```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

                                                      2 ************************************************************************
                                                      3 *
                                                      4 *        Zvector E6 instruction tests for VRI-f encoded:
                                                      5 *
                                                      6 *        E671 VAP    - VECTOR ADD DECIMAL
                                                      7 *        E673 VSP    - VECTOR SUBTRACT DECIMAL
                                                      8 *        E678 VMP    - VECTOR MULTIPLY DECIMAL
                                                      9 *        E679 VSDP   - VECTOR MULTIPLY AND SHIFT DECIMAL
                                                     10 *        E67A VDP    - VECTOR DIVIDE DECIMAL
                                                     11 *        E67B VRP    - VECTOR REMAINDER DECIMAL
                                                     12 *        E67E VSDP   - VECTOR SHIFT AND DIVIDE DECIMAL
                                                     13 *
                                                     14 *        James Wekel June 2024
                                                     15 ************************************************************************
                                                     16
                                                     17 ************************************************************************
                                                     18 *
                                                     19 *        basic instruction tests
                                                     20 *
                                                     21 ************************************************************************
                                                     22 *  This program tests proper functioning of the z/arch E6 VRI-f vector
                                                     23 *  packed decimal arithmetic instructions. Exceptions are not tested.
                                                     24 *
                                                     25 *  PLEASE NOTE that the tests are very SIMPLE TESTS designed to catch
                                                     26 *  obvious coding errors.  None of the tests are thorough.  They are
                                                     27 *  NOT designed to test all aspects of any of the instructions.
                                                     28 *
                                                     29 ************************************************************************
                                                     30 *
                                                     31 *  *Testcase VECTOR E6 VRI-f packed arithmetic instructions
                                                     32 *  *
                                                     33 *  *   Zvector E6 tests for VRI-f encoded packed decimal
                                                     34 *  *   arithmetic instructions:
                                                     35 *  *
                                                     36 *  *   E671 VAP    - VECTOR ADD DECIMAL
                                                     37 *  *   E673 VSP    - VECTOR SUBTRACT DECIMAL
                                                     38 *  *   E678 VMP    - VECTOR MULTIPLY DECIMAL
                                                     39 *  *   E679 VMSP   - VECTOR MULTIPLY AND SHIFT DECIMAL
                                                     40 *  *   E67A VDP    - VECTOR DIVIDE DECIMAL
                                                     41 *  *   E67B VRP    - VECTOR REMAINDER DECIMAL
                                                     42 *  *   E67E VSDP   - VECTOR SHIFT AND DIVIDE DECIMAL
                                                     43 *  *
                                                     44 *  *   # ---------------------------------------------------------
                                                     45 *  *   #  This tests only the basic function of the instruction.
                                                     46 *  *   #  Exceptions are NOT tested.
                                                     47 *  *   # ---------------------------------------------------------
                                                     48 *  *
                                                     49 *  mainsize    2
                                                     50 *  numcpu      1
                                                     51 *  sysclear
                                                     52 *  archlvl     z/Arch
                                                     53 *
                                                     54 *  loadcore    "$(testpath)/zvector-e6-05-packarith.core" 0x0
                                                     55 *
                                                     56 *  diag8cmd    enable    # (needed for messages to Hercules console)
                                                     57 *  runtest     2
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
                                                      58 *  diag8cmd    disable   # (reset back to default)
                                                      59 *
                                                      60 *  *Done
                                                      61 ********************************************************************************


                                00000000  00004EF7    63 ZVE6TST  START 0
00000000                        00000000              64          USING ZVE6TST,R0            Low core addressability
                                                      65
                                00000140  00000000    66 SVOLDPSW EQU   ZVE6TST+X'140'        z/Arch Supervisor call old PSW

00000000                        00000000  000001A0    68          ORG   ZVE6TST+X'1A0'        z/Architecure RESTART PSW
000001A0  00000001 80000000                           69          DC    X'0000000180000000'
000001A8  00000000 00000200                           70          DC    AD(BEGIN)

000001B0                        000001B0  000001D0    72          ORG   ZVE6TST+X'1D0'        z/Architecure PROGRAM CHECK PSW
000001D0  00020001 80000000                           73          DC    X'0002000180000000'
000001D8  00000000 0000DEAD                           74          DC    AD(X'DEAD')



000001E0                        000001E0  00000200    76          ORG   ZVE6TST+X'200'        Start of actual test program...
                                                      77
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

                                                      79 ************************************************************************
                                                      80 *               The actual "ZVE6TST" program itself...
                                                      81 ************************************************************************
                                                      82 *
                                                      83 *  Architecture Mode: z/Arch
                                                      84 *  Register Usage:
                                                      85 *
                                                      86 *   R0       (work)
                                                      87 *   R1-4     (work)
                                                      88 *   R5       Testing control table - current test base
                                                      89 *   R6-R7    (work)
                                                      90 *   R8       First base register
                                                      91 *   R9       Second base register
                                                      92 *   R10      Third base register
                                                      93 *   R11      E6TEST call return
                                                      94 *   R12      E6TESTS register
                                                      95 *   R13      (work)
                                                      96 *   R14      Subroutine call
                                                      97 *   R15      Secondary Subroutine call or work
                                                      98 *
                                                      99 ************************************************************************

00000200                          00000200           101          USING  BEGIN,R8         FIRST Base Register
00000200                          00001200           102          USING  BEGIN+4096,R9    SECOND Base Register

00000200  0580                                       104 BEGIN    BALR  R8,0              Initalize FIRST base register
00000202  0680                                       105          BCTR  R8,0              Initalize FIRST base register
00000204  0680                                       106          BCTR  R8,0              Initalize FIRST base register

00000206  4190 8800                       00000800   108          LA    R9,2048(,R8)      Initalize SECOND base register
0000020A  4190 9800                       00000800   109          LA    R9,2048(,R9)      Initalize SECOND base register

0000020E  41A0 9800                       00000800   111          LA    R10,2048(,R9)     Initalize THIRD base register
00000212  41A0 A800                       00000800   112          LA    R10,2048(,R10)    Initalize THIRD base register
                                                     113
00000216  B600 82AC                       000004AC   114          STCTL R0,R0,CTLR0       Store CR0 to enable AFP
0000021A  9604 82AD                       000004AD   115          OI    CTLR0+1,X'04'     Turn on AFP bit
0000021E  9602 82AD                       000004AD   116          OI    CTLR0+1,X'02'     Turn on Vector bit
00000222  B700 82AC                       000004AC   117          LCTL  R0,R0,CTLR0       Reload updated CR0
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
                                                     119 ***************************************************************************
                                                     120 *               Do tests in the E6TESTS table
                                                     121 ***************************************************************************
                                                     122
00000226  58C0 82B4                       000004B4  123           L     R12,E6TADR       get table of test addresses
                                                     124
                                0000022A  00000001  125 NEXTE6    EQU   *
0000022A  5850 C000                       00000000  126           L     R5,0(0,R12)       get test address
0000022E  1255                                      127           LTR   R5,R5                have a test?
00000230  4780 817E                       0000037E  128           BZ    ENDTEST                 done?
                                                     129
00000234  B982 0000                                 130           XGR   R0,R0              no cc error
                                                     131
00000238                        00000000            132           USING E6TEST,R5
                                                     133
00000238  4800 5004                       00000004  134           LH    R0,TNUM            save current test number
0000023C  5000 8E04                       00001004  135           ST    R0,TESTING         for easy reference
                                                     136
00000240  E710 8F28 0006                  00001128  137           VL    V1,V1FUDGE
00000246  58B0 5000                       00000000  138           L     R11,TSUB           get address of test routine
0000024A  05BB                                      139           BALR  R11,R11            do test
                                                     140
0000024C  E310 500A 0076                  0000000A  141           LB    R1,CCMASK          (failure CC mask)
00000252  8910 0004                       00000004  142           SLL   R1,4               (shift to BC instr CC position)
00000256  4410 8072                       00000272  143           EX    R1,TESTCC             fail if...
                                                     144
                                0000025A  00000001  145 TESTREST EQU   *
0000025A  E310 502C 0014                  0000002C  146           LGF   R1,READDR          get address of expected result
00000260  D50F 8F08 1000        00001108  00000000  147           CLC   V1OUTPUT,0(R1)     valid?
00000266  4770 8106                       00000306  148           BNE   FAILMSG               no, issue failed message
                                                     149
0000026A  41C0 C004                       00000004  150           LA    R12,4(0,R12)       next test address
0000026E  47F0 802A                       0000022A  151           B     NEXTE6
                                                     152
00000272  4700 8076                       00000276  153 TESTCC    BC    0,CCMSG           (fail if unexpected condition code)
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
                                                     155 ********************************************************************************
                                                     156 * cc was not as expected
                                                     157 ********************************************************************************
                                00000276  00000001   158 CCMSG    EQU   *
00000276  E310 0001 0082                   00000001   159          XG    R1,R1
0000027C  E310 5008 0076                   00000008   160          LB    R1,M5           M5 has CS bit
00000282  5410 82B8                        000004B8   161          N     R1,=F'1'        get CS (CC set) bit
00000286  4780 805A                        0000025A   162          BZ    TESTREST           ignore if not set
                                                     163 *
                                                     164 * extract CC extracted PSW
                                                     165 *
0000028A  5810 8EE8                        000010E8   166          L     R1,CCPSW
0000028E  8810 000C                        0000000C   167          SRL   R1,12
00000292  5410 82BC                        000004BC   168          N     R1,=XL4'3'
00000296  4210 8EF0                        000010F0   169          STC   R1,CCFOUND      save cc
                                                     170 *
                                                     171 * FILL IN MESSAGE
                                                     172 *
0000029A  4820 5004                        00000004   173          LH    R2,TNUM                  get test number and convert
0000029E  4E20 8ED5                        000010D5   174          CVD   R2,DECNUM
000002A2  D211 8EBF 8EA9       000010BF    000010A9   175          MVC   PRT3,EDIT
000002A8  DE11 8EBF 8ED5       000010BF    000010D5   176          ED    PRT3,DECNUM
000002AE  D202 8E64 8ECC       00001064    000010CC   177          MVC   CCPRTNUM(3),PRT3+13      fill in message with test #
                                                     178
000002B4  D207 8E81 5020       00001081    00000020   179          MVC   CCPRTNAME,OPNAME         fill in message with instruction
                                                     180
000002BA  B982 0022                                  181          XGR   R2,R2                    get CC as U8
000002BE  4320 5009                        00000009   182          IC    R2,CC
000002C2  4E20 8ED5                        000010D5   183          CVD   R2,DECNUM                and convert
000002C6  D211 8EBF 8EA9       000010BF    000010A9   184          MVC   PRT3,EDIT
000002CC  DE11 8EBF 8ED5       000010BF    000010D5   185          ED    PRT3,DECNUM
000002D2  D200 8E97 8ECE       00001097    000010CE   186          MVC   CCPRTEXP(1),PRT3+15      fill in message with CC field
                                                     187
000002D8  B982 0022                                  188          XGR   R2,R2                    get CCFOUND as U8
000002DC  4320 8EF0                        000010F0   189          IC    R2,CCFOUND
000002E0  4E20 8ED5                        000010D5   190          CVD   R2,DECNUM                and convert
000002E4  D211 8EBF 8EA9       000010BF    000010A9   191          MVC   PRT3,EDIT
000002EA  DE11 8EBF 8ED5       000010BF    000010D5   192          ED    PRT3,DECNUM
000002F0  D200 8EA7 8ECE       000010A7    000010CE   193          MVC   CCPRTGOT(1),PRT3+15    fill in message with ccfound
                                                     194
000002F6  4100 0055                        00000055   195          LA    R0,CCPRTLNG              message length
000002FA  4110 8E54                        00001054   196          LA    R1,CCPRTLINE             messagfe address
000002FE  45F0 818C                        0000038C   197          BAL   R15,RPTERROR
                                                     198
00000302  47F0 816E                        0000036E   199          B     FAILCONT
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
                                                     201 ************************************************************************
                                                     202 * result not as expected:
                                                     203 *        issue message with test number, instruction under test
                                                     204 *              and instruction m3
                                                     205 ************************************************************************
                               00000306  00000001    206 FAILMSG  EQU   *
00000306  4820 5004                      00000004    207          LH    R2,TNUM              get test number and convert
0000030A  4E20 8ED5                      000010D5    208          CVD   R2,DECNUM
0000030E  D211 8EBF 8EA9       000010BF  000010A9    209          MVC   PRT3,EDIT
00000314  DE11 8EBF 8ED5       000010BF  000010D5    210          ED    PRT3,DECNUM
0000031A  D202 8E18 8ECC       00001018  000010CC    211          MVC   PRTNUM(3),PRT3+13    fill in message with test #
                                                     212
00000320  D207 8E33 5020       00001033  00000020    213          MVC   PRTNAME,OPNAME       fill in message with instruction
                                                     214
00000326  B982 0022                                  215          XGR   R2,R2                get i4 as U8
0000032A  4320 5007                      00000007    216          IC    R2,I4
0000032E  4E20 8ED5                      000010D5    217          CVD   R2,DECNUM            and convert
00000332  D211 8EBF 8EA9       000010BF  000010A9    218          MVC   PRT3,EDIT
00000338  DE11 8EBF 8ED5       000010BF  000010D5    219          ED    PRT3,DECNUM
0000033E  D202 8E44 8ECC       00001044  000010CC    220          MVC   PRTI4(3),PRT3+13     fill in message with i4 field
                                                     221
00000344  B982 0022                                  222          XGR   R2,R2                get m5 as U8
00000348  4320 5008                      00000008    223          IC    R2,M5                and convert
0000034C  4E20 8ED5                      000010D5    224          CVD   R2,DECNUM
00000350  D211 8EBF 8EA9       000010BF  000010A9    225          MVC   PRT3,EDIT
00000356  DE11 8EBF 8ED5       000010BF  000010D5    226          ED    PRT3,DECNUM
0000035C  D201 8E51 8ECD       00001051  000010CD    227          MVC   PRTM5(2),PRT3+14     fill in message with m5 field
                                                     228
00000362  4100 004C                      0000004C    229          LA    R0,PRTLNG            message length
00000366  4110 8E08                      00001008    230          LA    R1,PRTLINE           messagfe address
0000036A  45F0 818C                      0000038C    231          BAL   R15,RPTERROR

                                                     233 ************************************************************************
                                                     234 * continue after a failed test
                                                     235 ************************************************************************
                               0000036E  00000001    236 FAILCONT EQU   *
0000036E  5800 82B8                      000004B8    237          L     R0,=F'1'             set GLOBAL failed test indicator
00000372  5000 8E00                      00001000    238          ST    R0,FAILED
                                                     239
00000376  41C0 C004                      00000004    240          LA    R12,4(0,R12)         next test address
0000037A  47F0 802A                      0000022A    241          B     NEXTE6


                                                     243 ************************************************************************
                                                     244 * end of testing; set ending psw
                                                     245 ************************************************************************
                               0000037E  00000001    246 ENDTEST  EQU   *
0000037E  5810 8E00                      00001000    247          L     R1,FAILED            did a test fail?
00000382  1211                                       248          LTR   R1,R1
00000384  4780 8290                      00000490    249          BZ    EOJ                  No, exit
00000388  47F0 82A8                      000004A8    250          B     FAILTEST             Yes, exit with BAD PSW
                                                     251
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
                                                    253 ********************************************************************************
                                                    254 *        RPTERROR          Report instruction test in error
                                                    255 *                             R0 = MESSGAE LENGTH
                                                    256 *                             R1 = ADDRESS OF MESSAGE
                                                    257 ********************************************************************************

0000038C  50F0 81AC                 000003AC    259 RPTERROR ST    R15,RPTSAVE          Save return address
00000390  5050 81B0                 000003B0    260          ST    R5,RPTSVR5           Save R5
                                                    261 *
                                                    262 *        Use Hercules Diagnose for Message to console
                                                    263 *
00000394  9002 81B8                 000003B8    264          STM   R0,R2,RPTDWSAV     save regs used by MSG
00000398  4520 81C8                 000003C8    265          BAL   R2,MSG             call Hercules console MSG display
0000039C  9802 81B8                 000003B8    266          LM    R0,R2,RPTDWSAV     restore regs


000003A0  5850 81B0                 000003B0    268          L     R5,RPTSVR5         Restore R5
000003A4  58F0 81AC                 000003AC    269          L     R15,RPTSAVE        Restore return address
000003A8  07FF                                  270          BR    R15                Return to caller

000003AC  00000000                              272 RPTSAVE  DC    F'0'               R15 save area
000003B0  00000000                              273 RPTSVR5  DC    F'0'               R5 save area

000003B8  00000000 00000000                     275 RPTDWSAV DC    2D'0'              R0-R2 save area for MSG call
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
                                                    277 ************************************************************************
                                                    278 *        Issue HERCULES MESSAGE pointed to by R1, length in R0
                                                    279 *              R2 = return address
                                                    280 ************************************************************************
                                                    281
000003C8  4900 82C0                  000004C0      282 MSG      CH    R0,=H'0'                 Do we even HAVE a message?
000003CC  07D2                                     283          BNHR  R2                       No, ignore
                                                   284
000003CE  9002 8204                  00000404      285          STM   R0,R2,MSGSAVE            Save registers
                                                   286
000003D2  4900 82C2                  000004C2      287          CH    R0,=AL2(L'MSGMSG)        Message length within limits?
000003D6  47D0 81DE                  000003DE      288          BNH   MSGOK                    Yes, continue
000003DA  4100 005F                  0000005F      289          LA    R0,L'MSGMSG              No, set to maximum
                                                   290
000003DE  1820                                     291 MSGOK    LR    R2,R0                    Copy length to work register
000003E0  0620                                     292          BCTR  R2,0                     Minus-1 for execute
000003E2  4420 8210                  00000410      293          EX    R2,MSGMVC                Copy message to O/P buffer
                                                   294
000003E6  4120 200A                  0000000A      295          LA    R2,1+L'MSGCMD(,R2)       Calculate true command length
000003EA  4110 8216                  00000416      296          LA    R1,MSGCMD                Point to true command
                                                   297
000003EE  83120008                                 298          DC    X'83',X'12',X'0008'      Issue Hercules Diagnose X'008'
000003F2  4780 81FE                  000003FE      299          BZ    MSGRET                   Return if successful
                                                   300
000003F6  1222                                     301          LTR   R2,R2                    Is Diag8 Ry (R2) 0?
000003F8  4780 81FE                  000003FE      302          BZ    MSGRET                     an error occurred but coninue
                                                   303
000003FC  0000                                     304          DC    H'0'                     CRASH for debugging purposes
                                                   305
000003FE  9802 8204                  00000404      306 MSGRET   LM    R0,R2,MSGSAVE            Restore registers
00000402  07F2                                     307          BR    R2                       Return to caller


00000404  00000000 00000000                        309 MSGSAVE  DC    3F'0'                    Registers save area
00000410  D200 821F 1000      0000041F  00000000   310 MSGMVC   MVC   MSGMSG(0),0(R1)          Executed instruction

00000416  D4E2C7D5 D6C8405C                        312 MSGCMD   DC    C'MSGNOH * '             *** HERCULES MESSAGE COMMAND ***
0000041F  40404040 40404040                        313 MSGMSG   DC    CL95' '                  The message text to be displayed
                                                   314
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
                                                    316 ************************************************************************
                                                    317 *        Normal completion or Abnormal termination PSWs
                                                    318 ************************************************************************


00000480  00020001 80000000                         320 EOJPSW   DC    0D'0',X'0002000180000000',AD(0)
00000490  B2B2 8280                   00000480      322 EOJ      LPSWE EOJPSW               Normal completion

00000498  00020001 80000000                         324 FAILPSW  DC    0D'0',X'0002000180000000',AD(X'BAD')
000004A8  B2B2 8298                   00000498      326 FAILTEST LPSWE FAILPSW              Abnormal termination


                                                    328 ************************************************************************
                                                    329 *        Working Storage
                                                    330 ************************************************************************

000004AC  00000000                                  332 CTLR0    DS    F                    CR0
000004B0  00000000                                  333          DS    F
                                                    334
000004B4  00004D0C                                  335 E6TADR   DC    A(E6TESTS)           address of E6 test table


000004B8                                            337          LTORG ,                    Literals pool
000004B8  00000001                                  338                =F'1'
000004BC  00000003                                  339                =XL4'3'
000004C0  0000                                      340                =H'0'
000004C2  005F                                      341                =AL2(L'MSGMSG)
                                                    342
                                                    343 *        some constants
                                                    344
                          00000400  00000001        345 K        EQU   1024                 One KB
                          00001000  00000001        346 PAGE     EQU   (4*K)                Size of one page
                          00010000  00000001        347 K64      EQU   (64*K)               64 KB
                          00100000  00000001        348 MB       EQU   (K*K)                 1 MB
                                                    349
                          AABBCCDD  00000001        350 REG2PATT EQU   X'AABBCCDD'      Polluted Register pattern
                          000000DD  00000001        351 REG2LOW  EQU         X'DD'      (last byte above)
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
                                                     353 *=====================================================================
                                                     354 *
                                                     355 *  NOTE: start data on an address that is easy to display
                                                     356 *        within Hercules
                                                     357 *
                                                     358 *=====================================================================
                                                     359
000004C4                      000004C4  00001000     360          ORG   ZVE6TST+X'1000'
00001000  00000000                                   361 FAILED   DC    F'0'                    some test failed?
00001004  00000000                                   362 TESTING  DC    F'0'                    current test number

                                                     364 ************************************************************************
                                                     365 *        TEST failed : result messgae
                                                     366 ************************************************************************
                                                     367 *
                                                     368 *        failed message and associated editting
                                                     369 *
00001008  40404040 40404040                          370 PRTLINE  DC    C'         Test # '
00001018  A7A7A7                                     371 PRTNUM   DC    C'xxx'
0000101B  40868189 93858440                          372          DC    C' failed for instruction '
00001033  A7A7A7A7 A7A7A7A7                          373 PRTNAME  DC    CL8'xxxxxxxx'
0000103B  40A689A3 884089F4                          374          DC    C' with i4='
00001044  A7A7A7                                     375 PRTI4    DC    C'xxx'
00001047  6B                                         376          DC    C','
00001048  40A689A3 884094F5                          377          DC    C' with m5='
00001051  A7A7                                       378 PRTM5    DC    C'xx'
00001053  4B                                         379          DC    C'.'
                                0000004C  00000001   380 PRTLNG   EQU   *-PRTLINE



                                                     382 ************************************************************************
                                                     383 *        TEST failed : CC message
                                                     384 ************************************************************************
                                                     385 *
                                                     386 *        failed message and associated editting
                                                     387 *
00001054  40404040 40404040                          388 CCPRTLINE DC   C'         Test # '
00001064  A7A7A7                                     389 CCPRTNUM DC    C'xxx'
00001067  40A69996 95874083                          390          DC    c' wrong cc for instruction '
00001081  A7A7A7A7 A7A7A7A7                          391 CCPRTNAME DC    CL8'xxxxxxxx'
00001089  4085A797 8583A385                          392          DC    C' expected: cc='
00001097  A7                                         393 CCPRTEXP DC    C'x'
00001098  6B                                         394          DC    C','
00001099  40998583 8589A585                          395          DC    C' received: cc='
000010A7  A7                                         396 CCPRTGOT DC    C'x'
000010A8  4B                                         397          DC    C'.'
                                00000055  00000001   398 CCPRTLNG   EQU   *-CCPRTLINE
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
                                                    400 ************************************************************************
                                                    401 *        TEST failed : message working storge
                                                    402 ************************************************************************
000010A9  40212020 20202020                         403 EDIT     DC    XL18'40212020202020202020202020202020'
                                                    404
000010BB  7E7E7E6E                                  405          DC    C'===>'
000010BF  40404040 40404040                         406 PRT3     DC    CL18' '
000010D1  4C7E7E7E                                  407          DC    C'<==='
000010D5  00000000 00000000                         408 DECNUM   DS    CL16
                                                    409 *
                                                    410 *        CC extrtaction
                                                    411 *
000010E8  00000000 00000000                         412 CCPSW    DS    2F          extract PSW after test (has CC)
000010F0  00                                        413 CCFOUND  DS    X           extracted cc


                                                    415 ************************************************************************
                                                    416 *        Vector instruction results, pollution and input
                                                    417 ************************************************************************
000010F8                                            418          DS    0FD
000010F8  00000000 00000000                         419          DS    XL16                                    gap
00001108  00000000 00000000                         420 V1OUTPUT DS    XL16                                  V1 OUTPUT
00001118  00000000 00000000                         421          DS    XL16                                    gap
00001128  FFFFFFFF FFFFFFFF                         422 V1FUDGE  DC    XL16'FFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF'  V1 FUDGE
00001138  F1F2F3F4 F5F6F7F8                         423 V1INPUT  DC    CL16'1234567890123456'                  V1 input
00001148  F7F8F9F0 F1F2F3F4                         424          DC    CL14'78901234567890'
00001156  D9                                        425          DC    X'D9'
00001157  00000000 00000000                         426 V2PACKED DS    XL16                  packed version of macro v2
00001167  00000000 00000000                         427 V3PACKED DS    XL16                  packed version of macro v3
00001177  00000000 00000000                         428          DS    XL16
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
                                                     430 ********************************************************************************
                                                     431 *        E6TEST DSECT
                                                     432 ********************************************************************************


                                                     434 E6TEST   DSECT ,
00000000  00000000                                   435 TSUB     DC    A(0)              pointer  to test
00000004  0000                                       436 TNUM     DC    H'00'             Test Number
00000006  00                                         437          DC    X'00'
00000007  00                                         438 I4       DC    HL1'00'           I4 used
00000008  00                                         439 M5       DC    HL1'00'           M5 used
00000009  00                                         440 CC       DC    HL1'00'           cc
0000000A  00                                         441 CCMASK   DC    HL1'00'           not expected CC mask
                                                     442
00000010  00000000 00000000                          443 V2VALUE  DC    FD'0'
00000018  00000000 00000000                          444 V3VALUE  DC    FD'0'
                                                     445
00000020  40404040 40404040                          446 OPNAME   DC    CL8' '            E6 name
                                                     447
00000028  00000000                                   448 RELEN    DC    A(0)              result length
0000002C  00000000                                   449 READDR   DC    A(0)              expected result address
                                                     450
                                                     451 *        EXPECTED RESULT
                                                     452 **
                                                     453 *        test routine will be here (from VRI_F macro)
```

```
  LOC         OBJECT CODE       ADDR1     ADDR2     STMT

                                                      455 ************************************************************************
                                                      456 *     Macros to help build test tables
                                                      457 *----------------------------------------------------------------------
                                                      458 *     VRI_F Macro to help build test tables
                                                      459 ************************************************************************
                                                      460          MACRO
                                                      461          VRI_F &INST,&V2,&V3,&I4,&M5,&CC
                                                      462 .*                                 &INST - VRI-f instruction under test
                                                      463 .*                                 &v2   - binary DW value for V2
                                                      464 .*                                 &v3   - binary DW value for V3
                                                      465 .*                                 &i4   - i4 field
                                                      466 .*                                 &m5   - m5 field
                                                      467 .*                                 &CC   - expected CC
                                                      468 .*
                                                      469          LCLA  &XCC(4)  &CC has mask values for FAILED condition codes
                                                      470 &XCC(1)  SETA  7                    CC != 0
                                                      471 &XCC(2)  SETA  11                   CC != 1
                                                      472 &XCC(3)  SETA  13                   CC != 2
                                                      473 &XCC(4)  SETA  14                   CC != 3
                                                      474
                                                      475          GBLA  &TNUM
                                                      476 &TNUM    SETA  &TNUM+1
                                                      477
                                                      478          DS    0FD
                                                      479          USING *,R5                 base for test data and test routine
                                                      480
                                                      481 T&TNUM   DC    A(X&TNUM)            address of test routine
                                                      482          DC    H'&TNUM'             test number
                                                      483          DC    X'00'
                                                      484          DC    HL1'&I4'             i4
                                                      485          DC    HL1'&M5'             m5
                                                      486          DC    HL1'&CC'             cc
                                                      487          DC    HL1'&XCC(&CC+1)'     cc failed mask
                                                      488 V2_&TNUM DC    FD'&V2'              binary value for v2 packed decimal
                                                      489 V3_&TNUM DC    FD'&V3'              binary value for v3 packed decimal
                                                      490          DC    CL8'&INST'           instruction name
                                                      491          DC    A(16)                result length
                                                      492 REA&TNUM DC    A(RE&TNUM)           result address
                                                      493 .*
                                                      494 *                                   INSTRUCTION UNDER TEST ROUTINE
                                                      495 X&TNUM   DS    0F
                                                      496          LG    R2,V2_&TNUM          convert v2
                                                      497          CVDG  R2,V2PACKED
                                                      498          VL    V2,V2PACKED
                                                      499
                                                      500          LG    R2,V3_&TNUM          convert v3
                                                      501          CVDG  R2,V3PACKED
                                                      502          VL    V3,V3PACKED
                                                      503
                                                      504          &INST V1,V2,V3,&I4,&M5     test instruction
                                                      505
                                                      506          VST   V1,V1OUTPUT          save result
                                                      507          EPSW  R2,R0                exptract psw
                                                      508          ST    R2,CCPSW                 to save CC
                                                      509          BR    R11                  return
                                                      510
```

```
  LOC         OBJECT CODE       ADDR1     ADDR2     STMT

                                                      511 RE&TNUM  DC    0F
                                                      512
                                                      513          DROP  R5
                                                      514          MEND
```

```
  LOC         OBJECT CODE       ADDR1     ADDR2     STMT

                                                      516 ************************************************************************
                                                      517 *     PTTABLE Macro to generate table of pointers to individual tests
                                                      518 ************************************************************************
                                                      519
                                                      520          MACRO
                                                      521          PTTABLE
                                                      522          GBLA  &TNUM
                                                      523          LCLA  &CUR
                                                      524 &CUR     SETA  1
                                                      525 .*
                                                      526 TTABLE   DS    0F
                                                      527 .LOOP    ANOP
                                                      528 .*
                                                      529          DC    A(T&CUR)           address of test
                                                      530 .*
                                                      531 &CUR     SETA  &CUR+1
                                                      532          AIF   (&CUR LE &TNUM).LOOP
                                                      533 *
                                                      534          DC    A(0)               END OF TABLE
                                                      535          DC    A(0)
                                                      536 .*
                                                      537          MEND
```

```
  LOC         OBJECT CODE       ADDR1     ADDR2     STMT
                                                      539 ********************************************************************************
                                                      540 *        E6 VRI_F tests
                                                      541 ********************************************************************************
                              00000000  00004EF7    542 ZVE6TST  CSECT ,
00001188                                            543          DS    0F


                                                      545          PRINT DATA
                                                      546 *
                                                      547 *        E671 VAP    - VECTOR ADD DECIMAL
                                                      548 *        E673 VSP    - VECTOR SUBTRACT DECIMAL
                                                      549 *        E678 VMP    - VECTOR MULTIPLY DECIMAL
                                                      550 *        E679 VMSP   - VECTOR MULTIPLY AND SHIFT DECIMAL
                                                      551 *        E67A VDP    - VECTOR DIVIDE DECIMAL
                                                      552 *        E67B VRP    - VECTOR REMAINDER DECIMAL
                                                      553 *        E67E VSDP   - VECTOR SHIFT AND DIVIDE DECIMAL
                                                      554
                                                      555 *        VRI_F instr,v2,v3,i4,m5,cc
                                                      556 *             followed by 16 byte expected result
                                                      557
                                                      558 *-------------------------------------------------------------------
                                                      559 *  VAP    - VECTOR ADD DECIMAL
                                                      560 *-------------------------------------------------------------------
                                                      561 * VAP simple + CC checks
                                                      562          VRI_F VAP,+10,+12,7,1,2
00001188                                              563+         DS    0FD
00001188                              00001188        564+         USING *,R5              base for test data and test routine
00001188  000011B8                                    565+T1       DC    A(X1)             address of test routine
0000118C  0001                                        566+         DC    H'1'              test number
0000118E  00                                          567+         DC    X'00'
0000118F  07                                          568+         DC    HL1'7'            i4
00001190  01                                          569+         DC    HL1'1'            m5
00001191  02                                          570+         DC    HL1'2'            cc
00001192  0D                                          571+         DC    HL1'13'           cc failed mask
00001198  00000000 0000000A                           572+V2_1     DC    FD'+10'           binary value for v2 packed decimal
000011A0  00000000 0000000C                           573+V3_1     DC    FD'+12'           binary value for v3 packed decimal
000011A8  E5C1D740 40404040                           574+         DC    CL8'VAP'          instruction name
000011B0  00000010                                    575+         DC    A(16)             result length
000011B4  000011F4                                    576+REA1     DC    A(RE1)            result address
                                                      577+*                                  INSTRUCTION UNDER TEST ROUTINE
000011B8                                              578+X1       DS    0F
000011B8  E320 5010 0004                 00001198     579+         LG    R2,V2_1           convert v2
000011BE  E320 8F57 002E                 00001157     580+         CVDG  R2,V2PACKED
000011C4  E720 8F57 0006                 00001157     581+         VL    V2,V2PACKED
000011CA  E320 5018 0004                 000011A0     582+         LG    R2,V3_1           convert v3
000011D0  E320 8F67 002E                 00001167     583+         CVDG  R2,V3PACKED
000011D6  E730 8F67 0006                 00001167     584+         VL    V3,V3PACKED
000011DC  E612 3010 7071                              585+         VAP   V1,V2,V3,7,1      test instruction
000011E2  E710 8F08 000E                 00001108     586+         VST   V1,V1OUTPUT       save result
000011E8  B98D 0020                                   587+         EPSW  R2,R0             exptract psw
000011EC  5020 8EE8                      000010E8     588+         ST    R2,CCPSW              to save CC
000011F0  07FB                                       589+         BR    R11               return
000011F4                                              590+RE1      DC    0F
000011F4                                              591+         DROP  R5
000011F4  00000000 00000000                          592          DC    XL16'0000000000000000000000000000022C'
000011FC  00000000 0000022C
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
                                                     593
                                                     594          VRI_F VAP,-10,+12,7,1,2
00001208                                             595+         DS    0FD
00001208                       00001208              596+         USING *,R5              base for test data and test routine
00001208  00001238                                   597+T2       DC    A(X2)             address of test routine
0000120C  0002                                       598+         DC    H'2'              test number
0000120E  00                                         599+         DC    X'00'
0000120F  07                                         600+         DC    HL1'7'            i4
00001210  01                                         601+         DC    HL1'1'            m5
00001211  02                                         602+         DC    HL1'2'            cc
00001212  0D                                         603+         DC    HL1'13'           cc failed mask
00001218  FFFFFFFF FFFFFFF6                          604+V2_2     DC    FD'-10'           binary value for v2 packed decimal
00001220  00000000 0000000C                          605+V3_2     DC    FD'+12'           binary value for v3 packed decimal
00001228  E5C1D740 40404040                          606+         DC    CL8'VAP'          instruction name
00001230  00000010                                   607+         DC    A(16)             result length
00001234  00001274                                   608+REA2     DC    A(RE2)            result address
                                                     609+*                                INSTRUCTION UNDER TEST ROUTINE
00001238                                             610+X2       DS    0F
00001238  E320 5010 0004                 00001218    611+         LG    R2,V2_2           convert v2
0000123E  E320 8F57 002E                 00001157    612+         CVDG  R2,V2PACKED
00001244  E720 8F57 0006                 00001157    613+         VL    V2,V2PACKED
0000124A  E320 5018 0004                 00001220    614+         LG    R2,V3_2           convert v3
00001250  E320 8F67 002E                 00001167    615+         CVDG  R2,V3PACKED
00001256  E730 8F67 0006                 00001167    616+         VL    V3,V3PACKED
0000125C  E612 3010 7071                             617+         VAP   V1,V2,V3,7,1      test instruction
00001262  E710 8F08 000E                 00001108    618+         VST   V1,V1OUTPUT       save result
00001268  B98D 0020                                  619+         EPSW  R2,R0             exptract psw
0000126C  5020 8EE8                      000010E8    620+         ST    R2,CCPSW              to save CC
00001270  07FB                                       621+         BR    R11               return
00001274                                             622+RE2      DC    0F
00001274                                             623+         DROP  R5
00001274  00000000 00000000                          624          DC    XL16'00000000000000000000000000000000002C'
0000127C  00000000 0000002C
                                                     625
                                                     626          VRI_F VAP,+10,-12,7,1,1
00001288                                             627+         DS    0FD
00001288                       00001288              628+         USING *,R5              base for test data and test routine
00001288  000012B8                                   629+T3       DC    A(X3)             address of test routine
0000128C  0003                                       630+         DC    H'3'              test number
0000128E  00                                         631+         DC    X'00'
0000128F  07                                         632+         DC    HL1'7'            i4
00001290  01                                         633+         DC    HL1'1'            m5
00001291  01                                         634+         DC    HL1'1'            cc
00001292  0B                                         635+         DC    HL1'11'           cc failed mask
00001298  00000000 0000000A                          636+V2_3     DC    FD'+10'           binary value for v2 packed decimal
000012A0  FFFFFFFF FFFFFFF4                          637+V3_3     DC    FD'-12'           binary value for v3 packed decimal
000012A8  E5C1D740 40404040                          638+         DC    CL8'VAP'          instruction name
000012B0  00000010                                   639+         DC    A(16)             result length
000012B4  000012F4                                   640+REA3     DC    A(RE3)            result address
                                                     641+*                                INSTRUCTION UNDER TEST ROUTINE
000012B8                                             642+X3       DS    0F
000012B8  E320 5010 0004                 00001298    643+         LG    R2,V2_3           convert v2
000012BE  E320 8F57 002E                 00001157    644+         CVDG  R2,V2PACKED
000012C4  E720 8F57 0006                 00001157    645+         VL    V2,V2PACKED
000012CA  E320 5018 0004                 000012A0    646+         LG    R2,V3_3           convert v3
000012D0  E320 8F67 002E                 00001167    647+         CVDG  R2,V3PACKED
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2    STMT

000012D6  E730 8F67 0006                 00001167   648+         VL    V3,V3PACKED
000012DC  E612 3010 7071                            649+         VAP   V1,V2,V3,7,1      test instruction
000012E2  E710 8F08 000E                 00001108   650+         VST   V1,V1OUTPUT       save result
000012E8  B98D 0020                                 651+         EPSW  R2,R0             exptract psw
000012EC  5020 8EE8                      000010E8   652+         ST    R2,CCPSW              to save CC
000012F0  07FB                                      653+         BR    R11               return
000012F4                                            654+RE3      DC    0F
000012F4                                            655+         DROP  R5
000012F4  00000000 00000000                         656          DC    XL16'00000000000000000000000000000002D'
000012FC  00000000 0000002D
                                                    657
                                                    658          VRI_F VAP,-10,-12,7,1,1
00001308                                            659+         DS    0FD
00001308                         00001308           660+         USING *,R5              base for test data and test routine
00001308  00001338                                  661+T4       DC    A(X4)             address of test routine
0000130C  0004                                      662+         DC    H'4'              test number
0000130E  00                                        663+         DC    X'00'
0000130F  07                                        664+         DC    HL1'7'            i4
00001310  01                                        665+         DC    HL1'1'            m5
00001311  01                                        666+         DC    HL1'1'            cc
00001312  0B                                        667+         DC    HL1'11'           cc failed mask
00001318  FFFFFFFF FFFFFFF6                         668+V2_4     DC    FD'-10'           binary value for v2 packed decimal
00001320  FFFFFFFF FFFFFFF4                         669+V3_4     DC    FD'-12'           binary value for v3 packed decimal
00001328  E5C1D740 40404040                         670+         DC    CL8'VAP'          instruction name
00001330  00000010                                  671+         DC    A(16)             result length
00001334  00001374                                  672+REA4     DC    A(RE4)            result address
                                                    673+*                                INSTRUCTION UNDER TEST ROUTINE
00001338                                            674+X4       DS    0F
00001338  E320 5010 0004                 00001318   675+         LG    R2,V2_4           convert v2
0000133E  E320 8F57 002E                 00001157   676+         CVDG  R2,V2PACKED
00001344  E720 8F57 0006                 00001157   677+         VL    V2,V2PACKED
0000134A  E320 5018 0004                 00001320   678+         LG    R2,V3_4           convert v3
00001350  E320 8F67 002E                 00001167   679+         CVDG  R2,V3PACKED
00001356  E730 8F67 0006                 00001167   680+         VL    V3,V3PACKED
0000135C  E612 3010 7071                            681+         VAP   V1,V2,V3,7,1      test instruction
00001362  E710 8F08 000E                 00001108   682+         VST   V1,V1OUTPUT       save result
00001368  B98D 0020                                 683+         EPSW  R2,R0             exptract psw
0000136C  5020 8EE8                      000010E8   684+         ST    R2,CCPSW              to save CC
00001370  07FB                                      685+         BR    R11               return
00001374                                            686+RE4      DC    0F
00001374                                            687+         DROP  R5
00001374  00000000 00000000                         688          DC    XL16'00000000000000000000000000000022D'
0000137C  00000000 0000022D
                                                    689
                                                    690          VRI_F VAP,-10,+10,7,1,0
00001388                                            691+         DS    0FD
00001388                         00001388           692+         USING *,R5              base for test data and test routine
00001388  000013B8                                  693+T5       DC    A(X5)             address of test routine
0000138C  0005                                      694+         DC    H'5'              test number
0000138E  00                                        695+         DC    X'00'
0000138F  07                                        696+         DC    HL1'7'            i4
00001390  01                                        697+         DC    HL1'1'            m5
00001391  00                                        698+         DC    HL1'0'            cc
00001392  07                                        699+         DC    HL1'7'            cc failed mask
00001398  FFFFFFFF FFFFFFF6                         700+V2_5     DC    FD'-10'           binary value for v2 packed decimal
000013A0  00000000 0000000A                         701+V3_5     DC    FD'+10'           binary value for v3 packed decimal
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

000013A8  E5C1D740 40404040                          702+          DC    CL8'VAP'           instruction name
000013B0  00000010                                   703+          DC    A(16)              result length
000013B4  000013F4                                   704+REA5      DC    A(RE5)             result address
                                                     705+*                                  INSTRUCTION UNDER TEST ROUTINE
000013B8                                             706+X5        DS    0F
000013B8  E320 5010 0004                 00001398    707+          LG    R2,V2_5            convert v2
000013BE  E320 8F57 002E                 00001157    708+          CVDG  R2,V2PACKED
000013C4  E720 8F57 0006                 00001157    709+          VL    V2,V2PACKED
000013CA  E320 5018 0004                 000013A0    710+          LG    R2,V3_5            convert v3
000013D0  E320 8F67 002E                 00001167    711+          CVDG  R2,V3PACKED
000013D6  E730 8F67 0006                 00001167    712+          VL    V3,V3PACKED
000013DC  E612 3010 7071                             713+          VAP   V1,V2,V3,7,1       test instruction
000013E2  E710 8F08 000E                 00001108    714+          VST   V1,V1OUTPUT        save result
000013E8  B98D 0020                                  715+          EPSW  R2,R0              exptract psw
000013EC  5020 8EE8                      000010E8    716+          ST    R2,CCPSW                 to save CC
000013F0  07FB                                       717+          BR    R11                return
000013F4                                             718+RE5       DC    0F
000013F4                                             719+          DROP  R5
000013F4  00000000 00000000                          720           DC    XL16'0000000000000000000000000000000C'
000013FC  00000000 0000000C
                                                     721
                                                     722           VRI_F VAP,+10000000000,+10,135,1,3     i4=135(iom=1 & rdc=7)
00001408                                             723+          DS    0FD
00001408                       00001408              724+          USING *,R5               base for test data and test routine
00001408  00001438                                   725+T6        DC    A(X6)              address of test routine
0000140C  0006                                       726+          DC    H'6'               test number
0000140E  00                                         727+          DC    X'00'
0000140F  87                                         728+          DC    HL1'135'           i4
00001410  01                                         729+          DC    HL1'1'             m5
00001411  03                                         730+          DC    HL1'3'             cc
00001412  0E                                         731+          DC    HL1'14'            cc failed mask
00001418  00000002 540BE400                          732+V2_6      DC    FD'+10000000000'   binary value for v2 packed decimal
00001420  00000000 0000000A                          733+V3_6      DC    FD'+10'            binary value for v3 packed decimal
00001428  E5C1D740 40404040                          734+          DC    CL8'VAP'           instruction name
00001430  00000010                                   735+          DC    A(16)              result length
00001434  00001474                                   736+REA6      DC    A(RE6)             result address
                                                     737+*                                  INSTRUCTION UNDER TEST ROUTINE
00001438                                             738+X6        DS    0F
00001438  E320 5010 0004                 00001418    739+          LG    R2,V2_6            convert v2
0000143E  E320 8F57 002E                 00001157    740+          CVDG  R2,V2PACKED
00001444  E720 8F57 0006                 00001157    741+          VL    V2,V2PACKED
0000144A  E320 5018 0004                 00001420    742+          LG    R2,V3_6            convert v3
00001450  E320 8F67 002E                 00001167    743+          CVDG  R2,V3PACKED
00001456  E730 8F67 0006                 00001167    744+          VL    V3,V3PACKED
0000145C  E612 3018 7071                             745+          VAP   V1,V2,V3,135,1     test instruction
00001462  E710 8F08 000E                 00001108    746+          VST   V1,V1OUTPUT        save result
00001468  B98D 0020                                  747+          EPSW  R2,R0              exptract psw
0000146C  5020 8EE8                      000010E8    748+          ST    R2,CCPSW                 to save CC
00001470  07FB                                       749+          BR    R11                return
00001474                                             750+RE6       DC    0F
00001474                                             751+          DROP  R5
00001474  00000000 00000000                          752           DC    XL16'0000000000000000000000000000010C'
0000147C  00000000 0000010C
                                                     753
                                                     754 * VAP larger #'s , i4=159(iom=1 & rdc=31)
                                                     755           VRI_F VAP,+99999999999999999,+1,159,1,2
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

00001488                                    756+         DS    0FD
00001488                     00001488       757+         USING *,R5              base for test data and test routine
00001488  000014B8                          758+T7       DC    A(X7)             address of test routine
0000148C  0007                              759+         DC    H'7'              test number
0000148E  00                                760+         DC    X'00'
0000148F  9F                                761+         DC    HL1'159'          i4
00001490  01                                762+         DC    HL1'1'            m5
00001491  02                                763+         DC    HL1'2'            cc
00001492  0D                                764+         DC    HL1'13'           cc failed mask
                                            765+V2_7     DC    FD'+99999999999999999' \
00001498  01634578 5D89FFFF                    +                               binary value for v2 packed decimal
000014A0  00000000 00000001                 766+V3_7     DC    FD'+1'            binary value for v3 packed decimal
000014A8  E5C1D740 40404040                 767+         DC    CL8'VAP'          instruction name
000014B0  00000010                          768+         DC    A(16)             result length
000014B4  000014F4                          769+REA7     DC    A(RE7)            result address
                                            770+*                               INSTRUCTION UNDER TEST ROUTINE
000014B8                                    771+X7       DS    0F
000014B8  E320 5010 0004          00001498  772+         LG    R2,V2_7           convert v2
000014BE  E320 8F57 002E          00001157  773+         CVDG  R2,V2PACKED
000014C4  E720 8F57 0006          00001157  774+         VL    V2,V2PACKED
000014CA  E320 5018 0004          000014A0  775+         LG    R2,V3_7           convert v3
000014D0  E320 8F67 002E          00001167  776+         CVDG  R2,V3PACKED
000014D6  E730 8F67 0006          00001167  777+         VL    V3,V3PACKED
000014DC  E612 3019 F071                    778+         VAP   V1,V2,V3,159,1    test instruction
000014E2  E710 8F08 000E          00001108  779+         VST   V1,V1OUTPUT       save result
000014E8  B98D 0020                         780+         EPSW  R2,R0             exptract psw
000014EC  5020 8EE8               000010E8  781+         ST    R2,CCPSW                to save CC
000014F0  07FB                              782+         BR    R11               return
000014F4                                    783+RE7      DC    0F
000014F4                                    784+         DROP  R5
000014F4  00000000 00000100                 785          DC    XL16'0000000000001000000000000000000C'
000014FC  00000000 0000000C
                                            786
                                            787          VRI_F VAP,+99999999999999999,+10000000000000000,159,1,2
00001508                                    788+         DS    0FD
00001508                     00001508       789+         USING *,R5              base for test data and test routine
00001508  00001538                          790+T8       DC    A(X8)             address of test routine
0000150C  0008                              791+         DC    H'8'              test number
0000150E  00                                792+         DC    X'00'
0000150F  9F                                793+         DC    HL1'159'          i4
00001510  01                                794+         DC    HL1'1'            m5
00001511  02                                795+         DC    HL1'2'            cc
00001512  0D                                796+         DC    HL1'13'           cc failed mask
                                            797+V2_8     DC    FD'+99999999999999999' \
00001518  01634578 5D89FFFF                    +                               binary value for v2 packed decimal
                                            798+V3_8     DC    FD'+10000000000000000' \
00001520  002386F2 6FC10000                    +                               binary value for v3 packed decimal
00001528  E5C1D740 40404040                 799+         DC    CL8'VAP'          instruction name
00001530  00000010                          800+         DC    A(16)             result length
00001534  00001574                          801+REA8     DC    A(RE8)            result address
                                            802+*                               INSTRUCTION UNDER TEST ROUTINE
00001538                                    803+X8       DS    0F
00001538  E320 5010 0004          00001518  804+         LG    R2,V2_8           convert v2
0000153E  E320 8F57 002E          00001157  805+         CVDG  R2,V2PACKED
00001544  E720 8F57 0006          00001157  806+         VL    V2,V2PACKED
0000154A  E320 5018 0004          00001520  807+         LG    R2,V3_8           convert v3
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2    STMT

00001550  E320 8F67 002E                 00001167   808+         CVDG  R2,V3PACKED
00001556  E730 8F67 0006                 00001167   809+         VL    V3,V3PACKED
0000155C  E612 3019 F071                            810+         VAP   V1,V2,V3,159,1    test instruction
00001562  E710 8F08 000E                 00001108   811+         VST   V1,V1OUTPUT       save result
00001568  B98D 0020                                 812+         EPSW  R2,R0             exptract psw
0000156C  5020 8EE8                      000010E8   813+         ST    R2,CCPSW              to save CC
00001570  07FB                                      814+         BR    R11               return
00001574                                            815+RE8      DC    0F
00001574                                            816+         DROP  R5
00001574  00000000 00000109                         817          DC    XL16'0000000000000109999999999999999C'
0000157C  99999999 9999999C
                                                    818
                                                    819          VRI_F VAP,-9999999999999999,-1,159,1,1
00001588                                            820+         DS    0FD
00001588                    00001588                821+         USING *,R5              base for test data and test routine
00001588  000015B8                                  822+T9       DC    A(X9)             address of test routine
0000158C  0009                                      823+         DC    H'9'              test number
0000158E  00                                        824+         DC    X'00'
0000158F  9F                                        825+         DC    HL1'159'          i4
00001590  01                                        826+         DC    HL1'1'            m5
00001591  01                                        827+         DC    HL1'1'            cc
00001592  0B                                        828+         DC    HL1'11'           cc failed mask
                                                    829+V2_9     DC    FD'-9999999999999999' \
00001598  FFDC790D 903F0001                            +                                 binary value for v2 packed decimal
000015A0  FFFFFFFF FFFFFFFF                         830+V3_9     DC    FD'-1'            binary value for v3 packed decimal
000015A8  E5C1D740 40404040                         831+         DC    CL8'VAP'          instruction name
000015B0  00000010                                  832+         DC    A(16)             result length
000015B4  000015F4                                  833+REA9     DC    A(RE9)            result address
                                                    834+*                                INSTRUCTION UNDER TEST ROUTINE
000015B8                                            835+X9       DS    0F
000015B8  E320 5010 0004                 00001598   836+         LG    R2,V2_9           convert v2
000015BE  E320 8F57 002E                 00001157   837+         CVDG  R2,V2PACKED
000015C4  E720 8F57 0006                 00001157   838+         VL    V2,V2PACKED
000015CA  E320 5018 0004                 000015A0   839+         LG    R2,V3_9           convert v3
000015D0  E320 8F67 002E                 00001167   840+         CVDG  R2,V3PACKED
000015D6  E730 8F67 0006                 00001167   841+         VL    V3,V3PACKED
000015DC  E612 3019 F071                            842+         VAP   V1,V2,V3,159,1    test instruction
000015E2  E710 8F08 000E                 00001108   843+         VST   V1,V1OUTPUT       save result
000015E8  B98D 0020                                 844+         EPSW  R2,R0             exptract psw
000015EC  5020 8EE8                      000010E8   845+         ST    R2,CCPSW              to save CC
000015F0  07FB                                      846+         BR    R11               return
000015F4                                            847+RE9      DC    0F
000015F4                                            848+         DROP  R5
000015F4  00000000 00000010                         849          DC    XL16'0000000000000010000000000000000D'
000015FC  00000000 0000000D
                                                    850
                                                    851 * VAP larger #'s , i4=159(iom=1 & rdc=31)              CS=1 for all m5
                                                    852 * check forced positive
                                                    853          VRI_F VAP,-9999999999999999,+1,159,9,2      m5=9(P2=1)
00001608                                            854+         DS    0FD
00001608                    00001608                855+         USING *,R5              base for test data and test routine
00001608  00001638                                  856+T10      DC    A(X10)            address of test routine
0000160C  000A                                      857+         DC    H'10'             test number
0000160E  00                                        858+         DC    X'00'
0000160F  9F                                        859+         DC    HL1'159'          i4
00001610  09                                        860+         DC    HL1'9'            m5
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2    STMT
00001611  02                                       861+          DC    HL1'2'              cc
00001612  0D                                       862+          DC    HL1'13'             cc failed mask
                                                   863+V2_10     DC    FD'-99999999999999999' \
00001618  FE9CBA87 A2760001                           +                                    binary value for v2 packed decimal
00001620  00000000 00000001                        864+V3_10     DC    FD'+1'              binary value for v3 packed decimal
00001628  E5C1D740 40404040                        865+          DC    CL8'VAP'            instruction name
00001630  00000010                                 866+          DC    A(16)               result length
00001634  00001674                                 867+REA10     DC    A(RE10)             result address
                                                   868+*                                   INSTRUCTION UNDER TEST ROUTINE
00001638                                           869+X10       DS    0F
00001638  E320 5010 0004                00001618   870+          LG    R2,V2_10            convert v2
0000163E  E320 8F57 002E                00001157   871+          CVDG  R2,V2PACKED
00001644  E720 8F57 0006                00001157   872+          VL    V2,V2PACKED
0000164A  E320 5018 0004                00001620   873+          LG    R2,V3_10            convert v3
00001650  E320 8F67 002E                00001167   874+          CVDG  R2,V3PACKED
00001656  E730 8F67 0006                00001167   875+          VL    V3,V3PACKED
0000165C  E612 3099 F071                           876+          VAP   V1,V2,V3,159,9      test instruction
00001662  E710 8F08 000E                00001108   877+          VST   V1,V1OUTPUT         save result
00001668  B98D 0020                                878+          EPSW  R2,R0               exptract psw
0000166C  5020 8EE8                     000010E8   879+          ST    R2,CCPSW                to save CC
00001670  07FB                                     880+          BR    R11                 return
00001674                                           881+RE10      DC    0F
00001674                                           882+          DROP  R5
00001674  00000000 00000100                        883           DC    XL16'00000000000010000000000000000C'
0000167C  00000000 0000000C
                                                   884
                                                   885           VRI_F VAP,-99999999999999999,-10000000000000000,159,13,2
00001688                                           886+          DS    0FD
00001688                        00001688           887+          USING *,R5                base for test data and test routine
00001688  000016B8                                 888+T11       DC    A(X11)              address of test routine
0000168C  000B                                     889+          DC    H'11'               test number
0000168E  00                                       890+          DC    X'00'
0000168F  9F                                       891+          DC    HL1'159'            i4
00001690  0D                                       892+          DC    HL1'13'             m5
00001691  02                                       893+          DC    HL1'2'              cc
00001692  0D                                       894+          DC    HL1'13'             cc failed mask
                                                   895+V2_11     DC    FD'-99999999999999999' \
00001698  FE9CBA87 A2760001                           +                                    binary value for v2 packed decimal
                                                   896+V3_11     DC    FD'-10000000000000000' \
000016A0  FFDC790D 903F0000                            +                                   binary value for v3 packed decimal
000016A8  E5C1D740 40404040                        897+          DC    CL8'VAP'            instruction name
000016B0  00000010                                 898+          DC    A(16)               result length
000016B4  000016F4                                 899+REA11     DC    A(RE11)             result address
                                                   900+*                                   INSTRUCTION UNDER TEST ROUTINE
000016B8                                           901+X11       DS    0F
000016B8  E320 5010 0004                00001698   902+          LG    R2,V2_11            convert v2
000016BE  E320 8F57 002E                00001157   903+          CVDG  R2,V2PACKED
000016C4  E720 8F57 0006                00001157   904+          VL    V2,V2PACKED
000016CA  E320 5018 0004                000016A0   905+          LG    R2,V3_11            convert v3
000016D0  E320 8F67 002E                00001167   906+          CVDG  R2,V3PACKED
000016D6  E730 8F67 0006                00001167   907+          VL    V3,V3PACKED
000016DC  E612 30D9 F071                           908+          VAP   V1,V2,V3,159,13     test instruction
000016E2  E710 8F08 000E                00001108   909+          VST   V1,V1OUTPUT         save result
000016E8  B98D 0020                                910+          EPSW  R2,R0               exptract psw
000016EC  5020 8EE8                     000010E8   911+          ST    R2,CCPSW                to save CC
000016F0  07FB                                     912+          BR    R11                 return
```

