519   520   521   522
                  523   524
 502  NEG       *
 513  NINE       141   165
 505  ONE        157   181
   0  P           27    29    30    36    39    41    45    49    53
                  57    61    65    69    73    77    81    84    85
                  85    86    87    91    92    92    93    94    97
                  99   100   101   101   102   103   104   105   106
                 107   107   109   109   112   114   115   115   116
                 118   118   119   120   121   123   124   125   125
                 129   129   130   131   132   132   133   136   137
                 138   140   142   144   146   148   150   152   154
                 156   160   161   162   164   166   168   170   172
                 174   176   178   180   192   194   194   195   196
                 196   199   201   201   202   203   203   206   208
                 208   209
1329  PCBSL      *
1330  PCBSLB     *
1331  PCBSLZ     *
1317  PCCLN      *
1318  PCCLNB     *
1319  PCCLNZ     *
1341  PCCTD      *
1342  PCCTDB     *
1343  PCCTDZ     *
1321  PCECH      *
1322  PCECHB     *
1323  PCECHZ     *
13 3  PCLLN      *
13 4  PCLLNB     *
13 5  PCLLNZ     *
13 9  PCNTD      *
13 0  PCNTDB     *
13 1  PCNTDZ     *
1337  PCPCH      *
1338  PCPCHB     *
1339  PCPCHZ     *
1333  PCSWL      *
1334  PCSWLB     *
1335  PCSWLZ     *
1345  PCTYP      *
1346  PCTYPB     *
1347  PCTYPZ     *
1325  PCXMM      *
1326  PCXMMB     *
1327  PCXMMZ     *
 575  PIM1       *
 576  PIM2       *
 577  PIM3       *
 578  PIM4       *
 579  PIM5       *
 580  PIM6       *
 581  PIM7       *
 582  PIM8       *
 699  POST       *
1287  PSABN      *
1288  PSABNB     *
1289  PSABNZ     *
1239  PSASY      *
1240  PSASYB     *
1241  PSASYZ     *
 670  PSBADT     *
 666  PSBE       *
1299  PSB        *
1300  PSB  B     *
1301  PSB  Z     *
1251  PSC  L     *
1252  PSC  LB    *
1253  PSC  LZ    *
1255  PSC  C     *
1256  PSC  CB    *
1257  PSC  CZ    *
1291  PSCR       *
1292  PSCR B     *
1293  PSCR Z     *
1271  PSDE       *
1272  PSDE B     *
1273  PSDE Z     *
1279  PSDC       *
1280  PSDC B     *
1281  PSDC Z     *
1267  PSDWN      *
1268  PSDWNB     *
1269  PSDWNZ     *
 672  PSEND      *
1263  PSEFF      *
1264  PSEFFB     *
1265  PSEFFZ     *
1247  PSL        *
1248  PSL  B     *
```

```
1249   PSLSPZ   *
1231   PSMOD    *
1232   PSMODB   *
1233   PSMODZ   *
 671   PSNSEC   *
1235   PSPAR    *
1236   PSPARB   *
1237   PSPARZ   *
1275   PSPLA    *
1276   PSPLAB   *
1277   PSPLAZ   *
 667   PSPROT   *
1259   PSTER    *
1260   PSTERB   *
1261   PSTERZ   *
1243   PSXMM    *
1244   PSXMMB   *
1245   PSXMMZ   *
1283   PSYNC    *
1284   PSYNCB   *
1285   PSYNCZ   *
1303   PSYNR    *
1304   PSYNRB   *
1305   PSYNRZ   *
1295   PSYNT    *
1296   PSYNTB   *
1297   PSYNTZ   *
  32   PUSH     *
 228   PUTQ     *
 532   RA0      *
 533   RA1      *
 651   RADNR    *
 534   RB0      *
 535   RB1      *
 649   RFCB     *
 504   RHW      *
 645   ROPWD    *
 642   RSTPR    *
 650   RTIDB    *
  96   SETA     *
 111   SETB     *
 191   SETF     *
 511   SEVEN     145    169
 510   SIX       147    171
  26   SPACE    *
 135   SUBAT    *
 288   TBATSK   *
 287   TBCPTH   *
 274   TBENTY   *
 268   TBEVNT   *
 282   TBIO     *
 277   TBISA    *
 278   TBISB    *
 280   TBISP    *
 281   TBISRS   *
 294   TBIST    *
 279   TBISX    *
 292   TBKEY    *
 283   TBKN1    *
 284   TBKN2    *
 285   TBKN3    *
 293   TBMIMG   *
   0   TBMX0A   1467   1468
 291   TBNUCL   *
 267   TBPL     *
 269   TBRSA    *
 270   TBRSB    *
 289   TBRSE    *
 272   TBRSP    *
 273   TBRSTS   *
 271   TBRSX    *
 322   TBS0     *
 321   TBS1     *
 309   TBS10    *
 308   TBS11    *
 306   TBS12    *
 305   TBS13    *
 304   TBS14    *
 302   TBS15    *
 320   TBS2     *
 318   TBS3     *
 317   TBS4     *
 316   TBS5     *
 314   TBS6     *
 313   TBS7     *
 312   TBS8     *
 310   TBS9     *
 290   TBSIZ    *
 266   TBST     *
 286   TBTLC    *
 276   TBTMIN   *
 275   TBTMS    *
 265   TBTRD    *
1115   TCBSL    *
1116   TCBSLB   *
```

```
1117  TCBSLZ  *
1099  TCCLN   *
1100  TCCLNB  *
1101  TCCLNZ  *
1127  TCCON   *
1128  TCCONB  *
1129  TCCONZ  *
1095  TCC A   *
1096  TCC AB  *
1097  TCC AZ  *
1151  TCCTP   *
1152  TCCTPB  *
1153  TCCTPZ  *
1187  TCDCC   *
1188  TCDCCB  *
1189  TCDCCZ  *
1195  TCDTO   *
1196  TCDTOB  *
1197  TCDTOZ  *
1123  TCEOH   *
1124  TCEOHB  *
1125  TCEOHZ  *
1199  TCIPL   *
1200  TCID1B  *
1201  TCID1Z  *
1203  TCID2   *
1204  TCID2B  *
1205  TCID2Z  *
1171  TCLOF   *
1172  TCLOFB  *
1173  TCLOFZ  *
1103  TCLLN   *
1104  TCLLNB  *
1105  TCLLNZ  *
1143  TCNOD   *
1144  TCNODB  *
1145  TCNODZ  *
1139  TCNTD   *
1140  TCNTDB  *
1141  TCNTDZ  *
1107  TCPCH   *
1108  TCPCHB  *
1109  TCPCHZ  *
1135  TCRSC   *
1136  TCRBCB  *
1137  TCRBCZ  *
1191  TCRBF   *
1192  TCRBFB  *
1193  TCRBFZ  *
1175  TCRCA   *
1176  TCRCAB  *
1177  TCRCAZ  *
1155  TCRMD   *
1156  TCRMDB  *
1157  TCRMDZ  *
1091  TCRQH   *
1092  TCRQHB  *
1093  TCRQHZ  *
1163  TCRRS   *
1164  TCRRSB  *
1165  TCRRSZ  *
1179  TCSTO   *
1180  TCSTOB  *
1181  TCSTOZ  *
1111  TCSWL   *
1112  TCSWLB  *
1113  TCSWLZ  *
1087  TCTCD   *
1088  TCTCDB  *
1089  TCTCDZ  *
1147  TCTYP   *
1148  TCTYPB  *
1149  TCTYPZ  *
1131  TCWBC   *
1132  TCWBCB  *
1133  TCWBCZ  *
1183  TCWCA   *
1184  TCWCAB  *
1185  TCWCAZ  *
1159  TCWMD   *
1160  TCWMDB  *
1161  TCWMDZ  *
1167  TCWRS   *
1168  TCWRSB  *
1169  TCWRSZ  *
1119  TCXMM   *
1120  TCXMMB  *
1121  TCXMMZ  *
 514  TEN       139    163
 205  TESTF   *
 507  THRLE     153    177
1375  TIDSP   *
1376  TIDSPB  *
1377  TIDSPZ  *
1367  TIDNN   *
```

```
1368   TIDWNB   *
1369   TIDWNZ   *
1391   TINET    *
1392   TINETB   *
1393   TINETZ   *
1379   TIODN    *
1380   TIODNB   *
1381   TIODNZ   *
1387   TIODP    *
1388   TIODPB   *
1389   TIODPZ   *
1383   TIOSC    *
1384   TIOSCB   *
1385   TIOSCZ   *
1371   TISEC    *
1372   TISECB   *
1373   TISECZ   *
1359   TITU1    *
1360   TITU1B   *
1361   TITU1Z   *
1363   TITU2    *
1364   TITU2B   *
1365   TITU2Z   *
1221   TPFPA    *
1222   TPFPAB   *
1223   TPFPAZ   *
1213   TPRPA    *
1214   TPRPAB   *
1215   TPRPAZ   *
1217   TPWPA    *
1218   TPWPAB   *
1219   TPWPAZ   *
 506   TWO       155   179
 440   V$1MIN   *
 458   V$BFC    *
 366   V$BGLB   *
 363   V$BIC1   *
 392   V$BTB    *
 400   V$BTBM   *
 457   V$BVN    *
 408   V$CAM    *
 420   V$CKB    *
 448   V$CKIT   *
 387   V$CKPT   *
 380   V$CPL    *
 367   V$CRDM   *
 410   V$CRDR   *
 421   V$CRM    *
 381   V$CRS    *
 426   V$CTAD   *
 379   V$CTL    *
 418   V$CTMS   *
 364   V$DATE   *
 422   V$DSTB   *
 435   V$ERFG   *
 416   V$FGLB   *
 385   V$FLRS   *
 417   V$FREE   *
 401   V$GFCB   *
 397   V$IM     *
 447   V$IOA    *
 449   V$JCB    *
 356   V$JCFG   *
 370   V$JCTM   *
 354   V$JNAM   *
 436   V$JOP    *
 407   V$KEY    *
 355   V$LCNT   *
   0   V$LCW0   1537  1538
 390   V$LER    *
 423   V$LIT    *
 395   V$LLUP   *
 393   V$LPP    *
 386   V$LRSK   *
 389   V$LSAL   *
 414   V$LUNT   *
 394   V$LUP    *
 432   V$LUT1   *
 433   V$LUT2   *
 434   V$LUT3   *
 399   V$MAP    *
 404   V$MIMG   *
 398   V$MPM    *
 425   V$NCTR   *
 396   V$NPRG   *
 452   V$OCB    *
 415   V$OPCF   *
 388   V$OPCL   *
 424   V$PGT    *
 429   V$PIMN   *
 365   V$PLCT   *
 384   V$PTVB   *
 427   V$SCTL   *
 419   V$SCV    *
 434   V$SLFG   *
```

```
 403   V$ST0     *
 404   V$ST1     *
 405   V$ST2     *
 406   V$ST3     *
 382   V$TB      *
 411   V$TBGT    *
 459   V$TFC     *
 391   V$TJCP    *
 413   V$TMN     *
 412   V$TMS     *
 383   V$UTB     *
1480   VCL       1483
1478   VFU       1483
1479   VOP       1483
1476   VRD       1483
   0   VTPUSH      33     35
1477   VWT       1483
 697   X          232    254
 469   ZERO      *
```

```
000001 A      1 VORTEX SET     1                PUT LAST FOR VORTEX                                  V2  04 00001
              2 *   THIS IS A COPYRIGHTED PROGRAM, COPYRIGHT 1973 BY VARIAN DATA MACHINES              04 00002
              3 *                                                                                      04 00003
              4 *        V.D.M.    PART NO.      92L1105-057B                                          04 00004
              5 *                                                                                      04 00005
              6 *                                RELEASED      3-1-74                                  04 00006
              7 *                                                                                      04 00007
              8 *                                                                                      04 00008
              9 *                VT$IOC                                                                04 00009
             10 *                                                                                      04 00010
             11 *                                                                                      04 00011
             12          TITLE   VT$IOC                                                               04 00012
             13          NLIS                                                                         04 00013
           1443          LIST                                                                         ********
           1444 *                                                                                     04 00014
           1445          EJEC                                                                         04 00015
           1446 ********************************************************************************     04 00016
           1447 ********************************************************************************     04 00017
           1448 **       PROGRAM NAME -                                                         **    04 00018
           1449 **                VT$IOC - VTAM CCM REQUEST QUEUING PROGRAM                     **    04 00019
           1450 **                                                                              **    04 00020
           1451 **       DESCRIPTION -                                                          **    04 00021
           1452 **                VT$IOC IS INVOKED AS A CONSEQUENCE OF A COMMUNICATIONS        **    04 00022
           1453 **                IO REQUEST TO VORTEX IOC. VT$CCQ APPEARS TO IOC AS            **    04 00023
           1454 **                A DRIVER. VT$IOC REMOVES IO REQUESTS FROM THE VORTEX          **    04 00024
           1455 **                IOC REQUEST QUEUE IN THE CONTROLLER TABLE AND REQUEUES        **    04 00025
           1456 **                THEM TO THE APPROPRIATE VTAM IOC REQUEST QUEUES IN THE        **    04 00026
           1457 **                LINE SERVICE DESCRIPTORS.                                     **    04 00027
           1458 **                                                                              **    04 00028
           1459 ********************************************************************************     04 00029
           1460 ********************************************************************************     04 00030
           1461          EJEC                                                                         04 00031
           1462          NAME    VT$IOC                                                               04 00032
           1463          IFT     VORTEX-2                                                     V2      04 00033
           1464          GOTO    1                                                            V2      04 00034
           1465          EXT     V$MALC          ALLOCATE RQBLK                               V2      04 00035
           1466          EXT     V$MDAL          DEALLOCATE RQBLK                             V2      04 00036
           1467 1        CONT                                                                 V2      04 00037
           1468 *                                                                                     04 00038
           1469 *        PRESERVE REENTRANCY ON VTAM STACK                                            04 00039
           1470 *                                                                                     04 00040
           1471 VT$IOC   PUSH    CC00                                                                 04 00041
000000 100444 A
000001 100747 A
000002 002000 A
000003 000000 E
000004 000005 R
000005 000006 A 1472 CC00   DATA    6               NO. WORDS USED BY VT$CCQ                           04 00042
                1473 CC01   EINTS                                                                     04 00043
000006 100244 A
000007 100147 A
                1474 *        GET STACK ENTRY ADDRESS AND MAINTAIN A STACK POINTER IN (X)           04 00044
                1475 *                                                                               04 00045
                1476          EXT     VTSTAK                                                         04 00046
000010 006037 A 1477          LDXE    VTSTAK                                                         04 00047
000011 000000 E
       000001 A 1478 STACK    SET     X                                                              04 00048
                1479 *                                                                               04 00049
                1480 *        GET CONTROLLER TABLE ADDRESS                                           04 00050
                1481 *                                                                               04 00051
000012 020300 A 1482          LDB     V$CTL                                                          04 00052
       000002 A 1483 TIDB     SET     B                                                              04 00053
000013 026010 A 1484          LDB     TBRSTS,TIDB                                                    04 00054
       000002 A 1485 CTB      SET     B                                                              04 00055
000014 065006 A 1486          STB     6,STACK         SAVE CONTROLLER TABLE ADDR IN STACK            04 00056
                1487 *                                                                               04 00057
                1488 *        ZERO THE IO ALGORITHM VALUE IN THE CONTROLLER TABLE.                   04 00058
                1489 *        THE VALUE IN CTIOA REPRESENTS THE AMOUNT OF THE OVER ALL               04 00059
                1490 *        MEMORY ACCESSES WHICH ARE DEDICATED TO THE OPERATION OF                04 00060
                1491 *        THE COMMUNICATION HARDWARE DESCRIBED BY THE CONTROLLER TABLE.          04 00061
                1492 *        THIS VALUE IS ADDED TO THE SYSTEM IO ALGORITHM WHEN THE                04 00062
                1493 *        FIRST REQUEST FOR A CCM IS PROCESSED BY VORTEX IOC IN V$FNRM.          04 00063
                1494 *        SUBSEQUENT REQUESTS TO THE CCM WILL NOT CAUSE THE SYSTEM               04 00064
                1495 *        IO ALGORITHM TO BE INCREMENTED BECAUSE OF THE FOLLOWING                04 00065
                1496 *        CODE                                                                   04 00066
                1497 *                                                                               04 00067
000015 005001 A 1498          TZA                                                                    04 00068
000016 056007 A 1499          STA     CTIOA,CTB                                                      04 00069
                1500 *                                                                               04 00070
                1501 *        GET REQUEST ADDRESS                                                    04 00071
                1502 *                                                                               04 00072
000017 026004 A 1503          LDB     CTRQB,CTB                                                      04 00073
       000003 A 1504 RQST     SET     B                                                              04 00074
                1505 *                                                                               04 00075
                1506 *        IF RQST ADDRESS ZERO, GO TO EXIT                                       04 00076
                1507 *                                                                               04 00077
000020 001020 A 1508          JBZ     CC100                                                          04 00078
000021 000370 R
000022 065005 A 1509          STB     5,STACK         SAVE RQST ADDR IN STACK                        04 00079
                1510 *                                                                               04 00080
                1511 *        GET LCB ADDRESS                                                        04 00081
                1512 *                                                                               04 00082
000023 016002 A 1513          LDA     RFCB,RQST                                                      04 00083
000024 055007 A 1514          STA     7,STACK         SAVE LCB ADDRESS IN STACK                      04 00084
000025 005041 A 1515          TXA                                                          V2      04 00085
```

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000026 120423 A 1516          ADD     FOUR                                                    V2 04 00086
000027 055010 A 1517          STA     8,STACK       PUT FAKE LSD ADDR IN STACK IF ERROR       V2 04 00087
               1518 *                                                                             04 00088
               1519 *     DETHREAD REQUEST FROM CONTROLLER TABLE REQUEST THREAD                   04 00089
               1520 *                                                                             04 00090
               1521       DINTS                                                                   04 00091
000030 100444 A
000031 100747 A
000032 016004 A 1522          LDA     RADNR,RQST                                                 04 00092
000033 025006 A 1523          LDB     6,STACK                                                    04 00093
       000002 A 1524 CTB      SET     B                                                          04 00094
000034 056004 A 1525          STA     CTRQB,CTB                                                  04 00095
               1526          IFT     VORTEX-2                                                V2 04 00096
               1527          GOTO    1                                                       V2 04 00097
               1528          LDB     5,STACK       SET B=RQST                                V2 04 00098
               1529          LDB     RTIDB,B       SET B=USER TIDB                           V2 04 00099
               1530          LDA     TBKEY,B       GET MAP KEY                               V2 04 00100
               1531          ANA     BM17                                                    V2 04 00101
               1532          LDB     V$CTL                                                   V2 04 00102
               1533          STA     TBIST,B       STORE IN TIDB                             V2 04 00103
               1534          ORAI    040040                                                  V2 04 00104
               1535          OAR     MAP                                                     V2 04 00105
               1536          STA     V$ST0         SET IN LOW MEMORY                         V2 04 00106
               1537          ADD     BS5                                                     V2 04 00107
               1538          STA     V$ST1                                                   V2 04 00108
               1539          ADD     BS6                                                     V2 04 00109
               1540          STA     V$ST2                                                   V2 04 00110
               1541          ADD     BS7                                                     V2 04 00111
               1542          STA     V$ST3                                                   V2 04 00112
               1543 1        CONT                                                            V2 04 00113
               1544          EINTS                                                              04 00114
000035 100244 A
000036 100147 A
               1545 *                                                                             04 00115
               1546 *     VALIDATE LOGICAL LINE NUMBER FOR MAXIMUM VALUE                          04 00116
               1547 *                                                                             04 00117
000037 025007 A 1548          LDB     7,STACK                                                    04 00118
       000002 A 1549 LCB      SET     B                                                          04 00119
               1550          IFF     VORTEX-2                                                V2 04 00120
               1551          OME     MAP,V$ST3     SET EXEC STATE TO NN                      V2 04 00121
000040 016002 A 1552          LDA     2,LCB                                                      04 00122
               1553          IFF     VORTEX-2                                                V2 04 00123
               1554          OME     MAP,V$ST0     SET EXEC STATE TO 00                      V2 04 00124
000041 150463 A 1555          ANA     RHW                                                        04 00125
000042 055011 A 1556          STA     9,STACK       SAVE LOGICAL LINE NUMBER IN STACK            04 00126
000043 025006 A 1557          LDB     6,STACK                                                    04 00127
       000002 A 1558 DMT      SET     B                                                          04 00128
000044 026022 A 1559          LDB     DMLTA,DMT                                                  04 00129
       000002 A 1560 LTA      SET     B                                                          04 00130
000045 016000 A 1561          LDA     0,LTA         (A) = MAXIMUM LOG LINE NO                    04 00131
000046 145011 A 1562          SUB     9,STACK                                                    04 00132
000047 001002 A 1563          JAP     CC02          VALID LOGICAL LINE NUMBER                    04 00133
000050 000055 R
000051 006010 A 1564          LDAI    033           LOGICAL LINE NUMBER EXCEEDS MAXIMUM          04 00134
000052 000033 A
000053 001000 A 1565          JMP     CC20                                                       04 00135
000054 000343 R
               1566 *                                                                             04 00136
               1567 *     CHECK REQUEST FOR OPEN/CLOSE OPERATION CODE                             04 00137
               1568 *                                                                             04 00138
000055 025005 A 1569 CC02     LDB     5,STACK                                                    04 00139
       000002 A 1570 RQST     SET     B                                                          04 00140
               1571          FCTCHA  RQST,ROPWD,8,4                                             04 00141
000056 016001 A
000057 004350 A
000060 150472 A
000061 140466 A 1572          SUB     SIX                                                        04 00142
000062 001002 A 1573          JAP     CC09          OPEN/CLOSE REQUEST                           04 00143
000063 000106 R
               1574 *                                                                             04 00144
               1575 *     CHECK FOR PHYSICAL LINE OPEN                                            04 00145
               1576 *                                                                             04 00146
               1577 *     CALCULATE PHYSICAL ADDR OF LOGICAL LINE TABLE ENTRY                     04 00147
               1578 *                                                                             04 00148
000064 025006 A 1579          LDB     6,STACK                                                    04 00149
       000002 A 1580 DMT      SET     B                                                          04 00150
000065 015011 A 1581          LDA     9,STACK                                                    04 00151
000066 004301 A 1582          ASRA    1                                                          04 00152
000067 005111 A 1583          IAR                                                                04 00153
000070 126022 A 1584          ADD     DMLTA,DMT                                                  04 00154
000071 005012 A 1585          TAB                                                                04 00155
000072 016000 A 1586          LDA     0,B                                                        04 00156
000073 025011 A 1587          LDB     9,STACK                                                    04 00157
000074 006420 A 1588          BT      RB1+B0,CC03                                                04 00158
000075 000077 R
000076 004350 A 1589          LSRA    8                                                          04 00159
000077 150463 A 1590 CC03     ANA     RHW                                                        04 00160
000100 130463 A 1591          ERA     RHW                                                        04 00161
000101 001016 A 1592          JANZ    CC04                                                       04 00162
000102 000107 R
000103 006010 A 1593          LDAI    034           SET IO ERROR CODE 34                         04 00163
000104 000034 A
000105 001000 A 1594          JMP     CC20                                                       04 00164
000106 000343 R
               1595 *                                                                             04 00165
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                    1596 *       CALCULATE PHYSICAL LINE TABLE ENTRY ADDRESS                                    04 00166
                    1597 *                                                                                      04 00167
000107 130463 A     1598 CC04    ERA     RHW                                                                    04 00168
000110 005111 A     1599         IAR                                                                            04 00169
000111 025006 A     1600         LDB     6,STACK                                                                04 00170
       000002 A     1601 DMT     SET     B                                                                      04 00171
000112 126023 A     1602         ADD     DMPTA,DMT                                                              04 00172
000113 005012 A     1603         TAB                     (B) = ADDRESS OF PLT ENTRY                             04 00173
000114 016000 A     1604         LDA     0,B                                                                    04 00174
000115 001002 A     1605         JAP     CC05            LINE IS NOT DOWN                                       04 00175
000116 000123 R
000117 006010 A     1606         LDAI    035             LINE DOWN, RETURN ERROR CODE 35                        04 00176
000120 000035 A
000121 001000 A     1607         JMP     CC20                                                                   04 00177
000122 000343 R
000123 055010 A     1608 CC05    STA     8,STACK         SAVE LSD ADDRESS IN STACK                              04 00178
000124 065012 A     1609         STB     10,STACK        SAVE PLT ENTRY ADDRESS                                 04 00179
                    1610 *                                                                                      04 00180
                    1611 *       CHECK IF THE CTBL REFERENCED BY THE LUN IN THE REQUEST IS THE                  04 00181
                    1612 *       SAME AS CTBL REFERENCED BY THE PLT ENTRY FOR THE LOGICAL LINE                  04 00182
                    1613 *       NUMBER. (IN MULTIPLE DCM SYSTEM, THE PHYSICAL LINE ASSIGNED TO                 04 00183
                    1614 *       A LOGICAL LINE MUST BE CONSISTANT WITH THE DCM REFERENCED BY                   04 00184
                    1615 *       THE LOGICAL UNIT NUMBER IN THE REQUEST.                                        04 00185
                    1616 *                                                                                      04 00186
000125 005012 A     1617         TAB                                                                            04 00187
       000002 A     1618 LSD     SET     B                                                                      04 00188
000126 016012 A     1619         LDA     LSCTA,LSD                                                              04 00189
000127 145006 A     1620         SUB     6,STACK                                                                04 00190
000130 001010 A     1621         JAZ     CC05A                                                                  04 00191
000131 000136 R
000132 006010 A     1622         LDAI    033             ERROR CODE 033                                         04 00192
000133 000033 A
000134 001000 A     1623         JMP     CC20                                                                   04 00193
000135 000343 R
       000136 R     1624 CC05A   EQU     *                                                                      04 00194
                    1625 *       CHECK REQUEST OP CODE FOR FUNC                                                 04 00195
                    1626 *                                                                                      04 00196
000136 025005 A     1627         LDB     5,STACK                                                                04 00197
       000002 A     1628 RQST    SET     B                                                                      04 00198
                    1629         FETCHA  RQST,ROPWD,8,4                                                         04 00199
000137 016001 A
000140 004350 A
000141 150472 A
000142 140465 A     1630         SUB     FIVE                                                                   04 00200
000143 001016 A     1631         JANZ    CC06            NOT FUNC REQUEST                                       04 00201
000144 000164 R
                    1632 *                                                                                      04 00202
                    1633 *       EXAMINE FUNC CODE AND TRANSFER TO APPROPRIATE SUBROUTINE FOR                   04 00203
                    1634 *       PROCESSING                                                                     04 00204
                    1635 *                                                                                      04 00205
000145 025007 A     1636         LDB     7,STACK                                                                04 00206
       000002 A     1637 LCB     SET     B                                                                      04 00207
                    1638         IFF     VORTEX-2                                                       V2      04 00208
                    1639         OME     MAP,V$ST3       SET EXEC STATE TO NN                           V2      04 00209
000146 016002 A     1640         LDA     2,LCB                                                                  04 00210
                    1641         IFF     VORTEX-2                                                       V2      04 00211
                    1642         OME     MAP,V$ST0       SET EXEC STATE TO 00                           V2      04 00212
000147 004350 A     1643         LSRA    8                                                                      04 00213
000150 001010 A     1644         JAZ     CC12            STATUS FUNC                                            04 00214
000151 000243 R
000152 005311 A     1645         DAR                                                                            04 00215
000153 001010 A     1646         JAZ     CC14            CLEAR READ I/O                                         04 00216
000154 000267 R
000155 005311 A     1647         DAR                                                                            04 00217
000156 001010 A     1648         JAZ     CC15            CLEAR WRITE I/O                                        04 00218
000157 000302 R
000160 006140 A     1649         SUBI    19                                                                     04 00219
000161 000023 A
000162 001010 A     1650         JAZ     CC17            KILL I/O                                               04 00220
000163 000316 R
                    1651 *                                                                                      04 00221
                    1652 *       NOT AN IMMEDIATE FUNC                                                          04 00222
                    1653 *       THREAD REQUEST TO LSD REQUEST QUEUE                                            04 00223
                    1654 *                                                                                      04 00224
000164 015010 A     1655 CC06    LDA     8,STACK                                                                04 00225
                    1656         ADAT    LSRRT           FIND END OF LSD REQUEST QUEUE                          04 00226
000165 120421 A
                    1657         DINTS                                                                          04 00227
000166 100444 A
000167 100747 A
000170 005012 A     1658 CC07    TAB                                                                            04 00228
000171 016000 A     1659         LDA     0,B                                                                    04 00229
000172 001010 A     1660         JAZ     CC08                                                                   04 00230
000173 000177 R
                    1661         ADAT    RADNR                                                                  04 00231
000174 120423 A
000175 001000 A     1662         JMP     CC07                                                                   04 00232
000176 000170 R
000177 015005 A     1663 CC08    LDA     5,STACK         END OF THREAD ADDRESS IN (B)                           04 00233
000200 056000 A     1664         STA     0,B                                                                    04 00234
000201 005012 A     1665         TAB                                                                            04 00235
       000002 A     1666 RQST    SET     B                                                                      04 00236
000202 005001 A     1667         TZA                                                                            04 00237
000203 056004 A     1668         STA     RADNR,RQST      ZERO TERMINAL THREAD CELL                              04 00238
                    1669 *                                                                                      04 00239
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                    1670  *       GO BACK AND LOOK FOR ANOTHER REQUEST ON CTBL                                    04 00240
                    1671  *                                                                                       04 00241
000204 001000 A     1672          JMP       CC01                                                                  04 00242
000205 000006 R
                    1673          EJEC                                                                            04 00243
                    1674  *                                                                                       04 00244
                    1675  *       OPEN/CLOSE PROCESSING                                                           04 00245
                    1676  *                                                                                       04 00246
       000206 R     1677  CC09    EQU       *                                                                 V2  04 00247
                    1678          IFT       VORTEX-2                                                          V2  04 00248
                    1679          GOTO      1                                                                 V2  04 00249
                    1680          JSR       V$MALC,X        GET 5 WORDS                                       V2  04 00250
                    1681          DATA      5                                                                 V2  04 00251
                    1682          JAP       CC09A           IS SPACE AVAILABLE ?                              V2  04 00252
                    1683          DELAY     1               NO. DELAY 1 COUNT                                 V2  04 00253
                    1684          JMP       CC09            AND TRY AGAIN                                     V2  04 00254
                    1685  CC09A   TAB                       POINT B AT BLOCK                                  V2  04 00255
                    1686          LDXE      VTSTAK          RESTORE X                                         V2  04 00256
                    1687          LDA       6,STACK         GET CTBL ADDRESS                                  V2  04 00257
                    1688          LDX       5,STACK         POINT X AT RQBLK                                  V2  04 00258
                    1689          STB       0,X             SET RQBLK(0) = LCB                                V2  04 00259
                    1690          STA       4,B             SET LCB(4) = CTBL                                 V2  04 00260
                    1691          LDX       RFCB,X          POINT X AT LCB                                    V2  04 00261
                    1692          OME       MAP,V$ST2       SET EXEC STATE TO N0                              V2  04 00262
                    1693          LDA       0,X                                                               V2  04 00263
                    1694          STA       0,B                                                               V2  04 00264
                    1695          LDA       1,X                                                               V2  04 00265
                    1696          STA       1,B             MOVE LCB                                          V2  04 00266
                    1697          LDA       2,X                                                               V2  04 00267
                    1698          STA       2,B                                                               V2  04 00268
                    1699          LDA       3,X                                                               V2  04 00269
                    1700          STA       3,B                                                               V2  04 00270
                    1701          OME       MAP,V$ST0       SET EXEC STATE TO 00                              V2  04 00271
                    1702          LDXE      VTSTAK          RESTORE X                                         V2  04 00272
                    1703  1       CONT                                                                        V2  04 00273
                    1704          DINTS                                                                       V2  04 00274
000206 100444 A
000207 100747 A
                    1705          EXT       CC$OCM          OPEN/CLOSE REQUEST THREAD                             04 00275
000210 006017 A     1706          LDAE      CC$OCM          IF CC$OCM .NE. 0, VT$OCL IS ACTIVE AND                04 00276
000211 000000 E
000212 001016 A     1707          JANZ      CC10            DOES NOT NEED TO BE ACTIVATED                         04 00277
000213 000221 R
                    1708  *                                                                                       04 00278
                    1709  *       ACTIVATE CC$OCL WHICH SCHEDULES VT$OCL UNDER A DIFFERENT TIDB                   04 00279
                    1710  *                                                                                       04 00280
                    1711          EXT       TIDOCL          CC$OCL TIDB ADDRESS                                   04 00281
000214 006020 A     1712          LDBI      TIDOCL                                                                04 00282
000215 000000 E
000216 016001 A     1713          LDA       TBST,B                                                                04 00283
000217 150457 A     1714          ANA       BR14            CLEAR SUSPEND BIT IN TIDB STATUS WORD                 04 00284
000220 056001 A     1715          STA       TBST,B                                                                04 00285
                    1716  *                                                                                       04 00286
                    1717  *       THREAD OPEN/CLOSE REQUEST TO BOTTOM OF CC$OCM QUEUE                            04 00287
                    1718  *                                                                                       04 00288
000221 006010 A     1719  CC10    LDAI      CC$OCM                                                              04 00289
000222 000211 E
000223 005012 A     1720  CC11    TAB                                                                           04 00290
000224 016000 A     1721          LDA       0,B                                                                   04 00291
000225 001010 A     1722          JAZ       CC11A                                                                 04 00292
000226 000232 R
                    1723          ADAT      RADNR                                                                 04 00293
000227 120423 A
000230 001000 A     1724          JMP       CC11                                                                  04 00294
000231 000223 R
000232 015005 A     1725  CC11A   LDA       5,STACK                                                               04 00295
000233 056000 A     1726          STA       0,B                                                                   04 00296
000234 005012 A     1727          TAB                       ZERO TERMINAL THREAD ELEMENT                        04 00297
000235 005001 A     1728          TZA                                                                           04 00298
       000002 A     1729  RQST    SET       B                                                                   04 00299
000236 056004 A     1730          STA       RADNR,RQST                                                          04 00300
                    1731          IFT       VORTEX-1                                                          V2  04 00301
                    1732          GOTO      1                                                                 V2  04 00302
000237 016006 A     1733          LDA       6,STACK         STORE CONTROLLER TABLE ADDRESS                        04 00303
000240 056000 A     1734          STA       RSTPR,RQST      IN RSTPR                                              04 00304
                    1735  1       CONT                                                                        V2  04 00305
000241 001000 A     1736          JMP       CC01                                                                  04 00306
000242 000006 R
                    1737          EJEC                                                                            04 00307
                    1738  *                                                                                       04 00308
                    1739  *       FUNC CODE ZERO PROCESSING                                                       04 00309
                    1740  *                                                                                       04 00310
000243 025006 A     1741  CC12    LDB       6,STACK                                                               04 00311
       000002 A     1742  DMT     SET       B                                                                     04 00312
                    1743          DINTS                                                                         04 00313
000244 100444 A
000245 100747 A
                    1744  *                                                                                       04 00314
                    1745  *       GET STATUS PROCEDURE FROM CTBL AND STORE IN STATUS CALL                         04 00315
                    1746  *                                                                                       04 00316
000246 016020 A     1747          LDA       DMSTA,DMT                                                           04 00317
000247 054003 A     1748          STA       CC13            STATUS PROCEDURE ADDRESS                            04 00318
000250 035010 A     1749          LDX       8,STACK                                                             04 00319
                    1750          EXT       VTPUSH                                                              04 00320
000251 002 00 A     1751          JMPM      VTPUSH                                                              04 00321
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000252 000003 E
000253 000000 A 1752 CC13    DATA    0                                                                  04 00322
000254 006037 A 1753         LDXE    VTSTAK          RETURN WITH (B) SET TO STATUS                      04 00323
000255 000011 E
       000001 A 1754 STACK   SET     X                                                                  04 00324
000256 065011 A 1755         STB     9,STACK         SAVE STATUS IN STACK TEMPORARILY                   04 00325
000257 025010 A 1756         LDB     8,STACK                                                            04 00326
       000002 A 1757 LSD     SET     B                                                                  04 00327
000260 016013 A 1758         LDA     LSDST,LSD       PICK UP DYNAMIC STATUS                             04 00328
               1759          ANAN    5               AND OUT HARDWARE STATUS BITS                       04 00329
000261 006150 A
000262 177740 A
000263 115011 A 1760         ORA     9,STACK         OR IN NEW HARDWARE STATUS                          04 00330
000264 056013 A 1761         STA     LSDST,LSD       RESTORE IN LSDST                                   04 00331
000265 001000 A 1762         JMP     CC22            JUMP TO EXIT VIA CC$CRQ WITH (A) SET TO            04 00332
000266 000360 R
               1763 *                                STATUS                                             04 00333
               1764          EJEC                                                                       04 00334
               1765 *                                                                                   04 00335
               1766 *        IO CLEAR READ REQUEST                                                      04 00336
               1767 *                                                                                   04 00337
000267 025010 A 1768 CC14    LDB     8,STACK                                                            04 00338
       000002 A 1769 LSD     SET     B                                                                  04 00339
000270 010422 A 1770         LDA     TWO             SET IO CLEAR STATUS IN READ REQUEST STATUS         04 00340
               1771          SETA    LSD,LSRRS,LSRRSB,LSRRSZ                                            04 00341
000271 004250 A
000272 136016 A
000273 004350 A
000274 150467 A
000275 004250 A
000276 136016 A
000277 056016 A
000300 001000 A 1772         JMP     CC16                                                               04 00342
000301 000313 R
               1773          EJEC                                                                       04 00343
               1774 *                                                                                   04 00344
               1775 *        IO CLEAR WRITE REQUEST                                                     04 00345
               1776 *                                                                                   04 00346
000302 025010 A 1777 CC15    LDB     8,STACK                                                            04 00347
       000002 A 1778 LSD     SET     B                                                                  04 00348
000303 010422 A 1779         LDA     TWO             SET IO CLEAR STATUS IN WRITE REQUEST STATUS        04 00349
               1780          SETA    LSD,LSWRS,LSWRSB,LSWRSZ                                            04 00350
000304 004253 A
000305 136016 A
000306 004353 A
000307 150467 A
000310 004253 A
000311 136016 A
000312 056016 A
000313 005001 A 1781 CC16    TZA                     SET THIS REQUEST NO ERRORS                         04 00351
000314 001000 A 1782         JMP     CC20                                                               04 00352
000315 000343 R
               1783          EJEC                                                                       04 00353
               1784 *                                                                                   04 00354
               1785 *        KILL ALL IO ON LINE                                                        04 00355
               1786 *                                                                                   04 00356
               1787 CC17     DINTS                                                                      04 00357
000316 100444 A
000317 100747 A
000320 035010 A 1788         LDX     8,STACK                                                            04 00358
       000001 A 1789 LSD     SET     X                                                                  04 00359
000321 005001 A 1790         TZA                                                                        04 00360
000322 055002 A 1791         STA     LSRCA,LSD       CLEAR READ AND WRITE COMPLETION ADDRESSES          04 00361
000323 055006 A 1792         STA     LSWCA,LSD       RESPECTIVLY                                        04 00362
               1793 *                                                                                   04 00363
               1794 *        DETHREAD EACH REQUEST FROM LSRRT AND COMPLETE WITH DEVICE DOWN             04 00364
               1795 *        STATUS                                                                     04 00365
               1796 *                                                                                   04 00366
000324 025001 A 1797 CC18    LDB     LSRRT,LSD                                                          04 00367
       000002 A 1798 RQST    SET     B                                                                  04 00368
000325 001020 A 1799         JBZ     CC19            NO MORE REQUESTS LEFT                              04 00369
000326 000334 R
000327 010430 A 1800         LDA     BS7             SET IO CLEAR BIT                                   04 00370
               1801          EXT     CC$CRQ                                                             04 00371
000330 002000 A 1802         JMPM    CC$CRQ                                                             04 00372
000331 000000 E
               1803          IFT     VORTEX-2                                                    V2     04 00373
               1804          GOTO    1                                                           V2     04 00374
               1805          JOFN    CC18            TEST IF RQBLK SPACE MUST BE DEALLOCATED     V2     04 00375
               1806          STB     *+4                                                         V2     04 00376
               1807          JSR     V$MDAL,X        DEALLOCATE RQBLK SPACE                      V2     04 00377
               1808          DATA    6                                                           V2     04 00378
               1809          BSS     1                                                           V2     04 00379
               1810          LDXE    VTSTAK          RESTORE X                                   V2     04 00380
               1811          DINTS                                                               V2     04 00381
               1812 1        CONT                                                                V2     04 00382
000332 001000 A 1813         JMP     CC18                                                               04 00383
000333 000324 R
               1814 *                                                                                   04 00384
               1815 *        ALL REQUESTS COMPLETED, DOWN THE LINE                                      04 00385
               1816 *                                                                                   04 00386
000334 006037 A 1817 CC19    LDXE    VTSTAK                                                             04 00387
000335 000255 E
       000001 A 1818 STACK   SET     X                                                                  04 00388
000336 025012 A 1819         LDB     10,STACK                                                           04 00389
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000337 016000 A 1820          LDA     0,B
000340 110440 A 1821          ORA     BS15          SET DOWN BIT IN PLT ENTRY
000341 056000 A 1822          STA     0,B
000342 005001 A 1823          TZA                   FALL THRU TO CC20 TO COMPLETE RQST
               1824          EJEC
               1825 *
               1826 *        COMPLETE REQUEST VIA CC$ORQ
               1827 *        (A) = IOC ERROR CODE (RIGHT JUSTIFIED)
               1828 *
               1829 CC20     DINTS
000343 100444 A
000344 100747 A
000345 001010 A 1830          JAZ     CC21
000346 000352 R
000347 004251 A 1831          LRLA    9             ADJUST ERROR CODE
000350 006110 A 1832          ORAI    0640          SET CC = 5 (ERROR) AND SET 'E' BIT
000351 000640 A
000352 025005 A 1833 CC21     LDB     5,STACK
       000002 A 1834 RQST     SET     B
000353 035010 A 1835          LDX     8,STACK
       000001 A 1836 LSD      SET     X
               1837          EXT     CC$ORQ
000354 002000 A 1838          JMPM    CC$ORQ
000355 000000 E
               1839          IFF     VORTEX-2                                  V2
               1840          JMP     CC25                                      V2
               1841          IFF     VORTEX-1                                  V2
000356 001000 A 1842          JMP     CC01
000357 000006 R
               1843          EJEC
               1844 *
               1845 *        COMPLETE REQUEST VIA CC$CRQ
               1846 *        (A) = 16-BIT EXTENDED STATUS
               1847 *
               1848 CC22     DINTS
000360 100444 A
000361 100747 A
000362 025005 A 1849          LDB     5,STACK
       000002 A 1850 RQST     SET     B
000363 035010 A 1851          LDX     8,STACK
       000001 A 1852 LSD      SET     X
               1853          EXT     CC$CRQ
000364 002000 A 1854          JMPM    CC$CRQ
000365 000331 E
               1855          IFT     VORTEX-2                                  V2
               1856          GOTO    1                                         V2
               1857 CC25     JOFN    CC01          TEST DEALLOCATE             V2
               1858          STB     *+4                                       V2
               1859          JSR     V$MDAL,X      DEALLOCATE RQBLK            V2
               1860          DATA    6                                         V2
               1861          BSS     1                                         V2
               1862 1        CONT                                              V2
000366 001000 A 1863          JMP     CC01
000367 000006 R
               1864          EJEC
               1865 *
               1866 *        EXIT VT$CCQ
               1867 *
000370 006010 A 1868 CC100    LDAI    CC101         SET UP TO POP STACK
000371 000375 R
000372 055004 A 1869          STA     4,STACK       SET STACK 'P' TO RETURN
               1870          EXT     VTPOP
000373 001100 A 1871          JMP     VTPOP
000374 000000 E
               1872 CC101    DINTS
000375 100444 A
000376 100747 A
000377 030300 A 1873          LDX     V$CTL         SET SUSPEND IN TIDB
       000001 A 1874 TIDB     SET     X
000400 015001 A 1875          LDA     TBST,TIDB
000401 110437 A 1876          ORA     BS14
000402 055001 A 1877          STA     TBST,TIDB
000403 025010 A 1878          LDB     TIDSTS,TIDB
       000002 A 1879 CTB      SET     B
               1880          CLEARF  CTB,CTACT,CTACTB,CTACTZ
000404 016000 A
000405 150460 A
000406 056000 A
               1881          EXT     CC$ACE        ACTIVATE
000407 002000 A 1882          JMPM    CC$ACE        COM EXECUTIVE
000410 000000 E
               1883 *
               1884 *        SET CC$RCF FOR COM EXEC AND GO TO IOC COMPLETION
               1885 *
               1886          EXT     CC$RCF
000411 006047 A 1887          INRE    CC$RCF
000412 000000 E
               1888          EXT     V$FNRM
000413 001100 A 1889          JMP     V$FNRM
000414 000000 E
               1890          END

ENTRY NAMES
000000 R VT$IOC
EXTERNAL NAMES
000410 E CC$ACE 000365 E CC$CRQ 000222 E CC$DCM 000355 E CC$ORQ
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000412 E CC$RCF  000215 E TIOOCL  000414 E V$FNRM  000374 E VTPOP
000252 E VTPUSH  000335 E VTSTAK
SYMBOLS
000044 A APIM    000002 A B       000000 A B0      000001 A B1
000012 A B10     000013 A B11     000014 A B12     000015 A B13
000016 A B14     000017 A B15     000002 A B2      000003 A B3
000004 A B4      000005 A B5      000006 A B6      000007 A B7
000010 A B8      000011 A B9      000000 A BICNUM  000421 A BM1
000472 A BM17    000475 A BM177   000477 A BM1777  000464 A BM3
000473 A BM37    000463 A BM377   000467 A BM7     000474 A BM77
000476 A BM777   000441 A BR0     000442 A BR1     000453 A BR10
000454 A BR11    000455 A BR12    000456 A BR13    000457 A BR14
000460 A BR15    000443 A BR2     000444 A BR3     000445 A BR4
000446 A BR5     000447 A BR6     000450 A BR7     000451 A BR8
000452 A BR9     000421 A BS0     000422 A BS1     000433 A BS10
000434 A BS11    000435 A BS12    000436 A BS13    000437 A BS14
000440 A BS15    000423 A BS2     000424 A BS3     000425 A BS4
000426 A BS5     000427 A BS6     000430 A BS7     000431 A BS8
000432 A BS9     000410 E CC$ACE  000365 E CC$CRQ  000222 E CC$DCM
000355 E CC$DRQ  000412 E CC$RCF  000005 R CC00    000006 R CC01
000055 R CC02    000077 R CC03    000107 R CC04    000123 R CC05
000136 R CC05A   000164 R CC06    000170 R CC07    000177 R CC08
000206 R CC09    000221 R CC10    000370 R CC100   000375 R CC101
000223 R CC11    000232 R CC11A   000243 R CC12    000253 R CC13
000267 R CC14    000302 R CC15    000313 R CC16    000316 R CC17
000324 R CC18    000334 R CC19    000343 R CC20    000352 R CC21
000360 R CC22    000000 A CHAFP   000000 A CHAFPB  000020 A CHAFPZ
000001 A CHARP   000000 A CHARPB  000020 A CHARPZ  000002 A CHCFP
000000 A CHCFPB  000020 A CHCFPZ  000003 A CHCRP   000000 A CHCRPB
000020 A CHCRPZ  000004 A CHRBL   000000 A CHRBLB  000020 A CHRBLZ
000047 A CLOCK   000000 A COTAD1  000000 A CTACT   000017 A CTACTB
000001 A CTACTZ  000001 A CTADN   000000 A CTADNB  000020 A CTADNZ
000002 A CTB     000011 A CTBIC   000000 A CTBICB  000020 A CTBICZ
000003 A CTDST   000000 A CTDSTB  000020 A CTDSTZ  000006 A CTDVA
000000 A CTDVAB  000020 A CTDVAZ  000012 A CTFCB   000000 A CTFCBB
000020 A CTFCBZ  000014 A CTFRC   000010 A CTFRCB  000010 A CTFRCZ
000014 A CTFRE   000000 A CTFREB  000010 A CTFREZ  000000 A CTIDB
000000 A CTIDBB  000017 A CTIDBZ  000007 A CTIOA   000000 A CTIOAB
000020 A CTIOAZ  000002 A CTOPM   000000 A CTOPMB  000020 A CTOPMZ
000005 A CTRCN   000000 A CTRCNB  000010 A CTRCNZ  000004 A CTRQB
000000 A CTRQBB  000020 A CTRQBZ  000005 A CTRTR   000010 A CTRTRB
000010 A CTRTRZ  000010 A CTSTA   000000 A CTSTAB  000020 A CTSTAZ
000013 A CTWDS   000000 A CTWDSB  000020 A CTWDSZ  000001 A DCBUFF
000003 A DCCHR   000000 A DCCHRB  000020 A DCCHRZ  000002 A DCCNT
000000 A DCRECL  000747 A DISCLK  000745 A DISMP   000444 A DISPIM
000026 A DMBCA   000000 A DMBCAB  000020 A DMBCAZ  000024 A DMCWA
000000 A DMCWAB  000020 A DMCWAZ  000017 A DMFPA   000000 A DMFPAB
000020 A DMFPAZ  000021 A DMLCA   000000 A DMLCAB  000020 A DMLCAZ
000022 A DMLTA   000000 A DMLTAB  000020 A DMLTAZ  000023 A DMPTA
000000 A DMPTAB  000020 A DMPTAZ  000016 A DMRPA   000000 A DMRPAB
000020 A DMRPAZ  000020 A DMSTA   000000 A DMSTAB  000020 A DMSTAZ
000025 A DMSWA   000000 A DMSWAB  000020 A DMSWAZ  000002 A DMT
000015 A DMTPA   000000 A DMTPAB  000020 A DMTPAZ  000002 A DSCTAD
000000 A DSDASS  000000 A DSDVDN  000002 A DSLCKO  000001 A DSNAME
000000 A DSNORQ  000002 A DSOPCM  000002 A DSPSTI  000002 A DSREWD
000000 A DSUNAM  000002 A DSUNTN  000424 A EIGHT   000147 A ENACLK
000645 A ENAMP   000244 A ENAPIM  000465 A FIVE    000423 A FOUR
000003 A IBIBF   000017 A IBIBFB  000001 A IBIBFZ  000003 A IBLAS
000000 A IBLASB  000017 A IBLASZ  000001 A IBLEN   000000 A IBLENB
000020 A IBLENZ  000000 A IBLNK   000000 A IBLNKB  000020 A IBLNKZ
000002 A IBSTA   000000 A IBSTAB  000020 A IBSTAZ  000004 A IBSTS
000000 A IBSTSB  000017 A IBSTSZ  000300 A LC      000003 A LCABN
000013 A LCABNB  000001 A LCABNZ  000003 A LCASY   000012 A LCASYB
000001 A LCASYZ  000002 A LCB     000007 A LCBSC   000015 A LCBSCB
000001 A LCBSCZ  000007 A LCCHN   000016 A LCCHNB  000001 A LCCHNZ
000003 A LCCRC   000014 A LCCRCB  000003 A LCCRCZ  000006 A LCCWB
000014 A LCCWBB  000001 A LCCWBZ  000006 A LCCWC   000015 A LCCWCB
000001 A LCCWCZ  000006 A LCCWD   000013 A LCCWDB  000001 A LCCWDZ
000006 A LCCWI   000016 A LCCWIB  000001 A LCCWIZ  000006 A LCCWP
000012 A LCCWPB  000001 A LCCWPZ  000006 A LCCWR   000011 A LCCWRB
000001 A LCCWRZ  000006 A LCCWS   000017 A LCCWSB  000001 A LCCWSZ
000006 A LCCWT   000010 A LCCWTB  000001 A LCCWTZ  000001 A LCIBA
000000 A LCIBAB  000017 A LCIBAZ  000000 A LCIBF   000017 A LCIBFB
000001 A LCIBFZ  000000 A LCIBL   000000 A LCIBLB  000014 A LCIBLZ
000002 A LCIC1   000010 A LCIC1B  000010 A LCIC1Z  000002 A LCIC2
000000 A LCIC2B  000010 A LCIC2Z  000003 A LCIKE   000000 A LCIKEB
000004 A LCIKEZ  000007 A LCITB   000013 A LCITBB  000001 A LCITBZ
000050 A LCJP    000006 A LCLCB   000000 A LCLCBB  000020 A LCLCBZ
000007 A LCLDB   000014 A LCLDBB  000001 A LCLDBZ  000007 A LCLTB
000017 A LCLTBB  000001 A LCLTBZ  000005 A LCOBA   000000 A LCOBAB
000017 A LCOBAZ  000004 A LCOBF   000017 A LCOBFB  000001 A LCOBFZ
000004 A LCOBL   000000 A LCOBLB  000014 A LCOBLZ  000007 A LCOKE
000000 A LCOKEB  000004 A LCOKEZ  000003 A LCRCC   000017 A LCRCCB
000001 A LCRCCZ  000000 A LCSMB   000016 A LCSMBB  000001 A LCSMBZ
000462 A LHW     000017 A LSABN   000015 A LSABNB  000001 A LSABNZ
000017 A LSASC   000011 A LSASCB  000001 A LSASCZ  000014 A LSASY
000013 A LSASYB  000001 A LSASYZ  000020 A LSBSC   000016 A LSBSCB
000001 A LSBSCZ  000015 A LSCC1   000010 A LSCC1B  000010 A LSCC1Z
000015 A LSCC2   000000 A LSCC2B  000010 A LSCC2Z  000017 A LSCHN
000010 A LSCHNB  000001 A LSCHNZ  000017 A LSCRC   000012 A LSCRCB
000003 A LSCRCZ  000012 A LSCTA   000000 A LSCTAB  000020 A LSCTAZ
000001 A LSD     000017 A LSDSF   000017 A LSDSFB  000001 A LSDSFZ
000013 A LSDST   000000 A LSDSTB  000020 A LSDSTZ  000016 A LSEPF
000016 A LSEPFB  000001 A LSEPFZ  000014 A LSLSP   000000 A LSLSPB
000011 A LSLSPZ  000014 A LSMOD   000016 A LSMODB  000002 A LSMODZ
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000020 A LSNTO   000010 A LSNTOB 000006 A LSNTOZ 000014 A LSPAR
000014 A LSPARB 000002 A LSPARZ 000016 A LSPLA  000000 A LSPLAB
000010 A LSPLAZ 000002 A LSRCA  000000 A LSRCAB 000020 A LSRCAZ
000003 A LSREM  000000 A LSREMB 000020 A LSREMZ 000016 A LSRRS
000010 A LSRRSB 000003 A LSRRSZ 000001 A LSRRT  000000 A LSRRTB
000020 A LSRRTZ 000004 A LSRTO  000000 A LSRTOB 000020 A LSRTOZ
000005 A LSSRS  000000 A LSSRSB 000020 A LSSRSZ 000011 A LSSWS
000000 A LSSWSB 000020 A LSSWSZ 000016 A LSTER  000017 A LSTERB
000001 A LSTERZ 000000 A LSTHD  000000 A LSTHDB 000020 A LSTHDZ
000006 A LSWCA  000006 A LSWCAB 000020 A LSWCAZ 000007 A LSWEM
000000 A LSWEMB 000020 A LSWEMZ 000016 A LSWRS  000013 A LSWRSB
000003 A LSWRSZ 000010 A LSWTO  000000 A LSWTOB 000020 A LSWTOZ
000014 A LSXMM  000011 A LSXMMB 000002 A LSXMMZ 000017 A LSYNC
000016 A LSYNCB 000001 A LSYNCZ 000020 A LSYNR  000000 A LSYNRB
000010 A LSYNRZ 000017 A LSYNT  000000 A LSYNTB 000010 A LSYNTZ
000002 A LTA    000046 A MAP    000045 A MP     000045 A MPMR0
000145 A MPMR1  000245 A MPMR2  000345 A MPMR3  000420 A MT
000461 A NEG    000470 A NINE   000421 A ONE    000001 A PCBSL
000011 A PCBSLB 000001 A PCBSLZ 000000 A PCCLN  000000 A PCCLNB
000010 A PCCLNZ 000002 A PCCTP  000014 A PCCTPB 000004 A PCCTPZ
000001 A PCECH  000014 A PCECHB 000001 A PCECHZ 000000 A PCLLN
000010 A PCLLNB 000010 A PCLLNZ 000002 A PCNTD  000000 A PCNTDB
000004 A PCNTDZ 000001 A PCPCH  000000 A PCPCHB 000010 A PCPCHZ
000001 A PCSWL  000010 A PCSWLB 000001 A PCSWLZ 000002 A PCTYP
000010 A PCTYPB 000004 A PCTYPZ 000001 A PCXMM  000012 A PCXMMB
000002 A PCXMMZ 000040 A PIM1   000041 A PIM2   000042 A PIM3
000043 A PIM4   000040 A PIM5   000040 A PIM6   000040 A PIM7
000040 A PIM8   000200 A POST   000003 A PSABN  000015 A PSABNB
000001 A PSABNZ 000000 A PSASY  000013 A PSASYB 000001 A PSASYZ
000002 A PSBADT 000000 A PSBEG  000004 A PSBSC  000016 A PSBSCB
000016 A PSBSCZ 000001 A PSCC1  000010 A PSCC1B 000010 A PSCC1Z
000001 A PSCC2  000000 A PSCC2B 000010 A PSCC2Z 000003 A PSCRC
000012 A PSCRCB 000003 A PSCRCZ 000002 A PSDEF  000010 A PSDEFB
000001 A PSDEFZ 000003 A PSDSF  000017 A PSDSFB 000001 A PSDSFZ
000002 A PSDWN  000011 A PSDWNB 000001 A PSDWNZ 000004 A PSEND
000002 A PSEPF  000016 A PSEPFB 000001 A PSEPFZ 000000 A PSLSP
000000 A PSLSPB 000011 A PSLSPZ 000000 A PSMOD  000016 A PSMODB
000002 A PSMODZ 000003 A PSNSEC 000000 A PSPAR  000014 A PSPARB
000002 A PSPARZ 000002 A PSPLA  000000 A PSPLAB 000010 A PSPLAZ
000001 A PSPROT 000002 A PSTER  000017 A PSTERB 000001 A PSTERZ
000000 A PSXMM  000011 A PSXMMB 000002 A PSXMMZ 000003 A PSYNC
000016 A PSYNCB 000001 A PSYNCZ 000004 A PSYNR  000000 A PSYNRB
000010 A PSYNRZ 000003 A PSYNT  000000 A PSYNTB 000010 A PSYNTZ
000040 A RA0    000000 A RA1    000004 A RADNR  000060 A RB0
000020 A RB1    000002 A RFCB   000463 A RHW    000001 A ROPWD
000002 A RQST   000100 A RSTPR  000003 A RTIDB  000467 A SEVEN
000466 A SIX    000101 A STACK  000027 A TBATSK 000026 A TBCPTH
000011 A TBENTY 000103 A TBEVNT 000021 A TBID   000014 A TBISA
000015 A TBISB  000017 A TBISP  000020 A TBISRS 000034 A TBIST
000016 A TBISX  000032 A TBKEY  000022 A TBKN1  000023 A TBKN2
000024 A TBKN3  000033 A TBMIMG 000032 A TBNUCL 000002 A TBPL
000004 A TBRSA  000005 A TBRSB  000030 A TBRSC  000007 A TBRSP
000010 A TBRSTS 000006 A TBRSX  000000 A TBS0   000001 A TBS1
000012 A TBS10  000013 A TBS11  000014 A TBS12  000015 A TBS13
000016 A TBS14  000017 A TBS15  000002 A TBS2   000003 A TBS3
000004 A TBS4   000005 A TBS5   000006 A TBS6   000007 A TBS7
000010 A TBS8   000011 A TBS9   000031 A TBSIZ  000001 A TBST
000025 A TBTLC  000013 A TBTMIN 000012 A TBTMS  000000 A TBTRD
000004 A TCBSL  000011 A TCBSLB 000001 A TCBSLZ 000003 A TCCLN
000000 A TCCLNB 000010 A TCCLNZ 000004 A TCCON  000015 A TCCONB
000001 A TCCONZ 000002 A TCCTA  000000 A TCCTAB 000020 A TCCTAZ
000005 A TCCTP  000014 A TCCTPB 000004 A TCCTPZ 000012 A TCIOC
000000 A TCIOCB 000020 A TCIOCZ 000014 A TCIOD  000000 A TCIODB
000020 A TCIODZ 000004 A TCPCH  000014 A TCPCHB 000001 A TCPCHZ
000015 A TCID1  000000 A TCID1B 000020 A TCID1Z 000016 A TCID2
000000 A TCID2B 000020 A TCID2Z 000006 A TCLDF  000014 A TCLDFB
000001 A TCLDFZ 000003 A TCLLN  000010 A TCLLNB 000010 A TCLLNZ
000005 A TCNOD  000004 A TCNODB 000004 A TCNODZ 000005 A TCNTD
000000 A TCNTDB 000004 A TCNTDZ 000004 A TCPCH  000000 A TCPCHB
000010 A TCPCHZ 000004 A TCPTP  000017 A TCRBCB 000001 A TCRBCZ
000013 A TCRBF  000000 A TCRBTI 000020 A TCRBFZ 000007 A TCRCA
000000 A TCRCAB 000020 A TCRCAZ 000006 A TCRLD  000000 A TCRMDB
000003 A TCRMDZ 000001 A TCRQH  000000 A TCRQHB 000020 A TCRQHZ
000006 A TCRRS  000006 A TCRTB  000003 A TCRTIZ 000010 A TCSTO
000000 A TCSTOB 000020 A TCSTOZ 000004 A TCSWL  000013 A TCSWLB
000001 A TCSWLZ 000000 A TCTCA  000000 A TCTCDB 000000 A TCTCDZ
000005 A TCTYP  000010 A TCTYPB 000004 A TCTYPZ 000001 A TCWBC
000016 A TCWBCB 000001 A TCWBCZ 000011 A TCWCA  000000 A TCWCAB
000020 A TCWCAZ 000006 A TCWMD  000003 A TCWMDB 000003 A TCWMDZ
000006 A TCWRS  000011 A TCWRTB 000003 A TCWRTZ 000004 A TCXMM
000012 A TCXMMB 000002 A TCXMQ  000471 A TEM    000464 A TMPEE
000001 A TIDB   000215 E TIDCL  000002 A TIDSP  000000 A TIDSPB
000007 A TIDSPZ 000002 A TIMER  000017 A TIOWNB 000001 A TIOWNZ
000000 A TINET  000000 A TINETB 000020 A TINETZ 000003 A TIODH
000017 A TIODNB 000001 A TIODNZ 000003 A TIODP  000000 A TIODPB
000007 A TIODPZ 000003 A TIOSC  000007 A TIOSTP 000010 A TIOSTZ
000002 A TISEC  000007 A TISTCB 000010 A TITCEL 000000 A TITU1
000000 A TITU1B 000020 A TITU1Z 000001 A TITU2  000000 A TITU2B
000020 A TITU2Z 000017 A TPFFA  000000 A TPFFAB 000000 A TPFFAZ
000015 A TPRPA  000000 A TPRPAB 000020 A TPRPAZ 000016 A TPWPA
000000 A TPWPAB 000020 A TPWPAZ 000422 A TUQ    000403 A VTAMIN
000415 A VTBFC  000075 A VTDGAB 000056 A VTELIC 000373 A VTETB
000331 A VTETBM 000414 A VTEVN  000334 A VTCAM  000343 A VTCTB
000411 A VTCKIT 000310 A VTCMST 000301 A VTFPL  000075 A VTCRDM
000341 A VTCPDR 000354 A VTCPM  000302 A VTCPQ  000343 A VTCTAD
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000300 A V$CTL   000351 A V$CTMS 000070 A V$DATE 000355 A V$DSTB
000376 A V$ERFG  000347 A V$FGLB 000306 A V$FLRS 000414 E V$FNRM
000350 A V$FREE  000332 A V$GFCB 000320 A V$IM   000410 A V$IOA
000412 A V$JCB   000055 A V$JCFG 000077 A V$JCTM 000050 A V$JNAM
000377 A V$JOP   000340 A V$KEY  000054 A V$LCNT 000313 A V$LER
000356 A V$LIT   000317 A V$LLUP 000317 A V$LPP  000307 A V$LRSK
000312 A V$LSAL  000345 A V$LUNT 000316 A V$LUP  000400 A V$LUT1
000401 A V$LUT2  000402 A V$LUT3 000330 A V$MAP  000333 A V$MIMG
000330 A V$MPM   000362 A V$NCTR 000316 A V$NPAG 000413 A V$OCB
000346 A V$OPCF  000311 A V$OPCL 000357 A V$PGT  000363 A V$PIMN
000074 A V$PLCT  000305 A V$PTVB 000361 A V$SCTL 000352 A V$SCV
000375 A V$SLFG  000334 A V$ST0  000335 A V$ST1  000336 A V$ST2
000337 A V$ST3   000303 A V$TB   000342 A V$TBGT 000416 A V$TFC
000314 A V$TJCP  000344 A V$TMN  000343 A V$TMS  000304 A V$UTB
000001 A VORTEX  000000 R VT$IOC 000374 E VTPOP  000252 E VTPUSH
000335 E VTSTAK  000001 A X      000420 A ZERO
  0 ERRORS ASSEMBLY COMPLETE
```

```
1467  1       *
 159  ADAT    *
  38  ANAM    *
  90  ANAN    *
 574  APIM      584   585
 108  B          98   117   229   230   252   255   257  1483  1485
               1504  1524  1529  1530  1533  1549  1558  1560  1570
               1580  1586  1601  1604  1618  1628  1637  1659  1664
               1666  1690  1694  1696  1698  1700  1713  1715  1721
               1726  1729  1742  1757  1769  1778  1798  1820  1822
               1834  1850  1879
  88  B&         82
  83  B&0        40
  80  B&1        78
  44  B&10       42
  76  B&2        74
  72  B&3        70
  68  B&4        66
  64  B&5        62
  60  B&6        58
  56  B&7        54
  52  B&8        50
  48  B&9        46
 543  B0       1588
 544  B1       *
 553  B10      *
 554  B11      *
 555  B12      *
 556  B13      *
 557  B14      *
 558  B15      *
 545  B2       *
 546  B3       *
 547  B4       *
 548  B5       *
 549  B6       *
 550  B7       *
 551  B8       *
 552  B9       *
 630  BICNUM   *
 515  BM1        79
 518  BM17       67  1531
 521  BM177      55
 524  BM1777     43
 516  BM3        75
 519  BM37       63
 522  BM377      51
 517  BM7        71
 520  BM77       59
 523  BM777      47
 486  BR0      202
 487  BR1      *
 496  BR10     *
 497  BR11     *
 498  BR12     *
 499  BR13     *
 500  BR14     1714
 501  BR15     *
 488  BR2      *
 489  BR3      *
 490  BR4      *
 491  BR5      *
 492  BR6      *
 493  BR7      *
 494  BR8      *
 495  BR9      *
 470  BS0        195   209
 471  BS1      *
 480  BS10     *
 481  BS11     *
 482  BS12     *
 483  BS13     *
 484  BS14     1876
 485  BS15     1821
 472  BS2      *
 473  BS3      *
```

```
 474   BS4       *
 475   BS5       1537
 476   BS6       1539
 477   BS7       1541   1800
 478   BS8       *
 479   BS9       *
   0   CC$ACE    1881   1882
   0   CC$CRQ    1801   1802   1853   1854
   0   CC$DCM    1705   1706   1719
   0   CC$DRQ    1837   1838
   0   CC$RCF    1886   1887
1472   CC00      1471
1473   CC01      1672   1736   1842   1857   1863
1569   CC02      1563
1596   CC03      1588
1598   CC04      1592
1608   CC05      1605
1624   CC05A     1621
1655   CC06      1631
1658   CC07      1662
1663   CC08      1660
1677   CC09      1573   1684
1685   CC09A     1682
1719   CC10      1707
1868   CC100     1508
1872   CC101     1868
1720   CC11      1724
1725   CC11A     1722
1741   CC12      1644
1752   CC13      1748
1768   CC14      1646
1777   CC15      1648
1781   CC16      1772
1787   CC17      1650
1797   CC18      1805   1813
1817   CC19      1799
1829   CC20      1565   1594   1607   1623   1782
1833   CC21      1830
1848   CC22      1762
1857   CC25      1840
1397   CHAFP     *
1398   CHAFPB    *
1399   CHAFPZ    *
1401   CHARP     *
1402   CHARPB    *
1403   CHARPZ    *
1405   CHCFP     *
1406   CHCFPB    *
1407   CHCFPZ    *
1409   CHCRP     *
1410   CHCRPB    *
1411   CHCRPZ    *
1413   CHRBL     *
1414   CHRBLB    *
1415   CHRBLZ    *
 198   CLEARF    *
 567   CLOCK      569    570
 622   CDTAD1    *
 707   CTACT     1880
 708   CTACTB    1880
 709   CTACTZ    1880
 715   CTADN     *
 716   CTADNB    *
 717   CTADNZ    *
1485   CTB       1499   1503   1525   1880
 751   CTBIC     *
 752   CTBICB    *
 753   CTBICZ    *
 723   CTDST     *
 724   CTDSTB    *
 725   CTDSTZ    *
 739   CTDVA     *
 740   CTDVAB    *
 741   CTDVAZ    *
 755   CTFCB     *
 756   CTFCBB    *
 757   CTFCBZ    *
 763   CTFRC     *
 764   CTFRCB    *
 765   CTFRCZ    *
 767   CTFRE     *
 768   CTFREB    *
 769   CTFREZ    *
 711   CTIDB     *
 712   CTIDBB    *
 713   CTIDBZ    *
 743   CTIDA     1499
 744   CTIDAB    *
 745   CTIDAZ    *
 719   CTIPM     *
 720   CTIPMB    *
 721   CTIPMZ    *
 735   CTRCN     *
 736   CTRCNB    *
 737   CTRCNZ    *
```

```
727   CTRQB    1503  1525
728   CTRQBB   *
729   CTRQBZ   *
731   CTRTR    *
732   CTRTRB   *
733   CTRTRZ   *
747   CTSTA    *
748   CTSTAB   *
749   CTSTAZ   *
759   CTWDS    *
760   CTWDSB   *
761   CTWDSZ   *
688   DCBUFF   *
691   DCCHR    *
692   DCCHRB   *
693   DCCHRZ   *
689   DCCNT    *
687   DCRECL   *
187   DINTS    *
569   DISCLK    189
589   DISMP    *
584   DISPIM    188
813   DMBCA    *
814   DMBCAB   *
815   DMBCAZ   *
805   DMCWA    *
806   DMCWAB   *
807   DMCWAZ   *
785   DMFPA    *
786   DMFPAB   *
787   DMFPAZ   *
793   DMLCA    *
794   DMLCAB   *
795   DMLCAZ   *
797   DMLTA    1559  1584
798   DMLTAB   *
799   DMLTAZ   *
801   DMPTA    1602
802   DMPTAB   *
803   DMPTAZ   *
781   DMRPA    *
782   DMRPAB   *
783   DMRPAZ   *
789   DMSTA    1747
790   DMSTAB   *
791   DMSTAZ   *
809   DMSWA    *
810   DMSWAB   *
811   DMSWAZ   *
1558  DMT      1559  1584  1602  1747
777   DMTPA    *
778   DMTPAB   *
779   DMTPAZ   *
615   DSCTAD   *
601   DSDASS   *
600   DSDVDN   *
612   DSLCKD   *
609   DSNAME   *
608   DSNORQ   *
613   DSOPCM   *
614   DSPSTI   *
610   DSREWD   *
606   DSUNAM   *
611   DSUNTN   *
512   EIGHT     143   167
183   EINTS    *
570   ENACLK    185
590   ENAMP    *
585   ENAPIM    184
  0   ERROR     113   193   200   207
128   FETCHA   *
509   FIVE      149   173  1630
508   FOUR      151   175  1516
251   GETQ     *
1432  IBIBF    *
1433  IBIBFB   *
1434  IBIBFZ   *
1436  IBLAS    *
1437  IBLASB   *
1438  IBLASZ   *
1424  IBLEN    *
1425  IBLENB   *
1426  IBLENZ   *
1420  IBLNK    *
1421  IBLNKB   *
1422  IBLNKZ   *
1428  IBSTA    *
1429  IBSTAB   *
1430  IBSTAZ   *
1440  IBSTS    *
1441  IBSTSB   *
1442  IBSTSZ   *
 378  LC        379   380   381   382   383   384   385   386   387
                388   389   390   391   392   393   394   395   396
                397   398   399   400   401   402   403   404   405
```

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                406   407   408   410   411   412   413   414   415
                416   417   418   419   420   421   422   423   424
                426   427   428   429   434   435   436   437   438
                439   440   447   448   449   452   457   458   459
  855   LCABN    *
  856   LCABNB   *
  857   LCABNZ   *
  859   LCASY    *
  860   LCASYB   *
  861   LCASYZ   *
 1549   LCB      1552  1640
  923   LCBSC    *
  924   LCBSCB   *
  925   LCBSCZ   *
  919   LCCHN    *
  920   LCCHNB   *
  921   LCCHNZ   *
  851   LCCRC    *
  852   LCCRCB   *
  853   LCCRCZ   *
  895   LCCWB    *
  896   LCCWBB   *
  897   LCCWBZ   *
  891   LCCWC    *
  892   LCCWCB   *
  893   LCCWCZ   *
  899   LCCWD    *
  900   LCCWDB   *
  901   LCCWDZ   *
  887   LCCWI    *
  888   LCCWIB   *
  889   LCCWIZ   *
  903   LCCWP    *
  904   LCCWPB   *
  905   LCCWPZ   *
  907   LCCWR    *
  908   LCCWRB   *
  909   LCCWRZ   *
  883   LCCWS    *
  884   LCCWSB   *
  885   LCCWSZ   *
  911   LCCWT    *
  912   LCCWTB   *
  913   LCCWTZ   *
  835   LCIBA    *
  836   LCIBAB   *
  837   LCIBAZ   *
  823   LCIBF    *
  824   LCIBFB   *
  825   LCIBFZ   *
  831   LCIBL    *
  832   LCIBLB   *
  833   LCIBLZ   *
  839   LCIC1    *
  840   LCIC1B   *
  841   LCIC1Z   *
  843   LCIC2    *
  844   LCIC2B   *
  845   LCIC2Z   *
  863   LCIKE    *
  864   LCIKEB   *
  865   LCIKEZ   *
  931   LCITB    *
  932   LCITBB   *
  933   LCITBZ   *
  353   LCJP      354   355   356   363   364   365   366   367   370
  879   LCLCB    *
  880   LCLCBB   *
  881   LCLCBZ   *
  927   LCLDB    *
  928   LCLDBB   *
  929   LCLDBZ   *
  915   LCLTB    *
  916   LCLTBB   *
  917   LCLTBZ   *
  875   LCOBA    *
  876   LCOBAB   *
  877   LCOBAZ   *
  867   LCOBF    *
  868   LCOBFB   *
  869   LCOBFZ   *
  871   LCOBL    *
  872   LCOBLB   *
  873   LCOBLZ   *
  935   LCOKE    *
  936   LCOKEB   *
  937   LCOKEZ   *
  847   LCRCC    *
  848   LCRCCB   *
  849   LCRCCZ   *
  827   LCSMB    *
  828   LCSMBB   *
  829   LCSMBZ   *
  503   LHW      *
 1049   LSABN    *
```

```
1050   LSABNB   *
1051   LSABNZ   *
1057   LSASC    *
1058   LSASCB   *
1059   LSASCZ   *
1001   LSASY    *
1002   LSASYB   *
1003   LSASYZ   *
1069   LSBSC    *
1070   LSBSCB   *
1071   LSBSCZ   *
1013   LSCC1    *
1014   LSCC1B   *
1015   LSCC1Z   *
1017   LSCC2    *
1018   LSCC2B   *
1019   LSCC2Z   *
1061   LSCHN    *
1062   LSCHNB   *
1063   LSCHNZ   *
1053   LSCRC    *
1054   LSCRCB   *
1055   LSCRCZ   *
 985   LSCTA    1619
 986   LSCTAB   *
 987   LSCTAZ   *
1618   LSD      1619  1758  1761  1771  1780  1791  1792  1797
1041   LSDSF    *
1042   LSDSFB   *
1043   LSDSFZ   *
 989   LSDST    1758  1761
 990   LSDSTB   *
 991   LSDSTZ   *
1025   LSEPF    *
1026   LSEPFB   *
1027   LSEPFZ   *
1009   LSLSP    *
1010   LSLSPB   *
1011   LSLSPZ   *
 993   LSMOD    *
 994   LSMODB   *
 995   LSMODZ   *
1073   LSNTO    *
1074   LSNTOB   *
1075   LSNTOZ   *
 997   LSPAR    *
 998   LSPARB   *
 999   LSPARZ   *
1037   LSPLA    *
1038   LSPLAB   *
1039   LSPLAZ   *
 953   LSRCA    1791
 954   LSRCAB   *
 955   LSRCAZ   *
 957   LSREM    *
 958   LSREMB   *
 959   LSREMZ   *
1033   LSRRS    1771
1034   LSRRSB   1771
1035   LSRRSZ   1771
 949   LSRRT    1656  1797
 950   LSRRTB   *
 951   LSRRTZ   *
 961   LSRTO    *
 962   LSRTOB   *
 963   LSRTOZ   *
 965   LSSRS    *
 966   LSSRSB   *
 967   LSSRSZ   *
 981   LSSWS    *
 982   LSSWSB   *
 983   LSSWSZ   *
1021   LSTER    *
1022   LSTERB   *
1023   LSTERZ   *
 945   LSTHD    *
 946   LSTHDB   *
 947   LSTHDZ   *
 969   LSWCA    1792
 970   LSWCAB   *
 971   LSWCAZ.  *
 973   LSWEM    *
 974   LSWEMB   *
 975   LSWEMZ   *
1029   LSWRS    1780
1030   LSWRSB   1780
1031   LSWRSZ   1780
 977   LSWTO    *
 978   LSWTOB   *
 979   LSWTOZ   *
1005   LSXMM    *
1006   LSXMMB   *
1007   LSXMMZ   *
1045   LSYNC    *
1046   LSYNCB   *
```

```
1047   LSYNCZ   *
1077   LSYNR    *
1078   LSYNRB   *
1079   LSYNRZ   *
1065   LSYNT    *
1066   LSYNTB   *
1067   LSYNTZ   *
1560   LTA      1561
 591   MAP      1535  1551  1554  1639  1642  1692  1701
 588   MP        589   590   592   593   594   595
 592   MPMR0    *
 593   MPMR1    *
 594   MPMR2    *
 595   MPMR3    *
 468   MT        469   470   471   472   473   474   475   476   477
                 478   479   480   481   482   483   484   485   486
                 487   488   489   490   491   492   493   494   495
                 496   497   498   499   500   501   502   503   504
                 505   506   507   508   509   510   511   512   513
                 514   515   516   517   518   519   520   521   522
                 523   524
 502   NEG      *
 513   NINE      141   165
 505   ONE       157   181
   0   P          27    29    30    36    39    41    45    49    53
                  57    61    65    69    73    77    81    84    85
                  85    86    87    91    92    92    93    94    97
                  99   100   101   101   102   103   104   105   106
                 107   107   109   109   112   114   115   115   116
                 118   118   119   120   121   123   124   125   125
                 129   129   130   131   132   132   133   136   137
                 138   140   142   144   146   148   150   152   154
                 156   160   161   162   164   166   168   170   172
                 174   176   178   180   192   194   194   195   196
                 196   199   201   201   202   203   203   206   208
                 208   209
1329   PCBSL    *
1330   PCBSLB   *
1331   PCBSLZ   *
1317   PCCLN    *
1318   PCCLNB   *
1319   PCCLNZ   *
1341   PCCTP    *
1342   PCCTPB   *
1343   PCCTPZ   *
1321   PCECH    *
1322   PCECHB   *
1323   PCECHZ   *
1313   PCLLN    *
1314   PCLLNB   *
1315   PCLLNZ   *
1349   PCNTD    *
1350   PCNTDB   *
1351   PCNTDZ   *
1337   PCPCH    *
1338   PCPCHB   *
1339   PCPCHZ   *
1333   PCSWL    *
1334   PCSWLB   *
1335   PCSWLZ   *
1345   PCTYP    *
1346   PCTYPB   *
1347   PCTYPZ   *
1325   PCXMM    *
1326   PCXMMB   *
1327   PCXMMZ   *
 575   PIM1     *
 576   PIM2     *
 577   PIM3     *
 578   PIM4     *
 579   PIM5     *
 580   PIM6     *
 581   PIM7     *
 582   PIM8     *
 699   POSI     *
1287   PSABN    *
1288   PSABNB   *
1289   PSABNZ   *
1239   PSASY    *
1240   PSASYB   *
1241   PSASYZ   *
 670   PSBADT   *
 666   PSBEG    *
1299   PSBSC    *
1300   PSBSCB   *
1301   PSBSCZ   *
1251   PSCC1    *
1252   PSCC1B   *
1253   PSCC1Z   *
1255   PSCC2    *
1256   PSCC2B   *
1257   PSCC2Z   *
1291   PSCRC    *
1292   PSCRCB   *
1293   PSCRCZ   *
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1271	PSDEF	*								
1272	PSDEFB	*								
1273	PSDEFZ	*								
1279	PSDSF	*								
1280	PSDSFB	*								
1281	PSDSFZ	*								
1267	PSDWN	*								
1268	PSDWNB	*								
1269	PSDWNZ	*								
672	PSEND	*								
1263	PSEPF	*								
1264	PSEPFB	*								
1265	PSEPFZ	*								
1247	PSLSP	*								
1248	PSLSPB	*								
1249	PSLSPZ	*								
1231	PSMOD	*								
1232	PSMODB	*								
1233	PSMODZ	*								
671	PSNSEC	*								
1235	PSPAR	*								
1236	PSPARB	*								
1237	PSPARZ	*								
1275	PSPLA	*								
1276	PSPLAB	*								
1277	PSPLAZ	*								
667	PSPROT	*								
1259	PSTER	*								
1260	PSTERB	*								
1261	PSTERZ	*								
1243	PSXMM	*								
1244	PSXMMB	*								
1245	PSXMMZ	*								
1283	PSYNC	*								
1284	PSYNCB	*								
1285	PSYNCZ	*								
1303	PSYNR	*								
1304	PSYNRB	*								
1305	PSYNRZ	*								
1295	PSYNT	*								
1296	PSYNTB	*								
1297	PSYNTZ	*								
32	PUSH	*								
228	PUTQ	*								
532	RA0	*								
533	RA1	*								
651	RADNR	1522	1661	1668	1723	1738				
534	RB0	*								
535	RB1	1588								
649	RFCB	1513	1691							
504	RHW	1555	1590	1591	1598					
645	ROPWD	1571	1629							
1504	RQST	1513	1522	1571	1629	1668	1730	1734		
642	RSTPR	1734								
650	RTIDB	1529								
96	SETA	*								
111	SETB	*								
191	SETF	*								
511	SEVEN	145	169							
510	SIX	147	171	1572						
26	SPACE	*								
1478	STACK	1486	1509	1514	1517	1523	1528	1548	1556	1557
		1562	1569	1579	1581	1587	1600	1608	1609	1620
		1627	1636	1655	1663	1687	1688	1725	1733	1741
		1749	1755	1756	1760	1768	1777	1788	1819	1833
		1835	1849	1851	1869					
135	SUBAT	*								
288	TBATSK	*								
287	TBCPTH	*								
274	TBENTY	*								
268	TBEVNT	*								
282	TBIO	*								
277	TBISA	*								
278	TBISB	*								
280	TBISP	*								
281	TBISRS	*								
294	TBIST	1533								
279	TBISX	*								
292	TBKEY	1530								
283	TBKN1	*								
284	TBKN2	*								
285	TBKN3	*								
293	TBMIMG	*								
291	TBNUCL	*								
267	TBPL	*								
269	TBRSA	*								
270	TBRSB	*								
289	TBRSE	*								
272	TBRSP	*								
273	TBRSTS	1484	1878							
271	TBRSX	*								
322	TBS0	*								
321	TBS1	*								
309	TBS10	*								
308	TBS11	*								

```
 306   TBS12    *
 305   TBS13    *
 304   TBS14    *
 302   TBS15    *
 320   TBS2     *
 318   TBS3     *
 317   TBS4     *
 316   TBS5     *
 314   TBS6     *
 313   TBS7     *
 312   TBS8     *
 310   TBS9     *
 290   TBSIZ    *
 266   TBST     1713  1715  1875  1877
 286   TBTLC    *
 276   TBTMIN   *
 275   TBTMS    *
 265   TBTRD    *
1115   TCBSL    *
1116   TCBSLB   *
1117   TCBSLZ   *
1099   TCCLN    *
1100   TCCLNB   *
1101   TCCLNZ   *
1127   TCCON    *
1128   TCCONB   *
1129   TCCONZ   *
1095   TCCTA    *
1096   TCCTAB   *
1097   TCCTAZ   *
1151   TCCTP    *
1152   TCCTPB   *
1153   TCCTPZ   *
1187   TCDCC    *
1188   TCDCCB   *
1189   TCDCCZ   *
1195   TCDTO    *
1196   TCDTOB   *
1197   TCDTOZ   *
1123   TCECH    *
1124   TCECHB   *
1125   TCECHZ   *
1199   TCID1    *
1200   TCID1B   *
1201   TCID1Z   *
1203   TCID2    *
1204   TCID2B   *
1205   TCID2Z   *
1171   TCLDF    *
1172   TCLDFB   *
1173   TCLDFZ   *
1103   TCLLN    *
1104   TCLLNB   *
1105   TCLLNZ   *
1143   TCNOD    *
1144   TCNODB   *
1145   TCNODZ   *
1139   TCNTD    *
1140   TCNTDB   *
1141   TCNTDZ   *
1107   TCPCH    *
1108   TCPCHB   *
1109   TCPCHZ   *
1135   TCRBC    *
1136   TCRBCB   *
1137   TCRBCZ   *
1191   TCRBF    *
1192   TCRBFB   *
1193   TCRBFZ   *
1175   TCRCA    *
1176   TCRCAB   *
1177   TCRCAZ   *
1155   TCRMD    *
1156   TCRMDB   *
1157   TCRMDZ   *
1091   TCRQH    *
1092   TCRQHB   *
1093   TCRQHZ   *
1163   TCRRS    *
1164   TCRRSB   *
1165   TCRRSZ   *
1179   TCSTO    *
1180   TCSTOB   *
1181   TCSTOZ   *
1111   TCSWL    *
1112   TCSWLB   *
1113   TCSWLZ   *
1087   TCTCD    *
1088   TCTCDB   *
1089   TCTCDZ   *
1147   TCTYP    *
1148   TCTYPB   *
1149   TCTYPZ   *
1131   TCWBC    *
1132   TCWBCB   *
```

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1133   TCWBCZ   *
1183   TCWCA    *
1184   TCWCAB   *
1185   TCWCAZ   *
1159   TCWMD    *
1160   TCWMDB   *
1161   TCWMDZ   *
1167   TCWRS    *
1168   TCWRSB   *
1169   TCWRSZ   *
1119   TCXMM    *
1120   TCXMMB   *
1121   TCXMMZ   *
 514   TEN       139    163
 205   TESTF    *
 507   THREE     153    177
1483   TIDB      1484   1875   1877   1878
   0   TIDOCL    1711   1712
1375   TIDSP    *
1376   TIDSPB   *
1377   TIDSPZ   *
1367   TIDWN    *
1368   TIDWNB   *
1369   TIDWNZ   *
1391   TINET    *
1392   TINETB   *
1393   TINETZ   *
1379   TIODN    *
1380   TIODNB   *
1381   TIODNZ   *
1387   TIODP    *
1388   TIODPB   *
1389   TIODPZ   *
1383   TIOSC    *
1384   TIOSCB   *
1385   TIOSCZ   *
1371   TISEC    *
1372   TISECB   *
1373   TISECZ   *
1359   TITU1    *
1360   TITU1B   *
1361   TITU1Z   *
1363   TITU2    *
1364   TITU2B   *
1365   TITU2Z   *
1221   TPFPA    *
1222   TPFPAB   *
1223   TPFPAZ   *
1213   TPRPA    *
1214   TPRPAB   *
1215   TPRPAZ   *
1217   TPWPA    *
1218   TPWPAB   *
1219   TPWPAZ   *
 506   TWO       155    179   1770   1779
 440   V$1MIN   *
 458   V$BFC    *
 366   V$BGLB   *
 363   V$BIC1   *
 392   V$BTB    *
 400   V$BTBM   *
 457   V$BVN    *
 408   V$CAM    *
 420   V$CKB    *
 448   V$CKIT   *
 387   V$CKPT   *
 380   V$CPL    *
 367   V$CRDM   *
 410   V$CRDR   *
 421   V$CRM    *
 381   V$CRS    *
 426   V$CTAD   *
 379   V$CTL     1482   1532   1873
 418   V$CTMS   *
 364   V$DATE   *
 422   V$DSTB   *
 435   V$ERFG   *
 416   V$FGLB   *
 385   V$FLRS   *
   0   V$FNRM    1888   1889
 417   V$FREE   *
 401   V$GFCB   *
 397   V$IM     *
 447   V$IOA    *
 449   V$JCB    *
 356   V$JCFG   *
 370   V$JCTM   *
 354   V$JNAM   *
 436   V$JOP    *
 407   V$KEY    *
 355   V$LCNT   *
 390   V$LER    *
 423   V$LIT    *
 395   V$LLUP   *
 396   V$LPP    *
```

```
                    EJEC                                                                                02 00001
                *   THIS IS A COPYRIGHTED PROGRAM, COPYRIGHT 1973 BY VARIAN DATA MACHINES               02 00002
                *                                                                                       02 00003
                *      V.D.M. PART NO.        92L1105-058A                                              02 00004
                *                                                                                       02 00005
                *                                                RELEASED    03-26-73                   02 00006
                *                                                                                       02 00007
                *                                                                                       02 00008
                *             VTPOP                                                                     02 00009
                *                                                                                       02 00010
                *                                                                                       02 00011
                    TITLE   VTPOP                                                                       02 00012
                    NLIS                                                                                02 00013
               1443 *       LIST                                                                       ********
               1444 *                                                                                  02 00014
               1445         EJEC                                                                       02 00015
               1446 ***************************************************************************       02 00016
               1447 ***************************************************************************       02 00017
               1448 **      PROGRAM NAME -                                                        **    02 00018
               1449 **              VTPOP - RESTORE VOLATILE REGISTERS FROM STACK AND             **    02 00019
               1450 **              MOVE STACK POINTERS TO RECLAIM STACK ENTRY.                   **    02 00020
               1451 **                                                                            **    02 00021
               1452 **      ENTRY CONDITIONS -                                                    **    02 00022
               1453 **              VTSTAK POINTS TO TOP ENTRY ON STACK                           **    02 00023
               1454 **              VTVOLA POINTS TO SIZE OF TOP ENTRY ON STACK                   **    02 00024
               1455 **                                                                            **    02 00025
               1456 **      CALLING SEQUENCE -                                                    **    02 00026
               1457 **              JMP     VTPOP                                                 **    02 00027
               1458 **                                                                            **    02 00028
               1459 **      EXIT CONDITIONS -                                                     **    02 00029
               1460 **              INTERRUPTS ON                                                 **    02 00030
               1461 **              VTSTAK POINTS TO NEW TOP OF STACK                             **    02 00031
               1462 **              VTVOLA POINTS TO TOP OF POPPED STACK ENTRY                    **    02 00032
               1463 **                                                                            **    02 00033
               1464 ***************************************************************************       02 00034
               1465 ***************************************************************************       02 00035
               1466         EXT     VTSTAK                                                             02 00036
               1467         EXT     VTVOLA                                                             02 00037
               1468         NAME    VTPOP                                                              02 00038
               1469         EJEC                                                                       02 00039
               1470 VTPOP   DINTS                                                                      02 00040
000000 100444 A
000001 100747 A
000002 006017 A 1471         LDAE    VTSTAK                                                             02 00041
000003 000000 E
000004 006137 A 1472         ERAE    VTVOLA                                                             02 00042
000005 000000 E
000006 001016 A 1473         JANZ    PD00                                                               02 00043
000007 000011 R
000010 000100 A 1474         HLT     0100          ERROR, STACK ALREADY AT LEVEL 0                      02 00044
000011 006017 A 1475 PD00    LDAE    VTSTAK        POP OFF THIS ENTRY                                   02 00045
000012 000003 E
000013 006057 A 1476         STAE    VTVOLA                                                             02 00046
000014 000005 E
000015 006147 A 1477         SUBE*   VTSTAK                                                             02 00047
000016 100012 E
000017 006057 A 1478         STAE    VTSTAK        STORE NEW CURRENT STACK POINTER                      02 00048
000020 000016 E
000021 006027 A 1479         LDBE    VTVOLA                                                             02 00049
000022 000014 E
000023 016004 A 1480         LDA     4,B           RESTORE OVERFLOW AND SET UP FOR RETURN               02 00050
000024 007400 A 1481         ROF                                                                        02 00051
000025 001002 A 1482         JAP     PD01                                                               02 00052
000026 000031 R
000027 007401 A 1483         SOF                                                                        02 00053
000030 150460 A 1484         ANA     BR15                                                               02 00054
000031 054006 A 1485 PD01    STA     PD99                                                               02 00055
000032 016001 A 1486         LDA     1,B           RESTORE VOLATILE REGISTERS                           02 00056
000033 036003 A 1487         LDX     3,B                                                                02 00057
000034 026002 A 1488         LDB     2,B                                                                02 00058
                1489         EINTS                                                                      02 00059
000035 100244 A
000036 100147 A
000037 001000 A 1490         JMP     0                                                                  02 00060
000040 000000 A
       000040 R 1491 PD99    EQU     *-1                                                                02 00061
                1492         END                                                                        02 00062
ENTRY NAMES
000000 R VTPOP
EXTERNAL NAMES
000020 E VTSTAK 000022 E VTVOLA
SYMBOLS
000044 A APIM    000002 A B       000000 A B0      000001 A B1
000012 A B10     000013 A B11     000014 A B12     000015 A B13
000016 A B14     000017 A B15     000002 A B2      000003 A B3
000004 A B4      000005 A B5      000006 A B6      000007 A B7
000010 A B8      000011 A B9      000000 A BICNUM  000421 A BM1
000472 A BM17    000475 A BM177   000477 A BM1777  000464 A BM3
000473 A BM37    000463 A BM377   000467 A BM7     000474 A BM77
000476 A BM777   000441 A BR0     000442 A BR1     000453 A BR10
000454 A BR11    000455 A BR12    000456 A BR13    000457 A BR14
000460 A BR15    000443 A BR2     000444 A BR3     000445 A BR4
000446 A BR5     000447 A BR6     000450 A BR7     000451 A BR8
000452 A BR9     000421 A BS0     000422 A BS1     000433 A BS10
000434 A BS11    000435 A BS12    000436 A BS13    000437 A BS14
```

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000440 A BS15    000423 A BS2     000424 A BS3     000425 A BS4
000426 A BS5     000427 A BS6     000430 A BS7     000431 A BS8
000432 A BS9     000000 A CHAFP   000000 A CHAFPB  000020 A CHAFPZ
000001 A CHARP   000000 A CHARPB  000020 A CHARPZ  000002 A CHCFP
000000 A CHCFPB  000020 A CHCFPZ  000003 A CHCRP   000000 A CHCRPB
000020 A CHCRPZ  000004 A CHRBL   000000 A CHRBLB  000020 A CHRBLZ
000047 A CLOCK   000000 A COTAD1  000000 A CTACT   000017 A CTACTB
000001 A CTACTZ  000001 A CTADN   000000 A CTADNB  000020 A CTADNZ
000011 A CTBIC   000000 A CTBICB  000020 A CTBICZ  000003 A CTDST
000000 A CTDSTB  000020 A CTDSTZ  000006 A CTDVA   000000 A CTDVAB
000020 A CTDVAZ  000012 A CTFCB   000000 A CTFCBB  000020 A CTFCBZ
000014 A CTFRC   000010 A CTFRCB  000010 A CTFRCZ  000014 A CTFRE
000000 A CTFREB  000010 A CTFREZ  000000 A CTIDB   000000 A CTIDBB
000017 A CTIDBZ  000007 A CTIOA   000000 A CTIOAB  000020 A CTIOAZ
000002 A CTOPM   000000 A CTOPMB  000020 A CTOPMZ  000005 A CTRCN
000000 A CTRCNB  000010 A CTRCNZ  000004 A CTRQB   000000 A CTRQBB
000020 A CTRQBZ  000005 A CTRTR   000010 A CTRTRB  000010 A CTRTRZ
000010 A CTSTA   000000 A CTSTAB  000020 A CTSTAZ  000013 A CTWDS
000000 A CTWDSB  000020 A CTWDSZ  000001 A DCBUFF  000003 A DCCHR
000000 A DCCHRB  000020 A DCCHRZ  000002 A DCCNT   000000 A DCRECL
000747 A DISCLK  000745 A DISMP   000444 A DISPIM  000026 A DMBCA
000000 A DMBCAB  000020 A DMBCAZ  000024 A DMCWA   000000 A DMCWAB
000020 A DMCWAZ  000017 A DMFPA   000000 A DMFPAB  000020 A DMFPAZ
000021 A DMLCA   000000 A DMLCAB  000020 A DMLCAZ  000022 A DMLTA
000000 A DMLTAB  000020 A DMLTAZ  000023 A DMPTA   000000 A DMPTAB
000020 A DMPTAZ  000016 A DMRPA   000000 A DMRPAB  000020 A DMRPAZ
000020 A DMSTA   000000 A DMSTAB  000020 A DMSTAZ  000025 A DMSWA
000000 A DMSWAB  000020 A DMSWAZ  000015 A DMTPA   000000 A DMTPAB
000020 A DMTPAZ  000002 A DSCTAD  000000 A DSDASS  000000 A DSDVDN
000002 A DSLCKD  000001 A DSNAME  000000 A DSNORQ  000002 A DSOPCM
000002 A DSPSTI  000002 A DSREWD  000000 A DSUNAM  000002 A DSUNTN
000424 A EIGHT   000147 A ENACLK  000645 A ENAMP   000244 A ENAPIM
000465 A FIVE    000423 A FOUR    000003 A IBIBF   000017 A IBIBFB
000001 A IBIBFZ  000003 A IBLAS   000000 A IBLASB  000017 A IBLASZ
000001 A IBLEN   000000 A IBLENB  000020 A IBLENZ  000000 A IBLNK
000000 A IBLNKB  000020 A IBLNKZ  000002 A IBSTA   000000 A IBSTAB
000020 A IBSTAZ  000004 A IBSTS   000000 A IBSTSB  000017 A IBSTSZ
000300 A LC      000003 A LCABN   000013 A LCABNB  000001 A LCABNZ
000003 A LCASY   000012 A LCASYB  000001 A LCASYZ  000007 A LCBSC
000015 A LCBSCB  000001 A LCBSCZ  000007 A LCCHN   000016 A LCCHNB
000001 A LCCHNZ  000003 A LCCRC   000014 A LCCRCB  000003 A LCCRCZ
000006 A LCCWB   000014 A LCCWBB  000001 A LCCWBZ  000006 A LCCWC
000015 A LCCWCB  000001 A LCCWCZ  000006 A LCCWD   000013 A LCCWDB
000001 A LCCWDZ  000006 A LCCWI   000016 A LCCWIB  000001 A LCCWIZ
000006 A LCCWP   000012 A LCCWPB  000001 A LCCWPZ  000006 A LCCWR
000011 A LCCWRB  000001 A LCCWRZ  000006 A LCCWS   000017 A LCCWSB
000001 A LCCWSZ  000006 A LCCWT   000010 A LCCWTB  000001 A LCCWTZ
000001 A LCIBA   000000 A LCIBAB  000017 A LCIBAZ  000000 A LCIBF
000017 A LCIBFB  000001 A LCIBFZ  000000 A LCIBL   000000 A LCIBLB
000014 A LCIBLZ  000002 A LCIC1   000010 A LCIC1B  000010 A LCIC1Z
000002 A LCIC2   000000 A LCIC2B  000010 A LCIC2Z  000003 A LCIKE
000000 A LCIKEB  000004 A LCIKEZ  000007 A LCITB   000013 A LCITBB
000001 A LCITBZ  000050 A LCJP    000006 A LCLCB   000000 A LCLCBB
000020 A LCLCBZ  000007 A LCLDB   000014 A LCLDBB  000001 A LCLDBZ
000007 A LCLTB   000017 A LCLTBB  000001 A LCLTBZ  000005 A LCOBA
000000 A LCOBAB  000017 A LCOBAZ  000004 A LCOBF   000017 A LCOBFB
000001 A LCOBFZ  000004 A LCOBL   000000 A LCOBLB  000014 A LCOBLZ
000007 A LCOKE   000000 A LCOKEB  000004 A LCOKEZ  000003 A LCRCC
000017 A LCRCCB  000001 A LCRCCZ  000000 A LCSMB   000016 A LCSMBB
000001 A LCSMBZ  000462 A LHW     000017 A LSABN   000015 A LSABNB
000001 A LSABNZ  000017 A LSASC   000011 A LSASCB  000001 A LSASCZ
000014 A LSASY   000013 A LSASYB  000001 A LSASYZ  000020 A LSBSC
000016 A LSBSCB  000001 A LSBSCZ  000015 A LSCC1   000010 A LSCC1B
000010 A LSCC1Z  000015 A LSCC2   000000 A LSCC2B  000010 A LSCC2Z
000017 A LSCHN   000010 A LSCHNB  000001 A LSCHNZ  000017 A LSCRC
000012 A LSCRCB  000003 A LSCRCZ  000012 A LSCTA   000000 A LSCTAB
000020 A LSCTAZ  000017 A LSDSF   000017 A LSDSFB  000001 A LSDSFZ
000013 A LSDST   000000 A LSDSTB  000020 A LSDSTZ  000016 A LSEPF
000016 A LSEPFB  000001 A LSEPFZ  000014 A LSLSP   000000 A LSLSPB
000011 A LSLSPZ  000014 A LSMOD   000016 A LSMODB  000002 A LSMODZ
000020 A LSNTO   000010 A LSNTOB  000006 A LSNTOZ  000014 A LSPAR
000014 A LSPARB  000002 A LSPARZ  000016 A LSPLA   000000 A LSPLAB
000010 A LSPLAZ  000002 A LSRCA   000000 A LSRCAB  000020 A LSRCAZ
000003 A LSREM   000000 A LSREMB  000020 A LSREMZ  000016 A LSRRS
000010 A LSRRSB  000003 A LSRRSZ  000001 A LSRRT   000000 A LSRRTB
000020 A LSRRTZ  000004 A LSRTO   000000 A LSRTOB  000020 A LSRTOZ
000005 A LSSRS   000000 A LSSRSB  000020 A LSSRSZ  000011 A LSSWS
000000 A LSSWSB  000020 A LSSWSZ  000016 A LSTER   000017 A LSTERB
000001 A LSTERZ  000000 A LSTHD   000000 A LSTHDB  000020 A LSTHDZ
000006 A LSWCA   000000 A LSWCAB  000020 A LSWCAZ  000007 A LSWEM
000000 A LSWEMB  000020 A LSWEMZ  000016 A LSWRS   000013 A LSWRSB
000003 A LSWRSZ  000010 A LSWTO   000000 A LSWTOB  000020 A LSWTOZ
000014 A LSXMM   000011 A LSXMMB  000002 A LSXMMZ  000017 A LSYNC
000016 A LSYNCB  000001 A LSYNCZ  000020 A LSYNR   000000 A LSYNRB
000010 A LSYNRZ  000017 A LSYNT   000000 A LSYNTB  000010 A LSYNTZ
000046 A MAP     000045 A MP      000045 A MPMR0   000145 A MPMR1
000245 A MPMR2   000345 A MPMR3   000420 A MT      000461 A NEG
000470 A NINE    000421 A ONE     000001 A PCBSL   000011 A PCBSLB
000001 A PCBSLZ  000000 A PCCLN   000000 A PCCLNB  000010 A PCCLNZ
000002 A PCCTP   000014 A PCCTPB  000004 A PCCTPZ  000001 A PCECH
000014 A PCECHB  000001 A PCECHZ  000000 A PCLLN   000010 A PCLLNB
000010 A PCLLNZ  000002 A PCNTD   000000 A PCNTDB  000004 A PCNTDZ
000001 A PCPCH   000000 A PCPCHB  000010 A PCPCHZ  000001 A PCSWL
000010 A PCSWLB  000001 A PCSWLZ  000002 A PCTYP   000010 A PCTYPB
000004 A PCTYPZ  000001 A PCXMM   000012 A PCXMMB  000002 A PCXMMZ
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000040 A PIM1    000041 A PIM2    000042 A PIM3    000043 A PIM4
000040 A PIM5    000040 A PIM6    000040 A PIM7    000040 A PIM8
000011 R PD00    000031 R PD01    000040 R PD99    000200 A POST
000003 A PSABN   000015 A PSABNB  000001 A PSABNZ  000000 A PSASY
000013 A PSASYB  000001 A PSASYZ  000002 A PSBADT  000000 A PSBEG
000004 A PSBSC   000016 A PSBSCB  000016 A PSBSCZ  000001 A PSCC1
000010 A PSCC1B  000010 A PSCC1Z  000001 A PSCC2   000000 A PSCC2B
000010 A PSCC2Z  000003 A PSCRC   000012 A PSCRCB  000003 A PSCRCZ
000002 A PSDEF   000010 A PSDEFB  000001 A PSDEFZ  000003 A PSDSF
000017 A PSDSFB  000001 A PSDSFZ  000002 A PSDWN   000011 A PSDWNB
000001 A PSDWNZ  000004 A PSEND   000002 A PSEPF   000016 A PSEPFB
000001 A PSEPFZ  000000 A PSLSP   000000 A PSLSPB  000011 A PSLSPZ
000000 A PSMOD   000016 A PSMODB  000002 A PSMODZ  000003 A PSNSEC
000000 A PSPAR   000014 A PSPARB  000002 A PSPARZ  000002 A PSPLA
000000 A PSPLAB  000010 A PSPLAZ  000001 A PSPROT  000002 A PSTER
000017 A PSTERB  000001 A PSTERZ  000000 A PSXMM   000011 A PSXMMB
000002 A PSXMMZ  000003 A PSYNC   000016 A PSYNCB  000001 A PSYNCZ
000004 A PSYNR   000000 A PSYNRB  000010 A PSYNRZ  000003 A PSYNT
000000 A PSYNTB  000010 A PSYNTZ  000040 A RA0     000000 A RA1
000004 A RADNR   000060 A RB0     000020 A RB1     000002 A RFCB
000463 A RHW     000001 A ROPWD   000000 A RSTPR   000003 A RTIDB
000467 A SEVEN   000466 A SIX     000027 A TBATSK  000026 A TBCPTH
000011 A TBENTY  000003 A TBEVNT  000021 A TBIO    000014 A TBISA
000015 A TBISB   000017 A TBISP   000020 A TBISRS  000034 A TBIST
000016 A TBISX   000032 A TBKEY   000022 A TBKN1   000023 A TBKN2
000024 A TBKN3   000033 A TBMIMG  000032 A TBNUCL  000002 A TBPL
000004 A TBRSA   000005 A TBRSB   000030 A TBRSE   000007 A TBRSP
000010 A TBRSTS  000006 A TBRSX   000000 A TBS0    000001 A TBS1
000012 A TBS10   000013 A TBS11   000014 A TBS12   000015 A TBS13
000016 A TBS14   000017 A TBS15   000002 A TBS2    000003 A TBS3
000004 A TBS4    000005 A TBS5    000006 A TBS6    000007 A TBS7
000010 A TBS8    000011 A TBS9    000031 A TBSIZ   000001 A TBST
000025 A TBTLC   000013 A TBTMIN  000012 A TBTMS   000000 A TBTRD
000004 A TCBSL   000011 A TCBSLB  000001 A TCBSLZ  000003 A TCCLN
000000 A TCCLNB  000010 A TCCLNZ  000004 A TCCON   000015 A TCCONB
000001 A TCCONZ  000002 A TCCTA   000000 A TCCTAB  000020 A TCCTAZ
000005 A TCCTP   000014 A TCCTPB  000004 A TCCTPZ  000012 A TCDCC
000000 A TCDCCB  000020 A TCDCCZ  000014 A TCDTO   000000 A TCDTOB
000020 A TCDTOZ  000004 A TCECH   000014 A TCECHB  000001 A TCECHZ
000015 A TCID1   000000 A TCID1B  000020 A TCID1Z  000016 A TCID2
000000 A TCID2B  000020 A TCID2Z  000006 A TCLDF   000014 A TCLDFB
000001 A TCLDFZ  000003 A TCLLN   000010 A TCLLNB  000010 A TCLLNZ
000005 A TCNOD   000004 A TCNODB  000004 A TCNODZ  000005 A TCNTD
000000 A TCNTDB  000004 A TCNTDZ  000004 A TCPCH   000000 A TCPCHB
000010 A TCPCHZ  000004 A TCRBC   000017 A TCRBCB  000001 A TCRBCZ
000013 A TCRBF   000000 A TCRBFB  000020 A TCRBFZ  000007 A TCRCA
000000 A TCRCAB  000020 A TCRCAZ  000006 A TCRMD   000000 A TCRMDB
000003 A TCRMDZ  000001 A TCRQH   000000 A TCRQHB  000020 A TCRQHZ
000006 A TCRRS   000006 A TCRRSB  000003 A TCRRSZ  000010 A TCSTO
000000 A TCSTOB  000020 A TCSTOZ  000004 A TCSWL   000010 A TCSWLB
000001 A TCSWLZ  000000 A TCTCD   000000 A TCTCDB  000020 A TCTCDZ
000005 A TCTYP   000010 A TCTYPB  000004 A TCTYPZ  000004 A TCWBC
000016 A TCWBCB  000001 A TCWBCZ  000011 A TCWCA   000000 A TCWCAB
000020 A TCWCAZ  000006 A TCWMD   000003 A TCWMDB  000003 A TCWMDZ
000006 A TCWRS   000011 A TCWRSB  000003 A TCWRSZ  000004 A TCXMM
000012 A TCXMMB  000002 A TCXMMZ  000471 A TEN     000464 A THREE
000002 A TIDSP   000000 A TIDSPB  000007 A TIDSPZ  000002 A TIDWN
000017 A TIDWNB  000001 A TIDWNZ  000000 A TINET   000000 A TINETB
000020 A TINETZ  000003 A TIODN   000017 A TIODNB  000001 A TIODNZ
000003 A TIODP   000000 A TIODPB  000007 A TIODPZ  000003 A TIOSC
000007 A TIOSCB  000010 A TIOSCZ  000002 A TISEC   000007 A TISECB
000010 A TISECZ  000000 A TITU1   000000 A TITU1B  000020 A TITU1Z
000001 A TITU2   000000 A TITU2B  000020 A TITU2Z  000017 A TPFPA
000000 A TPFPAB  000020 A TPFPAZ  000015 A TPRPA   000000 A TPRPAB
000020 A TPRPAZ  000016 A TPWPA   000000 A TPWPAB  000020 A TPWPAZ
000422 A TWO     000403 A V$1MIN  000415 A V$BFC   000075 A V$BGLB
000056 A V$BIC1  000315 A V$BTB   000331 A V$BTBM  000414 A V$BVN
000334 A V$CAM   000353 A V$CKB   000411 A V$CKIT  000310 A V$CKPT
000301 A V$CPL   000076 A V$CRDM  000341 A V$CRDR  000354 A V$CRM
000302 A V$CRS   000360 A V$CTAD  000300 A V$CTL   000351 A V$CTMS
000070 A V$DATE  000355 A V$DSTB  000376 A V$ERFG  000347 A V$FGLB
000306 A V$FLRS  000350 A V$FREE  000332 A V$GFCB  000320 A V$IM
000410 A V$IOA   000412 A V$JCB   000055 A V$JCFG  000077 A V$JCTM
000050 A V$JNAM  000377 A V$JOP   000340 A V$KEY   000054 A V$LCNT
000313 A V$LER   000356 A V$LIT   000317 A V$LLUP  000317 A V$LPP
000307 A V$LRSK  000312 A V$LSAL  000345 A V$LUNT  000316 A V$LUP
000400 A V$LUT1  000401 A V$LUT2  000402 A V$LUT3  000330 A V$MAP
000333 A V$MIMG  000330 A V$MPM   000362 A V$NCTR  000316 A V$NPAG
000413 A V$OCB   000346 A V$OPCF  000311 A V$OPCL  000357 A V$PGT
000363 A V$PIMN  000074 A V$PLCT  000305 A V$PTVB  000361 A V$SCTL
000352 A V$SCV   000375 A V$SLFG  000834 A V$ST0   000335 A V$ST1
000336 A V$ST2   000337 A V$ST3   000303 A V$TB    000342 A V$TBGT
000416 A V$TFC   000314 A V$TJCP  000344 A V$TMN   000343 A V$TMS
000304 A V$UTB   000000 R VTPOP   000020 E VTSTAK  000022 E VTVOLA
000001 A X       000420 A ZERO
  0 ERRORS ASSEMBLY COMPLETE

  159   ADAT     *
   38   ANAM     *
   90   ANAN     *
  574   APIM      584   585
  108   B          98   117   229   230   252   255   257  1480  1486
                 1487  1488
   88   B&         82
```