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  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
000016F4                                           913+RE11     DC    0F
000016F4                                           914+         DROP  R5
000016F4  00000000 00000109                        915          DC    XL16'0000000000000109999999999999999C' m5=13(P2=1,P3=1)
000016FC  99999999 9999999C
                                                   916
                                                   917          VRI_F VAP,-9999999999999999,-1,159,3,2       m5=3(P1=1)
00001708                                           918+         DS    0FD
00001708                     00001708              919+         USING *,R5              base for test data and test routine
00001708  00001738                                 920+T12      DC    A(X12)            address of test routine
0000170C  000C                                     921+         DC    H'12'             test number
0000170E  00                                       922+         DC    X'00'
0000170F  9F                                       923+         DC    HL1'159'          i4
00001710  03                                       924+         DC    HL1'3'            m5
00001711  02                                       925+         DC    HL1'2'            cc
00001712  0D                                       926+         DC    HL1'13'           cc failed mask
                                                   927+V2_12    DC    FD'-9999999999999999' \
00001718  FFDC790D 903F0001                          +                                 binary value for v2 packed decimal
00001720  FFFFFFFF FFFFFFFF                        928+V3_12    DC    FD'-1'            binary value for v3 packed decimal
00001728  E5C1D740 40404040                       929+         DC    CL8'VAP'          instruction name
00001730  00000010                               930+         DC    A(16)             result length
00001734  00001774                               931+REA12    DC    A(RE12)           result address
                                                   932+*                               INSTRUCTION UNDER TEST ROUTINE
00001738                                           933+X12      DS    0F
00001738  E320 5010 0004           00001718        934+         LG    R2,V2_12          convert v2
0000173E  E320 8F57 002E           00001157        935+         CVDG  R2,V2PACKED
00001744  E720 8F57 0006           00001157        936+         VL    V2,V2PACKED
0000174A  E320 5018 0004           00001720        937+         LG    R2,V3_12          convert v3
00001750  E320 8F67 002E           00001167        938+         CVDG  R2,V3PACKED
00001756  E730 8F67 0006           00001167        939+         VL    V3,V3PACKED
0000175C  E612 3039 F071                           940+         VAP   V1,V2,V3,159,3    test instruction
00001762  E710 8F08 000E           00001108        941+         VST   V1,V1OUTPUT       save result
00001768  B98D 0020                                942+         EPSW  R2,R0             exptract psw
0000176C  5020 8EE8                000010E8        943+         ST    R2,CCPSW              to save CC
00001770  07FB                                     944+         BR    R11               return
00001774                                           945+RE12     DC    0F
00001774                                           946+         DROP  R5
00001774  00000000 00000010                        947          DC    XL16'00000000000000100000000000000000F'
0000177C  00000000 0000000F
                                                   948
                                                   949 *-------------------------------------------------------------------
                                                   950 *  VSP    - VECTOR SUBTRACT DECIMAL
                                                   951 *-------------------------------------------------------------------
                                                   952 * VSP simple + CC checks
                                                   953          VRI_F VSP,+10,+12,7,1,1
00001788                                           954+         DS    0FD
00001788                     00001788              955+         USING *,R5              base for test data and test routine
00001788  000017B8                                 956+T13      DC    A(X13)            address of test routine
0000178C  000D                                     957+         DC    H'13'             test number
0000178E  00                                       958+         DC    X'00'
0000178F  07                                       959+         DC    HL1'7'            i4
00001790  01                                       960+         DC    HL1'1'            m5
00001791  01                                       961+         DC    HL1'1'            cc
00001792  0B                                       962+         DC    HL1'11'           cc failed mask
00001798  00000000 0000000A                        963+V2_13    DC    FD'+10'           binary value for v2 packed decimal
000017A0  00000000 0000000C                        964+V3_13    DC    FD'+12'           binary value for v3 packed decimal
000017A8  E5E2D740 40404040                        965+         DC    CL8'VSP'          instruction name
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
000017B0  00000010                                966+          DC    A(16)              result length
000017B4  000017F4                                967+REA13     DC    A(RE13)            result address
                                                  968+*                                  INSTRUCTION UNDER TEST ROUTINE
000017B8                                          969+X13       DS    0F
000017B8  E320 5010 0004                 00001798 970+          LG    R2,V2_13           convert v2
000017BE  E320 8F57 002E                 00001157 971+          CVDG  R2,V2PACKED
000017C4  E720 8F57 0006                 00001157 972+          VL    V2,V2PACKED
000017CA  E320 5018 0004                 000017A0 973+          LG    R2,V3_13           convert v3
000017D0  E320 8F67 002E                 00001167 974+          CVDG  R2,V3PACKED
000017D6  E730 8F67 0006                 00001167 975+          VL    V3,V3PACKED
000017DC  E612 3010 7073                          976+          VSP   V1,V2,V3,7,1       test instruction
000017E2  E710 8F08 000E                 00001108 977+          VST   V1,V1OUTPUT        save result
000017E8  B98D 0020                               978+          EPSW  R2,R0              exptract psw
000017EC  5020 8EE8                      000010E8 979+          ST    R2,CCPSW               to save CC
000017F0  07FB                                    980+          BR    R11                return
000017F4                                          981+RE13      DC    0F
000017F4                                          982+          DROP  R5
000017F4  00000000 00000000                       983           DC    XL16'0000000000000000000000000000002D'
000017FC  00000000 0000002D
                                                  984
                                                  985           VRI_F VSP,-10,+12,7,1,1
00001808                                          986+          DS    0FD
00001808                  00001808                987+          USING *,R5               base for test data and test routine
00001808  00001838                                988+T14       DC    A(X14)             address of test routine
0000180C  000E                                    989+          DC    H'14'              test number
0000180E  00                                      990+          DC    X'00'
0000180F  07                                      991+          DC    HL1'7'             i4
00001810  01                                      992+          DC    HL1'1'             m5
00001811  01                                      993+          DC    HL1'1'             cc
00001812  0B                                      994+          DC    HL1'11'            cc failed mask
00001818  FFFFFFFF FFFFFFF6                       995+V2_14     DC    FD'-10'            binary value for v2 packed decimal
00001820  00000000 0000000C                       996+V3_14     DC    FD'+12'            binary value for v3 packed decimal
00001828  E5E2D740 40404040                       997+          DC    CL8'VSP'           instruction name
00001830  00000010                                998+          DC    A(16)              result length
00001834  00001874                                999+REA14     DC    A(RE14)            result address
                                                 1000+*                                  INSTRUCTION UNDER TEST ROUTINE
00001838                                         1001+X14       DS    0F
00001838  E320 5010 0004                 00001818 1002+         LG    R2,V2_14           convert v2
0000183E  E320 8F57 002E                 00001157 1003+         CVDG  R2,V2PACKED
00001844  E720 8F57 0006                 00001157 1004+         VL    V2,V2PACKED
0000184A  E320 5018 0004                 00001820 1005+         LG    R2,V3_14           convert v3
00001850  E320 8F67 002E                 00001167 1006+         CVDG  R2,V3PACKED
00001856  E730 8F67 0006                 00001167 1007+         VL    V3,V3PACKED
0000185C  E612 3010 7073                          1008+         VSP   V1,V2,V3,7,1       test instruction
00001862  E710 8F08 000E                 00001108 1009+         VST   V1,V1OUTPUT        save result
00001868  B98D 0020                               1010+         EPSW  R2,R0              exptract psw
0000186C  5020 8EE8                      000010E8 1011+         ST    R2,CCPSW               to save CC
00001870  07FB                                    1012+         BR    R11                return
00001874                                          1013+RE14     DC    0F
00001874                                          1014+         DROP  R5
00001874  00000000 00000000                       1015          DC    XL16'0000000000000000000000000000022D'
0000187C  00000000 0000022D
                                                  1016
                                                  1017          VRI_F VSP,+10,-12,1,1,3
00001888                                          1018+         DS    0FD
00001888                  00001888                1019+         USING *,R5               base for test data and test routine
```

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  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
00001888  000018B8                          1020+T15      DC    A(X15)            address of test routine
0000188C  000F                              1021+         DC    H'15'             test number
0000188E  00                                1022+         DC    X'00'
0000188F  01                                1023+         DC    HL1'1'            i4
00001890  01                                1024+         DC    HL1'1'            m5
00001891  03                                1025+         DC    HL1'3'            cc
00001892  0E                                1026+         DC    HL1'14'           cc failed mask
00001898  00000000 0000000A                 1027+V2_15    DC    FD'+10'           binary value for v2 packed decimal
000018A0  FFFFFFFF FFFFFFF4                 1028+V3_15    DC    FD'-12'           binary value for v3 packed decimal
000018A8  E5E2D740 40404040                 1029+         DC    CL8'VSP'          instruction name
000018B0  00000010                          1030+         DC    A(16)             result length
000018B4  000018F4                          1031+REA15    DC    A(RE15)           result address
                                            1032+*                                INSTRUCTION UNDER TEST ROUTINE
000018B8                                    1033+X15      DS    0F
000018B8  E320 5010 0004          00001898  1034+         LG    R2,V2_15          convert v2
000018BE  E320 8F57 002E          00001157  1035+         CVDG  R2,V2PACKED
000018C4  E720 8F57 0006          00001157  1036+         VL    V2,V2PACKED
000018CA  E320 5018 0004          000018A0  1037+         LG    R2,V3_15          convert v3
000018D0  E320 8F67 002E          00001167  1038+         CVDG  R2,V3PACKED
000018D6  E730 8F67 0006          00001167  1039+         VL    V3,V3PACKED
000018DC  E612 3010 1073                    1040+         VSP   V1,V2,V3,1,1      test instruction
000018E2  E710 8F08 000E          00001108  1041+         VST   V1,V1OUTPUT       save result
000018E8  B98D 0020                         1042+         EPSW  R2,R0             exptract psw
000018EC  5020 8EE8               000010E8  1043+         ST    R2,CCPSW              to save CC
000018F0  07FB                              1044+         BR    R11               return
000018F4                                    1045+RE15     DC    0F
000018F4                                    1046+         DROP  R5
000018F4  00000000 00000000                 1047          DC    XL16'00000000000000000000000000000000002C'
000018FC  00000000 0000002C
                                            1048
                                            1049          VRI_F VSP,+10,-12,7,1,2
00001908                                    1050+         DS    0FD
00001908                    00001908        1051+         USING *,R5              base for test data and test routine
00001908  00001938                          1052+T16      DC    A(X16)            address of test routine
0000190C  0010                              1053+         DC    H'16'             test number
0000190E  00                                1054+         DC    X'00'
0000190F  07                                1055+         DC    HL1'7'            i4
00001910  01                                1056+         DC    HL1'1'            m5
00001911  02                                1057+         DC    HL1'2'            cc
00001912  0D                                1058+         DC    HL1'13'           cc failed mask
00001918  00000000 0000000A                 1059+V2_16    DC    FD'+10'           binary value for v2 packed decimal
00001920  FFFFFFFF FFFFFFF4                 1060+V3_16    DC    FD'-12'           binary value for v3 packed decimal
00001928  E5E2D740 40404040                 1061+         DC    CL8'VSP'          instruction name
00001930  00000010                          1062+         DC    A(16)             result length
00001934  00001974                          1063+REA16    DC    A(RE16)           result address
                                            1064+*                                INSTRUCTION UNDER TEST ROUTINE
00001938                                    1065+X16      DS    0F
00001938  E320 5010 0004          00001918  1066+         LG    R2,V2_16          convert v2
0000193E  E320 8F57 002E          00001157  1067+         CVDG  R2,V2PACKED
00001944  E720 8F57 0006          00001157  1068+         VL    V2,V2PACKED
0000194A  E320 5018 0004          00001920  1069+         LG    R2,V3_16          convert v3
00001950  E320 8F67 002E          00001167  1070+         CVDG  R2,V3PACKED
00001956  E730 8F67 0006          00001167  1071+         VL    V3,V3PACKED
0000195C  E612 3010 7073                    1072+         VSP   V1,V2,V3,7,1      test instruction
00001962  E710 8F08 000E          00001108  1073+         VST   V1,V1OUTPUT       save result
00001968  B98D 0020                         1074+         EPSW  R2,R0             exptract psw
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  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
0000196C  5020 8EE8                     000010E8  1075+          ST    R2,CCPSW              to save CC
00001970  07FB                                    1076+          BR    R11                 return
00001974                                          1077+RE16      DC    0F
00001974                                          1078+          DROP  R5
00001974  00000000 00000000                       1079           DC    XL16'0000000000000000000000000000022C'
0000197C  00000000 0000022C
                                                  1080
                                                  1081           VRI_F VSP,-10,-12,7,1,2
00001988                                          1082+          DS    0FD
00001988                  00001988                1083+          USING *,R5                base for test data and test routine
00001988  000019B8                                1084+T17       DC    A(X17)              address of test routine
0000198C  0011                                    1085+          DC    H'17'               test number
0000198E  00                                      1086+          DC    X'00'
0000198F  07                                      1087+          DC    HL1'7'              i4
00001990  01                                      1088+          DC    HL1'1'              m5
00001991  02                                      1089+          DC    HL1'2'              cc
00001992  0D                                      1090+          DC    HL1'13'             cc failed mask
00001998  FFFFFFFF FFFFFFF6                       1091+V2_17     DC    FD'-10'             binary value for v2 packed decimal
000019A0  FFFFFFFF FFFFFFF4                       1092+V3_17     DC    FD'-12'             binary value for v3 packed decimal
000019A8  E5E2D740 40404040                       1093+          DC    CL8'VSP'            instruction name
000019B0  00000010                                1094+          DC    A(16)               result length
000019B4  000019F4                                1095+REA17     DC    A(RE17)             result address
                                                  1096+*                                   INSTRUCTION UNDER TEST ROUTINE
000019B8                                          1097+X17       DS    0F
000019B8  E320 5010 0004                00001998  1098+          LG    R2,V2_17            convert v2
000019BE  E320 8F57 002E                00001157  1099+          CVDG  R2,V2PACKED
000019C4  E720 8F57 0006                00001157  1100+          VL    V2,V2PACKED
000019CA  E320 5018 0004                000019A0  1101+          LG    R2,V3_17            convert v3
000019D0  E320 8F67 002E                00001167  1102+          CVDG  R2,V3PACKED
000019D6  E730 8F67 0006                00001167  1103+          VL    V3,V3PACKED
000019DC  E612 3010 7073                          1104+          VSP   V1,V2,V3,7,1        test instruction
000019E2  E710 8F08 000E                00001108  1105+          VST   V1,V1OUTPUT         save result
000019E8  B98D 0020                               1106+          EPSW  R2,R0               exptract psw
000019EC  5020 8EE8                     000010E8  1107+          ST    R2,CCPSW              to save CC
000019F0  07FB                                    1108+          BR    R11                 return
000019F4                                          1109+RE17      DC    0F
000019F4                                          1110+          DROP  R5
000019F4  00000000 00000000                       1111           DC    XL16'0000000000000000000000000000002C'
000019FC  00000000 0000002C
                                                  1112
                                                  1113           VRI_F VSP,-10,-10,7,1,0
00001A08                                          1114+          DS    0FD
00001A08                  00001A08                1115+          USING *,R5                base for test data and test routine
00001A08  00001A38                                1116+T18       DC    A(X18)              address of test routine
00001A0C  0012                                    1117+          DC    H'18'               test number
00001A0E  00                                      1118+          DC    X'00'
00001A0F  07                                      1119+          DC    HL1'7'              i4
00001A10  01                                      1120+          DC    HL1'1'              m5
00001A11  00                                      1121+          DC    HL1'0'              cc
00001A12  07                                      1122+          DC    HL1'7'              cc failed mask
00001A18  FFFFFFFF FFFFFFF6                       1123+V2_18     DC    FD'-10'             binary value for v2 packed decimal
00001A20  FFFFFFFF FFFFFFF6                       1124+V3_18     DC    FD'-10'             binary value for v3 packed decimal
00001A28  E5E2D740 40404040                       1125+          DC    CL8'VSP'            instruction name
00001A30  00000010                                1126+          DC    A(16)               result length
00001A34  00001A74                                1127+REA18     DC    A(RE18)             result address
                                                  1128+*                                   INSTRUCTION UNDER TEST ROUTINE
```