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  83   B&0          40
  80   B&1          78
  44   B&10         42
  76   B&2          74
  72   B&3          70
  68   B&4          66
  64   B&5          62
  60   B&6          58
  56   B&7          54
  52   B&8          50
  48   B&9          46
 543   B0       *
 544   B1       *
 553   B10      *
 554   B11      *
 555   B12      *
 556   B13      *
 557   B14      *
 558   B15      *
 545   B2       *
 546   B3       *
 547   B4       *
 548   B5       *
 549   B6       *
 550   B7       *
 551   B8       *
 552   B9       *
 630   BICNUM   *
 515   BM1          79
 518   BM17         67
 521   BM177        55
 524   BM1777       43
 516   BM3          75
 519   BM37         63
 522   BM377        51
 517   BM7          71
 520   BM77         59
 523   BM777        47
 486   BR0         202
 487   BR1      *
 496   BR10     *
 497   BR11     *
 498   BR12     *
 499   BR13     *
 500   BR14     *
 501   BR15     1484
 488   BR2      *
 489   BR3      *
 490   BR4      *
 491   BR5      *
 492   BR6      *
 493   BR7      *
 494   BR8      *
 495   BR9      *
 470   BS0         195    209
 471   BS1      *
 480   BS10     *
 481   BS11     *
 482   BS12     *
 483   BS13     *
 484   BS14     *
 485   BS15     *
 472   BS2      *
 473   BS3      *
 474   BS4      *
 475   BS5      *
 476   BS6      *
 477   BS7      *
 478   BS8      *
 479   BS9      *
1397   CHAFP    *
1398   CHAFPB   *
1399   CHAFPZ   *
1401   CHARP    *
1402   CHARPB   *
1403   CHARPZ   *
1405   CHCFP    *
1406   CHCFPB   *
1407   CHCFPZ   *
1409   CHCRP    *
1410   CHCRPB   *
1411   CHCRPZ   *
1413   CHRBL    *
1414   CHRBLB   *
1415   CHRBLZ   *
 198   CLEARF   *
 567   CLOCK       569    570
 622   COTAD1   *
 707   CTACT    *
 708   CTACTB   *
 709   CTACTZ   *
 715   CTADN    *
 716   CTADNB   *
 717   CTADNZ   *
 751   CTBIC    *
```

```
752   CTBICB   *
753   CTBICZ   *
723   CTDST    *
724   CTDSTB   *
725   CTDSTZ   *
739   CTDVA    *
740   CTDVAB   *
741   CTDVAZ   *
755   CTFCB    *
756   CTFCBB   *
757   CTFCBZ   *
763   CTFRC    *
764   CTFRCB   *
765   CTFRCZ   *
767   CTFRE    *
768   CTFREB   *
769   CTFREZ   *
711   CTIDB    *
712   CTIDBB   *
713   CTIDBZ   *
743   CTIOA    *
744   CTIOAB   *
745   CTIOAZ   *
719   CTOPM    *
720   CTOPMB   *
721   CTOPMZ   *
735   CTRCN    *
736   CTRCNB   *
737   CTRCNZ   *
727   CTRQB    *
728   CTRQBB   *
729   CTRQBZ   *
731   CTRTR    *
732   CTRTRB   *
733   CTRTRZ   *
747   CTSTA    *
748   CTSTAB   *
749   CTSTAZ   *
759   CTWDS    *
760   CTWDSB   *
761   CTWDSZ   *
688   DCBUFF   *
691   DCCHR    *
692   DCCHRB   *
693   DCCHRZ   *
689   DCCNT    *
687   DCRECL   *
187   DINTS    *
569   DISCLK    189
589   DISMP    *
584   DISPIM    188
813   DMBCA    *
814   DMBCAB   *
815   DMBCAZ   *
805   DMCWA    *
806   DMCWAB   *
807   DMCWAZ   *
785   DMFPA    *
786   DMFPAB   *
787   DMFPAZ   *
793   DMLCA    *
794   DMLCAB   *
795   DMLCAZ   *
797   DMLTA    *
798   DMLTAB   *
799   DMLTAZ   *
801   DMPTA    *
802   DMPTAB   *
803   DMPTAZ   *
781   DMRPA    *
782   DMRPAB   *
783   DMRPAZ   *
789   DMSTA    *
790   DMSTAB   *
791   DMSTAZ   *
809   DMSWA    *
810   DMSWAB   *
811   DMSWAZ   *
777   DMTPA    *
778   DMTPAB   *
779   DMTPAZ   *
615   DSCTAD   *
601   DSDASS   *
600   DSDVDN   *
612   DSLCKD   *
609   DSNAME   *
608   DSNORQ   *
613   DSOPCM   *
614   DSPSTI   *
610   DSREWD   *
606   DSUNAM   *
611   DSUNTN   *
512   EIGHT     143    167
183   EINTS    *
570   ENACLK    185
```

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 590   ENAMP    *
 585   ENAPIM    184
   0   ERROR     113    193    200    207
 128   FETCHA   *
 509   FIVE      149    173
 508   FOUR      151    175
 251   GETQ     *
1432   IBIBF    *
1433   IBIBFB   *
1434   IBIBFZ   *
1436   IBLAS    *
1437   IBLASB   *
1438   IBLASZ   *
1424   IBLEN    *
1425   IBLENB   *
1426   IBLENZ   *
1420   IBLNK    *
1421   IBLNKB   *
1422   IBLNKZ   *
1428   IBSTA    *
1429   IBSTAB   *
1430   IBSTAZ   *
1440   IBSTS    *
1441   IBSTSB   *
1442   IBSTSZ   *
 378   LC        379    380    381    382    383    384    385    386    387
                 388    389    390    391    392    393    394    395    396
                 397    398    399    400    401    402    403    404    405
                 406    407    408    410    411    412    413    414    415
                 416    417    418    419    420    421    422    423    424
                 426    427    428    429    434    435    436    437    438
                 439    440    447    448    449    452    457    458    459
 855   LCABN    *
 856   LCABNB   *
 857   LCABNZ   *
 859   LCASY    *
 860   LCASYB   *
 861   LCASYZ   *
 923   LCBSC    *
 924   LCBSCB   *
 925   LCBSCZ   *
 919   LCCHN    *
 920   LCCHNB   *
 921   LCCHNZ   *
 851   LCCRC    *
 852   LCCRCB   *
 853   LCCRCZ   *
 895   LCCWB    *
 896   LCCWBB   *
 897   LCCWBZ   *
 891   LCCWC    *
 892   LCCWCB   *
 893   LCCWCZ   *
 899   LCCWD    *
 900   LCCWDB   *
 901   LCCWDZ   *
 887   LCCWI    *
 888   LCCWIB   *
 889   LCCWIZ   *
 903   LCCWP    *
 904   LCCWPB   *
 905   LCCWPZ   *
 907   LCCWR    *
 908   LCCWRB   *
 909   LCCWRZ   *
 883   LCCWS    *
 884   LCCWSB   *
 885   LCCWSZ   *
 911   LCCWT    *
 912   LCCWTB   *
 913   LCCWTZ   *
 835   LCIBA    *
 836   LCIBAB   *
 837   LCIBAZ   *
 823   LCIBF    *
 824   LCIBFB   *
 825   LCIBFZ   *
 831   LCIBL    *
 832   LCIBLB   *
 833   LCIBLZ   *
 839   LCIC1    *
 840   LCIC1B   *
 841   LCIC1Z   *
 843   LCIC2    *
 844   LCIC2B   *
 845   LCIC2Z   *
 863   LCIKE    *
 864   LCIKEB   *
 865   LCIKEZ   *
 931   LCITB    *
 932   LCITBB   *
 933   LCITBZ   *
 353   LCJP      354    355    356    363    364    365    366    367    370
 879   LCLCB    *
 880   LCLCBB   *
```

```
 881   LCLCBZ   *
 927   LCLDB    *
 928   LCLDBB   *
 929   LCLDBZ   *
 915   LCLTB    *
 916   LCLTBB   *
 917   LCLTBZ   *
 875   LCOBA    *
 876   LCOBAB   *
 877   LCOBAZ   *
 867   LCOBF    *
 868   LCOBFB   *
 869   LCOBFZ   *
 871   LCOBL    *
 872   LCOBLB   *
 873   LCOBLZ   *
 935   LCOKE    *
 936   LCOKEB   *
 937   LCOKEZ   *
 847   LCRCC    *
 848   LCRCCB   *
 849   LCRCCZ   *
 827   LCSMB    *
 828   LCSMBB   *
 829   LCSMBZ   *
 503   LHW      *
1049   LSABN    *
1050   LSABNB   *
1051   LSABNZ   *
1057   LSASC    *
1058   LSASCB   *
1059   LSASCZ   *
1001   LSASY    *
1002   LSASYB   *
1003   LSASYZ   *
1069   LSBSC    *
1070   LSBSCB   *
1071   LSBSCZ   *
1013   LSCC1    *
1014   LSCC1B   *
1015   LSCC1Z   *
1017   LSCC2    *
1018   LSCC2B   *
1019   LSCC2Z   *
1061   LSCHN    *
1062   LSCHNB   *
1063   LSCHNZ   *
1053   LSCRC    *
1054   LSCRCB   *
1055   LSCRCZ   *
 985   LSCTA    *
 986   LSCTAB   *
 987   LSCTAZ   *
1041   LSDSF    *
1042   LSDSFB   *
1043   LSDSFZ   *
 989   LSDST    *
 990   LSDSTB   *
 991   LSDSTZ   *
1025   LSEPF    *
1026   LSEPFB   *
1027   LSEPFZ   *
1009   LSLSP    *
1010   LSLSPB   *
1011   LSLSPZ   *
 993   LSMOD    *
 994   LSMODB   *
 995   LSMODZ   *
1073   LSNTO    *
1074   LSNTOB   *
1075   LSNTOZ   *
 997   LSPAR    *
 998   LSPARB   *
 999   LSPARZ   *
1037   LSPLA    *
1038   LSPLAB   *
1039   LSPLAZ   *
 953   LSRCA    *
 954   LSRCAB   *
 955   LSRCAZ   *
 957   LSREM    *
 958   LSREMB   *
 959   LSREMZ   *
1033   LSRRS    *
1034   LSRRSB   *
1035   LSRRSZ   *
 949   LSRRT    *
 950   LSRRTB   *
 951   LSRRTZ   *
 961   LSRTO    *
 962   LSRTOB   *
 963   LSRTOZ   *
 965   LSSRS    *
 966   LSSRSB   *
 967   LSSRSZ   *
```

```
 579   PIM5      *
 580   PIM6      *
 581   PIM7      *
 582   PIM8      *
1475   PD00      1473
1485   PD01      1482
1491   PD99      1485
 699   PDST      *
1287   PSABN     *
1288   PSABNB    *
1289   PSABNZ    *
1239   PSASY     *
1240   PSASYB    *
1241   PSASYZ    *
 670   PSBADT    *
 666   PSBEG     *
1299   PSBSC     *
1300   PSBSCB    *
1301   PSBSCZ    *
1251   PSCC1     *
1252   PSCC1B    *
1253   PSCC1Z    *
1255   PSCC2     *
1256   PSCC2B    *
1257   PSCC2Z    *
1291   PSCRC     *
1292   PSCRCB    *
1293   PSCRCZ    *
1271   PSDEF     *
1272   PSDEFB    *
1273   PSDEFZ    *
1279   PSDSF     *
1280   PSDSFB    *
1281   PSDSFZ    *
1267   PSDWN     *
1268   PSDWNB    *
1269   PSDWNZ    *
 672   PSEND     *
1263   PSEPF     *
1264   PSEPFB    *
1265   PSEPFZ    *
1247   PSLSP     *
1248   PSLSPB    *
1249   PSLSPZ    *
1231   PSMOD     *
1232   PSMODB    *
1233   PSMODZ    *
 671   PSNSEC    *
1235   PSPAR     *
1236   PSPARB    *
1237   PSPARZ    *
1275   PSPLA     *
1276   PSPLAB    *
1277   PSPLAZ    *
 667   PSPROT    *
1259   PSTER     *
1260   PSTERB    *
1261   PSTERZ    *
1243   PSXMM     *
1244   PSXMMB    *
1245   PSXMMZ    *
1283   PSYNC     *
1284   PSYNCB    *
1285   PSYNCZ    *
1303   PSYNR     *
1304   PSYNRB    *
1305   PSYNRZ    *
1295   PSYNT     *
1296   PSYNTB    *
1297   PSYNTZ    *
  32   PUSH      *
 228   PUTQ      *
 532   RA0       *
 533   RA1       *
 651   RADNR     *
 534   RB0       *
 535   RB1       *
 649   RFCB      *
 504   RHW       *
 645   ROPWD     *
 642   RSTPR     *
 650   RTIDB     *
  96   SETA      *
 111   SETB      *
 191   SETF      *
 511   SEVEN       145     169
 510   SIX         147     171
  26   SPACE     *
 135   SVRAT     *
 288   TBATSK    *
 287   TBCPTH    *
 274   TBENTY    *
 268   TBEVNT    *
 282   TBIO      *
 277   TBISA     *
```

```
 278   TBISB    *
 280   TBISP    *
 281   TBISRS   *
 294   TBIST    *
 279   TBISX    *
 292   TBKEY    *
 283   TBKN1    *
 284   TBKN2    *
 285   TBKN3    *
 293   TBMIMG   *
 291   TBNUCL   *
 267   TBPL     *
 269   TBRSA    *
 270   TBRSB    *
 289   TBRSE    *
 272   TBRSP    *
 273   TBRSTS   *
 271   TBRSX    *
 322   TBS0     *
 321   TBS1     *
 309   TBS10    *
 308   TBS11    *
 306   TBS12    *
 305   TBS13    *
 304   TBS14    *
 302   TBS15    *
 320   TBS2     *
 318   TBS3     *
 317   TBS4     *
 316   TBS5     *
 314   TBS6     *
 313   TBS7     *
 312   TBS8     *
 310   TBS9     *
 290   TBSIZ    *
 266   TBST     *
 286   TBTLC    *
 276   TBTMIN   *
 275   TBTMS    *
 265   TBTRD    *
1115   TCBSL    *
1116   TCBSLB   *
1117   TCBSLZ   *
1099   TCCLN    *
1100   TCCLNB   *
1101   TCCLNZ   *
1127   TCCON    *
1128   TCCONB   *
1129   TCCONZ   *
1095   TCCTA    *
1096   TCCTAB   *
1097   TCCTAZ   *
1151   TCCTP    *
1152   TCCTPB   *
1153   TCCTPZ   *
1187   TCDCC    *
1188   TCDCCB   *
1189   TCDCCZ   *
1195   TCDTO    *
1196   TCDTOB   *
1197   TCDTOZ   *
1123   TCECH    *
1124   TCECHB   *
1125   TCECHZ   *
1199   TCID1    *
1200   TCID1B   *
1201   TCID1Z   *
1203   TCID2    *
1204   TCID2B   *
1205   TCID2Z   *
1171   TCLDF    *
1172   TCLDFB   *
1173   TCLDFZ   *
1103   TCLLN    *
1104   TCLLNB   *
1105   TCLLNZ   *
1143   TCNOD    *
1144   TCNODB   *
1145   TCNODZ   *
1139   TCNTD    *
1140   TCNTDB   *
1141   TCNTDZ   *
1107   TCPCH    *
1108   TCPCHB   *
1109   TCPCHZ   *
1135   TCRBC    *
1136   TCRBCB   *
1137   TCRBCZ   *
1191   TCRBF    *
1192   TCRBFB   *
1193   TCRBFZ   *
1175   TCRCA    *
1176   TCRCAB   *
1177   TCRCAZ   *
1155   TCRMD    *
```

```
1156   TCRMDB   *
1157   TCRMDZ   *
1091   TCRQH    *
1092   TCRQHB   *
1093   TCRQHZ   *
1163   TCRRS    *
1164   TCRRSB   *
1165   TCRRSZ   *
1179   TCSTO    *
1180   TCSTOB   *
1181   TCSTOZ   *
1111   TCSWL    *
1112   TCSWLB   *
1113   TCSWLZ   *
1087   TCTCD    *
1088   TCTCDB   *
1089   TCTCDZ   *
1147   TCTYP    *
1148   TCTYPB   *
1149   TCTYPZ   *
1131   TCWBC    *
1132   TCWBCB   *
1133   TCWBCZ   *
1183   TCWCA    *
1184   TCWCAB   *
1185   TCWCAZ   *
1159   TCWMD    *
1160   TCWMDB   *
1161   TCWMDZ   *
1167   TCWRS    *
1168   TCWRSB   *
1169   TCWRSZ   *
1119   TCXMM    *
1120   TCXMMB   *
1121   TCXMMZ   *
 514   TEN       139    163
 205   TESTF    *
 507   THREE     153    177
1375   TIDSP    *
1376   TIDSPB   *
1377   TIDSPZ   *
1367   TIDWN    *
1368   TIDWNB   *
1369   TIDWNZ   *
1391   TINET    *
1392   TINETB   *
1393   TINETZ   *
1379   TIODN    *
1380   TIODNB   *
1381   TIODNZ   *
1387   TIODP    *
1388   TIODPB   *
1389   TIODPZ   *
1383   TIOSC    *
1384   TIOSCB   *
1385   TIOSCZ   *
1371   TISEC    *
1372   TISECB   *
1373   TISECZ   *
1359   TITU1    *
1360   TITU1B   *
1361   TITU1Z   *
1363   TITU2    *
1364   TITU2B   *
1365   TITU2Z   *
1221   TPFPA    *
1222   TPFPAB   *
1223   TPFPAZ   *
1213   TPRPA    *
1214   TPRPAB   *
1215   TPRPAZ   *
1217   TPWPA    *
1218   TPWPAB   *
1219   TPWPAZ   *
 506   TWO       155    179
 440   V$1MIN   *
 458   V$BFC    *
 366   V$BGLB   *
 363   V$BIC1   *
 392   V$BTB    *
 400   V$BTBM   *
 457   V$BVN    *
 408   V$CAM    *
 420   V$CKB    *
 448   V$CKIT   *
 387   V$CKPT   *
 380   V$CPL    *
 367   V$CRDM   *
 410   V$CRDR   *
 421   V$CRM    *
 381   V$CRS    *
 426   V$CTAD   *
 379.  V$CTL    *
 418   V$CTMS   *
 364   V$DATE   *
```

```
 422   V$DSTB   *
 435   V$ERFG   *
 416   V$FGLB   *
 385   V$FLRS   *
 417   V$FREE   *
 401   V$GFCB   *
 397   V$IM     *
 447   V$IOA    *
 449   V$JCB    *
 356   V$JCFG   *
 370   V$JCTM   *
 354   V$JNAM   *
 436   V$JOP    *
 407   V$KEY    *
 355   V$LCNT   *
 390   V$LER    *
 423   V$LIT    *
 395   V$LLUP   *
 396   V$LPP    *
 386   V$LRSK   *
 389   V$LSAL   *
 414   V$LUNT   *
 394   V$LUP    *
 437   V$LUT1   *
 438   V$LUT2   *
 439   V$LUT3   *
 399   V$MAP    *
 402   V$MIMG   *
 398   V$MPM    *
 428   V$NCTR   *
 393   V$NPAG   *
 452   V$OCB    *
 415   V$OPCF   *
 388   V$OPCL   *
 424   V$PGT    *
 429   V$PIMN   *
 365   V$PLCT   *
 384   V$PTVB   *
 427   V$SCTL   *
 419   V$SCV    *
 434   V$SLFG   *
 403   V$ST0    *
 404   V$ST1    *
 405   V$ST2    *
 406   V$ST3    *
 382   V$TB     *
 411   V$TBGT   *
 459   V$TFC    *
 391   V$TJCP   *
 413   V$TMN    *
 412   V$TMS    *
 383   V$UTB    *
1470   VTPOP      12   1468
   0   VTPUSH     33     35
   0   VTSTAK   1466   1471   1475   1477   1478
   0   VTVOLA   1467   1472   1476   1479
 697   X         232    254
 469   ZERO     *
```

```
                    EJEC                                                                                02 00001
                *   THIS IS A COPYRIGHTED PROGRAM, COPYRIGHT 1973 BY VARIAN DATA MACHINES               02 00002
                *                                                                                       02 00003
                *      V.D.M. PART NO.          92L1105-059A                                            02 00004
                *                                                                                       02 00005
                *                                                  RELEASED     03-26-73               02 00006
                *                                                                                       02 00007
                *                                                                                       02 00008
                *                VTPUSH                                                                 02 00009
                *                                                                                       02 00010
                *                                                                                       02 00011
                          TITLE   VTPUSH                                                                02 00012
                          NLIS                                                                          02 00013
               1443       LIST                                                                          ********
               1444     *                                                                              02 00014
               1445       EJEC                                                                          02 00015
               1446     ************************************************************************      02 00016
               1447     ************************************************************************      02 00017
               1448     **      PROGRAM NAME -                                                  **      02 00018
               1449     **              VTPUSH - PUSH VOLATILE REGISTERS ON VTAM STACK          **      02 00019
               1450     **                                                                      **      02 00020
               1451     **      ENTRY CONDITIONS-                                               **      02 00021
               1452     **              INTERRUPTS OFF.                                         **      02 00022
               1453     **              VTSTAK POINTS TO CURRENT TOP OF STACK.                  **      02 00023
               1454     **              VTVOLA POINTS TO NEXT AVAILABLE WORD IN STACK.          **      02 00024
               1455     **              FIRST WORD OF REENTRANT SUBROUTINE IS THE NUMBER OF     **      02 00025
               1456     **              WORDS REQUIRED BY THE SUBROUTINE.                       **      02 00026
               1457     **                                                                      **      02 00027
               1458     **      CALLING SEQUENCE -                                              **      02 00028
               1459     **              JMPM    VTPUSH                                          **      02 00029
               1460     **              DATA    SUBROUTINE ADDRESS                              **      02 00030
               1461     **                  RETURN AFTER SUBROUTINE EXECUTION                   **      02 00031
               1462     **                                                                      **      02 00032
               1463     **              OPTIONAL PARAMETERS MAY FOLLOW SUBROUTINE ADDRESS.      **      02 00033
               1464     **              THE REENTRANT SUBROUTINE MUST THEN INCREMENT THE        **      02 00034
               1465     **              STACK P STORAGE CELL TO REFLECT THE CORRECT RETURN      **      02 00035
               1466     **              ADDRESS BEFORE 'POPPING' THE STACK                      **      02 00036
               1467     **                                                                      **      02 00037
               1468     **      SUBROUTINE CODING FORMAT -                                      **      02 00038
               1469     **              DATA    NO. WORD REQUIRED BY SUBROUTINE                 **      02 00039
               1470     **              SUBROUTINE ENTRY POINT                                  **      02 00040
               1471     **                                                                      **      02 00041
               1472     **      EXIT CONDITIONS -                                               **      02 00042
               1473     **              VTSTAK POINTS TO NEW STACK ENTRY                        **      02 00043
               1474     **              VTVOLA POINTS TO NEXT AVAILABLE STACK POSITION          **      02 00044
               1475     **              INTERRUPTS OFF                                          **      02 00045
               1476     **      STACK ENTRY FORMAT -                                            **      02 00046
               1477     **              WORD    CONTENTS                                        **      02 00047
               1478     **               0      LENGTH OF PRECEDING STACK ENTRY                 **      02 00048
               1479     **               1      A-REGISTER                                      **      02 00049
               1480     **               2      B-REGISTER                                      **      02 00050
               1481     **               3      X-REGISTER                                      **      02 00051
               1482     **               4      P-REGISTER                                      **      02 00052
               1483     **               5-N    SCRATCH STORAGE FOR REENTRANT SUBROUTINE USAGE  **      02 00053
               1484     **                                                                      **      02 00054
               1485     ************************************************************************      02 00055
               1486     ************************************************************************      02 00056
               1487       EJEC                                                                          02 00057
               1488       EXT     VTVOLA                                                                02 00058
               1489       EXT     VTSTAK                                                                02 00059
               1490     *                                                                               02 00060
               1491       NAME    VTPUSH                                                                02 00061
000000 000000 A 1492 VTPUSH ENTR                                                                        02 00062
000001 074034 A 1493       STX     PUSAVX          TEMP STORE (X)                                       02 00063
000002 006037 A 1494       LDXE    VTVOLA                                                               02 00064
000003 000000 E
000004 006077 A 1495       STXE    VTSTAK          BUMP STACK POINTER                                   02 00065
000005 000000 E
               1496     *                  **SAVE VOLATILE REGISTERS AND OVERFLOW**                     02 00066
000006 055001 A 1497       STA       1,X                                                                02 00067
000007 065002 A 1498       STB       2,X                                                                02 00068
000010 014025 A 1499       LDA       PUSAVX                                                             02 00069
000011 055003 A 1500       STA       3,X                                                                02 00070
               1501     *                  **SET P REG CELL TO ADDR FOLLOWING JMPM AND SET             02 00071
               1502     *                    UPPERMOST BIT IF OVERFLOW IS ON**                         02 00072
000012 006017 A 1503       LDAE      VTPUSH                                                             02 00073
000013 000000 R
000014 005111 A 1504       IAR                                                                          02 00074
000015 001007 A 1505       JOFN      PU01                                                               02 00075
000016 000020 R
000017 110440 A 1506       ORA       BS15                                                               02 00076
000020 055004 A 1507 PU01  STA       4,X                                                                02 00077
               1508     *                  **CALCULATE TOTAL LENGTH OF VOLATILE BLOCK**                02 00078
000021 006027 A 1509       LDBE*     VTPUSH          (B) = FWA OF SUBROUTINE                            02 00079
000022 100000 R
000023 016000 A 1510       LDA       0,B             (A) = VOLATILE REQUIREMENTS FOR SUBROUTINE         02 00080
000024 120465 A 1511       ADD       FIVE                +OVERHEAD TO STORE REGISTERS                   02 00081
000025 005014 A 1512       TAX                                                                          02 00082
               1513     *                  **CALCULATE NEW TOP OF STACK POINTER**                      02 00083
000026 006127 A 1514       ADDE      VTVOLA                                                             02 00084
000027 000003 E
000030 006057 A 1515       STAE      VTVOLA                                                             02 00085
000031 000027 E
               1516     *                  **SAVE THIS ALLOCATION LENGTH IN FIRST WORD OF NEXT**       02 00086
000032 006077 A 1517       STXE*     VTVOLA                                                             02 00087
```

```
000033 100031 E
                    1518 *                **EXIT TO CALLED SUBROUTINE WITH INTERRUPTS OFF**                02 00088
000034 006706 A     1519          IJMP    1,B                                                              02 00089
000035 000001 A
                    1520 *                                                                                 02 00090
                    1521 *        TEMPORARY STORAGE                                                        02 00091
                    1522 *                                                                                 02 00092
000036 000000 A     1523 PUSAVX   DATA    0                                                                02 00093
                    1524          END                                                                      02 00094
ENTRY NAMES
000000 R VTPUSH
EXTERNAL NAMES
000005 E VTSTAK 000033 E VTVOLA
SYMBOLS
000044 A APIM   000002 A B      000000 A B0     000001 A B1
000012 A B10    000013 A B11    000014 A B12    000015 A B13
000016 A B14    000017 A B15    000002 A B2     000003 A B3
000004 A B4     000005 A B5     000006 A B6     000007 A B7
000010 A B8     000011 A B9     000000 A BICNUM 000421 A BM1
000472 A BM17   000475 A BM177  000477 A BM1777 000464 A BM3
000473 A BM37   000463 A BM377  000467 A BM7    000474 A BM77
000476 A BM777  000441 A BR0    000442 A BR1    000453 A BR10
000454 A BR11   000455 A BR12   000456 A BR13   000457 A BR14
000460 A BR15   000443 A BR2    000444 A BR3    000445 A BR4
000446 A BR5    000447 A BR6    000450 A BR7    000451 A BR8
000452 A BR9    000421 A BS0    000422 A BS1    000433 A BS10
000434 A BS11   000435 A BS12   000436 A BS13   000437 A BS14
000440 A BS15   000423 A BS2    000424 A BS3    000425 A BS4
000426 A BS5    000427 A BS6    000430 A BS7    000431 A BS8
000432 A BS9    000000 A CHAFP  000000 A CHAFPB 000020 A CHAFPZ
000001 A CHARP  000000 A CHARPB 000020 A CHARPZ 000002 A CHCFP
000000 A CHCFPB 000020 A CHCFPZ 000003 A CHCRP  000000 A CHCRPB
000020 A CHCRPZ 000004 A CHRBL  000000 A CHRBLB 000020 A CHRBLZ
000047 A CLOCK  000000 A COTAD1 000000 A CTACT  000017 A CTACTB
000001 A CTACTZ 000001 A CTADN  000000 A CTADNB 000020 A CTADNZ
000011 A CTBIC  000000 A CTBICB 000020 A CTBICZ 000003 A CTDST
000000 A CTDSTB 000020 A CTDSTZ 000006 A CTDVA  000000 A CTDVAB
000020 A CTDVAZ 000012 A CTFCB  000000 A CTFCBB 000020 A CTFCBZ
000014 A CTFRC  000010 A CTFRCB 000010 A CTFRCZ 000014 A CTFRE
000000 A CTFREB 000010 A CTFREZ 000000 A CTIDB  000000 A CTIDBB
000017 A CTIDBZ 000007 A CTIOA  000000 A CTIOAB 000020 A CTIOAZ
000002 A CTOPM  000000 A CTOPMB 000020 A CTOPMZ 000005 A CTRCN
000000 A CTRCNB 000010 A CTRCNZ 000004 A CTRQB  000000 A CTRQBB
000020 A CTRQBZ 000005 A CTRTR  000010 A CTRTRB 000010 A CTRTRZ
000010 A CTSTA  000000 A CTSTAB 000020 A CTSTAZ 000013 A CTWDS
000000 A CTWDSB 000020 A CTWDSZ 000001 A DCBUFF 000003 A DCCHR
000000 A DCCHRB 000020 A DCCHRZ 000002 A DCCNT  000000 A DCRECL
000747 A DISCLK 000745 A DISMP  000444 A DISPIM 000026 A DMBCA
000000 A DMBCAB 000020 A DMBCAZ 000024 A DMCWA  000000 A DMCWAB
000020 A DMCWAZ 000017 A DMFPA  000000 A DMFPAB 000020 A DMFPAZ
000021 A DMLCA  000000 A DMLCAB 000020 A DMLCAZ 000022 A DMLTA
000000 A DMLTAB 000020 A DMLTAZ 000023 A DMPTA  000000 A DMPTAB
000020 A DMPTAZ 000016 A DMRPA  000000 A DMRPAB 000020 A DMRPAZ
000020 A DMSTA  000000 A DMSTAB 000020 A DMSTAZ 000025 A DMSWA
000000 A DMSWAB 000020 A DMSWAZ 000015 A DMTPA  000000 A DMTPAB
000020 A DMTPAZ 000002 A DSCTAD 000000 A DSDASS 000000 A DSDVDN
000002 A DSLCKO 000001 A DSNAME 000000 A DSNORQ 000002 A DSOPCM
000002 A DSPSTI 000002 A DSREWD 000000 A DSUNAM 000002 A DSUNTN
000424 A EIGHT  000147 A ENACLK 000645 A ENAMP  000244 A ENAPIM
000465 A FIVE   000423 A FOUR   000003 A IBIBF  000017 A IBIBFB
000001 A IBIBFZ 000003 A IBLAS  000000 A IBLASB 000017 A IBLASZ
000001 A IBLEN  000000 A IBLENB 000020 A IBLENZ 000000 A IBLNK
000000 A IBLNKB 000020 A IBLNKZ 000002 A IBSTA  000000 A IBSTAB
000020 A IBSTAZ 000004 A IBSTS  000000 A IBSTSB 000017 A IBSTSZ
000300 A LC     000003 A LCABN  000013 A LCABNB 000001 A LCABNZ
000003 A LCASY  000012 A LCASYB 000001 A LCASYZ 000007 A LCBSC
000015 A LCBSCB 000001 A LCBSCZ 000007 A LCCHN  000016 A LCCHNB
000001 A LCCHNZ 000003 A LCCRC  000014 A LCCRCB 000003 A LCCRCZ
000006 A LCCWB  000014 A LCCWBB 000001 A LCCWBZ 000006 A LCCWC
000015 A LCCWCB 000001 A LCCWCZ 000006 A LCCWD  000013 A LCCWDB
000001 A LCCWDZ 000006 A LCCWI  000016 A LCCWIB 000001 A LCCWIZ
000006 A LCCWP  000012 A LCCWPB 000001 A LCCWPZ 000006 A LCCWR
000011 A LCCWRB 000001 A LCCWRZ 000006 A LCCWS  000017 A LCCWSB
000001 A LCCWSZ 000006 A LCCWT  000010 A LCCWTB 000001 A LCCWTZ
000001 A LCIBA  000000 A LCIBAB 000017 A LCIBAZ 000000 A LCIBF
000017 A LCIBFB 000001 A LCIBFZ 000000 A LCIBL  000000 A LCIBLB
000014 A LCIBLZ 000002 A LCIC1  000010 A LCIC1B 000010 A LCIC1Z
000002 A LCIC2  000000 A LCIC2B 000010 A LCIC2Z 000003 A LCIKE
000000 A LCIKEB 000004 A LCIKEZ 000007 A LCITB  000013 A LCITBB
000001 A LCITBZ 000050 A LCJP   000006 A LCLCB  000000 A LCLCBB
000020 A LCLCBZ 000007 A LCLDB  000014 A LCLDBB 000001 A LCLDBZ
000007 A LCLTB  000017 A LCLTBB 000001 A LCLTBZ 000005 A LCOBA
000000 A LCOBAB 000017 A LCOBAZ 000004 A LCOBF  000017 A LCOBFB
000001 A LCOBFZ 000004 A LCOBL  000000 A LCOBLB 000014 A LCOBLZ
000007 A LCOKE  000000 A LCOKEB 000004 A LCOKEZ 000003 A LCRCC
000017 A LCRCCB 000001 A LCRCCZ 000000 A LCSMB  000016 A LCSMBB
000001 A LCSMBZ 000462 A LHW    000017 A LSABN  000015 A LSABNB
000001 A LSABNZ 000017 A LSASC  000011 A LSASCB 000001 A LSASCZ
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000016 A LSBSCB 000001 A LSBSCZ 000015 A LSCC1  000010 A LSCC1B
000010 A LSCC1Z 000015 A LSCC2  000000 A LSCC2B 000010 A LSCC2Z
000017 A LSCHN  000010 A LSCHNB 000001 A LSCHNZ 000017 A LSCRC
000012 A LSCRCB 000003 A LSCRCZ 000012 A LSCTA  000000 A LSCTAB
000020 A LSCTAZ 000017 A LSDSF  000017 A LSDSFB 000001 A LSDSFZ
000013 A LSDST  000000 A LSDSTB 000020 A LSDSTZ 000016 A LSEPF
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000014 A LSPARB 000002 A LSPARZ 000016 A LSPLA  000000 A LSPLAB
000010 A LSPLAZ 000002 A LSRCA  000000 A LSRCAB 000020 A LSRCAZ
000003 A LSREM  000000 A LSREMB 000020 A LSREMZ 000016 A LSRRS
000010 A LSRRSB 000003 A LSRRSZ 000001 A LSRRT  000000 A LSRRTB
000020 A LSRRTZ 000004 A LSRTO  000000 A LSRTOB 000020 A LSRTOZ
000005 A LSSRS  000000 A LSSRSB 000020 A LSSRSZ 000011 A LSSWS
000000 A LSSWSB 000020 A LSSWSZ 000016 A LSTER  000017 A LSTERB
000001 A LSTERZ 000000 A LSTHD  000000 A LSTHDB 000020 A LSTHDZ
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000000 A LSWEMB 000020 A LSWEMZ 000016 A LSWRS  000013 A LSWRSB
000003 A LSWRSZ 000010 A LSWTO  000000 A LSWTOB 000020 A LSWTOZ
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000016 A LSYNCB 000001 A LSYNCZ 000020 A LSYNR  000000 A LSYNRB
000010 A LSYNRZ 000017 A LSYNT  000000 A LSYNTB 000010 A LSYNTZ
000046 A MAP    000045 A MP     000045 A MPMR0  000145 A MPMR1
000245 A MPMR2  000345 A MPMR3  000420 A MT     000461 A NEG
000470 A NINE   000421 A ONE    000001 A PCBSL  000011 A PCBSLB
000001 A PCBSLZ 000000 A PCCLN  000000 A PCCLNB 000010 A PCCLNZ
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000014 A PCECHB 000001 A PCECHZ 000000 A PCLLN  000010 A PCLLNB
000010 A PCLLNZ 000002 A PCNTD  000000 A PCNTDB 000004 A PCNTDZ
000001 A PCPCH  000000 A PCPCHB 000010 A PCPCHZ 000001 A PCSWL
000010 A PCSWLB 000001 A PCSWLZ 000002 A PCTYP  000010 A PCTYPB
000004 A PCTYPZ 000001 A PCXMM  000012 A PCXMMB 000002 A PCXMMZ
000040 A PIM1   000041 A PIM2   000042 A PIM3   000043 A PIM4
000040 A PIM5   000040 A PIM6   000040 A PIM7   000040 A PIM8
000200 A POST   000003 A PSABN  000015 A PSABNB 000001 A PSABNZ
000000 A PSASY  000013 A PSASYB 000001 A PSASYZ 000002 A PSBADT
000000 A PSBEG  000004 A PSBSC  000016 A PSBSCB 000016 A PSBSCZ
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000000 A PSCC2B 000010 A PSCC2Z 000003 A PSCRC  000012 A PSCRCB
000003 A PSCRCZ 000002 A PSDEF  000010 A PSDEFB 000001 A PSDEFZ
000003 A PSDSF  000017 A PSDSFB 000001 A PSDSFZ 000002 A PSDWN
000011 A PSDWNB 000001 A PSDWNZ 000004 A PSEND  000002 A PSEPF
000016 A PSEPFB 000001 A PSEPFZ 000000 A PSLSP  000000 A PSLSPB
000011 A PSLSPZ 000000 A PSMOD  000016 A PSMODB 000002 A PSMODZ
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000002 A PSTER  000017 A PSTERB 000001 A PSTERZ 000000 A PSXMM
000011 A PSXMMB 000002 A PSXMMZ 000003 A PSYNC  000016 A PSYNCB
000001 A PSYNCZ 000004 A PSYNR  000000 A PSYNRB 000010 A PSYNRZ
000003 A PSYNT  000000 A PSYNTB 000010 A PSYNTZ 000020 R PU01
000036 R PUSAVX 000040 A RA0    000000 A RA1    000004 A RADNR
000060 A RB0    000020 A RB1    000002 A RFCB   000463 A RHW
000001 A ROPWD  000000 A RSTPR  000003 A RTIDB  000467 A SEVEN
000466 A SIX    000027 A TBATSK 000026 A TBCPTH 000011 A TBENTY
000003 A TBEVNT 000021 A TBIO   000014 A TBISA  000015 A TBISB
000017 A TBISP  000020 A TBISRS 000034 A TBIST  000016 A TBISX
000032 A TBKEY  000022 A TBKN1  000023 A TBKN2  000024 A TBKN3
000033 A TBMIMG 000032 A TBNUCL 000002 A TBPL   000004 A TBRSA
000005 A TBRSB  000030 A TBRSE  000007 A TBRSP  000010 A TBRSTS
000006 A TBRSX  000000 A TBS0   000001 A TBS1   000012 A TBS10
000013 A TBS11  000014 A TBS12  000015 A TBS13  000016 A TBS14
000017 A TBS15  000002 A TBS2   000003 A TBS3   000004 A TBS4
000005 A TBS5   000006 A TBS6   000007 A TBS7   000010 A TBS8
000011 A TBS9   000031 A TBSIZ  000001 A TBST   000025 A TBTLC
000013 A TBTMIN 000012 A TBTMS  000000 A TBTRD  000004 A TCBSL
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000010 A TCCLNZ 000004 A TCCON  000015 A TCCONB 000001 A TCCONZ
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000014 A TCCTPB 000004 A TCCTPZ 000012 A TCDCC  000000 A TCDCCB
000020 A TCDCCZ 000014 A TCDTO  000000 A TCDTOB 000020 A TCDTOZ
000004 A TCECH  000014 A TCECHB 000001 A TCECHZ 000015 A TCID1
000000 A TCID1B 000020 A TCID1Z 000016 A TCID2  000000 A TCID2B
000020 A TCID2Z 000006 A TCLDF  000014 A TCLDFB 000001 A TCLDFZ
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000004 A TCNODB 000004 A TCNODZ 000005 A TCNTD  000000 A TCNTDB
000004 A TCNTDZ 000004 A TCPCH  000000 A TCPCHB 000010 A TCPCHZ
000004 A TCRBC  000017 A TCRBCB 000001 A TCRBCZ 000013 A TCRBF
000000 A TCRBFB 000020 A TCRBFZ 000007 A TCRCA  000000 A TCRCAB
000020 A TCRCAZ 000006 A TCRMD  000000 A TCRMDB 000003 A TCRMDZ
000001 A TCRQH  000000 A TCRQHB 000020 A TCRQHZ 000006 A TCRRS
000006 A TCRRSB 000003 A TCRRSZ 000010 A TCSTO  000000 A TCSTOB
000020 A TCSTOZ 000004 A TCSWL  000010 A TCSWLB 000001 A TCSWLZ
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000010 A TCTYPB 000004 A TCTYPZ 000004 A TCWBC  000016 A TCWBCB
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000006 A TCWMD  000003 A TCWMDB 000003 A TCWMDZ 000006 A TCWRS
000011 A TCWRSB 000003 A TCWRSZ 000004 A TCXMM  000012 A TCXMMB
000002 A TCXMMZ 000471 A TEN    000464 A THREE  000002 A TIDSP
000000 A TIDSPB 000007 A TIDSPZ 000002 A TIDWN  000017 A TIDWNB
000001 A TIDWNZ 000000 A TINET  000000 A TINETB 000020 A TINETZ
000003 A TIODN  000017 A TIODNB 000001 A TIODNZ 000003 A TIODP
000000 A TIODPB 000007 A TIODPZ 000003 A TIOSC  000007 A TIOSCB
000010 A TIOSCZ 000002 A TISEC  000007 A TISECB 000010 A TISECZ
000000 A TITU1  000000 A TITU1B 000020 A TITU1Z 000001 A TITU2
000000 A TITU2B 000020 A TITU2Z 000017 A TPFPA  000000 A TPFPAB
000020 A TPFPAZ 000015 A TPRPA  000000 A TPRPAB 000020 A TPRPAZ
000016 A TPWPA  000000 A TPWPAB 000020 A TPWPAZ 000422 A TWO
000403 A V$1MIN 000415 A V$BFC  000075 A V$BGLB 000056 A V$BIC1
000315 A V$BTB  000331 A V$BTBM 000414 A V$BVN  000334 A V$CAM
000353 A V$CKB  000411 A V$CKIT 000310 A V$CKPT 000301 A V$CPL
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000076 A V$CRDM 000341 A V$CRDR 000354 A V$CRM  000302 A V$CRS
000360 A V$CTAD 000300 A V$CTL  000351 A V$CTMS 000070 A V$DATE
000355 A V$DSTB 000376 A V$ERFG 000347 A V$FGLB 000306 A V$FLRS
000350 A V$FREE 000332 A V$GFCB 000320 A V$IM   000410 A V$IOA
000412 A V$JCB  000055 A V$JCFG 000077 A V$JCTM 000050 A V$JNAM
000377 A V$JOP  000340 A V$KEY  000054 A V$LCNT 000313 A V$LER
000356 A V$LIT  000317 A V$LLUP 000317 A V$LPP  000307 A V$LRSK
000312 A V$LSAL 000345 A V$LUNT 000316 A V$LUP  000400 A V$LUT1
000401 A V$LUT2 000402 A V$LUT3 000330 A V$MAP  000333 A V$MIMG
000330 A V$MPM  000362 A V$NCTR 000316 A V$NPAG 000413 A V$OCB
000346 A V$OPCF 000311 A V$OPCL 000357 A V$PGT  000363 A V$PIMN
000074 A V$PLCT 000305 A V$PTVB 000361 A V$SCTL 000352 A V$SCV
000375 A V$SLFG 000334 A V$ST0  000335 A V$ST1  000336 A V$ST2
000337 A V$ST3  000303 A V$TB   000342 A V$TBGT 000416 A V$TFC
000314 A V$TJCP 000344 A V$TMN  000343 A V$TMS  000304 A V$UTB
000000 R VTPUSH 000005 E VTSTAK 000033 E VTVOLA 000001 A X
000420 A ZERO
  0 ERRORS ASSEMBLY COMPLETE
```

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159  ADAT     *
 38  ANAM     *
 90  ANAN     *
574  APIM      584   585
108  B          98   117   229   230   252   255   257  1510  1519
 88  B&         82
 83  B&0        40
 80  B&1        78
 44  B&10       42
 76  B&2        74
 72  B&3        70
 68  B&4        66
 64  B&5        62
 60  B&6        58
 56  B&7        54
 52  B&8        50
 48  B&9        46
543  B0       *
544  B1       *
553  B10      *
554  B11      *
555  B12      *
556  B13      *
557  B14      *
558  B15      *
545  B2       *
546  B3       *
547  B4       *
548  B5       *
549  B6       *
550  B7       *
551  B8       *
552  B9       *
630  BICNUM   *
515  BM1        79
518  BM17       67
521  BM177      55
524  BM1777     43
516  BM3        75
519  BM37       63
522  BM377      51
517  BM7        71
520  BM77       59
523  BM777      47
486  BR0       202
487  BR1      *
496  BR10     *
497  BR11     *
498  BR12     *
499  BR13     *
500  BR14     *
501  BR15     *
488  BR2      *
489  BR3      *
490  BR4      *
491  BR5      *
492  BR6      *
493  BR7      *
494  BR8      *
495  BR9      *
470  BS0       195   209
471  BS1      *
480  BS10     *
481  BS11     *
482  BS12     *
483  BS13     *
484  BS14     *
485  BS15     1506
472  BS2      *
473  BS3      *
474  BS4      *
475  BS5      *
476  BS6      *
477  BS7      *
478  BS8      *
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 479   BS9      *
1397   CHAFP    *
1398   CHAFPB   *
1399   CHAFPZ   *
1401   CHARP    *
1402   CHARPB   *
1403   CHARPZ   *
1405   CHCFP    *
1406   CHCFPB   *
1407   CHCFPZ   *
1409   CHCRP    *
1410   CHCRPB   *
1411   CHCRPZ   *
1413   CHRBL    *
1414   CHRBLB   *
1415   CHRBLZ   *
 198   CLEARF   *
 567   CLOCK     569    570
 622   COTAD1   *
 707   CTACT    *
 708   CTACTB   *
 709   CTACTZ   *
 715   CTADN    *
 716   CTADNB   *
 717   CTADNZ   *
 751   CTBIC    *
 752   CTBICB   *
 753   CTBICZ   *
 723   CTDST    *
 724   CTDSTB   *
 725   CTDSTZ   *
 739   CTDVA    *
 740   CTDVAB   *
 741   CTDVAZ   *
 755   CTFCB    *
 756   CTFCBB   *
 757   CTFCBZ   *
 763   CTFRC    *
 764   CTFRCB   *
 765   CTFRCZ   *
 767   CTFRE    *
 768   CTFREB   *
 769   CTFREZ   *
 711   CTIDB    *
 712   CTIDBB   *
 713   CTIDBZ   *
 743   CTIOA    *
 744   CTIOAB   *
 745   CTIOAZ   *
 719   CTOPM    *
 720   CTOPMB   *
 721   CTOPMZ   *
 735   CTRCN    *
 736   CTRCNB   *
 737   CTRCNZ   *
 727   CTRQB    *
 728   CTRQBB   *
 729   CTRQBZ   *
 731   CTRTR    *
 732   CTRTRB   *
 733   CTRTRZ   *
 747   CTSTA    *
 748   CTSTAB   *
 749   CTSTAZ   *
 759   CTWDS    *
 760   CTWDSB   *
 761   CTWDSZ   *
 688   DCBUFF   *
 691   DCCHR    *
 692   DCCHRB   *
 693   DCCHRZ   *
 689   DCCNT    *
 687   DCRECL   *
 187   DINTS    *
 569   DISCLK    189
 589   DISMP    *
 584   DISPIM    188
 813   DMBCA    *
 814   DMBCAB   *
 815   DMBCAZ   *
 805   DMCWA    *
 806   DMCWAB   *
 807   DMCWAZ   *
 785   DMFPA    *
 786   DMFPAB   *
 787   DMFPAZ   *
 793   DMLCA    *
 794   DMLCAB   *
 795   DMLCAZ   *
 797   DMLTA    *
 798   DMLTAB   *
 799   DMLTAZ   *
 801   DMPTA    *
 802   DMPTAB   *
 803   DMPTAZ   *
```

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781   DMRPA    *
782   DMRPAB   *
783   DMRPAZ   *
789   DMSTA    *
790   DMSTAB   *
791   DMSTAZ   *
809   DMSWA    *
810   DMSWAB   *
811   DMSWAZ   *
727   DMTPA    *
728   DMTPAB   *
729   DMTPAZ   *
615   DSCTAD   *
601   DSDASS   *
600   DSDVDN   *
612   DSLCKD   *
609   DSNAME   *
608   DSNORQ   *
613   DSOPCM   *
614   DSPSTI   *
610   DSREWD   *
606   DSUNAM   *
611   DSUNTN   *
512   EIGHT     143    167
183   EINTS    *
570   ENACLK    185
590   ENAMP    *
585   ENAPIM    184
  0   ERROR     113    193    200    207
128   FETCHA   *
509   FIVE      149    173   1511
508   FOUR      151    175
251   GETQ     *
1432  IBIBF    *
1433  IBIBFB   *
1434  IBIBFZ   *
1436  IBLAS    *
1437  IBLASB   *
1438  IBLASZ   *
1424  IBLEN    *
1425  IBLENB   *
1426  IBLENZ   *
1420  IBLNK    *
1421  IBLNKB   *
1422  IBLNKZ   *
1428  IBSTA    *
1429  IBSTAB   *
1430  IBSTAZ   *
1440  IBSTS    *
1441  IBSTSB   *
1442  IBSTSZ   *
 378  LC        379    380    381    382    383    384    385    386    387
                388    389    390    391    392    393    394    395    396
                397    398    399    400    401    402    403    404    405
                406    407    408    410    411    412    413    414    415
                416    417    418    419    420    421    422    423    424
                426    427    428    429    434    435    436    437    438
                439    440    447    448    449    452    457    458    459
 855  LCABN    *
 856  LCABNB   *
 857  LCABNZ   *
 859  LCASY    *
 860  LCASYB   *
 861  LCASYZ   *
 923  LCBSC    *
 924  LCBSCB   *
 925  LCBSCZ   *
 919  LCCHN    *
 920  LCCHNB   *
 921  LCCHNZ   *
 851  LCCRC    *
 852  LCCRCB   *
 853  LCCRCZ   *
 895  LCCWB    *
 896  LCCWBB   *
 897  LCCWBZ   *
 891  LCCWC    *
 892  LCCWCB   *
 893  LCCWCZ   *
 899  LCCWD    *
 900  LCCWDB   *
 901  LCCWDZ   *
 887  LCCWI    *
 888  LCCWIB   *
 889  LCCWIZ   *
 903  LCCWP    *
 904  LCCWPB   *
 905  LCCWPZ   *
 907  LCCWR    *
 908  LCCWRB   *
 909  LCCWRZ   *
 883  LCCWS    *
 884  LCCWSB   *
 885  LCCWSZ   *
 911  LCCWT    *
```

```
912   LCCWTB   *
913   LCCWTZ   *
835   LCIBA    *
836   LCIBAB   *
837   LCIBAZ   *
823   LCIBF    *
824   LCIBFB   *
825   LCIBFZ   *
831   LCIBL    *
832   LCIBLB   *
833   LCIBLZ   *
839   LCIC1    *
840   LCIC1B   *
841   LCIC1Z   *
843   LCIC2    *
844   LCIC2B   *
845   LCIC2Z   *
863   LCIKE    *
864   LCIKEB   *
865   LCIKEZ   *
931   LCITB    *
932   LCITBB   *
933   LCITBZ   *
353   LCJP      354   355   356   363   364   365   366   367   370
879   LCLCB    *
880   LCLCBB   *
881   LCLCBZ   *
927   LCLDB    *
928   LCLDBB   *
929   LCLDBZ   *
915   LCLTB    *
916   LCLTBB   *
917   LCLTBZ   *
875   LCOBA    *
876   LCOBAB   *
877   LCOBAZ   *
867   LCOBF    *
868   LCOBFB   *
869   LCOBFZ   *
871   LCOBL    *
872   LCOBLB   *
873   LCOBLZ   *
935   LCOKE    *
936   LCOKEB   *
937   LCOKEZ   *
847   LCRCC    *
848   LCRCCB   *
849   LCRCCZ   *
827   LCSMB    *
828   LCSMBB   *
829   LCSMBZ   *
503   LHW      *
1049  LSABN    *
1050  LSABNB   *
1051  LSABNZ   *
1057  LSASC    *
1058  LSASCB   *
1059  LSASCZ   *
1001  LSASY    *
1002  LSASYB   *
1003  LSASYZ   *
1069  LSBSC    *
1070  LSBSCB   *
1071  LSBSCZ   *
1013  LSCC1    *
1014  LSCC1B   *
1015  LSCC1Z   *
1017  LSCC2    *
1018  LSCC2B   *
1019  LSCC2Z   *
1061  LSCHN    *
1062  LSCHNB   *
1063  LSCHNZ   *
1053  LSCRC    *
1054  LSCRCB   *
1055  LSCRCZ   *
 985  LSCTA    *
 986  LSCTAB   *
 987  LSCTAZ   *
1041  LSDSF    *
1042  LSDSFB   *
1043  LSDSFZ   *
 989  LSDST    *
 990  LSDSTB   *
 991  LSDSTZ   *
1025  LSEPF    *
1026  LSEPFB   *
1027  LSEPFZ   *
1009  LSLSP    *
1010  LSLSPB   *
1011  LSLSPZ   *
 993  LSMOD    *
 994  LSMODB   *
 995  LSMODZ   *
1073  LSNTO    *
```

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1074   LSNTOB   *
1075   LSNTOZ   *
 997   LSPAR    *
 998   LSPARB   *
 999   LSPARZ   *
1037   LSPLA    *
1038   LSPLAB   *
1039   LSPLAZ   *
 953   LSRCA    *
 954   LSRCAB   *
 955   LSRCAZ   *
 957   LSREM    *
 958   LSREMB   *
 959   LSREMZ   *
1033   LSRRS    *
1034   LSRRSB   *
1035   LSRRSZ   *
 949   LSRRT    *
 950   LSRRTB   *
 951   LSRRTZ   *
 961   LSRTO    *
 962   LSRTOB   *
 963   LSRTOZ   *
 965   LSSRS    *
 966   LSSRSB   *
 967   LSSRSZ   *
 981   LSSWS    *
 982   LSSWSB   *
 983   LSSWSZ   *
1021   LSTER    *
1022   LSTERB   *
1023   LSTERZ   *
 945   LSTHD    *
 946   LSTHDB   *
 947   LSTHDZ   *
 969   LSWCA    *
 970   LSWCAB   *
 971   LSWCAZ   *
 973   LSWEM    *
 974   LSWEMB   *
 975   LSWEMZ   *
1029   LSWRS    *
1030   LSWRSB   *
1031   LSWRSZ   *
 977   LSWTO    *
 978   LSWTOB   *
 979   LSWTOZ   *
1005   LSXMM    *
1006   LSXMMB   *
1007   LSXMMZ   *
1045   LSYNC    *
1046   LSYNCB   *
1047   LSYNCZ   *
1077   LSYNR    *
1078   LSYNRB   *
1079   LSYNRZ   *
1065   LSYNT    *
1066   LSYNTB   *
1067   LSYNTZ   *
 591   MAP      *
 588   MP        589   590   592   593   594   595
 592   MPMR0    *
 593   MPMR1    *
 594   MPMR2    *
 595   MPMR3    *
 468   MT        469   470   471   472   473   474   475   476   477
                 478   479   480   481   482   483   484   485   486
                 487   488   489   490   491   492   493   494   495
                 496   497   498   499   500   501   502   503   504
                 505   506   507   508   509   510   511   512   513
                 514   515   516   517   518   519   520   521   522
                 523   524
 502   NEG      *
 513   NINE      141   165
 505   ONE       157   181
   0   P          27    29    30    36    39    41    45    49    53
                  57    61    65    69    73    77    81    84    85
                  85    86    87    91    92    92    93    94    97
                  99   100   101   101   102   103   104   105   106
                 107   107   109   109   112   114   115   115   116
                 118   118   119   120   121   123   124   125   125
                 129   129   130   131   132   132   133   136   137
                 138   140   142   144   146   148   150   152   154
                 156   160   161   162   164   166   168   170   172
                 174   176   178   180   192   194   194   195   196
                 196   199   201   201   202   203   203   206   208
                 208   209
1329   PCBSL    *
1330   PCBSLB   *
1331   PCBSLZ   *
1317   PCCLN    *
1318   PCCLNB   *
1319   PCCLNZ   *
1341   PCCTP    *
1342   PCCTPB   *
```

```
1343   PCCTPZ   *
1321   PCECH    *
1322   PCECHB   *
1323   PCECHZ   *
1313   PCLLN    *
1314   PCLLNB   *
1315   PCLLNZ   *
1349   PCNTD    *
1350   PCNTDB   *
1351   PCNTDZ   *
1337   PCPCH    *
1338   PCPCHB   *
1339   PCPCHZ   *
1333   PCSWL    *
1334   PCSWLB   *
1335   PCSWLZ   *
1345   PCTYP    *
1346   PCTYPB   *
1347   PCTYPZ   *
1325   PCXMM    *
1326   PCXMMB   *
1327   PCXMMZ   *
 575   PIM1     *
 576   PIM2     *
 577   PIM3     *
 578   PIM4     *
 579   PIM5     *
 580   PIM6     *
 581   PIM7     *
 582   PIM8     *
 699   POST     *
1287   PSABN    *
1288   PSABNB   *
1289   PSABNZ   *
1239   PSASY    *
1240   PSASYB   *
1241   PSASYZ   *
 670   PSBADT   *
 666   PSBEG    *
1299   PSBSC    *
1300   PSBSCB   *
1301   PSBSCZ   *
1251   PSCC1    *
1252   PSCC1B   *
1253   PSCC1Z   *
1255   PSCC2    *
1256   PSCC2B   *
1257   PSCC2Z   *
1291   PSCRC    *
1292   PSCRCB   *
1293   PSCRCZ   *
1271   PSDEF    *
1272   PSDEFB   *
1273   PSDEFZ   *
1279   PSDSF    *
1280   PSDSFB   *
1281   PSDSFZ   *
1267   PSDWN    *
1268   PSDWNB   *
1269   PSDWNZ   *
 672   PSEND    *
1263   PSEPF    *
1264   PSEPFB   *
1265   PSEPFZ   *
1247   PSLSP    *
1248   PSLSPB   *
1249   PSLSPZ   *
1231   PSMOD    *
1232   PSMODB   *
1233   PSMODZ   *
 671   PSNSEC   *
1235   PSPAR    *
1236   PSPARB   *
1237   PSPARZ   *
1275   PSPLA    *
1276   PSPLAB   *
1277   PSPLAZ   *
 667   PSPROT   *
1259   PSTER    *
1260   PSTERB   *
1261   PSTERZ   *
1243   PSXMM    *
1244   PSXMMB   *
1245   PSXMMZ   *
1283   PSYNC    *
1284   PSYNCB   *
1285   PSYNCZ   *
1303   PSYNR    *
1304   PSYNRB   *
1305   PSYNRZ   *
1295   PSYNT    *
1296   PSYNTB   *
1297   PSYNTZ   *
1507   PU01     1505
1523   PUSAVX   1493   1499
```

```
 32   PUSH     *
228   PUTQ     *
532   RA0      *
533   RA1      *
651   RADNR    *
534   RB0      *
535   RB1      *
649   RFCB     *
504   RHW      *
645   RDPWD    *
642   RSTPR    *
650   RTIDB    *
 96   SETA     *
111   SETB     *
191   SETF     *
511   SEVEN      145    169
510   SIX        147    171
 26   SPACE    *
135   SUBAT    *
288   TBATSK   *
287   TBCPTH   *
274   TBENTY   *
268   TBEVNT   *
282   TBID     *
277   TBISA    *
278   TBISB    *
280   TBISP    *
281   TBISRS   *
294   TBIST    *
279   TBISX    *
292   TBKEY    *
283   TBKN1    *
284   TBKN2    *
285   TBKN3    *
293   TBMIMG   *
291   TBNUCL   *
267   TBPL     *
269   TBRSA    *
270   TBRSB    *
289   TBRSE    *
272   TBRSP    *
273   TBRSTS   *
271   TBRSX    *
322   TBS0     *
321   TBS1     *
309   TBS10    *
308   TBS11    *
306   TBS12    *
305   TBS13    *
304   TBS14    *
302   TBS15    *
320   TBS2     *
318   TBS3     *
317   TBS4     *
316   TBS5     *
314   TBS6     *
313   TBS7     *
312   TBS8     *
310   TBS9     *
290   TBSIZ    *
266   TBST     *
286   TBTLC    *
276   TBTMIN   *
275   TBTMS    *
265   TBTRD    *
1115  TCBSL    *
1116  TCBSLB   *
1117  TCBSLZ   *
1099  TCCLN    *
1100  TCCLNB   *
1101  TCCLNZ   *
1127  TCCON    *
1128  TCCONB   *
1129  TCCONZ   *
1095  TCCTA    *
1096  TCCTAB   *
1097  TCCTAZ   *
1151  TCCTP    *
1152  TCCTPB   *
1153  TCCTPZ   *
1187  TCDCC    *
1188  TCDCCB   *
1189  TCDCCZ   *
1195  TCDTO    *
1196  TCDTOB   *
1197  TCDTOZ   *
1123  TCECH    *
1124  TCECHB   *
1125  TCECHZ   *
1199  TCID1    *
1200  TCID1B   *
1201  TCID1Z   *
1203  TCID2    *
1204  TCID2B   *
1205  TCID2Z   *
```

```
1171   TCLDF    *
1172   TCLDFB   *
1173   TCLDFZ   *
1103   TCLLN    *
1104   TCLLNB   *
1105   TCLLNZ   *
1143   TCNOD    *
1144   TCNODB   *
1145   TCNODZ   *
1139   TCNTD    *
1140   TCNTDB   *
1141   TCNTDZ   *
1107   TCPCH    *
1108   TCPCHB   *
1109   TCPCHZ   *
1135   TCRBC    *
1136   TCRBCB   *
1137   TCRBCZ   *
1191   TCRBF    *
1192   TCRBFB   *
1193   TCRBFZ   *
1175   TCRCA    *
1176   TCRCAB   *
1177   TCRCAZ   *
1155   TCRMD    *
1156   TCRMDB   *
1157   TCRMDZ   *
1091   TCRQH    *
1092   TCRQHB   *
1093   TCRQHZ   *
1163   TCRRS    *
1164   TCRRSB   *
1165   TCRRSZ   *
1179   TCSTO    *
1180   TCSTOB   *
1181   TCSTOZ   *
1111   TCSWL    *
1112   TCSWLB   *
1113   TCSWLZ   *
1087   TCTCD    *
1088   TCTCDB   *
1089   TCTCDZ   *
1147   TCTYP    *
1148   TCTYPB   *
1149   TCTYPZ   *
1131   TCWBC    *
1132   TCWBCB   *
1133   TCWBCZ   *
1183   TCWCA    *
1184   TCWCAB   *
1185   TCWCAZ   *
1159   TCWMD    *
1160   TCWMDB   *
1161   TCWMDZ   *
1167   TCWRS    *
1168   TCWRSB   *
1169   TCWRSZ   *
1119   TCXMM    *
1120   TCXMMB   *
1121   TCXMMZ   *
 514   TEN       139    163
 205   TESTF    *
 507   THREE     153    177
1375   TIDSP    *
1376   TIDSPB   *
1377   TIDSPZ   *
1367   TIDWN    *
1368   TIDWNB   *
1369   TIDWNZ   *
1391   TINET    *
1392   TINETB   *
1393   TINETZ   *
1379   TIODN    *
1380   TIODNB   *
1381   TIODNZ   *
1387   TIODP    *
1388   TIODPB   *
1389   TIODPZ   *
1383   TIOSC    *
1384   TIOSCB   *
1385   TIOSCZ   *
1371   TISEC    *
1372   TISECB   *
1373   TISECZ   *
1359   TITU1    *
1360   TITU1B   *
1361   TITU1Z   *
1363   TITU2    *
1364   TITU2B   *
1365   TITU2Z   *
1221   TPFPA    *
1222   TPFPAB   *
1223   TPFPAZ   *
1213   TPRPA    *
1214   TPRPAB   *
```

```
1215   TPRPAZ   *
1217   TPWPA    *
1218   TPWPAB   *
1219   TPWPAZ   *
 506   TWO       155    179
 440   V$1MIN   *
 458   V$BFC    *
 366   V$BGLB   *
 363   V$BIC1   *
 392   V$BTB    *
 400   V$BTBM   *
 457   V$BVN    *
 408   V$CAM    *
 420   V$CKB    *
 448   V$CKIT   *
 387   V$CKPT   *
 380   V$CPL    *
 367   V$CRDM   *
 410   V$CRDR   *
 421   V$CRM    *
 381   V$CRS    *
 426   V$CTAD   *
 379   V$CTL    *
 418   V$CTMS   *
 364   V$DATE   *
 422   V$DSTB   *
 435   V$ERFG   *
 416   V$FGLB   *
 385   V$FLRS   *
 417   V$FREE   *
 401   V$GFCB   *
 397   V$IM     *
 447   V$IOA    *
 449   V$JCB    *
 356   V$JCFG   *
 370   V$JCTM   *
 354   V$JNAM   *
 436   V$JOP    *
 407   V$KEY    *
 355   V$LCNT   *
 390   V$LER    *
 423   V$LIT    *
 395   V$LLUP   *
 396   V$LPP    *
 386   V$LRSK   *
 389   V$LSAL   *
 414   V$LUNT   *
 394   V$LUP    *
 437   V$LUT1   *
 438   V$LUT2   *
 439   V$LUT3   *
 399   V$MAP    *
 402   V$MIMG   *
 398   V$MPM    *
 428   V$NCTR   *
 393   V$NPAG   *
 452   V$OCB    *
 415   V$OPCF   *
 388   V$OPCL   *
 424   V$PGT    *
 429   V$PIMN   *
 365   V$PLCT   *
 384   V$PTVB   *
 427   V$SCTL   *
 419   V$SCV    *
 434   V$SLFG   *
 403   V$ST0    *
 404   V$ST1    *
 405   V$ST2    *
 406   V$ST3    *
 382   V$TB     *
 411   V$TBGT   *
 459   V$TFC    *
 391   V$TJCP   *
 413   V$TMN    *
 412   V$TMS    *
 383   V$UTB    *
1492   VTPUSH     12     33     35   1491   1503   1509
   0   VTSTAK   1489   1495
   0   VTVOLA   1488   1494   1514   1515   1517
 697   X         232    254   1497   1498   1500   1507
 469   ZERO     *
```

```
  1   C  THIS IS A COPYRIGHTED PROGRAM, COPYRIGHT 1973 BY VARIAN DATA MACHINES03 00001
  2   C                                                                       03 00002
  3   C       V.D.M.    PART NO.      92L1105-019B                            03 00003
  4   C                                                                       03 00004
  5   C                               RELEASED     3-1-74                     03 00005
  6   C                                                                       03 00006
  7   C                                                                       03 00007
  8   C               ADVANC                                                  03 00008
  9   C                                                                       03 00009
 10   C                                                                       03 00010
 11         TITLE ADVANC                                                      03 00011
 12         SUBROUTINE ADVANC                                                 03 00012
 13   C                                                                       ********
 14   C               COMMON                                                  ********
 15   C                                                                       ********
 16   C                                                                       ********
 17   C ***************************************************************       ********
 18   C *     DECLARE COMMON CELLS                                    *       ********
 19   C ***************************************************************       ********
 20         COMMON  ITEST , P1    , P2    , BUF   , INCHAR, SECTOR, IN      ********
 21         COMMON  OUT   , VT$DFL, VT$DFT, BLANK , LSDN  , LSD   , TUIDN   ********
 22         COMMON  TIB   , TCD   , LINE  , LNCNT , LNMAX , PGCNT           ********
 23         COMMON  DFLFCB, DFTFCB, IVALUE, LFILE , NXTSCT, IDTSCT, IDTDSP  ********
 24         INTEGER P1    , P2    , OUT   , VT$DFL, VT$DFT, BLANK , PGCNT   ********
 25         INTEGER BUF   (160), SECTOR(120), LSD   ( 5), TUIDN ( 4)        ********
 26         INTEGER TIB   ( 4), TCD   ( 5), DFLFCB( 13), DFTFCB( 13)        ********
 27         INTEGER LINE  ( 80)                                             ********
 28   C ***************************************************************       ********
 29   C *     END OF COMMON DECLARATIONS                              *       ********
 30   C ***************************************************************       ********
 31   C                                                                       03 00013
 32   C       THIS ROUTINE ADVANCES THE BACKUP POINTER, P2, UNTIL             03 00014
 33   C       IT IS EQUAL TO P1.  ADVANC IS CALLED WHENEVER A TEST IS         03 00015
 34   C       SUCCESSFUL.  INPUT CHARACTERS ADVANCED OVER ARE BLANKED OUT     03 00016
 35   C                                                                       03 00017
 36   C------IF BACK UP POINTER(P2) IS UP WITH POINTER P1, SIMPLY RETURN      03 00018
 37   10     IF (P1 - P2) 20, 20, 30                                          03 00019
 38   C                                                                       03 00020
 39   C------POINTER$ ARE EQUAL, $O RETURN                                    03 00021
 40   20     RETURN                                                           03 00022
 41   C                                                                       03 00023
 42   C------ELSE, BLANK A COLUMN AND TEST AGAIN                            03 00024
 43   30     BUF(P2) = BLANK                                                  03 00025
 44          P2 = P2 + 1                                                      03 00026
 45          GO TO 10                                                         03 00027
 46          END                                                              03 00028
ENTRY/COMMON BLOCK NAMES
  000051 R ADVANC
  000646 C COMMON
EXTERNAL NAMES
SYMBOL TABLE
  000050 R 000001
  000001 C      P1
  000002 C      P2
  000435 C     OUT
  000436 C VT$DFL
  000437 C VT$DFT
  000440 C  BLANK
  000606 C  PGCNT
  000003 C     BUF
  000244 C SECTOR
  000442 C     LSD
  000447 C  TUIDN
  000453 C     TIB
  000457 C     TCD
  000607 C DFLFCB
  000624 C DFTFCB
  000464 C    LINE
  000003 R      10
  000000 C   ITEST
  000243 C  INCHAR
  000434 C      IN
  000441 C    LSDN
  000604 C   LNCNT
  000605 C   LNMAX
  000641 C  IVALUE
  000642 C   LFILE
  000643 C  NXTSCT
  000644 C  IDTSCT
  000645 C  IDTDSP
  000013 R      20
  000015 R      30
  000046 R  000002
  000037 R      0$
  000047 R      $1
0  ERRORS  COMPILATION COMPLETE
  1   C  THIS IS A COPYRIGHTED PROGRAM, COPYRIGHT 1973 BY VARIAN DATA MACHINES02 00001
  2   C                                                                       02 00002
  3   C       V.D.M. PART NO.         92L1105-020A                            02 00003
  4   C                                                                       02 00004
  5   C                                                RELEASED    03-26-7    02 00005
  6   C                                                                       02 00006
  7   C                                                                       02 00007
  8   C                                                                       02 00008
  9   C                                                                       02 00009
```

```
 10   C                BACKUP                                                                    02 00010
 11         TITLE BACKUP                                                                        02 00011
 12         SUBROUTINE BACKUP                                                                   02 00012
 13   C                                                                                         ********
 14   C                COMMON                                                                   ********
 15   C                                                                                         ********
 16   C                                                                                         ********
 17   C ***********************************************************************************************
 18   C *     DECLARE COMMON CELLS                                                            *********
 19   C ***********************************************************************************************
 20         COMMON  ITEST , P1    , P2    , BUF   , INCHAR, SECTOR, IN                        ********
 21         COMMON  OUT   , VT$DFL, VT$DFT, BLANK , LSDN  , LSD   , TUIDN                     ********
 22         COMMON  TIB   , TCD   , LINE  , LNCNT , LNMAX , PGCNT                             ********
 23         COMMON  DFLFCB, DFTFCB, IVALUE, LFILE , NXTSCT, IDTSCT, IDTDSP                    ********
 24         INTEGER P1    , P2    , OUT   , VT$DFL, VT$DFT, BLANK , PGCNT                     ********
 25         INTEGER BUF   (160), SECTOR(120), LSD   (  5), TUIDN (  4)                        ********
 26         INTEGER TIB   (  4), TCD   (  5), DFLFCB( 13), DFTFCB( 13)                        ********
 27         INTEGER LINE  ( 80)                                                               ********
 28   C ***********************************************************************************************
 29   C *     END OF COMMON DECLARATIONS                                                      *********
 30   C ***********************************************************************************************
 31   C                                                                                         02 00013
 32   C         THIS ROUTINE IS CALLED TO RESET THE PRIMARY INPUT                               02 00014
 33   C         POINTER, P1, TO THE POSITION OF THE LAST CALL TO ADVANC.                        02 00015
 34   C         BACKUP IS CALLED BEFORE EVERY TEST                                              02 00016
 35   C                                                                                         02 00017
 36   C-------RESET PRIMARY POINTER(P1) TO BACKUP POINTER(P2)                                    02 00018
 37         P1 = P2                                                                           02 00019
 38   C                                                                                         02 00020
 39   C-------AND RETURN TO THE CALLER                                                         02 00021
 40         RETURN                                                                            02 00022
 41         END                                                                               02 00023
ENTRY/COMMON BLOCK NAMES
  000011 R BACKUP
  000646 C COMMON
EXTERNAL NAMES
SYMBOL TABLE
  000001 C      P1
  000002 C      P2
  000435 C     OUT
  000436 C  VT$DFL
  000437 C  VT$DFT
  000440 C   BLANK
  000606 C   PGCNT
  000003 C     BUF
  000244 C  SECTOR
  000442 C     LSD
  000447 C   TUIDN
  000453 C     TIB
  000457 C     TCD
  000607 C  DFLFCB
  000624 C  DFTFCB
  000464 C    LINE
  000000 C   ITEST
  000243 C  INCHAR
  000434 C      IN
  000441 C    LSDN
  000604 C   LNCNT
  000605 C   LNMAX
  000641 C  IVALUE
  000642 C   LFILE
  000643 C  NXTSCT
  000644 C  IDTSCT
  000645 C  IDTDSP
  0 ERRORS  COMPILATION COMPLETE
    1   C   THIS IS A COPYRIGHTED PROGRAM, COPYRIGHT 1973 BY VARIAN DATA MACHINES07 00001
    2   C                                                                       07 00002
    3   C        V.D.M.    PART NO.      92L1105-022B                           07 00003
    4   C                                                                       07 00004
    5   C                  RELEASED      3-1-74                                 07 00005
    6   C                                                                       07 00006
    7   C                                                                       07 00007
    8   C                CLEAR                                                  07 00008
    9   C                                                                       07 00009
   10   C                                                                       07 00010
   11         TITLE CLEAR                                                      07 00011
   12         SUBROUTINE CLEAR                                                 07 00012
   13   C                                                                      ********
   14   C                COMMON                                                ********
   15   C                                                                      ********
   16   C                                                                      ********
   17   C ********************************************************************************
   18   C *     DECLARE COMMON CELLS                                          *********
   19   C ********************************************************************************
   20         COMMON  ITEST , P1    , P2    , BUF   , INCHAR, SECTOR, IN     ********
   21         COMMON  OUT   , VT$DFL, VT$DFT, BLANK , LSDN  , LSD   , TUIDN  ********
   22         COMMON  TIB   , TCD   , LINE  , LNCNT , LNMAX , PGCNT          ********
   23         COMMON  DFLFCB, DFTFCB, IVALUE, LFILE , NXTSCT, IDTSCT, IDTDSP ********
   24         INTEGER P1    , P2    , OUT   , VT$DFL, VT$DFT, BLANK , PGCNT  ********
   25         INTEGER BUF   (160), SECTOR(120), LSD   (  5), TUIDN (  4)     ********
   26         INTEGER TIB   (  4), TCD   (  5), DFLFCB( 13), DFTFCB( 13)     ********
   27         INTEGER LINE  ( 80)                                            ********
   28   C ********************************************************************************
   29   C *     END OF COMMON DECLARATIONS                                    *********
   30   C ********************************************************************************
```

```
      C                                                                 07 00013
      C     THIS ROUTINE IS CALLED ONCE TO INITIALIZE THE NDL PROCESSOR 07 00014
            INTEGER FCBKEY, FCBNAM(4)                                   07 00015
            DATA FCBKEY /2H F/                                          07 00016
            DATA FCBNAM(1), FCBNAM(2) /2HVT, 2H$D/                      07 00017
            DATA FCBNAM(3), FCBNAM(4) /2HFL, 2HFT/                      07 00018
      C                                                                 07 00019
      C------INITIALIZE THE INPUT BUFFER AND POINTERS                    07 00020
            BLANK = 160                                                 07 00021
            DO 10 I = 1, 160                                            07 00022
10          BUF(I) = BLANK                                              07 00023
            P1 = 1                                                      07 00024
            P2 = 1                                                      07 00025
            INCHAR = BLANK                                              07 00026
      C                                                                 07 00027
      C------INITIALIZE COMMON DATA CELLS                                07 00028
            CALL SYSGET (SECTOR)                                        07 00029
            LNMAX = SECTOR(9)                                           07 00030
            LNCNT = LNMAX                                               07 00031
            PGCNT = 0                                                   07 00032
            IN = 4                                                      07 00033
            OUT = 5                                                     07 00034
            VT$DFL = 10                                                 07 00035
            VT$DFT = 11                                                 07 00036
            NXTSCT = 2                                                  07 00037
            IDTSCT = 0                                                  07 00038
            IDTDSP  = 120                                               07 00039
            ITEST = 1                                                   07 00040
            LFILE = 0                                                   07 00041
      C                                                                 07 00042
      C------INITIALIZE THE SECTOR BUFFER AND RMD FCBS                   07 00043
            DO 80 I = 1, 13                                             07 00044
            DFLFCB(I) = 0                                               07 00045
80          DFTFCB(I) = 0                                               07 00046
            DO 90 I = 1, 120                                            07 00047
90          SECTOR(I) = 0                                               07 00048
            DO 100 I = 1, 2                                             07 00049
            DFLFCB(I+7) = FCBNAM(I)                                     07 00050
            DFTFCB(I+7) = FCBNAM(I)                                     07 00051
100         CONTINUE                                                    07 00052
            DFLFCB(10) = FCBNAM(3)                                      07 00053
            DFTFCB(10) = FCBNAM(4)                                      07 00054
      C                                                                 07 00055
      C                                                                 07 00056
      C------SET UP KEY FIELD IN FCB BEFORE OPEN                         07 00057
            DFLFCB(3) = FCBKEY                                          07 00058
            DFTFCB(3) = FCBKEY                                          07 00059
      C                                                                 07 00060
      C------REQUEST OPEN FOR FILE VT$DFL                                07 00061
            CALL V$OPEN (VT$DFL, 106, DFLFCB, 1)                        07 00062
      C                                                                 07 00063
      C------CHECK FOR AT LEAST 11 SECTORS IN FILE                      07 00064
            IF (DFLFCB(7) - DFLFCB(6) - 11) 160, 108, 108               07 00065
      C                                                                 07 00066
      C------INITIALIZE FILE WITH 11 SECTORS OF ZEROS                    07 00067
108         DO 110 ISECT = 1, 11                                        07 00068
            DFLFCB(4) = ISECT                                           07 00069
            WRITE (VT$DFL) SECTOR                                       07 00070
            DFLFCB(4) = ISECT                                           07 00071
            IF (IOCHK(I)) 430, 110, 430                                 07 00072
110         CONTINUE                                                    07 00073
            LFILE = 1                                                   07 00074
      C                                                                 07 00075
      C------NOW GO TO HANDLE FILE VT$DFT                                07 00076
            GO TO 200                                                   07 00077
      C                                                                 07 00078
      C------AT THIS POINT, FILE VT$DFL IS NOT LARGE ENOUGH             07 00079
160         CONTINUE                                                    07 00080
            CALL HEADER(2)                                              07 00081
            WRITE (OUT, 169) DFLFCB(10)                                 07 00082
169         FORMAT (12H0**FILE VT$D, A2, 10H TOO SMALL)                 07 00083
            IF (IOCHK(I)) 420, 180, 420                                 07 00084
      C                                                                 07 00085
      C------MAKE FCB APPEAR TO BE CLOSED (TO PREVENT FUTURE USE)       07 00086
180         DFLFCB(5) = 0                                               07 00087
      C                                                                 07 00088
      C------REQUEST OPEN FOR FILE VT$DFT                               07 00089
200         CONTINUE                                                    07 00090
            CALL V$OPEN (VT$DFT, 106, DFTFCB, 1)                        07 00091
      C                                                                 07 00092
      C------NOW CHECK FOR AT LEAST 2 SECTORS                           07 00093
            IF (DFTFCB(7) - DFTFCB(6) - 2) 260, 210, 210                07 00094
      C                                                                 07 00095
      C------INITIALIZE FILE VT$DFT, WITH ONE ZERO SECTOR               07 00096
210         DFTFCB(4) = 1                                               07 00097
            WRITE (VT$DFT) SECTOR                                       07 00098
            DFTFCB(4) = 1                                               07 00099
            IF (IOCHK(I)) 440, 250, 440                                 07 00100
250         LFILE = 2                                                   07 00101
      C                                                                 07 00102
      C------GO TO NEXT INITIALIZATION STEP                             07 00103
            GO TO 300                                                   07 00104
      C                                                                 07 00105
      C------AT THIS POINT, FILE VT$DFT WAS TOO SMALL                   07 00106
260         CONTINUE                                                    07 00107
```

```
  126           CALL HEADER(2)                                                  07 00108
  127           WRITE (OUT, 169) DFTFCB(10)                                     07 00109
  128           IF (IOCHK(I)) 420, 270, 420                                     07 00110
  129   C                                                                       07 00111
  130   C-------MAKE FILE VT$DFL APPEAR CLOSED (TO PREVENT USE)                 07 00112
  131   270     DFTFCB(5) = 0                                                   07 00113
  132   C                                                                       07 00114
  133   C-------AND RETURN TO THE CALLER                                        07 00115
  134   300     CONTINUE                                                        07 00116
  135           RETURN                                                          07 00117
  136   C                                                                       07 00118
  137   C-------BELOW ARE THE I/O STOP EXITS                                    07 00119
  138   420     STOP 200                                                        07 00120
  139   430     STOP 300                                                        07 00121
  140   440     STOP 400                                                        07 00122
  141           END                                                             07 00123
ENTRY/COMMON BLOCK NAMES
  000714 R  CLEAR
  000646 C COMMON
EXTERNAL NAMES
  000425 E     $DO
  000056 E SYSGET
  000515 E V$OPEN
  000606 E     $WR
  000000 E V$RERR
  000000 E V$RER1
  000612 E     $I1
  000616 E     $ND
  000620 E   IOCHK
  000603 E HEADER
  000644 E     $ST
SYMBOL TABLE
  000650 R 000001
  000662 R 000002
  000656 R 000004
  000001 C      P1
  000002 C      P2
  000435 C     OUT
  000436 C VT$DFL
  000437 C VT$DFT
  000440 C   BLANK
  000606 C   PGCNT
  000003 C     BUF
  000647 R 000240
  000244 C SECTOR
  000663 R 000170
  000442 C     LSD
  000657 R 000005
  000447 C   TUIDN
  000453 C     TIB
  000457 C     TCD
  000607 C DFLFCB
  000666 R 000015
  000624 C DFTFCB
  000464 C    LINE
  000007 R FCBKEY
  000003 R FCBNAM
  000000 C   ITEST
  000243 C INCHAR
  000434 C      IN
  000441 C    LSDN
  000604 C   LNCNT
  000605 C   LNMAX
  000641 C  IVALUE
  000642 C   LFILE
  000643 C  NXTSCT
  000644 C  IDTSCT
  000645 C  IDTDSP
  000625 R      0$
  000022 R      10
  000651 R       I
  000652 R 000002
  000653 R    $1
  000425 E     $DO
  000056 E SYSGET
  000655 R 000000
  000660 R 000012
  000661 R 000013
  000654 R 000254
  000200 R      80
  000664 R 000606
  000665 R 000623
  000222 R      90
  000667 R 000243
  000276 R     100
  000670 R 000615
  000671 R    $1 0
  000672 R 000002
  000673 R    $1 1
  000674 R 000632
  000675 R    $1 2
  000515 E V$OPEN
  000704 R 000152
  000676 R 000005
  000677 R 000620
```

```
000700  R 000006
000701  R 000635
000702  R 000611
000703  R 000626
000705  R 000614
000442  R     160
000367  R     108
000424  R     110
000706  R   ISECT
000707  R 000612
000606  E     $WR
000000  E V$RERR
000000  E V$RER1
000612  E     $I1
000616  E     $ND
000620  E   IOCHK
000637  R     430
000514  R     200
000603  E  HEADER
000461  R     169
000633  R     420
000507  R     180
000710  R 000613
000711  R 000631
000602  R     260
000541  R     210
000712  R 000627
000643  R     440
000572  R     250
000631  R     300
000624  R     270
000713  R 000630
000644  E     $ST
0  ERRORS  COMPILATION COMPLETE
```

```
      C   THIS IS A COPYRIGHTED PROGRAM, COPYRIGHT 1973 BY VARIAN DATA MACHINES  05 00001
      C                                                                          05 00002
      C       V.D.M.    PART NO.      92L1105-024B                               05 00003
      C                                                                          05 00004
      C                               RELEASED     3-1-74                        05 00005
      C                                                                          05 00006
      C                                                                          05 00007
      C             COMPAR                                                       05 00008
      C                                                                          05 00009
      C                                                                          05 00010
            TITLE COMPAR                                                       05 00011
            SUBROUTINE COMPAR(N)                                               05 00012
      C                                                                        ********
      C             COMMON                                                     ********
      C                                                                        ********
      C                                                                        ********
      C  ************************************************************************ ********
      C  *     DECLARE COMMON CELLS                                           * ********
      C  ************************************************************************ ********
            COMMON  ITEST , P1    , P2    , BUF   , INCHAR, SECTOR, IN       ********
            COMMON  OUT   , VT$DFL, VT$DFT, BLANK , LSDN  , LSD   , TUIDN    ********
            COMMON  TIB   , TCD   , LINE  , LNCNT , LNMAX , PGCNT            ********
            COMMON  DFLFCB, DFTFCB, IVALUE, LFILE , NXTSCT, IDTSCT, IDTDSP   ********
            INTEGER P1    , P2    , OUT   , VT$DFL, VT$DFT, BLANK , PGCNT    ********
            INTEGER BUF   (160), SECTOR(120), LSD   (  5), TUIDN (  4)       ********
            INTEGER TIB   (  4), TCD   (  5), DFLFCB( 13), DFTFCB( 13)       ********
            INTEGER LINE  ( 80)                                              ********
      C  ************************************************************************ ********
      C  *     END OF COMMON DECLARATIONS                                     * ********
      C  ************************************************************************ ********
            INTEGER START, SIZE                                                05 00013
      C                                                                        05 00014
      C                                                                        05 00015
      C       SUBROUTINE COMPAR COMPARES A GIVEN LITERAL STRING AGAINST        05 00016
      C       THE CURRENT CONTENTS OF THE INPUT BUFFER.                        05 00017
      C       THE TEST FLAG, ITEST, IS SET TO REFLECT THE OUTCOME OF THIS      05 00018
      C       TEST.  ALL LITERAL STRINGS ARE DECLARED IN THE LOCAL VECTORS     05 00019
      C       STRING AND POOL.                                                 05 00020
      C                                                                        05 00021
            DIMENSION STRING( 54), POOL  (291)                                 05 00022
            INTEGER STRING, POOL                                               05 00023
      C                                                                        05 00024
      C------STRING  0  4HLINE                                                 05 00025
            DATA STRING(  1)/    1/, POOL  (  1)/    4/                        05 00026
            DATA POOL  (  2)/2H L/, POOL  (  3)/2H I/, POOL  (  4)/2H N/       05 00027
            DATA POOL  (  5)/2H E/                                             05 00028
      C                                                                        05 00029
      C------STRING  1  1H:                                                   05 00030
            DATA STRING(  2)/    6/, POOL  (  6)/    1/                        05 00031
            DATA POOL  (  7)/2H :/                                             05 00032
      C                                                                        05 00033
      C------STRING  2  1H,                                                   05 00034
            DATA STRING(  3)/    8/, POOL  (  8)/    1/                        05 00035
            DATA POOL  (  9)/2H ,/                                             05 00036
      C                                                                        05 00037
      C------STRING  3  7HADDRESS                                             05 00038
            DATA STRING(  4)/   10/, POOL  ( 10)/    7/                        05 00039
            DATA POOL  ( 11)/2H A/, POOL  ( 12)/2H D/, POOL  ( 13)/2H D/       05 00040
            DATA POOL  ( 14)/2H R/, POOL  ( 15)/2H E/, POOL  ( 16)/2H S/       05 00041
            DATA POOL  ( 17)/2H S/                                             05 00042
      C                                                                        05 00043
```

```
C------STRING  4  1H=
        DATA STRING(  5)/  18/, POOL  ( 18)/   1/                                  05 00044
        DATA POOL  ( 19)/2H =/                                                     05 00045
C                                                                                  05 00046
C------STRING  5  7HCONNECT                                                        05 00047
        DATA STRING(  6)/  20/, POOL  ( 20)/   7/                                  05 00048
        DATA POOL  ( 21)/2H C/, POOL  ( 22)/2H O/, POOL  ( 23)/2H N/               05 00049
        DATA POOL  ( 24)/2H N/, POOL  ( 25)/2H E/, POOL  ( 26)/2H C/               05 00050
        DATA POOL  ( 27)/2H T/                                                     05 00051
C                                                                                  05 00052
C------STRING  6  6HDIRECT                                                         05 00053
        DATA STRING(  7)/  28/, POOL  ( 28)/   6/                                  05 00054
        DATA POOL  ( 29)/2H D/, POOL  ( 30)/2H I/, POOL  ( 31)/2H R/               05 00055
        DATA POOL  ( 32)/2H E/, POOL  ( 33)/2H C/, POOL  ( 34)/2H T/               05 00056
C                                                                                  05 00057
C------STRING  7  5HMODEM                                                          05 00058
        DATA STRING(  8)/  35/, POOL  ( 35)/   5/                                  05 00059
        DATA POOL  ( 36)/2H M/, POOL  ( 37)/2H O/, POOL  ( 38)/2H D/               05 00060
        DATA POOL  ( 39)/2H E/, POOL  ( 40)/2H M/                                  05 00061
C                                                                                  05 00062
C------STRING  8  4HDIAL                                                           05 00063
        DATA STRING(  9)/  41/, POOL  ( 41)/   4/                                  05 00064
        DATA POOL  ( 42)/2H D/, POOL  ( 43)/2H I/, POOL  ( 44)/2H A/               05 00065
        DATA POOL  ( 45)/2H L/                                                     05 00066
C                                                                                  05 00067
C------STRING  9  1H-                                                             05 00068
        DATA STRING( 10)/  46/, POOL  ( 46)/   1/                                  05 00069
        DATA POOL  ( 47)/2H -/                                                     05 00070
C                                                                                  05 00071
C------STRING 10  3HCRC                                                          05 00072
        DATA STRING( 11)/  48/, POOL  ( 48)/   3/                                  05 00073
        DATA POOL  ( 49)/2H C/, POOL  ( 50)/2H R/, POOL  ( 51)/2H C/               05 00074
C                                                                                  05 00075
C------STRING 11  4HSTOP                                                           05 00076
        DATA STRING( 12)/  52/, POOL  ( 52)/   4/                                  05 00077
        DATA POOL  ( 53)/2H S/, POOL  ( 54)/2H T/, POOL  ( 55)/2H O/               05 00078
        DATA POOL  ( 56)/2H P/                                                     05 00079
C                                                                                  05 00080
C------STRING 12  4HECHO                                                          05 00081
        DATA STRING( 13)/  57/, POOL  ( 57)/   4/                                  05 00082
        DATA POOL  ( 58)/2H E/, POOL  ( 59)/2H C/, POOL  ( 60)/2H H/               05 00083
        DATA POOL  ( 61)/2H O/                                                     05 00084
C                                                                                  05 00085
C------STRING 13  3HEOM                                                           05 00086
        DATA STRING( 14)/  62/, POOL  ( 62)/   3/                                  05 00087
        DATA POOL  ( 63)/2H E/, POOL  ( 64)/2H O/, POOL  ( 65)/2H M/               05 00088
C                                                                                  05 00089
C------STRING 14  5HFALSE                                                         05 00090
        DATA STRING( 15)/  66/, POOL  ( 66)/   5/                                  05 00091
        DATA POOL  ( 67)/2H F/, POOL  ( 68)/2H A/, POOL  ( 69)/2H L/               05 00092
        DATA POOL  ( 70)/2H S/, POOL  ( 71)/2H E/                                  05 00093
C                                                                                  05 00094
C------STRING 15  1H(                                                             05 00095
        DATA STRING( 16)/  72/, POOL  ( 72)/   1/                                  05 00096
        DATA POOL  ( 73)/2H (/                                                     05 00097
C                                                                                  05 00098
C------STRING 16  1H)                                                             05 00099
        DATA STRING( 17)/  74/, POOL  ( 74)/   1/                                  05 00100
        DATA POOL  ( 75)/2H )/                                                     05 00101
C                                                                                  05 00102
C------STRING 17  5HERROR                                                          05 00103
        DATA STRING( 18)/  76/, POOL  ( 76)/   5/                                  05 00104
        DATA POOL  ( 77)/2H E/, POOL  ( 78)/2H R/, POOL  ( 79)/2H R/               05 00105
        DATA POOL  ( 80)/2H O/, POOL  ( 81)/2H R/                                  05 00106
C                                                                                  05 00107
C------STRING 18  4HTYPE                                                          05 00108
        DATA STRING( 19)/  82/, POOL  ( 82)/   4/                                  05 00109
        DATA POOL  ( 83)/2H T/, POOL  ( 84)/2H Y/, POOL  ( 85)/2H P/               05 00110
        DATA POOL  ( 86)/2H E/                                                     05 00111
C                                                                                  05 00112
C------STRING 19  4HHALF                                                          05 00113
        DATA STRING( 20)/  87/, POOL  ( 87)/   4/                                  05 00114
        DATA POOL  ( 88)/2H H/, POOL  ( 89)/2H A/, POOL  ( 90)/2H L/               05 00115
        DATA POOL  ( 91)/2H F/                                                     05 00116
C                                                                                  05 00117
C------STRING 20  6HDUPLEX                                                        05 00118
        DATA STRING( 21)/  92/, POOL  ( 92)/   6/                                  05 00119
        DATA POOL  ( 93)/2H D/, POOL  ( 94)/2H U/, POOL  ( 95)/2H P/               05 00120
        DATA POOL  ( 96)/2H L/, POOL  ( 97)/2H E/, POOL  ( 98)/2H X/               05 00121
C                                                                                  05 00122
C------STRING 21  7HSIMPLEX                                                       05 00123
        DATA STRING( 22)/  99/, POOL  ( 99)/   7/                                  05 00124
        DATA POOL  (100)/2H S/, POOL  (101)/2H I/, POOL  (102)/2H M/               05 00125
        DATA POOL  (103)/2H P/, POOL  (104)/2H L/, POOL  (105)/2H E/               05 00126
        DATA POOL  (106)/2H X/                                                     05 00127
C                                                                                  05 00128
C------STRING 22  7HRECEIVE                                                       05 00129
        DATA STRING( 23)/ 107/, POOL  (107)/   7/                                  05 00130
        DATA POOL  (108)/2H R/, POOL  (109)/2H E/, POOL  (110)/2H C/               05 00131
        DATA POOL  (111)/2H E/, POOL  (112)/2H I/, POOL  (113)/2H V/               05 00132
        DATA POOL  (114)/2H E/                                                     05 00133
C                                                                                  05 00134
C------STRING 23  8HTRANSMIT                                                      05 00135
        DATA STRING( 24)/ 115/, POOL  (115)/   8/                                  05 00136
        DATA POOL  (116)/2H T/, POOL  (117)/2H R/, POOL  (118)/2H A/               05 00137
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157           DATA POOL  (119)/2H N/, POOL  (120)/2H S/, POOL  (121)/2H M/      05 00139
158           DATA POOL  (122)/2H I/, POOL  (123)/2H T/                         05 00140
159   C                                                                         05 00141
160   C------STRING 24  4HFULL                                                  05 00142
161           DATA STRING( 25)/ 124/, POOL  (124)/   4/                         05 00143
162           DATA POOL  (125)/2H F/, POOL  (126)/2H U/, POOL  (127)/2H L/      05 00144
163           DATA POOL  (128)/2H L/                                            05 00145
164   C                                                                         05 00146
165   C------STRING 25  4HMODE                                                  05 00147
166           DATA STRING( 26)/ 129/, POOL  (129)/   4/                         05 00148
167           DATA POOL  (130)/2H M/, POOL  (131)/2H O/, POOL  (132)/2H D/      05 00149
168           DATA POOL  (133)/2H E/                                            05 00150
169   C                                                                         05 00151
170   C------STRING 26  1HA                                                     05 00152
171           DATA STRING( 27)/ 134/, POOL  (134)/   1/                         05 00153
172           DATA POOL  (135)/2H A/                                            05 00154
173   C                                                                         05 00155
174   C------STRING 27  4HSYNC                                                   05 00156
175           DATA STRING( 28)/ 136/, POOL  (136)/   4/                         05 00157
176           DATA POOL  (137)/2H S/, POOL  (138)/2H Y/, POOL  (139)/2H M/      05 00158
177           DATA POOL  (140)/2H C/                                            05 00159
178   C                                                                         05 00160
179   C------STRING 28  7HHRONOUS                                               05 00161
180           DATA STRING( 29)/ 141/, POOL  (141)/   7/                         05 00162
181           DATA POOL  (142)/2H H/, POOL  (143)/2H R/, POOL  (144)/2H O/      05 00163
182           DATA POOL  (145)/2H N/, POOL  (146)/2H O/, POOL  (147)/2H U/      05 00164
183           DATA POOL  (148)/2H S/                                            05 00165
184   C                                                                         05 00166
185   C------STRING 29  6HPARITY                                                05 00167
186           DATA STRING( 30)/ 149/, POOL  (149)/   6/                         05 00168
187           DATA POOL  (150)/2H P/, POOL  (151)/2H A/, POOL  (152)/2H R/      05 00169
188           DATA POOL  (153)/2H I/, POOL  (154)/2H T/, POOL  (155)/2H Y/      05 00170
189   C                                                                         05 00171
190   C------STRING 30  4HNONE                                                  05 00172
191           DATA STRING( 31)/ 156/, POOL  (156)/   4/                         05 00173
192           DATA POOL  (157)/2H N/, POOL  (158)/2H O/, POOL  (159)/2H N/      05 00174
193           DATA POOL  (160)/2H E/                                            05 00175
194   C                                                                         05 00176
195   C------STRING 31  3HODD                                                   05 00177
196           DATA STRING( 32)/ 161/, POOL  (161)/   3/                         05 00178
197           DATA POOL  (162)/2H O/, POOL  (163)/2H D/, POOL  (164)/2H D/      05 00179
198   C                                                                         05 00180
199   C------STRING 32  4HEVEN                                                   05 00181
200           DATA STRING( 33)/ 165/, POOL  (165)/   4/                         05 00182
201           DATA POOL  (166)/2H E/, POOL  (167)/2H V/, POOL  (168)/2H E/      05 00183
202           DATA POOL  (169)/2H N/                                            05 00184
203   C                                                                         05 00185
204   C------STRING 33  5HSPEED                                                 05 00186
205           DATA STRING( 34)/ 170/, POOL  (170)/   5/                         05 00187
206           DATA POOL  (171)/2H S/, POOL  (172)/2H P/, POOL  (173)/2H E/      05 00188
207           DATA POOL  (174)/2H E/, POOL  (175)/2H D/                         05 00189
208   C                                                                         05 00190
209   C------STRING 34  6HSTATUS                                                05 00191
210           DATA STRING( 35)/ 176/, POOL  (176)/   6/                         05 00192
211           DATA POOL  (177)/2H S/, POOL  (178)/2H T/, POOL  (179)/2H A/      05 00193
212           DATA POOL  (180)/2H T/, POOL  (181)/2H U/, POOL  (182)/2H S/      05 00194
213   C                                                                         05 00195
214   C------STRING 35  2HUP                                                    05 00196
215           DATA STRING( 36)/ 183/, POOL  (183)/   2/                         05 00197
216           DATA POOL  (184)/2H U/, POOL  (185)/2H P/                         05 00198
217   C                                                                         05 00199
218   C------STRING 36  4HDOWN                                                  05 00200
219           DATA STRING( 37)/ 186/, POOL  (186)/   4/                         05 00201
220           DATA POOL  (187)/2H D/, POOL  (188)/2H O/, POOL  (189)/2H W/      05 00202
221           DATA POOL  (190)/2H N/                                            05 00203
222   C                                                                         05 00204
223   C------STRING 37  5HSTORE                                                 05 00205
224           DATA STRING( 38)/ 191/, POOL  (191)/   5/                         05 00206
225           DATA POOL  (192)/2H S/, POOL  (193)/2H T/, POOL  (194)/2H O/      05 00207
226           DATA POOL  (195)/2H R/, POOL  (196)/2H E/                         05 00208
227   C                                                                         05 00209
228   C------STRING 38  7HHRONIZE                                               05 00210
229           DATA STRING( 39)/ 197/, POOL  (197)/   7/                         05 00211
230           DATA POOL  (198)/2H H/, POOL  (199)/2H R/, POOL  (200)/2H O/      05 00212
231           DATA POOL  (201)/2H N/, POOL  (202)/2H I/, POOL  (203)/2H Z/      05 00213
232           DATA POOL  (204)/2H E/, POOL  (205)/2H  /, POOL  (206)/2H  /      05 00214
233           DATA POOL  (207)/2H  /, POOL  (208)/2H  /                         05 00215
234   C                                                                         05 00216
235   C------STRING 39  4HHIGH                                                  05 00217
236           DATA STRING( 40)/ 209/, POOL  (209)/   4/                         05 00218
237           DATA POOL  (210)/2H H/, POOL  (211)/2H I/, POOL  (212)/2H G/      05 00219
238           DATA POOL  (213)/2H H/                                            05 00220
239   C                                                                         05 00221
240   C------STRING 40  3HLOW                                                   05 00222
241           DATA STRING( 41)/ 214/, POOL  (214)/   3/                         05 00223
242           DATA POOL  (215)/2H L/, POOL  (216)/2H O/, POOL  (217)/2H W/      05 00224
243   C                                                                         05 00225
244   C------STRING 41  11HTRANSPARENT                                          05 00226
245           DATA STRING( 42)/ 218/, POOL  (218)/  11/                         05 00227
246           DATA POOL  (219)/2H T/, POOL  (220)/2H R/, POOL  (221)/2H A/      05 00228
247           DATA POOL  (222)/2H N/, POOL  (223)/2H S/, POOL  (224)/2H P/      05 00229
248           DATA POOL  (225)/2H A/, POOL  (226)/2H R/, POOL  (227)/2H E/      05 00230
249           DATA POOL  (228)/2H N/, POOL  (229)/2H T/                         05 00231
250   C                                                                         05 00232
251   C------STRING 42  1H.                                                     05 00233
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252           DATA STRING( 43)/ 230/, POOL  (230)/   1/                                  05 00234
253           DATA POOL  (231)/2H ./                                                     05 00235
254     C                                                                                05 00236
255     C------STRING 43  8HTERMINAL                                                     05 00237
256           DATA STRING( 44)/ 232/, POOL  (232)/   8/                                  05 00238
257           DATA POOL  (233)/2H T/, POOL  (234)/2H E/, POOL  (235)/2H R/               05 00239
258           DATA POOL  (236)/2H M/, POOL  (237)/2H I/, POOL  (238)/2H N/               05 00240
259           DATA POOL  (239)/2H A/, POOL  (240)/2H L/                                  05 00241
260     C                                                                                05 00242
261     C------STRING 44  4HCODE                                                         05 00243
262           DATA STRING( 45)/ 241/, POOL  (241)/   4/                                  05 00244
263           DATA POOL  (242)/2H C/, POOL  (243)/2H O/, POOL  (244)/2H D/               05 00245
264           DATA POOL  (245)/2H E/                                                     05 00246
265     C                                                                                05 00247
266     C------STRING 45  5HASCII                                                        05 00248
267           DATA STRING( 46)/ 246/, POOL  (246)/   5/                                  05 00249
268           DATA POOL  (247)/2H A/, POOL  (248)/2H S/, POOL  (249)/2H C/               05 00250
269           DATA POOL  (250)/2H I/, POOL  (251)/2H I/                                  05 00251
270     C                                                                                05 00252
271     C------STRING 46  7HDEVICES                                                      05 00253
272           DATA STRING( 47)/ 252/, POOL  (252)/   7/                                  05 00254
273           DATA POOL  (253)/2H D/, POOL  (254)/2H E/, POOL  (255)/2H V/               05 00255
274           DATA POOL  (256)/2H I/, POOL  (257)/2H C/, POOL  (258)/2H E/               05 00256
275           DATA POOL  (259)/2H S/                                                     05 00257
276     C                                                                                05 00258
277     C------STRING 47  6HPROMPT                                                       05 00259
278           DATA STRING( 48)/ 260/, POOL  (260)/   6/                                  05 00260
279           DATA POOL  (261)/2H P/, POOL  (262)/2H R/, POOL  (263)/2H O/               05 00261
280           DATA POOL  (264)/2H M/, POOL  (265)/2H P/, POOL  (266)/2H T/               05 00262
281     C                                                                                05 00263
282     C------STRING 48  4HTTY1                                                         05 00264
283           DATA STRING( 49)/ 267/, POOL  (267)/   4/                                  05 00265
284           DATA POOL  (268)/2H T/, POOL  (269)/2H T/, POOL  (270)/2H Y/               05 00266
285           DATA POOL  (271)/2H 1/                                                     05 00267
286     C                                                                                05 00268
287     C------STRING 49  4HUNIT                                                         05 00269
288           DATA STRING( 50)/ 272/, POOL  (272)/   4/                                  05 00270
289           DATA POOL  (273)/2H U/, POOL  (274)/2H N/, POOL  (275)/2H I/               05 00271
290           DATA POOL  (276)/2H T/                                                     05 00272
291     C                                                                                05 00273
292     C------STRING 50  3HEND                                                          05 00274
293           DATA STRING( 51)/ 277/, POOL  (277)/   3/                                  05 00275
294           DATA POOL  (278)/2H E/, POOL  (279)/2H N/, POOL  (280)/2H D/               05 00276
295     C                                                                                05 00277
296     C------STRING 51  1H0                                                            05 00278
297           DATA STRING( 52)/ 281/, POOL  (281)/   1/                                  05 00279
298           DATA POOL  (282)/2H 0/                                                     05 00280
299     C                                                                                05 00281
300     C------STRING 52  4HTRUE                                                         05 00282
301           DATA STRING( 53)/ 283/, POOL  (283)/   4/                                  05 00283
302           DATA POOL  (284)/2H T/, POOL  (285)/2H R/, POOL  (286)/2H U/               05 00284
303           DATA POOL  (287)/2H E/                                                     05 00285
304     C                                                                                05 00286
305     C------STRING 53  3HBSC                                                          05 00287
306           DATA STRING( 54)/ 288/, POOL   (288)/   3/                                 05 00288
307           DATA POOL  (289)/2H B/, POOL   (290)/2H S/                                 05 00289
308           DATA POOL  (291)/2H C/                                                     05 00290
309     C                                                                                05 00291
310     C------BACKUP THE INPUT POINTER AND SET THE TEST FLAG TO FALSE                    05 00292
311           CALL BACKUP                                                                05 00293
312           ITEST = 0                                                                  05 00294
313     C                                                                                05 00295
314     C------LOCATE THE REQUESTED STRING WITHIN THE LOCAL VECTORS                       05 00296
315           START = STRING(N + 1)                                                      05 00297
316           SIZE = POOL(START)                                                         05 00298
317     C                                                                                05 00299
318     C------NOW COMPARE EACH INPUT CHARACTER AGAINST THE LOCAL STRING                  05 00300
319           DO 100 I = 1, SIZE                                                         05 00301
320           J = START + I                                                              05 00302
321           CALL GETCHR                                                                05 00303
322           IF (INCHAR - (POOL(J) .AND. 255)) 200, 100, 200                            05 00304
323   100     CONTINUE                                                                   05 00305
324     C                                                                                05 00306
325     C------ALL CHARACTERS COMPARE, ADVANCE POINTERS AND SET TEST FLAG TRUE           05 00307
326           CALL ADVANC                                                                05 00308
327           ITEST = 1                                                                  05 00309
328     C                                                                                05 00310
329     C------AND RETURN TO THE CALLER                                                  05 00311
330   200     RETURN                                                                     05 00312
331           END                                                                        05 00313
ENTRY/COMMON BLOCK NAMES
  000662 R COMPAR
  000646 C COMMON
EXTERNAL NAMES
  000002 E     $SE
  000541 E BACKUP
  000605 E GETCHR
  000630 E     $DO
  000636 E ADVANC
SYMBOL TABLE
  000656 R 000001
  100004 R       N
  000002 E     $SE
  000001 C      P1
  000002 C      P2
```