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  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
00001A38                                           1129+X18      DS    0F
00001A38  E320 5010 0004                 00001A18  1130+          LG    R2,V2_18          convert v2
00001A3E  E320 8F57 002E                 00001157  1131+          CVDG  R2,V2PACKED
00001A44  E720 8F57 0006                 00001157  1132+          VL    V2,V2PACKED
00001A4A  E320 5018 0004                 00001A20  1133+          LG    R2,V3_18          convert v3
00001A50  E320 8F67 002E                 00001167  1134+          CVDG  R2,V3PACKED
00001A56  E730 8F67 0006                 00001167  1135+          VL    V3,V3PACKED
00001A5C  E612 3010 7073                           1136+          VSP   V1,V2,V3,7,1      test instruction
00001A62  E710 8F08 000E                 00001108  1137+          VST   V1,V1OUTPUT       save result
00001A68  B98D 0020                                1138+          EPSW  R2,R0             exptract psw
00001A6C  5020 8EE8                      000010E8  1139+          ST    R2,CCPSW              to save CC
00001A70  07FB                                     1140+          BR    R11               return
00001A74                                           1141+RE18      DC    0F
00001A74                                           1142+          DROP  R5
00001A74  00000000 00000000                        1143           DC    XL16'0000000000000000000000000000000C'
00001A7C  00000000 0000000C
                                                   1144
                                                   1145           VRI_F VSP,+10000000000,+10,135,1,3     i4=135(iom=1 & rdc=7)
00001A88                                           1146+          DS    0FD
00001A88                       00001A88            1147+          USING *,R5              base for test data and test routine
00001A88  00001AB8                                 1148+T19       DC    A(X19)            address of test routine
00001A8C  0013                                     1149+          DC    H'19'             test number
00001A8E  00                                       1150+          DC    X'00'
00001A8F  87                                       1151+          DC    HL1'135'          i4
00001A90  01                                       1152+          DC    HL1'1'            m5
00001A91  03                                       1153+          DC    HL1'3'            cc
00001A92  0E                                       1154+          DC    HL1'14'           cc failed mask
00001A98  00000002 540BE400                        1155+V2_19     DC    FD'+10000000000'  binary value for v2 packed decimal
00001AA0  00000000 0000000A                        1156+V3_19     DC    FD'+10'           binary value for v3 packed decimal
00001AA8  E5E2D740 40404040                        1157+          DC    CL8'VSP'          instruction name
00001AB0  00000010                                 1158+          DC    A(16)             result length
00001AB4  00001AF4                                 1159+REA19     DC    A(RE19)           result address
                                                   1160+*                                 INSTRUCTION UNDER TEST ROUTINE
00001AB8                                           1161+X19       DS    0F
00001AB8  E320 5010 0004                 00001A98  1162+          LG    R2,V2_19          convert v2
00001ABE  E320 8F57 002E                 00001157  1163+          CVDG  R2,V2PACKED
00001AC4  E720 8F57 0006                 00001157  1164+          VL    V2,V2PACKED
00001ACA  E320 5018 0004                 00001AA0  1165+          LG    R2,V3_19          convert v3
00001AD0  E320 8F67 002E                 00001167  1166+          CVDG  R2,V3PACKED
00001AD6  E730 8F67 0006                 00001167  1167+          VL    V3,V3PACKED
00001ADC  E612 3018 7073                           1168+          VSP   V1,V2,V3,135,1    test instruction
00001AE2  E710 8F08 000E                 00001108  1169+          VST   V1,V1OUTPUT       save result
00001AE8  B98D 0020                                1170+          EPSW  R2,R0             exptract psw
00001AEC  5020 8EE8                      000010E8  1171+          ST    R2,CCPSW              to save CC
00001AF0  07FB                                     1172+          BR    R11               return
00001AF4                                           1173+RE19      DC    0F
00001AF4                                           1174+          DROP  R5
00001AF4  00000000 00000000                        1175           DC    XL16'0000000000000000000009999990C'  note RDC
00001AFC  00000000 9999990C
                                                   1176
                                                   1177 * VSP larger #'s , i4=159(iom=1 & rdc=31)
                                                   1178           VRI_F VSP,+99999999999999999,+1,159,1,2
00001B08                                           1179+          DS    0FD
00001B08                       00001B08            1180+          USING *,R5              base for test data and test routine
00001B08  00001B38                                 1181+T20       DC    A(X20)            address of test routine
00001B0C  0014                                     1182+          DC    H'20'             test number
```

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  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

00001B0E  00                                       1183+          DC    X'00'
00001B0F  9F                                       1184+          DC    HL1'159'          i4
00001B10  01                                       1185+          DC    HL1'1'            m5
00001B11  02                                       1186+          DC    HL1'2'            cc
00001B12  0D                                       1187+          DC    HL1'13'           cc failed mask
                                                   1188+V2_20     DC    FD'+9999999999999999' \
00001B18  01634578 5D89FFFF                            +                                  binary value for v2 packed decimal
00001B20  00000000 00000001                        1189+V3_20     DC    FD'+1'            binary value for v3 packed decimal
00001B28  E5E2D740 40404040                        1190+          DC    CL8'VSP'          instruction name
00001B30  00000010                                 1191+          DC    A(16)             result length
00001B34  00001B74                                 1192+REA20     DC    A(RE20)           result address
                                                   1193+*                                 INSTRUCTION UNDER TEST ROUTINE
00001B38                                           1194+X20       DS    0F
00001B38  E320 5010 0004                 00001B18  1195+          LG    R2,V2_20          convert v2
00001B3E  E320 8F57 002E                 00001157  1196+          CVDG  R2,V2PACKED
00001B44  E720 8F57 0006                 00001157  1197+          VL    V2,V2PACKED
00001B4A  E320 5018 0004                 00001B20  1198+          LG    R2,V3_20          convert v3
00001B50  E320 8F67 002E                 00001167  1199+          CVDG  R2,V3PACKED
00001B56  E730 8F67 0006                 00001167  1200+          VL    V3,V3PACKED
00001B5C  E612 3019 F073                           1201+          VSP   V1,V2,V3,159,1    test instruction
00001B62  E710 8F08 000E                 00001108  1202+          VST   V1,V1OUTPUT       save result
00001B68  B98D 0020                                1203+          EPSW  R2,R0             exptract psw
00001B6C  5020 8EE8                      000010E8  1204+          ST    R2,CCPSW              to save CC
00001B70  07FB                                     1205+          BR    R11               return
00001B74                                           1206+RE20      DC    0F
00001B74                                           1207+          DROP  R5
00001B74  00000000 00000099                        1208           DC    XL16'0000000000000099999999999999998C'
00001B7C  99999999 9999998C
                                                   1209
                                                   1210           VRI_F VSP,+9999999999999999,+10000000000000000,159,1,2
00001B88                                           1211+          DS    0FD
00001B88                      00001B88             1212+          USING *,R5              base for test data and test routine
00001B88  00001BB8                                 1213+T21       DC    A(X21)            address of test routine
00001B8C  0015                                     1214+          DC    H'21'             test number
00001B8E  00                                       1215+          DC    X'00'
00001B8F  9F                                       1216+          DC    HL1'159'          i4
00001B90  01                                       1217+          DC    HL1'1'            m5
00001B91  02                                       1218+          DC    HL1'2'            cc
00001B92  0D                                       1219+          DC    HL1'13'           cc failed mask
                                                   1220+V2_21     DC    FD'+9999999999999999' \
00001B98  01634578 5D89FFFF                            +                                  binary value for v2 packed decimal
                                                   1221+V3_21     DC    FD'+10000000000000000' \
00001BA0  002386F2 6FC10000                            +                                  binary value for v3 packed decimal
00001BA8  E5E2D740 40404040                        1222+          DC    CL8'VSP'          instruction name
00001BB0  00000010                                 1223+          DC    A(16)             result length
00001BB4  00001BF4                                 1224+REA21     DC    A(RE21)           result address
                                                   1225+*                                 INSTRUCTION UNDER TEST ROUTINE
00001BB8                                           1226+X21       DS    0F
00001BB8  E320 5010 0004                 00001B98  1227+          LG    R2,V2_21          convert v2
00001BBE  E320 8F57 002E                 00001157  1228+          CVDG  R2,V2PACKED
00001BC4  E720 8F57 0006                 00001157  1229+          VL    V2,V2PACKED
00001BCA  E320 5018 0004                 00001BA0  1230+          LG    R2,V3_21          convert v3
00001BD0  E320 8F67 002E                 00001167  1231+          CVDG  R2,V3PACKED
00001BD6  E730 8F67 0006                 00001167  1232+          VL    V3,V3PACKED
00001BDC  E612 3019 F073                           1233+          VSP   V1,V2,V3,159,1    test instruction
00001BE2  E710 8F08 000E                 00001108  1234+          VST   V1,V1OUTPUT       save result
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  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

00001BE8  B98D 0020                            1235+          EPSW  R2,R0              exptract psw
00001BEC  5020 8EE8                 000010E8   1236+          ST    R2,CCPSW             to save CC
00001BF0  07FB                                 1237+          BR    R11                  return
00001BF4                                       1238+RE21      DC    0F
00001BF4                                       1239+          DROP  R5
00001BF4  00000000 00000089                    1240           DC    XL16'0000000000000089999999999999999C'
00001BFC  99999999 9999999C
                                               1241
                                               1242           VRI_F VSP,-9999999999999999,-1,159,1,1
00001C08                                       1243+          DS    0FD
00001C08                    00001C08           1244+          USING *,R5                 base for test data and test routine
00001C08  00001C38                             1245+T22       DC    A(X22)               address of test routine
00001C0C  0016                                 1246+          DC    H'22'                test number
00001C0E  00                                   1247+          DC    X'00'
00001C0F  9F                                   1248+          DC    HL1'159'             i4
00001C10  01                                   1249+          DC    HL1'1'               m5
00001C11  01                                   1250+          DC    HL1'1'               cc
00001C12  0B                                   1251+          DC    HL1'11'              cc failed mask
                                               1252+V2_22     DC    FD'-9999999999999999' \
00001C18  FFDC790D 903F0001                        +                                     binary value for v2 packed decimal
00001C20  FFFFFFFF FFFFFFFF                    1253+V3_22     DC    FD'-1'               binary value for v3 packed decimal
00001C28  E5E2D740 40404040                    1254+          DC    CL8'VSP'             instruction name
00001C30  00000010                             1255+          DC    A(16)                result length
00001C34  00001C74                             1256+REA22     DC    A(RE22)              result address
                                               1257+*                                    INSTRUCTION UNDER TEST ROUTINE
00001C38                                       1258+X22       DS    0F
00001C38  E320 5010 0004            00001C18   1259+          LG    R2,V2_22             convert v2
00001C3E  E320 8F57 002E            00001157   1260+          CVDG  R2,V2PACKED
00001C44  E720 8F57 0006            00001157   1261+          VL    V2,V2PACKED
00001C4A  E320 5018 0004            00001C20   1262+          LG    R2,V3_22             convert v3
00001C50  E320 8F67 002E            00001167   1263+          CVDG  R2,V3PACKED
00001C56  E730 8F67 0006            00001167   1264+          VL    V3,V3PACKED
00001C5C  E612 3019 F073                       1265+          VSP   V1,V2,V3,159,1       test instruction
00001C62  E710 8F08 000E            00001108   1266+          VST   V1,V1OUTPUT          save result
00001C68  B98D 0020                            1267+          EPSW  R2,R0                exptract psw
00001C6C  5020 8EE8                 000010E8   1268+          ST    R2,CCPSW             to save CC
00001C70  07FB                                 1269+          BR    R11                  return
00001C74                                       1270+RE22      DC    0F
00001C74                                       1271+          DROP  R5
00001C74  00000000 00000009                    1272           DC    XL16'0000000000000009999999999999998D'
00001C7C  99999999 9999998D
                                               1273
                                               1274           VRI_F VSP,-9999999999999999,-1,135,1,3  i4=135(iom=1 & rdc=7)
00001C88                                       1275+          DS    0FD
00001C88                    00001C88           1276+          USING *,R5                 base for test data and test routine
00001C88  00001CB8                             1277+T23       DC    A(X23)               address of test routine
00001C8C  0017                                 1278+          DC    H'23'                test number
00001C8E  00                                   1279+          DC    X'00'
00001C8F  87                                   1280+          DC    HL1'135'             i4
00001C90  01                                   1281+          DC    HL1'1'               m5
00001C91  03                                   1282+          DC    HL1'3'               cc
00001C92  0E                                   1283+          DC    HL1'14'              cc failed mask
                                               1284+V2_23     DC    FD'-9999999999999999' \
00001C98  FFDC790D 903F0001                        +                                     binary value for v2 packed decimal
00001CA0  FFFFFFFF FFFFFFFF                    1285+V3_23     DC    FD'-1'               binary value for v3 packed decimal
00001CA8  E5E2D740 40404040                    1286+          DC    CL8'VSP'             instruction name
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  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
00001CB0  00000010                                1287+         DC    A(16)              result length
00001CB4  00001CF4                                1288+REA23    DC    A(RE23)            result address
                                                  1289+*                                 INSTRUCTION UNDER TEST ROUTINE
00001CB8                                          1290+X23      DS    0F
00001CB8  E320 5010 0004                 00001C98 1291+         LG    R2,V2_23           convert v2
00001CBE  E320 8F57 002E                 00001157 1292+         CVDG  R2,V2PACKED
00001CC4  E720 8F57 0006                 00001157 1293+         VL    V2,V2PACKED
00001CCA  E320 5018 0004                 00001CA0 1294+         LG    R2,V3_23           convert v3
00001CD0  E320 8F67 002E                 00001167 1295+         CVDG  R2,V3PACKED
00001CD6  E730 8F67 0006                 00001167 1296+         VL    V3,V3PACKED
00001CDC  E612 3018 7073                          1297+         VSP   V1,V2,V3,135,1     test instruction
00001CE2  E710 8F08 000E                 00001108 1298+         VST   V1,V1OUTPUT        save result
00001CE8  B98D 0020                               1299+         EPSW  R2,R0              exptract psw
00001CEC  5020 8EE8                      000010E8 1300+         ST    R2,CCPSW               to save CC
00001CF0  07FB                                    1301+         BR    R11                return
00001CF4                                          1302+RE23     DC    0F
00001CF4                                          1303+         DROP  R5
00001CF4  00000000 00000000                       1304          DC    XL16'0000000000000000000000009999998D'
00001CFC  00000000 9999998D
                                                  1305
                                                  1306 * VSP larger #'s , i4=159(iom=1 & rdc=31)            CS=1 for all m5
                                                  1307 * check forced positive
                                                  1308          VRI_F VSP,-99999999999999999,+1,159,9,2     m5=9(P2=1)
00001D08                                          1309+         DS    0FD
00001D08                           00001D08       1310+         USING *,R5               base for test data and test routine
00001D08  00001D38                                1311+T24      DC    A(X24)             address of test routine
00001D0C  0018                                    1312+         DC    H'24'              test number
00001D0E  00                                      1313+         DC    X'00'
00001D0F  9F                                      1314+         DC    HL1'159'           i4
00001D10  09                                      1315+         DC    HL1'9'             m5
00001D11  02                                      1316+         DC    HL1'2'             cc
00001D12  0D                                      1317+         DC    HL1'13'            cc failed mask
                                                  1318+V2_24    DC    FD'-99999999999999999' \
00001D18  FE9CBA87 A2760001                           +                                  binary value for v2 packed decimal
00001D20  00000000 00000001                       1319+V3_24    DC    FD'+1'             binary value for v3 packed decimal
00001D28  E5E2D740 40404040                       1320+         DC    CL8'VSP'           instruction name
00001D30  00000010                                1321+         DC    A(16)              result length
00001D34  00001D74                                1322+REA24    DC    A(RE24)            result address
                                                  1323+*                                 INSTRUCTION UNDER TEST ROUTINE
00001D38                                          1324+X24      DS    0F
00001D38  E320 5010 0004                 00001D18 1325+         LG    R2,V2_24           convert v2
00001D3E  E320 8F57 002E                 00001157 1326+         CVDG  R2,V2PACKED
00001D44  E720 8F57 0006                 00001157 1327+         VL    V2,V2PACKED
00001D4A  E320 5018 0004                 00001D20 1328+         LG    R2,V3_24           convert v3
00001D50  E320 8F67 002E                 00001167 1329+         CVDG  R2,V3PACKED
00001D56  E730 8F67 0006                 00001167 1330+         VL    V3,V3PACKED
00001D5C  E612 3099 F073                          1331+         VSP   V1,V2,V3,159,9     test instruction
00001D62  E710 8F08 000E                 00001108 1332+         VST   V1,V1OUTPUT        save result
00001D68  B98D 0020                               1333+         EPSW  R2,R0              exptract psw
00001D6C  5020 8EE8                      000010E8 1334+         ST    R2,CCPSW               to save CC
00001D70  07FB                                    1335+         BR    R11                return
00001D74                                          1336+RE24     DC    0F
00001D74                                          1337+         DROP  R5
00001D74  00000000 00000099                       1338          DC    XL16'0000000000000099999999999999998C'
00001D7C  99999999 9999998C
                                                  1339
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  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
                                                   1340          VRI_F VSP,-99999999999999999,-10000000000000000,159,13,2
00001D88                                           1341+         DS    0FD
00001D88                       00001D88            1342+         USING *,R5              base for test data and test routine
00001D88  00001DB8                                 1343+T25      DC    A(X25)            address of test routine
00001D8C  0019                                     1344+         DC    H'25'             test number
00001D8E  00                                       1345+         DC    X'00'
00001D8F  9F                                       1346+         DC    HL1'159'          i4
00001D90  0D                                       1347+         DC    HL1'13'           m5
00001D91  02                                       1348+         DC    HL1'2'            cc
00001D92  0D                                       1349+         DC    HL1'13'           cc failed mask
                                                   1350+V2_25    DC    FD'-99999999999999999' \
00001D98  FE9CBA87 A2760001                           +                                  binary value for v2 packed decimal
                                                   1351+V3_25    DC    FD'-10000000000000000' \
00001DA0  FFDC790D 903F0000                           +                                  binary value for v3 packed decimal
00001DA8  E5E2D740 40404040                        1352+         DC    CL8'VSP'          instruction name
00001DB0  00000010                                 1353+         DC    A(16)             result length
00001DB4  00001DF4                                 1354+REA25    DC    A(RE25)           result address
                                                   1355+*                                 INSTRUCTION UNDER TEST ROUTINE
00001DB8                                           1356+X25      DS    0F
00001DB8  E320 5010 0004                00001D98   1357+         LG    R2,V2_25          convert v2
00001DBE  E320 8F57 002E                00001157   1358+         CVDG  R2,V2PACKED
00001DC4  E720 8F57 0006                00001157   1359+         VL    V2,V2PACKED
00001DCA  E320 5018 0004                00001DA0   1360+         LG    R2,V3_25          convert v3
00001DD0  E320 8F67 002E                00001167   1361+         CVDG  R2,V3PACKED
00001DD6  E730 8F67 0006                00001167   1362+         VL    V3,V3PACKED
00001DDC  E612 30D9 F073                           1363+         VSP   V1,V2,V3,159,13   test instruction
00001DE2  E710 8F08 000E                00001108   1364+         VST   V1,V1OUTPUT       save result
00001DE8  B98D 0020                                1365+         EPSW  R2,R0             exptract psw
00001DEC  5020 8EE8                     000010E8   1366+         ST    R2,CCPSW              to save CC
00001DF0  07FB                                     1367+         BR    R11               return
00001DF4                                           1368+RE25     DC    0F
00001DF4                                           1369+         DROP  R5
00001DF4  00000000 00000089                        1370          DC    XL16'0000000000000089999999999999999C' m5=13(P2=1,P3=1)
00001DFC  99999999 9999999C
                                                   1371
                                                   1372          VRI_F VSP,-9999999999999999,-1,159,3,2       m5=3(P1=1)
00001E08                                           1373+         DS    0FD
00001E08                       00001E08            1374+         USING *,R5              base for test data and test routine
00001E08  00001E38                                 1375+T26      DC    A(X26)            address of test routine
00001E0C  001A                                     1376+         DC    H'26'             test number
00001E0E  00                                       1377+         DC    X'00'
00001E0F  9F                                       1378+         DC    HL1'159'          i4
00001E10  03                                       1379+         DC    HL1'3'            m5
00001E11  02                                       1380+         DC    HL1'2'            cc
00001E12  0D                                       1381+         DC    HL1'13'           cc failed mask
                                                   1382+V2_26    DC    FD'-9999999999999999' \
00001E18  FFDC790D 903F0001                           +                                  binary value for v2 packed decimal
00001E20  FFFFFFFF FFFFFFFF                        1383+V3_26    DC    FD'-1'            binary value for v3 packed decimal
00001E28  E5E2D740 40404040                        1384+         DC    CL8'VSP'          instruction name
00001E30  00000010                                 1385+         DC    A(16)             result length
00001E34  00001E74                                 1386+REA26    DC    A(RE26)           result address
                                                   1387+*                                 INSTRUCTION UNDER TEST ROUTINE
00001E38                                           1388+X26      DS    0F
00001E38  E320 5010 0004                00001E18   1389+         LG    R2,V2_26          convert v2
00001E3E  E320 8F57 002E                00001157   1390+         CVDG  R2,V2PACKED
00001E44  E720 8F57 0006                00001157   1391+         VL    V2,V2PACKED
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

00001E4A  E320 5018 0004                 00001E20  1392+         LG    R2,V3_26          convert v3
00001E50  E320 8F67 002E                 00001167  1393+         CVDG  R2,V3PACKED
00001E56  E730 8F67 0006                 00001167  1394+         VL    V3,V3PACKED
00001E5C  E612 3039 F073                           1395+         VSP   V1,V2,V3,159,3    test instruction
00001E62  E710 8F08 000E                 00001108  1396+         VST   V1,V1OUTPUT       save result
00001E68  B98D 0020                                1397+         EPSW  R2,R0             exptract psw
00001E6C  5020 8EE8                      000010E8  1398+         ST    R2,CCPSW              to save CC
00001E70  07FB                                     1399+         BR    R11               return
00001E74                                           1400+RE26     DC    0F
00001E74                                           1401+         DROP  R5
00001E74  00000000 00000009                        1402          DC    XL16'0000000000000009999999999999998F'
00001E7C  99999999 9999998F
                                                   1403
                                                   1404          VRI_F VSP,-9999999999999999,-1,135,3,3  i4=135(iom=1 & rdc=7)
00001E88                                           1405+         DS    0FD
00001E88                 00001E88                  1406+         USING *,R5              base for test data and test routine
00001E88  00001EB8                                 1407+T27      DC    A(X27)            address of test routine
00001E8C  001B                                     1408+         DC    H'27'             test number
00001E8E  00                                       1409+         DC    X'00'
00001E8F  87                                       1410+         DC    HL1'135'          i4
00001E90  03                                       1411+         DC    HL1'3'            m5
00001E91  03                                       1412+         DC    HL1'3'            cc
00001E92  0E                                       1413+         DC    HL1'14'           cc failed mask
                                                   1414+V2_27    DC    FD'-9999999999999999' \
00001E98  FFDC790D 903F0001                            +                                 binary value for v2 packed decimal
00001EA0  FFFFFFFF FFFFFFFF                        1415+V3_27    DC    FD'-1'            binary value for v3 packed decimal
00001EA8  E5E2D740 40404040                        1416+         DC    CL8'VSP'          instruction name
00001EB0  00000010                                 1417+         DC    A(16)             result length
00001EB4  00001EF4                                 1418+REA27    DC    A(RE27)           result address
                                                   1419+*                                  INSTRUCTION UNDER TEST ROUTINE
00001EB8                                           1420+X27      DS    0F
00001EB8  E320 5010 0004                 00001E98  1421+         LG    R2,V2_27          convert v2
00001EBE  E320 8F57 002E                 00001157  1422+         CVDG  R2,V2PACKED
00001EC4  E720 8F57 0006                 00001157  1423+         VL    V2,V2PACKED
00001ECA  E320 5018 0004                 00001EA0  1424+         LG    R2,V3_27          convert v3
00001ED0  E320 8F67 002E                 00001167  1425+         CVDG  R2,V3PACKED
00001ED6  E730 8F67 0006                 00001167  1426+         VL    V3,V3PACKED
00001EDC  E612 3038 7073                           1427+         VSP   V1,V2,V3,135,3    test instruction
00001EE2  E710 8F08 000E                 00001108  1428+         VST   V1,V1OUTPUT       save result
00001EE8  B98D 0020                                1429+         EPSW  R2,R0             exptract psw
00001EEC  5020 8EE8                      000010E8  1430+         ST    R2,CCPSW              to save CC
00001EF0  07FB                                     1431+         BR    R11               return
00001EF4                                           1432+RE27     DC    0F
00001EF4                                           1433+         DROP  R5
00001EF4  00000000 00000000                        1434          DC    XL16'0000000000000000000000009999998F' m5=3(P1=1)
00001EFC  00000000 9999998F
                                                   1435
                                                   1436 *-------------------------------------------------------------------
                                                   1437 *  VMP    - VECTOR MULTIPLY DECIMAL
                                                   1438 *-------------------------------------------------------------------
                                                   1439 * VMP simple + CC checks
                                                   1440          VRI_F VMP,+10,+12,7,1,2
00001F08                                           1441+         DS    0FD
00001F08                 00001F08                  1442+         USING *,R5              base for test data and test routine
00001F08  00001F38                                 1443+T28      DC    A(X28)            address of test routine
00001F0C  001C                                     1444+         DC    H'28'             test number
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
00001F0E  00                                       1445+         DC    X'00'
00001F0F  07                                       1446+         DC    HL1'7'            i4
00001F10  01                                       1447+         DC    HL1'1'            m5
00001F11  02                                       1448+         DC    HL1'2'            cc
00001F12  0D                                       1449+         DC    HL1'13'           cc failed mask
00001F18  00000000 0000000A                        1450+V2_28    DC    FD'+10'           binary value for v2 packed decimal
00001F20  00000000 0000000C                        1451+V3_28    DC    FD'+12'           binary value for v3 packed decimal
00001F28  E5D4D740 40404040                        1452+         DC    CL8'VMP'          instruction name
00001F30  00000010                                 1453+         DC    A(16)             result length
00001F34  00001F74                                 1454+REA28    DC    A(RE28)           result address
                                                   1455+*                                INSTRUCTION UNDER TEST ROUTINE
00001F38                                           1456+X28      DS    0F
00001F38  E320 5010 0004                 00001F18  1457+         LG    R2,V2_28          convert v2
00001F3E  E320 8F57 002E                 00001157  1458+         CVDG  R2,V2PACKED
00001F44  E720 8F57 0006                 00001157  1459+         VL    V2,V2PACKED
00001F4A  E320 5018 0004                 00001F20  1460+         LG    R2,V3_28          convert v3
00001F50  E320 8F67 002E                 00001167  1461+         CVDG  R2,V3PACKED
00001F56  E730 8F67 0006                 00001167  1462+         VL    V3,V3PACKED
00001F5C  E612 3010 7078                           1463+         VMP   V1,V2,V3,7,1      test instruction
00001F62  E710 8F08 000E                 00001108  1464+         VST   V1,V1OUTPUT       save result
00001F68  B98D 0020                                1465+         EPSW  R2,R0             exptract psw
00001F6C  5020 8EE8                      000010E8  1466+         ST    R2,CCPSW              to save CC
00001F70  07FB                                     1467+         BR    R11               return
00001F74                                           1468+RE28     DC    0F
00001F74                                           1469+         DROP  R5
00001F74  00000000 00000000                        1470          DC    XL16'0000000000000000000000000000120C'
00001F7C  00000000 0000120C
                                                   1471
                                                   1472          VRI_F VMP,-10,+12,7,1,1
00001F88                                           1473+         DS    0FD
00001F88                 00001F88                  1474+         USING *,R5              base for test data and test routine
00001F88  00001FB8                                 1475+T29      DC    A(X29)            address of test routine
00001F8C  001D                                     1476+         DC    H'29'             test number
00001F8E  00                                       1477+         DC    X'00'
00001F8F  07                                       1478+         DC    HL1'7'            i4
00001F90  01                                       1479+         DC    HL1'1'            m5
00001F91  01                                       1480+         DC    HL1'1'            cc
00001F92  0B                                       1481+         DC    HL1'11'           cc failed mask
00001F98  FFFFFFFF FFFFFFF6                        1482+V2_29    DC    FD'-10'           binary value for v2 packed decimal
00001FA0  00000000 0000000C                        1483+V3_29    DC    FD'+12'           binary value for v3 packed decimal
00001FA8  E5D4D740 40404040                        1484+         DC    CL8'VMP'          instruction name
00001FB0  00000010                                 1485+         DC    A(16)             result length
00001FB4  00001FF4                                 1486+REA29    DC    A(RE29)           result address
                                                   1487+*                                INSTRUCTION UNDER TEST ROUTINE
00001FB8                                           1488+X29      DS    0F
00001FB8  E320 5010 0004                 00001F98  1489+         LG    R2,V2_29          convert v2
00001FBE  E320 8F57 002E                 00001157  1490+         CVDG  R2,V2PACKED
00001FC4  E720 8F57 0006                 00001157  1491+         VL    V2,V2PACKED
00001FCA  E320 5018 0004                 00001FA0  1492+         LG    R2,V3_29          convert v3
00001FD0  E320 8F67 002E                 00001167  1493+         CVDG  R2,V3PACKED
00001FD6  E730 8F67 0006                 00001167  1494+         VL    V3,V3PACKED
00001FDC  E612 3010 7078                           1495+         VMP   V1,V2,V3,7,1      test instruction
00001FE2  E710 8F08 000E                 00001108  1496+         VST   V1,V1OUTPUT       save result
00001FE8  B98D 0020                                1497+         EPSW  R2,R0             exptract psw
00001FEC  5020 8EE8                      000010E8  1498+         ST    R2,CCPSW              to save CC
00001FF0  07FB                                     1499+         BR    R11               return
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
00001FF4                                           1500+RE29     DC    0F
00001FF4                                           1501+         DROP  R5
00001FF4  00000000 00000000                        1502          DC    XL16'0000000000000000000000000000120D'
00001FFC  00000000 0000120D
                                                   1503
                                                   1504          VRI_F VMP,+10,-12,1,1,3                    note rdc=1
00002008                                           1505+         DS    0FD
00002008                      00002008             1506+         USING *,R5              base for test data and test routine
00002008  00002038                                 1507+T30      DC    A(X30)            address of test routine
0000200C  001E                                     1508+         DC    H'30'             test number
0000200E  00                                       1509+         DC    X'00'
0000200F  01                                       1510+         DC    HL1'1'            i4
00002010  01                                       1511+         DC    HL1'1'            m5
00002011  03                                       1512+         DC    HL1'3'            cc
00002012  0E                                       1513+         DC    HL1'14'           cc failed mask
00002018  00000000 0000000A                        1514+V2_30    DC    FD'+10'           binary value for v2 packed decimal
00002020  FFFFFFFF FFFFFFF4                        1515+V3_30    DC    FD'-12'           binary value for v3 packed decimal
00002028  E5D4D740 40404040                        1516+         DC    CL8'VMP'          instruction name
00002030  00000010                                 1517+         DC    A(16)             result length
00002034  00002074                                 1518+REA30    DC    A(RE30)           result address
                                                   1519+*                                INSTRUCTION UNDER TEST ROUTINE
00002038                                           1520+X30      DS    0F
00002038  E320 5010 0004                 00002018  1521+         LG    R2,V2_30          convert v2
0000203E  E320 8F57 002E                 00001157  1522+         CVDG  R2,V2PACKED
00002044  E720 8F57 0006                 00001157  1523+         VL    V2,V2PACKED
0000204A  E320 5018 0004                 00002020  1524+         LG    R2,V3_30          convert v3
00002050  E320 8F67 002E                 00001167  1525+         CVDG  R2,V3PACKED
00002056  E730 8F67 0006                 00001167  1526+         VL    V3,V3PACKED
0000205C  E612 3010 1078                           1527+         VMP   V1,V2,V3,1,1      test instruction
00002062  E710 8F08 000E                 00001108  1528+         VST   V1,V1OUTPUT       save result
00002068  B98D 0020                                1529+         EPSW  R2,R0             exptract psw
0000206C  5020 8EE8                      000010E8  1530+         ST    R2,CCPSW              to save CC
00002070  07FB                                     1531+         BR    R11               return
00002074                                           1532+RE30     DC    0F
00002074                                           1533+         DROP  R5
00002074  00000000 00000000                        1534          DC    XL16'0000000000000000000000000000000C'
0000207C  00000000 0000000C
                                                   1535
                                                   1536          VRI_F VMP,+10,-12,7,1,1
00002088                                           1537+         DS    0FD
00002088                      00002088             1538+         USING *,R5              base for test data and test routine
00002088  000020B8                                 1539+T31      DC    A(X31)            address of test routine
0000208C  001F                                     1540+         DC    H'31'             test number
0000208E  00                                       1541+         DC    X'00'
0000208F  07                                       1542+         DC    HL1'7'            i4
00002090  01                                       1543+         DC    HL1'1'            m5
00002091  01                                       1544+         DC    HL1'1'            cc
00002092  0B                                       1545+         DC    HL1'11'           cc failed mask
00002098  00000000 0000000A                        1546+V2_31    DC    FD'+10'           binary value for v2 packed decimal
000020A0  FFFFFFFF FFFFFFF4                        1547+V3_31    DC    FD'-12'           binary value for v3 packed decimal
000020A8  E5D4D740 40404040                        1548+         DC    CL8'VMP'          instruction name
000020B0  00000010                                 1549+         DC    A(16)             result length
000020B4  000020F4                                 1550+REA31    DC    A(RE31)           result address
                                                   1551+*                                INSTRUCTION UNDER TEST ROUTINE
000020B8                                           1552+X31      DS    0F
000020B8  E320 5010 0004                 00002098  1553+         LG    R2,V2_31          convert v2
```

```
  LOC         OBJECT CODE       ADDR1     ADDR2     STMT

000020BE  E320 8F57 002E                  00001157  1554+          CVDG  R2,V2PACKED
000020C4  E720 8F57 0006                  00001157  1555+          VL    V2,V2PACKED
000020CA  E320 5018 0004                  000020A0  1556+          LG    R2,V3_31           convert v3
000020D0  E320 8F67 002E                  00001167  1557+          CVDG  R2,V3PACKED
000020D6  E730 8F67 0006                  00001167  1558+          VL    V3,V3PACKED
000020DC  E612 3010 7078                            1559+          VMP   V1,V2,V3,7,1       test instruction
000020E2  E710 8F08 000E                  00001108  1560+          VST   V1,V1OUTPUT        save result
000020E8  B98D 0020                                 1561+          EPSW  R2,R0              exptract psw
000020EC  5020 8EE8                       000010E8  1562+          ST    R2,CCPSW               to save CC
000020F0  07FB                                      1563+          BR    R11                return
000020F4                                            1564+RE31      DC    0F
000020F4                                            1565+          DROP  R5
000020F4  00000000 00000000                         1566           DC    XL16'0000000000000000000000000000120D'
000020FC  00000000 0000120D
                                                    1567
                                                    1568           VRI_F VMP,-10,-12,7,1,2
00002108                                            1569+          DS    0FD
00002108                            00002108        1570+          USING *,R5               base for test data and test routine
00002108  00002138                                  1571+T32       DC    A(X32)             address of test routine
0000210C  0020                                      1572+          DC    H'32'              test number
0000210E  00                                        1573+          DC    X'00'
0000210F  07                                        1574+          DC    HL1'7'             i4
00002110  01                                        1575+          DC    HL1'1'             m5
00002111  02                                        1576+          DC    HL1'2'             cc
00002112  0D                                        1577+          DC    HL1'13'            cc failed mask
00002118  FFFFFFFF FFFFFFF6                         1578+V2_32     DC    FD'-10'            binary value for v2 packed decimal
00002120  FFFFFFFF FFFFFFF4                         1579+V3_32     DC    FD'-12'            binary value for v3 packed decimal
00002128  E5D4D740 40404040                         1580+          DC    CL8'VMP'           instruction name
00002130  00000010                                  1581+          DC    A(16)              result length
00002134  00002174                                  1582+REA32     DC    A(RE32)            result address
                                                    1583+*                                  INSTRUCTION UNDER TEST ROUTINE
00002138                                            1584+X32       DS    0F
00002138  E320 5010 0004                  00002118  1585+          LG    R2,V2_32           convert v2
0000213E  E320 8F57 002E                  00001157  1586+          CVDG  R2,V2PACKED
00002144  E720 8F57 0006                  00001157  1587+          VL    V2,V2PACKED
0000214A  E320 5018 0004                  00002120  1588+          LG    R2,V3_32           convert v3
00002150  E320 8F67 002E                  00001167  1589+          CVDG  R2,V3PACKED
00002156  E730 8F67 0006                  00001167  1590+          VL    V3,V3PACKED
0000215C  E612 3010 7078                            1591+          VMP   V1,V2,V3,7,1       test instruction
00002162  E710 8F08 000E                  00001108  1592+          VST   V1,V1OUTPUT        save result
00002168  B98D 0020                                 1593+          EPSW  R2,R0              exptract psw
0000216C  5020 8EE8                       000010E8  1594+          ST    R2,CCPSW               to save CC
00002170  07FB                                      1595+          BR    R11                return
00002174                                            1596+RE32      DC    0F
00002174                                            1597+          DROP  R5
00002174  00000000 00000000                         1598           DC    XL16'0000000000000000000000000000120C'
0000217C  00000000 0000120C
                                                    1599
                                                    1600           VRI_F VMP,-10,-10,7,1,2
00002188                                            1601+          DS    0FD
00002188                            00002188        1602+          USING *,R5               base for test data and test routine
00002188  000021B8                                  1603+T33       DC    A(X33)             address of test routine
0000218C  0021                                      1604+          DC    H'33'              test number
0000218E  00                                        1605+          DC    X'00'
0000218F  07                                        1606+          DC    HL1'7'             i4
00002190  01                                        1607+          DC    HL1'1'             m5
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
00002191  02                                      1608+          DC    HL1'2'             cc
00002192  0D                                      1609+          DC    HL1'13'            cc failed mask
00002198  FFFFFFFF FFFFFFF6                       1610+V2_33     DC    FD'-10'            binary value for v2 packed decimal
000021A0  FFFFFFFF FFFFFFF6                       1611+V3_33     DC    FD'-10'            binary value for v3 packed decimal
000021A8  E5D4D740 40404040                       1612+          DC    CL8'VMP'           instruction name
000021B0  00000010                                1613+          DC    A(16)              result length
000021B4  000021F4                                1614+REA33     DC    A(RE33)            result address
                                                  1615+*                                  INSTRUCTION UNDER TEST ROUTINE
000021B8                                          1616+X33       DS    0F
000021B8  E320 5010 0004                 00002198 1617+          LG    R2,V2_33           convert v2
000021BE  E320 8F57 002E                 00001157 1618+          CVDG  R2,V2PACKED
000021C4  E720 8F57 0006                 00001157 1619+          VL    V2,V2PACKED
000021CA  E320 5018 0004                 000021A0 1620+          LG    R2,V3_33           convert v3
000021D0  E320 8F67 002E                 00001167 1621+          CVDG  R2,V3PACKED
000021D6  E730 8F67 0006                 00001167 1622+          VL    V3,V3PACKED
000021DC  E612 3010 7078                          1623+          VMP   V1,V2,V3,7,1       test instruction
000021E2  E710 8F08 000E                 00001108 1624+          VST   V1,V1OUTPUT        save result
000021E8  B98D 0020                               1625+          EPSW  R2,R0              exptract psw
000021EC  5020 8EE8                      000010E8 1626+          ST    R2,CCPSW               to save CC
000021F0  07FB                                    1627+          BR    R11                return
000021F4                                          1628+RE33      DC    0F
000021F4                                          1629+          DROP  R5
000021F4  00000000 00000000                       1630           DC    XL16'0000000000000000000000000000100C'
000021FC  00000000 0000100C
                                                  1631
                                                  1632           VRI_F VMP,+10000000010,+10,135,1,3     i4=135(iom=1 & rdc=7)
00002208                                          1633+          DS    0FD
00002208                 00002208                 1634+          USING *,R5               base for test data and test routine
00002208  00002238                                1635+T34       DC    A(X34)             address of test routine
0000220C  0022                                    1636+          DC    H'34'              test number
0000220E  00                                      1637+          DC    X'00'
0000220F  87                                      1638+          DC    HL1'135'           i4
00002210  01                                      1639+          DC    HL1'1'             m5
00002211  03                                      1640+          DC    HL1'3'             cc
00002212  0E                                      1641+          DC    HL1'14'            cc failed mask
00002218  00000002 540BE40A                       1642+V2_34     DC    FD'+10000000010'   binary value for v2 packed decimal
00002220  00000000 0000000A                       1643+V3_34     DC    FD'+10'            binary value for v3 packed decimal
00002228  E5D4D740 40404040                       1644+          DC    CL8'VMP'           instruction name
00002230  00000010                                1645+          DC    A(16)              result length
00002234  00002274                                1646+REA34     DC    A(RE34)            result address
                                                  1647+*                                  INSTRUCTION UNDER TEST ROUTINE
00002238                                          1648+X34       DS    0F
00002238  E320 5010 0004                 00002218 1649+          LG    R2,V2_34           convert v2
0000223E  E320 8F57 002E                 00001157 1650+          CVDG  R2,V2PACKED
00002244  E720 8F57 0006                 00001157 1651+          VL    V2,V2PACKED
0000224A  E320 5018 0004                 00002220 1652+          LG    R2,V3_34           convert v3
00002250  E320 8F67 002E                 00001167 1653+          CVDG  R2,V3PACKED
00002256  E730 8F67 0006                 00001167 1654+          VL    V3,V3PACKED
0000225C  E612 3018 7078                          1655+          VMP   V1,V2,V3,135,1     test instruction
00002262  E710 8F08 000E                 00001108 1656+          VST   V1,V1OUTPUT        save result
00002268  B98D 0020                               1657+          EPSW  R2,R0              exptract psw
0000226C  5020 8EE8                      000010E8 1658+          ST    R2,CCPSW               to save CC
00002270  07FB                                    1659+          BR    R11                return
00002274                                          1660+RE34      DC    0F
00002274                                          1661+          DROP  R5
00002274  00000000 00000000                       1662           DC    XL16'0000000000000000000000000000100C'  note RDC
```

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  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
0000227C  00000000 0000100C                        1663
                                                   1664 * VMP larger #'s , i4=159(iom=1 & rdc=31)
                                                   1665          VRI_F VMP,+99999999999999999,+1,159,1,2
00002288                                           1666+         DS    0FD
00002288                      00002288             1667+         USING *,R5              base for test data and test routine
00002288  000022B8                                 1668+T35      DC    A(X35)            address of test routine
0000228C  0023                                     1669+         DC    H'35'             test number
0000228E  00                                       1670+         DC    X'00'
0000228F  9F                                       1671+         DC    HL1'159'          i4
00002290  01                                       1672+         DC    HL1'1'            m5
00002291  02                                       1673+         DC    HL1'2'            cc
00002292  0D                                       1674+         DC    HL1'13'           cc failed mask
                                                   1675+V2_35    DC    FD'+99999999999999999' \
00002298  01634578 5D89FFFF                           +                                 binary value for v2 packed decimal
000022A0  00000000 00000001                        1676+V3_35    DC    FD'+1'            binary value for v3 packed decimal
000022A8  E5D4D740 40404040                        1677+         DC    CL8'VMP'          instruction name
000022B0  00000010                                 1678+         DC    A(16)             result length
000022B4  000022F4                                 1679+REA35    DC    A(RE35)           result address
                                                   1680+*                                INSTRUCTION UNDER TEST ROUTINE
000022B8                                           1681+X35      DS    0F
000022B8  E320 5010 0004                00002298   1682+         LG    R2,V2_35          convert v2
000022BE  E320 8F57 002E                00001157   1683+         CVDG  R2,V2PACKED
000022C4  E720 8F57 0006                00001157   1684+         VL    V2,V2PACKED
000022CA  E320 5018 0004                000022A0   1685+         LG    R2,V3_35          convert v3
000022D0  E320 8F67 002E                00001167   1686+         CVDG  R2,V3PACKED
000022D6  E730 8F67 0006                00001167   1687+         VL    V3,V3PACKED
000022DC  E612 3019 F078                           1688+         VMP   V1,V2,V3,159,1    test instruction
000022E2  E710 8F08 000E                00001108   1689+         VST   V1,V1OUTPUT       save result
000022E8  B98D 0020                                1690+         EPSW  R2,R0             exptract psw
000022EC  5020 8EE8                     000010E8   1691+         ST    R2,CCPSW              to save CC
000022F0  07FB                                     1692+         BR    R11               return
000022F4                                           1693+RE35     DC    0F
000022F4                                           1694+         DROP  R5
000022F4  00000000 00000099                        1695          DC    XL16'0000000000000099999999999999999C'
000022FC  99999999 9999999C                        1696
                                                   1697          VRI_F VMP,+99999999999999999,+10000000000000000,159,1,3
00002308                                           1698+         DS    0FD
00002308                      00002308             1699+         USING *,R5              base for test data and test routine
00002308  00002338                                 1700+T36      DC    A(X36)            address of test routine
0000230C  0024                                     1701+         DC    H'36'             test number
0000230E  00                                       1702+         DC    X'00'
0000230F  9F                                       1703+         DC    HL1'159'          i4
00002310  01                                       1704+         DC    HL1'1'            m5
00002311  03                                       1705+         DC    HL1'3'            cc
00002312  0E                                       1706+         DC    HL1'14'           cc failed mask
                                                   1707+V2_36    DC    FD'+99999999999999999' \
00002318  01634578 5D89FFFF                           +                                 binary value for v2 packed decimal
                                                   1708+V3_36    DC    FD'+10000000000000000' \
00002320  002386F2 6FC10000                           +                                 binary value for v3 packed decimal
00002328  E5D4D740 40404040                        1709+         DC    CL8'VMP'          instruction name
00002330  00000010                                 1710+         DC    A(16)             result length
00002334  00002374                                 1711+REA36    DC    A(RE36)           result address
                                                   1712+*                                INSTRUCTION UNDER TEST ROUTINE
00002338                                           1713+X36      DS    0F
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

00002338  E320 5010 0004                 00002318  1714+         LG    R2,V2_36          convert v2
0000233E  E320 8F57 002E                 00001157  1715+         CVDG  R2,V2PACKED
00002344  E720 8F57 0006                 00001157  1716+         VL    V2,V2PACKED
0000234A  E320 5018 0004                 00002320  1717+         LG    R2,V3_36          convert v3
00002350  E320 8F67 002E                 00001167  1718+         CVDG  R2,V3PACKED
00002356  E730 8F67 0006                 00001167  1719+         VL    V3,V3PACKED
0000235C  E612 3019 F078                           1720+         VMP   V1,V2,V3,159,1    test instruction
00002362  E710 8F08 000E                 00001108  1721+         VST   V1,V1OUTPUT       save result
00002368  B98D 0020                                1722+         EPSW  R2,R0             exptract psw
0000236C  5020 8EE8                      000010E8  1723+         ST    R2,CCPSW              to save CC
00002370  07FB                                     1724+         BR    R11               return
00002374                                           1725+RE36     DC    0F
00002374                                           1726+         DROP  R5
00002374  99999999 99999990                        1727          DC    XL16'9999999999999990000000000000000C'    overflowed
0000237C  00000000 0000000C
                                                   1728
                                                   1729          VRI_F VMP,-9999999999999999,-1,159,1,2
00002388                                           1730+         DS    0FD
00002388                      00002388             1731+         USING *,R5              base for test data and test routine
00002388  000023B8                                 1732+T37      DC    A(X37)            address of test routine
0000238C  0025                                     1733+         DC    H'37'             test number
0000238E  00                                       1734+         DC    X'00'
0000238F  9F                                       1735+         DC    HL1'159'          i4
00002390  01                                       1736+         DC    HL1'1'            m5
00002391  02                                       1737+         DC    HL1'2'            cc
00002392  0D                                       1738+         DC    HL1'13'           cc failed mask
                                                   1739+V2_37    DC    FD'-9999999999999999' \
00002398  FFDC790D 903F0001                            +                               binary value for v2 packed decimal
000023A0  FFFFFFFF FFFFFFFF                        1740+V3_37    DC    FD'-1'            binary value for v3 packed decimal
000023A8  E5D4D740 40404040                        1741+         DC    CL8'VMP'          instruction name
000023B0  00000010                                 1742+         DC    A(16)             result length
000023B4  000023F4                                 1743+REA37    DC    A(RE37)           result address
                                                   1744+*                                INSTRUCTION UNDER TEST ROUTINE
000023B8                                           1745+X37      DS    0F
000023B8  E320 5010 0004                 00002398  1746+         LG    R2,V2_37          convert v2
000023BE  E320 8F57 002E                 00001157  1747+         CVDG  R2,V2PACKED
000023C4  E720 8F57 0006                 00001157  1748+         VL    V2,V2PACKED
000023CA  E320 5018 0004                 000023A0  1749+         LG    R2,V3_37          convert v3
000023D0  E320 8F67 002E                 00001167  1750+         CVDG  R2,V3PACKED
000023D6  E730 8F67 0006                 00001167  1751+         VL    V3,V3PACKED
000023DC  E612 3019 F078                           1752+         VMP   V1,V2,V3,159,1    test instruction
000023E2  E710 8F08 000E                 00001108  1753+         VST   V1,V1OUTPUT       save result
000023E8  B98D 0020                                1754+         EPSW  R2,R0             exptract psw
000023EC  5020 8EE8                      000010E8  1755+         ST    R2,CCPSW              to save CC
000023F0  07FB                                     1756+         BR    R11               return
000023F4                                           1757+RE37     DC    0F
000023F4                                           1758+         DROP  R5
000023F4  00000000 00000009                        1759          DC    XL16'00000000000000099999999999999999C'
000023FC  99999999 9999999C
                                                   1760
                                                   1761          VRI_F VMP,-9999999999999999,-1,135,1,3  i4=135(iom=1 & rdc=7)
00002408                                           1762+         DS    0FD
00002408                      00002408             1763+         USING *,R5              base for test data and test routine
00002408  00002438                                 1764+T38      DC    A(X38)            address of test routine
0000240C  0026                                     1765+         DC    H'38'             test number
0000240E  00                                       1766+         DC    X'00'
```

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  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
0000240F  87                                       1767+          DC    HL1'135'           i4
00002410  01                                       1768+          DC    HL1'1'             m5
00002411  03                                       1769+          DC    HL1'3'             cc
00002412  0E                                       1770+          DC    HL1'14'            cc failed mask
                                                   1771+V2_38     DC    FD'-9999999999999999' \
00002418  FFDC790D 903F0001                            +                                   binary value for v2 packed decimal
00002420  FFFFFFFF FFFFFFFF                         1772+V3_38     DC    FD'-1'             binary value for v3 packed decimal
00002428  E5D4D740 40404040                         1773+          DC    CL8'VMP'           instruction name
00002430  00000010                                 1774+          DC    A(16)              result length
00002434  00002474                                 1775+REA38     DC    A(RE38)            result address
                                                   1776+*                                  INSTRUCTION UNDER TEST ROUTINE
00002438                                           1777+X38       DS    0F
00002438  E320 5010 0004                 00002418  1778+          LG    R2,V2_38           convert v2
0000243E  E320 8F57 002E                 00001157  1779+          CVDG  R2,V2PACKED
00002444  E720 8F57 0006                 00001157  1780+          VL    V2,V2PACKED
0000244A  E320 5018 0004                 00002420  1781+          LG    R2,V3_38           convert v3
00002450  E320 8F67 002E                 00001167  1782+          CVDG  R2,V3PACKED
00002456  E730 8F67 0006                 00001167  1783+          VL    V3,V3PACKED
0000245C  E612 3018 7078                           1784+          VMP   V1,V2,V3,135,1     test instruction
00002462  E710 8F08 000E                 00001108  1785+          VST   V1,V1OUTPUT        save result
00002468  B98D 0020                                1786+          EPSW  R2,R0              exptract psw
0000246C  5020 8EE8                      000010E8  1787+          ST    R2,CCPSW               to save CC
00002470  07FB                                     1788+          BR    R11                running
00002474                                           1789+RE38      DC    0F
00002474                                           1790+          DROP  R5
00002474  00000000 00000000                        1791           DC    XL16'0000000000000000000000009999999C'    overflow RDC
0000247C  00000000 9999999C
                                                   1792
                                                   1793           VRI_F VMP,+9999999999999,+10000000000000,159,1,2
00002488                                           1794+          DS    0FD
00002488                 00002488                  1795+          USING *,R5               base for test data and test routine
00002488  000024B8                                 1796+T39       DC    A(X39)             address of test routine
0000248C  0027                                     1797+          DC    H'39'              test number
0000248E  00                                       1798+          DC    X'00'
0000248F  9F                                       1799+          DC    HL1'159'           i4
00002490  01                                       1800+          DC    HL1'1'             m5
00002491  02                                       1801+          DC    HL1'2'             cc
00002492  0D                                       1802+          DC    HL1'13'            cc failed mask
                                                   1803+V2_39     DC    FD'+9999999999999' \
00002498  00000918 4E729FFF                            +                                   binary value for v2 packed decimal
                                                   1804+V3_39     DC    FD'+10000000000000' \
000024A0  00000918 4E72A000                            +                                   binary value for v3 packed decimal
000024A8  E5D4D740 40404040                        1805+          DC    CL8'VMP'           instruction name
000024B0  00000010                                 1806+          DC    A(16)              result length
000024B4  000024F4                                 1807+REA39     DC    A(RE39)            result address
                                                   1808+*                                  INSTRUCTION UNDER TEST ROUTINE
000024B8                                           1809+X39       DS    0F
000024B8  E320 5010 0004                 00002498  1810+          LG    R2,V2_39           convert v2
000024BE  E320 8F57 002E                 00001157  1811+          CVDG  R2,V2PACKED
000024C4  E720 8F57 0006                 00001157  1812+          VL    V2,V2PACKED
000024CA  E320 5018 0004                 000024A0  1813+          LG    R2,V3_39           convert v3
000024D0  E320 8F67 002E                 00001167  1814+          CVDG  R2,V3PACKED
000024D6  E730 8F67 0006                 00001167  1815+          VL    V3,V3PACKED
000024DC  E612 3019 F078                           1816+          VMP   V1,V2,V3,159,1     test instruction
000024E2  E710 8F08 000E                 00001108  1817+          VST   V1,V1OUTPUT        save result
000024E8  B98D 0020                                1818+          EPSW  R2,R0              exptract psw
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  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

000024EC  5020 8EE8                     000010E8  1819+         ST    R2,CCPSW              to save CC
000024F0  07FB                                    1820+         BR    R11                 return
000024F4                                          1821+RE39     DC    0F
000024F4                                          1822+         DROP  R5
000024F4  00000999 99999999                       1823          DC    XL16'0000099999999999990000000000000C'
000024FC  99000000 0000000C
                                                  1824
                                                  1825 * VMP larger #'s , i4=159(iom=1 & rdc=31)            CS=1 for all m5
                                                  1826 * check forced positive
                                                  1827          VRI_F VMP,-99999999999999999,+1,159,9,2     m5=9(P2=1)
00002508                                          1828+         DS    0FD
00002508                  00002508                1829+         USING *,R5                base for test data and test routine
00002508  00002538                                1830+T40      DC    A(X40)              address of test routine
0000250C  0028                                    1831+         DC    H'40'               test number
0000250E  00                                      1832+         DC    X'00'
0000250F  9F                                      1833+         DC    HL1'159'            i4
00002510  09                                      1834+         DC    HL1'9'              m5
00002511  02                                      1835+         DC    HL1'2'              cc
00002512  0D                                      1836+         DC    HL1'13'             cc failed mask
                                                  1837+V2_40    DC    FD'-99999999999999999' \
00002518  FE9CBA87 A2760001                           +                                 binary value for v2 packed decimal
00002520  00000000 00000001                       1838+V3_40    DC    FD'+1'              binary value for v3 packed decimal
00002528  E5D4D740 40404040                       1839+         DC    CL8'VMP'            instruction name
00002530  00000010                                1840+         DC    A(16)               result length
00002534  00002574                                1841+REA40    DC    A(RE40)             result address
                                                  1842+*                                  INSTRUCTION UNDER TEST ROUTINE
00002538                                          1843+X40      DS    0F
00002538  E320 5010 0004                00002518  1844+         LG    R2,V2_40            convert v2
0000253E  E320 8F57 002E                00001157  1845+         CVDG  R2,V2PACKED
00002544  E720 8F57 0006                00001157  1846+         VL    V2,V2PACKED
0000254A  E320 5018 0004                00002520  1847+         LG    R2,V3_40            convert v3
00002550  E320 8F67 002E                00001167  1848+         CVDG  R2,V3PACKED
00002556  E730 8F67 0006                00001167  1849+         VL    V3,V3PACKED
0000255C  E612 3099 F078                          1850+         VMP   V1,V2,V3,159,9      test instruction
00002562  E710 8F08 000E                00001108  1851+         VST   V1,V1OUTPUT         save result
00002568  B98D 0020                               1852+         EPSW  R2,R0               exptract psw
0000256C  5020 8EE8                     000010E8  1853+         ST    R2,CCPSW              to save CC
00002570  07FB                                    1854+         BR    R11                 return
00002574                                          1855+RE40     DC    0F
00002574                                          1856+         DROP  R5
00002574  00000000 00000099                       1857          DC    XL16'0000000000000099999999999999999C'
0000257C  99999999 9999999C
                                                  1858
                                                  1859 *                                                   m5=13(P2=1,P3=1)
                                                  1860          VRI_F VMP,-99999999999999999,-10000000000000000,159,13,3
00002588                                          1861+         DS    0FD
00002588                  00002588                1862+         USING *,R5                base for test data and test routine
00002588  000025B8                                1863+T41      DC    A(X41)              address of test routine
0000258C  0029                                    1864+         DC    H'41'               test number
0000258E  00                                      1865+         DC    X'00'
0000258F  9F                                      1866+         DC    HL1'159'            i4
00002590  0D                                      1867+         DC    HL1'13'             m5
00002591  03                                      1868+         DC    HL1'3'              cc
00002592  0E                                      1869+         DC    HL1'14'             cc failed mask
                                                  1870+V2_41    DC    FD'-99999999999999999' \
00002598  FE9CBA87 A2760001                           +                                 binary value for v2 packed decimal
```