```
000435 C     OUT
000436 C  VT$DFL
000437 C  VT$DFT
000440 C   BLANK
000606 C   PGCNT
000003 C      BUF
000244 C  SECTOR
000442 C      LSD
000447 C   TUIDN
000453 C      TIB
000457 C      TCD
000607 C  DFLFCB
000624 C  DFTFCB
000464 C    LINE
000652 R   START
000655 R    SIZE
000007 R  STRING
000075 R    POOL
000000 C   ITEST
000243 C  INCHAR
000434 C        IN
000441 C    LSDN
000604 C   LNCNT
000605 C   LNMAX
000641 C  IVALUE
000642 C   LFILE
000643 C  NXTSCT
000644 C  IDTSCT
000645 C  IDTDSP
000541 E  BACKUP
000647 R  000000
000640 R       0$
000650 R  000007
000651 R     $1
000653 R  000074
000654 R     $1 0
000627 R      100
000657 R        I
000660 R        J
000605 E  GETCHR
000661 R  000377
000645 R      200
000630 E      $DO
000636 E  ADVANC
0  ERRORS COMPILATION COMPLETE
```

```
  1   C   THIS IS A COPYRIGHTED PROGRAM, COPYRIGHT 1973 BY VARIAN DATA MACHINES  04 00001
  2   C                                                                          04 00002
  3   C        V.D.M.    PART NO.      92L1105-025B                              04 00003
  4   C                                                                          04 00004
  5   C                                RELEASED    3-1-74                        04 00005
  6   C                                                                          04 00006
  7   C                                                                          04 00007
  8   C                 DIAG                                                     04 00008
  9   C                                                                          04 00009
 10   C                                                                          04 00010
 11         TITLE DIAG                                                          04 00011
 12         SUBROUTINE DIAG                                                     04 00012
 13   C                                                                         ********
 14   C                 COMMON                                                  ********
 15   C                                                                         ********
 16   C                                                                         ********
 17   C ************************************************************************ ********
 18   C *     DECLARE COMMON CELLS                                           *  ********
 19   C ************************************************************************ ********
 20         COMMON  ITEST , P1    , P2    , BUF   , INCHAR, SECTOR, IN        ********
 21         COMMON  OUT   , VT$DFL, VT$DFT, BLANK , LSDN  , LSD   , TUIDN     ********
 22         COMMON  TIB   , TCD   , LINE  , LNCNT , LNMAX , PGCNT             ********
 23         COMMON  DFLFCB, DFTFCB, IVALUE, LFILE , NXTSCT, IDTSCT, IDTDSP    ********
 24         INTEGER P1    , P2    , OUT   , VT$DFL, VT$DFT, BLANK , PGCNT     ********
 25         INTEGER BUF   (160), SECTOR(120), LSD   (  5), TUIDN (  4)        ********
 26         INTEGER TIB   (  4), TCD   (  5), DFLFCB( 13), DFTFCB( 13)        ********
 27         INTEGER LINE  ( 80)                                               ********
 28   C ************************************************************************ ********
 29   C *     END OF COMMON DECLARATIONS                                     *  ********
 30   C ************************************************************************ ********
 31   C                                                                          04 00013
 32   C       THIS ROUTINE IS CALLED BY PARSE WHENEVER A SYNTAX ERROR            04 00014
 33   C       IS SUSPECTED IN THE INPUT STREAM                                   04 00015
 34   C                                                                          04 00016
 35         IF (ITEST) 500, 100, 500                                            04 00017
 36   C                                                                          04 00018
 37   C------FIRST SHRINK UP THE INPUT BUFFER FOR THE MESSAGE                    04 00019
 38   100   CALL SHRINK                                                         04 00020
 39   C                                                                          04 00021
 40   C------THEN PREPARE AND OUTPUT THE MESSAGE                                04 00022
 41         CALL HEADER(3)                                                      04 00023
 42   C                                                                          04 00024
 43   C------SHIFT CHARACTERS LEFT                                              04 00025
 44         DO 10 I = 1, 80                                                     04 00026
 45         LINE(I) = 0                                                         04 00027
 46   10    CALL BITSET (LINE(I), 15, 08, BUF(I))                               04 00028
 47         WRITE (OUT, 99) LINE                                                04 00029
 48         IF (IOCHK(I)) 520, 500, 520                                         04 00030
 49   99    FORMAT (1H0, 14H**SYNTAX ERROR, /, 1X, 80 A 1)                      04 00031
 50   C                                                                          04 00032
```

```
000033 100031 E
                    1518 *                  **EXIT TO CALLED SUBROUTINE WITH INTERRUPTS OFF**          02 00088
000034 006706 A     1519            IJMP     1,B                                                      02 00089
000035 000001 A
                    1520 *                                                                            02 00090
                    1521 *          TEMPORARY STORAGE                                                 02 00091
                    1522 *                                                                            02 00092
000036 000000 A     1523 PUSAVX     DATA     0                                                        02 00093
                    1524            END                                                               02 00094
ENTRY NAMES
000000 R VTPUSH
EXTERNAL NAMES
000005 E VTSTAK 000033 E VTVOLA
SYMBOLS
000044 A APIM   000002 A B      000000 A B0     000001 A B1
000012 A B10    000013 A B11    000014 A B12    000015 A B13
000016 A B14    000017 A B15    000002 A B2     000003 A B3
000004 A B4     000005 A B5     000006 A B6     000007 A B7
000010 A B8     000011 A B9     000000 A BICNUM 000421 A BM1
000472 A BM17   000475 A BM177  000477 A BM1777 000464 A BM3
000473 A BM37   000463 A BM377  000467 A BM7    000474 A BM77
000476 A BM777  000441 A BR0    000442 A BR1    000453 A BR10
000454 A BR11   000455 A BR12   000456 A BR13   000457 A BR14
000460 A BR15   000443 A BR2    000444 A BR3    000445 A BR4
000446 A BR5    000447 A BR6    000450 A BR7    000451 A BR8
000452 A BR9    000421 A BS0    000422 A BS1    000433 A BS10
000434 A BS11   000435 A BS12   000436 A BS13   000437 A BS14
000440 A BS15   000423 A BS2    000424 A BS3    000425 A BS4
000426 A BS5    000427 A BS6    000430 A BS7    000431 A BS8
000432 A BS9    000000 A CHAFP  000000 A CHAFPB 000020 A CHAFPZ
000001 A CHARP  000000 A CHARPB 000020 A CHARPZ 000002 A CHCFP
000000 A CHCFPB 000020 A CHCFPZ 000003 A CHCRP  000000 A CHCRPB
000020 A CHCRPZ 000004 A CHRBL  000000 A CHRBLB 000020 A CHRBLZ
000047 A CLOCK  000000 A COTAD1 000000 A CTACT  000017 A CTACTB
000001 A CTACTZ 000001 A CTADN  000000 A CTADNB 000020 A CTADNZ
000011 A CTBIC  000000 A CTBICB 000020 A CTBICZ 000003 A CTDST
000000 A CTDSTB 000020 A CTDSTZ 000006 A CTDVA  000000 A CTDVAB
000020 A CTDVAZ 000012 A CTFCB  000000 A CTFCBB 000020 A CTFCBZ
000014 A CTFRC  000010 A CTFRCB 000010 A CTFRCZ 000014 A CTFRE
000000 A CTFREB 000010 A CTFREZ 000000 A CTIDB  000000 A CTIDBB
000017 A CTIDBZ 000007 A CTIOA  000000 A CTIOAB 000020 A CTIOAZ
000002 A CTOPM  000000 A CTOPMB 000020 A CTOPMZ 000005 A CTRCN
000000 A CTRCNB 000010 A CTRCNZ 000004 A CTRQB  000000 A CTRQBB
000020 A CTRQBZ 000005 A CTRTR  000010 A CTRTRB 000010 A CTRTRZ
000010 A CTSTA  000000 A CTSTAB 000020 A CTSTAZ 000013 A CTWDS
000000 A CTWDSB 000020 A CTWDSZ 000001 A DCBUFF 000003 A DCCHR
000000 A DCCHRB 000020 A DCCHRZ 000002 A DCCNT  000000 A DCRECL
000747 A DISCLK 000745 A DISMP  000444 A DISPIM 000026 A DMBCA
000000 A DMBCAB 000020 A DMBCAZ 000024 A DMCWA  000000 A DMCWAB
000020 A DMCWAZ 000017 A DMFPA  000000 A DMFPAB 000020 A DMFPAZ
000021 A DMLCA  000000 A DMLCAB 000020 A DMLCAZ 000022 A DMLTA
000000 A DMLTAB 000020 A DMLTAZ 000023 A DMPTA  000000 A DMPTAB
000020 A DMPTAZ 000016 A DMRPA  000000 A DMRPAB 000020 A DMRPAZ
000020 A DMSTA  000000 A DMSTAB 000020 A DMSTAZ 000025 A DMSWA
000000 A DMSWAB 000020 A DMSWAZ 000015 A DMTPA  000000 A DMTPAB
000020 A DMTPAZ 000002 A DSCTAD 000000 A DSDASS 000000 A DSDVDN
000002 A DSLCKO 000001 A DSNAME 000000 A DSNORQ 000002 A DSOPCM
000002 A DSPSTI 000002 A DSREWD 000000 A DSUNAM 000002 A DSUNTN
000424 A EIGHT  000147 A ENACLK 000645 A ENAMP  000244 A ENAPIM
000465 A FIVE   000423 A FOUR   000003 A IBIBF  000017 A IBIBFB
000001 A IBIBFZ 000003 A IBLAS  000000 A IBLASB 000017 A IBLASZ
000001 A IBLEN  000000 A IBLENB 000020 A IBLENZ 000000 A IBLNK
000000 A IBLNKB 000020 A IBLNKZ 000002 A IBSTA  000000 A IBSTAB
000020 A IBSTAZ 000004 A IBSTS  000000 A IBSTSB 000017 A IBSTSZ
000300 A LC     000003 A LCABN  000013 A LCABNB 000001 A LCABNZ
000003 A LCASY  000012 A LCASYB 000001 A LCASYZ 000007 A LCBSC
000015 A LCBSCB 000001 A LCBSCZ 000007 A LCCHN  000016 A LCCHNB
000001 A LCCHNZ 000003 A LCCRC  000014 A LCCRCB 000003 A LCCRCZ
000006 A LCCWB  000014 A LCCWBB 000001 A LCCWBZ 000006 A LCCWC
000015 A LCCWCB 000001 A LCCWCZ 000006 A LCCWD  000013 A LCCWDB
000001 A LCCWDZ 000006 A LCCWI  000016 A LCCWIB 000001 A LCCWIZ
000006 A LCCWP  000012 A LCCWPB 000001 A LCCWPZ 000006 A LCCWR
000011 A LCCWRB 000001 A LCCWRZ 000006 A LCCWS  000017 A LCCWSB
000001 A LCCWSZ 000006 A LCCWT  000010 A LCCWTB 000001 A LCCWTZ
000001 A LCIBA  000000 A LCIBAB 000017 A LCIBAZ 000000 A LCIBF
000017 A LCIBFB 000001 A LCIBFZ 000000 A LCIBL  000000 A LCIBLB
000014 A LCIBLZ 000002 A LCIC1  000010 A LCIC1B 000010 A LCIC1Z
000002 A LCIC2  000000 A LCIC2B 000010 A LCIC2Z 000003 A LCIKE
000000 A LCIKEB 000004 A LCIKEZ 000007 A LCITB  000013 A LCITBB
000001 A LCITBZ 000050 A LCJP   000006 A LCLCB  000000 A LCLCBB
000020 A LCLCBZ 000007 A LCLDB  000014 A LCLDBB 000001 A LCLDBZ
000007 A LCLTB  000017 A LCLTBB 000001 A LCLTBZ 000005 A LCOBA
000000 A LCOBAB 000017 A LCOBAZ 000004 A LCOBF  000017 A LCOBFB
000001 A LCOBFZ 000004 A LCOBL  000000 A LCOBLB 000014 A LCOBLZ
000007 A LCOKE  000000 A LCOKEB 000004 A LCOKEZ 000003 A LCRCC
000017 A LCRCCB 000001 A LCRCCZ 000000 A LCSMB  000016 A LCSMBB
000001 A LCSMBZ 000462 A LHW    000017 A LSABN  000015 A LSABNB
000001 A LSABNZ 000017 A LSASC  000011 A LSASCB 000001 A LSASCZ
000014 A LSASY  000013 A LSASYB 000001 A LSASYZ 000020 A LSBSC
000016 A LSBSCB 000001 A LSBSCZ 000015 A LSCC1  000010 A LSCC1B
000010 A LSCC1Z 000015 A LSCC2  000000 A LSCC2B 000010 A LSCC2Z
000017 A LSCHN  000010 A LSCHNB 000001 A LSCHNZ 000017 A LSCRC
000012 A LSCRCB 000003 A LSCRCZ 000012 A LSCTA  000000 A LSCTAB
000020 A LSCTAZ 000017 A LSDSF  000017 A LSDSFB 000001 A LSDSFZ
000013 A LSDST  000000 A LSDSTB 000020 A LSDSTZ 000016 A LSEPF
```

```
000016 A LSEPFB  000001 A LSEPFZ  000014 A LSLSP   000000 A LSLSPB
000011 A LSLSPZ  000014 A LSMOD   000016 A LSMODB  000002 A LSMODZ
000020 A LSNTO   000010 A LSNTOB  000006 A LSNTOZ  000014 A LSPAR
000014 A LSPARB  000002 A LSPARZ  000016 A LSPLA   000000 A LSPLAB
000010 A LSPLAZ  000002 A LSRCA   000000 A LSRCAB  000020 A LSRCAZ
000003 A LSREM   000000 A LSREMB  000020 A LSREMZ  000016 A LSRRS
000010 A LSRRSB  000003 A LSRRSZ  000001 A LSRRT   000000 A LSRRTB
000020 A LSRRTZ  000004 A LSRTO   000000 A LSRTOB  000020 A LSRTOZ
000005 A LSSRS   000000 A LSSRSB  000020 A LSSRSZ  000011 A LSSWS
000000 A LSSWSB  000020 A LSSWSZ  000016 A LSTER   000017 A LSTERB
000001 A LSTERZ  000000 A LSTHD   000000 A LSTHDB  000020 A LSTHDZ
000006 A LSWCA   000000 A LSWCAB  000020 A LSWCAZ  000007 A LSWEM
000000 A LSWEMB  000020 A LSWEMZ  000016 A LSWRS   000013 A LSWRSB
000003 A LSWRSZ  000010 A LSWTO   000000 A LSWTOB  000020 A LSWTOZ
000014 A LSXMM   000011 A LSXMMB  000002 A LSXMMZ  000017 A LSYNC
000016 A LSYNCB  000001 A LSYNCZ  000020 A LSYNR   000000 A LSYNRB
000010 A LSYNRZ  000017 A LSYNT   000000 A LSYNTB  000010 A LSYNTZ
000046 A MAP     000045 A MP      000045 A MPMR0   000145 A MPMR1
000245 A MPMR2   000345 A MPMR3   000420 A MT      000461 A NEG
000470 A NINE    000421 A ONE     000001 A PCBSL   000011 A PCBSLB
000001 A PCBSLZ  000000 A PCCLN   000000 A PCCLNB  000010 A PCCLNZ
000002 A PCCTP   000014 A PCCTPB  000004 A PCCTPZ  000001 A PCECH
000014 A PCECHB  000001 A PCECHZ  000000 A PCLLN   000010 A PCLLNB
000010 A PCLLNZ  000002 A PCNTD   000000 A PCNTDB  000004 A PCNTDZ
000001 A PCPCH   000000 A PCPCHB  000010 A PCPCHZ  000001 A PCSWL
000010 A PCSWLB  000001 A PCSWLZ  000002 A PCTYP   000010 A PCTYPB
000004 A PCTYPZ  000001 A PCXMM   000012 A PCXMMB  000002 A PCXMMZ
000040 A PIM1    000041 A PIM2    000042 A PIM3    000043 A PIM4
000040 A PIM5    000040 A PIM6    000040 A PIM7    000040 A PIM8
000200 A POST    000003 A PSABN   000015 A PSABNB  000001 A PSABNZ
000000 A PSASY   000013 A PSASYB  000001 A PSASYZ  000002 A PSBADT
000000 A PSBEG   000004 A PSBSC   000016 A PSBSCB  000016 A PSBSCZ
000001 A PSCC1   000010 A PSCC1B  000010 A PSCC1Z  000001 A PSCC2
000000 A PSCC2B  000010 A PSCC2Z  000003 A PSCRC   000012 A PSCRCB
000003 A PSCRCZ  000002 A PSDEF   000010 A PSDEFB  000001 A PSDEFZ
000003 A PSDSF   000017 A PSDSFB  000001 A PSDSFZ  000002 A PSDWN
000011 A PSDWNB  000001 A PSDWNZ  000004 A PSEND   000002 A PSEPF
000016 A PSEPFB  000001 A PSEPFZ  000000 A PSLSP   000000 A PSLSPB
000011 A PSLSPZ  000000 A PSMOD   000016 A PSMODB  000002 A PSMODZ
000003 A PSNSEC  000000 A PSPAR   000014 A PSPARB  000002 A PSPARZ
000002 A PSPLA   000000 A PSPLAB  000010 A PSPLAZ  000001 A PSPROT
000002 A PSTER   000017 A PSTERB  000001 A PSTERZ  000000 A PSXMM
000011 A PSXMMB  000002 A PSXMMZ  000003 A PSYNC   000016 A PSYNCB
000001 A PSYNCZ  000004 A PSYNR   000000 A PSYNRB  000010 A PSYNRZ
000003 A PSYNT   000000 A PSYNTB  000010 A PSYNTZ  000020 R PU01
000036 R PUSAVX  000040 A RA0     000000 A RA1     000004 A RADNR
000060 A RB0     000020 A RB1     000002 A RFCB    000463 A RHW
000001 A ROPWD   000000 A RSTPR   000003 A RTIDB   000467 A SEVEN
000466 A SIX     000027 A TBATSK  000026 A TBCPTM  000011 A TBENTY
000003 A TBEVNT  000021 A TBIO    000014 A TBISA   000015 A TBISB
000017 A TBISP   000020 A TBISRS  000034 A TBIST   000016 A TBISX
000032 A TBKEY   000022 A TBKN1   000023 A TBKN2   000024 A TBKN3
000033 A TBMIMG  000032 A TBNUCL  000002 A TBPL    000004 A TBRSA
000005 A TBRSB   000030 A TBRSE   000007 A TBRSP   000010 A TBRSTS
000006 A TBRSX   000000 A TBS0    000001 A TBS1    000012 A TBS10
000013 A TBS11   000014 A TBS12   000015 A TBS13   000016 A TBS14
000017 A TBS15   000002 A TBS2    000003 A TBS3    000004 A TBS4
000005 A TBS5    000006 A TBS6    000007 A TBS7    000010 A TBS8
000011 A TBS9    000031 A TBSIZ   000001 A TBST    000025 A TBTLC
000013 A TBTMIN  000012 A TBTMS   000000 A TBTRD   000004 A TCBSL
000011 A TCBSLB  000001 A TCBSLZ  000003 A TCCLN   000000 A TCCLNB
000010 A TCCLNZ  000004 A TCCON   000015 A TCCONB  000001 A TCCONZ
000002 A TCCTA   000000 A TCCTAB  000020 A TCCTAZ  000005 A TCCTP
000014 A TCCTPB  000004 A TCCTPZ  000012 A TCDCC   000000 A TCDCCB
000020 A TCDCCZ  000014 A TCDTO   000000 A TCDTOB  000020 A TCDTOZ
000004 A TCECH   000014 A TCECHB  000001 A TCECHZ  000015 A TCID1
000000 A TCID1B  000020 A TCID1Z  000016 A TCID2   000000 A TCID2B
000020 A TCID2Z  000006 A TCLDF   000014 A TCLDFB  000001 A TCLDFZ
000003 A TCLLN   000010 A TCLLNB  000010 A TCLLNZ  000005 A TCNOD
000004 A TCNODB  000004 A TCNODZ  000005 A TCNTD   000000 A TCNTDB
000004 A TCNTDZ  000004 A TCPCH   000000 A TCPCHB  000010 A TCPCHZ
000004 A TCRBC   000017 A TCRBCB  000001 A TCRBCZ  000013 A TCRBF
000000 A TCRBFB  000020 A TCRBFZ  000007 A TCRCA   000000 A TCRCAB
000020 A TCRCAZ  000006 A TCRMD   000000 A TCRMDB  000003 A TCRMDZ
000001 A TCRQH   000000 A TCRQHB  000020 A TCRQHZ  000006 A TCRRS
000006 A TCRRSB  000003 A TCRRSZ  000010 A TCSTO   000000 A TCSTOB
000020 A TCSTOZ  000004 A TCSWL   000010 A TCSWLB  000001 A TCSWLZ
000000 A TCTCD   000000 A TCTCDB  000020 A TCTCDZ  000005 A TCTYP
000010 A TCTYPB  000004 A TCTYPZ  000004 A TCWBC   000016 A TCWBCB
000001 A TCWBCZ  000011 A TCWCA   000000 A TCWCAB  000020 A TCWCAZ
000006 A TCWMD   000003 A TCWMDB  000003 A TCWMDZ  000006 A TCWRS
000011 A TCWRSB  000003 A TCWRSZ  000004 A TCXMM   000012 A TCXMMB
000002 A TCXMMZ  000471 A TEN     000464 A THREE   000002 A TIDSP
000000 A TIDSPB  000007 A TIDSPZ  000002 A TIDWN   000017 A TIDWNB
000001 A TIDWNZ  000000 A TINET   000000 A TINETB  000020 A TINETZ
000003 A TIODN   000017 A TIODNB  000001 A TIODNZ  000003 A TIODP
000000 A TIODPB  000007 A TIODPZ  000003 A TIOSC   000007 A TIOSCB
000010 A TIOSCZ  000002 A TISEC   000007 A TISECB  000010 A TISECZ
000000 A TITU1   000000 A TITU1B  000020 A TITU1Z  000001 A TITU2
000000 A TITU2B  000020 A TITU2Z  000017 A TPFPA   000000 A TPFPAB
000020 A TPFPAZ  000015 A TPRPA   000000 A TPRPAB  000020 A TPRPAZ
000016 A TPWPA   000000 A TPWPAB  000020 A TPWPAZ  000422 A TWO
000403 A V$1MIN  000415 A V$BFC   000075 A V$BGLB  000056 A V$BIC1
000315 A V$BTB   000331 A V$BTBM  000414 A V$BVN   000334 A V$CAM
000353 A V$CKB   000411 A V$CKIT  000310 A V$CKPT  000301 A V$CPL
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```
000076 A V$CRDM 000341 A V$CRDR 000354 A V$CRM  000302 A V$CRS
000360 A V$CTAD 000300 A V$CTL  000351 A V$CTMS 000070 A V$DATE
000355 A V$DSTB 000376 A V$ERFG 000347 A V$FGLB 000306 A V$FLRS
000350 A V$FREE 000332 A V$GFCB 000320 A V$IM   000410 A V$IOA
000412 A V$JCB  000055 A V$JCFG 000077 A V$JCTM 000050 A V$JNAM
000377 A V$JOP  000340 A V$KEY  000054 A V$LCNT 000313 A V$LER
000356 A V$LIT  000317 A V$LLUP 000317 A V$LPP  000307 A V$LRSK
000312 A V$LSAL 000345 A V$LUNT 000316 A V$LUP  000400 A V$LUT1
000401 A V$LUT2 000402 A V$LUT3 000330 A V$MAP  000333 A V$MIMG
000330 A V$MPM  000362 A V$NCTR 000316 A V$NPAG 000413 A V$OCB
000346 A V$OPCF 000311 A V$OPCL 000357 A V$PGT  000363 A V$PIMN
000074 A V$PLCT 000305 A V$PTVB 000361 A V$SCTL 000352 A V$SCV
000375 A V$SLFG 000334 A V$ST0  000335 A V$ST1  000336 A V$ST2
000337 A V$ST3  000303 A V$TB   000342 A V$TBGT 000416 A V$TFC
000314 A V$TJCP 000344 A V$TMN  000343 A V$TMS  000304 A V$UTB
000000 R VTPUSH 000005 E VTSTAK 000033 E VTVOLA 000001 A X
000420 A ZERO
  0 ERRORS ASSEMBLY COMPLETE
```

```
159   ADAT     *
 38   ANAM     *
 90   ANAN     *
574   APIM      584    585
108   B          98    117    229    230    252    255    257   1510   1519
 88   B&         82
 83   B&0        40
 80   B&1        78
 44   B&10       42
 76   B&2        74
 72   B&3        70
 68   B&4        66
 64   B&5        62
 60   B&6        58
 56   B&7        54
 52   B&8        50
 48   B&9        46
543   B0       *
544   B1       *
553   B10      *
554   B11      *
555   B12      *
556   B13      *
557   B14      *
558   B15      *
545   B2       *
546   B3       *
547   B4       *
548   B5       *
549   B6       *
550   B7       *
551   B8       *
552   B9       *
630   BICNUM   *
515   BM1        79
518   BM17       67
521   BM177      55
524   BM1777     43
516   BM3        75
519   BM37       63
522   BM377      51
517   BM7        71
520   BM77       59
523   BM777      47
486   BR0       202
487   BR1      *
496   BR10     *
497   BR11     *
498   BR12     *
499   BR13     *
500   BR14     *
501   BR15     *
488   BR2      *
489   BR3      *
490   BR4      *
491   BR5      *
492   BR6      *
493   BR7      *
494   BR8      *
495   BR9      *
470   BS0       195    209
471   BS1      *
480   BS10     *
481   BS11     *
482   BS12     *
483   BS13     *
484   BS14     *
485   BS15     1506
472   BS2      *
473   BS3      *
474   BS4      *
475   BS5      *
476   BS6      *
477   BS7      *
478   BS8      *
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 479   BS9      *
1397   CHAFP    *
1398   CHAFPB   *
1399   CHAFPZ   *
1401   CHARP    *
1402   CHARPB   *
1403   CHARPZ   *
1405   CHCFP    *
1406   CHCFPB   *
1407   CHCFPZ   *
1409   CHCRP    *
1410   CHCRPB   *
1411   CHCRPZ   *
1413   CHRBL    *
1414   CHRBLB   *
1415   CHRBLZ   *
 198   CLEARF   *
 567   CLOCK     569    570
 622   COTAD1   *
 707   CTACT    *
 708   CTACTB   *
 709   CTACTZ   *
 715   CTADN    *
 716   CTADNB   *
 717   CTADNZ   *
 751   CTBIC    *
 752   CTBICB   *
 753   CTBICZ   *
 723   CTDST    *
 724   CTDSTB   *
 725   CTDSTZ   *
 739   CTDVA    *
 740   CTDVAB   *
 741   CTDVAZ   *
 755   CTFCB    *
 756   CTFCBB   *
 757   CTFCBZ   *
 763   CTFRC    *
 764   CTFRCB   *
 765   CTFRCZ   *
 767   CTFRE    *
 768   CTFREB   *
 769   CTFREZ   *
 711   CTIDB    *
 712   CTIDBB   *
 713   CTIDBZ   *
 743   CTIOA    *
 744   CTIOAB   *
 745   CTIOAZ   *
 719   CTOPM    *
 720   CTOPMB   *
 721   CTOPMZ   *
 735   CTRCN    *
 736   CTRCNB   *
 737   CTRCNZ   *
 727   CTRQB    *
 728   CTRQBB   *
 729   CTRQBZ   *
 731   CTRTR    *
 732   CTRTRB   *
 733   CTRTRZ   *
 747   CTSTA    *
 748   CTSTAB   *
 749   CTSTAZ   *
 759   CTWDS    *
 760   CTWDSB   *
 761   CTWDSZ   *
 688   DCBUFF   *
 691   DCCHR    *
 692   DCCHRB   *
 693   DCCHRZ   *
 689   DCCNT    *
 687   DCRECL   *
 187   DINTS    *
 569   DISCLK    189
 589   DISMP    *
 584   DISPIM    188
 813   DMBCA    *
 814   DMBCAB   *
 815   DMBCAZ   *
 805   DMCWA    *
 806   DMCWAB   *
 807   DMCWAZ   *
 785   DMFPA    *
 786   DMFPAB   *
 787   DMFPAZ   *
 793   DMLCA    *
 794   DMLCAB   *
 795   DMLCAZ   *
 797   DMLTA    *
 798   DMLTAB   *
 799   DMLTAZ   *
 801   DMPTA    *
 802   DMPTAB   *
 803   DMPTAZ   *
```

```
781   DMRPA    *
782   DMRPAB   *
783   DMRPAZ   *
789   DMSTA    *
790   DMSTAB   *
791   DMSTAZ   *
809   DMSWA    *
810   DMSWAB   *
811   DMSWAZ   *
777   DMTPA    *
778   DMTPAB   *
779   DMTPAZ   *
615   DSCTAD   *
601   DSDASS   *
600   DSDVDN   *
612   DSLCKD   *
609   DSNAME   *
608   DSNORQ   *
613   DSOPCM   *
614   DSPSTI   *
610   DSREWD   *
606   DSUNAM   *
611   DSUNTN   *
512   EIGHT     143    167
183   EINTS    *
570   ENACLK    185
590   ENAMP    *
585   ENAPIM    184
  0   ERROR     113    193    200    207
128   FETCHA   *
509   FIVE      149    173   1511
508   FOUR      151    175
251   GETQ     *
1432  IBIBF    *
1433  IBIBFB   *
1434  IBIBFZ   *
1436  IBLAS    *
1437  IBLASB   *
1438  IBLASZ   *
1424  IBLEN    *
1425  IBLENB   *
1426  IBLENZ   *
1420  IBLNK    *
1421  IBLNKB   *
1422  IBLNKZ   *
1428  IBSTA    *
1429  IBSTAB   *
1430  IBSTAZ   *
1440  IBSTS    *
1441  IBSTSB   *
1442  IBSTSZ   *
378   LC        379    380    381    382    383    384    385    386    387
                388    389    390    391    392    393    394    395    396
                397    398    399    400    401    402    403    404    405
                406    407    408    410    411    412    413    414    415
                416    417    418    419    420    421    422    423    424
                426    427    428    429    434    435    436    437    438
                439    440    447    448    449    452    457    458    459
855   LCABN    *
856   LCABNB   *
857   LCABNZ   *
859   LCASY    *
860   LCASYB   *
861   LCASYZ   *
923   LCBSC    *
924   LCBSCB   *
925   LCBSCZ   *
919   LCCHN    *
920   LCCHNB   *
921   LCCHNZ   *
851   LCCRC    *
852   LCCRCB   *
853   LCCRCZ   *
895   LCCWB    *
896   LCCWBB   *
897   LCCWBZ   *
891   LCCWC    *
892   LCCWCB   *
893   LCCWCZ   *
899   LCCWD    *
900   LCCWDB   *
901   LCCWDZ   *
887   LCCWI    *
888   LCCWIB   *
889   LCCWIZ   *
903   LCCWP    *
904   LCCWPB   *
905   LCCWPZ   *
907   LCCWR    *
908   LCCWRB   *
909   LCCWRZ   *
883   LCCWS    *
884   LCCWSB   *
885   LCCWSZ   *
911   LCCWT    *
```

```
912   LCCWTB   *
913   LCCWTZ   *
835   LCIBA    *
836   LCIBAB   *
837   LCIBAZ   *
823   LCIBF    *
824   LCIBFB   *
825   LCIBFZ   *
831   LCIBL    *
832   LCIBLB   *
833   LCIBLZ   *
839   LCIC1    *
840   LCIC1B   *
841   LCIC1Z   *
843   LCIC2    *
844   LCIC2B   *
845   LCIC2Z   *
863   LCIKE    *
864   LCIKEB   *
865   LCIKEZ   *
931   LCITB    *
932   LCITBB   *
933   LCITBZ   *
353   LCJP      354   355   356   363   364   365   366   367   370
879   LCLCB    *
880   LCLCBB   *
881   LCLCBZ   *
927   LCLDB    *
928   LCLDBB   *
929   LCLDBZ   *
915   LCLTB    *
916   LCLTBB   *
917   LCLTBZ   *
875   LCOBA    *
876   LCOBAB   *
877   LCOBAZ   *
867   LCOBF    *
868   LCOBFB   *
869   LCOBFZ   *
871   LCOBL    *
872   LCOBLB   *
873   LCOBLZ   *
935   LCOKE    *
936   LCOKEB   *
937   LCOKEZ   *
847   LCRCC    *
848   LCRCCB   *
849   LCRCCZ   *
827   LCSMB    *
828   LCSMBB   *
829   LCSMBZ   *
503   LHW      *
1049  LSABN    *
1050  LSABNB   *
1051  LSABNZ   *
1057  LSASC    *
1058  LSASCB   *
1059  LSASCZ   *
1001  LSASY    *
1002  LSASYB   *
1003  LSASYZ   *
1069  LSBSC    *
1070  LSBSCB   *
1071  LSBSCZ   *
1013  LSCC1    *
1014  LSCC1B   *
1015  LSCC1Z   *
1017  LSCC2    *
1018  LSCC2B   *
1019  LSCC2Z   *
1061  LSCHN    *
1062  LSCHNB   *
1063  LSCHNZ   *
1053  LSCRC    *
1054  LSCRCB   *
1055  LSCRCZ   *
 985  LSCTA    *
 986  LSCTAB   *
 987  LSCTAZ   *
1041  LSDSF    *
1042  LSDSFB   *
1043  LSDSFZ   *
 989  LSDST    *
 990  LSDSTB   *
 991  LSDSTZ   *
1025  LSEPF    *
1026  LSEPFB   *
1027  LSEPFZ   *
1009  LSLSP    *
1010  LSLSPB   *
1011  LSLSPZ   *
 993  LSMOD    *
 994  LSMODB   *
 995  LSMODZ   *
1073  LSNTO    *
```

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1074   LSNTOB   *
1075   LSNTOZ   *
 997   LSPAR    *
 998   LSPARB   *
 999   LSPARZ   *
1037   LSPLA    *
1038   LSPLAB   *
1039   LSPLAZ   *
 953   LSRCA    *
 954   LSRCAB   *
 955   LSRCAZ   *
 957   LSREM    *
 958   LSREMB   *
 959   LSREMZ   *
1033   LSRRS    *
1034   LSRRSB   *
1035   LSRRSZ   *
 949   LSRRT    *
 950   LSRRTB   *
 951   LSRRTZ   *
 961   LSRTO    *
 962   LSRTOB   *
 963   LSRTOZ   *
 965   LSSRS    *
 966   LSSRSB   *
 967   LSSRSZ   *
 981   LSSWS    *
 982   LSSWSB   *
 983   LSSWSZ   *
1021   LSTER    *
1022   LSTERB   *
1023   LSTERZ   *
 945   LSTHD    *
 946   LSTHDB   *
 947   LSTHDZ   *
 969   LSWCA    *
 970   LSWCAB   *
 971   LSWCAZ   *
 973   LSWEM    *
 974   LSWEMB   *
 975   LSWEMZ   *
1029   LSWRS    *
1030   LSWRSB   *
1031   LSWRSZ   *
 977   LSWTO    *
 978   LSWTOB   *
 979   LSWTOZ   *
1005   LSXMM    *
1006   LSXMMB   *
1007   LSXMMZ   *
1045   LSYNC    *
1046   LSYNCB   *
1047   LSYNCZ   *
1077   LSYNR    *
1078   LSYNRB   *
1079   LSYNRZ   *
1065   LSYNT    *
1066   LSYNTB   *
1067   LSYNTZ   *
 591   MAP      *
 588   MP        589    590    592    593    594    595
 592   MPMR0    *
 593   MPMR1    *
 594   MPMR2    *
 595   MPMR3    *
 468   MT        469    470    471    472    473    474    475    476    477
                 478    479    480    481    482    483    484    485    486
                 487    488    489    490    491    492    493    494    495
                 496    497    498    499    500    501    502    503    504
                 505    506    507    508    509    510    511    512    513
                 514    515    516    517    518    519    520    521    522
                 523    524
 502   NEG      *
 513   NINE      141    165
 505   ONE       157    181
   0   P          27     29     30     36     39     41     45     49     53
                  57     61     65     69     73     77     81     84     85
                  85     86     87     91     92     92     93     94     97
                  99    100    101    101    102    103    104    105    106
                 107    107    109    109    112    114    115    115    116
                 118    118    119    120    121    123    124    125    125
                 129    129    130    131    132    132    133    136    137
                 138    140    142    144    146    148    150    152    154
                 156    160    161    162    164    166    168    170    172
                 174    176    178    180    192    194    194    195    196
                 196    199    201    201    202    203    203    206    208
                 208    209
1329   PCBSL    *
1330   PCBSLB   *
1331   PCBSLZ   *
1317   PCCLN    *
1318   PCCLNB   *
1319   PCCLNZ   *
1341   PCCTP    *
1342   PCCTPB   *
```

```
1343   PCCTPZ   *
1321   PCECH    *
1322   PCECHB   *
1323   PCECHZ   *
1313   PCLLN    *
1314   PCLLNB   *
1315   PCLLNZ   *
1349   PCNTD    *
1350   PCNTDB   *
1351   PCNTDZ   *
1337   PCPCH    *
1338   PCPCHB   *
1339   PCPCHZ   *
1333   PCSWL    *
1334   PCSWLB   *
1335   PCSWLZ   *
1345   PCTYP    *
1346   PCTYPB   *
1347   PCTYPZ   *
1325   PCXMM    *
1326   PCXMMB   *
1327   PCXMMZ   *
 575   PIM1     *
 576   PIM2     *
 577   PIM3     *
 578   PIM4     *
 579   PIM5     *
 580   PIM6     *
 581   PIM7     *
 582   PIM8     *
 699   POST     *
1287   PSABN    *
1288   PSABNB   *
1289   PSABNZ   *
1239   PSASY    *
1240   PSASYB   *
1241   PSASYZ   *
 670   PSBADT   *
 666   PSBEG    *
1299   PSBSC    *
1300   PSBSCB   *
1301   PSBSCZ   *
1251   PSCC1    *
1252   PSCC1B   *
1253   PSCC1Z   *
1255   PSCC2    *
1256   PSCC2B   *
1257   PSCC2Z   *
1291   PSCRC    *
1292   PSCRCB   *
1293   PSCRCZ   *
1271   PSDEF    *
1272   PSDEFB   *
1273   PSDEFZ   *
1279   PSDSF    *
1280   PSDSFB   *
1281   PSDSFZ   *
1267   PSDWN    *
1268   PSDWNB   *
1269   PSDWNZ   *
 672   PSEND    *
1263   PSEPF    *
1264   PSEPFB   *
1265   PSEPFZ   *
1247   PSLSP    *
1248   PSLSPB   *
1249   PSLSPZ   *
1231   PSMOD    *
1232   PSMODB   *
1233   PSMODZ   *
 671   PSNSEC   *
1235   PSPAR    *
1236   PSPARB   *
1237   PSPARZ   *
1275   PSPLA    *
1276   PSPLAB   *
1277   PSPLAZ   *
 667   PSPROT   *
1259   PSTER    *
1260   PSTERB   *
1261   PSTERZ   *
1243   PSXMM    *
1244   PSXMMB   *
1245   PSXMMZ   *
1283   PSYNC    *
1284   PSYNCB   *
1285   PSYNCZ   *
1303   PSYNR    *
1304   PSYNRB   *
1305   PSYNRZ   *
1295   PSYNT    *
1296   PSYNTB   *
1297   PSYNTZ   *
1507   PU01     1505
1523   PUSAVX   1493   1499
```

```
 32  PUSH     *
228  PUTQ     *
532  RA0      *
533  RA1      *
651  RADNR    *
534  RB0      *
535  RB1      *
649  RFCB     *
504  RHW      *
645  ROPWD    *
642  RSTPR    *
650  RTIDB    *
 96  SETA     *
111  SETB     *
191  SETF     *
511  SEVEN      145    169
510  SIX        147    171
 26  SPACE    *
135  SUBAT    *
288  TBATSK   *
287  TBCPTH   *
274  TBENTY   *
268  TBEVNT   *
282  TBID     *
277  TBISA    *
278  TBISB    *
280  TBISP    *
281  TBISRS   *
294  TBIST    *
279  TBISX    *
292  TBKEY    *
283  TBKN1    *
284  TBKN2    *
285  TBKN3    *
293  TBMIMG   *
291  TBNUCL   *
267  TBPL     *
269  TBRSA    *
270  TBRSB    *
289  TBRSE    *
272  TBRSP    *
273  TBRSTS   *
271  TBRSX    *
322  TBS0     *
321  TBS1     *
309  TBS10    *
308  TBS11    *
306  TBS12    *
305  TBS13    *
304  TBS14    *
302  TBS15    *
320  TBS2     *
318  TBS3     *
317  TBS4     *
316  TBS5     *
314  TBS6     *
313  TBS7     *
312  TBS8     *
310  TBS9     *
290  TBSIZ    *
266  TBST     *
286  TBTLC    *
276  TBTMIN   *
275  TBTMS    *
265  TBTRD    *
1115 TCBSL    *
1116 TCBSLB   *
1117 TCBSLZ   *
1099 TCCLN    *
1100 TCCLNB   *
1101 TCCLNZ   *
1127 TCCON    *
1128 TCCONB   *
1129 TCCONZ   *
1095 TCCTA    *
1096 TCCTAB   *
1097 TCCTAZ   *
1151 TCCTP    *
1152 TCCTPB   *
1153 TCCTPZ   *
1187 TCDCC    *
1188 TCDCCB   *
1189 TCDCCZ   *
1195 TCDTO    *
1196 TCDTOB   *
1197 TCDTOZ   *
1123 TCECH    *
1124 TCECHB   *
1125 TCECHZ   *
1199 TCID1    *
1200 TCID1B   *
1201 TCID1Z   *
1203 TCID2    *
1204 TCID2B   *
1205 TCID2Z   *
```

```
1171   TCLDF    *
1172   TCLDFB   *
1173   TCLDFZ   *
1103   TCLLN    *
1104   TCLLNB   *
1105   TCLLNZ   *
1143   TCNOD    *
1144   TCNODB   *
1145   TCNODZ   *
1139   TCNTD    *
1140   TCNTDB   *
1141   TCNTDZ   *
1107   TCPCH    *
1108   TCPCHB   *
1109   TCPCHZ   *
1135   TCRBC    *
1136   TCRBCB   *
1137   TCRBCZ   *
1191   TCRBF    *
1192   TCRBFB   *
1193   TCRBFZ   *
1175   TCRCA    *
1176   TCRCAB   *
1177   TCRCAZ   *
1155   TCRMD    *
1156   TCRMDB   *
1157   TCRMDZ   *
1091   TCRQH    *
1092   TCRQHB   *
1093   TCRQHZ   *
1163   TCRRS    *
1164   TCRRSB   *
1165   TCRRSZ   *
1179   TCSTO    *
1180   TCSTOB   *
1181   TCSTOZ   *
1111   TCSWL    *
1112   TCSWLB   *
1113   TCSWLZ   *
1087   TCTCD    *
1088   TCTCDB   *
1089   TCTCDZ   *
1147   TCTYP    *
1148   TCTYPB   *
1149   TCTYPZ   *
1131   TCWBC    *
1132   TCWBCB   *
1133   TCWBCZ   *
1183   TCWCA    *
1184   TCWCAB   *
1185   TCWCAZ   *
1159   TCWMD    *
1160   TCWMDB   *
1161   TCWMDZ   *
1167   TCWRS    *
1168   TCWRSB   *
1169   TCWRSZ   *
1119   TCXMM    *
1120   TCXMMB   *
1121   TCXMMZ   *
 514   TEN       139    163
 205   TESTF    *
 507   THREE     153    177
1375   TIDSP    *
1376   TIDSPB   *
1377   TIDSPZ   *
1367   TIDWN    *
1368   TIDWNB   *
1369   TIDWNZ   *
1391   TINET    *
1392   TINETB   *
1393   TINETZ   *
1379   TIODN    *
1380   TIODNB   *
1381   TIODNZ   *
1387   TIODP    *
1388   TIODPB   *
1389   TIODPZ   *
1383   TIOSC    *
1384   TIOSCB   *
1385   TIOSCZ   *
1371   TISEC    *
1372   TISECB   *
1373   TISECZ   *
1359   TITU1    *
1360   TITU1B   *
1361   TITU1Z   *
1363   TITU2    *
1364   TITU2B   *
1365   TITU2Z   *
1221   TPFPA    *
1222   TPFPAB   *
1223   TPFPAZ   *
1213   TPRPA    *
1214   TPRPAB   *
```

```
1215  TPRPAZ   *
1217  TPWPA    *
1218  TPWPAB   *
1219  TPWPAZ   *
 506  TWO       155   179
 440  V$1MIN   *
 458  V$BFC    *
 366  V$BGLB   *
 363  V$BIC1   *
 392  V$BTB    *
 400  V$BTBM   *
 457  V$BVN    *
 408  V$CAM    *
 420  V$CKB    *
 448  V$CKIT   *
 387  V$CKPT   *
 380  V$CPL    *
 367  V$CRDM   *
 410  V$CRDR   *
 421  V$CRM    *
 381  V$CRS    *
 426  V$CTAD   *
 379  V$CTL    *
 418  V$CTMS   *
 364  V$DATE   *
 422  V$DSTB   *
 435  V$ERFG   *
 416  V$FGLB   *
 385  V$FLRS   *
 417  V$FREE   *
 401  V$GFCB   *
 397  V$IM     *
 447  V$IOA    *
 449  V$JCB    *
 356  V$JCFG   *
 370  V$JCTM   *
 354  V$JNAM   *
 436  V$JOP    *
 407  V$KEY    *
 355  V$LCNT   *
 390  V$LER    *
 423  V$LIT    *
 395  V$LLUP   *
 396  V$LPP    *
 386  V$LRSK   *
 389  V$LSAL   *
 414  V$LUNT   *
 394  V$LUP    *
 437  V$LUT1   *
 438  V$LUT2   *
 439  V$LUT3   *
 399  V$MAP    *
 402  V$MIMG   *
 398  V$MPM    *
 428  V$NCTR   *
 393  V$NPAG   *
 452  V$OCB    *
 415  V$OPCF   *
 388  V$OPCL   *
 424  V$PGT    *
 429  V$PIMN   *
 365  V$PLCT   *
 384  V$PTVB   *
 427  V$SCTL   *
 419  V$SCV    *
 434  V$SLFG   *
 403  V$ST0    *
 404  V$ST1    *
 405  V$ST2    *
 406  V$ST3    *
 382  V$TB     *
 411  V$TBGT   *
 459  V$TFC    *
 391  V$TJCP   *
 413  V$TMN    *
 412  V$TMS    *
 383  V$UTB    *
1492  VTPUSH     12    33    35  1491  1503  1509
   0  VTSTAK   1489  1495
   0  VTVOLA   1488  1494  1514  1515  1517
 697  X         232   254  1497  1498  1500  1507
 469  ZERO     *
```

```
  1   C  THIS IS A COPYRIGHTED PROGRAM, COPYRIGHT 1973 BY VARIAN DATA MACHINES03 00001
  2   C                                                                       03 00002
  3   C       V.D.M.    PART NO.      92L1105-019B                            03 00003
  4   C                                                                       03 00004
  5   C                               RELEASED     3-1-74                     03 00005
  6   C                                                                       03 00006
  7   C                                                                       03 00007
  8   C               ADVANC                                                  03 00008
  9   C                                                                       03 00009
 10   C                                                                       03 00010
 11         TITLE ADVANC                                                     03 00011
 12         SUBROUTINE ADVANC                                                03 00012
 13   C                                                                      ********
 14   C               COMMON                                                 ********
 15   C                                                                      ********
 16   C                                                                      ********
 17   C ***************************************************************      ********
 18   C *     DECLARE COMMON CELLS                                    *      ********
 19   C ***************************************************************      ********
 20         COMMON  ITEST , P1    , P2    , BUF   , INCHAR, SECTOR, IN       ********
 21         COMMON  OUT   , VT$DFL, VT$DFT, BLANK , LSDN  , LSD   , TUIDN    ********
 22         COMMON  TIB   , TCD   , LINE  , LNCNT , LNMAX , PGCNT            ********
 23         COMMON  DFLFCB, DFTFCB, IVALUE, LFILE , NXTSCT, IDTSCT, IDTDSP   ********
 24         INTEGER P1    , P2    , OUT   , VT$DFL, VT$DFT, BLANK , PGCNT    ********
 25         INTEGER BUF   (160), SECTOR(120), LSD   (  5), TUIDN (  4)       ********
 26         INTEGER TIB   (  4), TCD   (  5), DFLFCB( 13), DFTFCB( 13)       ********
 27         INTEGER LINE  ( 80)                                              ********
 28   C ***************************************************************      ********
 29   C *     END OF COMMON DECLARATIONS                              *      ********
 30   C ***************************************************************      ********
 31   C                                                                       03 00013
 32   C       THIS ROUTINE ADVANCES THE BACKUP POINTER, P2, UNTIL             03 00014
 33   C       IT IS EQUAL TO P1.  ADVANC IS CALLED WHENEVER A TEST IS         03 00015
 34   C       SUCCESSFUL.  INPUT CHARACTERS ADVANCED OVER ARE BLANKED OUT     03 00016
 35   C                                                                       03 00017
 36   C------IF BACK UP POINTER(P2) IS UP WITH POINTER P1, SIMPLY RETURN      03 00018
 37   10     IF (P1 - P2) 20, 20, 30                                          03 00019
 38   C                                                                       03 00020
 39   C------POINTER$ ARE EQUAL, SO RETURN                                    03 00021
 40   20     RETURN                                                           03 00022
 41   C                                                                       03 00023
 42   C------ELSE, BLANK A COLUMN AND TEST AGAIN                             03 00024
 43   30     BUF(P2) = BLANK                                                  03 00025
 44          P2 = P2 + 1                                                      03 00026
 45          GO TO 10                                                         03 00027
 46          END                                                              03 00028
ENTRY/COMMON BLOCK NAMES
  000051 R ADVANC
  000646 C COMMON
EXTERNAL NAMES
SYMBOL TABLE
  000050 R 000001
  000001 C      P1
  000002 C      P2
  000435 C     OUT
  000436 C VT$DFL
  000437 C VT$DFT
  000440 C   BLANK
  000606 C   PGCNT
  000003 C     BUF
  000244 C  SECTOR
  000442 C     LSD
  000447 C   TUIDN
  000453 C     TIB
  000457 C     TCD
  000607 C  DFLFCB
  000624 C  DFTFCB
  000464 C    LINE
  000003 R      10
  000000 C   ITEST
  000243 C  INCHAR
  000434 C      IN
  000441 C    LSDN
  000604 C   LNCNT
  000605 C   LNMAX
  000641 C  IVALUE
  000642 C   LFILE
  000643 C  NXTSCT
  000644 C  IDTSCT
  000645 C  IDTDSP
  000013 R      20
  000015 R      30
  000046 R  000002
  000037 R      0$
  000047 R     $1
0 ERRORS  COMPILATION COMPLETE
  1   C  THIS IS A COPYRIGHTED PROGRAM, COPYRIGHT 1973 BY VARIAN DATA MACHINES02 00001
  2   C                                                                       02 00002
  3   C      V.D.M. PART NO.         92L1105-020A                             02 00003
  4   C                                                                       02 00004
  5   C                                                RELEASED    03-26-7    02 00005
  6   C                                                                       02 00006
  7   C                                                                       02 00007
  8   C                                                                       02 00008
  9   C                                                                       02 00009
```

```
 10   C                BACKUP                                                                    02 00010
 11         TITLE BACKUP                                                                        02 00011
 12         SUBROUTINE BACKUP                                                                   02 00012
 13   C                                                                                         ********
 14   C                COMMON                                                                   ********
 15   C                                                                                         ********
 16   C                                                                                         ********
 17   C ***********************************************************************************************
 18   C *     DECLARE COMMON CELLS                                                            *********
 19   C ***********************************************************************************************
 20         COMMON  ITEST , P1    , P2    , BUF   , INCHAR, SECTOR, IN                        *********
 21         COMMON  OUT   , VT$DFL, VT$DFT, BLANK , LSDN  , LSD   , TUIDN                     *********
 22         COMMON  TIB   , TCD   , LINE  , LNCNT , LNMAX , PGCNT                             *********
 23         COMMON  DFLFCB, DFTFCB, IVALUE, LFILE , NXTSCT, IDTSCT, IDTDSP                    *********
 24         INTEGER P1    , P2    , OUT   , VT$DFL, VT$DFT, BLANK , PGCNT                     *********
 25         INTEGER BUF   (160), SECTOR(120), LSD   (  5), TUIDN (  4)                        *********
 26         INTEGER TIB   (  4), TCD   (  5), DFLFCB( 13), DFTFCB( 13)                        *********
 27         INTEGER LINE  ( 80)                                                               *********
 28   C ***********************************************************************************************
 29   C *     END OF COMMON DECLARATIONS                                                      *********
 30   C ***********************************************************************************************
 31   C                                                                                         02 00013
 32   C         THIS ROUTINE IS CALLED TO RESET THE PRIMARY INPUT                               02 00014
 33   C         POINTER, P1, TO THE POSITION OF THE LAST CALL TO ADVANC.                        02 00015
 34   C         BACKUP IS CALLED BEFORE EVERY TEST                                              02 00016
 35   C                                                                                         02 00017
 36   C-------RESET PRIMARY POINTER(P1) TO BACKUP POINTER(P2)                                    02 00018
 37         P1 = P2                                                                           02 00019
 38   C                                                                                         02 00020
 39   C-------AND RETURN TO THE CALLER                                                         02 00021
 40           RETURN                                                                          02 00022
 41           END                                                                             02 00023
ENTRY/COMMON BLOCK NAMES
  000011 R BACKUP
  000646 C COMMON
EXTERNAL NAMES
SYMBOL TABLE
  000001 C      P1
  000002 C      P2
  000435 C     OUT
  000436 C  VT$DFL
  000437 C  VT$DFT
  000440 C   BLANK
  000606 C   PGCNT
  000003 C     BUF
  000244 C  SECTOR
  000442 C     LSD
  000447 C   TUIDN
  000453 C     TIB
  000457 C     TCD
  000607 C  DFLFCB
  000624 C  DFTFCB
  000464 C    LINE
  000000 C   ITEST
  000243 C  INCHAR
  000434 C      IN
  000441 C    LSDN
  000604 C   LNCNT
  000605 C   LNMAX
  000641 C  IVALUE
  000642 C   LFILE
  000643 C  NXTSCT
  000644 C  IDTSCT
  000645 C  IDTDSP
  0 ERRORS COMPILATION COMPLETE
    1   C   THIS IS A COPYRIGHTED PROGRAM, COPYRIGHT 1973 BY VARIAN DATA MACHINES07 00001
    2   C                                                                         07 00002
    3   C       V.D.M.    PART NO.      92L1105-022B                              07 00003
    4   C                                                                         07 00004
    5   C                               RELEASED      3-1-74                      07 00005
    6   C                                                                         07 00006
    7   C                                                                         07 00007
    8   C                CLEAR                                                    07 00008
    9   C                                                                         07 00009
   10   C                                                                         07 00010
   11         TITLE CLEAR                                                        07 00011
   12         SUBROUTINE CLEAR                                                   07 00012
   13   C                                                                         ********
   14   C                COMMON                                                   ********
   15   C                                                                         ********
   16   C                                                                         ********
   17   C ***********************************************************************************************
   18   C *     DECLARE COMMON CELLS                                                            *********
   19   C ***********************************************************************************************
   20         COMMON  ITEST , P1    , P2    , BUF   , INCHAR, SECTOR, IN                        *********
   21         COMMON  OUT   , VT$DFL, VT$DFT, BLANK , LSDN  , LSD   , TUIDN                     *********
   22         COMMON  TIB   , TCD   , LINE  , LNCNT , LNMAX , PGCNT                             *********
   23         COMMON  DFLFCB, DFTFCB, IVALUE, LFILE , NXTSCT, IDTSCT, IDTDSP                    *********
   24         INTEGER P1    , P2    , OUT   , VT$DFL, VT$DFT, BLANK , PGCNT                     *********
   25         INTEGER BUF   (160), SECTOR(120), LSD   (  5), TUIDN (  4)                        *********
   26         INTEGER TIB   (  4), TCD   (  5), DFLFCB( 13), DFTFCB( 13)                        *********
   27         INTEGER LINE  ( 80)                                                               *********
   28   C ***********************************************************************************************
   29   C *     END OF COMMON DECLARATIONS                                                      *********
   30   C ***********************************************************************************************
```

```
 31   C
 32   C       THIS ROUTINE IS CALLED ONCE TO INITIALIZE THE NDL PROCESSOR                07 00013
 33           INTEGER FCBKEY, FCBNAM(4)                                                 07 00014
 34           DATA FCBKEY /2H F/                                                        07 00015
 35           DATA FCBNAM(1), FCBNAM(2) /2HVT, 2H$D/                                    07 00016
 36           DATA FCBNAM(3), FCBNAM(4) /2HFL, 2HFT/                                    07 00017
 37   C                                                                                 07 00018
 38   C------INITIALIZE THE INPUT BUFFER AND POINTERS                                   07 00019
 39           BLANK = 160                                                               07 00020
 40           DO 10 I = 1, 160                                                          07 00021
 41   10      BUF(I) = BLANK                                                            07 00022
 42           P1 = 1                                                                    07 00023
 43           P2 = 1                                                                    07 00024
 44           INCHAR = BLANK                                                            07 00025
 45   C                                                                                 07 00026
 46   C------INITIALIZE COMMON DATA CELLS                                               07 00027
 47           CALL SYSGET (SECTOR)                                                      07 00028
 48           LNMAX = SECTOR(9)                                                         07 00029
 49           LNCNT = LNMAX                                                             07 00030
 50           PGCNT = 0                                                                 07 00031
 51           IN = 4                                                                    07 00032
 52           OUT = 5                                                                   07 00033
 53           VT$DFL = 10                                                               07 00034
 54           VT$DFT = 11                                                               07 00035
 55           NXTSCT = 2                                                                07 00036
 56           IDTSCT = 0                                                                07 00037
 57           IDTDSP  = 120                                                             07 00038
 58           ITEST = 1                                                                 07 00039
 59           LFILE = 0                                                                 07 00040
 60   C                                                                                 07 00041
 61   C------INITIALIZE THE SECTOR BUFFER AND RMD FCBS                                  07 00042
 62           DO 80 I = 1, 13                                                           07 00043
 63           DFLFCB(I) = 0                                                             07 00044
 64   80      DFTFCB(I) = 0                                                             07 00045
 65           DO 90 I = 1, 120                                                          07 00046
 66   90      SECTOR(I) = 0                                                             07 00047
 67           DO 100 I = 1, 2                                                           07 00048
 68           DFLFCB(I+7) = FCBNAM(I)                                                   07 00049
 69           DFTFCB(I+7) = FCBNAM(I)                                                   07 00050
 70   100     CONTINUE                                                                  07 00051
 71           DFLFCB(10) = FCBNAM(3)                                                    07 00052
 72           DFTFCB(10) = FCBNAM(4)                                                    07 00053
 73   C                                                                                 07 00054
 74   C                                                                                 07 00055
 75   C------SET UP KEY FIELD IN FCB BEFORE OPEN                                        07 00056
 76           DFLFCB(3) = FCBKEY                                                        07 00057
 77           DFTFCB(3) = FCBKEY                                                        07 00058
 78   C                                                                                 07 00059
 79   C------REQUEST OPEN FOR FILE VT$DFL                                              07 00060
 80           CALL V$OPEN (VT$DFL, 106, DFLFCB, 1)                                      07 00061
 81   C                                                                                 07 00062
 82   C------CHECK FOR AT LEAST 11 SECTORS IN FILE                                     07 00063
 83           IF (DFLFCB(7) - DFLFCB(6) - 11) 160, 108, 108                             07 00064
 84   C                                                                                 07 00065
 85   C------INITIALIZE FILE WITH 11 SECTORS OF ZEROS                                   07 00066
 86   108     DO 110 ISECT = 1, 11                                                      07 00067
 87           DFLFCB(4) = ISECT                                                         07 00068
 88           WRITE (VT$DFL) SECTOR                                                     07 00069
 89           DFLFCB(4) = ISECT                                                         07 00070
 90           IF (IOCHK(I)) 430, 110, 430                                               07 00071
 91   110     CONTINUE                                                                  07 00072
 92           LFILE = 1                                                                 07 00073
 93   C                                                                                 07 00074
 94   C------NOW GO TO HANDLE FILE VT$DFT                                              07 00075
 95           GO TO 200                                                                 07 00076
 96   C                                                                                 07 00077
 97   C------AT THIS POINT, FILE VT$DFL IS NOT LARGE ENOUGH                           07 00078
 98   160     CONTINUE                                                                  07 00079
 99           CALL HEADER(2)                                                            07 00080
100           WRITE (OUT, 169) DFLFCB(10)                                               07 00081
101   169     FORMAT (12H0**FILE VT$D, A2, 10H TOO SMALL)                               07 00082
102           IF (IOCHK(I)) 420, 180, 420                                               07 00083
103   C                                                                                 07 00084
104   C------MAKE FCB APPEAR TO BE CLOSED (TO PREVENT FUTURE USE)                       07 00085
105   180     DFLFCB(5) = 0                                                             07 00086
106   C                                                                                 07 00087
107   C------REQUEST OPEN FOR FILE VT$DFT                                              07 00088
108   200     CONTINUE                                                                  07 00089
109           CALL V$OPEN (VT$DFT, 106, DFTFCB, 1)                                      07 00090
110   C                                                                                 07 00091
111   C------NOW CHECK FOR AT LEAST 2 SECTORS                                           07 00092
112           IF (DFTFCB(7) - DFTFCB(6) - 2) 260, 210, 210                              07 00093
113   C                                                                                 07 00094
114   C------INITIALIZE FILE VT$DFT, WITH ONE ZERO SECTOR                              07 00095
115   210     DFTFCB(4) = 1                                                             07 00096
116           WRITE (VT$DFT) SECTOR                                                     07 00097
117           DFTFCB(4) = 1                                                             07 00098
118           IF (IOCHK(I)) 440, 250, 440                                               07 00099
119   250     LFILE = 2                                                                 07 00100
120   C                                                                                 07 00101
121   C------GO TO NEXT INITIALIZATION STEP                                            07 00102
122           GO TO 300                                                                 07 00103
123   C                                                                                 07 00104
124   C------AT THIS POINT, FILE VT$DFT WAS TOO SMALL                                   07 00105
125   260     CONTINUE                                                                  07 00106
                                                                                        07 00107
```

```
  126           CALL HEADER(2)                                                  07 00108
  127           WRITE (OUT, 169) DFTFCB(10)                                     07 00109
  128           IF (IOCHK(I)) 420, 270, 420                                     07 00110
  129   C                                                                       07 00111
  130   C-------MAKE FILE VT$DFL APPEAR CLOSED (TO PREVENT USE)                 07 00112
  131   270     DFTFCB(5) = 0                                                   07 00113
  132   C                                                                       07 00114
  133   C-------AND RETURN TO THE CALLER                                        07 00115
  134   300     CONTINUE                                                        07 00116
  135           RETURN                                                          07 00117
  136   C                                                                       07 00118
  137   C-------BELOW ARE THE I/O STOP EXITS                                    07 00119
  138   420     STOP 200                                                        07 00120
  139   430     STOP 300                                                        07 00121
  140   440     STOP 400                                                        07 00122
  141           END                                                             07 00123
ENTRY/COMMON BLOCK NAMES
  000714 R  CLEAR
  000646 C COMMON
EXTERNAL NAMES
  000425 E     $DO
  000056 E SYSGET
  000515 E V$OPEN
  000606 E     $WR
  000000 E V$RERR
  000000 E V$RER1
  000612 E     $I1
  000616 E     $ND
  000620 E   IOCHK
  000603 E HEADER
  000644 E     $ST
SYMBOL TABLE
  000650 R 000001
  000662 R 000002
  000656 R 000004
  000001 C       P1
  000002 C       P2
  000435 C      OUT
  000436 C VT$DFL
  000437 C VT$DFT
  000440 C   BLANK
  000606 C   PGCNT
  000003 C      BUF
  000647 R 000240
  000244 C SECTOR
  000663 R 000170
  000442 C      LSD
  000657 R 000005
  000447 C   TUIDN
  000453 C      TIB
  000457 C      TCD
  000607 C DFLFCB
  000666 R 000015
  000624 C DFTFCB
  000464 C     LINE
  000007 R FCBKEY
  000003 R FCBNAM
  000000 C   ITEST
  000243 C INCHAR
  000434 C       IN
  000441 C    LSDN
  000604 C   LNCNT
  000605 C   LNMAX
  000641 C IVALUE
  000642 C   LFILE
  000643 C NXTSCT
  000644 C IDTSCT
  000645 C IDTDSP
  000625 R       0$
  000022 R       10
  000651 R        I
  000652 R 000002
  000653 R    $1
  000425 E      $DO
  000056 E SYSGET
  000655 R 000000
  000660 R 000012
  000661 R 000013
  000654 R 000254
  000200 R       80
  000664 R 000606
  000665 R 000623
  000222 R       90
  000667 R 000243
  000276 R      100
  000670 R 000615
  000671 R    $1 0
  000672 R 000002
  000673 R    $1 1
  000674 R 000632
  000675 R    $1 2
  000715 E V$OPEN
  000704 R 000152
  000676 R 000005
  000677 R 000620
```

```
000700 R 000006
000701 R 000635
000702 R 000611
000703 R 000626
000705 R 000614
000442 R     160
000367 R     108
000424 R     110
000706 R   ISECT
000707 R 000612
000606 E     $WR
000000 E V$RERR
000000 E V$RER1
000612 E     $I1
000616 E     $ND
000620 E   IOCHK
000637 R     430
000514 R     200
000603 E HEADER
000461 R     169
000633 R     420
000507 R     180
000710 R 000613
000711 R 000631
000602 R     260
000541 R     210
000712 R 000627
000643 R     440
000572 R     250
000631 R     300
000624 R     270
000713 R 000630
000644 E     $ST
0 ERRORS COMPILATION COMPLETE
```

```
  1   C  THIS IS A COPYRIGHTED PROGRAM, COPYRIGHT 1973 BY VARIAN DATA MACHINES  05 00001
  2   C                                                                         05 00002
  3   C       V.D.M.    PART NO.      92L1105-024B                              05 00003
  4   C                                                                         05 00004
  5   C                               RELEASED     3-1-74                       05 00005
  6   C                                                                         05 00006
  7   C                                                                         05 00007
  8   C                 COMPAR                                                  05 00008
  9   C                                                                         05 00009
 10   C                                                                         05 00010
 11         TITLE COMPAR                                                       05 00011
 12         SUBROUTINE COMPAR(N)                                               05 00012
 13   C                                                                        ********
 14   C                 COMMON                                                 ********
 15   C                                                                        ********
 16   C                                                                        ********
 17   C ***********************************************************************  ********
 18   C *     DECLARE COMMON CELLS                                          *  ********
 19   C ***********************************************************************  ********
 20         COMMON  ITEST , P1    , P2    , BUF   , INCHAR, SECTOR, IN       ********
 21         COMMON  OUT   , VT$DFL, VT$DFT, BLANK , LSDN  , LSD   , TUIDN    ********
 22         COMMON  TIB   , TCD   , LINE  , LNCNT , LNMAX , PGCNT            ********
 23         COMMON  DFLFCB, DFTFCB, IVALUE, LFILE , NXTSCT, IDTSCT, IDTDSP   ********
 24         INTEGER P1    , P2    , OUT   , VT$DFL, VT$DFT, BLANK , PGCNT    ********
 25         INTEGER BUF   (160), SECTOR(120), LSD   (  5), TUIDN (  4)       ********
 26         INTEGER TIB   (  4), TCD   (  5), DFLFCB( 13), DFTFCB( 13)       ********
 27         INTEGER LINE  ( 80)                                              ********
 28   C ***********************************************************************  ********
 29   C *     END OF COMMON DECLARATIONS                                    *  ********
 30   C ***********************************************************************  ********
 31         INTEGER START, SIZE                                                05 00013
 32   C                                                                        05 00014
 33   C                                                                        05 00015
 34   C     SUBROUTINE COMPAR COMPARES A GIVEN LITERAL STRING AGAINST           05 00016
 35   C     THE CURRENT CONTENTS OF THE INPUT BUFFER.                          05 00017
 36   C     THE TEST FLAG, ITEST, IS SET TO REFLECT THE OUTCOME OF THIS        05 00018
 37   C     TEST.  ALL LITERAL STRINGS ARE DECLARED IN THE LOCAL VECTORS       05 00019
 38   C     STRING AND POOL.                                                   05 00020
 39   C                                                                        05 00021
 40         DIMENSION STRING( 54), POOL  (291)                                 05 00022
 41         INTEGER STRING, POOL                                               05 00023
 42   C                                                                        05 00024
 43   C------STRING  0  4HLINE                                                 05 00025
 44         DATA STRING(  1)/   1/, POOL  (  1)/   4/                          05 00026
 45         DATA POOL  (  2)/2H L/, POOL  (  3)/2H I/, POOL  (  4)/2H N/       05 00027
 46         DATA POOL  (  5)/2H E/                                             05 00028
 47   C                                                                        05 00029
 48   C------STRING  1  1H:                                                    05 00030
 49         DATA STRING(  2)/   6/, POOL  (  6)/   1/                          05 00031
 50         DATA POOL  (  7)/2H :/                                             05 00032
 51   C                                                                        05 00033
 52   C------STRING  2  1H,                                                    05 00034
 53         DATA STRING(  3)/   8/, POOL  (  8)/   1/                          05 00035
 54         DATA POOL  (  9)/2H ,/                                             05 00036
 55   C                                                                        05 00037
 56   C------STRING  3  7HADDRESS                                              05 00038
 57         DATA STRING(  4)/  10/, POOL  ( 10)/   7/                          05 00039
 58         DATA POOL  ( 11)/2H A/, POOL  ( 12)/2H D/, POOL  ( 13)/2H D/       05 00040
 59         DATA POOL  ( 14)/2H R/, POOL  ( 15)/2H E/, POOL  ( 16)/2H S/       05 00041
 60         DATA POOL  ( 17)/2H S/                                             05 00042
 61   C                                                                        05 00043
```

```
C------STRING  4  1H=
        DATA STRING(  5)/  18/, POOL  ( 18)/   1/
        DATA POOL  ( 19)/2H =/
C
C------STRING  5  7HCONNECT
        DATA STRING(  6)/  20/, POOL  ( 20)/   7/
        DATA POOL  ( 21)/2H C/, POOL  ( 22)/2H O/, POOL  ( 23)/2H N/
        DATA POOL  ( 24)/2H N/, POOL  ( 25)/2H E/, POOL  ( 26)/2H C/
        DATA POOL  ( 27)/2H T/
C
C------STRING  6  6HDIRECT
        DATA STRING(  7)/  28/, POOL  ( 28)/   6/
        DATA POOL  ( 29)/2H D/, POOL  ( 30)/2H I/, POOL  ( 31)/2H R/
        DATA POOL  ( 32)/2H E/, POOL  ( 33)/2H C/, POOL  ( 34)/2H T/
C
C------STRING  7  5HMODEM
        DATA STRING(  8)/  35/, POOL  ( 35)/   5/
        DATA POOL  ( 36)/2H M/, POOL  ( 37)/2H O/, POOL  ( 38)/2H D/
        DATA POOL  ( 39)/2H E/, POOL  ( 40)/2H M/
C
C------STRING  8  4HDIAL
        DATA STRING(  9)/  41/, POOL  ( 41)/   4/
        DATA POOL  ( 42)/2H D/, POOL  ( 43)/2H I/, POOL  ( 44)/2H A/
        DATA POOL  ( 45)/2H L/
C
C------STRING  9  1H-
        DATA STRING( 10)/  46/, POOL  ( 46)/   1/
        DATA POOL  ( 47)/2H -/
C
C------STRING 10  3HCRC
        DATA STRING( 11)/  48/, POOL  ( 48)/   3/
        DATA POOL  ( 49)/2H C/, POOL  ( 50)/2H R/, POOL  ( 51)/2H C/
C
C------STRING 11  4HSTOP
        DATA STRING( 12)/  52/, POOL  ( 52)/   4/
        DATA POOL  ( 53)/2H S/, POOL  ( 54)/2H T/, POOL  ( 55)/2H O/
        DATA POOL  ( 56)/2H P/
C
C------STRING 12  4HECHO
        DATA STRING( 13)/  57/, POOL  ( 57)/   4/
        DATA POOL  ( 58)/2H E/, POOL  ( 59)/2H C/, POOL  ( 60)/2H H/
        DATA POOL  ( 61)/2H O/
C
C------STRING 13  3HEOM
        DATA STRING( 14)/  62/, POOL  ( 62)/   3/
        DATA POOL  ( 63)/2H E/, POOL  ( 64)/2H O/, POOL  ( 65)/2H M/
C
C------STRING 14  5HFALSE
        DATA STRING( 15)/  66/, POOL  ( 66)/   5/
        DATA POOL  ( 67)/2H F/, POOL  ( 68)/2H A/, POOL  ( 69)/2H L/
        DATA POOL  ( 70)/2H S/, POOL  ( 71)/2H E/
C
C------STRING 15  1H(
        DATA STRING( 16)/  72/, POOL  ( 72)/   1/
        DATA POOL  ( 73)/2H (/
C
C------STRING 16  1H)
        DATA STRING( 17)/  74/, POOL  ( 74)/   1/
        DATA POOL  ( 75)/2H )/
C
C------STRING 17  5HERROR
        DATA STRING( 18)/  76/, POOL  ( 76)/   5/
        DATA POOL  ( 77)/2H E/, POOL  ( 78)/2H R/, POOL  ( 79)/2H R/
        DATA POOL  ( 80)/2H O/, POOL  ( 81)/2H R/
C
C------STRING 18  4HTYPE
        DATA STRING( 19)/  82/, POOL  ( 82)/   4/
        DATA POOL  ( 83)/2H T/, POOL  ( 84)/2H Y/, POOL  ( 85)/2H P/
        DATA POOL  ( 86)/2H E/
C
C------STRING 19  4HHALF
        DATA STRING( 20)/  87/, POOL  ( 87)/   4/
        DATA POOL  ( 88)/2H H/, POOL  ( 89)/2H A/, POOL  ( 90)/2H L/
        DATA POOL  ( 91)/2H F/
C
C------STRING 20  6HDUPLEX
        DATA STRING( 21)/  92/, POOL  ( 92)/   6/
        DATA POOL  ( 93)/2H D/, POOL  ( 94)/2H U/, POOL  ( 95)/2H P/
        DATA POOL  ( 96)/2H L/, POOL  ( 97)/2H E/, POOL  ( 98)/2H X/
C
C------STRING 21  7HSIMPLEX
        DATA STRING( 22)/  99/, POOL  ( 99)/   7/
        DATA POOL  (100)/2H S/, POOL  (101)/2H I/, POOL  (102)/2H M/
        DATA POOL  (103)/2H P/, POOL  (104)/2H L/, POOL  (105)/2H E/
        DATA POOL  (106)/2H X/
C
C------STRING 22  7HRECEIVE
        DATA STRING( 23)/ 107/, POOL  (107)/   7/
        DATA POOL  (108)/2H R/, POOL  (109)/2H E/, POOL  (110)/2H C/
        DATA POOL  (111)/2H E/, POOL  (112)/2H I/, POOL  (113)/2H V/
        DATA POOL  (114)/2H E/
C
C------STRING 23  8HTRANSMIT
        DATA STRING( 24)/ 115/, POOL  (115)/   8/
        DATA POOL  (116)/2H T/, POOL  (117)/2H R/, POOL  (118)/2H A/
```

```
157          DATA POOL  (119)/2H N/, POOL  (120)/2H S/, POOL  (121)/2H M/      05 00139
158          DATA POOL  (122)/2H I/, POOL  (123)/2H T/                         05 00140
159   C                                                                        05 00141
160   C------STRING 24  4HFULL                                                 05 00142
161          DATA STRING( 25)/ 124/, POOL  (124)/   4/                         05 00143
162          DATA POOL  (125)/2H F/, POOL  (126)/2H U/, POOL  (127)/2H L/      05 00144
163          DATA POOL  (128)/2H L/                                            05 00145
164   C                                                                        05 00146
165   C------STRING 25  4HMODE                                                 05 00147
166          DATA STRING( 26)/ 129/, POOL  (129)/   4/                         05 00148
167          DATA POOL  (130)/2H M/, POOL  (131)/2H O/, POOL  (132)/2H D/      05 00149
168          DATA POOL  (133)/2H E/                                            05 00150
169   C                                                                        05 00151
170   C------STRING 26  1HA                                                    05 00152
171          DATA STRING( 27)/ 134/, POOL  (134)/   1/                         05 00153
172          DATA POOL  (135)/2H A/                                            05 00154
173   C                                                                        05 00155
174   C------STRING 27  4HSYNC                                                 05 00156
175          DATA STRING( 28)/ 136/, POOL  (136)/   4/                         05 00157
176          DATA POOL  (137)/2H S/, POOL  (138)/2H Y/, POOL  (139)/2H N/      05 00158
177          DATA POOL  (140)/2H C/                                            05 00159
178   C                                                                        05 00160
179   C------STRING 28  7HHRONOUS                                              05 00161
180          DATA STRING( 29)/ 141/, POOL  (141)/   7/                         05 00162
181          DATA POOL  (142)/2H H/, POOL  (143)/2H R/, POOL  (144)/2H O/      05 00163
182          DATA POOL  (145)/2H N/, POOL  (146)/2H O/, POOL  (147)/2H U/      05 00164
183          DATA POOL  (148)/2H S/                                            05 00165
184   C                                                                        05 00166
185   C------STRING 29  6HPARITY                                               05 00167
186          DATA STRING( 30)/ 149/, POOL  (149)/   6/                         05 00168
187          DATA POOL  (150)/2H P/, POOL  (151)/2H A/, POOL  (152)/2H R/      05 00169
188          DATA POOL  (153)/2H I/, POOL  (154)/2H T/, POOL  (155)/2H Y/      05 00170
189   C                                                                        05 00171
190   C------STRING 30  4HNONE                                                 05 00172
191          DATA STRING( 31)/ 156/, POOL  (156)/   4/                         05 00173
192          DATA POOL  (157)/2H N/, POOL  (158)/2H O/, POOL  (159)/2H N/      05 00174
193          DATA POOL  (160)/2H E/                                            05 00175
194   C                                                                        05 00176
195   C------STRING 31  3HODD                                                  05 00177
196          DATA STRING( 32)/ 161/, POOL  (161)/   3/                         05 00178
197          DATA POOL  (162)/2H O/, POOL  (163)/2H D/, POOL  (164)/2H D/      05 00179
198   C                                                                        05 00180
199   C------STRING 32  4HEVEN                                                 05 00181
200          DATA STRING( 33)/ 165/, POOL  (165)/   4/                         05 00182
201          DATA POOL  (166)/2H E/, POOL  (167)/2H V/, POOL  (168)/2H E/      05 00183
202          DATA POOL  (169)/2H N/                                            05 00184
203   C                                                                        05 00185
204   C------STRING 33  5HSPEED                                                05 00186
205          DATA STRING( 34)/ 170/, POOL  (170)/   5/                         05 00187
206          DATA POOL  (171)/2H S/, POOL  (172)/2H P/, POOL  (173)/2H E/      05 00188
207          DATA POOL  (174)/2H E/, POOL  (175)/2H D/                         05 00189
208   C                                                                        05 00190
209   C------STRING 34  6HSTATUS                                               05 00191
210          DATA STRING( 35)/ 176/, POOL  (176)/   6/                         05 00192
211          DATA POOL  (177)/2H S/, POOL  (178)/2H T/, POOL  (179)/2H A/      05 00193
212          DATA POOL  (180)/2H T/, POOL  (181)/2H U/, POOL  (182)/2H S/      05 00194
213   C                                                                        05 00195
214   C------STRING 35  2HUP                                                   05 00196
215          DATA STRING( 36)/ 183/, POOL  (183)/   2/                         05 00197
216          DATA POOL  (184)/2H U/, POOL  (185)/2H P/                         05 00198
217   C                                                                        05 00199
218   C------STRING 36  4HDOWN                                                 05 00200
219          DATA STRING( 37)/ 186/, POOL  (186)/   4/                         05 00201
220          DATA POOL  (187)/2H D/, POOL  (188)/2H O/, POOL  (189)/2H W/      05 00202
221          DATA POOL  (190)/2H N/                                            05 00203
222   C                                                                        05 00204
223   C------STRING 37  5HSTORE                                                05 00205
224          DATA STRING( 38)/ 191/, POOL  (191)/   5/                         05 00206
225          DATA POOL  (192)/2H S/, POOL  (193)/2H T/, POOL  (194)/2H O/      05 00207
226          DATA POOL  (195)/2H R/, POOL  (196)/2H E/                         05 00208
227   C                                                                        05 00209
228   C------STRING 38  7HHRONIZE                                              05 00210
229          DATA STRING( 39)/ 197/, POOL  (197)/   7/                         05 00211
230          DATA POOL  (198)/2H H/, POOL  (199)/2H R/, POOL  (200)/2H O/      05 00212
231          DATA POOL  (201)/2H N/, POOL  (202)/2H I/, POOL  (203)/2H Z/      05 00213
232          DATA POOL  (204)/2H E/, POOL  (205)/2H  /, POOL  (206)/2H  /      05 00214
233          DATA POOL  (207)/2H  /, POOL  (208)/2H  /                         05 00215
234   C                                                                        05 00216
235   C------STRING 39  4HHIGH                                                 05 00217
236          DATA STRING( 40)/ 209/, POOL  (209)/   4/                         05 00218
237          DATA POOL  (210)/2H H/, POOL  (211)/2H I/, POOL  (212)/2H G/      05 00219
238          DATA POOL  (213)/2H H/                                            05 00220
239   C                                                                        05 00221
240   C------STRING 40  3HLOW                                                  05 00222
241          DATA STRING( 41)/ 214/, POOL  (214)/   3/                         05 00223
242          DATA POOL  (215)/2H L/, POOL  (216)/2H O/, POOL  (217)/2H W/      05 00224
243   C                                                                        05 00225
244   C------STRING 41 11HTRANSPARENT                                          05 00226
245          DATA STRING( 42)/ 218/, POOL  (218)/  11/                         05 00227
246          DATA POOL  (219)/2H T/, POOL  (220)/2H R/, POOL  (221)/2H A/      05 00228
247          DATA POOL  (222)/2H N/, POOL  (223)/2H S/, POOL  (224)/2H P/      05 00229
248          DATA POOL  (225)/2H A/, POOL  (226)/2H R/, POOL  (227)/2H E/      05 00230
249          DATA POOL  (228)/2H N/, POOL  (229)/2H T/                         05 00231
250   C                                                                        05 00232
251   C------STRING 42  1H.                                                    05 00233
```

```
252           DATA STRING( 43)/ 230/, POOL  (230)/   1/                                  05 00234
253           DATA POOL  (231)/2H ./                                                     05 00235
254   C                                                                                  05 00236
255   C------STRING 43  8HTERMINAL                                                       05 00237
256           DATA STRING( 44)/ 232/, POOL  (232)/   8/                                  05 00238
257           DATA POOL  (233)/2H T/, POOL  (234)/2H E/, POOL  (235)/2H R/               05 00239
258           DATA POOL  (236)/2H M/, POOL  (237)/2H I/, POOL  (238)/2H N/               05 00240
259           DATA POOL  (239)/2H A/, POOL  (240)/2H L/                                  05 00241
260   C                                                                                  05 00242
261   C------STRING 44  4HCODE                                                           05 00243
262           DATA STRING( 45)/ 241/, POOL  (241)/   4/                                  05 00244
263           DATA POOL  (242)/2H C/, POOL  (243)/2H O/, POOL  (244)/2H D/               05 00245
264           DATA POOL  (245)/2H E/                                                     05 00246
265   C                                                                                  05 00247
266   C------STRING 45  5HASCII                                                          05 00248
267           DATA STRING( 46)/ 246/, POOL  (246)/   5/                                  05 00249
268           DATA POOL  (247)/2H A/, POOL  (248)/2H S/, POOL  (249)/2H C/               05 00250
269           DATA POOL  (250)/2H I/, POOL  (251)/2H I/                                  05 00251
270   C                                                                                  05 00252
271   C------STRING 46  7HDEVICES                                                        05 00253
272           DATA STRING( 47)/ 252/, POOL  (252)/   7/                                  05 00254
273           DATA POOL  (253)/2H D/, POOL  (254)/2H E/, POOL  (255)/2H V/               05 00255
274           DATA POOL  (256)/2H I/, POOL  (257)/2H C/, POOL  (258)/2H E/               05 00256
275           DATA POOL  (259)/2H S/                                                     05 00257
276   C                                                                                  05 00258
277   C------STRING 47  6HPROMPT                                                         05 00259
278           DATA STRING( 48)/ 260/, POOL  (260)/   6/                                  05 00260
279           DATA POOL  (261)/2H P/, POOL  (262)/2H R/, POOL  (263)/2H O/               05 00261
280           DATA POOL  (264)/2H M/, POOL  (265)/2H P/, POOL  (266)/2H T/               05 00262
281   C                                                                                  05 00263
282   C------STRING 48  4HTTY1                                                           05 00264
283           DATA STRING( 49)/ 267/, POOL  (267)/   4/                                  05 00265
284           DATA POOL  (268)/2H T/, POOL  (269)/2H T/, POOL  (270)/2H Y/               05 00266
285           DATA POOL  (271)/2H 1/                                                     05 00267
286   C                                                                                  05 00268
287   C------STRING 49  4HUNIT                                                           05 00269
288           DATA STRING( 50)/ 272/, POOL  (272)/   4/                                  05 00270
289           DATA POOL  (273)/2H U/, POOL  (274)/2H N/, POOL  (275)/2H I/               05 00271
290           DATA POOL  (276)/2H T/                                                     05 00272
291   C                                                                                  05 00273
292   C------STRING 50  3HEND                                                            05 00274
293           DATA STRING( 51)/ 277/, POOL  (277)/   3/                                  05 00275
294           DATA POOL  (278)/2H E/, POOL  (279)/2H N/, POOL  (280)/2H D/               05 00276
295   C                                                                                  05 00277
296   C------STRING 51  1H0                                                              05 00278
297           DATA STRING( 52)/ 281/, POOL  (281)/   1/                                  05 00279
298           DATA POOL  (282)/2H 0/                                                     05 00280
299   C                                                                                  05 00281
300   C------STRING 52  4HTRUE                                                           05 00282
301           DATA STRING( 53)/ 283/, POOL  (283)/   4/                                  05 00283
302           DATA POOL  (284)/2H T/, POOL  (285)/2H R/, POOL  (286)/2H U/               05 00284
303           DATA POOL  (287)/2H E/                                                     05 00285
304   C                                                                                  05 00286
305   C------STRING 53  3HBSC                                                            05 00287
306           DATA STRING( 54)/ 288/, POOL   (288)/   3/                                 05 00288
307           DATA POOL  (289)/2H B/, POOL   (290)/2H S/                                 05 00289
308          .DATA POOL  (291)/2H C/                                                     05 00290
309   C                                                                                  05 00291
310   C------BACKUP THE INPUT POINTER AND SET THE TEST FLAG TO FALSE                      05 00292
311           CALL BACKUP                                                                05 00293
312           ITEST = 0                                                                  05 00294
313   C                                                                                  05 00295
314   C------LOCATE THE REQUESTED STRING WITHIN THE LOCAL VECTORS                         05 00296
315           START = STRING(N + 1)                                                      05 00297
316           SIZE = POOL(START)                                                         05 00298
317   C                                                                                  05 00299
318   C------NOW COMPARE EACH INPUT CHARACTER AGAINST THE LOCAL STRING                    05 00300
319           DO 100 I = 1, SIZE                                                         05 00301
320           J = START + I                                                              05 00302
321           CALL GETCHR                                                                05 00303
322           IF (INCHAR - (POOL(J) .AND. 255)) 200, 100, 200                            05 00304
323   100     CONTINUE                                                                   05 00305
324   C                                                                                  05 00306
325   C------ALL CHARACTERS COMPARE, ADVANCE POINTERS AND SET TEST FLAG TRUE           05 00307
326           CALL ADVANC                                                                05 00308
327           ITEST = 1                                                                  05 00309
328   C                                                                                  05 00310
329   C------AND RETURN TO THE CALLER                                                  05 00311
330   200     RETURN                                                                     05 00312
331           END                                                                        05 00313
ENTRY/COMMON BLOCK NAMES
  000662 R COMPAR
  000646 C COMMON
EXTERNAL NAMES
  000002 E     $SE
  000541 E BACKUP
  000605 E GETCHR
  000630 E     $DO
  000636 E ADVANC
SYMBOL TABLE
  000656 R 000001
  100004 R       N
  000002 E     $SE
  000001 C      P1
  000002 C      P2
```

```
000435 C     OUT
000436 C VT$DFL
000437 C VT$DFT
000440 C  BLANK
000606 C  PGCNT
000003 C     BUF
000244 C SECTOR
000442 C     LSD
000447 C  TUIDN
000453 C     TIB
000457 C     TCD
000607 C DFLFCB
000624 C DFTFCB
000464 C    LINE
000652 R   START
000655 R    SIZE
000007 R  STRING
000075 R    POOL
000000 C   ITEST
000243 C  INCHAR
000434 C      IN
000441 C    LSDN
000604 C   LNCNT
000605 C   LNMAX
000641 C  IVALUE
000642 C   LFILE
000643 C  NXTSCT
000644 C  IDTSCT
000645 C  IDTDSP
000541 E  BACKUP
000647 R  000000
000640 R       0$
000650 R  000007
000651 R     $1
000653 R  000074
000654 R     $1 0
000627 R      100
000657 R        I
000660 R        J
000605 E  GETCHR
000661 R  000377
000645 R      200
000630 E      $DO
000636 E  ADVANC
0  ERRORS  COMPILATION COMPLETE
```

```
  1   C   THIS IS A COPYRIGHTED PROGRAM. COPYRIGHT 1973 BY VARIAN DATA MACHINES04 00001
  2   C                                                                       04 00002
  3   C       V.D.M.    PART NO.      92L1105-025B                            04 00003
  4   C                                                                       04 00004
  5   C                               RELEASED     3-1-74                     04 00005
  6   C                                                                       04 00006
  7   C                                                                       04 00007
  8   C               DIAG                                                    04 00008
  9   C                                                                       04 00009
 10   C                                                                       04 00010
 11         TITLE DIAG                                                       04 00011
 12         SUBROUTINE DIAG                                                  04 00012
 13   C                                                                       ********
 14   C               COMMON                                                  ********
 15   C                                                                       ********
 16   C                                                                       ********
 17   C ***************************************************************       ********
 18   C *     DECLARE COMMON CELLS                                    *       ********
 19   C ***************************************************************       ********
 20         COMMON  ITEST , P1    , P2    , BUF   , INCHAR, SECTOR, IN      ********
 21         COMMON  OUT   , VT$DFL, VT$DFT, BLANK , LSDN  , LSD   , TUIDN   ********
 22         COMMON  TIB   , TCD   , LINE  , LNCNT , LNMAX , PGCNT           ********
 23         COMMON  DFLFCB, DFTFCB, IVALUE, LFILE , NXTSCT, IDTSCT, IDTDSP  ********
 24         INTEGER P1    , P2    , OUT   , VT$DFL, VT$DFT, BLANK , PGCNT   ********
 25         INTEGER BUF   (160), SECTOR(120), LSD   (  5), TUIDN (  4)      ********
 26         INTEGER TIB   (  4), TCD   (  5), DFLFCB( 13), DFTFCB( 13)      ********
 27         INTEGER LINE  ( 80)                                             ********
 28   C ***************************************************************       ********
 29   C *     END OF COMMON DECLARATIONS                              *       ********
 30   C ***************************************************************       ********
 31   C                                                                       04 00013
 32   C       THIS ROUTINE IS CALLED BY PARSE WHENEVER A SYNTAX ERROR         04 00014
 33   C       IS SUSPECTED IN THE INPUT STREAM                                04 00015
 34   C                                                                       04 00016
 35         IF (ITEST) 500, 100, 500                                         04 00017
 36   C                                                                       04 00018
 37   C------FIRST SHRINK UP THE INPUT BUFFER FOR THE MESSAGE                 04 00019
 38   100   CALL SHRINK                                                      04 00020
 39   C                                                                       04 00021
 40   C------THEN PREPARE AND OUTPUT THE MESSAGE                             04 00022
 41         CALL HEADER(3)                                                   04 00023
 42   C                                                                       04 00024
 43   C------SHIFT CHARACTERS LEFT                                           04 00025
 44         DO 10 I = 1, 80                                                  04 00026
 45         LINE(I) = 0                                                      04 00027
 46   10    CALL BITSET (LINE(I), 15, 08, BUF(I))                            04 00028
 47         WRITE (OUT, 99) LINE                                             04 00029
 48         IF (IOCHK(I)) 520, 500, 520                                      04 00030
 49   99    FORMAT (1H0, 14H**SYNTAX ERROR, /, 1X, 80 A 1)                   04 00031
 50   C                                                                       04 00032
```

```
    51   C------AND RETURN TO THE CALLER                                    04 00033
    52   500     RETURN                                                     04 00034
    53   C                                                                  04 00035
    54   C------BELOW IS THE I/O ERROR STOP                                 04 00036
    55   520     STOP 200                                                   04 00037
    56           END                                                        04 00038
ENTRY/COMMON BLOCK NAMES
  000142 R    DIAG
  000646 C  COMMON
EXTERNAL NAMES
  000011 E  SHRINK
  000013 E  HEADER
  000043 E  BITSET
  000051 E     $DO
  000057 E     $WR
  000000 E  V$RERR
  000000 E  V$RER1
  000063 E     $I1
  000067 E     $ND
  000071 E   IOCHK
  000123 E     $ST
SYMBOL TABLE
  000127 R 000001
  000001 C      P1
  000002 C      P2
  000435 C     OUT
  000436 C  VT$DFL
  000437 C  VT$DFT
  000440 C   BLANK
  000606 C   PGCNT
  000003 C     BUF
  000244 C  SECTOR
  000442 C     LSD
  000447 C   TUIDN
  000453 C     TIB
  000457 C     TCD
  000607 C  DFLFCB
  000624 C  DFTFCB
  000464 C    LINE
  000141 R 000120
  000000 C   ITEST
  000243 C  INCHAR
  000434 C      IN
  000441 C    LSDN
  000604 C   LNCNT
  000605 C   LNMAX
  000641 C  IVALUE
  000642 C   LFILE
  000643 C  NXTSCT
  000644 C  IDTSCT
  000645 C  IDTDSP
  000120 R     500
  000010 R     100
  000011 E  SHRINK
  000013 E  HEADER
  000126 R 000003
  000031 R      10
  000130 R       I
  000032 R      0$
  000133 R 000000
  000131 R 000463
  000132 R    $1
  000043 E  BITSET
  000137 R 000017
  000140 R 000010
  000134 R    $1  0
  000135 R 000002
  000136 R    $1  1
  000051 E     $DO
  000057 E     $WR
  000000 E  V$RERR
  000000 E  V$RER1
  000077 P      99
  000063 E     $I1
  000067 E     $ND
  000071 E   IOCHK
  000122 R     520
  000123 E     $ST
0  ERRORS  COMPILATION COMPLETE
    1    C   THIS IS A COPYRIGHTED PROGRAM, COPYRIGHT 1973 BY VARIAN DATA MACHINES06 00001
    2    C                                                                  06 00002
    3    C        V.D.M.    PART NO.      92L1105-026B                      06 00003
    4    C                                                                  06 00004
    5    C                                RELEASED     3-1-74               06 00005
    6    C                                                                  06 00006
    7    C                                                                  06 00007
    8    C                 GETCHR                                           06 00008
    9    C                                                                  06 00009
   10    C                                                                  06 00010
   11          TITLE GETCHR                                                06 00011
   12          SUBROUTINE GETCHR                                           06 00012
   13    C                                                                  ********
   14    C                 COMMON                                           ********
   15    C                                                                  ********
   16    C                                                                  ********
```

```
17   C ***************************************************************** ********
18   C *     DECLARE COMMON CELLS                                        * ********
19   C ***************************************************************** ********
20         COMMON  ITEST , P1    , P2    , BUF   , INCHAR, SECTOR, IN      ********
21         COMMON  OUT   , VT$DFL, VT$DFT, BLANK , LSDN  , LSD   , TUIDN   ********
22         COMMON  TIB   , TCD   , LINE  , LNCNT , LNMAX , PGCNT           ********
23         COMMON  DFLFCB, DFTFCB, IVALUE, LFILE , NXTSCT, IDTSCT, IDTDSP  ********
24         INTEGER P1    , P2    , OUT   , VT$DFL, VT$DFT, BLANK , PGCNT   ********
25         INTEGER BUF   (160), SECTOR(120), LSD   (  5), TUIDN (  4)      ********
26         INTEGER TIB   (  4), TCD   (  5), DFLFCB( 13), DFTFCB( 13)      ********
27         INTEGER LINE  ( 80)                                             ********
28   C ***************************************************************** ********
29   C *     END OF COMMON DECLARATIONS                                  * ********
30   C ***************************************************************** ********
31   C                                                                     06 00013
32   C       SUBROUTINE GETCHR FINDS THE NEXT NON-BLANK INPUT CHARACTER     06 00014
33   C                                                                     06 00015
34   C ***************************************************************** 06 00016
35   C                                                                     06 00017
36   C------FIRST ATTEMPT TO SATISFY THE REQUEST FROM THE CURRENT CARD     06 00018
37   1       IF (BUF(P1) - BLANK) 10, 100, 10                              06 00019
38   C                                                                     06 00020
39   C------REQUEST CAN BE SATISFIED                                      06 00021
40   10      INCHAR = BUF(P1)                                              06 00022
41           P1 = P1 + 1                                                   06 00023
42           RETURN                                                        06 00024
43   C                                                                     06 00025
44   C------NEW CARD MUST BE READ, FIRST COMPRESS THE CURRENT CARD        06 00026
45   100     CONTINUE                                                      06 00027
46           CALL SHRINK                                                   06 00028
47   C                                                                     06 00029
48   C------THEN READ AND LIST THE NEXT CARD FROM PI                      06 00030
49           READ (IN, 99) (BUF(I), I = 81, 160)                           06 00031
50   99      FORMAT ( 80 A 1)                                              06 00032
51           IF (IOCHK(I)) 210, 110, 210                                   06 00033
52   C                                                                     06 00034
53   C------NOW LIST OUT CARD IMAGE                                       06 00035
54   110     CALL HEADER(1)                                                06 00036
55           WRITE (OUT, 97) (BUF(I), I = 81, 160)                         06 00037
56   97      FORMAT (1X, 80 A 1)                                           06 00038
57           IF (IOCHK(I)) 220, 112, 220                                   06 00039
58   C                                                                     06 00040
59   C------SHIFT DATA RIGHT IN EACH WORD                                 06 00041
60   112     DO 120 I = 81, 160                                            06 00042
61   120     CALL BITGET (BUF(I), 15, 08, BUF(I))                          06 00043
62   C                                                                     06 00044
63   C------IF A SLASH CARD IS READ, TREAT AS AN I/O ERROR                06 00045
64           IF (BUF(81) - 175) 122, 210, 122                              06 00046
65   C                                                                     06 00047
66   C------BLANK SEQUENCE NUMBER PORTION OF THE NEW CARD                 06 00048
67   122     DO 130 I = 153, 160                                           06 00049
68   130     BUF(I) = BLANK                                                06 00050
69   C                                                                     06 00051
70   C------THEN COMPRESS THE NEW CARD IMAGE INTO THE OLD STRING          06 00052
71           CALL SHRINK                                                   06 00053
72   C                                                                     06 00054
73   C------AND ATTEMPT TO SATISFY THE REQUEST AGAIN                      06 00055
74           GO TO 1                                                       06 00056
75   C                                                                     06 00057
76   C------BELOW ARE THE I/O ERROR STOPS                                 06 00058
77   210     STOP 100                                                      06 00059
78   220     STOP 200                                                      06 00060
79           END                                                           06 00061
ENTRY/COMMON BLOCK NAMES
  000276 R GETCHR
  000646 C COMMON
EXTERNAL NAMES
  000250 E SHRINK
  000051 E    $RD
  000000 E V$RERR
  000000 E V$RER1
  000134 E    $I1
  000242 E    $DO
  000146 E    $ND
  000157 E  IOCHK
  000114 E HEADER
  000117 E    $WR
  000175 E BITGET
  000260 E    $ST
SYMBOL TABLE
  000265 R 000001
  000001 C      P1
  000002 C      P2
  000435 C     OUT
  000436 C VT$DFL
  000437 C VT$DFT
  000440 C   BLANK
  000606 C   PGCNT
  000003 C    'BUF
  000270 R 000240
  000244 C SECTOR
  000442 C     LSD
  000447 C   TUIDN
  000453 C     TIB
  000457 C     TCD
```

```
000607 C DFLFCB
000624 C DFTFCB
000464 C   LINE
000003 R      1
000000 C  ITEST
000243 C INCHAR
000434 C      IN
000441 C   LSDN
000604 C  LNCNT
000605 C  LNMAX
000641 C IVALUE
000642 C  LFILE
000643 C NXTSCT
000644 C IDTSCT
000645 C IDTDSP
000263 R 000002
000236 R      0$
000264 R    $1
000021 R     10
000046 R    100
000250 E SHRINK
000051 E     $RD
000000 E V$RERR
000000 E V$RER1
000103 R     99
000267 R      I
000266 R 000121
000134 E     $I1
000242 E     $DD
000146 E     $ND
000157 E   IOCHK
000253 R    210
000113 R    110
000114 E HEADER
000117 E     $WR
000151 R     97
000257 R    220
000163 R    112
000167 R    120
000175 E BITGET
000271 R 000017
000272 R 000010
000274 R 000257
000273 R 000123
000221 R    122
000225 R    130
000275 R 000231
000260 E     $ST
0 ERRORS COMPILATION COMPLETE
```

```
   1   C  THIS IS A COPYRIGHTED PROGRAM, COPYRIGHT 1973 BY VARIAN DATA MACHINES 08 00001
   2   C                                                                        08 00002
   3   C       V.D.M.    PART NO.      92L1105-027B                             08 00003
   4   C                                                                        08 00004
   5   C                               RELEASED     3-1-74                      08 00005
   6   C                                                                        08 00006
   7   C                                                                        08 00007
   8   C                 GETLSD                                                 08 00008
   9   C                                                                        08 00009
  10   C                                                                        08 00010
  11         TITLE GETLSD                                                      08 00011
  12         SUBROUTINE GETLSD                                                 08 00012
  13   C                                                                       ********
  14   C                 COMMON                                                ********
  15   C                                                                       ********
  16   C                                                                       ********
  17   C ***************************************************************       ********
  18   C *     DECLARE COMMON CELLS                                    *       ********
  19   C ***************************************************************       ********
  20         COMMON  ITEST , P1    , P2    , BUF   , INCHAR, SECTOR, IN      ********
  21         COMMON  OUT   , VT$DFL, VT$DFT, BLANK , LSDN  , LSD   , TUIDN   ********
  22         COMMON  TIB   , TCD   , LINE  , LNCNT , LNMAX , PGCNT           ********
  23         COMMON  DFLFCB, DFTFCB, IVALUE, LFILE , NXTSCT, IDTSCT, IDTDSP  ********
  24         INTEGER P1    , P2    , OUT   , VT$DFL, VT$DFT, BLANK , PGCNT   ********
  25         INTEGER BUF   (160), SECTOR(120), LSD   (  5), TUIDN (  4)      ********
  26         INTEGER TIB   (  4), TCD   (  5), DFLFCB( 18), DFTFCB( 13)      ********
  27         INTEGER LINE  ( 80)                                             ********
  28   C ***************************************************************       ********
  29   C *     END OF COMMON DECLARATIONS                              *       ********
  30   C ***************************************************************       ********
  31   C                                                                        08 00013
  32   C       THIS ROUTINE IS CALLED WHENEVER AN LSD IS NEEDED.                08 00014
  33   C       FIRST THE SECTOR AND DISPLACEMENT OF THE LSD IS COMPUTED.        08 00015
  34   C       THEN A CHECK IS PERFORMED TO SEE IF THIS SECTOR IS ALREADY       08 00016
  35   C       IN THE COMMON BUFFER.  IF IT IS NOT, THEN IT IS READ             08 00017
  36   C       FROM THE FILE, VT$DFL.  FINALLY THE LSD IS MOVED TO THE COMMON   08 00018
  37   C       VECTOR, 'LSD' AND A NORMAL RETURN IS MADE TO THE CALLER.         08 00019
  38   C                                                                        08 00020
  39   C ***************************************************************       08 00021
  40   C                                                                        08 00022
  41   C------ZERO OUT LSD IN COMMON                                           08 00023
  42         DO 100 I = 1, 5                                                   08 00024
  43  100    LSD(I) = 0                                                        08 00025
  44   C                                                                       08 00026
  45   C------IF FILE IS CLOSED, MERELY RETURN                                 08 00027
  46         IF (DFLFCB(5)) 500, 500, 110                                      08 00028
```

```
 47   C                                                                    08 00029
 48   C------FIRST COMPUTE THE SECTOR AND DISPLACEMENT WITHIN THE SECTOR    08 00030
 49   110      ISECT = LSDN / 24 + 1                                       08 00031
 50            IDISP = LSDN - (ISECT - 1) * 24                             08 00032
 51            IDISP = IDISP * 5                                           08 00033
 52   C                                                                    08 00034
 53   C------THEN CHECK AND SEE IF WE REALLY HAVE TO DO THE READ           08 00035
 54            IF (LFILE - 1) 130, 120, 130                                08 00036
 55   120      IF (DFLFCB(4) - ISECT) 130, 200, 130                        08 00037
 56   C                                                                    08 00038
 57   C------DIDN'T WORK, A READ IS REQUIRED                               08 00039
 58   130      LFILE = 1                                                   08 00040
 59            DFLFCB(4) = ISECT                                           08 00041
 60            READ (VT$DFL) SECTOR                                        08 00042
 61            DFLFCB(4) = ISECT                                           08 00043
 62            IF (IOCHK(I)) 140, 200, 140                                 08 00044
 63   C                                                                    08 00045
 64   C------STOP ON FILE ERROR                                           08 00046
 65   140      STOP 300                                                    08 00047
 66   C                                                                    08 00048
 67   C------NOW MOVE THE LSD TO THE COMMON VECTOR LSD                     08 00049
 68   200      CONTINUE                                                    08 00050
 69            DO 210 I = 1, 5                                             08 00051
 70            J = IDISP + I                                               08 00052
 71            LSD(I) = SECTOR(J)                                          08 00053
 72   210      CONTINUE                                                    08 00054
 73   C                                                                    08 00055
 74   C------THEN MAKE A NORMAL RETURN TO THE CALLER                       08 00056
 75   500      RETURN                                                      08 00057
 76            END                                                         08 00058
ENTRY/COMMON BLOCK NAMES
   000227 R  GETLSD
   000646 C  COMMON
EXTERNAL NAMES
   000202 E     $DO
   000125 E     $RD
   000000 E  V$RERR
   000000 E  V$RER1
   000131 E     $I1
   000135 E     $ND
   000144 E   IOCHK
   000151 E     $ST
SYMBOL TABLE
   000211 R  000001
   000001 C       P1
   000002 C       P2
   000435 C      OUT
   000436 C  VT$DFL
   000437 C  VT$DFT
   000440 C   BLANK
   000606 C   PGCNT
   000003 C      BUF
   000244 C  SECTOR
   000442 C      LSD
   000216 R  000005
   000447 C   TUIDN
   000453 C      TIB
   000457 C      TCD
   000607 C  DFLFCB
   000624 C  DFTFCB
   000464 C     LINE
   000000 C   ITEST
   000243 C  INCHAR
   000434 C       IN
   000441 C     LSDN
   000604 C   LNCNT
   000605 C   LNMAX
   000641 C  IVALUE
   000642 C   LFILE
   000643 C  NXTSCT
   000644 C  IDTSCT
   000645 C  IDTDSP
   000007 R      100
   000212 R        I
   000176 R       0$
   000215 R  000000
   000213 R  000441
   000214 R     $1
   000202 E     $DO
   000217 R  000613
   000207 R      500
   000035 R      110
   000221 R   ISECT
   000220 R  000030
   000222 R   IDISP
   000111 R      130
   000100 R      120
   000223 R  000612
   000154 R      200
   000125 E     $RD
   000000 E  V$RERR
   000000 E  V$RER1
   000131 E     $I1
   000135 E     $ND
   000144 E   IOCHK
```

```
000150 R     140
000151 E     $ST
000201 R     210
000224 R       J
000225 R 000243
000226 R    $1 0
0 ERRORS COMPILATION COMPLETE
   1   C  THIS IS A COPYRIGHTED PROGRAM, COPYRIGHT 1973 BY VARIAN DATA MACHINES06 00001
   2   C                                                                      06 00002
   3   C       V.D.M.    PART NO.      92L1105-028B                           06 00003
   4   C                                                                      06 00004
   5   C                               RELEASED     3-1-74                    06 00005
   6   C                                                                      06 00006
   7   C                                                                      06 00007
   8   C                 HEADER                                               06 00008
   9   C                                                                      06 00009
  10   C                                                                      06 00010
  11         TITLE HEADER                                                    06 00011
  12         SUBROUTINE HEADER(N)                                            06 00012
  13   C                                                                      ********
  14   C                 COMMON                                               ********
  15   C                                                                      ********
  16   C                                                                      ********
  17   C ***************************************************************     ********
  18   C *     DECLARE COMMON CELLS                                    *     ********
  19   C ***************************************************************     ********
  20         COMMON  ITEST , P1    , P2    , BUF   , INCHAR, SECTOR, IN      ********
  21         COMMON  OUT   , VT$DFL, VT$DFT, BLANK , LSDN  , LSD   , TUIDN   ********
  22         COMMON  TIB   , TCD   , LINE  , LNCNT , LNMAX , PGCNT           ********
  23         COMMON  DFLFCB, DFTFCB, IVALUE, LFILE , NXTSCT, IDTSCT, IDTDSP  ********
  24         INTEGER P1    , P2    , OUT   , VT$DFL, VT$DFT, BLANK , PGCNT   ********
  25         INTEGER BUF   (160), SECTOR(120), LSD   (  5), TUIDN (  4)      ********
  26         INTEGER TIB   (  4), TCD   (  5), DFLFCB( 13), DFTFCB( 13)      ********
  27         INTEGER LINE  ( 80)                                             ********
  28   C ***************************************************************     ********
  29   C *     END OF COMMON DECLARATIONS                              *     ********
  30   C ***************************************************************     ********
  31   C                                                                      06 00013
  32   C       THIS ROUTINE IS CALLED WHENEVER A NEW HEADING IS NEEDED        06 00014
  33   C       ON THE LISTING DEVICE(LO).                                     06 00015
  34   C                                                                      06 00016
  35   C                                                                      06 00017
  36         INTEGER NAMDTE(9), DATE(4), NAME(4)                             06 00018
  37         EQUIVALENCE (NAMDTE(1), DATE(1)), (NAMDTE(5), NAME(1))          06 00019
  38   C                                                                      06 00020
  39   C------INCREMENT LINE COUNTER BY USER AMOUNT                           06 00021
  40         LNCNT = LNCNT + N                                               06 00022
  41         IF (LNCNT - LNMAX) 500, 500, 100                                06 00023
  42   C                                                                      06 00024
  43   C------NEW PAGE IS NEEDED, PREPARE TOP LINE                           06 00025
  44   100   PGCNT = PGCNT + 1                                               06 00026
  45         LNCNT = 3                                                       06 00027
  46         CALL TIME (J,I)                                                 06 00028
  47         I = J / 60                                                      06 00029
  48         J = J - I * 60                                                  06 00030
  49         I = I * 100 + J                                                 06 00031
  50         CALL SYSGET (NAMDTE)                                            06 00032
  51         WRITE (OUT, 99) PGCNT, DATE, NAME, I                            06 00033
  52   99    FORMAT (5H1PAGE, I5, 2X, 4A2, 2X, 4A2, 2X,                      06 00034
  53        1 6HVORTEX, 2X, 4HVTAM, 2X, 3HNDL, 14X, I4, 6H HOURS, /)         06 00035
  54         IF (IOCHK(I)) 200, 500, 200                                     06 00036
  55   C                                                                      06 00037
  56   C------STOP ON PRINTER ERROR                                          06 00038
  57   200   STOP 200                                                        06 00039
  58   C                                                                      06 00040
  59   C------RETURN TO THE CALLER                                           06 00041
  60   500   RETURN                                                          06 00042
  61         END                                                             06 00043
ENTRY/COMMON BLOCK NAMES
   000231 R HEADER
   000646 C COMMON
EXTERNAL NAMES
   000002 E     $SE
   000057 E    TIME
   000110 E SYSGET
   000113 E     $WR
   000000 E V$RERR
   000000 E V$RER1
   000133 E     $I1
   000137 E     $ND
   000211 E   IOCHK
   000216 E     $ST
SYMBOL TABLE
   000223 R 000001
   100004 R       N
   000002 E     $SE
   000001 C      P1
   000002 C      P2
   000435 C     OUT
   000436 C VT$DFL
   000437 C VT$DFT
   000440 C   BLANK
   000606 C   PGCNT
   000003 C     BUF
   000244 C  SECTOR
```

```
000442 C     LSD
000447 C   TUIDN
000453 C     TIB
000457 C     TCD
000607 C  DFLFCB
000624 C  DFTFCB
000464 C    LINE
000007 R NAMDTE
000007 R    DATE
000013 R    NAME
000000 C   ITEST
000243 C  INCHAR
000434 C      IN
000441 C    LSDN
000604 C   LNCNT
000605 C   LNMAX
000641 C  IVALUE
000642 C   LFILE
000643 C  NXTSCT
000644 C  IDTSCT
000645 C  IDTDSP
000221 R     500
000037 R     100
000224 R  000003
000057 E    TIME
000225 R       J
000226 R       I
000063 R      0$
000227 R  000074
000230 R  000144
000110 E  SYSGET
000113 E     $WR
000000 E  V$RERR
000000 E  V$RER1
000142 R      99
000133 E     $I1
000137 E     $ND
000211 E   IOCHK
000215 R     200        *
000216 E     $ST
0  ERRORS  COMPILATION COMPLETE
  1    C   THIS IS A COPYRIGHTED PROGRAM, COPYRIGHT 1973 BY VARIAN DATA MACHINES03 00001
  2    C                                                                       03 00002
  3    C        V.D.M.    PART NO.      92L1105-029B                           03 00003
  4    C                                                                       03 00004
  5    C                                RELEASED     3-1-74                    03 00005
  6    C                                                                       03 00006
  7    C                                                                       03 00007
  8    C                NDL                                                    03 00008
  9    C                                                                       03 00009
 10    C                                                                       03 00010
 11           TITLE NDL                                                       03 00011
 12    C                                                                       03 00012
 13    C                                                                       ********
 14    C                COMMON                                                 ********
 15    C                                                                       ********
 16    C                                                                       ********
 17    C ***************************************************************       ********
 18    C *     DECLARE COMMON CELLS                                    *       ********
 19    C ***************************************************************       ********
 20           COMMON  ITEST , P1    , P2    , BUF   , INCHAR, SECTOR, IN      ********
 21           COMMON  OUT   , VT$DFL, VT$DFT, BLANK , LSDN  , LSD   , TUIDN   ********
 22           COMMON  TIB   , TCD   , LINE  , LNCNT , LNMAX , PGCNT           ********
 23           COMMON  DFLFCB, DFTFCB, IVALUE, LFILE , NXTSCT, IDTSCT, IDTDSP  ********
 24           INTEGER P1    , P2    , OUT   , VT$DFL, VT$DFT, BLANK , PGCNT   ********
 25           INTEGER BUF   (160), SECTOR(120), LSD   (  5), TUIDN (  4)      ********
 26           INTEGER TIB   (  4), TCD   (  5), DFLFCB( 13), DFTFCB( 13)      ********
 27           INTEGER LINE  ( 80)                                             ********
 28    C ***************************************************************       ********
 29    C *     END OF COMMON DECLARATIONS                              *       ********
 30    C ***************************************************************       ********
 31    C                                                                       03 00013
 32    C------INITIALIZE RMD FILES AND COMMON                                  03 00014
 33           CALL OVLAY (0, 0, 6HCLEAR )                                     03 00015
 34    C                                                                       03 00016
 35    C------ANALYZE THE USER'S INPUT                                        03 00017
 36           CALL OVLAY (0, 0, 6HPARSE )                                     03 00018
 37    C                                                                       03 00019
 38    C------PREPARE REPORT OF FINAL CONTENTS OF FILES                        03 00020
 39           CALL OVLAY (0, 0, 6HREPORT)                                     03 00021
 40    C                                                                       03 00022
 41    C------THEN RETURN CONTROL TO VORTEX                                   03 00023
 42           CALL EXIT                                                       03 00024
 43           END                                                             03 00025
ENTRY/COMMON BLOCK NAMES
  000045 R
  000646 C COMMON
EXTERNAL NAMES
  000034 E  OVLAY
  000041 E   EXIT
  000043 E    $ST
SYMBOL TABLE
  000001 C     P1
  000002 C     P2
  000435 C    OUT
```

```
000436 C VT$DFL
000437 C VT$DFT
000440 C  BLANK
000606 C  PGCNT
000003 C    BUF
000244 C SECTOR
000442 C    LSD
000447 C  TUIDN
000453 C    TIB
000457 C    TCD
000607 C DFLFCB
000624 C DFTFCB
000464 C   LINE
000000 C  ITEST
000243 C INCHAR
000434 C     IN
000441 C   LSDN
000604 C  LNCNT
000605 C  LNMAX
000641 C !VALUE
000642 C  LFILE
000643 C NXTSCT
000644 C IDTSCT
000645 C IDTDSP
000034 E  OVLAY
000044 R 000000
000041 E   EXIT
000043 E    $ST
0 ERRORS COMPILATION COMPLETE
```

```
      C  THIS IS A COPYRIGHTED PROGRAM, COPYRIGHT 1973 BY VARIAN DATA MACHINES05 00001
      C                                                                      05 00002
      C     V.D.M.    PART NO.      92L1105-030B                             05 00003
      C                                                                      05 00004
      C                             RELEASED      3-1-74                     05 00005
      C                                                                      05 00006
      C                                                                      05 00007
      C             NUMBER                                                   05 00008
      C                                                                      05 00009
      C                                                                      05 00010
            TITLE NUMBER                                                     05 00011
            SUBROUTINE NUMBER(IRAD)                                          05 00012
      C                                                                      ********
      C             COMMON                                                   ********
      C                                                                      ********
      C                                                                      ********
      C ***************************************************************      ********
      C *    DECLARE COMMON CELLS                                     *      ********
      C ***************************************************************      ********
            COMMON  ITEST , P1    , P2    , BUF   , INCHAR, SECTOR, IN       ********
            COMMON  OUT   , VT$DFL, VT$DFT, BLANK , LSDN  , LSD   , TUIDN    ********
            COMMON  TIB   , TCD   , LINE  , LNCNT , LNMAX , PGCNT            ********
            COMMON  DFLFCB, DFTFCB, IVALUE, LFILE , NXTSCT, IDTSCT, IDTDSP   ********
            INTEGER P1    , P2    , OUT   , VT$DFL, VT$DFT, BLANK , PGCNT    ********
            INTEGER BUF   (160), SECTOR(120), LSD   (  5), TUIDN (  4)       ********
            INTEGER TIB   (  4), TCD   (  5), DFLFCB( 13), DFTFCB( 13)       ********
            INTEGER LINE  ( 80)                                              ********
      C ***************************************************************      ********
      C *    END OF COMMON DECLARATIONS                               *      ********
      C ***************************************************************      ********
      C                                                                      05 00013
      C     SUBROUTINE NUMBER CONVERTS A NUMERIC CHARACTER STRING IN THE     05 00014
      C     INPUT BUFFER TO A BINARY VALUE.  PARAMETER IRAD                  05 00015
      C     DETERMINES THE DESIRED RADIX, FROM 1 TO 10.  NUMBER IS ALWAYS    05 00016
      C     TRUE AND RETURNS THE BINARY VALUE IN COMMON CELL IVALUE          05 00017
      C                                                                      05 00018
      C-----SET TEST FLAG TRUE, ZERO RESULT AND BACKUP INPUT POINTERS        05 00019
            ITEST = 1                                                        05 00020
            IVALUE = 0                                                       05 00021
            CALL BACKUP                                                      05 00022
      C                                                                      05 00023
      C------NOW SEE IF THE NEXT CHARACTER IS A NUMBER, IN THE SPECIFIED RADIX05 00024
      1     CALL GETCHR                                                      05 00025
            IF (INCHAR - 176) 500, 200, 200                                  05 00026
      200   IF (INCHAR - (175 + IRAD)) 210, 210, 500                         05 00027
      C                                                                      05 00028
      C------INCHAR IS A LEGAL DIGIT, ADVANCE POINTERS AND ADD INTO RESULT   05 00029
      210   CALL ADVANC                                                      05 00030
            IVALUE = IVALUE * IRAD + (INCHAR - 176)                          05 00031
      C                                                                      05 00032
      C------AND THEN GO BACK AND TRY THE NEXT DIGIT                         05 00033
            GO TO 1                                                          05 00034
      C                                                                      05 00035
      C------RETURN TO THE CALLER                                           05 00036
      500   RETURN                                                           05 00037
            END                                                              05 00038
ENTRY/COMMON BLOCK NAMES
  000120 R NUMBER
  000646 C COMMON
EXTERNAL NAMES
  000002 E    $SE
  000024 E BACKUP
  000026 E GETCHR
  000060 E ADVANC
SYMBOL TABLE
  000113 R 000001
```

```
100004 R    IRAD
000002 E     $SE
000001 C      P1
000002 C      P2
000435 C     OUT
000436 C  VT$DFL
000437 C  VT$DFT
000440 C   BLANK
000606 C   PGCNT
000003 C     BUF
000244 C  SECTOR
000442 C     LSD
000447 C   TUIDN
000453 C     TIB
000457 C     TCD
000607 C  DFLFCB
000624 C  DFTFCB
000464 C    LINE
000000 C   ITEST
000243 C  INCHAR
000434 C      IN
000441 C    LSDN
000604 C   LNCNT
000605 C   LNMAX
000641 C  IVALUE
000642 C   LFILE
000643 C  NXTSCT
000644 C  IDTSCT
000645 C  IDTDSP
000114 R  000000
000024 E  BACKUP
000102 R     0$
000025 R      1
000026 E  GETCHR
000115 R  000260
000111 R     500
000037 R     200
000116 R  000257
000057 R     210
000060 E  ADVANC
000117 R    $1
0  ERRORS  COMPILATION COMPLETE
```

```
      C  THIS IS A COPYRIGHTED PROGRAM, COPYRIGHT 1973 BY VARIAN DATA MACHINES  11 00001
      C                                                                         11 00002
      C      V.D.M.    PART NO.      92L1105-031B                               11 00003
      C                                                                         11 00004
      C                              RELEASED     3-1-74                        11 00005
      C                                                                         11 00006
      C                                                                         11 00007
      C              PARSE                                                      11 00008
      C                                                                         11 00009
      C                                                                         11 00010
            TITLE PARSE                                                       11 00011
            SUBROUTINE PARSE                                                  11 00012
      C                                                                       ********
      C             COMMON                                                    ********
      C                                                                       ********
      C                                                                       ********
      C ************************************************************************ ********
      C *     DECLARE COMMON CELLS                                           * ********
      C ************************************************************************ ********
            COMMON   ITEST , P1    , P2    , BUF   , INCHAR, SECTOR, IN       ********
            COMMON   OUT   , VT$DFL, VT$DFT, BLANK , LSDN  , LSD   , TUIDN    ********
            COMMON   TIB   , TCD   , LINE  , LNCNT , LNMAX , PGCNT            ********
            COMMON   DFLFCB, DFTFCB, IVALUE, LFILE , NXTSCT, IDTSCT, IDTDSP   ********
            INTEGER P1    , P2    , OUT   , VT$DFL, VT$DFT, BLANK , PGCNT     ********
            INTEGER BUF   (160), SECTOR(120), LSD   (  5), TUIDN (  4)        ********
            INTEGER TIB   (  4), TCD   (  5), DFLFCB( 13), DFTFCB( 13)        ********
            INTEGER LINE  ( 80)                                               ********
      C ************************************************************************ ********
      C *     END OF COMMON DECLARATIONS                                     * ********
      C ************************************************************************ ********
      C                                                                         11 00013
      C       THIS SUBROUTINE PARSES THE INPUT STREAM AND SETS UP ALL           11 00014
      C       THE VTAM RMD TABLES                                               11 00015
      C                                                                         11 00016
        1     CONTINUE                                                        11 00017
      C **-------------------------------------------------------------------**  11 00018
      C **                                                                   **  11 00019
      C **       START OF LINE SECTION                                       **  11 00020
      C **                                                                   **  11 00021
      C **-------------------------------------------------------------------**  11 00022
      C     ('LINE' <BYTE> ':'                    !?BITSET(LSDN,15,00,IVALUE)@  11 00023
            CALL COMPAR(0)                                                    11 00024
            IF (ITEST) 500, 2   , 500                                         11 00025
      500   CONTINUE                                                          11 00026
            ASSIGN    3 TO IRADD                                              11 00027
            GO TO 9001                                                        11 00028
        3   CONTINUE                                                          11 00029
            CALL COMPAR(1)                                                    11 00030
            CALL DIAG                                                         11 00031
      C                                                                       11 00032
      C------SAVE LSD NUMBER AND SETUP DEFAULT LSD VALUES                     11 00033
            LSDN = IVALUE                                                     11 00034
            MODE = 0                                                          11 00035
```

```
                LSD(1) = 0                                                                                  11 00036
                LSD(2) = -30067                                                                             11 00037
                LSD(3) = -32512                                                                             11 00038
                LSD(4) = 150                                                                                11 00039
                LSD(5) = 150                                                                                11 00040
            4   CONTINUE                                                                                    11 00041
C               ','                                                                                         11 00042
                CALL COMPAR(2)                                                                              11 00043
C               /'ADDRESS''=' <BYTE>                    :?BITSET(LSD(3),07,00,IVALUE)@                      11 00044
            5   CONTINUE                                                                                    11 00045
                CALL COMPAR(3)                                                                              11 00046
                IF (ITEST) 501, 7  , 501                                                                    11 00047
  501       CONTINUE                                                                                        11 00048
                CALL COMPAR(4)                                                                              11 00049
                CALL DIAG                                                                                   11 00050
                ASSIGN    8 TO IRADD                                                                        11 00051
                GO TO 9001                                                                                  11 00052
            8   CONTINUE                                                                                    11 00053
                CALL BITSET(LSD(3),7,0,IVALUE)                                                              11 00054
                GO TO 4                                                                                     11 00055
C               /'CONNECT''='                                                                               11 00056
            7   CONTINUE                                                                                    11 00057
                CALL COMPAR(5)                                                                              11 00058
                IF (ITEST) 502, 9  , 502                                                                    11 00059
  502       CONTINUE                                                                                        11 00060
                CALL COMPAR(4)                                                                              11 00061
                CALL DIAG                                                                                   11 00062
C                  ( 'DIRECT'                           :?BITSET(LSD(1),15,14,0)@                           11 00063
                CALL COMPAR(6)                                                                              11 00064
                IF (ITEST) 503, 10 , 503                                                                    11 00065
  503       CONTINUE                                                                                        11 00066
                CALL BITSET(LSD(1),15,14,0)                                                                 11 00067
                GO TO 4                                                                                     11 00068
C                  /'MODEM'                             :?BITSET(LSD(1),15,14,1)@                           11 00069
           10   CONTINUE                                                                                    11 00070
                CALL COMPAR(7)                                                                              11 00071
                IF (ITEST) 504, 12 , 504                                                                    11 00072
  504       CONTINUE                                                                                        11 00073
                CALL BITSET(LSD(1),15,14,1)                                                                 11 00074
                GO TO 4                                                                                     11 00075
C                  /'DIAL''-''MODEM'                    :?BITSET(LSD(1),15,14,2)@                           11 00076
           12   CONTINUE                                                                                    11 00077
                CALL COMPAR(8)                                                                              11 00078
                CALL DIAG                                                                                   11 00079
                CALL COMPAR(9)                                                                              11 00080
                CALL DIAG                                                                                   11 00081
                CALL COMPAR(7)                                                                              11 00082
                CALL DIAG                                                                                   11 00083
                CALL BITSET(LSD(1),15,14,2)                                                                 11 00084
                GO TO 4                                                                                     11 00085
C                  )                                                                                        11 00086
           13   CONTINUE                                                                                    11 00087
           11   CONTINUE                                                                                    11 00088
C               /'CRC''-''STOP''=' <BYTE>               :?BITSET(LSD(4),12,10,IVALUE)@                      11 00089
            9   CONTINUE                                                                                    11 00090
                CALL COMPAR(10)                                                                             11 00091
                IF (ITEST) 505, 14 , 505                                                                    11 00092
  505       CONTINUE                                                                                        11 00093
                CALL COMPAR(9)                                                                              11 00094
                CALL DIAG                                                                                   11 00095
                CALL COMPAR(11)                                                                             11 00096
                CALL DIAG                                                                                   11 00097
                CALL COMPAR(4)                                                                              11 00098
                CALL DIAG                                                                                   11 00099
                ASSIGN   15 TO IRADD                                                                        11 00100
                GO TO 9001                                                                                  11 00101
           15   CONTINUE                                                                                    11 00102
C                                                                                                           11 00103
C------GO TO CHECK FOR SYNCHRONOUS                                                                         11 00104
                ASSIGN 9915 TO IRADD                                                                        11 00105
                GO TO 9004                                                                                  11 00106
 9915       CONTINUE                                                                                        11 00107
                CALL BITSET(LSD(4),12,10,IVALUE)                                                            11 00108
                GO TO 4                                                                                     11 00109
C               /'ECHO''=' <LOGIC>                      :?BITSET(LSD(3),14,14,LOGIC)@                       11 00110
           14   CONTINUE                                                                                    11 00111
                CALL COMPAR(12)                                                                             11 00112
                IF (ITEST) 506, 16 , 506                                                                    11 00113
  506       CONTINUE                                                                                        11 00114
                CALL COMPAR(4)                                                                              11 00115
                IF(ITEST.EQ.0)CALL DIAG                                                                     11 00116
                ASSIGN   17 TO IRADD                                                                        11 00117
                GO TO 9002                                                                                  11 00118
           17   CONTINUE                                                                                    11 00119
C                                                                                                           11 00120
C------GO TO CHECK FOR ASYNCHRONOUS                                                                        11 00121
                ASSIGN 9917 TO IRADD                                                                        11 00122
                GO TO 9003                                                                                  11 00123
 9917       CONTINUE                                                                                        11 00124
                CALL BITSET(LSD(3),14,14,LOGIC)                                                             11 00125
                GO TO 4                                                                                     11 00126
C               /'EOM''-''STOP''='                                                                          11 00127
           16   CONTINUE                                                                                    11 00128
                CALL COMPAR(13)                                                                             11 00129
                IF (ITEST) 507, 18 , 507                                                                    11 00130
```