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  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
                                                   1871+V3_41    DC    FD'-10000000000000000' \
000025A0  FFDC790D 903F0000                            +                          binary value for v3 packed decimal
000025A8  E5D4D740 40404040                        1872+         DC    CL8'VMP'             instruction name
000025B0  00000010                                 1873+         DC    A(16)                result length
000025B4  000025F4                                 1874+REA41    DC    A(RE41)              result address
                                                   1875+*                                   INSTRUCTION UNDER TEST ROUTINE
000025B8                                           1876+X41      DS    0F
000025B8  E320 5010 0004                 00002598  1877+         LG    R2,V2_41             convert v2
000025BE  E320 8F57 002E                 00001157  1878+         CVDG  R2,V2PACKED
000025C4  E720 8F57 0006                 00001157  1879+         VL    V2,V2PACKED
000025CA  E320 5018 0004                 000025A0  1880+         LG    R2,V3_41             convert v3
000025D0  E320 8F67 002E                 00001167  1881+         CVDG  R2,V3PACKED
000025D6  E730 8F67 0006                 00001167  1882+         VL    V3,V3PACKED
000025DC  E612 30D9 F078                           1883+         VMP   V1,V2,V3,159,13      test instruction
000025E2  E710 8F08 000E                 00001108  1884+         VST   V1,V1OUTPUT          save result
000025E8  B98D 0020                                1885+         EPSW  R2,R0                exptract psw
000025EC  5020 8EE8                      000010E8  1886+         ST    R2,CCPSW                 to save CC
000025F0  07FB                                     1887+         BR    R11                  return
000025F4                                           1888+RE41     DC    0F
000025F4                                           1889+         DROP  R5
000025F4  99999999 99999990                        1890          DC    XL16'9999999999999990000000000000000C'    overflowed
000025FC  00000000 0000000C
                                                   1891
                                                   1892          VRI_F VMP,-9999999999999999,-1,159,3,2       m5=3(P1=1)
00002608                                           1893+         DS    0FD
00002608                        00002608           1894+         USING *,R5                 base for test data and test routine
00002608  00002638                                 1895+T42      DC    A(X42)               address of test routine
0000260C  002A                                     1896+         DC    H'42'                test number
0000260E  00                                       1897+         DC    X'00'
0000260F  9F                                       1898+         DC    HL1'159'             i4
00002610  03                                       1899+         DC    HL1'3'               m5
00002611  02                                       1900+         DC    HL1'2'               cc
00002612  0D                                       1901+         DC    HL1'13'              cc failed mask
                                                   1902+V2_42    DC    FD'-9999999999999999' \
00002618  FFDC790D 903F0001                            +                          binary value for v2 packed decimal
00002620  FFFFFFFF FFFFFFFF                        1903+V3_42    DC    FD'-1'               binary value for v3 packed decimal
00002628  E5D4D740 40404040                        1904+         DC    CL8'VMP'             instruction name
00002630  00000010                                 1905+         DC    A(16)                result length
00002634  00002674                                 1906+REA42    DC    A(RE42)              result address
                                                   1907+*                                   INSTRUCTION UNDER TEST ROUTINE
00002638                                           1908+X42      DS    0F
00002638  E320 5010 0004                 00002618  1909+         LG    R2,V2_42             convert v2
0000263E  E320 8F57 002E                 00001157  1910+         CVDG  R2,V2PACKED
00002644  E720 8F57 0006                 00001157  1911+         VL    V2,V2PACKED
0000264A  E320 5018 0004                 00002620  1912+         LG    R2,V3_42             convert v3
00002650  E320 8F67 002E                 00001167  1913+         CVDG  R2,V3PACKED
00002656  E730 8F67 0006                 00001167  1914+         VL    V3,V3PACKED
0000265C  E612 3039 F078                           1915+         VMP   V1,V2,V3,159,3       test instruction
00002662  E710 8F08 000E                 00001108  1916+         VST   V1,V1OUTPUT          save result
00002668  B98D 0020                                1917+         EPSW  R2,R0                exptract psw
0000266C  5020 8EE8                      000010E8  1918+         ST    R2,CCPSW                 to save CC
00002670  07FB                                     1919+         BR    R11                  return
00002674                                           1920+RE42     DC    0F
00002674                                           1921+         DROP  R5
00002674  00000000 00000009                        1922          DC    XL16'0000000000000009999999999999999F'
0000267C  99999999 9999999F
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```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
                                                    1923
                                                    1924          VRI_F VMP,-9999999999999999,-1,135,13,3  i4=135(iom=1 & rdc=7)
00002688                                            1925+         DS    0FD
00002688                      00002688              1926+         USING *,R5              base for test data and test routine
00002688  000026B8                                  1927+T43      DC    A(X43)            address of test routine
0000268C  002B                                      1928+         DC    H'43'             test number
0000268E  00                                        1929+         DC    X'00'
0000268F  87                                        1930+         DC    HL1'135'          i4
00002690  0D                                        1931+         DC    HL1'13'           m5
00002691  03                                        1932+         DC    HL1'3'            cc
00002692  0E                                        1933+         DC    HL1'14'           cc failed mask
                                                    1934+V2_43    DC    FD'-9999999999999999' \
00002698  FFDC790D 903F0001                           +                                   binary value for v2 packed decimal
000026A0  FFFFFFFF FFFFFFFF                         1935+V3_43    DC    FD'-1'            binary value for v3 packed decimal
000026A8  E5D4D740 40404040                         1936+         DC    CL8'VMP'          instruction name
000026B0  00000010                                  1937+         DC    A(16)             result length
000026B4  000026F4                                  1938+REA43    DC    A(RE43)           result address
                                                    1939+*                                INSTRUCTION UNDER TEST ROUTINE
000026B8                                            1940+X43      DS    0F
000026B8  E320 5010 0004                00002698    1941+         LG    R2,V2_43          convert v2
000026BE  E320 8F57 002E                00001157    1942+         CVDG  R2,V2PACKED
000026C4  E720 8F57 0006                00001157    1943+         VL    V2,V2PACKED
000026CA  E320 5018 0004                000026A0    1944+         LG    R2,V3_43          convert v3
000026D0  E320 8F67 002E                00001167    1945+         CVDG  R2,V3PACKED
000026D6  E730 8F67 0006                00001167    1946+         VL    V3,V3PACKED
000026DC  E612 30D8 7078                            1947+         VMP   V1,V2,V3,135,13   test instruction
000026E2  E710 8F08 000E                00001108    1948+         VST   V1,V1OUTPUT       save result
000026E8  B98D 0020                                 1949+         EPSW  R2,R0             exptract psw
000026EC  5020 8EE8                     000010E8    1950+         ST    R2,CCPSW              to save CC
000026F0  07FB                                      1951+         BR    R11               return
000026F4                                            1952+RE43     DC    0F
000026F4                                            1953+         DROP  R5
                                                    1954 *                                                    m5=13(P2=1,P3=1)
000026F4  00000000 00000000                         1955          DC    XL16'0000000000000000000000009999999C'    overflow RDC
000026FC  00000000 9999999C
                                                    1956
                                                    1957          VRI_F VMP,+9999999999999,+10000000000000,159,3,2  m5=3(P1=1)
00002708                                            1958+         DS    0FD
00002708                      00002708              1959+         USING *,R5              base for test data and test routine
00002708  00002738                                  1960+T44      DC    A(X44)            address of test routine
0000270C  002C                                      1961+         DC    H'44'             test number
0000270E  00                                        1962+         DC    X'00'
0000270F  9F                                        1963+         DC    HL1'159'          i4
00002710  03                                        1964+         DC    HL1'3'            m5
00002711  02                                        1965+         DC    HL1'2'            cc
00002712  0D                                        1966+         DC    HL1'13'           cc failed mask
                                                    1967+V2_44    DC    FD'+9999999999999' \
00002718  00000918 4E729FFF                           +                                   binary value for v2 packed decimal
                                                    1968+V3_44    DC    FD'+10000000000000' \
00002720  00000918 4E72A000                           +                                   binary value for v3 packed decimal
00002728  E5D4D740 40404040                         1969+         DC    CL8'VMP'          instruction name
00002730  00000010                                  1970+         DC    A(16)             result length
00002734  00002774                                  1971+REA44    DC    A(RE44)           result address
                                                    1972+*                                INSTRUCTION UNDER TEST ROUTINE
00002738                                            1973+X44      DS    0F
00002738  E320 5010 0004                00002718    1974+         LG    R2,V2_44          convert v2
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  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
0000273E  E320 8F57 002E                 00001157  1975+         CVDG  R2,V2PACKED
00002744  E720 8F57 0006                 00001157  1976+         VL    V2,V2PACKED
0000274A  E320 5018 0004                 00002720  1977+         LG    R2,V3_44          convert v3
00002750  E320 8F67 002E                 00001167  1978+         CVDG  R2,V3PACKED
00002756  E730 8F67 0006                 00001167  1979+         VL    V3,V3PACKED
0000275C  E612 3039 F078                           1980+         VMP   V1,V2,V3,159,3    test instruction
00002762  E710 8F08 000E                 00001108  1981+         VST   V1,V1OUTPUT       save result
00002768  B98D 0020                                1982+         EPSW  R2,R0             exptract psw
0000276C  5020 8EE8                      000010E8  1983+         ST    R2,CCPSW              to save CC
00002770  07FB                                     1984+         BR    R11               return
00002774                                           1985+RE44     DC    0F
00002774                                           1986+         DROP  R5
00002774  00000999 99999999                        1987          DC    XL16'00000999999999999900000000000000F'
0000277C  99000000 0000000F
                                                   1988
                                                   1989 *-------------------------------------------------------------------
                                                   1990 *  VDP    - VECTOR DIVIDE DECIMAL
                                                   1991 *-------------------------------------------------------------------
                                                   1992 * VDP simple + CC checks
                                                   1993          VRI_F VDP,+10,+12,7,1,0
00002788                                           1994+         DS    0FD
00002788                 00002788                  1995+         USING *,R5              base for test data and test routine
00002788  000027B8                                 1996+T45      DC    A(X45)            address of test routine
0000278C  002D                                     1997+         DC    H'45'             test number
0000278E  00                                       1998+         DC    X'00'
0000278F  07                                       1999+         DC    HL1'7'            i4
00002790  01                                       2000+         DC    HL1'1'            m5
00002791  00                                       2001+         DC    HL1'0'            cc
00002792  07                                       2002+         DC    HL1'7'            cc failed mask
00002798  00000000 0000000A                        2003+V2_45    DC    FD'+10'           binary value for v2 packed decimal
000027A0  00000000 0000000C                        2004+V3_45    DC    FD'+12'           binary value for v3 packed decimal
000027A8  E5C4D740 40404040                        2005+         DC    CL8'VDP'          instruction name
000027B0  00000010                                 2006+         DC    A(16)             result length
000027B4  000027F4                                 2007+REA45    DC    A(RE45)           result address
                                                   2008+*                                INSTRUCTION UNDER TEST ROUTINE
000027B8                                           2009+X45      DS    0F
000027B8  E320 5010 0004                 00002798  2010+         LG    R2,V2_45          convert v2
000027BE  E320 8F57 002E                 00001157  2011+         CVDG  R2,V2PACKED
000027C4  E720 8F57 0006                 00001157  2012+         VL    V2,V2PACKED
000027CA  E320 5018 0004                 000027A0  2013+         LG    R2,V3_45          convert v3
000027D0  E320 8F67 002E                 00001167  2014+         CVDG  R2,V3PACKED
000027D6  E730 8F67 0006                 00001167  2015+         VL    V3,V3PACKED
000027DC  E612 3010 707A                           2016+         VDP   V1,V2,V3,7,1      test instruction
000027E2  E710 8F08 000E                 00001108  2017+         VST   V1,V1OUTPUT       save result
000027E8  B98D 0020                                2018+         EPSW  R2,R0             exptract psw
000027EC  5020 8EE8                      000010E8  2019+         ST    R2,CCPSW              to save CC
000027F0  07FB                                     2020+         BR    R11               return
000027F4                                           2021+RE45     DC    0F
000027F4                                           2022+         DROP  R5
000027F4  00000000 00000000                        2023          DC    XL16'0000000000000000000000000000000C'
000027FC  00000000 0000000C
                                                   2024
                                                   2025          VRI_F VDP,-100,+12,7,1,1
00002808                                           2026+         DS    0FD
00002808                 00002808                  2027+         USING *,R5              base for test data and test routine
00002808  00002838                                 2028+T46      DC    A(X46)            address of test routine
```

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  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
0000280C  002E                                    2029+          DC    H'46'              test number
0000280E  00                                      2030+          DC    X'00'
0000280F  07                                      2031+          DC    HL1'7'             i4
00002810  01                                      2032+          DC    HL1'1'             m5
00002811  01                                      2033+          DC    HL1'1'             cc
00002812  0B                                      2034+          DC    HL1'11'            cc failed mask
00002818  FFFFFFFF FFFFFF9C                       2035+V2_46     DC    FD'-100'           binary value for v2 packed decimal
00002820  00000000 0000000C                       2036+V3_46     DC    FD'+12'            binary value for v3 packed decimal
00002828  E5C4D740 40404040                       2037+          DC    CL8'VDP'           instruction name
00002830  00000010                                2038+          DC    A(16)              result length
00002834  00002874                                2039+REA46     DC    A(RE46)            result address
                                                  2040+*                                  INSTRUCTION UNDER TEST ROUTINE
00002838                                          2041+X46       DS    0F
00002838  E320 5010 0004                 00002818 2042+          LG    R2,V2_46           convert v2
0000283E  E320 8F57 002E                 00001157 2043+          CVDG  R2,V2PACKED
00002844  E720 8F57 0006                 00001157 2044+          VL    V2,V2PACKED
0000284A  E320 5018 0004                 00002820 2045+          LG    R2,V3_46           convert v3
00002850  E320 8F67 002E                 00001167 2046+          CVDG  R2,V3PACKED
00002856  E730 8F67 0006                 00001167 2047+          VL    V3,V3PACKED
0000285C  E612 3010 707A                          2048+          VDP   V1,V2,V3,7,1       test instruction
00002862  E710 8F08 000E                 00001108 2049+          VST   V1,V1OUTPUT        save result
00002868  B98D 0020                               2050+          EPSW  R2,R0              exptract psw
0000286C  5020 8EE8                      000010E8 2051+          ST    R2,CCPSW               to save CC
00002870  07FB                                    2052+          BR    R11                return
00002874                                          2053+RE46      DC    0F
00002874                                          2054+          DROP  R5
00002874  00000000 00000000                       2055           DC    XL16'000000000000000000000000000008D'
0000287C  00000000 0000008D
                                                  2056
                                                  2057           VRI_F VDP,+100,-12,1,1,1                      note rdc=1
00002888                                          2058+          DS    0FD
00002888                  00002888                2059+          USING *,R5               base for test data and test routine
00002888  000028B8                                2060+T47       DC    A(X47)             address of test routine
0000288C  002F                                    2061+          DC    H'47'              test number
0000288E  00                                      2062+          DC    X'00'
0000288F  01                                      2063+          DC    HL1'1'             i4
00002890  01                                      2064+          DC    HL1'1'             m5
00002891  01                                      2065+          DC    HL1'1'             cc
00002892  0B                                      2066+          DC    HL1'11'            cc failed mask
00002898  00000000 00000064                       2067+V2_47     DC    FD'+100'           binary value for v2 packed decimal
000028A0  FFFFFFFF FFFFFFF4                       2068+V3_47     DC    FD'-12'            binary value for v3 packed decimal
000028A8  E5C4D740 40404040                       2069+          DC    CL8'VDP'           instruction name
000028B0  00000010                                2070+          DC    A(16)              result length
000028B4  000028F4                                2071+REA47     DC    A(RE47)            result address
                                                  2072+*                                  INSTRUCTION UNDER TEST ROUTINE
000028B8                                          2073+X47       DS    0F
000028B8  E320 5010 0004                 00002898 2074+          LG    R2,V2_47           convert v2
000028BE  E320 8F57 002E                 00001157 2075+          CVDG  R2,V2PACKED
000028C4  E720 8F57 0006                 00001157 2076+          VL    V2,V2PACKED
000028CA  E320 5018 0004                 000028A0 2077+          LG    R2,V3_47           convert v3
000028D0  E320 8F67 002E                 00001167 2078+          CVDG  R2,V3PACKED
000028D6  E730 8F67 0006                 00001167 2079+          VL    V3,V3PACKED
000028DC  E612 3010 107A                          2080+          VDP   V1,V2,V3,1,1       test instruction
000028E2  E710 8F08 000E                 00001108 2081+          VST   V1,V1OUTPUT        save result
000028E8  B98D 0020                               2082+          EPSW  R2,R0              exptract psw
000028EC  5020 8EE8                      000010E8 2083+          ST    R2,CCPSW               to save CC
```

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  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
000028F0  07FB                                     2084+          BR    R11               return
000028F4                                           2085+RE47      DC    0F
000028F4                                           2086+          DROP  R5
000028F4  00000000 00000000                        2087           DC    XL16'0000000000000000000000000000008D'
000028FC  00000000 0000008D
                                                   2088
                                                   2089           VRI_F VDP,+100,-12,7,1,1
00002908                                           2090+          DS    0FD
00002908                     00002908              2091+          USING *,R5              base for test data and test routine
00002908  00002938                                 2092+T48       DC    A(X48)            address of test routine
0000290C  0030                                     2093+          DC    H'48'             test number
0000290E  00                                       2094+          DC    X'00'
0000290F  07                                       2095+          DC    HL1'7'            i4
00002910  01                                       2096+          DC    HL1'1'            m5
00002911  01                                       2097+          DC    HL1'1'            cc
00002912  0B                                       2098+          DC    HL1'11'           cc failed mask
00002918  00000000 00000064                        2099+V2_48     DC    FD'+100'          binary value for v2 packed decimal
00002920  FFFFFFFF FFFFFFF4                        2100+V3_48     DC    FD'-12'           binary value for v3 packed decimal
00002928  E5C4D740 40404040                        2101+          DC    CL8'VDP'          instruction name
00002930  00000010                                 2102+          DC    A(16)             result length
00002934  00002974                                 2103+REA48     DC    A(RE48)           result address
                                                   2104+*                                 INSTRUCTION UNDER TEST ROUTINE
00002938                                           2105+X48       DS    0F
00002938  E320 5010 0004                00002918   2106+          LG    R2,V2_48          convert v2
0000293E  E320 8F57 002E                00001157   2107+          CVDG  R2,V2PACKED
00002944  E720 8F57 0006                00001157   2108+          VL    V2,V2PACKED
0000294A  E320 5018 0004                00002920   2109+          LG    R2,V3_48          convert v3
00002950  E320 8F67 002E                00001167   2110+          CVDG  R2,V3PACKED
00002956  E730 8F67 0006                00001167   2111+          VL    V3,V3PACKED
0000295C  E612 3010 707A                           2112+          VDP   V1,V2,V3,7,1      test instruction
00002962  E710 8F08 000E                00001108   2113+          VST   V1,V1OUTPUT       save result
00002968  B98D 0020                                2114+          EPSW  R2,R0             exptract psw
0000296C  5020 8EE8                     000010E8   2115+          ST    R2,CCPSW              to save CC
00002970  07FB                                     2116+          BR    R11               return
00002974                                           2117+RE48      DC    0F
00002974                                           2118+          DROP  R5
00002974  00000000 00000000                        2119           DC    XL16'0000000000000000000000000000008D'
0000297C  00000000 0000008D
                                                   2120
                                                   2121           VRI_F VDP,-100,-12,7,1,2
00002988                                           2122+          DS    0FD
00002988                     00002988              2123+          USING *,R5              base for test data and test routine
00002988  000029B8                                 2124+T49       DC    A(X49)            address of test routine
0000298C  0031                                     2125+          DC    H'49'             test number
0000298E  00                                       2126+          DC    X'00'
0000298F  07                                       2127+          DC    HL1'7'            i4
00002990  01                                       2128+          DC    HL1'1'            m5
00002991  02                                       2129+          DC    HL1'2'            cc
00002992  0D                                       2130+          DC    HL1'13'           cc failed mask
00002998  FFFFFFFF FFFFFF9C                        2131+V2_49     DC    FD'-100'          binary value for v2 packed decimal
000029A0  FFFFFFFF FFFFFFF4                        2132+V3_49     DC    FD'-12'           binary value for v3 packed decimal
000029A8  E5C4D740 40404040                        2133+          DC    CL8'VDP'          instruction name
000029B0  00000010                                 2134+          DC    A(16)             result length
000029B4  000029F4                                 2135+REA49     DC    A(RE49)           result address
                                                   2136+*                                 INSTRUCTION UNDER TEST ROUTINE
000029B8                                           2137+X49       DS    0F
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  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

000029B8  E320 5010 0004                 00002998  2138+         LG    R2,V2_49          convert v2
000029BE  E320 8F57 002E                 00001157  2139+         CVDG  R2,V2PACKED
000029C4  E720 8F57 0006                 00001157  2140+         VL    V2,V2PACKED
000029CA  E320 5018 0004                 000029A0  2141+         LG    R2,V3_49          convert v3
000029D0  E320 8F67 002E                 00001167  2142+         CVDG  R2,V3PACKED
000029D6  E730 8F67 0006                 00001167  2143+         VL    V3,V3PACKED
000029DC  E612 3010 707A                           2144+         VDP   V1,V2,V3,7,1      test instruction
000029E2  E710 8F08 000E                 00001108  2145+         VST   V1,V1OUTPUT       save result
000029E8  B98D 0020                                2146+         EPSW  R2,R0             exptract psw
000029EC  5020 8EE8                      000010E8  2147+         ST    R2,CCPSW              to save CC
000029F0  07FB                                     2148+         BR    R11               return
000029F4                                           2149+RE49     DC    0F
000029F4                                           2150+         DROP  R5
000029F4  00000000 00000000                        2151          DC    XL16'00000000000000000000000000000008C'
000029FC  00000000 0000008C
                                                   2152
                                                   2153          VRI_F VDP,-100,-10,7,1,2
00002A08                                           2154+         DS    0FD
00002A08                           00002A08        2155+         USING *,R5              base for test data and test routine
00002A08  00002A38                                 2156+T50      DC    A(X50)            address of test routine
00002A0C  0032                                     2157+         DC    H'50'             test number
00002A0E  00                                       2158+         DC    X'00'
00002A0F  07                                       2159+         DC    HL1'7'            i4
00002A10  01                                       2160+         DC    HL1'1'            m5
00002A11  02                                       2161+         DC    HL1'2'            cc
00002A12  0D                                       2162+         DC    HL1'13'           cc failed mask
00002A18  FFFFFFFF FFFFFF9C                        2163+V2_50    DC    FD'-100'          binary value for v2 packed decimal
00002A20  FFFFFFFF FFFFFFF6                        2164+V3_50    DC    FD'-10'           binary value for v3 packed decimal
00002A28  E5C4D740 40404040                        2165+         DC    CL8'VDP'          instruction name
00002A30  00000010                                 2166+         DC    A(16)             result length
00002A34  00002A74                                 2167+REA50    DC    A(RE50)           result address
                                                   2168+*                                INSTRUCTION UNDER TEST ROUTINE
00002A38                                           2169+X50      DS    0F
00002A38  E320 5010 0004                 00002A18  2170+         LG    R2,V2_50          convert v2
00002A3E  E320 8F57 002E                 00001157  2171+         CVDG  R2,V2PACKED
00002A44  E720 8F57 0006                 00001157  2172+         VL    V2,V2PACKED
00002A4A  E320 5018 0004                 00002A20  2173+         LG    R2,V3_50          convert v3
00002A50  E320 8F67 002E                 00001167  2174+         CVDG  R2,V3PACKED
00002A56  E730 8F67 0006                 00001167  2175+         VL    V3,V3PACKED
00002A5C  E612 3010 707A                           2176+         VDP   V1,V2,V3,7,1      test instruction
00002A62  E710 8F08 000E                 00001108  2177+         VST   V1,V1OUTPUT       save result
00002A68  B98D 0020                                2178+         EPSW  R2,R0             exptract psw
00002A6C  5020 8EE8                      000010E8  2179+         ST    R2,CCPSW              to save CC
00002A70  07FB                                     2180+         BR    R11               return
00002A74                                           2181+RE50     DC    0F
00002A74                                           2182+         DROP  R5
00002A74  00000000 00000000                        2183          DC    XL16'00000000000000000000000000000010C'
00002A7C  00000000 0000010C
                                                   2184
                                                   2185          VRI_F VDP,+10000000010,+10,135,1,3     i4=135(iom=1 & rdc=7)
00002A88                                           2186+         DS    0FD
00002A88                           00002A88        2187+         USING *,R5              base for test data and test routine
00002A88  00002AB8                                 2188+T51      DC    A(X51)            address of test routine
00002A8C  0033                                     2189+         DC    H'51'             test number
00002A8E  00                                       2190+         DC    X'00'
00002A8F  87                                       2191+         DC    HL1'135'          i4
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  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

00002A90  01                                       2192+          DC    HL1'1'              m5
00002A91  03                                       2193+          DC    HL1'3'              cc
00002A92  0E                                       2194+          DC    HL1'14'             cc failed mask
00002A98  00000002 540BE40A                        2195+V2_51     DC    FD'+10000000010'    binary value for v2 packed decimal
00002AA0  00000000 0000000A                        2196+V3_51     DC    FD'+10'             binary value for v3 packed decimal
00002AA8  E5C4D740 40404040                        2197+          DC    CL8'VDP'            instruction name
00002AB0  00000010                                 2198+          DC    A(16)               result length
00002AB4  00002AF4                                 2199+REA51     DC    A(RE51)             result address
                                                   2200+*                                   INSTRUCTION UNDER TEST ROUTINE
00002AB8                                           2201+X51       DS    0F
00002AB8  E320 5010 0004                 00002A98  2202+          LG    R2,V2_51            convert v2
00002ABE  E320 8F57 002E                 00001157  2203+          CVDG  R2,V2PACKED
00002AC4  E720 8F57 0006                 00001157  2204+          VL    V2,V2PACKED
00002ACA  E320 5018 0004                 00002AA0  2205+          LG    R2,V3_51            convert v3
00002AD0  E320 8F67 002E                 00001167  2206+          CVDG  R2,V3PACKED
00002AD6  E730 8F67 0006                 00001167  2207+          VL    V3,V3PACKED
00002ADC  E612 3018 707A                           2208+          VDP   V1,V2,V3,135,1      test instruction
00002AE2  E710 8F08 000E                 00001108  2209+          VST   V1,V1OUTPUT         save result
00002AE8  B98D 0020                                2210+          EPSW  R2,R0               exptract psw
00002AEC  5020 8EE8                      000010E8  2211+          ST    R2,CCPSW                to save CC
00002AF0  07FB                                     2212+          BR    R11                 return
00002AF4                                           2213+RE51      DC    0F
00002AF4                                           2214+          DROP  R5
00002AF4  00000000 00000000                        2215           DC    XL16'0000000000000000000000000000001C'  note RDC
00002AFC  00000000 0000001C
                                                   2216
                                                   2217 * VDP larger #'s , i4=159(iom=1 & rdc=31)
                                                   2218           VRI_F VDP,+99999999999999999,+1,159,1,2
00002B08                                           2219+          DS    0FD
00002B08                       00002B08            2220+          USING *,R5                base for test data and test routine
00002B08  00002B38                                 2221+T52       DC    A(X52)              address of test routine
00002B0C  0034                                     2222+          DC    H'52'               test number
00002B0E  00                                       2223+          DC    X'00'
00002B0F  9F                                       2224+          DC    HL1'159'            i4
00002B10  01                                       2225+          DC    HL1'1'              m5
00002B11  02                                       2226+          DC    HL1'2'              cc
00002B12  0D                                       2227+          DC    HL1'13'             cc failed mask
                                                   2228+V2_52     DC    FD'+99999999999999999' \
00002B18  01634578 5D89FFFF                            +                                    binary value for v2 packed decimal
00002B20  00000000 00000001                        2229+V3_52     DC    FD'+1'              binary value for v3 packed decimal
00002B28  E5C4D740 40404040                        2230+          DC    CL8'VDP'            instruction name
00002B30  00000010                                 2231+          DC    A(16)               result length
00002B34  00002B74                                 2232+REA52     DC    A(RE52)             result address
                                                   2233+*                                   INSTRUCTION UNDER TEST ROUTINE
00002B38                                           2234+X52       DS    0F
00002B38  E320 5010 0004                 00002B18  2235+          LG    R2,V2_52            convert v2
00002B3E  E320 8F57 002E                 00001157  2236+          CVDG  R2,V2PACKED
00002B44  E720 8F57 0006                 00001157  2237+          VL    V2,V2PACKED
00002B4A  E320 5018 0004                 00002B20  2238+          LG    R2,V3_52            convert v3
00002B50  E320 8F67 002E                 00001167  2239+          CVDG  R2,V3PACKED
00002B56  E730 8F67 0006                 00001167  2240+          VL    V3,V3PACKED
00002B5C  E612 3019 F07A                           2241+          VDP   V1,V2,V3,159,1      test instruction
00002B62  E710 8F08 000E                 00001108  2242+          VST   V1,V1OUTPUT         save result
00002B68  B98D 0020                                2243+          EPSW  R2,R0               exptract psw
00002B6C  5020 8EE8                      000010E8  2244+          ST    R2,CCPSW                to save CC
00002B70  07FB                                     2245+          BR    R11                 return
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  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

00002B74                                           2246+RE52     DC    0F
00002B74                                           2247+         DROP  R5
00002B74  00000000 00000099                        2248          DC    XL16'0000000000000099999999999999999C'
00002B7C  99999999 9999999C
                                                   2249
                                                   2250          VRI_F VDP,-9999999999999999,+1000,159,1,1
00002B88                                           2251+         DS    0FD
00002B88                     00002B88              2252+         USING *,R5              base for test data and test routine
00002B88  00002BB8                                 2253+T53      DC    A(X53)            address of test routine
00002B8C  0035                                     2254+         DC    H'53'             test number
00002B8E  00                                       2255+         DC    X'00'
00002B8F  9F                                       2256+         DC    HL1'159'          i4
00002B90  01                                       2257+         DC    HL1'1'            m5
00002B91  01                                       2258+         DC    HL1'1'            cc
00002B92  0B                                       2259+         DC    HL1'11'           cc failed mask
                                                   2260+V2_53    DC    FD'-9999999999999999' \
00002B98  FE9CBA87 A2760001                            +                                 binary value for v2 packed decimal
00002BA0  00000000 000003E8                        2261+V3_53    DC    FD'+1000'         binary value for v3 packed decimal
00002BA8  E5C4D740 40404040                        2262+         DC    CL8'VDP'          instruction name
00002BB0  00000010                                 2263+         DC    A(16)             result length
00002BB4  00002BF4                                 2264+REA53    DC    A(RE53)           result address
                                                   2265+*                                INSTRUCTION UNDER TEST ROUTINE
00002BB8                                           2266+X53      DS    0F
00002BB8  E320 5010 0004               00002B98    2267+         LG    R2,V2_53          convert v2
00002BBE  E320 8F57 002E               00001157    2268+         CVDG  R2,V2PACKED
00002BC4  E720 8F57 0006               00001157    2269+         VL    V2,V2PACKED
00002BCA  E320 5018 0004               00002BA0    2270+         LG    R2,V3_53          convert v3
00002BD0  E320 8F67 002E               00001167    2271+         CVDG  R2,V3PACKED
00002BD6  E730 8F67 0006               00001167    2272+         VL    V3,V3PACKED
00002BDC  E612 3019 F07A                           2273+         VDP   V1,V2,V3,159,1    test instruction
00002BE2  E710 8F08 000E               00001108    2274+         VST   V1,V1OUTPUT       save result
00002BE8  B98D 0020                                2275+         EPSW  R2,R0             exptract psw
00002BEC  5020 8EE8                    000010E8    2276+         ST    R2,CCPSW              to save CC
00002BF0  07FB                                     2277+         BR    R11               return
00002BF4                                           2278+RE53     DC    0F
00002BF4                                           2279+         DROP  R5
00002BF4  00000000 00000000                        2280          DC    XL16'0000000000000000099999999999999D'
00002BFC  09999999 9999999D
                                                   2281
                                                   2282          VRI_F VDP,-9999999999999999,-1,159,1,2
00002C08                                           2283+         DS    0FD
00002C08                     00002C08              2284+         USING *,R5              base for test data and test routine
00002C08  00002C38                                 2285+T54      DC    A(X54)            address of test routine
00002C0C  0036                                     2286+         DC    H'54'             test number
00002C0E  00                                       2287+         DC    X'00'
00002C0F  9F                                       2288+         DC    HL1'159'          i4
00002C10  01                                       2289+         DC    HL1'1'            m5
00002C11  02                                       2290+         DC    HL1'2'            cc
00002C12  0D                                       2291+         DC    HL1'13'           cc failed mask
                                                   2292+V2_54    DC    FD'-9999999999999999' \
00002C18  FFDC790D 903F0001                            +                                 binary value for v2 packed decimal
00002C20  FFFFFFFF FFFFFFFF                        2293+V3_54    DC    FD'-1'            binary value for v3 packed decimal
00002C28  E5C4D740 40404040                        2294+         DC    CL8'VDP'          instruction name
00002C30  00000010                                 2295+         DC    A(16)             result length
00002C34  00002C74                                 2296+REA54    DC    A(RE54)           result address
                                                   2297+*                                INSTRUCTION UNDER TEST ROUTINE
```

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  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
00002C38                                           2298+X54      DS    0F
00002C38  E320 5010 0004                 00002C18  2299+          LG    R2,V2_54          convert v2
00002C3E  E320 8F57 002E                 00001157  2300+          CVDG  R2,V2PACKED
00002C44  E720 8F57 0006                 00001157  2301+          VL    V2,V2PACKED
00002C4A  E320 5018 0004                 00002C20  2302+          LG    R2,V3_54          convert v3
00002C50  E320 8F67 002E                 00001167  2303+          CVDG  R2,V3PACKED
00002C56  E730 8F67 0006                 00001167  2304+          VL    V3,V3PACKED
00002C5C  E612 3019 F07A                           2305+          VDP   V1,V2,V3,159,1    test instruction
00002C62  E710 8F08 000E                 00001108  2306+          VST   V1,V1OUTPUT       save result
00002C68  B98D 0020                                2307+          EPSW  R2,R0             exptract psw
00002C6C  5020 8EE8                      000010E8  2308+          ST    R2,CCPSW              to save CC
00002C70  07FB                                     2309+          BR    R11               return
00002C74                                           2310+RE54      DC    0F
00002C74                                           2311+          DROP  R5
00002C74  00000000 00000009                        2312           DC    XL16'0000000000000009999999999999999C'
00002C7C  99999999 9999999C
                                                   2313
                                                   2314           VRI_F VDP,-9999999999999999,-1,135,1,3  i4=135(iom=1 & rdc=7)
00002C88                                           2315+          DS    0FD
00002C88                           00002C88        2316+          USING *,R5              base for test data and test routine
00002C88  00002CB8                                 2317+T55       DC    A(X55)            address of test routine
00002C8C  0037                                     2318+          DC    H'55'             test number
00002C8E  00                                       2319+          DC    X'00'
00002C8F  87                                       2320+          DC    HL1'135'          i4
00002C90  01                                       2321+          DC    HL1'1'            m5
00002C91  03                                       2322+          DC    HL1'3'            cc
00002C92  0E                                       2323+          DC    HL1'14'           cc failed mask
                                                   2324+V2_55     DC    FD'-9999999999999999' \
00002C98  FFDC790D 903F0001                           +                                  binary value for v2 packed decimal
00002CA0  FFFFFFFF FFFFFFFF                        2325+V3_55     DC    FD'-1'            binary value for v3 packed decimal
00002CA8  E5C4D740 40404040                        2326+          DC    CL8'VDP'          instruction name
00002CB0  00000010                                 2327+          DC    A(16)             result length
00002CB4  00002CF4                                 2328+REA55     DC    A(RE55)           result address
                                                   2329+*                                 INSTRUCTION UNDER TEST ROUTINE
00002CB8                                           2330+X55       DS    0F
00002CB8  E320 5010 0004                 00002C98  2331+          LG    R2,V2_55          convert v2
00002CBE  E320 8F57 002E                 00001157  2332+          CVDG  R2,V2PACKED
00002CC4  E720 8F57 0006                 00001157  2333+          VL    V2,V2PACKED
00002CCA  E320 5018 0004                 00002CA0  2334+          LG    R2,V3_55          convert v3
00002CD0  E320 8F67 002E                 00001167  2335+          CVDG  R2,V3PACKED
00002CD6  E730 8F67 0006                 00001167  2336+          VL    V3,V3PACKED
00002CDC  E612 3018 707A                           2337+          VDP   V1,V2,V3,135,1    test instruction
00002CE2  E710 8F08 000E                 00001108  2338+          VST   V1,V1OUTPUT       save result
00002CE8  B98D 0020                                2339+          EPSW  R2,R0             exptract psw
00002CEC  5020 8EE8                      000010E8  2340+          ST    R2,CCPSW              to save CC
00002CF0  07FB                                     2341+          BR    R11               return
00002CF4                                           2342+RE55      DC    0F
00002CF4                                           2343+          DROP  R5
00002CF4  00000000 00000000                        2344           DC    XL16'0000000000000000000000009999999C'    overflow RDC
00002CFC  00000000 9999999C
                                                   2345
                                                   2346           VRI_F VDP,+9999999999999,+1234,159,1,2
00002D08                                           2347+          DS    0FD
00002D08                           00002D08        2348+          USING *,R5              base for test data and test routine
00002D08  00002D38                                 2349+T56       DC    A(X56)            address of test routine
00002D0C  0038                                     2350+          DC    H'56'             test number
```

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  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

00002D0E  00                                       2351+          DC    X'00'
00002D0F  9F                                       2352+          DC    HL1'159'          i4
00002D10  01                                       2353+          DC    HL1'1'            m5
00002D11  02                                       2354+          DC    HL1'2'            cc
00002D12  0D                                       2355+          DC    HL1'13'           cc failed mask
                                                   2356+V2_56     DC    FD'+9999999999999' \
00002D18  00000918 4E729FFF                            +                                  binary value for v2 packed decimal
00002D20  00000000 000004D2                        2357+V3_56     DC    FD'+1234'         binary value for v3 packed decimal
00002D28  E5C4D740 40404040                        2358+          DC    CL8'VDP'          instruction name
00002D30  00000010                                 2359+          DC    A(16)             result length
00002D34  00002D74                                 2360+REA56     DC    A(RE56)           result address
                                                   2361+*                                 INSTRUCTION UNDER TEST ROUTINE
00002D38                                           2362+X56       DS    0F
00002D38  E320 5010 0004                00002D18   2363+          LG    R2,V2_56          convert v2
00002D3E  E320 8F57 002E                00001157   2364+          CVDG  R2,V2PACKED
00002D44  E720 8F57 0006                00001157   2365+          VL    V2,V2PACKED
00002D4A  E320 5018 0004                00002D20   2366+          LG    R2,V3_56          convert v3
00002D50  E320 8F67 002E                00001167   2367+          CVDG  R2,V3PACKED
00002D56  E730 8F67 0006                00001167   2368+          VL    V3,V3PACKED
00002D5C  E612 3019 F07A                           2369+          VDP   V1,V2,V3,159,1    test instruction
00002D62  E710 8F08 000E                00001108   2370+          VST   V1,V1OUTPUT       save result
00002D68  B98D 0020                                2371+          EPSW  R2,R0             exptract psw
00002D6C  5020 8EE8                     000010E8   2372+          ST    R2,CCPSW              to save CC
00002D70  07FB                                     2373+          BR    R11               return
00002D74                                           2374+RE56      DC    0F
00002D74                                           2375+          DROP  R5
00002D74  00000000 00000000                        2376           DC    XL16'00000000000000000000008103727714C'
00002D7C  00000810 3727714C
                                                   2377
                                                   2378           VRI_F VDP,+99999999999999999,+1234,159,1,2
00002D88                                           2379+          DS    0FD
00002D88                        00002D88           2380+          USING *,R5              base for test data and test routine
00002D88  00002DB8                                 2381+T57       DC    A(X57)            address of test routine
00002D8C  0039                                     2382+          DC    H'57'             test number
00002D8E  00                                       2383+          DC    X'00'
00002D8F  9F                                       2384+          DC    HL1'159'          i4
00002D90  01                                       2385+          DC    HL1'1'            m5
00002D91  02                                       2386+          DC    HL1'2'            cc
00002D92  0D                                       2387+          DC    HL1'13'           cc failed mask
                                                   2388+V2_57     DC    FD'+99999999999999999' \
00002D98  0DE0B6B3 A763FFFF                            +                                  binary value for v2 packed decimal
00002DA0  00000000 000004D2                        2389+V3_57     DC    FD'+1234'         binary value for v3 packed decimal
00002DA8  E5C4D740 40404040                        2390+          DC    CL8'VDP'          instruction name
00002DB0  00000010                                 2391+          DC    A(16)             result length
00002DB4  00002DF4                                 2392+REA57     DC    A(RE57)           result address
                                                   2393+*                                 INSTRUCTION UNDER TEST ROUTINE
00002DB8                                           2394+X57       DS    0F
00002DB8  E320 5010 0004                00002D98   2395+          LG    R2,V2_57          convert v2
00002DBE  E320 8F57 002E                00001157   2396+          CVDG  R2,V2PACKED
00002DC4  E720 8F57 0006                00001157   2397+          VL    V2,V2PACKED
00002DCA  E320 5018 0004                00002DA0   2398+          LG    R2,V3_57          convert v3
00002DD0  E320 8F67 002E                00001167   2399+          CVDG  R2,V3PACKED
00002DD6  E730 8F67 0006                00001167   2400+          VL    V3,V3PACKED
00002DDC  E612 3019 F07A                           2401+          VDP   V1,V2,V3,159,1    test instruction
00002DE2  E710 8F08 000E                00001108   2402+          VST   V1,V1OUTPUT       save result
00002DE8  B98D 0020                                2403+          EPSW  R2,R0             exptract psw
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  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