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149  507     CONTINUE                                                                    11 00131
150          CALL COMPAR(9)                                                              11 00132
151          CALL DIAG                                                                   11 00133
152          CALL COMPAR(11)                                                             11 00134
153          CALL DIAG                                                                   11 00135
154          CALL COMPAR(4)                                                              11 00136
155          CALL DIAG                                                                   11 00137
156  C          ( 'FALSE'                          :?BITSET(LSD(3),15,15,0)@            11 00138
157          CALL COMPAR(14)                                                             11 00139
158          IF (ITEST) 508, 19 , 508                                                    11 00140
159  508     CONTINUE                                                                    11 00141
160          CALL BITSET(LSD(3),15,15,0)                                                 11 00142
161          GO TO 4                                                                     11 00143
162  C           /'(' <BYTE>                       :?BITSET(LSD(2),15,08,IVALUE)@       11 00144
163    19    CONTINUE                                                                    11 00145
164          CALL COMPAR(15)                                                             11 00146
165          IF (ITEST) 509, 21 , 509                                                    11 00147
166  509     CONTINUE                                                                    11 00148
167          ASSIGN   22 TO IRADD                                                        11 00149
168          GO TO 9001                                                                  11 00150
169    22    CONTINUE                                                                    11 00151
170          CALL BITSET(LSD(2),15,08,IVALUE)                                            11 00152
171  C           ',' <BYTE>                        :?BITSET(LSD(2),07,00,IVALUE)@       11 00153
172          CALL COMPAR(2)                                                              11 00154
173          CALL DIAG                                                                   11 00155
174          ASSIGN   23 TO IRADD                                                        11 00156
175          GO TO 9001                                                                  11 00157
176    23    CONTINUE                                                                    11 00158
177          CALL BITSET(LSD(2),07,00,IVALUE)                                            11 00159
178  C           ')'                               :?BITSET(LSD(3),15,15,1)@            11 00160
179          CALL COMPAR(16)                                                             11 00161
180          CALL DIAG                                                                   11 00162
181          CALL BITSET(LSD(3),15,15,1)                                                 11 00163
182          GO TO 4                                                                     11 00164
183  C           /<BYTE>                           :?BITSET(LSD(2),15,08,IVALUE)>@      11 00165
184    21    CONTINUE                                                                    11 00166
185          ASSIGN   24 TO IRADD                                                        11 00167
186          GO TO 9001                                                                  11 00168
187    24    CONTINUE                                                                    11 00169
188          CALL BITSET(LSD(2),15,08,IVALUE)                                            11 00170
189          CALL BITSET(LSD(2),07,00,IVALUE)                                            11 00171
190          CALL BITSET(LSD(3),15,15,1)                                                 11 00172
191          GO TO 4                                                                     11 00173
192  C           )                                                                        11 00174
193    25    CONTINUE                                                                    11 00175
194    20    CONTINUE                                                                    11 00176
195  C        /'ERROR''-''STOP''=' <LOGIC>      :?BITSET(LSD(4),13,13,LOGIC)@          11 00177
196    18    CONTINUE                                                                    11 00178
197          CALL COMPAR(17)                                                             11 00179
198          IF (ITEST) 510, 26 , 510                                                    11 00180
199  510     CONTINUE                                                                    11 00181
200          CALL COMPAR(9)                                                              11 00182
201          CALL DIAG                                                                   11 00183
202          CALL COMPAR(11)                                                             11 00184
203          CALL DIAG                                                                   11 00185
204          CALL COMPAR(4)                                                              11 00186
205          CALL DIAG                                                                   11 00187
206          ASSIGN   27 TO IRADD                                                        11 00188
207          GO TO 9002                                                                  11 00189
208    27    CONTINUE                                                                    11 00190
209          CALL BITSET(LSD(4),13,13,LOGIC)                                             11 00191
210          GO TO 4                                                                     11 00192
211  C        /'LINE''-''TYPE''='                                                        11 00193
212    26    CONTINUE                                                                    11 00194
213          CALL COMPAR(0)                                                              11 00195
214          IF (ITEST) 511, 28 , 511                                                    11 00196
215  511     CONTINUE                                                                    11 00197
216          CALL COMPAR(9)                                                              11 00198
217          CALL DIAG                                                                   11 00199
218          CALL COMPAR(18)                                                             11 00200
219          CALL DIAG                                                                   11 00201
220          CALL COMPAR(4)                                                              11 00202
221          CALL DIAG                                                                   11 00203
222  C           ( 'HALF''-''DUPLEX'               :?BITSET(LSD(1),10,09,0)@            11 00204
223          CALL COMPAR(19)                                                             11 00205
224          IF (ITEST) 512, 29 , 512                                                    11 00206
225  512     CONTINUE                                                                    11 00207
226          CALL COMPAR(9)                                                              11 00208
227          CALL DIAG                                                                   11 00209
228          CALL COMPAR(20)                                                             11 00210
229          CALL DIAG                                                                   11 00211
230          CALL BITSET(LSD(1),10,09,0)                                                 11 00212
231          GO TO 4                                                                     11 00213
232  C           /'SIMPLEX''-''RECEIVE'            :?BITSET(LSD(1),10,09,1)@            11 00214
233    29    CONTINUE                                                                    11 00215
234          CALL COMPAR(21)                                                             11 00216
235          IF (ITEST) 513, 32 , 513                                                    11 00217
236  513     CONTINUE                                                                    11 00218
237          CALL COMPAR(9)                                                              11 00219
238          CALL DIAG                                                                   11 00220
239          CALL COMPAR(22)                                                             11 00221
240          IF (ITEST) 514, 31 , 514                                                    11 00222
241  514     CONTINUE                                                                    11 00223
242          CALL BITSET(LSD(1),10,09,1)                                                 11 00224
243          GO TO 4                                                                     11 00225
```

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C          /'SIMPLEX''-''TRANSMIT'      :?BITSET(LSD(1),10,09,2)@          11 00226
   31    CONTINUE                                                          11 00227
         CALL COMPAR(23)                                                   11 00228
         CALL DIAG                                                         11 00229
         CALL BITSET(LSD(1),10,09,2)                                       11 00230
         GO TO 4                                                           11 00231
C          /'FULL''-''DUPLEX'           :?BITSET(LSD(1),10,09,3)@          11 00232
   32    CONTINUE                                                          11 00233
         CALL COMPAR(24)                                                   11 00234
         CALL DIAG                                                         11 00235
         CALL COMPAR(9)                                                    11 00236
         CALL DIAG                                                         11 00237
         CALL COMPAR(20)                                                   11 00238
         CALL DIAG                                                         11 00239
         CALL BITSET(LSD(1),10,09,3)                                       11 00240
         GO TO 4                                                           11 00241
C          )                                                               11 00242
   33    CONTINUE                                                          11 00243
   30    CONTINUE                                                          11 00244
C         /'MODE''='                                                       11 00245
   28    CONTINUE                                                          11 00246
         CALL COMPAR(25)                                                   11 00247
         IF (ITEST) 515, 34 , 515                                          11 00248
  515    CONTINUE                                                          11 00249
         CALL COMPAR(4)                                                    11 00250
         CALL DIAG                                                         11 00251
C          ( 'A''SYNC''HRONOUS'         :?BITSET(LSD(1),11,11,0)@          11 00252
         CALL COMPAR(26)                                                   11 00253
         IF (ITEST) 516, 35 , 516                                          11 00254
  516    CONTINUE                                                          11 00255
         CALL COMPAR(27)                                                   11 00256
         CALL DIAG                                                         11 00257
         CALL COMPAR(28)                                                   11 00258
         CALL DIAG                                                         11 00259
C                                                                          11 00260
C------GO TO CHECK FOR ASYNCHRONOUS                                       11 00261
         ASSIGN 9935 TO IRADD                                              11 00262
         GO TO 9003                                                        11 00263
 9935    CONTINUE                                                          11 00264
         CALL BITSET(LSD(1),11,11,0)                                       11 00265
         GO TO 4                                                           11 00266
C          /'SYNC''HRONOUS'                 :?BITSET(LSD(1),11,11,1)@    11 00267
   35    CONTINUE                                                          11 00268
         CALL COMPAR(27)                                                   11 00269
         IF (ITEST) 600,102,600                                            11 00270
  600    CALL COMPAR(28)                                                   11 00271
         CALL DIAG                                                         11 00272
C                                                                          11 00273
         GO TO 103                                                         11 00274
C------CHECK FOR 'BSC'                                                    11 00275
  102    CONTINUE                                                          11 00276
         CALL COMPAR(53)                                                   11 00277
         CALL BITSET(LSD(5),14,14,ITEST)                                   11 00278
         CALL DIAG                                                         11 00279
C------GO TO CHECK FOR SYNCHRONOUS                                        11 00280
  103    ASSIGN 9937 TO IRADD                                              11 00281
         GO TO 9004                                                        11 00282
 9937    CONTINUE                                                          11 00283
         CALL BITSET(LSD(1),11,11,1)                                       11 00284
         GO TO 4                                                           11 00285
C          )                                                               11 00286
   37    CONTINUE                                                          11 00287
   36    CONTINUE                                                          11 00288
C         /'PARITY''='                                                     11 00289
   34    CONTINUE                                                          11 00290
         CALL COMPAR(29)                                                   11 00291
         IF (ITEST) 517, 38 , 517                                          11 00292
  517    CONTINUE                                                          11 00293
         CALL COMPAR(4)                                                    11 00294
         CALL DIAG                                                         11 00295
C          ( 'NONE'                     :?BITSET(LSD(1),13,12,0)@          11 00296
         CALL COMPAR(30)                                                   11 00297
         IF (ITEST) 518, 39 , 518                                          11 00298
  518    CONTINUE                                                          11 00299
         CALL BITSET(LSD(1),13,12,0)                                       11 00300
         GO TO 4                                                           11 00301
C          /'ODD'                       :?BITSET(LSD(1),13,12,1)@          11 00302
   39    CONTINUE                                                          11 00303
         CALL COMPAR(31)                                                   11 00304
         IF (ITEST) 519, 41 , 519                                          11 00305
  519    CONTINUE                                                          11 00306
         CALL BITSET(LSD(1),13,12,1)                                       11 00307
         GO TO 4                                                           11 00308
C          /'EVEN'                      :?BITSET(LSD(1),13,12,2)@          11 00309
   41    CONTINUE                                                          11 00310
         CALL COMPAR(32)                                                   11 00311
         CALL DIAG                                                         11 00312
         CALL BITSET(LSD(1),13,12,2)                                       11 00313
         GO TO 4                                                           11 00314
C          )                                                               11 00315
   42    CONTINUE                                                          11 00316
   40    CONTINUE                                                          11 00317
C         /'SPEED''=' <BYTE>           :?BITSET(LSD(1),08,00,IVALUE)@     11 00318
   38    CONTINUE                                                          11 00319
         CALL COMPAR(33)                                                   11 00320
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339           IF (ITEST) 520, 43 , 520                                          11 00321
340    520    CONTINUE                                                          11 00322
341           CALL COMPAR(4)                                                    11 00323
342           CALL DIAG                                                         11 00324
343           ASSIGN   44 TO IRADD                                              11 00325
344           GO TO 9001                                                        11 00326
345      44   CONTINUE                                                          11 00327
346    C                                                                       11 00328
347    C------CONVERT SPEED FROM CHARS/SEC TO NO 500 MICRO/CHAR                  11 00329
348           IF (IVALUE) 550, 550, 551                                         11 00330
349    550    IVALUE = 1                                                        11 00331
350    551    IVALUE = 2000 / IVALUE                                            11 00332
351           IF (IVALUE - 511) 553, 553, 552                                   11 00333
352    552    IVALUE = 0                                                        11 00334
353    553    CONTINUE                                                          11 00335
354    C                                                                       11 00336
355           CALL BITSET(LSD(1),08,00,IVALUE)                                  11 00337
356           GO TO 4                                                           11 00338
357    C       /'STATUS''='                                                    11 00339
358      43   CONTINUE                                                          11 00340
359           CALL COMPAR(34)                                                   11 00341
360           IF (ITEST) 521, 45 , 521                                          11 00342
361    521    CONTINUE                                                          11 00343
362           CALL COMPAR(4)                                                    11 00344
363           CALL DIAG                                                         11 00345
364    C          ( 'UP'                          :?BITSET(LSD(3),09,09,0)@     11 00346
365           CALL COMPAR(35)                                                   11 00347
366           IF (ITEST) 522, 46 , 522                                          11 00348
367    522    CONTINUE                                                          11 00349
368           CALL BITSET(LSD(3),09,09,0)                                       11 00350
369           GO TO 4                                                           11 00351
370    C          /'DOWN'                         :?BITSET(LSD(3),09,09,1)@     11 00352
371      46   CONTINUE                                                          11 00353
372           CALL COMPAR(36)                                                   11 00354
373           CALL DIAG                                                         11 00355
374           CALL BITSET(LSD(3),09,09,1)                                       11 00356
375           GO TO 4                                                           11 00357
376    C          )                                                            11 00358
377      48   CONTINUE                                                          11 00359
378      47   CONTINUE                                                          11 00360
379    C       /'STORE''-''SYNC''=' <LOGIC>    :?BITSET(LSD(4),15,15,NLOGIC)@   11 00361
380      45   CONTINUE                                                          11 00362
381           CALL COMPAR(37)                                                   11 00363
382           IF (ITEST) 523, 49 , 523                                          11 00364
383    523    CONTINUE                                                          11 00365
384           CALL COMPAR(9)                                                    11 00366
385           CALL DIAG                                                         11 00367
386           CALL COMPAR(27)                                                   11 00368
387           CALL DIAG                                                         11 00369
388           CALL COMPAR(4)                                                    11 00370
389           CALL DIAG                                                         11 00371
390           ASSIGN   50 TO IRADD                                              11 00372
391           GO TO 9002                                                        11 00373
392      50   CONTINUE                                                          11 00374
393    C                                                                       11 00375
394    C------GO TO CHECK FOR SYNCHRONOUS                                       11 00376
395           ASSIGN 9950 TO IRADD                                              11 00377
396           GO TO 9004                                                        11 00378
397    9950   CONTINUE                                                          11 00379
398           CALL BITSET(LSD(4),15,15,NLOGIC)                                  11 00380
399           GO TO 4                                                           11 00381
400    C       /'SYNC''-'                                                      11 00382
401      49   CONTINUE                                                          11 00383
402           CALL COMPAR(27)                                                   11 00384
403           IF (ITEST) 524, 57 , 524                                          11 00385
404    524    CONTINUE                                                          11 00386
405           CALL COMPAR(9)                                                    11 00387
406           IF (ITEST) 525, 51 , 525                                          11 00388
407    525    CONTINUE                                                          11 00389
408    C                                                                       11 00390
409    C------GO TO CHECK FOR SYNCHRONOUS                                       11 00391
410           ASSIGN 9953 TO IRADD                                              11 00392
411           GO TO 9004                                                        11 00393
412    9953   CONTINUE                                                          11 00394
413    C          ( 'TRANSMIT''=' <BYTE>       :?BITSET(LSD(4),07,00,IVALUE)@   11 00395
414           CALL COMPAR(23)                                                   11 00396
415           IF (ITEST) 526, 52 , 526                                          11 00397
416    526    CONTINUE                                                          11 00398
417           CALL COMPAR(4)                                                    11 00399
418           CALL DIAG                                                         11 00400
419           ASSIGN   53 TO IRADD                                              11 00401
420           GO TO 9001                                                        11 00402
421      53   CONTINUE                                                          11 00403
422           CALL BITSET(LSD(4),07,00,IVALUE)                                  11 00404
423           GO TO 4                                                           11 00405
424    C          /'RECEIVE''=' <BYTE>         :?BITSET(LSD(5),07,00,IVALUE)@   11 00406
425      52   CONTINUE                                                          11 00407
426           CALL COMPAR(22)                                                   11 00408
427           CALL DIAG                                                         11 00409
428           CALL COMPAR(4)                                                    11 00410
429           CALL DIAG                                                         11 00411
430           ASSIGN   56 TO IRADD                                              11 00412
431           GO TO 9001                                                        11 00413
432      56   CONTINUE                                                          11 00414
433           CALL BITSET(LSD(5),07,00,IVALUE)                                  11 00415
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434             GO TO 4                                                                                  11 00416
435   C           )                                                                                      11 00417
436   C          /'SYNCHRONIZE''=' <LOGIC>        :?BITSET(LSD(4),14,14,LOGIC)@                        11 00418
437     51      CONTINUE                                                                                 11 00419
438             CALL COMPAR(38)                                                                          11 00420
439             CALL DIAG                                                                                11 00421
440             CALL COMPAR(4)                                                                           11 00422
441             CALL DIAG                                                                                11 00423
442             ASSIGN   58 TO IRADD                                                                     11 00424
443             GO TO 9002                                                                               11 00425
444     58      CONTINUE                                                                                 11 00426
445   C                                                                                                  11 00427
446   C-------GO TO CHECK FOR SYNCHRONOUS                                                                11 00428
447             ASSIGN 9958 TO IRADD                                                                     11 00429
448             GO TO 9004                                                                               11 00430
449   9958      CONTINUE                                                                                 11 00431
450             CALL BITSET(LSD(4),14,14,LOGIC)                                                          11 00432
451             GO TO 4                                                                                  11 00433
452   C          /'TRANSMIT''-''SPEED''='                                                                11 00434
453     57      CONTINUE                                                                                 11 00435
454             CALL COMPAR(23)                                                                          11 00436
455             IF (ITEST) 527, 59 , 527                                                                 11 00437
456   527       CONTINUE                                                                                 11 00438
457             CALL COMPAR(9)                                                                           11 00439
458             CALL DIAG                                                                                11 00440
459             CALL COMPAR(33)                                                                          11 00441
460             CALL DIAG                                                                                11 00442
461             CALL COMPAR(4)                                                                           11 00443
462             CALL DIAG                                                                                11 00444
463   C                                                                                                  11 00445
464   C-------GO TO CHECK FOR ASYNCHRONOUS                                                               11 00446
465             ASSIGN 9957 TO IRADD                                                                     11 00447
466             GO TO 9003                                                                               11 00448
467   9957      CONTINUE                                                                                 11 00449
468   C            ( 'HIGH'                          :?BITSET(LSD(4),15,15,1)@                         11 00450
469             CALL COMPAR(39)                                                                          11 00451
470             IF (ITEST) 528, 60 , 528                                                                 11 00452
471   528       CONTINUE                                                                                 11 00453
472             CALL BITSET(LSD(4),15,15,1)                                                              11 00454
473             GO TO 4                                                                                  11 00455
474   C            /'LOW'                            :?BITSET(LSD(4),15,15,0)@                         11 00456
475     60      CONTINUE                                                                                 11 00457
476             CALL COMPAR(40)                                                                          11 00458
477             CALL DIAG                                                                                11 00459
478             CALL BITSET(LSD(4),15,15,0)                                                              11 00460
479             GO TO 4                                                                                  11 00461
480   C           )                                                                                      11 00462
481   C          /'TRANSPARENT''=' <LOGIC>        :?BITSET(LSD(3),14,14,IVALUE)@                       11 00463
482     59      CONTINUE                                                                                 11 00464
483             CALL COMPAR(41)                                                                          11 00465
484             IF (ITEST) 529, 63 , 529                                                                 11 00466
485   529       CONTINUE                                                                                 11 00467
486             CALL COMPAR(4)                                                                           11 00468
487             CALL DIAG                                                                                11 00469
488             ASSIGN   64 TO IRADD                                                                     11 00470
489             GO TO 9002                                                                               11 00471
490     64      CONTINUE                                                                                 11 00472
491   C                                                                                                  11 00473
492   C-------GO TO CHECK FOR SYNCHRONOUS                                                               11 00474
493             ASSIGN 9964 TO IRADD                                                                     11 00475
494             GO TO 9004                                                                               11 00476
495   9964      CONTINUE                                                                                 11 00477
496             CALL BITSET(LSD(3),14,14,IVALUE)                                                         11 00478
497             GO TO 4                                                                                  11 00479
498   C       ) '.'                                   :?PUTLSD@                                          11 00480
499     63      CONTINUE                                                                                 11 00481
500      6      CONTINUE                                                                                 11 00482
501             CALL COMPAR(42)                                                                          11 00483
502             CALL DIAG                                                                                11 00484
503   C                                                                                                  11 00485
504   C-------CHECK FOR MODE = ASYNCHRONOUS, ECHO = TRUE AND                                             11 00486
505   C-------LINE-TYPE .NE. HALF-DUPLEX                                                                 11 00487
506             CALL BITGET (I, 11, 11, LSD(1))                                                          11 00488
507             CALL BITGET (J, 14, 14, LSD(3))                                                          11 00489
508             CALL BITGET (K, 10, 09, LSD(1))                                                          11 00490
509             ASSIGN 9963 TO IRADD                                                                     11 00491
510             IF ((I .EQ. 0) .AND. (J .EQ. 1) .AND. (K .NE. 0)) GO TO 9005                             11 00492
511   9963      CONTINUE                                                                                 11 00493
512   C                                                                                                  11 00494
513   C-------REWRITE THE LSD TO THE FILE                                                                11 00495
514             CALL PUTLSD                                                                              11 00496
515             GO TO 1                                                                                  11 00497
516   C **-------------------------------------------------------------------**                         11 00498
517   C **                                                                     **                         11 00499
518   C **       END OF LINE SECTION                                           **                         11 00500
519   C **                                                                     **                         11 00501
520   C **-------------------------------------------------------------------**                         11 00502
521   C     )                                                                                            11 00503
522       2     CONTINUE                                                                                 11 00504
523   C **-------------------------------------------------------------------**                         11 00505
524   C **                                                                     **                         11 00506
525   C **       START OF TERMINAL SECTION                                     **                         11 00507
526   C **                                                                     **                         11 00508
527   C **-------------------------------------------------------------------**                         11 00509
528   C    /('TERMINAL'                                                                                  11 00510
```

```
529           CALL COMPAR(43)                                                    11 00511
530           IF (ITEST) 530, 68 , 530                                           11 00512
531   530     CONTINUE                                                           11 00513
532   C                                                                          11 00514
533   C-------CLEAR OUT THE COMMON TCD                                           11 00515
534           DO 9120 I = 1, 5                                                   11 00516
535   9120    TCD(I) = 0                                                         11 00517
536           LSDN = 0                                                           11 00518
537   C **-------------------------------------------------------------------**  11 00519
538   C **    SETUP TCD DEFAULT VALUES                                       **  11 00520
539   C **-------------------------------------------------------------------**  11 00521
540           TCD(2) = 135                                                       11 00522
541           TCD(3) = 1                                                         11 00523
542   C                                                                          11 00524
543   C-------GO TO PARSE TUID AND SETUP TIB                                     11 00525
544   C         :?TUID@                                                          11 00526
545           CALL TUID                                                          11 00527
546           CALL DIAG                                                          11 00528
547   C     ':'                                                                  11 00529
548           CALL COMPAR(1)                                                     11 00530
549           CALL DIAG                                                          11 00531
550   C     $(                                                                   11 00532
551     69    CONTINUE                                                         11 00533
552   C         ','                                                            11 00534
553           CALL COMPAR(2)                                                     11 00535
554   C         /'CODE''='                                                       11 00536
555           CALL COMPAR(44)                                                    11 00537
556           IF (ITEST) 531, 72 , 531                                           11 00538
557   531     CONTINUE                                                           11 00539
558           CALL COMPAR(4)                                                     11 00540
559           CALL DIAG                                                          11 00541
560   C         ( 'ASCII'                       :?BITSET(TCD(3),15,12,0)@        11 00542
561           CALL COMPAR(45)                                                    11 00543
562           CALL DIAG                                                          11 00544
563           CALL BITSET(TCD(3),15,12,0)                                        11 00545
564           GO TO 69                                                           11 00546
565   C         )                                                                11 00547
566   C         /'DEVICES''=' <BYTE>            :?BITSET(TCD(3),03,00,IVALUE)@   11 00548
567     72    CONTINUE                                                         11 00549
568           CALL COMPAR(46)                                                    11 00550
569           IF (ITEST) 532, 75 , 532                                           11 00551
570   532     CONTINUE                                                           11 00552
571           CALL COMPAR(4)                                                     11 00553
572           CALL DIAG                                                          11 00554
573           ASSIGN   76 TO IRADD                                               11 00555
574           GO TO 9001                                                         11 00556
575     76    CONTINUE                                                         11 00557
576           CALL BITSET(TCD(3),03,00,IVALUE)                                   11 00558
577           GO TO 69                                                           11 00559
578   C         /'ECHO''=' <LOGIC>              :?BITSET(TCD(2),12,12,LOGIC)@    11 00560
579     75    CONTINUE                                                         11 00561
580           CALL COMPAR(12)                                                    11 00562
581           IF (ITEST) 533, 77 , 533                                           11 00563
582   533     CONTINUE                                                           11 00564
583           CALL COMPAR(4)                                                     11 00565
584           CALL DIAG                                                          11 00566
585           ASSIGN   78 TO IRADD                                               11 00567
586           GO TO 9002                                                         11 00568
587     78    CONTINUE                                                         11 00569
588           CALL BITSET(TCD(2),12,12,NLOGIC)                                   11 00570
589           GO TO 69                                                           11 00571
590   C         /'LINE''=' <BYTE>               :?BITSET(TCD(1),15,08,IVALUE)@   11 00572
591     77    CONTINUE                                                         11 00573
592           CALL COMPAR(0)                                                     11 00574
593           IF (ITEST) 534, 79 , 534                                           11 00575
594   534     CONTINUE                                                           11 00576
595           CALL COMPAR(4)                                                     11 00577
596           CALL DIAG                                                          11 00578
597           ASSIGN   80 TO IRADD                                               11 00579
598           GO TO 9001                                                         11 00580
599     80    CONTINUE                                                         11 00581
600           CALL BITSET(TCD(1),15,08,IVALUE)                                   11 00582
601           LSDN = IVALUE                                                      11 00583
602   C                                                                          11 00584
603   C-------READ IN THE ASSOCIATED LSD                                         11 00585
604           CALL GETLSD                                                        11 00586
605           GO TO 69                                                           11 00587
606   C                                                                          11 00588
607   C         /'PROMPT''=' <BYTE>           :?BITSET(TCD(2),07,00,IVALUE)@     11 00589
608     79    CONTINUE                                                         11 00590
609           CALL COMPAR(47)                                                    11 00591
610           IF (ITEST) 535, 81 , 535                                           11 00592
611   535     CONTINUE                                                           11 00593
612           CALL COMPAR(4)                                                     11 00594
613           CALL DIAG                                                          11 00595
614           ASSIGN   82 TO IRADD                                               11 00596
615           GO TO 9001                                                         11 00597
616     82    CONTINUE                                                         11 00598
617           CALL BITSET(TCD(2),07,00,IVALUE)                                   11 00599
618           GO TO 69                                                           11 00600
619   C         /'STATUS''='                                                     11 00601
620     81    CONTINUE                                                         11 00602
621           CALL COMPAR(34)                                                    11 00603
622           IF (ITEST) 536, 83 , 536                                           11 00604
623   536     CONTINUE                                                           11 00605
```

```
624           CALL COMPAR(4)                                                    11 00606
625           CALL DIAG                                                         11 00607
626   C          ( 'UP'                          !?BITSET(TCDI(3),15,15,0)@     11 00608
627           CALL COMPAR(35)                                                   11 00609
628           IF (ITEST) 537, 84 , 537                                          11 00610
629   537     CONTINUE                                                          11 00611
630           CALL BITSET(TIB(3), 15, 15, 0)                                    11 00612
631           GO TO 69                                                          11 00613
632   C        /'DOWN'                          !?BITSET(TCDI(3),15,15,1)@     11 00614
633      84   CONTINUE                                                          11 00615
634           CALL COMPAR(36)                                                   11 00616
635           CALL DIAG                                                         11 00617
636           CALL BITSET (TIB(3), 15, 15, 1)                                   11 00618
637           GO TO 69                                                          11 00619
638   C        )                                                                11 00620
639   C       /'TYPE''='                                                        11 00621
640      83   CONTINUE                                                          11 00622
641           CALL COMPAR(18)                                                   11 00623
642           IF (ITEST) 538, 87 , 538                                          11 00624
643   538     CONTINUE                                                          11 00625
644           CALL COMPAR(4)                                                    11 00626
645           CALL DIAG                                                         11 00627
646   C          ( 'TTY1'                        !?BITSET(TCD(3),11,08,0)@      11 00628
647           CALL COMPAR(48)                                                   11 00629
648           CALL DIAG                                                         11 00630
649           CALL BITSET(TCD(3),11,08,0)                                       11 00631
650           GO TO 69                                                          11 00632
651   C        )                                                                11 00633
652   C       /'UNIT''='  <BYTE>               !?BITSET(TCD(1),07,00,IVALUE)@   11 00634
653      87   CONTINUE                                                          11 00635
654           CALL COMPAR(49)                                                   11 00636
655           IF (ITEST) 539, 90 , 539                                          11 00637
656   539     CONTINUE                                                          11 00638
657           CALL COMPAR(4)                                                    11 00639
658           CALL DIAG                                                         11 00640
659           ASSIGN   91 TO IRADD                                              11 00641
660           GO TO 9001                                                        11 00642
661      91   CONTINUE                                                          11 00643
662           CALL BITSET(TCD(1),07,00,IVALUE)                                  11 00644
663           GO TO 69                                                          11 00645
664   C     ) '.'                                                             11 00646
665      90   CONTINUE                                                          11 00647
666           CALL COMPAR(42)                                                   11 00648
667           CALL DIAG                                                         11 00649
668   C **-------------------------------------------------------------------**  11 00650
669   C **  GET TCXMM FROM LSXMM                                             **  11 00651
670   C **-------------------------------------------------------------------**  11 00652
671           CALL BITGET(IVALUE,10,09,LSD(1))                                  11 00653
672           CALL BITSET(TCD(2),11,10,IVALUE)                                  11 00654
673   C **-------------------------------------------------------------------**  11 00655
674   C **     GET TCD SWITCHED LINE (TCSWL) FROM LSD (LSASY)                 **  11 00656
675   C **-------------------------------------------------------------------**  11 00657
676           CALL BITGET(IVALUE,11,11,LSD(1))                                  11 00658
677           CALL BITSET(TCD(2),09,09,IVALUE)                                  11 00659
678   C **-------------------------------------------------------------------**  11 00660
679   C*      HANDLE ASNYC/SYNC - GET TCSWL FROM LSMOD                        **  11 00661
680   C **-------------------------------------------------------------------**  11 00662
681           CALL BITGET(IVALUE,15,15,LSD(1))                                  11 00663
682           CALL BITSET(TCD(2),08,08,IVALUE)                                  11 00664
683   C                                                                         11 00665
684   C------OUTPUT THE NEW TCB AND TIB                                         11 00666
685           CALL PUTTCD                                                       11 00667
686   C **-------------------------------------------------------------------**  11 00668
687   C **     END OF TERMINAL SECTION                                         **  11 00669
688   C **-------------------------------------------------------------------**  11 00670
689           GO TO 1                                                           11 00671
690   C    )                                                                    11 00672
691      68   CONTINUE                                                          11 00673
692   C **-------------------------------------------------------------------**  11 00674
693   C **    PROCESS 'END' DIRECTIVE                                          **  11 00675
694   C **-------------------------------------------------------------------**  11 00676
695           CALL COMPAR(50)                                                   11 00677
696           IF (ITEST) 540, 93 , 540                                          11 00678
697   540     CONTINUE                                                          11 00679
698           CALL COMPAR(42)                                                   11 00680
699           CALL DIAG                                                         11 00681
700   C                                                                         11 00682
701   C------RETURN TO THE NDL DRIVER                                           11 00683
702           RETURN                                                            11 00684
703   C                                                                         11 00685
704   C **-------------------------------------------------------------------**  11 00686
705   C **     SERIOUS SYNTAX ERROR HAS OCCURED (ILLEGAL DIRECTIVE)            **  11 00687
706   C **     CALL DIAG TO LIST ERROR AND ADVANCE TO END OF STMT              **  11 00688
707   C **-------------------------------------------------------------------**  11 00689
708   C    /:?DIAG@ $(-'.':?ADVANC@)                                            11 00690
709      93   CONTINUE                                                          11 00691
710           CALL DIAG                                                         11 00692
711      94   CONTINUE                                                          11 00693
712           CALL COMPAR(42)                                                   11 00694
713           IF (ITEST) 95, 95, 1                                              11 00695
714   95      CONTINUE                                                          11 00696
715           CALL ADVANC                                                       11 00697
716           GO TO 94                                                          11 00698
717   C **-------------------------------------------------------------------**  11 00699
718   C **                                                                   **  11 00700
```

```
719   C **      INLINE SUBROUTINE TO PROCESS BYTE STRINGS                    ** 11 00701
720   C **                                                                   ** 11 00702
721   C **-------------------------------------------------------------------** 11 00703
722   C <BYTE> =                                                              11 00704
723   9001    CONTINUE                                                        11 00705
724   C      '0'                                 :?NUMBER(08)@                11 00706
725           CALL COMPAR(51)                                                 11 00707
726           IF (ITEST) 541, 99 , 541                                        11 00708
727   541     CONTINUE                                                        11 00709
728           CALL NUMBER(08)                                                 11 00710
729           GO TO IRADD                                                     11 00711
730   C     /                                   :?NUMBER(10)@                11 00712
731     99    CONTINUE                                                        11 00713
732           CALL NUMBER(10)                                                 11 00714
733           GO TO IRADD                                                     11 00715
734   C **-------------------------------------------------------------------** 11 00716
735   C **                                                                   ** 11 00717
736   C **      INLINE SUBROUTINE TO PROCESS LOGIC STRINGS                   ** 11 00718
737   C **                                                                   ** 11 00719
738   C **-------------------------------------------------------------------** 11 00720
739   C <LOGIC> =                                                             11 00721
740   9002    CONTINUE                                                        11 00722
741   C     < 'TRUE'                            :?BITSET(LOGIC,15,00,1)@     11 00723
742           CALL COMPAR(52)                                                 11 00724
743           IF (ITEST) 542, 101, 542                                        11 00725
744   542     CONTINUE                                                        11 00726
745           LOGIC  = 1                                                      11 00727
746           NLOGIC = 0                                                      11 00728
747           GO TO IRADD                                                     11 00729
748   C     /'FALSE'                            :?BITSET(LOGIC,15,00,0)@     11 00730
749    101    CONTINUE                                                        11 00731
750           CALL COMPAR(14)                                                 11 00732
751           CALL DIAG                                                       11 00733
752           LOGIC  = 0                                                      11 00734
753           NLOGIC = 1                                                      11 00735
754           GO TO IRADD                                                     11 00736
755   C **-------------------------------------------------------------------** 11 00737
756   C **    INLINE SUBROUTINE TO INSURE THAT MODE IS NOT SYNCHRONOUS       ** 11 00738
757   C **-------------------------------------------------------------------** 11 00739
758   9003    IF (MODE) 560, 560, 562                                         11 00740
759   560     MODE = 1                                                        11 00741
760   562     IF (MODE - 1) 9005, 570, 9005                                   11 00742
761   C                                                                       11 00743
762   C **-------------------------------------------------------------------** 11 00744
763   C **    INLINE SUBROUTINE TO INSURE THAT MODE IS NOT ASYNCHRONOUS      ** 11 00745
764   C **-------------------------------------------------------------------** 11 00746
765   9004    IF (MODE) 566, 566, 568                                         11 00747
766   566     MODE = 2                                                        11 00748
767   568     IF (MODE - 2) 9005, 570, 9005                                   11 00749
768   570     GO TO IRADD                                                     11 00750
769   C                                                                       11 00751
770   C **-------------------------------------------------------------------** 11 00752
771   C **    INLINE SUBROUTINE TO WRITE ERROR MESSAGE                       ** 11 00753
772   C **-------------------------------------------------------------------** 11 00754
773   9005    CONTINUE                                                        11 00755
774           CALL HEADER(2)                                                  11 00756
775           WRITE (OUT, 9099)                                               11 00757
776   9099    FORMAT (35H0**ILLEGAL PARAMETER TYPE SPECIFIED)                 11 00758
777           IF (IOCHK(I) .NE. 0) STOP 200                                   11 00759
778   C                                                                       11 00760
779   C------RETURN TO THE CALLING RULE                                       11 00761
780           GO TO IRADD                                                     11 00762
781   C END; MON;                                                             11 00763
782           END                                                             11 00764
ENTRY/COMMON BLOCK NAMES
  003216 R  PARSE
  000646 C COMMON
EXTERNAL NAMES
  002723 E COMPAR
  002726 E   DIAG
  002576 E BITSET
  002570 E BITGET
  002061 E PUTLSD
  002111 E     $DO
  002137 E    TUID
  002333 E GETLSD
  002604 E PUTTCD
  002643 E ADVANC
  002670 E NUMBER
  003014 E HEADER
  003017 E     $WR
  000000 E V$RERR
  000000 E V$RER1
  003023 E     $ND
  003053 E   IOCHK
  003066 E     $ST
SYMBOL TABLE
  003101 R 000001
  003113 R 000002
  003115 R 000004
  000001 C      P1
  000002 C      P2
  000435 C     OUT
  000436 C VT$DFL
  000437 C VT$DFT
```

```
000440 C   BLANK
000606 C   PGCNT
000003 C     BUF
000244 C  SECTOR
000442 C     LSD
003117 R  000005
000447 C   TUIDN
000453 C     TIB
000457 C     TCD
000607 C  DFLFCB
003131 R  000015
000624 C  DFTFCB
000464 C    LINE
000003 R       1
000000 C   ITEST
000243 C  INCHAR
000434 C      IN
000441 C    LSDN
000604 C   LNCNT
000605 C   LNMAX
000641 C  IVALUE
000642 C   LFILE
000643 C  NXTSCT
000644 C  IDTSCT
000645 C  IDTDSP
002723 E  COMPAR
003077 R  000000
000013 R     500
002064 R       2
000022 R       3
003100 R   IRADD
003072 R      0$
002646 R    9001
002726 E    DIAG
003102 R    MODE
003104 R  105215
003114 R  000003
003106 R  100400
003110 R  000226
000066 R       4
003103 R  000442
003105 R  000443
003107 R  000444
003111 R  000445
003112 R  000446
000071 R       5
000101 R     501
000125 R       7
000115 R       8
002576 E  BITSET
003116 R  000007
000135 R     502
000231 R       9
003120 R  000006
000152 R     503
000162 R      10
003121 R  000017
003122 R  000016
000172 R     504
000202 R      12
003123 R  000010
003124 R  000011
000231 R      13
000231 R      11
003125 R  000012
000241 R     505
000306 R      14
003126 R  000013
000267 R      15
000276 R    9915
002764 R    9004
003127 R  000014
000316 R     506
000365 R      16
000346 R      17
002700 R    9002
000355 R    9917
002741 R    9003
003130 R   LOGIC
000375 R     507
000553 R      18
000424 R     508
000434 R      19
000444 R     509
000520 R      21
000453 R      22
000475 R      23
003132 R  000020
000527 R      24
000553 R      25
000553 R      20
003133 R  000021
000563 R     510
000621 R      26
000611 R      27
```