00002DEC  5020 8EE8                     000010E8  2404+         ST    R2,CCPSW              to save CC
00002DF0  07FB                                    2405+         BR    R11                 return
00002DF4                                          2406+RE57     DC    0F
00002DF4                                          2407+         DROP  R5
00002DF4  00000000 00000000                       2408          DC    XL16'00000000000000008103727714748 78C'
00002DFC  81037277 1474878C
                                                  2409
                                                  2410 * VDP larger #'s , i4=159(iom=1 & rdc=31)            CS=1 for all m5
                                                  2411 * check forced positive
                                                  2412          VRI_F VDP,-9999999999999999,+1,159,9,2     m5=9(P2=1)
00002E08                                          2413+         DS    0FD
00002E08                  00002E08                2414+         USING *,R5                base for test data and test routine
00002E08  00002E38                                2415+T58      DC    A(X58)              address of test routine
00002E0C  003A                                    2416+         DC    H'58'               test number
00002E0E  00                                      2417+         DC    X'00'
00002E0F  9F                                      2418+         DC    HL1'159'            i4
00002E10  09                                      2419+         DC    HL1'9'              m5
00002E11  02                                      2420+         DC    HL1'2'              cc
00002E12  0D                                      2421+         DC    HL1'13'             cc failed mask
                                                  2422+V2_58    DC    FD'-9999999999999999' \
00002E18  FE9CBA87 A2760001                           +                                 binary value for v2 packed decimal
00002E20  00000000 00000001                       2423+V3_58    DC    FD'+1'              binary value for v3 packed decimal
00002E28  E5C4D740 40404040                       2424+         DC    CL8'VDP'            instruction name
00002E30  00000010                                2425+         DC    A(16)               result length
00002E34  00002E74                                2426+REA58    DC    A(RE58)             result address
                                                  2427+*                                  INSTRUCTION UNDER TEST ROUTINE
00002E38                                          2428+X58      DS    0F
00002E38  E320 5010 0004                00002E18  2429+         LG    R2,V2_58            convert v2
00002E3E  E320 8F57 002E                00001157  2430+         CVDG  R2,V2PACKED
00002E44  E720 8F57 0006                00001157  2431+         VL    V2,V2PACKED
00002E4A  E320 5018 0004                00002E20  2432+         LG    R2,V3_58            convert v3
00002E50  E320 8F67 002E                00001167  2433+         CVDG  R2,V3PACKED
00002E56  E730 8F67 0006                00001167  2434+         VL    V3,V3PACKED
00002E5C  E612 3099 F07A                          2435+         VDP   V1,V2,V3,159,9      test instruction
00002E62  E710 8F08 000E                00001108  2436+         VST   V1,V1OUTPUT         save result
00002E68  B98D 0020                               2437+         EPSW  R2,R0               exptract psw
00002E6C  5020 8EE8                     000010E8  2438+         ST    R2,CCPSW                to save CC
00002E70  07FB                                    2439+         BR    R11                 return
00002E74                                          2440+RE58     DC    0F
00002E74                                          2441+         DROP  R5
00002E74  00000000 00000099                       2442          DC    XL16'00000000000000999999999999999 9C'
00002E7C  99999999 9999999C
                                                  2443
                                                  2444          VRI_F VDP,+9999999999999999,-1000,159,13,2 m5=13(P2=1,P3=1)
00002E88                                          2445+         DS    0FD
00002E88                  00002E88                2446+         USING *,R5                base for test data and test routine
00002E88  00002EB8                                2447+T59      DC    A(X59)              address of test routine
00002E8C  003B                                    2448+         DC    H'59'               test number
00002E8E  00                                      2449+         DC    X'00'
00002E8F  9F                                      2450+         DC    HL1'159'            i4
00002E90  0D                                      2451+         DC    HL1'13'             m5
00002E91  02                                      2452+         DC    HL1'2'              cc
00002E92  0D                                      2453+         DC    HL1'13'             cc failed mask
                                                  2454+V2_59    DC    FD'+9999999999999999' \
00002E98  01634578 5D89FFFF                           +                                 binary value for v2 packed decimal
00002EA0  FFFFFFFF FFFFFC18                       2455+V3_59    DC    FD'-1000'           binary value for v3 packed decimal
```

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  LOC         OBJECT CODE       ADDR1     ADDR2     STMT
00002EA8  E5C4D740 40404040                         2456+          DC    CL8'VDP'           instruction name
00002EB0  00000010                                  2457+          DC    A(16)              result length
00002EB4  00002EF4                                  2458+REA59     DC    A(RE59)            result address
                                                    2459+*                                  INSTRUCTION UNDER TEST ROUTINE
00002EB8                                            2460+X59       DS    0F
00002EB8  E320 5010 0004                 00002E98   2461+          LG    R2,V2_59           convert v2
00002EBE  E320 8F57 002E                 00001157   2462+          CVDG  R2,V2PACKED
00002EC4  E720 8F57 0006                 00001157   2463+          VL    V2,V2PACKED
00002ECA  E320 5018 0004                 00002EA0   2464+          LG    R2,V3_59           convert v3
00002ED0  E320 8F67 002E                 00001167   2465+          CVDG  R2,V3PACKED
00002ED6  E730 8F67 0006                 00001167   2466+          VL    V3,V3PACKED
00002EDC  E612 30D9 F07A                            2467+          VDP   V1,V2,V3,159,13    test instruction
00002EE2  E710 8F08 000E                 00001108   2468+          VST   V1,V1OUTPUT        save result
00002EE8  B98D 0020                                 2469+          EPSW  R2,R0              exptract psw
00002EEC  5020 8EE8                      000010E8   2470+          ST    R2,CCPSW               to save CC
00002EF0  07FB                                      2471+          BR    R11                return
00002EF4                                            2472+RE59      DC    0F
00002EF4                                            2473+          DROP  R5
00002EF4  00000000 00000000                         2474           DC    XL16'0000000000000000099999999999999C'
00002EFC  09999999 9999999C
                                                    2475
                                                    2476           VRI_F VDP,-9999999999999999,-1,159,3,2       m5=3(P1=1)
00002F08                                            2477+          DS    0FD
00002F08                         00002F08           2478+          USING *,R5               base for test data and test routine
00002F08  00002F38                                  2479+T60       DC    A(X60)             address of test routine
00002F0C  003C                                      2480+          DC    H'60'              test number
00002F0E  00                                        2481+          DC    X'00'
00002F0F  9F                                        2482+          DC    HL1'159'           i4
00002F10  03                                        2483+          DC    HL1'3'             m5
00002F11  02                                        2484+          DC    HL1'2'             cc
00002F12  0D                                        2485+          DC    HL1'13'            cc failed mask
                                                    2486+V2_60     DC    FD'-9999999999999999' \
00002F18  FFDC790D 903F0001                             +                                  binary value for v2 packed decimal
00002F20  FFFFFFFF FFFFFFFF                         2487+V3_60     DC    FD'-1'             binary value for v3 packed decimal
00002F28  E5C4D740 40404040                         2488+          DC    CL8'VDP'           instruction name
00002F30  00000010                                  2489+          DC    A(16)              result length
00002F34  00002F74                                  2490+REA60     DC    A(RE60)            result address
                                                    2491+*                                  INSTRUCTION UNDER TEST ROUTINE
00002F38                                            2492+X60       DS    0F
00002F38  E320 5010 0004                 00002F18   2493+          LG    R2,V2_60           convert v2
00002F3E  E320 8F57 002E                 00001157   2494+          CVDG  R2,V2PACKED
00002F44  E720 8F57 0006                 00001157   2495+          VL    V2,V2PACKED
00002F4A  E320 5018 0004                 00002F20   2496+          LG    R2,V3_60           convert v3
00002F50  E320 8F67 002E                 00001167   2497+          CVDG  R2,V3PACKED
00002F56  E730 8F67 0006                 00001167   2498+          VL    V3,V3PACKED
00002F5C  E612 3039 F07A                            2499+          VDP   V1,V2,V3,159,3     test instruction
00002F62  E710 8F08 000E                 00001108   2500+          VST   V1,V1OUTPUT        save result
00002F68  B98D 0020                                 2501+          EPSW  R2,R0              exptract psw
00002F6C  5020 8EE8                      000010E8   2502+          ST    R2,CCPSW               to save CC
00002F70  07FB                                      2503+          BR    R11                return
00002F74                                            2504+RE60      DC    0F
00002F74                                            2505+          DROP  R5
00002F74  00000000 00000009                         2506           DC    XL16'0000000000000000999999999999999F'
00002F7C  99999999 9999999F
                                                    2507
                                                    2508 *                                                  m5=13(P2=1,P3=1)
```

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  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
                                                   2509          VRI_F VDP,+9999999999999999,-1,135,13,3  i4=135(iom=1 & rdc=7)
00002F88                                           2510+         DS    0FD
00002F88                       00002F88            2511+         USING *,R5              base for test data and test routine
00002F88  00002FB8                                 2512+T61      DC    A(X61)            address of test routine
00002F8C  003D                                     2513+         DC    H'61'             test number
00002F8E  00                                       2514+         DC    X'00'
00002F8F  87                                       2515+         DC    HL1'135'          i4
00002F90  0D                                       2516+         DC    HL1'13'           m5
00002F91  03                                       2517+         DC    HL1'3'            cc
00002F92  0E                                       2518+         DC    HL1'14'           cc failed mask
                                                   2519+V2_61    DC    FD'+9999999999999999' \
00002F98  002386F2 6FC0FFFF                           +                                 binary value for v2 packed decimal
00002FA0  FFFFFFFF FFFFFFFF                        2520+V3_61    DC    FD'-1'            binary value for v3 packed decimal
00002FA8  E5C4D740 40404040                        2521+         DC    CL8'VDP'          instruction name
00002FB0  00000010                                 2522+         DC    A(16)             result length
00002FB4  00002FF4                                 2523+REA61    DC    A(RE61)           result address
                                                   2524+*                                INSTRUCTION UNDER TEST ROUTINE
00002FB8                                           2525+X61      DS    0F
00002FB8  E320 5010 0004                00002F98   2526+         LG    R2,V2_61          convert v2
00002FBE  E320 8F57 002E                00001157   2527+         CVDG  R2,V2PACKED
00002FC4  E720 8F57 0006                00001157   2528+         VL    V2,V2PACKED
00002FCA  E320 5018 0004                00002FA0   2529+         LG    R2,V3_61          convert v3
00002FD0  E320 8F67 002E                00001167   2530+         CVDG  R2,V3PACKED
00002FD6  E730 8F67 0006                00001167   2531+         VL    V3,V3PACKED
00002FDC  E612 30D8 707A                           2532+         VDP   V1,V2,V3,135,13   test instruction
00002FE2  E710 8F08 000E                00001108   2533+         VST   V1,V1OUTPUT       save result
00002FE8  B98D 0020                                2534+         EPSW  R2,R0             exptract psw
00002FEC  5020 8EE8                     000010E8   2535+         ST    R2,CCPSW              to save CC
00002FF0  07FB                                     2536+         BR    R11               return
00002FF4                                           2537+RE61     DC    0F
00002FF4                                           2538+         DROP  R5
00002FF4  00000000 00000000                        2539          DC    XL16'0000000000000000000000009999999C'    overflow RDC
00002FFC  00000000 9999999C
                                                   2540
                                                   2541          VRI_F VDP,+9999999999999,+1234,159,3,2        m5=3(P1=1)
00003008                                           2542+         DS    0FD
00003008                       00003008            2543+         USING *,R5              base for test data and test routine
00003008  00003038                                 2544+T62      DC    A(X62)            address of test routine
0000300C  003E                                     2545+         DC    H'62'             test number
0000300E  00                                       2546+         DC    X'00'
0000300F  9F                                       2547+         DC    HL1'159'          i4
00003010  03                                       2548+         DC    HL1'3'            m5
00003011  02                                       2549+         DC    HL1'2'            cc
00003012  0D                                       2550+         DC    HL1'13'           cc failed mask
                                                   2551+V2_62    DC    FD'+9999999999999' \
00003018  00000918 4E729FFF                           +                                 binary value for v2 packed decimal
00003020  00000000 000004D2                        2552+V3_62    DC    FD'+1234'         binary value for v3 packed decimal
00003028  E5C4D740 40404040                        2553+         DC    CL8'VDP'          instruction name
00003030  00000010                                 2554+         DC    A(16)             result length
00003034  00003074                                 2555+REA62    DC    A(RE62)           result address
                                                   2556+*                                INSTRUCTION UNDER TEST ROUTINE
00003038                                           2557+X62      DS    0F
00003038  E320 5010 0004                00003018   2558+         LG    R2,V2_62          convert v2
0000303E  E320 8F57 002E                00001157   2559+         CVDG  R2,V2PACKED
00003044  E720 8F57 0006                00001157   2560+         VL    V2,V2PACKED
0000304A  E320 5018 0004                00003020   2561+         LG    R2,V3_62          convert v3
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

00003050  E320 8F67 002E                 00001167  2562+         CVDG  R2,V3PACKED
00003056  E730 8F67 0006                 00001167  2563+         VL    V3,V3PACKED
0000305C  E612 3039 F07A                           2564+         VDP   V1,V2,V3,159,3    test instruction
00003062  E710 8F08 000E                 00001108  2565+         VST   V1,V1OUTPUT       save result
00003068  B98D 0020                                2566+         EPSW  R2,R0             exptract psw
0000306C  5020 8EE8                      000010E8  2567+         ST    R2,CCPSW              to save CC
00003070  07FB                                     2568+         BR    R11               return
00003074                                           2569+RE62     DC    0F
00003074                                           2570+         DROP  R5
00003074  00000000 00000000                        2571          DC    XL16'00000000000000000000008103727714F'
0000307C  00000810 3727714F
                                                   2572
                                                   2573 *                                  m5=15(P1=1,P2=1,P3=1)
                                                   2574          VRI_F VDP,-999999999999999999,-1234,159,15,2
00003088                                           2575+         DS    0FD
00003088                 00003088                  2576+         USING *,R5              base for test data and test routine
00003088  000030B8                                 2577+T63      DC    A(X63)            address of test routine
0000308C  003F                                     2578+         DC    H'63'             test number
0000308E  00                                       2579+         DC    X'00'
0000308F  9F                                       2580+         DC    HL1'159'          i4
00003090  0F                                       2581+         DC    HL1'15'           m5
00003091  02                                       2582+         DC    HL1'2'            cc
00003092  0D                                       2583+         DC    HL1'13'           cc failed mask
                                                   2584+V2_63    DC    FD'-999999999999999999' \
00003098  F21F494C 589C0001                            +                                binary value for v2 packed decimal
000030A0  FFFFFFFF FFFFFB2E                        2585+V3_63    DC    FD'-1234'         binary value for v3 packed decimal
000030A8  E5C4D740 40404040                        2586+         DC    CL8'VDP'          instruction name
000030B0  00000010                                 2587+         DC    A(16)             result length
000030B4  000030F4                                 2588+REA63    DC    A(RE63)           result address
                                                   2589+*                                INSTRUCTION UNDER TEST ROUTINE
000030B8                                           2590+X63      DS    0F
000030B8  E320 5010 0004                 00003098  2591+         LG    R2,V2_63          convert v2
000030BE  E320 8F57 002E                 00001157  2592+         CVDG  R2,V2PACKED
000030C4  E720 8F57 0006                 00001157  2593+         VL    V2,V2PACKED
000030CA  E320 5018 0004                 000030A0  2594+         LG    R2,V3_63          convert v3
000030D0  E320 8F67 002E                 00001167  2595+         CVDG  R2,V3PACKED
000030D6  E730 8F67 0006                 00001167  2596+         VL    V3,V3PACKED
000030DC  E612 30F9 F07A                           2597+         VDP   V1,V2,V3,159,15   test instruction
000030E2  E710 8F08 000E                 00001108  2598+         VST   V1,V1OUTPUT       save result
000030E8  B98D 0020                                2599+         EPSW  R2,R0             exptract psw
000030EC  5020 8EE8                      000010E8  2600+         ST    R2,CCPSW              to save CC
000030F0  07FB                                     2601+         BR    R11               return
000030F4                                           2602+RE63     DC    0F
000030F4                                           2603+         DROP  R5
000030F4  00000000 00000000                        2604          DC    XL16'00000000000000008103727714748 78F'
000030FC  81037277 1474878F
                                                   2605
                                                   2606 *-------------------------------------------------------------------
                                                   2607 *  VRP    - VECTOR REMAINDER DECIMAL
                                                   2608 *-------------------------------------------------------------------
                                                   2609 * VRP simple + CC checks
                                                   2610          VRI_F VRP,+10,+12,7,1,2
00003108                                           2611+         DS    0FD
00003108                 00003108                  2612+         USING *,R5              base for test data and test routine
00003108  00003138                                 2613+T64      DC    A(X64)            address of test routine
0000310C  0040                                     2614+         DC    H'64'             test number
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
0000310E  00                                       2615+          DC    X'00'
0000310F  07                                       2616+          DC    HL1'7'            i4
00003110  01                                       2617+          DC    HL1'1'            m5
00003111  02                                       2618+          DC    HL1'2'            cc
00003112  0D                                       2619+          DC    HL1'13'           cc failed mask
00003118  00000000 0000000A                        2620+V2_64     DC    FD'+10'           binary value for v2 packed decimal
00003120  00000000 0000000C                        2621+V3_64     DC    FD'+12'           binary value for v3 packed decimal
00003128  E5D9D740 40404040                        2622+          DC    CL8'VRP'          instruction name
00003130  00000010                                 2623+          DC    A(16)             result length
00003134  00003174                                 2624+REA64     DC    A(RE64)           result address
                                                   2625+*                                 INSTRUCTION UNDER TEST ROUTINE
00003138                                           2626+X64       DS    0F
00003138  E320 5010 0004                 00003118  2627+          LG    R2,V2_64          convert v2
0000313E  E320 8F57 002E                 00001157  2628+          CVDG  R2,V2PACKED
00003144  E720 8F57 0006                 00001157  2629+          VL    V2,V2PACKED
0000314A  E320 5018 0004                 00003120  2630+          LG    R2,V3_64          convert v3
00003150  E320 8F67 002E                 00001167  2631+          CVDG  R2,V3PACKED
00003156  E730 8F67 0006                 00001167  2632+          VL    V3,V3PACKED
0000315C  E612 3010 707B                           2633+          VRP   V1,V2,V3,7,1      test instruction
00003162  E710 8F08 000E                 00001108  2634+          VST   V1,V1OUTPUT       save result
00003168  B98D 0020                                2635+          EPSW  R2,R0             exptract psw
0000316C  5020 8EE8                      000010E8  2636+          ST    R2,CCPSW              to save CC
00003170  07FB                                     2637+          BR    R11               return
00003174                                           2638+RE64      DC    0F
00003174                                           2639+          DROP  R5
00003174  00000000 00000000                        2640           DC    XL16'0000000000000000000000000000010C'
0000317C  00000000 0000010C
                                                   2641
                                                   2642           VRI_F VRP,-100,+12,7,1,1
00003188                                           2643+          DS    0FD
00003188                 00003188                  2644+          USING *,R5              base for test data and test routine
00003188  000031B8                                 2645+T65       DC    A(X65)            address of test routine
0000318C  0041                                     2646+          DC    H'65'             test number
0000318E  00                                       2647+          DC    X'00'
0000318F  07                                       2648+          DC    HL1'7'            i4
00003190  01                                       2649+          DC    HL1'1'            m5
00003191  01                                       2650+          DC    HL1'1'            cc
00003192  0B                                       2651+          DC    HL1'11'           cc failed mask
00003198  FFFFFFFF FFFFFF9C                        2652+V2_65     DC    FD'-100'          binary value for v2 packed decimal
000031A0  00000000 0000000C                        2653+V3_65     DC    FD'+12'           binary value for v3 packed decimal
000031A8  E5D9D740 40404040                        2654+          DC    CL8'VRP'          instruction name
000031B0  00000010                                 2655+          DC    A(16)             result length
000031B4  000031F4                                 2656+REA65     DC    A(RE65)           result address
                                                   2657+*                                 INSTRUCTION UNDER TEST ROUTINE
000031B8                                           2658+X65       DS    0F
000031B8  E320 5010 0004                 00003198  2659+          LG    R2,V2_65          convert v2
000031BE  E320 8F57 002E                 00001157  2660+          CVDG  R2,V2PACKED
000031C4  E720 8F57 0006                 00001157  2661+          VL    V2,V2PACKED
000031CA  E320 5018 0004                 000031A0  2662+          LG    R2,V3_65          convert v3
000031D0  E320 8F67 002E                 00001167  2663+          CVDG  R2,V3PACKED
000031D6  E730 8F67 0006                 00001167  2664+          VL    V3,V3PACKED
000031DC  E612 3010 707B                           2665+          VRP   V1,V2,V3,7,1      test instruction
000031E2  E710 8F08 000E                 00001108  2666+          VST   V1,V1OUTPUT       save result
000031E8  B98D 0020                                2667+          EPSW  R2,R0             exptract psw
000031EC  5020 8EE8                      000010E8  2668+          ST    R2,CCPSW              to save CC
000031F0  07FB                                     2669+          BR    R11               return
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
000031F4                                           2670+RE65     DC    0F
000031F4                                           2671+         DROP  R5
000031F4  00000000 00000000                        2672          DC    XL16'0000000000000000000000000000004D'
000031FC  00000000 0000004D
                                                   2673
                                                   2674          VRI_F VRP,+100,-12,1,1,2                    note rdc=1
00003208                                           2675+         DS    0FD
00003208                      00003208             2676+         USING *,R5              base for test data and test routine
00003208  00003238                                 2677+T66      DC    A(X66)            address of test routine
0000320C  0042                                     2678+         DC    H'66'             test number
0000320E  00                                       2679+         DC    X'00'
0000320F  01                                       2680+         DC    HL1'1'            i4
00003210  01                                       2681+         DC    HL1'1'            m5
00003211  02                                       2682+         DC    HL1'2'            cc
00003212  0D                                       2683+         DC    HL1'13'           cc failed mask
00003218  00000000 00000064                        2684+V2_66    DC    FD'+100'          binary value for v2 packed decimal
00003220  FFFFFFFF FFFFFFF4                        2685+V3_66    DC    FD'-12'           binary value for v3 packed decimal
00003228  E5D9D740 40404040                        2686+         DC    CL8'VRP'          instruction name
00003230  00000010                                 2687+         DC    A(16)             result length
00003234  00003274                                 2688+REA66    DC    A(RE66)           result address
                                                   2689+*                                INSTRUCTION UNDER TEST ROUTINE
00003238                                           2690+X66      DS    0F
00003238  E320 5010 0004                 00003218  2691+         LG    R2,V2_66          convert v2
0000323E  E320 8F57 002E                 00001157  2692+         CVDG  R2,V2PACKED
00003244  E720 8F57 0006                 00001157  2693+         VL    V2,V2PACKED
0000324A  E320 5018 0004                 00003220  2694+         LG    R2,V3_66          convert v3
00003250  E320 8F67 002E                 00001167  2695+         CVDG  R2,V3PACKED
00003256  E730 8F67 0006                 00001167  2696+         VL    V3,V3PACKED
0000325C  E612 3010 107B                           2697+         VRP   V1,V2,V3,1,1      test instruction
00003262  E710 8F08 000E                 00001108  2698+         VST   V1,V1OUTPUT       save result
00003268  B98D 0020                                2699+         EPSW  R2,R0             exptract psw
0000326C  5020 8EE8                      000010E8  2700+         ST    R2,CCPSW              to save CC
00003270  07FB                                     2701+         BR    R11               return
00003274                                           2702+RE66     DC    0F
00003274                                           2703+         DROP  R5
00003274  00000000 00000000                        2704          DC    XL16'0000000000000000000000000000004C'
0000327C  00000000 0000004C
                                                   2705
                                                   2706          VRI_F VRP,+100,-12,7,1,2
00003288                                           2707+         DS    0FD
00003288                      00003288             2708+         USING *,R5              base for test data and test routine
00003288  000032B8                                 2709+T67      DC    A(X67)            address of test routine
0000328C  0043                                     2710+         DC    H'67'             test number
0000328E  00                                       2711+         DC    X'00'
0000328F  07                                       2712+         DC    HL1'7'            i4
00003290  01                                       2713+         DC    HL1'1'            m5
00003291  02                                       2714+         DC    HL1'2'            cc
00003292  0D                                       2715+         DC    HL1'13'           cc failed mask
00003298  00000000 00000064                        2716+V2_67    DC    FD'+100'          binary value for v2 packed decimal
000032A0  FFFFFFFF FFFFFFF4                        2717+V3_67    DC    FD'-12'           binary value for v3 packed decimal
000032A8  E5D9D740 40404040                        2718+         DC    CL8'VRP'          instruction name
000032B0  00000010                                 2719+         DC    A(16)             result length
000032B4  000032F4                                 2720+REA67    DC    A(RE67)           result address
                                                   2721+*                                INSTRUCTION UNDER TEST ROUTINE
000032B8                                           2722+X67      DS    0F
000032B8  E320 5010 0004                 00003298  2723+         LG    R2,V2_67          convert v2
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

000032BE  E320 8F57 002E                 00001157  2724+         CVDG  R2,V2PACKED
000032C4  E720 8F57 0006                 00001157  2725+         VL    V2,V2PACKED
000032CA  E320 5018 0004                 000032A0  2726+         LG    R2,V3_67          convert v3
000032D0  E320 8F67 002E                 00001167  2727+         CVDG  R2,V3PACKED
000032D6  E730 8F67 0006                 00001167  2728+         VL    V3,V3PACKED
000032DC  E612 3010 707B                           2729+         VRP   V1,V2,V3,7,1      test instruction
000032E2  E710 8F08 000E                 00001108  2730+         VST   V1,V1OUTPUT       save result
000032E8  B98D 0020                                2731+         EPSW  R2,R0             exptract psw
000032EC  5020 8EE8                      000010E8  2732+         ST    R2,CCPSW              to save CC
000032F0  07FB                                     2733+         BR    R11               return
000032F4                                           2734+RE67     DC    0F
000032F4                                           2735+         DROP  R5
000032F4  00000000 00000000                        2736          DC    XL16'0000000000000000000000000000004C'
000032FC  00000000 0000004C
                                                   2737
                                                   2738          VRI_F VRP,-100,-12,7,1,1
00003308                                           2739+         DS    0FD
00003308                           00003308        2740+         USING *,R5              base for test data and test routine
00003308  00003338                                 2741+T68      DC    A(X68)            address of test routine
0000330C  0044                                     2742+         DC    H'68'             test number
0000330E  00                                       2743+         DC    X'00'
0000330F  07                                       2744+         DC    HL1'7'            i4
00003310  01                                       2745+         DC    HL1'1'            m5
00003311  01                                       2746+         DC    HL1'1'            cc
00003312  0B                                       2747+         DC    HL1'11'           cc failed mask
00003318  FFFFFFFF FFFFFF9C                        2748+V2_68    DC    FD'-100'          binary value for v2 packed decimal
00003320  FFFFFFFF FFFFFFF4                        2749+V3_68    DC    FD'-12'           binary value for v3 packed decimal
00003328  E5D9D740 40404040                        2750+         DC    CL8'VRP'          instruction name
00003330  00000010                                 2751+         DC    A(16)             result length
00003334  00003374                                 2752+REA68    DC    A(RE68)           result address
                                                   2753+*                                INSTRUCTION UNDER TEST ROUTINE
00003338                                           2754+X68      DS    0F
00003338  E320 5010 0004                 00003318  2755+         LG    R2,V2_68          convert v2
0000333E  E320 8F57 002E                 00001157  2756+         CVDG  R2,V2PACKED
00003344  E720 8F57 0006                 00001157  2757+         VL    V2,V2PACKED
0000334A  E320 5018 0004                 00003320  2758+         LG    R2,V3_68          convert v3
00003350  E320 8F67 002E                 00001167  2759+         CVDG  R2,V3PACKED
00003356  E730 8F67 0006                 00001167  2760+         VL    V3,V3PACKED
0000335C  E612 3010 707B                           2761+         VRP   V1,V2,V3,7,1      test instruction
00003362  E710 8F08 000E                 00001108  2762+         VST   V1,V1OUTPUT       save result
00003368  B98D 0020                                2763+         EPSW  R2,R0             exptract psw
0000336C  5020 8EE8                      000010E8  2764+         ST    R2,CCPSW              to save CC
00003370  07FB                                     2765+         BR    R11               return
00003374                                           2766+RE68     DC    0F
00003374                                           2767+         DROP  R5
00003374  00000000 00000000                        2768          DC    XL16'0000000000000000000000000000004D'
0000337C  00000000 0000004D
                                                   2769
                                                   2770          VRI_F VRP,-100,-10,7,1,0
00003388                                           2771+         DS    0FD
00003388                           00003388        2772+         USING *,R5              base for test data and test routine
00003388  000033B8                                 2773+T69      DC    A(X69)            address of test routine
0000338C  0045                                     2774+         DC    H'69'             test number
0000338E  00                                       2775+         DC    X'00'
0000338F  07                                       2776+         DC    HL1'7'            i4
00003390  01                                       2777+         DC    HL1'1'            m5
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
00003391  00                                       2778+          DC    HL1'0'             cc
00003392  07                                       2779+          DC    HL1'7'             cc failed mask
00003398  FFFFFFFF FFFFFF9C                        2780+V2_69     DC    FD'-100'           binary value for v2 packed decimal
000033A0  FFFFFFFF FFFFFFF6                        2781+V3_69     DC    FD'-10'            binary value for v3 packed decimal
000033A8  E5D9D740 40404040                        2782+          DC    CL8'VRP'           instruction name
000033B0  00000010                                 2783+          DC    A(16)              result length
000033B4  000033F4                                 2784+REA69     DC    A(RE69)            result address
                                                   2785+*                                  INSTRUCTION UNDER TEST ROUTINE
000033B8                                           2786+X69       DS    0F
000033B8  E320 5010 0004                 00003398  2787+          LG    R2,V2_69           convert v2
000033BE  E320 8F57 002E                 00001157  2788+          CVDG  R2,V2PACKED
000033C4  E720 8F57 0006                 00001157  2789+          VL    V2,V2PACKED
000033CA  E320 5018 0004                 000033A0  2790+          LG    R2,V3_69           convert v3
000033D0  E320 8F67 002E                 00001167  2791+          CVDG  R2,V3PACKED
000033D6  E730 8F67 0006                 00001167  2792+          VL    V3,V3PACKED
000033DC  E612 3010 707B                           2793+          VRP   V1,V2,V3,7,1       test instruction
000033E2  E710 8F08 000E                 00001108  2794+          VST   V1,V1OUTPUT        save result
000033E8  B98D 0020                                2795+          EPSW  R2,R0              exptract psw
000033EC  5020 8EE8                      000010E8  2796+          ST    R2,CCPSW               to save CC
000033F0  07FB                                     2797+          BR    R11                return
000033F4                                           2798+RE69      DC    0F
000033F4                                           2799+          DROP  R5
000033F4  00000000 00000000                        2800           DC    XL16'0000000000000000000000000000000C'   NOTE Plus 0
000033FC  00000000 0000000C
                                                   2801
                                                   2802           VRI_F VRP,+1000001111,+10,135,1,2    i4=135(iom=1 & rdc=7)
00003408                                           2803+          DS    0FD
00003408                           00003408        2804+          USING *,R5               base for test data and test routine
00003408  00003438                                 2805+T70       DC    A(X70)             address of test routine
0000340C  0046                                     2806+          DC    H'70'              test number
0000340E  00                                       2807+          DC    X'00'
0000340F  87                                       2808+          DC    HL1'135'           i4
00003410  01                                       2809+          DC    HL1'1'             m5
00003411  02                                       2810+          DC    HL1'2'             cc
00003412  0D                                       2811+          DC    HL1'13'            cc failed mask
00003418  00000000 3B9ACE57                        2812+V2_70     DC    FD'+1000001111'    binary value for v2 packed decimal
00003420  00000000 0000000A                        2813+V3_70     DC    FD'+10'            binary value for v3 packed decimal
00003428  E5D9D740 40404040                        2814+          DC    CL8'VRP'           instruction name
00003430  00000010                                 2815+          DC    A(16)              result length
00003434  00003474                                 2816+REA70     DC    A(RE70)            result address
                                                   2817+*                                  INSTRUCTION UNDER TEST ROUTINE
00003438                                           2818+X70       DS    0F
00003438  E320 5010 0004                 00003418  2819+          LG    R2,V2_70           convert v2
0000343E  E320 8F57 002E                 00001157  2820+          CVDG  R2,V2PACKED
00003444  E720 8F57 0006                 00001157  2821+          VL    V2,V2PACKED
0000344A  E320 5018 0004                 00003420  2822+          LG    R2,V3_70           convert v3
00003450  E320 8F67 002E                 00001167  2823+          CVDG  R2,V3PACKED
00003456  E730 8F67 0006                 00001167  2824+          VL    V3,V3PACKED
0000345C  E612 3018 707B                           2825+          VRP   V1,V2,V3,135,1     test instruction
00003462  E710 8F08 000E                 00001108  2826+          VST   V1,V1OUTPUT        save result
00003468  B98D 0020                                2827+          EPSW  R2,R0              exptract psw
0000346C  5020 8EE8                      000010E8  2828+          ST    R2,CCPSW               to save CC
00003470  07FB                                     2829+          BR    R11                return
00003474                                           2830+RE70      DC    0F
00003474                                           2831+          DROP  R5
00003474  00000000 00000000                        2832           DC    XL16'0000000000000000000000000000001C'  note RDC
```

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  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
0000347C  00000000 0000001C                        2833
                                                   2834 * VRP larger #'s , i4=159(iom=1 & rdc=31)
                                                   2835          VRI_F VRP,+99999999999999999,+13,159,1,2
00003488                                           2836+         DS    0FD
00003488                    00003488               2837+         USING *,R5              base for test data and test routine
00003488  000034B8                                 2838+T71      DC    A(X71)            address of test routine
0000348C  0047                                     2839+         DC    H'71'             test number
0000348E  00                                       2840+         DC    X'00'
0000348F  9F                                       2841+         DC    HL1'159'          i4
00003490  01                                       2842+         DC    HL1'1'            m5
00003491  02                                       2843+         DC    HL1'2'            cc
00003492  0D                                       2844+         DC    HL1'13'           cc failed mask
                                                   2845+V2_71    DC    FD'+99999999999999999' \
00003498  01634578 5D89FFFF                           +                                 binary value for v2 packed decimal
000034A0  00000000 0000000D                        2846+V3_71    DC    FD'+13'           binary value for v3 packed decimal
000034A8  E5D9D740 40404040                        2847+         DC    CL8'VRP'          instruction name
000034B0  00000010                                 2848+         DC    A(16)             result length
000034B4  000034F4                                 2849+REA71    DC    A(RE71)           result address
                                                   2850+*                                INSTRUCTION UNDER TEST ROUTINE
000034B8                                           2851+X71      DS    0F
000034B8  E320 5010 0004                00003498   2852+         LG    R2,V2_71          convert v2
000034BE  E320 8F57 002E                00001157   2853+         CVDG  R2,V2PACKED
000034C4  E720 8F57 0006                00001157   2854+         VL    V2,V2PACKED
000034CA  E320 5018 0004                000034A0   2855+         LG    R2,V3_71          convert v3
000034D0  E320 8F67 002E                00001167   2856+         CVDG  R2,V3PACKED
000034D6  E730 8F67 0006                00001167   2857+         VL    V3,V3PACKED
000034DC  E612 3019 F07B                           2858+         VRP   V1,V2,V3,159,1    test instruction
000034E2  E710 8F08 000E                00001108   2859+         VST   V1,V1OUTPUT       save result
000034E8  B98D 0020                                2860+         EPSW  R2,R0             exptract psw
000034EC  5020 8EE8                     000010E8   2861+         ST    R2,CCPSW              to save CC
000034F0  07FB                                     2862+         BR    R11               return
000034F4                                           2863+RE71     DC    0F
000034F4                                           2864+         DROP  R5
000034F4  00000000 00000000                       2865          DC    XL16'0000000000000000000000000000003C'
000034FC  00000000 0000003C                        2866
                                                   2867          VRI_F VRP,-99999999999999999,+1000,159,1,1
00003508                                           2868+         DS    0FD
00003508                    00003508               2869+         USING *,R5              base for test data and test routine
00003508  00003538                                 2870+T72      DC    A(X72)            address of test routine
0000350C  0048                                     2871+         DC    H'72'             test number
0000350E  00                                       2872+         DC    X'00'
0000350F  9F                                       2873+         DC    HL1'159'          i4
00003510  01                                       2874+         DC    HL1'1'            m5
00003511  01                                       2875+         DC    HL1'1'            cc
00003512  0B                                       2876+         DC    HL1'11'           cc failed mask
                                                   2877+V2_72    DC    FD'-99999999999999999' \
00003518  FE9CBA87 A2760001                            +                                 binary value for v2 packed decimal
00003520  00000000 000003E8                        2878+V3_72    DC    FD'+1000'         binary value for v3 packed decimal
00003528  E5D9D740 40404040                        2879+         DC    CL8'VRP'          instruction name
00003530  00000010                                 2880+         DC    A(16)             result length
00003534  00003574                                 2881+REA72    DC    A(RE72)           result address
                                                   2882+*                                INSTRUCTION UNDER TEST ROUTINE
00003538                                           2883+X72      DS    0F
00003538  E320 5010 0004                00003518   2884+         LG    R2,V2_72          convert v2
```

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  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

0000353E  E320 8F57 002E                 00001157  2885+         CVDG  R2,V2PACKED
00003544  E720 8F57 0006                 00001157  2886+         VL    V2,V2PACKED
0000354A  E320 5018 0004                 00003520  2887+         LG    R2,V3_72          convert v3
00003550  E320 8F67 002E                 00001167  2888+         CVDG  R2,V3PACKED
00003556  E730 8F67 0006                 00001167  2889+         VL    V3,V3PACKED
0000355C  E612 3019 F07B                           2890+         VRP   V1,V2,V3,159,1    test instruction
00003562  E710 8F08 000E                 00001108  2891+         VST   V1,V1OUTPUT       save result
00003568  B98D 0020                                2892+         EPSW  R2,R0             exptract psw
0000356C  5020 8EE8                      000010E8  2893+         ST    R2,CCPSW              to save CC
00003570  07FB                                     2894+         BR    R11               return
00003574                                           2895+RE72     DC    0F
00003574                                           2896+         DROP  R5
00003574  00000000 00000000                        2897          DC    XL16'0000000000000000000000000000999D'
0000357C  00000000 0000999D
                                                   2898
                                                   2899          VRI_F VRP,-9999999999999999,-47,159,1,1
00003588                                           2900+         DS    0FD
00003588                       00003588            2901+         USING *,R5              base for test data and test routine
00003588  000035B8                                 2902+T73      DC    A(X73)            address of test routine
0000358C  0049                                     2903+         DC    H'73'             test number
0000358E  00                                       2904+         DC    X'00'
0000358F  9F                                       2905+         DC    HL1'159'          i4
00003590  01                                       2906+         DC    HL1'1'            m5
00003591  01                                       2907+         DC    HL1'1'            cc
00003592  0B                                       2908+         DC    HL1'11'           cc failed mask
                                                   2909+V2_73    DC    FD'-9999999999999999' \
00003598  FFDC790D 903F0001                              +                               binary value for v2 packed decimal
000035A0  FFFFFFFF FFFFFFD1                        2910+V3_73    DC    FD'-47'           binary value for v3 packed decimal
000035A8  E5D9D740 40404040                        2911+         DC    CL8'VRP'          instruction name
000035B0  00000010                                 2912+         DC    A(16)             result length
000035B4  000035F4                                 2913+REA73    DC    A(RE73)           result address
                                                   2914+*                                INSTRUCTION UNDER TEST ROUTINE
000035B8                                           2915+X73      DS    0F
000035B8  E320 5010 0004                 00003598  2916+         LG    R2,V2_73          convert v2
000035BE  E320 8F57 002E                 00001157  2917+         CVDG  R2,V2PACKED
000035C4  E720 8F57 0006                 00001157  2918+         VL    V2,V2PACKED
000035CA  E320 5018 0004                 000035A0  2919+         LG    R2,V3_73          convert v3
000035D0  E320 8F67 002E                 00001167  2920+         CVDG  R2,V3PACKED
000035D6  E730 8F67 0006                 00001167  2921+         VL    V3,V3PACKED
000035DC  E612 3019 F07B                           2922+         VRP   V1,V2,V3,159,1    test instruction
000035E2  E710 8F08 000E                 00001108  2923+         VST   V1,V1OUTPUT       save result
000035E8  B98D 0020                                2924+         EPSW  R2,R0             exptract psw
000035EC  5020 8EE8                      000010E8  2925+         ST    R2,CCPSW              to save CC
000035F0  07FB                                     2926+         BR    R11               return
000035F4                                           2927+RE73     DC    0F
000035F4                                           2928+         DROP  R5
000035F4  00000000 00000000                        2929          DC    XL16'0000000000000000000000000000023D'
000035FC  00000000 0000023D
                                                   2930
                                                   2931          VRI_F VRP,-999999999999,-123456,135,1,1  i4=135(iom=1 & rdc=7)
00003608                                           2932+         DS    0FD
00003608                       00003608            2933+         USING *,R5              base for test data and test routine
00003608  00003638                                 2934+T74      DC    A(X74)            address of test routine
0000360C  004A                                     2935+         DC    H'74'             test number
0000360E  00                                       2936+         DC    X'00'
0000360F  87                                       2937+         DC    HL1'135'          i4
```

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  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

00003610  01                                      2938+          DC    HL1'1'             m5
00003611  01                                      2939+          DC    HL1'1'             cc
00003612  0B                                      2940+          DC    HL1'11'            cc failed mask
00003618  FFFFFF17 2B5AF001                       2941+V2_74     DC    FD'-999999999999'  binary value for v2 packed decimal
00003620  FFFFFFFF FFFE1DC0                       2942+V3_74     DC    FD'-123456'        binary value for v3 packed decimal
00003628  E5D9D740 40404040                      2943+          DC    CL8'VRP'           instruction name
00003630  00000010                              2944+          DC    A(16)              result length
00003634  00003674                              2945+REA74     DC    A(RE74)            result address
                                                  2946+*                                  INSTRUCTION UNDER TEST ROUTINE
00003638                                          2947+X74       DS    0F
00003638  E320 5010 0004                00003618  2948+          LG    R2,V2_74           convert v2
0000363E  E320 8F57 002E                00001157  2949+          CVDG  R2,V2PACKED
00003644  E720 8F57 0006                00001157  2950+          VL    V2,V2PACKED
0000364A  E320 5018 0004                00003620  2951+          LG    R2,V3_74           convert v3
00003650  E320 8F67 002E                00001167  2952+          CVDG  R2,V3PACKED
00003656  E730 8F67 0006                00001167  2953+          VL    V3,V3PACKED
0000365C  E612 3018 707B                          2954+          VRP   V1,V2,V3,135,1     test instruction
00003662  E710 8F08 000E                00001108  2955+          VST   V1,V1OUTPUT        save result
00003668  B98D 0020                               2956+          EPSW  R2,R0              exptract psw
0000366C  5020 8EE8                     000010E8  2957+          ST    R2,CCPSW               to save CC
00003670  07FB                                    2958+          BR    R11                return
00003674                                          2959+RE74      DC    0F
00003674                                          2960+          DROP  R5
00003674  00000000 00000000                       2961           DC    XL16'0000000000000000000000000103743D'
0000367C  00000000 0103743D
                                                  2962
                                                  2963           VRI_F VRP,+9999999999999,+1234,159,1,2
00003688                                          2964+          DS    0FD
00003688                        00003688          2965+          USING *,R5               base for test data and test routine
00003688  000036B8                                2966+T75       DC    A(X75)             address of test routine
0000368C  004B                                    2967+          DC    H'75'              test number
0000368E  00                                      2968+          DC    X'00'
0000368F  9F                                      2969+          DC    HL1'159'           i4
00003690  01                                      2970+          DC    HL1'1'             m5
00003691  02                                      2971+          DC    HL1'2'             cc
00003692  0D                                      2972+          DC    HL1'13'            cc failed mask
                                                  2973+V2_75     DC    FD'+9999999999999' \
00003698  00000918 4E729FFF                         +                                     binary value for v2 packed decimal
000036A0  00000000 000004D2                       2974+V3_75     DC    FD'+1234'          binary value for v3 packed decimal
000036A8  E5D9D740 40404040                       2975+          DC    CL8'VRP'           instruction name
000036B0  00000010                                2976+          DC    A(16)              result length
000036B4  000036F4                                2977+REA75     DC    A(RE75)            result address
                                                  2978+*                                  INSTRUCTION UNDER TEST ROUTINE
000036B8                                          2979+X75       DS    0F
000036B8  E320 5010 0004                00003698  2980+          LG    R2,V2_75           convert v2
000036BE  E320 8F57 002E                00001157  2981+          CVDG  R2,V2PACKED
000036C4  E720 8F57 0006                00001157  2982+          VL    V2,V2PACKED
000036CA  E320 5018 0004                000036A0  2983+          LG    R2,V3_75           convert v3
000036D0  E320 8F67 002E                00001167  2984+          CVDG  R2,V3PACKED
000036D6  E730 8F67 0006                00001167  2985+          VL    V3,V3PACKED
000036DC  E612 3019 F07B                          2986+          VRP   V1,V2,V3,159,1     test instruction
000036E2  E710 8F08 000E                00001108  2987+          VST   V1,V1OUTPUT        save result
000036E8  B98D 0020                               2988+          EPSW  R2,R0              exptract psw
000036EC  5020 8EE8                     000010E8  2989+          ST    R2,CCPSW               to save CC
000036F0  07FB                                    2990+          BR    R11                return
000036F4                                          2991+RE75      DC    0F
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  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
000036F4                                           2992+          DROP  R5
000036F4  00000000 00000000                        2993           DC    XL16'0000000000000000000000000000923C'
000036FC  00000000 0000923C
                                                   2994
                                                   2995           VRI_F VRP,+999999999999999999,+1234,159,1,2
00003708                                           2996+          DS    0FD
00003708                    00003708               2997+          USING *,R5              base for test data and test routine
00003708  00003738                                 2998+T76       DC    A(X76)            address of test routine
0000370C  004C                                     2999+          DC    H'76'             test number
0000370E  00                                       3000+          DC    X'00'
0000370F  9F                                       3001+          DC    HL1'159'          i4
00003710  01                                       3002+          DC    HL1'1'            m5
00003711  02                                       3003+          DC    HL1'2'            cc
00003712  0D                                       3004+          DC    HL1'13'           cc failed mask
                                                   3005+V2_76     DC    FD'+999999999999999999' \
00003718  0DE0B6B3 A763FFFF                            +                                  binary value for v2 packed decimal
00003720  00000000 000004D2                        3006+V3_76     DC    FD'+1234'         binary value for v3 packed decimal
00003728  E5D9D740 40404040                        3007+          DC    CL8'VRP'          instruction name
00003730  00000010                                 3008+          DC    A(16)             result length
00003734  00003774                                 3009+REA76     DC    A(RE76)           result address
                                                   3010+*                                 INSTRUCTION UNDER TEST ROUTINE
00003738                                           3011+X76       DS    0F
00003738  E320 5010 0004                00003718   3012+          LG    R2,V2_76          convert v2
0000373E  E320 8F57 002E                00001157   3013+          CVDG  R2,V2PACKED
00003744  E720 8F57 0006                00001157   3014+          VL    V2,V2PACKED
0000374A  E320 5018 0004                00003720   3015+          LG    R2,V3_76          convert v3
00003750  E320 8F67 002E                00001167   3016+          CVDG  R2,V3PACKED
00003756  E730 8F67 0006                00001167   3017+          VL    V3,V3PACKED
0000375C  E612 3019 F07B                           3018+          VRP   V1,V2,V3,159,1    test instruction
00003762  E710 8F08 000E                00001108   3019+          VST   V1,V1OUTPUT       save result
00003768  B98D 0020                                3020+          EPSW  R2,R0             exptract psw
0000376C  5020 8EE8                     000010E8   3021+          ST    R2,CCPSW              to save CC
00003770  07FB                                     3022+          BR    R11               return
00003774                                           3023+RE76      DC    0F
00003774                                           3024+          DROP  R5
00003774  00000000 00000000                        3025           DC    XL16'0000000000000000000000000000547C'
0000377C  00000000 0000547C
                                                   3026
                                                   3027 * VRP larger #'s , i4=159(iom=1 & rdc=31)            CS=1 for all m5
                                                   3028 * check forced positive
                                                   3029           VRI_F VRP,-99999999999999999,+13,159,9,2     m5=9(P2=1)
00003788                                           3030+          DS    0FD
00003788                    00003788               3031+          USING *,R5              base for test data and test routine
00003788  000037B8                                 3032+T77       DC    A(X77)            address of test routine
0000378C  004D                                     3033+          DC    H'77'             test number
0000378E  00                                       3034+          DC    X'00'
0000378F  9F                                       3035+          DC    HL1'159'          i4
00003790  09                                       3036+          DC    HL1'9'            m5
00003791  02                                       3037+          DC    HL1'2'            cc
00003792  0D                                       3038+          DC    HL1'13'           cc failed mask
                                                   3039+V2_77     DC    FD'-99999999999999999' \
00003798  FE9CBA87 A2760001                            +                                  binary value for v2 packed decimal
000037A0  00000000 0000000D                        3040+V3_77     DC    FD'+13'           binary value for v3 packed decimal
000037A8  E5D9D740 40404040                        3041+          DC    CL8'VRP'          instruction name
000037B0  00000010                                 3042+          DC    A(16)             result length
000037B4  000037F4                                 3043+REA77     DC    A(RE77)           result address
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  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

                                          3044+*                                INSTRUCTION UNDER TEST ROUTINE
000037B8                                  3045+X77      DS    0F
000037B8  E320 5010 0004                  00003798  3046+        LG    R2,V2_77          convert v2
000037BE  E320 8F57 002E                  00001157  3047+        CVDG  R2,V2PACKED
000037C4  E720 8F57 0006                  00001157  3048+        VL    V2,V2PACKED
000037CA  E320 5018 0004                  000037A0  3049+        LG    R2,V3_77          convert v3
000037D0  E320 8F67 002E                  00001167  3050+        CVDG  R2,V3PACKED
000037D6  E730 8F67 0006                  00001167  3051+        VL    V3,V3PACKED
000037DC  E612 3099 F07B                            3052+        VRP   V1,V2,V3,159,9    test instruction
000037E2  E710 8F08 000E                  00001108  3053+        VST   V1,V1OUTPUT       save result
000037E8  B98D 0020                               3054+        EPSW  R2,R0             exptract psw
000037EC  5020 8EE8                       000010E8  3055+        ST    R2,CCPSW              to save CC
000037F0  07FB                                    3056+        BR    R11               return
000037F4                                  3057+RE77     DC    0F
000037F4                                  3058+         DROP  R5
000037F4  00000000 00000000              3059          DC    XL16'0000000000000000000000000000003C'
000037FC  00000000 0000003C
                                          3060
                                          3061          VRI_F VRP,-99999999999999999,-1000,159,13,2   m5=13(P2=1,P3=1)
00003808                                  3062+         DS    0FD
00003808                  00003808        3063+         USING *,R5              base for test data and test routine
00003808  00003838                        3064+T78      DC    A(X78)            address of test routine
0000380C  004E                            3065+         DC    H'78'             test number
0000380E  00                              3066+         DC    X'00'
0000380F  9F                              3067+         DC    HL1'159'          i4
00003810  0D                              3068+         DC    HL1'13'           m5
00003811  02                              3069+         DC    HL1'2'            cc
00003812  0D                              3070+         DC    HL1'13'           cc failed mask
                                          3071+V2_78    DC    FD'-9999999999999999' \
00003818  FE9CBA87 A2760001                  +                                 binary value for v2 packed decimal
00003820  FFFFFFFF FFFFFC18               3072+V3_78    DC    FD'-1000'         binary value for v3 packed decimal
00003828  E5D9D740 40404040               3073+         DC    CL8'VRP'          instruction name
00003830  00000010                        3074+         DC    A(16)             result length
00003834  00003874                        3075+REA78    DC    A(RE78)           result address
                                          3076+*                                INSTRUCTION UNDER TEST ROUTINE
00003838                                  3077+X78      DS    0F
00003838  E320 5010 0004                  00003818  3078+        LG    R2,V2_78          convert v2
0000383E  E320 8F57 002E                  00001157  3079+        CVDG  R2,V2PACKED
00003844  E720 8F57 0006                  00001157  3080+        VL    V2,V2PACKED
0000384A  E320 5018 0004                  00003820  3081+        LG    R2,V3_78          convert v3
00003850  E320 8F67 002E                  00001167  3082+        CVDG  R2,V3PACKED
00003856  E730 8F67 0006                  00001167  3083+        VL    V3,V3PACKED
0000385C  E612 30D9 F07B                            3084+        VRP   V1,V2,V3,159,13   test instruction
00003862  E710 8F08 000E                  00001108  3085+        VST   V1,V1OUTPUT       save result
00003868  B98D 0020                               3086+        EPSW  R2,R0             exptract psw
0000386C  5020 8EE8                       000010E8  3087+        ST    R2,CCPSW              to save CC
00003870  07FB                                    3088+        BR    R11               return
00003874                                  3089+RE78     DC    0F
00003874                                  3090+         DROP  R5
00003874  00000000 00000000              3091          DC    XL16'0000000000000000000000000000999C'
0000387C  00000000 0000999C
                                          3092
                                          3093          VRI_F VRP,-9999999999999999,-47,159,3,2       m5=3(P1=1)
00003888                                  3094+         DS    0FD
00003888                  00003888        3095+         USING *,R5              base for test data and test routine
00003888  000038B8                        3096+T79      DC    A(X79)            address of test routine
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  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

0000388C  004F                                     3097+          DC    H'79'              test number
0000388E  00                                       3098+          DC    X'00'
0000388F  9F                                       3099+          DC    HL1'159'           i4
00003890  03                                       3100+          DC    HL1'3'             m5
00003891  02                                       3101+          DC    HL1'2'             cc
00003892  0D                                       3102+          DC    HL1'13'            cc failed mask
                                                   3103+V2_79     DC    FD'-9999999999999999' \
00003898  FFDC790D 903F0001                            +                                  binary value for v2 packed decimal
000038A0  FFFFFFFF FFFFFFD1                        3104+V3_79     DC    FD'-47'            binary value for v3 packed decimal
000038A8  E5D9D740 40404040                        3105+          DC    CL8'VRP'           instruction name
000038B0  00000010                                 3106+          DC    A(16)              result length
000038B4  000038F4                                 3107+REA79     DC    A(RE79)            result address
                                                   3108+*                                  INSTRUCTION UNDER TEST ROUTINE
000038B8                                           3109+X79       DS    0F
000038B8  E320 5010 0004                 00003898  3110+          LG    R2,V2_79           convert v2
000038BE  E320 8F57 002E                 00001157  3111+          CVDG  R2,V2PACKED
000038C4  E720 8F57 0006                 00001157  3112+          VL    V2,V2PACKED
000038CA  E320 5018 0004                 000038A0  3113+          LG    R2,V3_79           convert v3
000038D0  E320 8F67 002E                 00001167  3114+          CVDG  R2,V3PACKED
000038D6  E730 8F67 0006                 00001167  3115+          VL    V3,V3PACKED
000038DC  E612 3039 F07B                           3116+          VRP   V1,V2,V3,159,3     test instruction
000038E2  E710 8F08 000E                 00001108  3117+          VST   V1,V1OUTPUT        save result
000038E8  B98D 0020                                3118+          EPSW  R2,R0              exptract psw
000038EC  5020 8EE8                      000010E8  3119+          ST    R2,CCPSW               to save CC
000038F0  07FB                                     3120+          BR    R11                return
000038F4                                           3121+RE79      DC    0F
000038F4                                           3122+          DROP  R5
000038F4  00000000 00000000                        3123           DC    XL16'0000000000000000000000000000023F'
000038FC  00000000 0000023F
                                                   3124
                                                   3125 *                                                    m5=13(P2=1,P3=1)
                                                   3126           VRI_F VRP,-999999999999,-123456,135,13,2 i4=135(iom=1 & rdc=7)
00003908                                           3127+          DS    0FD
00003908                       00003908            3128+          USING *,R5               base for test data and test routine
00003908  00003938                                 3129+T80       DC    A(X80)             address of test routine
0000390C  0050                                     3130+          DC    H'80'              test number
0000390E  00                                       3131+          DC    X'00'
0000390F  87                                       3132+          DC    HL1'135'           i4
00003910  0D                                       3133+          DC    HL1'13'            m5
00003911  02                                       3134+          DC    HL1'2'             cc
00003912  0D                                       3135+          DC    HL1'13'            cc failed mask
00003918  FFFFFF17 2B5AF001                        3136+V2_80     DC    FD'-999999999999'  binary value for v2 packed decimal
00003920  FFFFFFFF FFFE1DC0                        3137+V3_80     DC    FD'-123456'        binary value for v3 packed decimal
00003928  E5D9D740 40404040                        3138+          DC    CL8'VRP'           instruction name
00003930  00000010                                 3139+          DC    A(16)              result length
00003934  00003974                                 3140+REA80     DC    A(RE80)            result address
                                                   3141+*                                  INSTRUCTION UNDER TEST ROUTINE
00003938                                           3142+X80       DS    0F
00003938  E320 5010 0004                 00003918  3143+          LG    R2,V2_80           convert v2
0000393E  E320 8F57 002E                 00001157  3144+          CVDG  R2,V2PACKED
00003944  E720 8F57 0006                 00001157  3145+          VL    V2,V2PACKED
0000394A  E320 5018 0004                 00003920  3146+          LG    R2,V3_80           convert v3
00003950  E320 8F67 002E                 00001167  3147+          CVDG  R2,V3PACKED
00003956  E730 8F67 0006                 00001167  3148+          VL    V3,V3PACKED
0000395C  E612 30D8 707B                           3149+          VRP   V1,V2,V3,135,13    test instruction
00003962  E710 8F08 000E                 00001108  3150+          VST   V1,V1OUTPUT        save result
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

00003968  B98D 0020                        000010E8 3151+         EPSW  R2,R0             exptract psw
0000396C  5020 8EE8                                 3152+         ST    R2,CCPSW             to save CC
00003970  07FB                                      3153+         BR    R11                return
00003974                                            3154+RE80     DC    0F
00003974                                            3155+         DROP  R5
00003974  00000000 00000000                         3156          DC    XL16'0000000000000000000000000103743C'
0000397C  00000000 0103743C
                                                    3157
                                                    3158          VRI_F VRP,+9999999999999,+1234,159,3,2        m5=3(P1=1)
00003988                                            3159+         DS    0FD
00003988                    00003988                3160+         USING *,R5               base for test data and test routine
00003988  000039B8                                  3161+T81      DC    A(X81)             address of test routine
0000398C  0051                                      3162+         DC    H'81'              test number
0000398E  00                                        3163+         DC    X'00'
0000398F  9F                                        3164+         DC    HL1'159'           i4
00003990  03                                        3165+         DC    HL1'3'             m5
00003991  02                                        3166+         DC    HL1'2'             cc
00003992  0D                                        3167+         DC    HL1'13'            cc failed mask
                                                    3168+V2_81    DC    FD'+9999999999999' \
00003998  00000918 4E729FFF                             +                                  binary value for v2 packed decimal
000039A0  00000000 000004D2                         3169+V3_81    DC    FD'+1234'          binary value for v3 packed decimal
000039A8  E5D9D740 40404040                         3170+         DC    CL8'VRP'           instruction name
000039B0  00000010                                  3171+         DC    A(16)              result length
000039B4  000039F4                                  3172+REA81    DC    A(RE81)            result address
                                                    3173+*                                 INSTRUCTION UNDER TEST ROUTINE
000039B8                                            3174+X81      DS    0F
000039B8  E320 5010 0004                00003998    3175+         LG    R2,V2_81           convert v2
000039BE  E320 8F57 002E                00001157    3176+         CVDG  R2,V2PACKED
000039C4  E720 8F57 0006                00001157    3177+         VL    V2,V2PACKED
000039CA  E320 5018 0004                000039A0    3178+         LG    R2,V3_81           convert v3
000039D0  E320 8F67 002E                00001167    3179+         CVDG  R2,V3PACKED
000039D6  E730 8F67 0006                00001167    3180+         VL    V3,V3PACKED
000039DC  E612 3039 F07B                            3181+         VRP   V1,V2,V3,159,3     test instruction
000039E2  E710 8F08 000E                00001108    3182+         VST   V1,V1OUTPUT        save result
000039E8  B98D 0020                                 3183+         EPSW  R2,R0              exptract psw
000039EC  5020 8EE8                     000010E8    3184+         ST    R2,CCPSW             to save CC
000039F0  07FB                                      3185+         BR    R11                return
000039F4                                            3186+RE81     DC    0F
000039F4                                            3187+         DROP  R5
000039F4  00000000 00000000                         3188          DC    XL16'0000000000000000000000000000923F'
000039FC  00000000 0000923F
                                                    3189
                                                    3190          VRI_F VRP,+999999999999999999,+1234,159,3,2   m5=3(P1=1)
00003A08                                            3191+         DS    0FD
00003A08                    00003A08                3192+         USING *,R5               base for test data and test routine
00003A08  00003A38                                  3193+T82      DC    A(X82)             address of test routine
00003A0C  0052                                      3194+         DC    H'82'              test number
00003A0E  00                                        3195+         DC    X'00'
00003A0F  9F                                        3196+         DC    HL1'159'           i4
00003A10  03                                        3197+         DC    HL1'3'             m5
00003A11  02                                        3198+         DC    HL1'2'             cc
00003A12  0D                                        3199+         DC    HL1'13'            cc failed mask
                                                    3200+V2_82    DC    FD'+999999999999999999' \
00003A18  0DE0B6B3 A763FFFF                             +                                  binary value for v2 packed decimal
00003A20  00000000 000004D2                         3201+V3_82    DC    FD'+1234'          binary value for v3 packed decimal
00003A28  E5D9D740 40404040                         3202+         DC    CL8'VRP'           instruction name
```

```
  LOC         OBJECT CODE       ADDR1     ADDR2     STMT
00003A30  00000010                                  3203+          DC    A(16)              result length
00003A34  00003A74                                  3204+REA82     DC    A(RE82)            result address
                                                    3205+*                                  INSTRUCTION UNDER TEST ROUTINE
00003A38                                            3206+X82       DS    0F
00003A38  E320 5010 0004                 00003A18   3207+          LG    R2,V2_82           convert v2
00003A3E  E320 8F57 002E                 00001157   3208+          CVDG  R2,V2PACKED
00003A44  E720 8F57 0006                 00001157   3209+          VL    V2,V2PACKED
00003A4A  E320 5018 0004                 00003A20   3210+          LG    R2,V3_82           convert v3
00003A50  E320 8F67 002E                 00001167   3211+          CVDG  R2,V3PACKED
00003A56  E730 8F67 0006                 00001167   3212+          VL    V3,V3PACKED
00003A5C  E612 3039 F07B                            3213+          VRP   V1,V2,V3,159,3     test instruction
00003A62  E710 8F08 000E                 00001108   3214+          VST   V1,V1OUTPUT        save result
00003A68  B98D 0020                                 3215+          EPSW  R2,R0              exptract psw
00003A6C  5020 8EE8                      000010E8   3216+          ST    R2,CCPSW               to save CC
00003A70  07FB                                      3217+          BR    R11                return
00003A74                                            3218+RE82      DC    0F
00003A74                                            3219+          DROP  R5
00003A74  00000000 00000000                         3220           DC    XL16'0000000000000000000000000000547F'
00003A7C  00000000 0000547F
                                                    3221
                                                    3222 *-------------------------------------------------------------------
                                                    3223 *  VMSP   - VECTOR MULTIPLY AND SHIFT DECIMAL
                                                    3224 *-------------------------------------------------------------------
                                                    3225 * VMSP simple + CC checks
                                                    3226 *                                                 i4=128(iom=1 & shamt=0)
                                                    3227 *                                                 i4=129(iom=1 & shamt=1)
                                                    3228 *                                                 i4=132(iom=1 & shamt=4)
                                                    3229 *                                                 i4=135(iom=1 & shamt=7)
                                                    3230 *                                                 i4=142(iom=1 & shamt=14)
                                                    3231 *                                                 i4=159(iom=1 & shamt=31)
                                                    3232
                                                    3233           VRI_F VMSP,+10,+12,129,1,2                        shamt=1
00003A88                                            3234+          DS    0FD
00003A88                         00003A88           3235+          USING *,R5               base for test data and test routine
00003A88  00003AB8                                  3236+T83       DC    A(X83)             address of test routine
00003A8C  0053                                      3237+          DC    H'83'              test number
00003A8E  00                                        3238+          DC    X'00'
00003A8F  81                                        3239+          DC    HL1'129'           i4
00003A90  01                                        3240+          DC    HL1'1'             m5
00003A91  02                                        3241+          DC    HL1'2'             cc
00003A92  0D                                        3242+          DC    HL1'13'            cc failed mask
00003A98  00000000 0000000A                         3243+V2_83     DC    FD'+10'            binary value for v2 packed decimal
00003AA0  00000000 0000000C                         3244+V3_83     DC    FD'+12'            binary value for v3 packed decimal
00003AA8  E5D4E2D7 40404040                         3245+          DC    CL8'VMSP'          instruction name
00003AB0  00000010                                  3246+          DC    A(16)              result length
00003AB4  00003AF4                                  3247+REA83     DC    A(RE83)            result address
                                                    3248+*                                  INSTRUCTION UNDER TEST ROUTINE
00003AB8                                            3249+X83       DS    0F
00003AB8  E320 5010 0004                 00003A98   3250+          LG    R2,V2_83           convert v2
00003ABE  E320 8F57 002E                 00001157   3251+          CVDG  R2,V2PACKED
00003AC4  E720 8F57 0006                 00001157   3252+          VL    V2,V2PACKED
00003ACA  E320 5018 0004                 00003AA0   3253+          LG    R2,V3_83           convert v3
00003AD0  E320 8F67 002E                 00001167   3254+          CVDG  R2,V3PACKED
00003AD6  E730 8F67 0006                 00001167   3255+          VL    V3,V3PACKED
00003ADC  E612 3018 1079                            3256+          VMSP  V1,V2,V3,129,1     test instruction
00003AE2  E710 8F08 000E                 00001108   3257+          VST   V1,V1OUTPUT        save result
```

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  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

00003AE8  B98D 0020                            3258+          EPSW  R2,R0              exptract psw
00003AEC  5020 8EE8                  000010E8  3259+          ST    R2,CCPSW                to save CC
00003AF0  07FB                                 3260+          BR    R11               return
00003AF4                                       3261+RE83      DC    0F
00003AF4                                       3262+          DROP  R5
00003AF4  00000000 00000000                    3263           DC    XL16'0000000000000000000000000000012C'
00003AFC  00000000 0000012C
                                               3264
                                               3265           VRI_F VMSP,-100,+12,129,1,1                     shamt=1
00003B08                                       3266+          DS    0FD
00003B08                     00003B08          3267+          USING *,R5              base for test data and test routine
00003B08  00003B38                             3268+T84       DC    A(X84)            address of test routine
00003B0C  0054                                 3269+          DC    H'84'             test number
00003B0E  00                                   3270+          DC    X'00'
00003B0F  81                                   3271+          DC    HL1'129'          i4
00003B10  01                                   3272+          DC    HL1'1'            m5
00003B11  01                                   3273+          DC    HL1'1'            cc
00003B12  0B                                   3274+          DC    HL1'11'           cc failed mask
00003B18  FFFFFFFF FFFFFF9C                    3275+V2_84     DC    FD'-100'          binary value for v2 packed decimal
00003B20  00000000 0000000C                    3276+V3_84     DC    FD'+12'           binary value for v3 packed decimal
00003B28  E5D4E2D7 40404040                    3277+          DC    CL8'VMSP'         instruction name
00003B30  00000010                             3278+          DC    A(16)             result length
00003B34  00003B74                             3279+REA84     DC    A(RE84)           result address
                                               3280+*                                 INSTRUCTION UNDER TEST ROUTINE
00003B38                                       3281+X84       DS    0F
00003B38  E320 5010 0004             00003B18  3282+          LG    R2,V2_84          convert v2
00003B3E  E320 8F57 002E             00001157  3283+          CVDG  R2,V2PACKED
00003B44  E720 8F57 0006             00001157  3284+          VL    V2,V2PACKED
00003B4A  E320 5018 0004             00003B20  3285+          LG    R2,V3_84          convert v3
00003B50  E320 8F67 002E             00001167  3286+          CVDG  R2,V3PACKED
00003B56  E730 8F67 0006             00001167  3287+          VL    V3,V3PACKED
00003B5C  E612 3018 1079                       3288+          VMSP  V1,V2,V3,129,1    test instruction
00003B62  E710 8F08 000E             00001108  3289+          VST   V1,V1OUTPUT       save result
00003B68  B98D 0020                            3290+          EPSW  R2,R0             exptract psw
00003B6C  5020 8EE8                  000010E8  3291+          ST    R2,CCPSW                to save CC
00003B70  07FB                                 3292+          BR    R11               return
00003B74                                       3293+RE84      DC    0F
00003B74                                       3294+          DROP  R5
00003B74  00000000 00000000                    3295           DC    XL16'0000000000000000000000000000120D'
00003B7C  00000000 0000120D
                                               3296
                                               3297           VRI_F VMSP,+100,-12,128,1,1                     shamt=0
00003B88                                       3298+          DS    0FD
00003B88                     00003B88          3299+          USING *,R5              base for test data and test routine
00003B88  00003BB8                             3300+T85       DC    A(X85)            address of test routine
00003B8C  0055                                 3301+          DC    H'85'             test number
00003B8E  00                                   3302+          DC    X'00'
00003B8F  80                                   3303+          DC    HL1'128'          i4
00003B90  01                                   3304+          DC    HL1'1'            m5
00003B91  01                                   3305+          DC    HL1'1'            cc
00003B92  0B                                   3306+          DC    HL1'11'           cc failed mask
00003B98  00000000 00000064                    3307+V2_85     DC    FD'+100'          binary value for v2 packed decimal
00003BA0  FFFFFFFF FFFFFFF4                    3308+V3_85     DC    FD'-12'           binary value for v3 packed decimal
00003BA8  E5D4E2D7 40404040                    3309+          DC    CL8'VMSP'         instruction name
00003BB0  00000010                             3310+          DC    A(16)             result length
00003BB4  00003BF4                             3311+REA85     DC    A(RE85)           result address
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  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
                                                   3312+*                                INSTRUCTION UNDER TEST ROUTINE
00003BB8                                           3313+X85      DS    0F
00003BB8  E320 5010 0004                 00003B98  3314+           LG    R2,V2_85          convert v2
00003BBE  E320 8F57 002E                 00001157  3315+           CVDG  R2,V2PACKED
00003BC4  E720 8F57 0006                 00001157  3316+           VL    V2,V2PACKED
00003BCA  E320 5018 0004                 00003BA0  3317+           LG    R2,V3_85          convert v3
00003BD0  E320 8F67 002E                 00001167  3318+           CVDG  R2,V3PACKED
00003BD6  E730 8F67 0006                 00001167  3319+           VL    V3,V3PACKED
00003BDC  E612 3018 0079                           3320+           VMSP  V1,V2,V3,128,1    test instruction
00003BE2  E710 8F08 000E                 00001108  3321+           VST   V1,V1OUTPUT       save result
00003BE8  B98D 0020                                3322+           EPSW  R2,R0             exptract psw
00003BEC  5020 8EE8                      000010E8  3323+           ST    R2,CCPSW              to save CC
00003BF0  07FB                                     3324+           BR    R11               return
00003BF4                                           3325+RE85       DC    0F
00003BF4                                           3326+           DROP  R5
00003BF4  00000000 00000000                        3327            DC    XL16'0000000000000000000000000001200D'
00003BFC  00000000 0001200D
                                                   3328
                                                   3329            VRI_F VMSP,+100,-12,7,1,0                       shamt=7
00003C08                                           3330+           DS    0FD
00003C08                         00003C08          3331+           USING *,R5              base for test data and test routine
00003C08  00003C38                                 3332+T86        DC    A(X86)            address of test routine
00003C0C  0056                                     3333+           DC    H'86'             test number
00003C0E  00                                       3334+           DC    X'00'
00003C0F  07                                       3335+           DC    HL1'7'            i4
00003C10  01                                       3336+           DC    HL1'1'            m5
00003C11  00                                       3337+           DC    HL1'0'            cc
00003C12  07                                       3338+           DC    HL1'7'            cc failed mask
00003C18  00000000 00000064                        3339+V2_86      DC    FD'+100'          binary value for v2 packed decimal
00003C20  FFFFFFFF FFFFFFF4                        3340+V3_86      DC    FD'-12'           binary value for v3 packed decimal
00003C28  E5D4E2D7 40404040                        3341+           DC    CL8'VMSP'         instruction name
00003C30  00000010                                 3342+           DC    A(16)             result length
00003C34  00003C74                                 3343+REA86      DC    A(RE86)           result address
                                                   3344+*                                INSTRUCTION UNDER TEST ROUTINE
00003C38                                           3345+X86      DS    0F
00003C38  E320 5010 0004                 00003C18  3346+           LG    R2,V2_86          convert v2
00003C3E  E320 8F57 002E                 00001157  3347+           CVDG  R2,V2PACKED
00003C44  E720 8F57 0006                 00001157  3348+           VL    V2,V2PACKED
00003C4A  E320 5018 0004                 00003C20  3349+           LG    R2,V3_86          convert v3
00003C50  E320 8F67 002E                 00001167  3350+           CVDG  R2,V3PACKED
00003C56  E730 8F67 0006                 00001167  3351+           VL    V3,V3PACKED
00003C5C  E612 3010 7079                           3352+           VMSP  V1,V2,V3,7,1      test instruction
00003C62  E710 8F08 000E                 00001108  3353+           VST   V1,V1OUTPUT       save result
00003C68  B98D 0020                                3354+           EPSW  R2,R0             exptract psw
00003C6C  5020 8EE8                      000010E8  3355+           ST    R2,CCPSW              to save CC
00003C70  07FB                                     3356+           BR    R11               return
00003C74                                           3357+RE86       DC    0F
00003C74                                           3358+           DROP  R5
00003C74  00000000 00000000                        3359            DC    XL16'0000000000000000000000000000000C'    NOTE Plus 0
00003C7C  00000000 0000000C
                                                   3360
                                                   3361            VRI_F VMSP,-100,-12,0,1,2                       shamt=0
00003C88                                           3362+           DS    0FD
00003C88                         00003C88          3363+           USING *,R5              base for test data and test routine
00003C88  00003CB8                                 3364+T87        DC    A(X87)            address of test routine
00003C8C  0057                                     3365+           DC    H'87'             test number
```

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  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
00003C8E  00                                       3366+         DC    X'00'
00003C8F  00                                       3367+         DC    HL1'0'            i4
00003C90  01                                       3368+         DC    HL1'1'            m5
00003C91  02                                       3369+         DC    HL1'2'            cc
00003C92  0D                                       3370+         DC    HL1'13'           cc failed mask
00003C98  FFFFFFFF FFFFFF9C                        3371+V2_87    DC    FD'-100'          binary value for v2 packed decimal
00003CA0  FFFFFFFF FFFFFFF4                        3372+V3_87    DC    FD'-12'           binary value for v3 packed decimal
00003CA8  E5D4E2D7 40404040                        3373+         DC    CL8'VMSP'         instruction name
00003CB0  00000010                                 3374+         DC    A(16)             result length
00003CB4  00003CF4                                 3375+REA87    DC    A(RE87)           result address
                                                   3376+*                                INSTRUCTION UNDER TEST ROUTINE
00003CB8                                           3377+X87      DS    0F
00003CB8  E320 5010 0004                 00003C98  3378+         LG    R2,V2_87          convert v2
00003CBE  E320 8F57 002E                 00001157  3379+         CVDG  R2,V2PACKED
00003CC4  E720 8F57 0006                 00001157  3380+         VL    V2,V2PACKED
00003CCA  E320 5018 0004                 00003CA0  3381+         LG    R2,V3_87          convert v3
00003CD0  E320 8F67 002E                 00001167  3382+         CVDG  R2,V3PACKED
00003CD6  E730 8F67 0006                 00001167  3383+         VL    V3,V3PACKED
00003CDC  E612 3010 0079                           3384+         VMSP  V1,V2,V3,0,1      test instruction
00003CE2  E710 8F08 000E                 00001108  3385+         VST   V1,V1OUTPUT       save result
00003CE8  B98D 0020                                3386+         EPSW  R2,R0             exptract psw
00003CEC  5020 8EE8                      000010E8  3387+         ST    R2,CCPSW              to save CC
00003CF0  07FB                                     3388+         BR    R11               return
00003CF4                                           3389+RE87     DC    0F
00003CF4                                           3390+         DROP  R5
00003CF4  00000000 00000000                        3391          DC    XL16'00000000000000000000000000001200C'
00003CFC  00000000 0001200C
                                                   3392
                                                   3393          VRI_F VMSP,-100,-10,0,1,2                    shamt=0
00003D08                                           3394+         DS    0FD
00003D08                 00003D08                  3395+         USING *,R5              base for test data and test routine
00003D08  00003D38                                 3396+T88      DC    A(X88)            address of test routine
00003D0C  0058                                     3397+         DC    H'88'             test number
00003D0E  00                                       3398+         DC    X'00'
00003D0F  00                                       3399+         DC    HL1'0'            i4
00003D10  01                                       3400+         DC    HL1'1'            m5
00003D11  02                                       3401+         DC    HL1'2'            cc
00003D12  0D                                       3402+         DC    HL1'13'           cc failed mask
00003D18  FFFFFFFF FFFFFF9C                        3403+V2_88    DC    FD'-100'          binary value for v2 packed decimal
00003D20  FFFFFFFF FFFFFFF6                        3404+V3_88    DC    FD'-10'           binary value for v3 packed decimal
00003D28  E5D4E2D7 40404040                        3405+         DC    CL8'VMSP'         instruction name
00003D30  00000010                                 3406+         DC    A(16)             result length
00003D34  00003D74                                 3407+REA88    DC    A(RE88)           result address
                                                   3408+*                                INSTRUCTION UNDER TEST ROUTINE
00003D38                                           3409+X88      DS    0F
00003D38  E320 5010 0004                 00003D18  3410+         LG    R2,V2_88          convert v2
00003D3E  E320 8F57 002E                 00001157  3411+         CVDG  R2,V2PACKED
00003D44  E720 8F57 0006                 00001157  3412+         VL    V2,V2PACKED
00003D4A  E320 5018 0004                 00003D20  3413+         LG    R2,V3_88          convert v3
00003D50  E320 8F67 002E                 00001167  3414+         CVDG  R2,V3PACKED
00003D56  E730 8F67 0006                 00001167  3415+         VL    V3,V3PACKED
00003D5C  E612 3010 0079                           3416+         VMSP  V1,V2,V3,0,1      test instruction
00003D62  E710 8F08 000E                 00001108  3417+         VST   V1,V1OUTPUT       save result
00003D68  B98D 0020                                3418+         EPSW  R2,R0             exptract psw
00003D6C  5020 8EE8                      000010E8  3419+         ST    R2,CCPSW              to save CC
00003D70  07FB                                     3420+         BR    R11               return
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  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

00003D74                                           3421+RE88     DC    0F
00003D74                                           3422+         DROP  R5
00003D74  00000000 00000000                        3423          DC    XL16'00000000000000000000000000001000C'
00003D7C  00000000 0001000C
                                                   3424
                                                   3425          VRI_F VMSP,+1000001111,+10,135,1,2              shamt=7
00003D88                                           3426+         DS    0FD
00003D88                      00003D88             3427+         USING *,R5              base for test data and test routine
00003D88  00003DB8                                 3428+T89      DC    A(X89)            address of test routine
00003D8C  0059                                     3429+         DC    H'89'             test number
00003D8E  00                                       3430+         DC    X'00'
00003D8F  87                                       3431+         DC    HL1'135'          i4
00003D90  01                                       3432+         DC    HL1'1'            m5
00003D91  02                                       3433+         DC    HL1'2'            cc
00003D92  0D                                       3434+         DC    HL1'13'           cc failed mask
00003D98  00000000 3B9ACE57                        3435+V2_89    DC    FD'+1000001111'   binary value for v2 packed decimal
00003DA0  00000000 0000000A                        3436+V3_89    DC    FD'+10'           binary value for v3 packed decimal
00003DA8  E5D4E2D7 40404040                        3437+         DC    CL8'VMSP'         instruction name
00003DB0  00000010                                 3438+         DC    A(16)             result length
00003DB4  00003DF4                                 3439+REA89    DC    A(RE89)           result address
                                                   3440+*                                INSTRUCTION UNDER TEST ROUTINE
00003DB8                                           3441+X89      DS    0F
00003DB8  E320 5010 0004                 00003D98  3442+         LG    R2,V2_89          convert v2
00003DBE  E320 8F57 002E                 00001157  3443+         CVDG  R2,V2PACKED
00003DC4  E720 8F57 0006                 00001157  3444+         VL    V2,V2PACKED
00003DCA  E320 5018 0004                 00003DA0  3445+         LG    R2,V3_89          convert v3
00003DD0  E320 8F67 002E                 00001167  3446+         CVDG  R2,V3PACKED
00003DD6  E730 8F67 0006                 00001167  3447+         VL    V3,V3PACKED
00003DDC  E612 3018 7079                           3448+         VMSP  V1,V2,V3,135,1    test instruction
00003DE2  E710 8F08 000E                 00001108  3449+         VST   V1,V1OUTPUT       save result
00003DE8  B98D 0020                                3450+         EPSW  R2,R0             exptract psw
00003DEC  5020 8EE8                      000010E8  3451+         ST    R2,CCPSW              to save CC
00003DF0  07FB                                     3452+         BR    R11               return
00003DF4                                           3453+RE89     DC    0F
00003DF4                                           3454+         DROP  R5
00003DF4  00000000 00000000                        3455          DC    XL16'00000000000000000000000000001000C'
00003DFC  00000000 0001000C
                                                   3456
                                                   3457 * VMSP larger #'s
                                                   3458          VRI_F VMSP,+99999999999999999,+1,142,1,2        shamt=14
00003E08                                           3459+         DS    0FD
00003E08                      00003E08             3460+         USING *,R5              base for test data and test routine
00003E08  00003E38                                 3461+T90      DC    A(X90)            address of test routine
00003E0C  005A                                     3462+         DC    H'90'             test number
00003E0E  00                                       3463+         DC    X'00'
00003E0F  8E                                       3464+         DC    HL1'142'          i4
00003E10  01                                       3465+         DC    HL1'1'            m5
00003E11  02                                       3466+         DC    HL1'2'            cc
00003E12  0D                                       3467+         DC    HL1'13'           cc failed mask
                                                   3468+V2_90    DC    FD'+99999999999999999' \
00003E18  01634578 5D89FFFF                           +                                  binary value for v2 packed decimal
00003E20  00000000 00000001                        3469+V3_90    DC    FD'+1'            binary value for v3 packed decimal
00003E28  E5D4E2D7 40404040                        3470+         DC    CL8'VMSP'         instruction name
00003E30  00000010                                 3471+         DC    A(16)             result length
00003E34  00003E74                                 3472+REA90    DC    A(RE90)           result address
                                                   3473+*                                INSTRUCTION UNDER TEST ROUTINE
```

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  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

00003E38                                           3474+X90      DS    0F
00003E38  E320 5010 0004                 00003E18  3475+          LG    R2,V2_90          convert v2
00003E3E  E320 8F57 002E                 00001157  3476+          CVDG  R2,V2PACKED
00003E44  E720 8F57 0006                 00001157  3477+          VL    V2,V2PACKED
00003E4A  E320 5018 0004                 00003E20  3478+          LG    R2,V3_90          convert v3
00003E50  E320 8F67 002E                 00001167  3479+          CVDG  R2,V3PACKED
00003E56  E730 8F67 0006                 00001167  3480+          VL    V3,V3PACKED
00003E5C  E612 3018 E079                           3481+          VMSP  V1,V2,V3,142,1    test instruction
00003E62  E710 8F08 000E                 00001108  3482+          VST   V1,V1OUTPUT       save result
00003E68  B98D 0020                                3483+          EPSW  R2,R0             exptract psw
00003E6C  5020 8EE8                      000010E8  3484+          ST    R2,CCPSW              to save CC
00003E70  07FB                                     3485+          BR    R11               return
00003E74                                           3486+RE90      DC    0F
00003E74                                           3487+          DROP  R5
00003E74  00000000 00000000                        3488           DC    XL16'0000000000000000000000000000999C'
00003E7C  00000000 0000999C
                                                   3489
                                                   3490 *                                                  shamt=14
                                                   3491           VRI_F VMSP,+99999999999999999,+10000000000000000,142,1,2
00003E88                                           3492+          DS    0FD
00003E88                         00003E88          3493+          USING *,R5              base for test data and test routine
00003E88  00003EB8                                 3494+T91       DC    A(X91)            address of test routine
00003E8C  005B                                     3495+          DC    H'91'             test number
00003E8E  00                                       3496+          DC    X'00'
00003E8F  8E                                       3497+          DC    HL1'142'          i4
00003E90  01                                       3498+          DC    HL1'1'            m5
00003E91  02                                       3499+          DC    HL1'2'            cc
00003E92  0D                                       3500+          DC    HL1'13'           cc failed mask
                                                   3501+V2_91     DC    FD'+99999999999999999' \
00003E98  01634578 5D89FFFF                            +                                 binary value for v2 packed decimal
                                                   3502+V3_91     DC    FD'+10000000000000000' \
00003EA0  002386F2 6FC10000                            +                                 binary value for v3 packed decimal
00003EA8  E5D4E2D7 40404040                        3503+          DC    CL8'VMSP'         instruction name
00003EB0  00000010                                 3504+          DC    A(16)             result length
00003EB4  00003EF4                                 3505+REA91     DC    A(RE91)           result address
                                                   3506+*                                  INSTRUCTION UNDER TEST ROUTINE
00003EB8                                           3507+X91       DS    0F
00003EB8  E320 5010 0004                 00003E98  3508+          LG    R2,V2_91          convert v2
00003EBE  E320 8F57 002E                 00001157  3509+          CVDG  R2,V2PACKED
00003EC4  E720 8F57 0006                 00001157  3510+          VL    V2,V2PACKED
00003ECA  E320 5018 0004                 00003EA0  3511+          LG    R2,V3_91          convert v3
00003ED0  E320 8F67 002E                 00001167  3512+          CVDG  R2,V3PACKED
00003ED6  E730 8F67 0006                 00001167  3513+          VL    V3,V3PACKED
00003EDC  E612 3018 E079                           3514+          VMSP  V1,V2,V3,142,1    test instruction
00003EE2  E710 8F08 000E                 00001108  3515+          VST   V1,V1OUTPUT       save result
00003EE8  B98D 0020                                3516+          EPSW  R2,R0             exptract psw
00003EEC  5020 8EE8                      000010E8  3517+          ST    R2,CCPSW              to save CC
00003EF0  07FB                                     3518+          BR    R11               return
00003EF4                                           3519+RE91      DC    0F
00003EF4                                           3520+          DROP  R5
00003EF4  00000000 00009999                        3521           DC    XL16'0000000000009999999999999999900C'
00003EFC  99999999 9999900C
                                                   3522
                                                   3523           VRI_F VMSP,-9999999999999999,-1,159,1,0         shamt=31
00003F08                                           3524+          DS    0FD
00003F08                         00003F08          3525+          USING *,R5              base for test data and test routine
```

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  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
00003F08  00003F38                          3526+T92      DC    A(X92)            address of test routine
00003F0C  005C                              3527+         DC    H'92'             test number
00003F0E  00                                3528+         DC    X'00'
00003F0F  9F                                3529+         DC    HL1'159'          i4
00003F10  01                                3530+         DC    HL1'1'            m5
00003F11  00                                3531+         DC    HL1'0'            cc
00003F12  07                                3532+         DC    HL1'7'            cc failed mask
                                            3533+V2_92    DC    FD'-9999999999999999' \
00003F18  FFDC790D 903F0001                    +                                 binary value for v2 packed decimal
00003F20  FFFFFFFF FFFFFFFF                 3534+V3_92    DC    FD'-1'            binary value for v3 packed decimal
00003F28  E5D4E2D7 40404040                 3535+         DC    CL8'VMSP'         instruction name
00003F30  00000010                          3536+         DC    A(16)             result length
00003F34  00003F74                          3537+REA92    DC    A(RE92)           result address
                                            3538+*                                INSTRUCTION UNDER TEST ROUTINE
00003F38                                    3539+X92      DS    0F
00003F38  E320 5010 0004            00003F18 3540+         LG    R2,V2_92          convert v2
00003F3E  E320 8F57 002E            00001157 3541+         CVDG  R2,V2PACKED
00003F44  E720 8F57 0006            00001157 3542+         VL    V2,V2PACKED
00003F4A  E320 5018 0004            00003F20 3543+         LG    R2,V3_92          convert v3
00003F50  E320 8F67 002E            00001167 3544+         CVDG  R2,V3PACKED
00003F56  E730 8F67 0006            00001167 3545+         VL    V3,V3PACKED
00003F5C  E612 3019 F079                     3546+         VMSP  V1,V2,V3,159,1    test instruction
00003F62  E710 8F08 000E            00001108 3547+         VST   V1,V1OUTPUT       save result
00003F68  B98D 0020                          3548+         EPSW  R2,R0             exptract psw
00003F6C  5020 8EE8                 000010E8 3549+         ST    R2,CCPSW              to save CC
00003F70  07FB                               3550+         BR    R11               return
00003F74                                    3551+RE92     DC    0F
00003F74                                    3552+         DROP  R5
00003F74  00000000 00000000                 3553          DC    XL16'0000000000000000000000000000000C'
00003F7C  00000000 0000000C
                                            3554
                                            3555          VRI_F VMSP,-9999999999999999,-1,135,1,2         shamt=7
00003F88                                    3556+         DS    0FD
00003F88                    00003F88        3557+         USING *,R5              base for test data and test routine
00003F88  00003FB8                          3558+T93      DC    A(X93)            address of test routine
00003F8C  005D                              3559+         DC    H'93'             test number
00003F8E  00                                3560+         DC    X'00'
00003F8F  87                                3561+         DC    HL1'135'          i4
00003F90  01                                3562+         DC    HL1'1'            m5
00003F91  02                                3563+         DC    HL1'2'            cc
00003F92  0D                                3564+         DC    HL1'13'           cc failed mask
                                            3565+V2_93    DC    FD'-9999999999999999' \
00003F98  FFDC790D 903F0001                    +                                 binary value for v2 packed decimal
00003FA0  FFFFFFFF FFFFFFFF                 3566+V3_93    DC    FD'-1'            binary value for v3 packed decimal
00003FA8  E5D4E2D7 40404040                 3567+         DC    CL8'VMSP'         instruction name
00003FB0  00000010                          3568+         DC    A(16)             result length
00003FB4  00003FF4                          3569+REA93    DC    A(RE93)           result address
                                            3570+*                                INSTRUCTION UNDER TEST ROUTINE
00003FB8                                    3571+X93      DS    0F
00003FB8  E320 5010 0004            00003F98 3572+         LG    R2,V2_93          convert v2
00003FBE  E320 8F57 002E            00001157 3573+         CVDG  R2,V2PACKED
00003FC4  E720 8F57 0006            00001157 3574+         VL    V2,V2PACKED
00003FCA  E320 5018 0004            00003FA0 3575+         LG    R2,V3_93          convert v3
00003FD0  E320 8F67 002E            00001167 3576+         CVDG  R2,V3PACKED
00003FD6  E730 8F67 0006            00001167 3577+         VL    V3,V3PACKED
00003FDC  E612 3018 7079                     3578+         VMSP  V1,V2,V3,135,1    test instruction
```

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  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