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000631 R     511
001003 R      28
003134 R 000022
003135 R 000023
000660 R     512
000702 R      29
003136 R 000024
003137 R 000025
000712 R     513
000754 R      32
003140 R 000026
000727 R     514
000737 R      31
003141 R 000027
003142 R 000030
001003 R      33
001003 R      30
003143 R 000031
001013 R     515
001132 R      34
003144 R 000032
001030 R     516
001061 R      35
003145 R 000033
003146 R 000034
001051 R    9935
001071 R     600
001100 R     102
001113 R     103
003147 R 000065
001122 R    9937
001132 R      37
001132 R      36
003150 R 000035
001142 R     517
001224 R      38
003151 R 000036
001157 R     518
001167 R      39
003152 R 000037
001177 R     519
001207 R      41
003153 R 000040
001224 R      42
001224 R      40
003154 R 000041
001234 R     520
001324 R      43
001250 R      44
001257 R     550
001265 R     551
003155 R 003720
003156 R 000777
001314 R     553
001306 R     552
003157 R 000042
001334 R     521
001376 R      45
003160 R 000043
001351 R     522
001361 R      46
003161 R 000044
001376 R      48
001376 R      47
003162 R 000045
001406 R     523
001453 R      49
001434 R      50
001443 R    9950
003163 R NLOGIC
001463 R     524
001627 R      57
001473 R     525
001567 R      51
001502 R    9953
001512 R     526
001536 R      52
001526 R      53
001557 R      56
003164 R 000046
001610 R      58
001617 R    9958
001637 R     527
001722 R      59
001665 R    9957
003165 R 000047
001675 R     528
001705 R      60
003166 R 000050
003167 R 000051
001732 R     529
001765 R      63
001746 R      64
001755 R    9964
001765 R       6
```

```
003170  R  000052
002570  E  BITGET
003171  R        I
003172  R        J
003173  R        K
002060  R     9963
003174  R     $1
003175  R     $1  0
003013  R     9005
002061  E  PUTLSD
003176  R  000053
002074  R      530
002607  R       68
002100  R     9120
003177  R  000456
002111  E      $DD
003200  R  000207
002137  E     TUID
003201  R  000460
003202  R  000461
002147  R       69
003203  R  000054
002162  R      531
002204  R       72
003204  R  000055
003205  R  000056
002214  R      532
002240  R       75
002230  R       76
002250  R      533
002274  R       77
002264  R       78
002304  R      534
002336  R       79
002320  R       80
003206  R  000457
002333  E  GETLSD
003207  R  000057
002346  R      535
002372  R       81
002362  R       82
002402  R      536
002444  R       83
002417  R      537
002427  R       84
003210  R  000455
002454  R      538
002476  R       87
003211  R  000060
003212  R  000061
002506  R      539
002532  R       90
002522  R       91
002604  E  PUTTCD
003213  R  000062
002617  R      540
002626  R       93
002630  R       94
002642  R       95
002643  E  ADVANC
003214  R  000063
002656  R      541
002667  R       99
002670  E  NUMBER
003215  R  000064
002710  R      542
002722  R      101
002750  R      560
002754  R      562
003005  R      570
002773  R      566
002772  R      568
002914  E  HEADER
003017  E     $WR
000000  E  V$RERR
000000  E  V$RER1
003026  R     9099
003023  E     $ND
003053  E   IOCHK
003066  E     $ST
0  ERRORS  COMPILATION COMPLETE
```

```
  1    C   THIS IS A COPYRIGHTED PROGRAM, COPYRIGHT 1973 BY VARIAN DATA MACHINES09 00001
  2    C                                                                       09 00002
  3    C       V.D.M.    PART NO.      92L1105-032B                            09 00003
  4    C                                                                       09 00004
  5    C                               RELEASED      3-1-74                    09 00005
  6    C                                                                       09 00006
  7    C                                                                       09 00007
  8    C                 PUTLSD                                                09 00008
  9    C                                                                       09 00009
 10    C                                                                       09 00010
 11          TITLE PUTLSD                                                      09 00011
 12          SUBROUTINE PUTLSD                                                 09 00012
 13    C                                                                       ********
 14    C                 COMMON                                                ********
```

```
 15   C                                                                                  ********
 16   C                                                                                  ********
 17   C ***************************************************************************    ********
 18   C *     DECLARE COMMON CELLS                                                *    ********
 19   C ***************************************************************************    ********
 20         COMMON  ITEST , P1    , P2    , BUF   , INCHAR, SECTOR, IN                  ********
 21         COMMON  OUT   , VT$DFL, VT$DFT, BLANK , LSDN  , LSD   , TUIDN               ********
 22         COMMON  TIB   , TCD   , LINE  , LNCNT , LNMAX , PGCNT                       ********
 23         COMMON  DFLFCB, DFTFCB, IVALUE, LFILE , NXTSCT, IDTSCT, IDTDSP              ********
 24         INTEGER P1    , P2    , OUT   , VT$DFL, VT$DFT, BLANK , PGCNT               ********
 25         INTEGER BUF   (160), SECTOR(120), LSD   (  5), TUIDN (  4)                  ********
 26         INTEGER TIB   (  4), TCD   (  5), DFLFCB( 13), DFTFCB( 13)                  ********
 27         INTEGER LINE  ( 80)                                                         ********
 28   C ***************************************************************************    ********
 29   C *     END OF COMMON DECLARATIONS                                          *    ********
 30   C ***************************************************************************    ********
 31   C                                                                                  09 00013
 32   C       THIS ROUTINE IS CALLED WHENEVER AN LSD IN THE COMMON VECTOR                09 00014
 33   C       'LSD' IS TO BE REPLACE IN THE FILE 'VT$DFL'.  COMMON CELL                  09 00015
 34   C       'LSDN' INDICATES THE NUMBER OF THE LSD THAT IS TO BE WRITTEN.              09 00016
 35   C       FIRST THE SECTOR NUMBER AND DISPLACEMENT OF THE LSD IS COMPUTED.           09 00017
 36   C       THEN A CHECK IS MADE TO SEE IF THE READ IS                                 09 00018
 37   C       NECESSARY.  IF IT IS, THE SECTOR IS READ.  THEN THE LSD IS                 09 00019
 38   C       MOVED INTO THE SECTOR BUFFER, AT THE PROPER DISPLACEMENT,                  09 00020
 39   C       AND THE SECTOR IS REWRITTEN.  A NORMAL RETURN IS MADE TO THE               09 00021
 40   C       CALLER.                                                                    09 00022
 41   C                                                                                  09 00023
 42   C------RETURN IF FILE IS NOT OPEN                                                 09 00024
 43         IF (DFLFCB(5)) 500, 500, 100                                                09 00025
 44   C                                                                                  09 00026
 45   C------COMPUTE THE SECTOR AND DISPLACEMENT OF THE LSD                             09 00027
 46   100   ISECT = LSDN / 24 + 1                                                       09 00028
 47         IDISP = LSDN - (ISECT - 1) * 24                                             09 00029
 48         IDISP = IDISP * 5                                                           09 00030
 49   C                                                                                  09 00031
 50   C------FIRST SEE IF REQUIRED SECTOR IS IN COMMON                                  09 00032
 51         IF ((LFILE .EQ. 1) .AND. (DFLFCB(4) .EQ. ISECT)) GO TO 200                  09 00033
 52   C                                                                                  09 00034
 53   C------SECTOR IS NOT IN COMMON, THUS READ THE SECTOR                               09 00035
 54         LFILE = 1                                                                   09 00036
 55         DFLFCB(4) = ISECT                                                           09 00037
 56         READ (VT$DFL) SECTOR                                                        09 00038
 57         DFLFCB(4) = ISECT                                                           09 00039
 58         IF (IOCHK(I)) 530, 200, 530                                                 09 00040
 59   C                                                                                  09 00041
 60   C------NOW MOVE LSD TO SECTOR AND REWRITE                                       09 00042
 61   200   CONTINUE                                                                    09 00043
 62         DO 210 I = 1, 5                                                             09 00044
 63         J = IDISP + I                                                               09 00045
 64         SECTOR(J) = LSD(I)                                                          09 00046
 65   210   CONTINUE                                                                    09 00047
 66         WRITE (VT$DFL) SECTOR                                                       09 00048
 67         DFLFCB(4) = ISECT                                                           09 00049
 68         IF (IOCHK(I)) 530, 500, 530                                                 09 00050
 69   C                                                                                  09 00051
 70   C------ZERO OUT COMMON LSD AND LSD NUMBER                                      09 00052
 71   500   CONTINUE                                                                    09 00053
 72         DO 510 I = 1, 5                                                             09 00054
 73   510   LSD(I) = 0                                                                  09 00055
 74         LSDN = 0                                                                    09 00056
 75   C                                                                                  09 00057
 76   C------AND MAKE A NORMAL RETURN TO THE CALLER                                   09 00058
 77         RETURN                                                                      09 00059
 78   C                                                                                  09 00060
 79   C------STOP OF FILE ERROR                                                       09 00061
 80   530   STOP 300                                                                    09 00062
 81         END                                                                         09 00063
ENTRY/COMMON BLOCK NAMES
  000275 R PUTLSD
  000646 C COMMON
EXTERNAL NAMES
  000117 E     $RD
  000000 E V$RERR
  000000 E V$RER1
  000202 E     $I1
  000206 E     $ND
  000215 E   IOCHK
  000236 E     $DO
  000176 E     $WR
  000254 E     $ST
SYMBOL TABLE
  000261 R 000001
  000001 C      P1
  000002 C      P2
  000435 C     OUT
  000436 C VT$DFL
  000437 C VT$DFT
  000440 C   BLANK
  000606 C   PGCNT
  000003 C     BUF
  000244 C SECTOR
  000442 C     LSD
  000264 R 000005
  000447 C   TUIDN
  000453 C     TIB
```

```
000457 C     TCD
000607 C  DFLFCB
000624 C  DFTFCB
000464 C    LINE
000000 C   ITEST
000243 C  INCHAR
000434 C      IN
000441 C    LSDN
000604 C   LNCNT
000605 C   LNMAX
000641 C  IVALUE
000642 C   LFILE
000643 C  NXTSCT
000644 C  IDTSCT
000645 C  IDTDSP
000257 R  000613
000244 R      0$
000221 R     500
000013 R     100
000262 R   ISECT
000260 R  000030
000263 R   IDISP
000265 R  000612
000266 R     $1
000142 R     200
000117 E     $RD
000000 E  V$RERR
000000 E  V$RER1
000202 E     $I1
000206 E     $ND
000215 E   IOCHK
000267 R       I
000253 R     530
000167 R     210
000270 R       J
000271 R  000243
000272 R  000441
000273 R    $1 0
000236 E     $DO
000176 E     $WR
000225 R     510
000274 R  000000
000254 E     $ST
0  ERRORS  COMPILATION COMPLETE
```

```
   1    C   THIS IS A COPYRIGHTED PROGRAM, COPYRIGHT 1973 BY VARIAN DATA MACHINES  08 00001
   2    C                                                                          08 00002
   3    C        V.D.M.    PART NO.      92L1105-033B                              08 00003
   4    C                                                                          08 00004
   5    C                                RELEASED      3-1-74                      08 00005
   6    C                                                                          08 00006
   7    C                                                                          08 00007
   8    C                PUTTCD                                                    08 00008
   9    C                                                                          08 00009
  10    C                                                                          08 00010
  11          TITLE PUTTCD                                                        08 00011
  12          SUBROUTINE PUTTCD                                                   08 00012
  13    C                                                                         ********
  14    C                COMMON                                                   ********
  15    C                                                                         ********
  16    C                                                                         ********
  17    C ************************************************************************ ********
  18    C *     DECLARE COMMON CELLS                                           *  ********
  19    C ************************************************************************ ********
  20          COMMON   ITEST , P1    , P2    , BUF   , INCHAR, SECTOR, IN       ********
  21          COMMON   OUT   , VT$DFL, VT$DFT, BLANK , LSDN  , LSD   , TUIDN    ********
  22          COMMON   TIB   , TCD   , LINE  , LNCNT , LNMAX , PGCNT            ********
  23          COMMON   DFLFCB, DFTFCB, IVALUE, LFILE , NXTSCT, IDTSCT, IDTDSP   ********
  24          INTEGER P1    , P2    , OUT   , VT$DFL, VT$DFT, BLANK , PGCNT     ********
  25          INTEGER BUF   (160), SECTOR(120), LSD   (  5), TUIDN (  4)        ********
  26          INTEGER TIB   (  4), TCD   (  5), DFLFCB( 13), DFTFCB( 13)        ********
  27          INTEGER LINE  ( 80)                                               ********
  28    C ************************************************************************ ********
  29    C *     END OF COMMON DECLARATIONS                                     *  ********
  30    C ************************************************************************ ********
  31    C                                                                          08 00013
  32    C------IF FILE IS CLOSED, SKIP TO RETURN                                   08 00014
  33          IF (DFTFCB(5)) 500, 500, 10                                         08 00015
  34    C                                                                          08 00016
  35    C------SEARCH INDEX BLOCK FOR DUPLICATE TUID                               08 00017
  36    10    ISECT = 1                                                           08 00018
  37          LFILE = 2                                                           08 00019
  38    100   DFTFCB(4) = ISECT                                                   08 00020
  39          READ (VT$DFT) SECTOR                                                08 00021
  40          DFTFCB(4) = ISECT                                                   08 00022
  41          IF (IOCHK(I)) 640, 120, 640                                         08 00023
  42    C                                                                          08 00024
  43    C------IF NO ENTRIES, SKIP SEARCH LOOP                                    08 00025
  44    120   IF (SECTOR(1)) 150, 150, 130                                        08 00026
  45    C                                                                          08 00027
  46    C------NOW SEARCH THIS INDEX SECTOR FOR TUID MATCH                        08 00028
  47    130   IDISP = 0                                                           08 00029
  48          N = SECTOR(1)                                                       08 00030
  49          DO 140 I = 1, N                                                     08 00031
  50          IDISP = IDISP + 4                                                   08 00032
  51          IF (TIB(1) - SECTOR(IDISP+1)) 140, 138, 140                         08 00033
```

```
                IF (TIB(2) - SECTOR(IDISP+2)) 140, 400, 140                     08 00034
                CONTINUE                                                        08 00035
C                                                                               08 00036
C-------NO MATCH IN CURRENT SECTOR, SEE IF THREAD IS NULL                       08 00037
150             CONTINUE                                                        08 00038
                CALL BITGET (ISECT, 14, 7, SECTOR(3))                           08 00039
                IF (ISECT) 160, 160, 100                                        08 00040
160             ISECT = DFTFCB(4)                                               08 00041
C                                                                               08 00042
C-------NOW FIND SPACE FOR INDEX STORAGE                                       08 00043
                IF (SECTOR(1) - 29) 240, 170, 170                               08 00044
C                                                                               08 00045
C-------NEW INDEX SECTOR IS REQUIRED, ALLOCATE AND THREAD                      08 00046
170             ISECT = NXTSCT                                                  08 00047
                NXTSCT = NXTSCT + 1                                             08 00048
                CALL BITSET (SECTOR(3), 14, 07, ISECT)                          08 00049
                WRITE (VT$DFT) SECTOR                                           08 00050
                IF (IOCHK(I)) 640, 210, 640                                     08 00051
C                                                                               08 00052
C-------NOW ZERO AND WRITE OUT THE NEW SECTOR                                  08 00053
210             DO 220 I = 1, 120                                               08 00054
220             SECTOR(I) = 0                                                   08 00055
                DFTFCB(4) = ISECT                                               08 00056
                WRITE (VT$DFT) SECTOR                                           08 00057
                DFTFCB(4) = ISECT                                               08 00058
                IF (IOCHK(I)) 640, 240, 640                                     08 00059
C                                                                               08 00060
C-------NOW REMEMBER LOCATION OF INDEX SLOT                                    08 00061
240             IDXSCT = ISECT                                                  08 00062
                IDXDSP = (SECTOR(1) + 1) * 4                                    08 00063
C                                                                               08 00064
C-------NOW FIND SPACE FOR DATA STORAGE                                         08 00065
                ISECT = IDTSCT                                                  08 00066
                IDTDSP = IDTDSP + 5                                             08 00067
                IDISP = IDTDSP                                                  08 00068
                IF (IDTDSP - 116) 340, 340, 310                                 08 00069
C                                                                               08 00070
C-------NEW DATA SECTOR IS REQUIRED, ALLOCATE AND ZERO                         08 00071
310             ISECT = NXTSCT                                                  08 00072
                IDTSCT = ISECT                                                  08 00073
                IDTDSP = 0                                                      08 00074
                NXTSCT = NXTSCT + 1                                             08 00075
                IDISP = 0                                                       08 00076
                DO 320 I = 1, 120                                               08 00077
320             SECTOR(I) = 0                                                   08 00078
                DFTFCB(4) = ISECT                                               08 00079
                GO TO 350                                                       08 00080
C                                                                               08 00081
C-------READ OLD DATA SECTOR                                                   08 00082
340             DFTFCB(4) = ISECT                                               08 00083
                READ (VT$DFT) SECTOR                                            08 00084
                DFTFCB(4) = ISECT                                               08 00085
                IF (IOCHK(I)) 640, 350, 640                                     08 00086
C                                                                               08 00087
C-------NOW MOVE TCD TO SECTOR AND REWRITE                                     08 00088
350             DO 360 I = 1, 5                                                 08 00089
                J = IDISP + I                                                   08 00090
360             SECTOR(J) = TCD(I)                                              08 00091
                WRITE (VT$DFT) SECTOR                                           08 00092
                DFTFCB(4) = ISECT                                               08 00093
                IF (IOCHK(I)), 640, 362, 640                                    08 00094
C                                                                               08 00095
C-------NOW UPDATE TIB AND REPLACE IN INDEX SECTOR                             08 00096
362             CONTINUE                                                        08 00097
                CALL BITSET(TIB(3), 14, 07, ISECT)                              08 00098
                CALL BITSET(TIB(3),  6,  0, IDISP)                              08 00099
                ISECT = IDXSCT                                                  08 00100
                IDISP = IDXDSP                                                  08 00101
                DFTFCB(4) = ISECT                                               08 00102
                READ (VT$DFT) SECTOR                                            08 00103
                DFTFCB(4) = ISECT                                               08 00104
                IF (IOCHK(I)) 640, 368, 640                                     08 00105
C                                                                               08 00106
C-------NOW MOVE TIB TO SECTOR AND REWRITE                                     08 00107
368             DO 370 I = 1, 4                                                 08 00108
                J = IDISP + I                                                   08 00109
370             SECTOR(J) = TIB(I)                                              08 00110
                SECTOR(1) = SECTOR(1) + 1                                       08 00111
                WRITE (VT$DFT) SECTOR                                           08 00112
                DFTFCB(4) = ISECT                                               08 00113
                IF (IOCHK(I)) 640, 500, 640                                     08 00114
C                                                                               08 00115
C-------HERE DUPLICATE TUID WAS FOUND, FIRST ISSUE MESSAGE                     08 00116
400             CALL HEADER(2)                                                  08 00117
                WRITE (OUT, 499) TIB(1), TIB(2)                                 08 00118
499             FORMAT (11H0**DUP TUID, 1X, 2 A 2)                              08 00119
                IF (IOCHK(I)) 620, 410, 620                                     08 00120
C                                                                               08 00121
C-------ONLY POSSIBLE CHANGE TO TIB IS UP/DOWN SWITCH                          08 00122
410             CONTINUE                                                        08 00123
                CALL BITGET(I, 15, 15, TIB(3))                                  08 00124
                CALL BITSET(SECTOR(IDISP+3), 15, 15, I)                         08 00125
C                                                                               08 00126
C-------REWRITE INDEX SECTOR                                                   08 00127
                WRITE (VT$DFT) SECTOR                                           08 00128
```

```
147             IF (IOCHK(I)) 640, 420, 640                                     08 00129
148     C                                                                       08 00130
149     C-------EXTRACT POINTERS TO DATA SECTOR                                  08 00131
150     420     CONTINUE                                                        08 00132
151             CALL BITGET(ISECT, 14, 07, SECTOR(IDISP+3))                     08 00133
152             CALL BITGET(IDISP,  6,  0, SECTOR(IDISP+3))                     08 00134
153     C                                                                       08 00135
154     C-------READ DATA SECTOR                                                08 00136
155             DFTFCB(4) = ISECT                                               08 00137
156             READ (VT$DFT) SECTOR                                            08 00138
157             DFTFCB(4) = ISECT                                               08 00139
158             IF (IOCHK(I)) 640, 430, 640                                     08 00140
159     C                                                                       08 00141
160     C-------MOVE TCD TO DATA SECTOR                                         08 00142
161     430     DO 440 I = 1, 5                                                 08 00143
162             J = IDISP + I                                                   08 00144
163     440     SECTOR(J) = TCD(I)                                              08 00145
164     C                                                                       08 00146
165     C-------REWRITE DATA SECTOR                                             08 00147
166             WRITE (VT$DFT) SECTOR                                           08 00148
167             DFTFCB(4) = ISECT                                               08 00149
168             IF (IOCHK(I)) 640, 500, 640                                     08 00150
169     C                                                                       08 00151
170     C-------ZERO OUT COMMON CELLS                                           08 00152
171     500     CONTINUE                                                        08 00153
172             DO 510 I = 1, 4                                                 08 00154
173             TIB(I) = 0                                                      08 00155
174     510     TUIDN(I) = BLANK                                                08 00156
175             DO 520 I = 1, 5                                                 08 00157
176     520     TCD(I) = 0                                                      08 00158
177     C                                                                       08 00159
178     C-------AND RETURN TO THE CALLER                                        08 00160
179             RETURN                                                          08 00161
180     C                                                                       08 00162
181     C-------BELOW ARE THE I/O ERROR STOPS                                    08 00163
182     620     STOP 200                                                        08 00164
183     640     STOP 400                                                        08 00165
184             END                                                             08 00166
ENTRY/COMMON BLOCK NAMES
  001314 R PUTTCD
  000646 C COMMON
EXTERNAL NAMES
  001055 E     $RD
  000000 E V$RERR
  000000 E V$RER1
  001142 E     $I1
  001146 E     $ND
  001155 E   IOCHK
  001234 E     $DO
  001042 E BITGET
  000775 E BITSET
  001136 E     $WR
  000716 E HEADER
  001250 E     $ST
SYMBOL TABLE
  001254 R 000001
  001256 R 000002
  001265 R 000004
  000001 C      P1
  000002 C      P2
  000435 C     OUT
  000436 C VT$DFL
  000437 C VT$DFT
  000440 C   BLANK
  000606 C   PGCNT
  000003 C     BUF
  000244 C SECTOR
  001277 R 000170
  000442 C     LSD
  001302 R 000005
  000447 C   TUIDN
  000453 C     TIB
  000457 C     TCD
  000607 C DFLFCB
  000624 C DFTFCB
  000464 C    LINE
  000000 C   ITEST
  000243 C INCHAR
  000434 C      IN
  000441 C    LSDN
  000604 C   LNCNT
  000605 C   LNMAX
  000641 C  IVALUE
  000642 C   LFILE
  000643 C  NXTSCT
  000644 C  IDTSCT
  000645 C  IDTDSP
  001253 R 000630
  001224 R      0$
  001161 R     500
  000013 R      10
  001255 R   ISECT
  000023 R     100
  001257 R 000627
  001055 E     $RD
```

```
000000 E V$RERR
000000 E V$RER1
001142 E     $I1
001146 E     $ND
001155 E   IOCHK
001260 R         I
001247 R     640
000054 R     120
001261 R 000244
000146 R     150
000064 R     130
001263 R   IDISP
001262 R 000000
001264 R         N
000140 R     140
001266 R    $1
001267 R 000453
000121 R     138
001270 R 000245
001271 R 000454
000715 R     400
001234 E     $DO
001042 E BITGET
001272 R 000016
001273 R 000007
001274 R 000246
000163 R     160
001275 R 000035
000313 R     240
000201 R     170
000775 E BITSET
001136 E     $WR
000240 R     210
000244 R     220
001276 R 000243
001300 R IDXSCT
001301 R IDXDSP
001303 R 000164
000436 R     340
000355 R     310
000411 R     320
000467 R     350
000500 R     360
001304 R       J
001305 R 000456
001306 R    $1 0
000550 R     362
001307 R 000455
001310 R 000006
000621 R     368
000632 R     370
001311 R 000452
000716 E HEADER
000740 R     499
001243 R     620
000761 R     410
001312 R 000017
001021 R     420
001100 R     430
001111 R     440
001175 R     510
001313 R 000446
001223 R     520
001250 E     $ST
0  ERRORS  COMPILATION COMPLETE
```

```
   1   C   THIS IS A COPYRIGHTED PROGRAM, COPYRIGHT 1973 BY VARIAN DATA MACHINES10 00001
   2   C                                                                       10 00002
   3   C       V.D.M.    PART NO.      92L1105-034B                            10 00003
   4   C                                                                       10 00004
   5   C                             RELEASED     3-1-74                       10 00005
   6   C                                                                       10 00006
   7   C                                                                       10 00007
   8   C             REPORT                                                    10 00008
   9   C                                                                       10 00009
  10   C                                                                       10 00010
  11         TITLE REPORT                                                     10 00011
  12         SUBROUTINE REPORT                                                10 00012
  13   C                                                                      ********
  14   C             COMMON                                                   ********
  15   C                                                                      ********
  16   C                                                                      ********
  17   C ***************************************************************      ********
  18   C *     DECLARE COMMON CELLS                                    *      ********
  19   C ***************************************************************      ********
  20         COMMON  ITEST , P1    , P2    , BUF   , INCHAR, SECTOR, IN       ********
  21         COMMON  OUT   , VT$DFL, VT$DFT, BLANK , LSDN  , LSD   , TUIDN    ********
  22         COMMON  TIB   , TCD   , LINE  , LNCNT , LNMAX , PGCNT            ********
  23         COMMON  DFLFCB, DFTFCB, IVALUE, LFILE , NXTSCT, IDTSCT, IDTDSP   ********
  24         INTEGER P1    , P2    , OUT   , VT$DFL, VT$DFT, BLANK , PGCNT    ********
  25         INTEGER BUF   (160), SECTOR(120), LSD   (  5), TUIDN (  4)       ********
  26         INTEGER TIB   (  4), TCD   (  5), DFLFCB( 13), DFTFCB( 13)       ********
  27         INTEGER LINE  ( 80)                                              ********
  28   C ***************************************************************      ********
  29   C *     END OF COMMON DECLARATIONS                              *      ********
  30   C ***************************************************************      ********
```

```
31   C
32   C       THIS ROUTINE WRITES A FINAL REPORT OF THE CONTENTS OF THE
33   C       FILE VT$DFL AND VT$DFT.
34   C
35   C------SKIP LSD REPORT IF FILE IS CLOSED
36           IF (DFLFCB(5)) 200, 200, 10
37   C
38   C------PRODUCE A BINARY REPORT FOR EACH LSD
39   10      LNCNT = LNMAX
40           DO 100 LSDN = 0, 255
41           CALL GETLSD
42   C
43   C------SKIP REPORT IF LSD IS NOT DEFINED
44           CALL BITGET (I, 8, 8, LSD(3))
45           IF (I) 100, 100, 20
46   C
47   C------DUMP OUT THIS DEFINED LSD
48   20      CALL HEADER(7)
49           WRITE (OUT, 199) LSDN
50   199     FORMAT (1H0, 3HLSD, I4)
51           IF (IOCHK(I)) 620, 30, 620
52   C
53   C------DECOMPOSE EACH WORD AND BIT
54   30      DO 90 I = 1, 5
55           DO 80 J = 1, 16
56           K = 16 - J
57           CALL BITGET (BUF(J), K, K, LSD(I))
58   80      CONTINUE
59           WRITE (OUT, 197) (BUF(J), J = 1, 16)
60   197     FORMAT (4X, 16 I 2)
61           IF (IOCHK(J)) 620, 90, 620
62   90      CONTINUE
63   100     CONTINUE
64   C
65   C------NOW PRODUCE REPORT FOR FILE VT$DFT, FIRST INSURE FILE IS OPEN
66   200     IF (DFTFCB(5)) 500, 500, 204
67   204     LNCNT = LNMAX
68   C
69   C------INITIALIZE INDEX SECTOR POINTER
70           INDEX = 1
71   C
72   C------READ NEW INDEX SECTOR INTO CARD BUFFER
73   210     DFTFCB(4) = INDEX
74           LFILE = 0
75           READ (VT$DFT) (BUF(I), I = 1, 120)
76           IF (IOCHK(I)) 640, 212, 640
77   C
78   C------GET NUMBER OF CURRENT ENTRIES AND MAKE CERTAIN THERE ARE SOME
79   212     P2 = BUF(1)
80           IF (P2) 260, 260, 214
81   214     P2 = P2 * 4
82   C
83   C------NOW HANDLE EACH ENTRY IN THIS SECTOR
84           DO 250 P1 = 4, P2, 4
85   C
86   C------MOVE TO TIB VECTOR FOR EASY REFERENCE
87           DO 220 I = 1, 4
88           J = P1 + I
89   220     TIB(I) = BUF(J)
90   C
91   C------NOW EXTRACT ADDRESS OF DATA AREA
92           CALL BITGET (ISECT, 14,  7, BUF(P1+3))
93           CALL BITGET (IDISP,  6,  0, BUF(P1+3))
94   C
95   C------SKIP READ IF SECTOR IS IN COMMON
96           IF ((LFILE .EQ. 2) .AND. (DFTFCB(4) .EQ. ISECT)) GO TO 222
97   C
98   C------SECTOR IS NOT IN COMMON, READ IS REQUIRED
99           LFILE = 2
100          DFTFCB(4) = ISECT
101          READ (VT$DFT) SECTOR
102          DFTFCB(4) = ISECT
103          IF (IOCHK(I)) 640, 222, 640
104  C
105  C------NOW THAT DATA SECTOR IS IN CORE, COPY TO VECTOR TCD
106  222     DO 230 I = 1, 5
107          J = IDISP + I
108  230     TCD(I) = SECTOR(J)
109  C
110  C------NOW DUMP OUT THE TIB
111          CALL HEADER(9)
112          WRITE (OUT, 299) TIB(1), TIB(2)
113  299     FORMAT (4H0TIB, 1X, 2 A 2)
114          IF (IOCHK(I)) 620, 232, 620
115  C
116  C------DECOMPOSE TIB, WORD 3
117  232     I = 3
118          DO 240 J = 1, 16
119          K = 16 -
120  240     CALL BITGET (LINE(J), K, K, TIB(I))
121          WRITE (OUT, 197) (LINE(J), J = 1, 16)
122          IF (IOCHK(J)) 620, 234, 620
123  C
124  C------DUMP OUT THE TCD
125  234     CONTINUE
```

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10 00101
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10 00107

```
  126           WRITE (OUT, 295) TIB(1), TIB(2)                                  10 00108
  127   295     FORMAT (4H PCD, 1X, 2 A 2)                                       10 00109
  128           IF (IOCHK(J)) 620, 236, 620                                      10 00110
  129   C                                                                        10 00111
  130   C-----NOW DECOMPOSE THE TCD                                              10 00112
  131   236     CONTINUE                                                         10 00113
  132           DO 244 I = 1,  5                                                 10 00114
  133           DO 242 J = 1, 16                                                 10 00115
  134           K = 16 - J                                                       10 00116
  135   242     CALL BITGET (LINE(J), K, K, TCD(I))                              10 00117
  136           WRITE (OUT, 197) (LINE(J), J = 1, 16)                            10 00118
  137           IF (IOCHK(J)) 620, 244, 620                                      10 00119
  138   244     CONTINUE                                                         10 00120
  139   C                                                                        10 00121
  140   C------HERE ALL ENTRIES IN THIS SECTOR HAVE BEEN PROCESSED              10 00122
  141   250     CONTINUE                                                         10 00123
  142   C                                                                        10 00124
  143   C------EXTRACT INDEX CHAIN, AND PROCESS IF NON-NULL                     10 00125
  144   260     CALL BITGET (INDEX, 14, 7, BUF(3))                               10 00126
  145           IF (INDEX) 500, 500, 210                                         10 00127
  146   C                                                                        10 00128
  147   C------NOW MAKE A NORMAL RETURN TO THE NDL DRIVER                       10 00129
  148   500     RETURN                                                           10 00130
  149   C                                                                        10 00131
  150   C------BELOW ARE THE I/O ERROR STOPS                                    10 00132
  151   620     STOP 200                                                         10 00133
  152   640     STOP 400                                                         10 00134
  153           END                                                              10 00135
ENTRY/COMMON BLOCK NAMES
  001164 R REPORT
  000646 C COMMON
EXTERNAL NAMES
  000026 E GETLSD
  001072 E BITGET
  000565 E HEADER
  001020 E    $WR
  000000 E V$RERR
  000000 E V$RER1
  001035 E    $I1
  001047 E    $ND
  001051 E  IOCHK
  001064 E    $DO
  000504 E    $RD
  001115 E    $ST
SYMBOL TABLE
  001126 R 000001
  001154 R 000002
  001145 R 000004
  000001 C      P1
  000002 C      P2
  000435 C     OUT
  000436 C VT$DFL
  000437 C VT$DFT
  000440 C  BLANK
  000606 C  PGCNT
  000003 C     BUF
  000244 C SECTOR
  001143 R 000170
  000442 C     LSD
  001136 R 000005
  000447 C  TUIDN
  000453 C     TIB
  000457 C     TCD
  000607 C DFLFCB
  000624 C DFTFCB
  000464 C    LINE
  000000 C   ITEST
  000243 C  INCHAR
  000434 C      IN
  000441 C    LSDN
  000604 C   LNCNT
  000605 C   LNMAX
  000641 C  IVALUE
  000642 C   LFILE
  000643 C  NXTSCT
  000644 C  IDTSCT
  000645 C  IDTDSP
  001120 R 000613
  001100 R      0$
  000217 R     200
  000013 R      10
  000211 R     100
  001121 R 000000
  001137 R 000377
  000026 E GETLSD
  001072 E BITGET
  001122 R       I
  001123 R 000010
  001162 R 000003
  001124 R 000444
  000044 R      20
  000565 E HEADER
  001125 R 000007
  001020 E    $WR
  000000 E V$RERR
```

```
000000  E  V$RER1
000063  R      199
001035  E      $I1
001047  E      $ND
001051  E   IOCHK
001110  R      620
000077  R       30
000203  R       90
000130  R       80
001127  R        J
001130  R  000020
001131  R        K
001132  R  000002
001133  R     $1
001134  R  000441
001135  R     $1  0
001064  E      $DO
000171  R      197
001140  R  000630
001106  R      500
000227  R      204
001141  R   INDEX
000237  R      210
001142  R  000627
000504  E      $RD
001114  R      640
000310  R      212
001144  R  000003
001071  R      260
000323  R      214
001063  R      250
000353  R      220
001146  R  000452
001150  R   ISECT
001151  R  000016
001147  R  000005
001152  R   IDISP
001153  R  000006
000527  R      222
000540  R      230
001155  R  000456
001156  R  000243
001157  R  000011
000607  R      299
001160  R  000453
001161  R  000454
000624  R      232
000637  R      240
001163  R  000463
000721  R      234
000741  R      295
000756  R      236
001055  R      244
000773  R      242
001115  E      $ST
0  ERRORS  COMPILATION COMPLETE
```

```
    1   C   THIS IS A COPYRIGHTED PROGRAM, COPYRIGHT 1973 BY VARIAN DATA MACHINES  04 00001
    2   C                                                                          04 00002
    3   C        V.D.M.    PART NO.      92 1105-035B                              04 00003
    4   C                                                                          04 00004
    5   C                                RELEASED      3-1-74                      04 00005
    6   C                                                                          04 00006
    7   C                  SHRINK                                                  04 00007
    8   C                                                                          04 00008
    9   C                                                                          04 00009
   10         TITLE SHRINK                                                        04 00010
   11         SUBROUTINE SHRINK                                                   04 00011
   12   C                                                                         04 00012
   13   C                                                                         ********
   14   C                  COMMON                                                 ********
   15   C                                                                         ********
   16   C                                                                         ********
   17   C  ***********************************************************************  ********
   18   C  *     DECLARE COMMON CELLS                                            *  ********
   19   C  ***********************************************************************  ********
   20         COMMON  ITEST , P1    , P2    , BUF   , INCHAR, SECTOR, IN        ********
   21         COMMON  OUT   , VT$DFL, VT$DFT, BLANK , LSDN  , LSD   , TUIDN     ********
   22         COMMON  TIB   , TCD   , LINE  , LNCNT , LNMAX , PGCNT             ********
   23         COMMON  DFLFCB, DFTFCB, IVALUE, LFILE , NXTSCT, IDTSCT, IDTDSP    ********
   24         INTEGER P1    , P2    , OUT   , VT$DFL, VT$DFT, BLANK , PGCNT     ********
   25         INTEGER BUF   (160), SECTOR(120), LSD   (  5), TUIDN (  4)        ********
   26         INTEGER TIB   (  4), TCD   (  5), DFLFCB( 13), DFTFCB( 13)        ********
   27         INTEGER LINE  ( 80)                                               ********
   28   C  ***********************************************************************  ********
   29   C  *     END OF COMMON DECLARATIONS                                      *  ********
   30   C  ***********************************************************************  ********
   31   C        THIS ROUTINE IS CALLED TO LEFT-JUSTIFY ALL NON-BLANK              04 00013
   32   C        CHARACTERS IN THE INPUT BUFFER                                    04 00014
   33   C                                                                          04 00015
   34   C------  SET DESTINATION POINTER                                           04 00016
   35         J = 0                                                               04 00017
   36   C                                                                         04 00018
   37   C------  SCAN WHOLE BUFFER, MOVING NON-BLANKS TO DESTINATION ADDRESS       04 00019
   38         DO 100 I = 1, 160                                                   04 00020
   39         IF (BUF(I) - BLANK) 80, 100, 80                                     04 00021
```

```
    C                                                                                  04 00022
    C------COLUMN I IS NON-BLANK, THUS MOVE IT                                          04 00023
80        J = J + 1                                                                    04 00024
          BUF(J) = BUF(I)                                                              04 00025
    C                                                                                  04 00026
    C------IF NOT IN THE SAME PLACE, BLANK OUT SOURCE ADDRESS                          04 00027
          IF (I - J) 90, 100, 90                                                       04 00028
90        BUF(I) = BLANK                                                             04 00029
100       CONTINUE                                                                     04 00030
    C                                                                                  04 00031
    C------ALL BUFFER IS COMPRESSED, NOW UPDATE CHARACTER POINTERS                     04 00032
          P1 = P1 - P2 + 1                                                             04 00033
          P2 = 1                                                                       04 00034
    C                                                                                  04 00035
    C------AND RETURN TO THE CALLER                                                   04 00036
          RETURN                                                                       04 00037
          END                                                                          04 00038
ENTRY/COMMON BLOCK NAMES
  000130 R SHRINK
  000646 C COMMON
EXTERNAL NAMES
  000071 E     $DO
SYMBOL TABLE
  000122 R 000001
  000001 C      P1
  000002 C      P2
  000435 C     OUT
  000436 C VT$DFL
  000437 C VT$DFT
  000440 C   BLANK
  000606 C   PGCNT
  000003 C     BUF
  000127 R 000240
  000244 C SECTOR
  000442 C     LSD
  000447 C   TUIDN
  000453 C     TIB
  000457 C     TCD
  000607 C DFLFCB
  000624 C DFTFCB
  000464 C    LINE
  000000 C   ITEST
  000243 C INCHAR
  000434 C      IN
  000441 C    LSDN
  000604 C   LNCNT
  000605 C   LNMAX
  000641 C IVALUE
  000642 C   LFILE
  000643 C NXTSCT
  000644 C IDTSCT
  000645 C IDTDSP
  000121 R       J
  000120 R 000000
  000111 R      0$
  000070 R     100
  000123 R       I
  000124 R 000002
  000125 R    $1
  000025 R      80
  000126 R    $1 0
  000054 R      90
  000071 E     $DO
0 ERRORS  COMPILATION COMPLETE
    1   C   THIS IS A COPYRIGHTED PROGRAM, COPYRIGHT 1973 BY VARIAN DATA MACHINES09 00001
    2   C                                                                      09 00002
    3   C       V.D.M.    PART NO.      92L1105-036B                           09 00003
    4   C                                                                      09 00004
    5   C                               RELEASED      3-1-74                   09 00005
    6   C                                                                      09 00006
    7   C                                                                      09 00007
    8   C                TUID                                                  09 00008
    9   C                                                                      09 00009
   10   C                                                                      09 00010
   11         TITLE    TUID                                                   09 00011
   12         SUBROUTINE TUID                                                 09 00012
   13   C                                                                      *********
   14   C                COMMON                                                *********
   15   C                                                                      *********
   16   C                                                                      *********
   17   C ***************************************************************      *********
   18   C *     DECLARE COMMON CELLS                                    *      *********
   19   C ***************************************************************      *********
   20         COMMON   ITEST , P1    , P2    , BUF   , INCHAR, SECTOR, IN     *********
   21        ' COMMON   OUT   , VT$DFL, VT$DFT, BLANK , LSDN  , LSD   , TUIDN  *********
   22         COMMON   TIB   , TCD   , LINE  , LNCNT , LNMAX , PGCNT          *********
   23         COMMON   DFLFCB, DFTFCB, IVALUE, LFILE , NXTSCT, IDTSCT, IDTDSP  *********
   24         INTEGER P1    , P2    , OUT   , VT$DFL, VT$DFT, BLANK , PGCNT    *********
   25         INTEGER BUF   (160), SECTOR(120), LSD   (  5), TUIDN (  4)       *********
   26         INTEGER TIB   (  4), TCD   (  5), DFLFCB( 13), DFTFCB( 13)       *********
   27         INTEGER LINE  ( 80)                                              *********
   28   C ***************************************************************      *********
   29   C *     END OF COMMON DECLARATIONS                              *      *********
   30   C ***************************************************************      *********
   31   C                                                                      09 00013
```

```
32  C       THIS ROUTINE ATTEMPTS TO FIND A FOUR-CHARACTER TUID IN THE          09 00014
33  C       INPUT STREAM.                                                       09 00015
34  C                                                                           09 00016
35          INTEGER CA    , CZ    , C0    , C9                                  09 00017
36          DATA CA/193/, CZ/218/, C0/176/, C9/185/                             09 00018
37  C                                                                           09 00019
38  C-------FIRST CLEAR OUT THE TUIDN VECTOR IN COMMON                          09 00020
39          DO 10 I = 1, 4                                                      09 00021
40  10      TUIDN(I) = BLANK                                                    09 00022
41  C                                                                           09 00023
42  C-------NOW BACKUP POINTERS AND SET TEST FLAG FALSE                         09 00024
43          CALL BACKUP                                                         09 00025
44          ITEST = 0                                                           09 00026
45  C                                                                           09 00027
46  C-------FETCH FIRST CHARACTER OF TUID AND INSIST THAT IT'S ALPHA             09 00028
47          CALL GETCHR                                                         09 00029
48          IF (INCHAR - CA) 200,  20,  20                                      09 00030
49  20      IF (INCHAR - CZ)  30,  30, 200                                      09 00031
50  C                                                                           09 00032
51  C-------FIRST CHAR IS ALPHABETIC, SO SET FLAG TRUE AND STORE CHAR            09 00033
52  30      CALL ADVANC                                                         09 00034
53          ITEST = 1                                                           09 00035
54          TUIDN(1) = INCHAR                                                   09 00036
55  C                                                                           09 00037
56  C-------NOW ATTEMPT TO LOCATE THREE MORE ALPHANUMERIC CHARACTERS            09 00038
57          DO 100 I = 2, 4                                                     09 00039
58          CALL GETCHR                                                         09 00040
59          IF (INCHAR - C0) 200,  40,  40                                      09 00041
60  40      IF (INCHAR - CZ)  50,  50, 200                                      09 00042
61  50      IF (INCHAR - CA)  60,  70,  70                                      09 00043
62  60      IF (INCHAR - C9)  70,  70, 200                                      09 00044
63  C                                                                           09 00045
64  C-------ALPHANUMERIC CHARACTER HAS BEEN FOUND, STORE IT IN VECTOR           09 00046
65  70      CALL ADVANC                                                         09 00047
66          TUIDN(I) = INCHAR                                                   09 00048
67  100     CONTINUE                                                            09 00049
68  C                                                                           09 00050
69  C-------CLEAR TIB AND PACK TUID INTO TIB                                    09 00051
70  200     CONTINUE                                                            09 00052
71          CALL BITSET (TIB(1), 15, 08, TUIDN(1))                              09 00053
72          CALL BITSET (TIB(1), 07, 00, TUIDN(2))                              09 00054
73          CALL BITSET (TIB(2), 15, 08, TUIDN(3))                              09 00055
74          CALL BITSET (TIB(2), 07, 00, TUIDN(4))                              09 00056
75          TIB(3) = 0                                                          09 00057
76          TIB(4) = 0                                                          09 00058
77  C                                                                           09 00059
78  C-------FOUR CHARACTER TUID IS COMPLETE, RETURN TO CALLER                   09 00060
79          RETURN                                                              09 00061
80          END                                                                 09 00062
ENTRY/COMMON BLOCK NAMES
  000272 R    TUID
  000646 C COMMON
EXTERNAL NAMES
  000177 E     $DO
  000036 E BACKUP
  000113 E GETCHR
  000161 E ADVANC
  000227 E BITSET
SYMBOL TABLE
  000250 R 000001
  000257 R 000002
  000254 R 000004
  000001 C      P1
  000002 C      P2
  000435 C     OUT
  000436 C VT$DFL
  000437 C VT$DFT
  000440 C   BLANK
  000606 C   PGCNT
  000003 C     BUF
  000244 C  SECTOR
  000442 C     LSD
  000447 C   TUIDN
  000453 C     TIB
  000457 C     TCD
  000607 C  DFLFCB
  000624 C  DFTFCB
  000464 C    LINE
  000003 R      CA
  000004 R      CZ
  000005 R      C0
  000006 R      C9
  000000 C   ITEST
  000243 C  INCHAR
  000434 C      IN
  000441 C    LSDN
  000604 C   LNCNT
  000605 C   LNMAX
  000641 C  IVALUE
  000642 C   LFILE
  000643 C  NXTSCT
  000644 C  IDTSCT
  000645 C  IDTDSP
  000013 R      10
  000251 R       I
```

```
000242 R       0$
000252 R  000446
000253 R    $1
000177 E      $DO
000036 E  BACKUP
000255 R  000000
000113 E  GETCHR
000204 R     200
000057 R      20
000071 R      30
000161 E  ADVANC
000256 R  000447
000176 R     100
000124 R      40
000136 R      50
000146 R      60
000160 R      70
000227 E  BITSET
000261 R  000017
000262 R  000010
000260 R  000453
000263 R  000007
000264 R  000450
000265 R  000454
000266 R  000451
000267 R  000452
000270 R  000455
000271 R  000456
0  ERRORS  COMPILATION COMPLETE
```