00003FE2  E710 8F08 000E                 00001108  3579+          VST   V1,V1OUTPUT       save result
00003FE8  B98D 0020                               3580+          EPSW  R2,R0             exptract psw
00003FEC  5020 8EE8                      000010E8  3581+          ST    R2,CCPSW              to save CC
00003FF0  07FB                                    3582+          BR    R11               return
00003FF4                                          3583+RE93      DC    0F
00003FF4                                          3584+          DROP  R5
00003FF4  00000000 00000000                       3585           DC    XL16'0000000000000000000000999999999C'
00003FFC  00000099 9999999C
                                                  3586
                                                  3587           VRI_F VMSP,-9999999999999,+10000000000000,159,1,0 shamt=31
00004008                                          3588+          DS    0FD
00004008                         00004008         3589+          USING *,R5              base for test data and test routine
00004008  00004038                                3590+T94       DC    A(X94)            address of test routine
0000400C  005E                                    3591+          DC    H'94'             test number
0000400E  00                                      3592+          DC    X'00'
0000400F  9F                                      3593+          DC    HL1'159'          i4
00004010  01                                      3594+          DC    HL1'1'            m5
00004011  00                                      3595+          DC    HL1'0'            cc
00004012  07                                      3596+          DC    HL1'7'            cc failed mask
                                                  3597+V2_94     DC    FD'-9999999999999' \
00004018  FFFFF6E7 B18D6001                           +                                  binary value for v2 packed decimal
                                                  3598+V3_94     DC    FD'+10000000000000' \
00004020  00000918 4E72A000                           +                                  binary value for v3 packed decimal
00004028  E5D4E2D7 40404040                       3599+          DC    CL8'VMSP'         instruction name
00004030  00000010                                3600+          DC    A(16)             result length
00004034  00004074                                3601+REA94     DC    A(RE94)           result address
                                                  3602+*                                 INSTRUCTION UNDER TEST ROUTINE
00004038                                          3603+X94       DS    0F
00004038  E320 5010 0004                 00004018 3604+          LG    R2,V2_94          convert v2
0000403E  E320 8F57 002E                 00001157 3605+          CVDG  R2,V2PACKED
00004044  E720 8F57 0006                 00001157 3606+          VL    V2,V2PACKED
0000404A  E320 5018 0004                 00004020 3607+          LG    R2,V3_94          convert v3
00004050  E320 8F67 002E                 00001167 3608+          CVDG  R2,V3PACKED
00004056  E730 8F67 0006                 00001167 3609+          VL    V3,V3PACKED
0000405C  E612 3019 F079                          3610+          VMSP  V1,V2,V3,159,1    test instruction
00004062  E710 8F08 000E                 00001108 3611+          VST   V1,V1OUTPUT       save result
00004068  B98D 0020                               3612+          EPSW  R2,R0             exptract psw
0000406C  5020 8EE8                      000010E8 3613+          ST    R2,CCPSW              to save CC
00004070  07FB                                    3614+          BR    R11               return
00004074                                          3615+RE94      DC    0F
00004074                                          3616+          DROP  R5
00004074  00000000 00000000                       3617           DC    XL16'0000000000000000000000000000000C'  NOTE Plus 0
0000407C  00000000 0000000C
                                                  3618
                                                  3619 * VMSP larger #'s , i4=159(iom=1 & rdc=31)            CS=1 for all m5
                                                  3620 * check forced positive
                                                  3621 *                                                    shamt=1
                                                  3622           VRI_F VMSP,-99999999999999999,+1,129,9,2   m5=9(P2=1)
00004088                                          3623+          DS    0FD
00004088                         00004088         3624+          USING *,R5              base for test data and test routine
00004088  000040B8                                3625+T95       DC    A(X95)            address of test routine
0000408C  005F                                    3626+          DC    H'95'             test number
0000408E  00                                      3627+          DC    X'00'
0000408F  81                                      3628+          DC    HL1'129'          i4
00004090  09                                      3629+          DC    HL1'9'            m5
00004091  02                                      3630+          DC    HL1'2'            cc
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
00004092  0D                                       3631+          DC    HL1'13'            cc failed mask
                                                   3632+V2_95     DC    FD'-99999999999999999' \
00004098  FE9CBA87 A2760001                            +                                   binary value for v2 packed decimal
000040A0  00000000 00000001                        3633+V3_95     DC    FD'+1'             binary value for v3 packed decimal
000040A8  E5D4E2D7 40404040                        3634+          DC    CL8'VMSP'          instruction name
000040B0  00000010                                 3635+          DC    A(16)              result length
000040B4  000040F4                                 3636+REA95     DC    A(RE95)            result address
                                                   3637+*                                  INSTRUCTION UNDER TEST ROUTINE
000040B8                                           3638+X95       DS    0F
000040B8  E320 5010 0004                 00004098  3639+          LG    R2,V2_95           convert v2
000040BE  E320 8F57 002E                 00001157  3640+          CVDG  R2,V2PACKED
000040C4  E720 8F57 0006                 00001157  3641+          VL    V2,V2PACKED
000040CA  E320 5018 0004                 000040A0  3642+          LG    R2,V3_95           convert v3
000040D0  E320 8F67 002E                 00001167  3643+          CVDG  R2,V3PACKED
000040D6  E730 8F67 0006                 00001167  3644+          VL    V3,V3PACKED
000040DC  E612 3098 1079                           3645+          VMSP  V1,V2,V3,129,9     test instruction
000040E2  E710 8F08 000E                 00001108  3646+          VST   V1,V1OUTPUT        save result
000040E8  B98D 0020                                3647+          EPSW  R2,R0              exptract psw
000040EC  5020 8EE8                      000010E8  3648+          ST    R2,CCPSW               to save CC
000040F0  07FB                                     3649+          BR    R11                return
000040F4                                           3650+RE95      DC    0F
000040F4                                           3651+          DROP  R5
000040F4  00000000 00000009                        3652           DC    XL16'0000000000000009999999999999999C'
000040FC  99999999 9999999C
                                                   3653
                                                   3654 *                                                        shamt=7
                                                   3655 *                                                        m5=13(P2=1,P3=1)
                                                   3656           VRI_F VMSP,-99999999999999999,-10000000000000000,135,13,2
00004108                                           3657+          DS    0FD
00004108                 00004108                  3658+          USING *,R5               base for test data and test routine
00004108  00004138                                 3659+T96       DC    A(X96)             address of test routine
0000410C  0060                                     3660+          DC    H'96'              test number
0000410E  00                                       3661+          DC    X'00'
0000410F  87                                       3662+          DC    HL1'135'           i4
00004110  0D                                       3663+          DC    HL1'13'            m5
00004111  02                                       3664+          DC    HL1'2'             cc
00004112  0D                                       3665+          DC    HL1'13'            cc failed mask
                                                   3666+V2_96     DC    FD'-99999999999999999' \
00004118  FE9CBA87 A2760001                            +                                   binary value for v2 packed decimal
                                                   3667+V3_96     DC    FD'-10000000000000000' \
00004120  FFDC790D 903F0000                            +                                   binary value for v3 packed decimal
00004128  E5D4E2D7 40404040                        3668+          DC    CL8'VMSP'          instruction name
00004130  00000010                                 3669+          DC    A(16)              result length
00004134  00004174                                 3670+REA96     DC    A(RE96)            result address
                                                   3671+*                                  INSTRUCTION UNDER TEST ROUTINE
00004138                                           3672+X96       DS    0F
00004138  E320 5010 0004                 00004118  3673+          LG    R2,V2_96           convert v2
0000413E  E320 8F57 002E                 00001157  3674+          CVDG  R2,V2PACKED
00004144  E720 8F57 0006                 00001157  3675+          VL    V2,V2PACKED
0000414A  E320 5018 0004                 00004120  3676+          LG    R2,V3_96           convert v3
00004150  E320 8F67 002E                 00001167  3677+          CVDG  R2,V3PACKED
00004156  E730 8F67 0006                 00001167  3678+          VL    V3,V3PACKED
0000415C  E612 30D8 7079                           3679+          VMSP  V1,V2,V3,135,13    test instruction
00004162  E710 8F08 000E                 00001108  3680+          VST   V1,V1OUTPUT        save result
00004168  B98D 0020                                3681+          EPSW  R2,R0              exptract psw
0000416C  5020 8EE8                      000010E8  3682+          ST    R2,CCPSW               to save CC
```

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  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
00004170  07FB                                    3683+         BR    R11               return
00004174                                          3684+RE96     DC    0F
00004174                                          3685+         DROP  R5
00004174  00000999 99999999                       3686          DC    XL16'00000999999999999999999000000000C'
0000417C  99999900 0000000C
                                                  3687
                                                  3688 *                                                  shamt=7
                                                  3689          VRI_F VMSP,-9999999999999999,-1,135,3,2   m5=3(P1=1)
00004188                                          3690+         DS    0FD
00004188                    00004188              3691+         USING *,R5              base for test data and test routine
00004188  000041B8                                3692+T97      DC    A(X97)            address of test routine
0000418C  0061                                    3693+         DC    H'97'             test number
0000418E  00                                      3694+         DC    X'00'
0000418F  87                                      3695+         DC    HL1'135'          i4
00004190  03                                      3696+         DC    HL1'3'            m5
00004191  02                                      3697+         DC    HL1'2'            cc
00004192  0D                                      3698+         DC    HL1'13'           cc failed mask
                                                  3699+V2_97    DC    FD'-9999999999999999' \
00004198  FFDC790D 903F0001                           +                                 binary value for v2 packed decimal
000041A0  FFFFFFFF FFFFFFFF                       3700+V3_97    DC    FD'-1'            binary value for v3 packed decimal
000041A8  E5D4E2D7 40404040                       3701+         DC    CL8'VMSP'         instruction name
000041B0  00000010                                3702+         DC    A(16)             result length
000041B4  000041F4                                3703+REA97    DC    A(RE97)           result address
                                                  3704+*                                  INSTRUCTION UNDER TEST ROUTINE
000041B8                                          3705+X97      DS    0F
000041B8  E320 5010 0004                00004198  3706+         LG    R2,V2_97          convert v2
000041BE  E320 8F57 002E                00001157  3707+         CVDG  R2,V2PACKED
000041C4  E720 8F57 0006                00001157  3708+         VL    V2,V2PACKED
000041CA  E320 5018 0004                000041A0  3709+         LG    R2,V3_97          convert v3
000041D0  E320 8F67 002E                00001167  3710+         CVDG  R2,V3PACKED
000041D6  E730 8F67 0006                00001167  3711+         VL    V3,V3PACKED
000041DC  E612 3038 7079                          3712+         VMSP  V1,V2,V3,135,3    test instruction
000041E2  E710 8F08 000E                00001108  3713+         VST   V1,V1OUTPUT       save result
000041E8  B98D 0020                               3714+         EPSW  R2,R0             exptract psw
000041EC  5020 8EE8                     000010E8  3715+         ST    R2,CCPSW              to save CC
000041F0  07FB                                    3716+         BR    R11               return
000041F4                                          3717+RE97     DC    0F
000041F4                                          3718+         DROP  R5
000041F4  00000000 00000000                       3719          DC    XL16'0000000000000000000000999999999F'
000041FC  00000099 9999999F
                                                  3720
                                                  3721 *                                                  shamt=4
                                                  3722 *                                                  m5=13(P2=1,P3=1)
                                                  3723          VRI_F VMSP,-9999999999999999,-1,132,13,2
00004208                                          3724+         DS    0FD
00004208                    00004208              3725+         USING *,R5              base for test data and test routine
00004208  00004238                                3726+T98      DC    A(X98)            address of test routine
0000420C  0062                                    3727+         DC    H'98'             test number
0000420E  00                                      3728+         DC    X'00'
0000420F  84                                      3729+         DC    HL1'132'          i4
00004210  0D                                      3730+         DC    HL1'13'           m5
00004211  02                                      3731+         DC    HL1'2'            cc
00004212  0D                                      3732+         DC    HL1'13'           cc failed mask
                                                  3733+V2_98    DC    FD'-9999999999999999' \
00004218  FFDC790D 903F0001                           +                                 binary value for v2 packed decimal
00004220  FFFFFFFF FFFFFFFF                       3734+V3_98    DC    FD'-1'            binary value for v3 packed decimal
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

00004228  E5D4E2D7 40404040                        3735+          DC    CL8'VMSP'          instruction name
00004230  00000010                                 3736+          DC    A(16)              result length
00004234  00004274                                 3737+REA98     DC    A(RE98)            result address
                                                   3738+*                                  INSTRUCTION UNDER TEST ROUTINE
00004238                                           3739+X98       DS    0F
00004238  E320 5010 0004                 00004218  3740+          LG    R2,V2_98           convert v2
0000423E  E320 8F57 002E                 00001157  3741+          CVDG  R2,V2PACKED
00004244  E720 8F57 0006                 00001157  3742+          VL    V2,V2PACKED
0000424A  E320 5018 0004                 00004220  3743+          LG    R2,V3_98           convert v3
00004250  E320 8F67 002E                 00001167  3744+          CVDG  R2,V3PACKED
00004256  E730 8F67 0006                 00001167  3745+          VL    V3,V3PACKED
0000425C  E612 30D8 4079                           3746+          VMSP  V1,V2,V3,132,13    test instruction
00004262  E710 8F08 000E                 00001108  3747+          VST   V1,V1OUTPUT        save result
00004268  B98D 0020                                3748+          EPSW  R2,R0              exptract psw
0000426C  5020 8EE8                      000010E8  3749+          ST    R2,CCPSW               to save CC
00004270  07FB                                     3750+          BR    R11                return
00004274                                           3751+RE98      DC    0F
00004274                                           3752+          DROP  R5
00004274  00000000 00000000                        3753           DC    XL16'00000000000000000000999999999999C'
0000427C  00099999 9999999C
                                                   3754
                                                   3755 *                                                      shamt=31
                                                   3756 *                                                      m5=3(P1=1)
                                                   3757           VRI_F VMSP,+99999999999999999,+10000000000000000,159,3,2
00004288                                           3758+          DS    0FD
00004288                           00004288        3759+          USING *,R5               base for test data and test routine
00004288  000042B8                                 3760+T99       DC    A(X99)             address of test routine
0000428C  0063                                     3761+          DC    H'99'              test number
0000428E  00                                       3762+          DC    X'00'
0000428F  9F                                       3763+          DC    HL1'159'           i4
00004290  03                                       3764+          DC    HL1'3'             m5
00004291  02                                       3765+          DC    HL1'2'             cc
00004292  0D                                       3766+          DC    HL1'13'            cc failed mask
                                                   3767+V2_99     DC    FD'+99999999999999999' \
00004298  01634578 5D89FFFF                           +                                   binary value for v2 packed decimal
                                                   3768+V3_99     DC    FD'+10000000000000000' \
000042A0  002386F2 6FC10000                        +                                   binary value for v3 packed decimal
000042A8  E5D4E2D7 40404040                        3769+          DC    CL8'VMSP'          instruction name
000042B0  00000010                                 3770+          DC    A(16)              result length
000042B4  000042F4                                 3771+REA99     DC    A(RE99)            result address
                                                   3772+*                                  INSTRUCTION UNDER TEST ROUTINE
000042B8                                           3773+X99       DS    0F
000042B8  E320 5010 0004                 00004298  3774+          LG    R2,V2_99           convert v2
000042BE  E320 8F57 002E                 00001157  3775+          CVDG  R2,V2PACKED
000042C4  E720 8F57 0006                 00001157  3776+          VL    V2,V2PACKED
000042CA  E320 5018 0004                 000042A0  3777+          LG    R2,V3_99           convert v3
000042D0  E320 8F67 002E                 00001167  3778+          CVDG  R2,V3PACKED
000042D6  E730 8F67 0006                 00001167  3779+          VL    V3,V3PACKED
000042DC  E612 3039 F079                           3780+          VMSP  V1,V2,V3,159,3     test instruction
000042E2  E710 8F08 000E                 00001108  3781+          VST   V1,V1OUTPUT        save result
000042E8  B98D 0020                                3782+          EPSW  R2,R0              exptract psw
000042EC  5020 8EE8                      000010E8  3783+          ST    R2,CCPSW               to save CC
000042F0  07FB                                     3784+          BR    R11                return
000042F4                                           3785+RE99      DC    0F
000042F4                                           3786+          DROP  R5
000042F4  00000000 00000000                        3787           DC    XL16'0000000000000000000000000000099F'
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
000042FC  00000000 0000099F                        3788
                                                   3789 *-------------------------------------------------------------------
                                                   3790 * VSDP   - VECTOR SHIFT AND DIVIDE DECIMAL
                                                   3791 *-------------------------------------------------------------------
                                                   3792 * VSDP simple + CC checks
                                                   3793 *                                          i4=128(iom=1 & shamt=0)
                                                   3794 *                                          i4=129(iom=1 & shamt=1)
                                                   3795 *                                          i4=132(iom=1 & shamt=4)
                                                   3796 *                                          i4=135(iom=1 & shamt=7)
                                                   3797 *                                          i4=142(iom=1 & shamt=14)
                                                   3798 *                                          i4=159(iom=1 & shamt=31)
                                                   3799
                                                   3800          VRI_F VSDP,+10,+12,128,1,0                  shamt=0
00004308                                           3801+         DS    0FD
00004308                          00004308         3802+         USING *,R5              base for test data and test routine
00004308  00004338                                 3803+T100     DC    A(X100)           address of test routine
0000430C  0064                                     3804+         DC    H'100'            test number
0000430E  00                                       3805+         DC    X'00'
0000430F  80                                       3806+         DC    HL1'128'          i4
00004310  01                                       3807+         DC    HL1'1'            m5
00004311  00                                       3808+         DC    HL1'0'            cc
00004312  07                                       3809+         DC    HL1'7'            cc failed mask
00004318  00000000 0000000A                        3810+V2_100   DC    FD'+10'           binary value for v2 packed decimal
00004320  00000000 0000000C                        3811+V3_100   DC    FD'+12'           binary value for v3 packed decimal
00004328  E5E2C4D7 40404040                        3812+         DC    CL8'VSDP'         instruction name
00004330  00000010                                 3813+         DC    A(16)             result length
00004334  00004374                                 3814+REA100   DC    A(RE100)          result address
                                                   3815+*                                 INSTRUCTION UNDER TEST ROUTINE
00004338                                           3816+X100     DS    0F
00004338  E320 5010 0004                 00004318  3817+         LG    R2,V2_100         convert v2
0000433E  E320 8F57 002E                 00001157  3818+         CVDG  R2,V2PACKED
00004344  E720 8F57 0006                 00001157  3819+         VL    V2,V2PACKED
0000434A  E320 5018 0004                 00004320  3820+         LG    R2,V3_100         convert v3
00004350  E320 8F67 002E                 00001167  3821+         CVDG  R2,V3PACKED
00004356  E730 8F67 0006                 00001167  3822+         VL    V3,V3PACKED
0000435C  E612 3018 007E                           3823+         VSDP  V1,V2,V3,128,1    test instruction
00004362  E710 8F08 000E                 00001108  3824+         VST   V1,V1OUTPUT       save result
00004368  B98D 0020                                3825+         EPSW  R2,R0             exptract psw
0000436C  5020 8EE8                      000010E8  3826+         ST    R2,CCPSW              to save CC
00004370  07FB                                     3827+         BR    R11               return
00004374                                           3828+RE100    DC    0F
00004374                                           3829+         DROP  R5
00004374  00000000 00000000                        3830          DC    XL16'0000000000000000000000000000000C'
0000437C  00000000 0000000C
                                                   3831
                                                   3832          VRI_F VSDP,+10,+12,129,1,2                  shamt=1
00004388                                           3833+         DS    0FD
00004388                          00004388         3834+         USING *,R5              base for test data and test routine
00004388  000043B8                                 3835+T101     DC    A(X101)           address of test routine
0000438C  0065                                     3836+         DC    H'101'            test number
0000438E  00                                       3837+         DC    X'00'
0000438F  81                                       3838+         DC    HL1'129'          i4
00004390  01                                       3839+         DC    HL1'1'            m5
00004391  02                                       3840+         DC    HL1'2'            cc
00004392  0D                                       3841+         DC    HL1'13'           cc failed mask
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

00004398  00000000 0000000A                        3842+V2_101   DC    FD'+10'            binary value for v2 packed decimal
000043A0  00000000 0000000C                        3843+V3_101   DC    FD'+12'            binary value for v3 packed decimal
000043A8  E5E2C4D7 40404040                        3844+         DC    CL8'VSDP'          instruction name
000043B0  00000010                                 3845+         DC    A(16)              result length
000043B4  000043F4                                 3846+REA101   DC    A(RE101)           result address
                                                   3847+*                                 INSTRUCTION UNDER TEST ROUTINE
000043B8                                           3848+X101     DS    0F
000043B8  E320 5010 0004                 00004398  3849+         LG    R2,V2_101          convert v2
000043BE  E320 8F57 002E                 00001157  3850+         CVDG  R2,V2PACKED
000043C4  E720 8F57 0006                 00001157  3851+         VL    V2,V2PACKED
000043CA  E320 5018 0004                 000043A0  3852+         LG    R2,V3_101          convert v3
000043D0  E320 8F67 002E                 00001167  3853+         CVDG  R2,V3PACKED
000043D6  E730 8F67 0006                 00001167  3854+         VL    V3,V3PACKED
000043DC  E612 3018 107E                           3855+         VSDP  V1,V2,V3,129,1     test instruction
000043E2  E710 8F08 000E                 00001108  3856+         VST   V1,V1OUTPUT        save result
000043E8  B98D 0020                                3857+         EPSW  R2,R0              exptract psw
000043EC  5020 8EE8                      000010E8  3858+         ST    R2,CCPSW               to save CC
000043F0  07FB                                     3859+         BR    R11                return
000043F4                                           3860+RE101    DC    0F
000043F4                                           3861+         DROP  R5
000043F4  00000000 00000000                        3862          DC    XL16'0000000000000000000000000000008C'
000043FC  00000000 0000008C
                                                   3863
                                                   3864          VRI_F VSDP,-100,+12,129,1,1                    shamt=1
00004408                                           3865+         DS    0FD
00004408                          00004408         3866+         USING *,R5               base for test data and test routine
00004408  00004438                                 3867+T102     DC    A(X102)            address of test routine
0000440C  0066                                     3868+         DC    H'102'             test number
0000440E  00                                       3869+         DC    X'00'
0000440F  81                                       3870+         DC    HL1'129'           i4
00004410  01                                       3871+         DC    HL1'1'             m5
00004411  01                                       3872+         DC    HL1'1'             cc
00004412  0B                                       3873+         DC    HL1'11'            cc failed mask
00004418  FFFFFFFF FFFFFF9C                        3874+V2_102   DC    FD'-100'           binary value for v2 packed decimal
00004420  00000000 0000000C                        3875+V3_102   DC    FD'+12'            binary value for v3 packed decimal
00004428  E5E2C4D7 40404040                        3876+         DC    CL8'VSDP'          instruction name
00004430  00000010                                 3877+         DC    A(16)              result length
00004434  00004474                                 3878+REA102   DC    A(RE102)           result address
                                                   3879+*                                 INSTRUCTION UNDER TEST ROUTINE
00004438                                           3880+X102     DS    0F
00004438  E320 5010 0004                 00004418  3881+         LG    R2,V2_102          convert v2
0000443E  E320 8F57 002E                 00001157  3882+         CVDG  R2,V2PACKED
00004444  E720 8F57 0006                 00001157  3883+         VL    V2,V2PACKED
0000444A  E320 5018 0004                 00004420  3884+         LG    R2,V3_102          convert v3
00004450  E320 8F67 002E                 00001167  3885+         CVDG  R2,V3PACKED
00004456  E730 8F67 0006                 00001167  3886+         VL    V3,V3PACKED
0000445C  E612 3018 107E                           3887+         VSDP  V1,V2,V3,129,1     test instruction
00004462  E710 8F08 000E                 00001108  3888+         VST   V1,V1OUTPUT        save result
00004468  B98D 0020                                3889+         EPSW  R2,R0              exptract psw
0000446C  5020 8EE8                      000010E8  3890+         ST    R2,CCPSW               to save CC
00004470  07FB                                     3891+         BR    R11                return
00004474                                           3892+RE102    DC    0F
00004474                                           3893+         DROP  R5
00004474  00000000 00000000                        3894          DC    XL16'0000000000000000000000000000083D'
0000447C  00000000 0000083D
                                                   3895
```

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  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
                                                   3896          VRI_F VSDP,+100,-12,132,1,1                    shamt=4
00004488                                           3897+         DS    0FD
00004488                     00004488              3898+         USING *,R5              base for test data and test routine
00004488  000044B8                                 3899+T103     DC    A(X103)           address of test routine
0000448C  0067                                     3900+         DC    H'103'            test number
0000448E  00                                       3901+         DC    X'00'
0000448F  84                                       3902+         DC    HL1'132'          i4
00004490  01                                       3903+         DC    HL1'1'            m5
00004491  01                                       3904+         DC    HL1'1'            cc
00004492  0B                                       3905+         DC    HL1'11'           cc failed mask
00004498  00000000 00000064                        3906+V2_103   DC    FD'+100'          binary value for v2 packed decimal
000044A0  FFFFFFFF FFFFFFF4                        3907+V3_103   DC    FD'-12'           binary value for v3 packed decimal
000044A8  E5E2C4D7 40404040                        3908+         DC    CL8'VSDP'         instruction name
000044B0  00000010                                 3909+         DC    A(16)             result length
000044B4  000044F4                                 3910+REA103   DC    A(RE103)          result address
                                                   3911+*                                INSTRUCTION UNDER TEST ROUTINE
000044B8                                           3912+X103     DS    0F
000044B8  E320 5010 0004                 00004498  3913+         LG    R2,V2_103         convert v2
000044BE  E320 8F57 002E                 00001157  3914+         CVDG  R2,V2PACKED
000044C4  E720 8F57 0006                 00001157  3915+         VL    V2,V2PACKED
000044CA  E320 5018 0004                 000044A0  3916+         LG    R2,V3_103         convert v3
000044D0  E320 8F67 002E                 00001167  3917+         CVDG  R2,V3PACKED
000044D6  E730 8F67 0006                 00001167  3918+         VL    V3,V3PACKED
000044DC  E612 3018 407E                           3919+         VSDP  V1,V2,V3,132,1    test instruction
000044E2  E710 8F08 000E                 00001108  3920+         VST   V1,V1OUTPUT       save result
000044E8  B98D 0020                                3921+         EPSW  R2,R0             exptract psw
000044EC  5020 8EE8                      000010E8  3922+         ST    R2,CCPSW                to save CC
000044F0  07FB                                     3923+         BR    R11               return
000044F4                                           3924+RE103    DC    0F
000044F4                                           3925+         DROP  R5
000044F4  00000000 00000000                       3926          DC    XL16'0000000000000000000000000083333D'
000044FC  00000000 0083333D
                                                   3927
                                                   3928          VRI_F VSDP,+100,-12,128,1,1                    shamt=0
00004508                                           3929+         DS    0FD
00004508                     00004508              3930+         USING *,R5              base for test data and test routine
00004508  00004538                                 3931+T104     DC    A(X104)           address of test routine
0000450C  0068                                     3932+         DC    H'104'            test number
0000450E  00                                       3933+         DC    X'00'
0000450F  80                                       3934+         DC    HL1'128'          i4
00004510  01                                       3935+         DC    HL1'1'            m5
00004511  01                                       3936+         DC    HL1'1'            cc
00004512  0B                                       3937+         DC    HL1'11'           cc failed mask
00004518  00000000 00000064                        3938+V2_104   DC    FD'+100'          binary value for v2 packed decimal
00004520  FFFFFFFF FFFFFFF4                        3939+V3_104   DC    FD'-12'           binary value for v3 packed decimal
00004528  E5E2C4D7 40404040                        3940+         DC    CL8'VSDP'         instruction name
00004530  00000010                                 3941+         DC    A(16)             result length
00004534  00004574                                 3942+REA104   DC    A(RE104)          result address
                                                   3943+*                                INSTRUCTION UNDER TEST ROUTINE
00004538                                           3944+X104     DS    0F
00004538  E320 5010 0004                 00004518  3945+         LG    R2,V2_104         convert v2
0000453E  E320 8F57 002E                 00001157  3946+         CVDG  R2,V2PACKED
00004544  E720 8F57 0006                 00001157  3947+         VL    V2,V2PACKED
0000454A  E320 5018 0004                 00004520  3948+         LG    R2,V3_104         convert v3
00004550  E320 8F67 002E                 00001167  3949+         CVDG  R2,V3PACKED
00004556  E730 8F67 0006                 00001167  3950+         VL    V3,V3PACKED
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  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

0000455C  E612 3018 007E                           3951+          VSDP  V1,V2,V3,128,1    test instruction
00004562  E710 8F08 000E                 00001108  3952+          VST   V1,V1OUTPUT       save result
00004568  B98D 0020                                3953+          EPSW  R2,R0             exptract psw
0000456C  5020 8EE8                      000010E8  3954+          ST    R2,CCPSW              to save CC
00004570  07FB                                     3955+          BR    R11               return
00004574                                           3956+RE104     DC    0F
00004574                                           3957+          DROP  R5
00004574  00000000 00000000                        3958           DC    XL16'0000000000000000000000000000008D'
0000457C  00000000 0000008D
                                                   3959
                                                   3960           VRI_F VSDP,-100,-12,129,1,2                    shamt=1
00004588                                           3961+          DS    0FD
00004588                   00004588                3962+          USING *,R5              base for test data and test routine
00004588  000045B8                                 3963+T105      DC    A(X105)           address of test routine
0000458C  0069                                     3964+          DC    H'105'            test number
0000458E  00                                       3965+          DC    X'00'
0000458F  81                                       3966+          DC    HL1'129'          i4
00004590  01                                       3967+          DC    HL1'1'            m5
00004591  02                                       3968+          DC    HL1'2'            cc
00004592  0D                                       3969+          DC    HL1'13'           cc failed mask
00004598  FFFFFFFF FFFFFF9C                        3970+V2_105    DC    FD'-100'          binary value for v2 packed decimal
000045A0  FFFFFFFF FFFFFFF4                        3971+V3_105    DC    FD'-12'           binary value for v3 packed decimal
000045A8  E5E2C4D7 40404040                        3972+          DC    CL8'VSDP'         instruction name
000045B0  00000010                                 3973+          DC    A(16)             result length
000045B4  000045F4                                 3974+REA105    DC    A(RE105)          result address
                                                   3975+*                                 INSTRUCTION UNDER TEST ROUTINE
000045B8                                           3976+X105      DS    0F
000045B8  E320 5010 0004                 00004598  3977+          LG    R2,V2_105         convert v2
000045BE  E320 8F57 002E                 00001157  3978+          CVDG  R2,V2PACKED
000045C4  E720 8F57 0006                 00001157  3979+          VL    V2,V2PACKED
000045CA  E320 5018 0004                 000045A0  3980+          LG    R2,V3_105         convert v3
000045D0  E320 8F67 002E                 00001167  3981+          CVDG  R2,V3PACKED
000045D6  E730 8F67 0006                 00001167  3982+          VL    V3,V3PACKED
000045DC  E612 3018 107E                           3983+          VSDP  V1,V2,V3,129,1    test instruction
000045E2  E710 8F08 000E                 00001108  3984+          VST   V1,V1OUTPUT       save result
000045E8  B98D 0020                                3985+          EPSW  R2,R0             exptract psw
000045EC  5020 8EE8                      000010E8  3986+          ST    R2,CCPSW              to save CC
000045F0  07FB                                     3987+          BR    R11               return
000045F4                                           3988+RE105     DC    0F
000045F4                                           3989+          DROP  R5
000045F4  00000000 00000000                        3990           DC    XL16'0000000000000000000000000000083C'
000045FC  00000000 0000083C
                                                   3991
                                                   3992           VRI_F VSDP,-100,-10,135,1,2                    shamt=7
00004608                                           3993+          DS    0FD
00004608                   00004608                3994+          USING *,R5              base for test data and test routine
00004608  00004638                                 3995+T106      DC    A(X106)           address of test routine
0000460C  006A                                     3996+          DC    H'106'            test number
0000460E  00                                       3997+          DC    X'00'
0000460F  87                                       3998+          DC    HL1'135'          i4
00004610  01                                       3999+          DC    HL1'1'            m5
00004611  02                                       4000+          DC    HL1'2'            cc
00004612  0D                                       4001+          DC    HL1'13'           cc failed mask
00004618  FFFFFFFF FFFFFF9C                        4002+V2_106    DC    FD'-100'          binary value for v2 packed decimal
00004620  FFFFFFFF FFFFFFF6                        4003+V3_106    DC    FD'-10'           binary value for v3 packed decimal
00004628  E5E2C4D7 40404040                        4004+          DC    CL8'VSDP'         instruction name
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  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
00004630  00000010                          4005+          DC    A(16)              result length
00004634  00004674                          4006+REA106    DC    A(RE106)           result address
                                            4007+*                                  INSTRUCTION UNDER TEST ROUTINE
00004638                                    4008+X106      DS    0F
00004638  E320 5010 0004            00004618 4009+         LG    R2,V2_106          convert v2
0000463E  E320 8F57 002E            00001157 4010+         CVDG  R2,V2PACKED
00004644  E720 8F57 0006            00001157 4011+         VL    V2,V2PACKED
0000464A  E320 5018 0004            00004620 4012+         LG    R2,V3_106          convert v3
00004650  E320 8F67 002E            00001167 4013+         CVDG  R2,V3PACKED
00004656  E730 8F67 0006            00001167 4014+         VL    V3,V3PACKED
0000465C  E612 3018 707E                     4015+         VSDP  V1,V2,V3,135,1     test instruction
00004662  E710 8F08 000E            00001108 4016+         VST   V1,V1OUTPUT        save result
00004668  B98D 0020                          4017+         EPSW  R2,R0              exptract psw
0000466C  5020 8EE8                 000010E8 4018+         ST    R2,CCPSW               to save CC
00004670  07FB                               4019+         BR    R11                return
00004674                                     4020+RE106    DC    0F
00004674                                     4021+         DROP  R5
00004674  00000000 00000000                  4022          DC    XL16'00000000000000000000000100000000C'
0000467C  00000010 0000000C
                                             4023
                                             4024          VRI_F VSDP,+10000000010,+10,135,1,2             shamt=7
00004688                                     4025+         DS    0FD
00004688                    00004688         4026+         USING *,R5               base for test data and test routine
00004688  000046B8                           4027+T107     DC    A(X107)            address of test routine
0000468C  006B                               4028+         DC    H'107'             test number
0000468E  00                                 4029+         DC    X'00'
0000468F  87                                 4030+         DC    HL1'135'           i4
00004690  01                                 4031+         DC    HL1'1'             m5
00004691  02                                 4032+         DC    HL1'2'             cc
00004692  0D                                 4033+         DC    HL1'13'            cc failed mask
00004698  00000002 540BE40A                  4034+V2_107   DC    FD'+10000000010'   binary value for v2 packed decimal
000046A0  00000000 0000000A                  4035+V3_107   DC    FD'+10'            binary value for v3 packed decimal
000046A8  E5E2C4D7 40404040                  4036+         DC    CL8'VSDP'          instruction name
000046B0  00000010                           4037+         DC    A(16)              result length
000046B4  000046F4                           4038+REA107   DC    A(RE107)           result address
                                             4039+*                                  INSTRUCTION UNDER TEST ROUTINE
000046B8                                     4040+X107     DS    0F
000046B8  E320 5010 0004            00004698 4041+         LG    R2,V2_107          convert v2
000046BE  E320 8F57 002E            00001157 4042+         CVDG  R2,V2PACKED
000046C4  E720 8F57 0006            00001157 4043+         VL    V2,V2PACKED
000046CA  E320 5018 0004            000046A0 4044+         LG    R2,V3_107          convert v3
000046D0  E320 8F67 002E            00001167 4045+         CVDG  R2,V3PACKED
000046D6  E730 8F67 0006            00001167 4046+         VL    V3,V3PACKED
000046DC  E612 3018 707E                     4047+         VSDP  V1,V2,V3,135,1     test instruction
000046E2  E710 8F08 000E            00001108 4048+         VST   V1,V1OUTPUT        save result
000046E8  B98D 0020                          4049+         EPSW  R2,R0              exptract psw
000046EC  5020 8EE8                 000010E8 4050+         ST    R2,CCPSW               to save CC
000046F0  07FB                               4051+         BR    R11                return
000046F4                                     4052+RE107    DC    0F
000046F4                                     4053+         DROP  R5
000046F4  00000000 00000010                  4054          DC    XL16'00000000000000010000000010000000C'
000046FC  00000001 0000000C
                                             4055
                                             4056 * VSDP larger #'s
                                             4057          VRI_F VSDP,+99999999999999999,+1,132,1,2        shamt=4
00004708                                     4058+         DS    0FD
```

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  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

00004708                     00004708               4059+          USING *,R5              base for test data and test routine
00004708  00004738                                  4060+T108      DC    A(X108)           address of test routine
0000470C  006C                                      4061+          DC    H'108'            test number
0000470E  00                                        4062+          DC    X'00'
0000470F  84                                        4063+          DC    HL1'132'          i4
00004710  01                                        4064+          DC    HL1'1'            m5
00004711  02                                        4065+          DC    HL1'2'            cc
00004712  0D                                        4066+          DC    HL1'13'           cc failed mask
                                                    4067+V2_108    DC    FD'+9999999999999999' \
00004718  01634578 5D89FFFF                            +                                  binary value for v2 packed decimal
00004720  00000000 00000001                         4068+V3_108    DC    FD'+1'            binary value for v3 packed decimal
00004728  E5E2C4D7 40404040                         4069+          DC    CL8'VSDP'         instruction name
00004730  00000010                                  4070+          DC    A(16)             result length
00004734  00004774                                  4071+REA108    DC    A(RE108)          result address
                                                    4072+*                                 INSTRUCTION UNDER TEST ROUTINE
00004738                                            4073+X108      DS    0F
00004738  E320 5010 0004                 00004718   4074+          LG    R2,V2_108         convert v2
0000473E  E320 8F57 002E                 00001157   4075+          CVDG  R2,V2PACKED
00004744  E720 8F57 0006                 00001157   4076+          VL    V2,V2PACKED
0000474A  E320 5018 0004                 00004720   4077+          LG    R2,V3_108         convert v3
00004750  E320 8F67 002E                 00001167   4078+          CVDG  R2,V3PACKED
00004756  E730 8F67 0006                 00001167   4079+          VL    V3,V3PACKED
0000475C  E612 3018 407E                            4080+          VSDP  V1,V2,V3,132,1    test instruction
00004762  E710 8F08 000E                 00001108   4081+          VST   V1,V1OUTPUT       save result
00004768  B98D 0020                                 4082+          EPSW  R2,R0             exptract psw
0000476C  5020 8EE8                      000010E8   4083+          ST    R2,CCPSW              to save CC
00004770  07FB                                      4084+          BR    R11               return
00004774                                            4085+RE108     DC    0F
00004774                                            4086+          DROP  R5
00004774  00000000 00999999                         4087           DC    XL16'0000000000999999999999999990000C'
0000477C  99999999 9990000C
                                                    4088
                                                    4089           VRI_F VSDP,-99999999999999999,+1000,128,1,1     shamt=0
00004788                                            4090+          DS    0FD
00004788                     00004788               4091+          USING *,R5              base for test data and test routine
00004788  000047B8                                  4092+T109      DC    A(X109)           address of test routine
0000478C  006D                                      4093+          DC    H'109'            test number
0000478E  00                                        4094+          DC    X'00'
0000478F  80                                        4095+          DC    HL1'128'          i4
00004790  01                                        4096+          DC    HL1'1'            m5
00004791  01                                        4097+          DC    HL1'1'            cc
00004792  0B                                        4098+          DC    HL1'11'           cc failed mask
                                                    4099+V2_109    DC    FD'-9999999999999999' \
00004798  FE9CBA87 A2760001                            +                                  binary value for v2 packed decimal
000047A0  00000000 000003E8                         4100+V3_109    DC    FD'+1000'         binary value for v3 packed decimal
000047A8  E5E2C4D7 40404040                         4101+          DC    CL8'VSDP'         instruction name
000047B0  00000010                                  4102+          DC    A(16)             result length
000047B4  000047F4                                  4103+REA109    DC    A(RE109)          result address
                                                    4104+*                                 INSTRUCTION UNDER TEST ROUTINE
000047B8                                            4105+X109      DS    0F
000047B8  E320 5010 0004                 00004798   4106+          LG    R2,V2_109         convert v2
000047BE  E320 8F57 002E                 00001157   4107+          CVDG  R2,V2PACKED
000047C4  E720 8F57 0006                 00001157   4108+          VL    V2,V2PACKED
000047CA  E320 5018 0004                 000047A0   4109+          LG    R2,V3_109         convert v3
000047D0  E320 8F67 002E                 00001167   4110+          CVDG  R2,V3PACKED
000047D6  E730 8F67 0006                 00001167   4111+          VL    V3,V3PACKED
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  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

000047DC  E612 3018 007E                          4112+         VSDP  V1,V2,V3,128,1    test instruction
000047E2  E710 8F08 000E                00001108  4113+         VST   V1,V1OUTPUT        save result
000047E8  B98D 0020                               4114+         EPSW  R2,R0              exptract psw
000047EC  5020 8EE8                     000010E8  4115+         ST    R2,CCPSW               to save CC
000047F0  07FB                                    4116+         BR    R11                return
000047F4                                          4117+RE109    DC    0F
000047F4                                          4118+         DROP  R5
000047F4  00000000 00000000                       4119          DC    XL16'00000000000000009999999999999D'
000047FC  09999999 9999999D
                                                  4120
                                                  4121          VRI_F VSDP,-9999999999999999,-1,128,1,2         shamt=0
00004808                                          4122+         DS    0FD
00004808                        00004808          4123+         USING *,R5               base for test data and test routine
00004808  00004838                                4124+T110     DC    A(X110)            address of test routine
0000480C  006E                                    4125+         DC    H'110'             test number
0000480E  00                                      4126+         DC    X'00'
0000480F  80                                      4127+         DC    HL1'128'           i4
00004810  01                                      4128+         DC    HL1'1'             m5
00004811  02                                      4129+         DC    HL1'2'             cc
00004812  0D                                      4130+         DC    HL1'13'            cc failed mask
                                                  4131+V2_110   DC    FD'-9999999999999999' \
00004818  FFDC790D 903F0001                           +                                binary value for v2 packed decimal
00004820  FFFFFFFF FFFFFFFF                       4132+V3_110   DC    FD'-1'             binary value for v3 packed decimal
00004828  E5E2C4D7 40404040                       4133+         DC    CL8'VSDP'          instruction name
00004830  00000010                               4134+         DC    A(16)              result length
00004834  00004874                               4135+REA110   DC    A(RE110)           result address
                                                  4136+*                                 INSTRUCTION UNDER TEST ROUTINE
00004838                                          4137+X110     DS    0F
00004838  E320 5010 0004                00004818  4138+         LG    R2,V2_110          convert v2
0000483E  E320 8F57 002E                00001157  4139+         CVDG  R2,V2PACKED
00004844  E720 8F57 0006                00001157  4140+         VL    V2,V2PACKED
0000484A  E320 5018 0004                00004820  4141+         LG    R2,V3_110          convert v3
00004850  E320 8F67 002E                00001167  4142+         CVDG  R2,V3PACKED
00004856  E730 8F67 0006                00001167  4143+         VL    V3,V3PACKED
0000485C  E612 3018 007E                          4144+         VSDP  V1,V2,V3,128,1     test instruction
00004862  E710 8F08 000E                00001108  4145+         VST   V1,V1OUTPUT        save result
00004868  B98D 0020                               4146+         EPSW  R2,R0              exptract psw
0000486C  5020 8EE8                     000010E8  4147+         ST    R2,CCPSW               to save CC
00004870  07FB                                    4148+         BR    R11                return
00004874                                          4149+RE110    DC    0F
00004874                                          4150+         DROP  R5
00004874  00000000 00000009                       4151          DC    XL16'00000000000000009999999999999999C'
0000487C  99999999 9999999C
                                                  4152
                                                  4153          VRI_F VSDP,-9999999999999999,-1,142,1,2         shamt=14
00004888                                          4154+         DS    0FD
00004888                        00004888          4155+         USING *,R5               base for test data and test routine
00004888  000048B8                                4156+T111     DC    A(X111)            address of test routine
0000488C  006F                                    4157+         DC    H'111'             test number
0000488E  00                                      4158+         DC    X'00'
0000488F  8E                                      4159+         DC    HL1'142'           i4
00004890  01                                      4160+         DC    HL1'1'             m5
00004891  02                                      4161+         DC    HL1'2'             cc
00004892  0D                                      4162+         DC    HL1'13'            cc failed mask
                                                  4163+V2_111   DC    FD'-9999999999999999' \
00004898  FFDC790D 903F0001                           +                                binary value for v2 packed decimal
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  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

000048A0  FFFFFFFF FFFFFFFF                        4164+V3_111   DC    FD'-1'              binary value for v3 packed decimal
000048A8  E5E2C4D7 40404040                        4165+         DC    CL8'VSDP'           instruction name
000048B0  00000010                                 4166+         DC    A(16)               result length
000048B4  000048F4                                 4167+REA111   DC    A(RE111)            result address
                                                   4168+*                                  INSTRUCTION UNDER TEST ROUTINE
000048B8                                           4169+X111     DS    0F
000048B8  E320 5010 0004                 00004898  4170+         LG    R2,V2_111           convert v2
000048BE  E320 8F57 002E                 00001157  4171+         CVDG  R2,V2PACKED
000048C4  E720 8F57 0006                 00001157  4172+         VL    V2,V2PACKED
000048CA  E320 5018 0004                 000048A0  4173+         LG    R2,V3_111           convert v3
000048D0  E320 8F67 002E                 00001167  4174+         CVDG  R2,V3PACKED
000048D6  E730 8F67 0006                 00001167  4175+         VL    V3,V3PACKED
000048DC  E612 3018 E07E                           4176+         VSDP  V1,V2,V3,142,1      test instruction
000048E2  E710 8F08 000E                 00001108  4177+         VST   V1,V1OUTPUT         save result
000048E8  B98D 0020                                4178+         EPSW  R2,R0               exptract psw
000048EC  5020 8EE8                      000010E8  4179+         ST    R2,CCPSW                to save CC
000048F0  07FB                                     4180+         BR    R11                 return
000048F4                                           4181+RE111    DC    0F
000048F4                                           4182+         DROP  R5
000048F4  09999999 99999999                        4183          DC    XL16'09999999999999999000000000000000C'
000048FC  90000000 0000000C
                                                   4184
                                                   4185          VRI_F VSDP,+9999999999999,+1234,129,1,2         shamt=1
00004908                                           4186+         DS    0FD
00004908                         00004908          4187+         USING *,R5                base for test data and test routine
00004908  00004938                                 4188+T112     DC    A(X112)             address of test routine
0000490C  0070                                     4189+         DC    H'112'              test number
0000490E  00                                       4190+         DC    X'00'
0000490F  81                                       4191+         DC    HL1'129'            i4
00004910  01                                       4192+         DC    HL1'1'              m5
00004911  02                                       4193+         DC    HL1'2'              cc
00004912  0D                                       4194+         DC    HL1'13'             cc failed mask
                                                   4195+V2_112   DC    FD'+9999999999999' \
00004918  00000918 4E729FFF                            +                                  binary value for v2 packed decimal
00004920  00000000 000004D2                        4196+V3_112   DC    FD'+1234'           binary value for v3 packed decimal
00004928  E5E2C4D7 40404040                        4197+         DC    CL8'VSDP'           instruction name
00004930  00000010                                 4198+         DC    A(16)               result length
00004934  00004974                                 4199+REA112   DC    A(RE112)            result address
                                                   4200+*                                  INSTRUCTION UNDER TEST ROUTINE
00004938                                           4201+X112     DS    0F
00004938  E320 5010 0004                 00004918  4202+         LG    R2,V2_112           convert v2
0000493E  E320 8F57 002E                 00001157  4203+         CVDG  R2,V2PACKED
00004944  E720 8F57 0006                 00001157  4204+         VL    V2,V2PACKED
0000494A  E320 5018 0004                 00004920  4205+         LG    R2,V3_112           convert v3
00004950  E320 8F67 002E                 00001167  4206+         CVDG  R2,V3PACKED
00004956  E730 8F67 0006                 00001167  4207+         VL    V3,V3PACKED
0000495C  E612 3018 107E                           4208+         VSDP  V1,V2,V3,129,1      test instruction
00004962  E710 8F08 000E                 00001108  4209+         VST   V1,V1OUTPUT         save result
00004968  B98D 0020                                4210+         EPSW  R2,R0               exptract psw
0000496C  5020 8EE8                      000010E8  4211+         ST    R2,CCPSW                to save CC
00004970  07FB                                     4212+         BR    R11                 return
00004974                                           4213+RE112    DC    0F
00004974                                           4214+         DROP  R5
00004974  00000000 00000000                        4215          DC    XL16'00000000000000000000810372771470'
0000497C  00008103 7277147C
                                                   4216
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  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
                                                   4217          VRI_F VSDP,+999999999999999,+12345,129,1,2      shamt=1
00004988                                           4218+         DS    0FD
00004988                     00004988              4219+         USING *,R5              base for test data and test routine
00004988  000049B8                                 4220+T113     DC    A(X113)           address of test routine
0000498C  0071                                     4221+         DC    H'113'            test number
0000498E  00                                       4222+         DC    X'00'
0000498F  81                                       4223+         DC    HL1'129'          i4
00004990  01                                       4224+         DC    HL1'1'            m5
00004991  02                                       4225+         DC    HL1'2'            cc
00004992  0D                                       4226+         DC    HL1'13'           cc failed mask
                                                   4227+V2_113   DC    FD'+999999999999999' \
00004998  00038D7E A4C67FFF                           +                                 binary value for v2 packed decimal
000049A0  00000000 00003039                        4228+V3_113   DC    FD'+12345'        binary value for v3 packed decimal
000049A8  E5E2C4D7 40404040                        4229+         DC    CL8'VSDP'         instruction name
000049B0  00000010                                 4230+         DC    A(16)             result length
000049B4  000049F4                                 4231+REA113   DC    A(RE113)          result address
                                                   4232+*                                INSTRUCTION UNDER TEST ROUTINE
000049B8                                           4233+X113     DS    0F
000049B8  E320 5010 0004                 00004998  4234+          LG    R2,V2_113         convert v2
000049BE  E320 8F57 002E                 00001157  4235+          CVDG  R2,V2PACKED
000049C4  E720 8F57 0006                 00001157  4236+          VL    V2,V2PACKED
000049CA  E320 5018 0004                 000049A0  4237+          LG    R2,V3_113         convert v3
000049D0  E320 8F67 002E                 00001167  4238+          CVDG  R2,V3PACKED
000049D6  E730 8F67 0006                 00001167  4239+          VL    V3,V3PACKED
000049DC  E612 3018 107E                           4240+          VSDP  V1,V2,V3,129,1    test instruction
000049E2  E710 8F08 000E                 00001108  4241+          VST   V1,V1OUTPUT       save result
000049E8  B98D 0020                                4242+          EPSW  R2,R0             exptract psw
000049EC  5020 8EE8                      000010E8  4243+          ST    R2,CCPSW              to save CC
000049F0  07FB                                     4244+          BR    R11               return
000049F4                                           4245+RE113    DC    0F
000049F4                                           4246+         DROP  R5
000049F4  00000000 00000000                        4247          DC    XL16'0000000000000000000810044552450C'
000049FC  00081004 4552450C
                                                   4248
                                                   4249 * VSDP larger #'s                                  CS=1 for all m5
                                                   4250 * check forced positive
                                                   4251 *                                                   shamt=1
                                                   4252          VRI_F VSDP,-99999999999999999,+1,129,9,2   m5=9(P2=1)
00004A08                                           4253+         DS    0FD
00004A08                     00004A08              4254+         USING *,R5              base for test data and test routine
00004A08  00004A38                                 4255+T114     DC    A(X114)           address of test routine
00004A0C  0072                                     4256+         DC    H'114'            test number
00004A0E  00                                       4257+         DC    X'00'
00004A0F  81                                       4258+         DC    HL1'129'          i4
00004A10  09                                       4259+         DC    HL1'9'            m5
00004A11  02                                       4260+         DC    HL1'2'            cc
00004A12  0D                                       4261+         DC    HL1'13'           cc failed mask
                                                   4262+V2_114   DC    FD'-99999999999999999' \
00004A18  FE9CBA87 A2760001                            +                                 binary value for v2 packed decimal
00004A20  00000000 00000001                        4263+V3_114   DC    FD'+1'            binary value for v3 packed decimal
00004A28  E5E2C4D7 40404040                        4264+         DC    CL8'VSDP'         instruction name
00004A30  00000010                                 4265+         DC    A(16)             result length
00004A34  00004A74                                 4266+REA114   DC    A(RE114)          result address
                                                   4267+*                                INSTRUCTION UNDER TEST ROUTINE
00004A38                                           4268+X114     DS    0F
00004A38  E320 5010 0004                 00004A18  4269+          LG    R2,V2_114         convert v2
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  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

00004A3E  E320 8F57 002E                 00001157  4270+         CVDG  R2,V2PACKED
00004A44  E720 8F57 0006                 00001157  4271+         VL    V2,V2PACKED
00004A4A  E320 5018 0004                 00004A20  4272+         LG    R2,V3_114          convert v3
00004A50  E320 8F67 002E                 00001167  4273+         CVDG  R2,V3PACKED
00004A56  E730 8F67 0006                 00001167  4274+         VL    V3,V3PACKED
00004A5C  E612 3098 107E                           4275+         VSDP  V1,V2,V3,129,9     test instruction
00004A62  E710 8F08 000E                 00001108  4276+         VST   V1,V1OUTPUT        save result
00004A68  B98D 0020                                4277+         EPSW  R2,R0              exptract psw
00004A6C  5020 8EE8                      000010E8  4278+         ST    R2,CCPSW               to save CC
00004A70  07FB                                     4279+         BR    R11                return
00004A74                                           4280+RE114    DC    0F
00004A74                                           4281+         DROP  R5
00004A74  00000000 00000999                        4282          DC    XL16'0000000000000999999999999999990C'
00004A7C  99999999 9999990C
                                                   4283
                                                   4284 *                                                  shamt=3
                                                   4285          VRI_F VSDP,+99999999999999999,-1000,131,13,2  m5=13(P2=1,P3=1)
00004A88                                           4286+         DS    0FD
00004A88                           00004A88        4287+         USING *,R5               base for test data and test routine
00004A88  00004AB8                                 4288+T115     DC    A(X115)            address of test routine
00004A8C  0073                                     4289+         DC    H'115'             test number
00004A8E  00                                       4290+         DC    X'00'
00004A8F  83                                       4291+         DC    HL1'131'           i4
00004A90  0D                                       4292+         DC    HL1'13'            m5
00004A91  02                                       4293+         DC    HL1'2'             cc
00004A92  0D                                       4294+         DC    HL1'13'            cc failed mask
                                                   4295+V2_115   DC    FD'+99999999999999999' \
00004A98  01634578 5D89FFFF                          +                                   binary value for v2 packed decimal
00004AA0  FFFFFFFF FFFFFC18                        4296+V3_115   DC    FD'-1000'          binary value for v3 packed decimal
00004AA8  E5E2C4D7 40404040                        4297+         DC    CL8'VSDP'          instruction name
00004AB0  00000010                                 4298+         DC    A(16)              result length
00004AB4  00004AF4                                 4299+REA115   DC    A(RE115)           result address
                                                   4300+*                                  INSTRUCTION UNDER TEST ROUTINE
00004AB8                                           4301+X115     DS    0F
00004AB8  E320 5010 0004                 00004A98  4302+         LG    R2,V2_115          convert v2
00004ABE  E320 8F57 002E                 00001157  4303+         CVDG  R2,V2PACKED
00004AC4  E720 8F57 0006                 00001157  4304+         VL    V2,V2PACKED
00004ACA  E320 5018 0004                 00004AA0  4305+         LG    R2,V3_115          convert v3
00004AD0  E320 8F67 002E                 00001167  4306+         CVDG  R2,V3PACKED
00004AD6  E730 8F67 0006                 00001167  4307+         VL    V3,V3PACKED
00004ADC  E612 30D8 307E                           4308+         VSDP  V1,V2,V3,131,13    test instruction
00004AE2  E710 8F08 000E                 00001108  4309+         VST   V1,V1OUTPUT        save result
00004AE8  B98D 0020                                4310+         EPSW  R2,R0              exptract psw
00004AEC  5020 8EE8                      000010E8  4311+         ST    R2,CCPSW               to save CC
00004AF0  07FB                                     4312+         BR    R11                return
00004AF4                                           4313+RE115    DC    0F
00004AF4                                           4314+         DROP  R5
00004AF4  00000000 00000099                        4315          DC    XL16'0000000000000099999999999999990C'
00004AFC  99999999 9999990C
                                                   4316
                                                   4317 *                                                  shamt=3
                                                   4318          VRI_F VSDP,-9999999999999999,-1,131,3,2   m5=3(P1=1)
00004B08                                           4319+         DS    0FD
00004B08                           00004B08        4320+         USING *,R5               base for test data and test routine
00004B08  00004B38                                 4321+T116     DC    A(X116)            address of test routine
00004B0C  0074                                     4322+         DC    H'116'             test number
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

00004B0E  00                                       4323+          DC    X'00'
00004B0F  83                                       4324+          DC    HL1'131'          i4
00004B10  03                                       4325+          DC    HL1'3'            m5
00004B11  02                                       4326+          DC    HL1'2'            cc
00004B12  0D                                       4327+          DC    HL1'13'           cc failed mask
                                                   4328+V2_116    DC    FD'-9999999999999999' \
00004B18  FFDC790D 903F0001                            +                                  binary value for v2 packed decimal
00004B20  FFFFFFFF FFFFFFFF                        4329+V3_116    DC    FD'-1'            binary value for v3 packed decimal
00004B28  E5E2C4D7 40404040                        4330+          DC    CL8'VSDP'         instruction name
00004B30  00000010                                 4331+          DC    A(16)             result length
00004B34  00004B74                                 4332+REA116    DC    A(RE116)          result address
                                                   4333+*                                 INSTRUCTION UNDER TEST ROUTINE
00004B38                                           4334+X116      DS    0F
00004B38  E320 5010 0004                 00004B18  4335+          LG    R2,V2_116         convert v2
00004B3E  E320 8F57 002E                 00001157  4336+          CVDG  R2,V2PACKED
00004B44  E720 8F57 0006                 00001157  4337+          VL    V2,V2PACKED
00004B4A  E320 5018 0004                 00004B20  4338+          LG    R2,V3_116         convert v3
00004B50  E320 8F67 002E                 00001167  4339+          CVDG  R2,V3PACKED
00004B56  E730 8F67 0006                 00001167  4340+          VL    V3,V3PACKED
00004B5C  E612 3038 307E                           4341+          VSDP  V1,V2,V3,131,3    test instruction
00004B62  E710 8F08 000E                 00001108  4342+          VST   V1,V1OUTPUT       save result
00004B68  B98D 0020                                4343+          EPSW  R2,R0             exptract psw
00004B6C  5020 8EE8                      000010E8  4344+          ST    R2,CCPSW              to save CC
00004B70  07FB                                     4345+          BR    R11               return
00004B74                                           4346+RE116     DC    0F
00004B74                                           4347+          DROP  R5
00004B74  00000000 00009999                        4348           DC    XL16'0000000000009999999999999999000F'
00004B7C  99999999 9999000F
                                                   4349
                                                   4350 *                                                  shamt=7
                                                   4351 *                                                  m5=13(P2=1,P3=1)
                                                   4352           VRI_F VSDP,+9999999999999999,-1,135,13,2
00004B88                                           4353+          DS    0FD
00004B88                           00004B88        4354+          USING *,R5              base for test data and test routine
00004B88  00004BB8                                 4355+T117      DC    A(X117)           address of test routine
00004B8C  0075                                     4356+          DC    H'117'            test number
00004B8E  00                                       4357+          DC    X'00'
00004B8F  87                                       4358+          DC    HL1'135'          i4
00004B90  0D                                       4359+          DC    HL1'13'           m5
00004B91  02                                       4360+          DC    HL1'2'            cc
00004B92  0D                                       4361+          DC    HL1'13'           cc failed mask
                                                   4362+V2_117    DC    FD'+9999999999999999' \
00004B98  002386F2 6FC0FFFF                            +                                  binary value for v2 packed decimal
00004BA0  FFFFFFFF FFFFFFFF                        4363+V3_117    DC    FD'-1'            binary value for v3 packed decimal
00004BA8  E5E2C4D7 40404040                        4364+          DC    CL8'VSDP'         instruction name
00004BB0  00000010                                 4365+          DC    A(16)             result length
00004BB4  00004BF4                                 4366+REA117    DC    A(RE117)          result address
                                                   4367+*                                 INSTRUCTION UNDER TEST ROUTINE
00004BB8                                           4368+X117      DS    0F
00004BB8  E320 5010 0004                 00004B98  4369+          LG    R2,V2_117         convert v2
00004BBE  E320 8F57 002E                 00001157  4370+          CVDG  R2,V2PACKED
00004BC4  E720 8F57 0006                 00001157  4371+          VL    V2,V2PACKED
00004BCA  E320 5018 0004                 00004BA0  4372+          LG    R2,V3_117         convert v3
00004BD0  E320 8F67 002E                 00001167  4373+          CVDG  R2,V3PACKED
00004BD6  E730 8F67 0006                 00001167  4374+          VL    V3,V3PACKED
00004BDC  E612 30D8 707E                           4375+          VSDP  V1,V2,V3,135,13   test instruction
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

00004BE2  E710 8F08 000E                 00001108  4376+          VST   V1,V1OUTPUT       save result
00004BE8  B98D 0020                               4377+          EPSW  R2,R0             exptract psw
00004BEC  5020 8EE8                      000010E8 4378+          ST    R2,CCPSW              to save CC
00004BF0  07FB                                    4379+          BR    R11               return
00004BF4                                          4380+RE117     DC    0F
00004BF4                                          4381+          DROP  R5
00004BF4  00000000 99999999                       4382           DC    XL16'0000000099999999999999990000000C'
00004BFC  99999999 0000000C
                                                  4383
                                                  4384 *                                                 shamt=14
                                                  4385           VRI_F VSDP,+9999999999999,+3,142,3,2     m5=3(P1=1)
00004C08                                          4386+          DS    0FD
00004C08                 00004C08                 4387+          USING *,R5              base for test data and test routine
00004C08  00004C38                                4388+T118      DC    A(X118)           address of test routine
00004C0C  0076                                    4389+          DC    H'118'            test number
00004C0E  00                                      4390+          DC    X'00'
00004C0F  8E                                      4391+          DC    HL1'142'          i4
00004C10  03                                      4392+          DC    HL1'3'            m5
00004C11  02                                      4393+          DC    HL1'2'            cc
00004C12  0D                                      4394+          DC    HL1'13'           cc failed mask
                                                  4395+V2_118    DC    FD'+9999999999999' \
00004C18  00000918 4E729FFF                           +                                  binary value for v2 packed decimal
00004C20  00000000 00000003                       4396+V3_118    DC    FD'+3'            binary value for v3 packed decimal
00004C28  E5E2C4D7 40404040                       4397+          DC    CL8'VSDP'         instruction name
00004C30  00000010                                4398+          DC    A(16)             result length
00004C34  00004C74                                4399+REA118    DC    A(RE118)          result address
                                                  4400+*                                  INSTRUCTION UNDER TEST ROUTINE
00004C38                                          4401+X118      DS    0F
00004C38  E320 5010 0004                 00004C18 4402+          LG    R2,V2_118         convert v2
00004C3E  E320 8F57 002E                 00001157 4403+          CVDG  R2,V2PACKED
00004C44  E720 8F57 0006                 00001157 4404+          VL    V2,V2PACKED
00004C4A  E320 5018 0004                 00004C20 4405+          LG    R2,V3_118         convert v3
00004C50  E320 8F67 002E                 00001167 4406+          CVDG  R2,V3PACKED
00004C56  E730 8F67 0006                 00001167 4407+          VL    V3,V3PACKED
00004C5C  E612 3038 E07E                          4408+          VSDP  V1,V2,V3,142,3    test instruction
00004C62  E710 8F08 000E                 00001108 4409+          VST   V1,V1OUTPUT       save result
00004C68  B98D 0020                               4410+          EPSW  R2,R0             exptract psw
00004C6C  5020 8EE8                      000010E8 4411+          ST    R2,CCPSW              to save CC
00004C70  07FB                                    4412+          BR    R11               return
00004C74                                          4413+RE118     DC    0F
00004C74                                          4414+          DROP  R5
00004C74  00003333 33333333                       4415           DC    XL16'00003333333333333000000000000000F'
00004C7C  30000000 0000000F
                                                  4416
                                                  4417 *                                                 shamt=31
                                                  4418 *                                       m5=15(P1=1,P2=1,P3=1)
                                                  4419           VRI_F VSDP,-99999999999999999,-3,159,15,3
00004C88                                          4420+          DS    0FD
00004C88                 00004C88                 4421+          USING *,R5              base for test data and test routine
00004C88  00004CB8                                4422+T119      DC    A(X119)           address of test routine
00004C8C  0077                                    4423+          DC    H'119'            test number
00004C8E  00                                      4424+          DC    X'00'
00004C8F  9F                                      4425+          DC    HL1'159'          i4
00004C90  0F                                      4426+          DC    HL1'15'           m5
00004C91  03                                      4427+          DC    HL1'3'            cc
00004C92  0E                                      4428+          DC    HL1'14'           cc failed mask
```

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  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
                                                   4429+V2_119   DC    FD'-999999999999999999' \
00004C98  F21F494C 589C0001                            +                          binary value for v2 packed decimal
00004CA0  FFFFFFFF FFFFFFFD                        4430+V3_119   DC    FD'-3'              binary value for v3 packed decimal
00004CA8  E5E2C4D7 40404040                        4431+         DC    CL8'VSDP'           instruction name
00004CB0  00000010                                 4432+         DC    A(16)               result length
00004CB4  00004CF4                                 4433+REA119   DC    A(RE119)            result address
                                                   4434+*                                  INSTRUCTION UNDER TEST ROUTINE
00004CB8                                           4435+X119     DS    0F
00004CB8  E320 5010 0004                 00004C98  4436+         LG    R2,V2_119           convert v2
00004CBE  E320 8F57 002E                 00001157  4437+         CVDG  R2,V2PACKED
00004CC4  E720 8F57 0006                 00001157  4438+         VL    V2,V2PACKED
00004CCA  E320 5018 0004                 00004CA0  4439+         LG    R2,V3_119           convert v3
00004CD0  E320 8F67 002E                 00001167  4440+         CVDG  R2,V3PACKED
00004CD6  E730 8F67 0006                 00001167  4441+         VL    V3,V3PACKED
00004CDC  E612 30F9 F07E                           4442+         VSDP  V1,V2,V3,159,15     test instruction
00004CE2  E710 8F08 000E                 00001108  4443+         VST   V1,V1OUTPUT         save result
00004CE8  B98D 0020                                4444+         EPSW  R2,R0               exptract psw
00004CEC  5020 8EE8                      000010E8  4445+         ST    R2,CCPSW                to save CC
00004CF0  07FB                                     4446+         BR    R11                 return
00004CF4                                           4447+RE119    DC    0F
00004CF4                                           4448+         DROP  R5
00004CF4  00000000 00000000                        4449          DC    XL16'0000000000000000000000000000000F'
00004CFC  00000000 0000000F
                                                   4450
                                                   4451
00004D04  00000000                                 4452          DC    F'0'     END OF TABLE
00004D08  00000000                                 4453          DC    F'0'
                                                   4454 *
                                                   4455 * table of pointers to individual load test
                                                   4456 *
00004D0C                                           4457 E6TESTS  DS    0F
                                                   4458          PTTABLE
00004D0C                                           4459+TTABLE   DS    0F
00004D0C  00001188                                 4460+         DC    A(T1)               address of test
00004D10  00001208                                 4461+         DC    A(T2)               address of test
00004D14  00001288                                 4462+         DC    A(T3)               address of test
00004D18  00001308                                 4463+         DC    A(T4)               address of test
00004D1C  00001388                                 4464+         DC    A(T5)               address of test
00004D20  00001408                                 4465+         DC    A(T6)               address of test
00004D24  00001488                                 4466+         DC    A(T7)               address of test
00004D28  00001508                                 4467+         DC    A(T8)               address of test
00004D2C  00001588                                 4468+         DC    A(T9)               address of test
00004D30  00001608                                 4469+         DC    A(T10)              address of test
00004D34  00001688                                 4470+         DC    A(T11)              address of test
00004D38  00001708                                 4471+         DC    A(T12)              address of test
00004D3C  00001788                                 4472+         DC    A(T13)              address of test
00004D40  00001808                                 4473+         DC    A(T14)              address of test
00004D44  00001888                                 4474+         DC    A(T15)              address of test
00004D48  00001908                                 4475+         DC    A(T16)              address of test
00004D4C  00001988                                 4476+         DC    A(T17)              address of test
00004D50  00001A08                                 4477+         DC    A(T18)              address of test
00004D54  00001A88                                 4478+         DC    A(T19)              address of test
00004D58  00001B08                                 4479+         DC    A(T20)              address of test
00004D5C  00001B88                                 4480+         DC    A(T21)              address of test
00004D60  00001C08                                 4481+         DC    A(T22)              address of test
00004D64  00001C88                                 4482+         DC    A(T23)              address of test
```

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  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
00004D68  00001D08                                4483+         DC    A(T24)            address of test
00004D6C  00001D88                                4484+         DC    A(T25)            address of test
00004D70  00001E08                                4485+         DC    A(T26)            address of test
00004D74  00001E88                                4486+         DC    A(T27)            address of test
00004D78  00001F08                                4487+         DC    A(T28)            address of test
00004D7C  00001F88                                4488+         DC    A(T29)            address of test
00004D80  00002008                                4489+         DC    A(T30)            address of test
00004D84  00002088                                4490+         DC    A(T31)            address of test
00004D88  00002108                                4491+         DC    A(T32)            address of test
00004D8C  00002188                                4492+         DC    A(T33)            address of test
00004D90  00002208                                4493+         DC    A(T34)            address of test
00004D94  00002288                                4494+         DC    A(T35)            address of test
00004D98  00002308                                4495+         DC    A(T36)            address of test
00004D9C  00002388                                4496+         DC    A(T37)            address of test
00004DA0  00002408                                4497+         DC    A(T38)            address of test
00004DA4  00002488                                4498+         DC    A(T39)            address of test
00004DA8  00002508                                4499+         DC    A(T40)            address of test
00004DAC  00002588                                4500+         DC    A(T41)            address of test
00004DB0  00002608                                4501+         DC    A(T42)            address of test
00004DB4  00002688                                4502+         DC    A(T43)            address of test
00004DB8  00002708                                4503+         DC    A(T44)            address of test
00004DBC  00002788                                4504+         DC    A(T45)            address of test
00004DC0  00002808                                4505+         DC    A(T46)            address of test
00004DC4  00002888                                4506+         DC    A(T47)            address of test
00004DC8  00002908                                4507+         DC    A(T48)            address of test
00004DCC  00002988                                4508+         DC    A(T49)            address of test
00004DD0  00002A08                                4509+         DC    A(T50)            address of test
00004DD4  00002A88                                4510+         DC    A(T51)            address of test
00004DD8  00002B08                                4511+         DC    A(T52)            address of test
00004DDC  00002B88                                4512+         DC    A(T53)            address of test
00004DE0  00002C08                                4513+         DC    A(T54)            address of test
00004DE4  00002C88                                4514+         DC    A(T55)            address of test
00004DE8  00002D08                                4515+         DC    A(T56)            address of test
00004DEC  00002D88                                4516+         DC    A(T57)            address of test
00004DF0  00002E08                                4517+         DC    A(T58)            address of test
00004DF4  00002E88                                4518+         DC    A(T59)            address of test
00004DF8  00002F08                                4519+         DC    A(T60)            address of test
00004DFC  00002F88                                4520+         DC    A(T61)            address of test
00004E00  00003008                                4521+         DC    A(T62)            address of test
00004E04  00003088                                4522+         DC    A(T63)            address of test
00004E08  00003108                                4523+         DC    A(T64)            address of test
00004E0C  00003188                                4524+         DC    A(T65)            address of test
00004E10  00003208                                4525+         DC    A(T66)            address of test
00004E14  00003288                                4526+         DC    A(T67)            address of test
00004E18  00003308                                4527+         DC    A(T68)            address of test
00004E1C  00003388                                4528+         DC    A(T69)            address of test
00004E20  00003408                                4529+         DC    A(T70)            address of test
00004E24  00003488                                4530+         DC    A(T71)            address of test
00004E28  00003508                                4531+         DC    A(T72)            address of test
00004E2C  00003588                                4532+         DC    A(T73)            address of test
00004E30  00003608                                4533+         DC    A(T74)            address of test
00004E34  00003688                                4534+         DC    A(T75)            address of test
00004E38  00003708                                4535+         DC    A(T76)            address of test
00004E3C  00003788                                4536+         DC    A(T77)            address of test
00004E40  00003808                                4537+         DC    A(T78)            address of test
00004E44  00003888                                4538+         DC    A(T79)            address of test
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  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

00004E48  00003908                                4539+          DC    A(T80)             address of test
00004E4C  00003988                                4540+          DC    A(T81)             address of test
00004E50  00003A08                                4541+          DC    A(T82)             address of test
00004E54  00003A88                                4542+          DC    A(T83)             address of test
00004E58  00003B08                                4543+          DC    A(T84)             address of test
00004E5C  00003B88                                4544+          DC    A(T85)             address of test
00004E60  00003C08                                4545+          DC    A(T86)             address of test
00004E64  00003C88                                4546+          DC    A(T87)             address of test
00004E68  00003D08                                4547+          DC    A(T88)             address of test
00004E6C  00003D88                                4548+          DC    A(T89)             address of test
00004E70  00003E08                                4549+          DC    A(T90)             address of test
00004E74  00003E88                                4550+          DC    A(T91)             address of test
00004E78  00003F08                                4551+          DC    A(T92)             address of test
00004E7C  00003F88                                4552+          DC    A(T93)             address of test
00004E80  00004008                                4553+          DC    A(T94)             address of test
00004E84  00004088                                4554+          DC    A(T95)             address of test
00004E88  00004108                                4555+          DC    A(T96)             address of test
00004E8C  00004188                                4556+          DC    A(T97)             address of test
00004E90  00004208                                4557+          DC    A(T98)             address of test
00004E94  00004288                                4558+          DC    A(T99)             address of test
00004E98  00004308                                4559+          DC    A(T100)            address of test
00004E9C  00004388                                4560+          DC    A(T101)            address of test
00004EA0  00004408                                4561+          DC    A(T102)            address of test
00004EA4  00004488                                4562+          DC    A(T103)            address of test
00004EA8  00004508                                4563+          DC    A(T104)            address of test
00004EAC  00004588                                4564+          DC    A(T105)            address of test
00004EB0  00004608                                4565+          DC    A(T106)            address of test
00004EB4  00004688                                4566+          DC    A(T107)            address of test
00004EB8  00004708                                4567+          DC    A(T108)            address of test
00004EBC  00004788                                4568+          DC    A(T109)            address of test
00004EC0  00004808                                4569+          DC    A(T110)            address of test
00004EC4  00004888                                4570+          DC    A(T111)            address of test
00004EC8  00004908                                4571+          DC    A(T112)            address of test
00004ECC  00004988                                4572+          DC    A(T113)            address of test
00004ED0  00004A08                                4573+          DC    A(T114)            address of test
00004ED4  00004A88                                4574+          DC    A(T115)            address of test
00004ED8  00004B08                                4575+          DC    A(T116)            address of test
00004EDC  00004B88                                4576+          DC    A(T117)            address of test
00004EE0  00004C08                                4577+          DC    A(T118)            address of test
00004EE4  00004C88                                4578+          DC    A(T119)            address of test
                                                  4579+*
00004EE8  00000000                                4580+          DC    A(0)               END OF TABLE
00004EEC  00000000                                4581+          DC    A(0)
                                                  4582
00004EF0  00000000                                4583           DC    F'0'     END OF TABLE
00004EF4  00000000                                4584           DC    F'0'
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  LOC         OBJECT CODE       ADDR1     ADDR2    STMT
                                                    4586 ********************************************************************************
                                                    4587 *        Register equates
                                                    4588 ********************************************************************************


                                00000000  00000001  4590 R0       EQU   0
                                00000001  00000001  4591 R1       EQU   1
                                00000002  00000001  4592 R2       EQU   2
                                00000003  00000001  4593 R3       EQU   3
                                00000004  00000001  4594 R4       EQU   4
                                00000005  00000001  4595 R5       EQU   5
                                00000006  00000001  4596 R6       EQU   6
                                00000007  00000001  4597 R7       EQU   7
                                00000008  00000001  4598 R8       EQU   8
                                00000009  00000001  4599 R9       EQU   9
                                0000000A  00000001  4600 R10      EQU   10
                                0000000B  00000001  4601 R11      EQU   11
                                0000000C  00000001  4602 R12      EQU   12
                                0000000D  00000001  4603 R13      EQU   13
                                0000000E  00000001  4604 R14      EQU   14
                                0000000F  00000001  4605 R15      EQU   15


                                                    4607 ********************************************************************************
                                                    4608 *        Register equates
                                                    4609 ********************************************************************************


                              00000000  00000001  4611 V0       EQU   0
                              00000001  00000001  4612 V1       EQU   1
                              00000002  00000001  4613 V2       EQU   2
                              00000003  00000001  4614 V3       EQU   3
                              00000004  00000001  4615 V4       EQU   4
                              00000005  00000001  4616 V5       EQU   5
                              00000006  00000001  4617 V6       EQU   6
                              00000007  00000001  4618 V7       EQU   7
                              00000008  00000001  4619 V8       EQU   8
                              00000009  00000001  4620 V9       EQU   9
                              0000000A  00000001  4621 V10      EQU   10
                              0000000B  00000001  4622 V11      EQU   11
                              0000000C  00000001  4623 V12      EQU   12
                              0000000D  00000001  4624 V13      EQU   13
                              0000000E  00000001  4625 V14      EQU   14
                              0000000F  00000001  4626 V15      EQU   15
                              00000010  00000001  4627 V16      EQU   16
                              00000011  00000001  4628 V17      EQU   17
                              00000012  00000001  4629 V18      EQU   18
                              00000013  00000001  4630 V19      EQU   19
                              00000014  00000001  4631 V20      EQU   20
                              00000015  00000001  4632 V21      EQU   21
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  LOC         OBJECT CODE        ADDR1     ADDR2     STMT
                                                     4633 V22       EQU   22
                                 00000016  00000001  4634 V23       EQU   23
                                 00000017  00000001  4635 V24       EQU   24
                                 00000018  00000001  4636 V25       EQU   25
                                 00000019  00000001  4637 V26       EQU   26
                                 0000001A  00000001  4638 V27       EQU   27
                                 0000001B  00000001  4639 V28       EQU   28
                                 0000001C  00000001  4640 V29       EQU   29
                                 0000001D  00000001  4641 V30       EQU   30
                                 0000001E  00000001  4642 V31       EQU   31
                                 0000001F  00000001  4643
                                                     4644           END
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| SYMBOL | TYPE | VALUE | LENGTH | DEFN | REFERENCES |
|---|---|---|---|---|---|
| BEGIN | I | 00000200 | 2 | 104 | 70 101 102 |
| CC | U | 00000009 | 1 | 440 | 182 |
| CCFOUND | X | 000010F0 | 1 | 413 | 169 189 |
| CCMASK | U | 0000000A | 1 | 441 | 141 |
| CCMSG | U | 00000276 | 1 | 158 | 153 |
| CCPRTEXP | C | 00001097 | 1 | 393 | 186 |
| CCPRTGOT | C | 000010A7 | 1 | 396 | 193 |
| CCPRTLINE | C | 00001054 | 16 | 388 | 398 196 |
| CCPRTLNG | U | 00000055 | 1 | 398 | 195 |
| CCPRTNAME | C | 00001081 | 8 | 391 | 179 |
| CCPRTNUM | C | 00001064 | 3 | 389 | 177 |
| CCPSW | F | 000010E8 | 4 | 412 | 166 588 620 652 684 716 748 781 813 845 879 911 943 979 1011 1043 1075 1107 1139 1171 1204 1236 1268 1300 1334 1366 1398 1430 1466 1498 1530 1562 1594 1626 1658 1691 1723 1755 1787 1819 1853 1886 1918 1950 1983 2019 2051 2083 2115 2147 2179 2211 2244 2276 2308 2340 2372 2404 2438 2470 2502 2535 2567 2600 2636 2668 2700 2732 2764 2796 2828 2861 2893 2925 2957 2989 3021 3055 3087 3119 3152 3184 3216 3259 3291 3323 3355 3387 3419 3451 3484 3517 3549 3581 3613 3648 3682 3715 3749 3783 3826 3858 3890 3922 3954 3986 4018 4050 4083 4115 4147 4179 4211 4243 4278 4311 4344 4378 4411 4445 |
| CTLR0 | F | 000004AC | 4 | 332 | 114 115 116 117 |
| DECNUM | C | 000010D5 | 16 | 408 | 174 176 183 185 190 192 208 210 217 219 224 226 |
| E6TADR | A | 000004B4 | 4 | 335 | 123 |
| E6TEST | 4 | 00000000 | 48 | 434 | 132 |
| E6TESTS | F | 00004D0C | 4 | 4457 | 335 |
| EDIT | X | 000010A9 | 18 | 403 | 175 184 191 209 218 225 |
| ENDTEST | U | 0000037E | 1 | 246 | 128 |
| EOJ | I | 00000490 | 4 | 322 | 249 |
| EOJPSW | D | 00000480 | 8 | 320 | 322 |
| FAILCONT | U | 0000036E | 1 | 236 | 199 |
| FAILED | F | 00001000 | 4 | 361 | 238 247 |
| FAILMSG | U | 00000306 | 1 | 206 | 148 |
| FAILPSW | D | 00000498 | 8 | 324 | 326 |
| FAILTEST | I | 000004A8 | 4 | 326 | 250 |
| I4 | U | 00000007 | 1 | 438 | 216 |
| IMAGE | 1 | 00000000 | 20216 | 0 | |
| K | U | 00000400 | 1 | 345 | 346 347 348 |
| K64 | U | 00010000 | 1 | 347 | |
| M5 | U | 00000008 | 1 | 439 | 160 223 |
| MB | U | 00100000 | 1 | 348 | |
| MSG | I | 000003C8 | 4 | 282 | 265 |
| MSGCMD | C | 00000416 | 9 | 312 | 295 296 |
| MSGMSG | C | 0000041F | 95 | 313 | 289 310 287 |
| MSGMVC | I | 00000410 | 6 | 310 | 293 |
| MSGOK | I | 000003DE | 2 | 291 | 288 |
| MSGRET | I | 000003FE | 4 | 306 | 299 302 |
| MSGSAVE | F | 00000404 | 4 | 309 | 285 306 |
| NEXTE6 | U | 0000022A | 1 | 125 | 151 241 |
| OPNAME | C | 00000020 | 8 | 446 | 179 213 |
| PAGE | U | 00001000 | 1 | 346 | |
| PRT3 | C | 000010BF | 18 | 406 | 175 176 177 184 185 186 191 192 193 209 210 211 218 219 220 225 226 227 |
| PRTI4 | C | 00001044 | 3 | 375 | 220 |
| PRTLINE | C | 00001008 | 16 | 370 | 380 230 |
| PRTLNG | U | 0000004C | 1 | 380 | 229 |

| SYMBOL | TYPE | VALUE | LENGTH | DEFN | REFERENCES |
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| PRTM5 | C | 00001051 | 2 | 378 | 227 |
| PRTNAME | C | 00001033 | 8 | 373 | 213 |
| PRTNUM | C | 00001018 | 3 | 371 | 211 |
| R0 | U | 00000000 | 1 | 4590 | 64 114 117 130 134 135 195 229 237 238 264 266 282 285 287 289 291 306 587 619 651 683 715 747 780 812 844 878 910 942 978 1010 1042 1074 1106 1138 1170 1203 1235 1267 1299 1333 1365 1397 1429 1465 1497 1529 1561 1593 1625 1657 1690 1722 1754 1786 1818 1852 1885 1917 1949 1982 2018 2050 2082 2114 2146 2178 2210 2243 2275 2307 2339 2371 2403 2437 2469 2501 2534 2566 2599 2635 2667 2699 2731 2763 2795 2827 2860 2892 2924 2956 2988 3020 3054 3086 3118 3151 3183 3215 3258 3290 3322 3354 3386 3418 3450 3483 3516 3548 3580 3612 3647 3681 3714 3748 3782 3825 3857 3889 3921 3953 3985 4017 4049 4082 4114 4146 4178 4210 4242 4277 4310 4343 4377 4410 4444 |
| R1 | U | 00000001 | 1 | 4591 | 141 142 143 146 147 159 160 161 166 167 168 169 196 230 247 248 296 310 |
| R10 | U | 0000000A | 1 | 4600 | 111 112 |
| R11 | U | 0000000B | 1 | 4601 | 138 139 589 621 653 685 717 749 782 814 846 880 912 944 980 1012 1044 1076 1108 1140 1172 1205 1237 1269 1301 1335 1367 1399 1431 1467 1499 1531 1563 1595 1627 1659 1692 1724 1756 1788 1820 1854 1887 1919 1951 1984 2020 2052 2084 2116 2148 2180 2212 2245 2277 2309 2341 2373 2405 2439 2471 2503 2536 2568 2601 2637 2669 2701 2733 2765 2797 2829 2862 2894 2926 2958 2990 3022 3056 3088 3120 3153 3185 3217 3260 3292 3324 3356 3388 3420 3452 3485 3518 3550 3582 3614 3649 3683 3716 3750 3784 3827 3859 3891 3923 3955 3987 4019 4051 4084 4116 4148 4180 4212 4244 4279 4312 4345 4379 4412 4446 |
| R12 | U | 0000000C | 1 | 4602 | 123 126 150 240 |
| R13 | U | 0000000D | 1 | 4603 | |
| R14 | U | 0000000E | 1 | 4604 | |
| R15 | U | 0000000F | 1 | 4605 | 197 231 259 269 270 |
| R2 | U | 00000002 | 1 | 4592 | 173 174 181 182 183 188 189 190 207 208 215 216 217 222 223 224 264 265 266 283 285 291 292 293 295 301 306 307 579 580 582 583 587 588 611 612 614 615 619 620 643 644 646 647 651 652 675 676 678 679 683 684 707 708 710 711 715 716 739 740 742 743 747 748 772 773 775 776 780 781 804 805 807 808 812 813 836 837 839 840 844 845 870 871 873 874 878 879 902 903 905 906 910 911 934 935 937 938 942 943 970 971 973 974 978 979 1002 1003 1005 1006 1010 1011 1034 1035 1037 1038 1042 1043 1066 1067 1069 1070 1074 1075 1098 1099 1101 1102 1106 1107 1130 1131 1133 1134 1138 1139 1162 1163 1165 1166 1170 1171 1195 1196 1198 1199 1203 1204 1227 1228 1230 1231 1235 1236 1259 1260 1262 1263 1267 1268 1291 1292 1294 1295 1299 1300 1325 1326 1328 1329 1333 1334 1357 1358 1360 1361 1365 1366 1389 1390 1392 1393 1397 1398 1421 1422 1424 1425 1429 1430 1457 1458 1460 1461 1465 1466 1489 1490 1492 1493 1497 1498 1521 1522 1524 1525 1529 1530 1553 1554 1556 1557 1561 1562 1585 1586 1588 1589 1593 1594 1617 1618 1620 1621 1625 1626 1649 1650 1652 1653 1657 1658 1682 1683 1685 1686 1690 1691 1714 1715 1717 1718 1722 1723 1746 1747 1749 1750 1754 1755 1778 1779 1781 1782 1786 1787 1810 1811 1813 1814 1818 1819 1844 1845 1847 1848 1852 1853 1877 1878 1880 1881 1885 1886 1909 1910 1912 1913 1917 1918 1941 1942 1944 1945 1949 1950 1974 1975 1977 1978 1982 1983 2010 2011 2013 2014 2018 2019 2042 2043 2045 2046 2050 2051 2074 2075 2077 2078 2082 2083 2106 2107 2109 2110 2114 2115 2138 2139 2141 2142 2146 2147 2170 2171 2173 |

| SYMBOL | TYPE | VALUE | LENGTH | DEFN | REFERENCES |
|---|---|---|---|---|---|
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| | | | | | 2243 2244 2267 2268 2270 2271 2275 2276 2299 2300 2302 2303 2307 |
| | | | | | 2308 2331 2332 2334 2335 2339 2340 2363 2364 2366 2367 2371 2372 |
| | | | | | 2395 2396 2398 2399 2403 2404 2429 2430 2432 2433 2437 2438 2461 |
| | | | | | 2462 2464 2465 2469 2470 2493 2494 2496 2497 2501 2502 2526 2527 |
| | | | | | 2529 2530 2534 2535 2558 2559 2561 2562 2566 2567 2591 2592 2594 |
| | | | | | 2595 2599 2600 2627 2628 2630 2631 2635 2636 2659 2660 2662 2663 |
| | | | | | 2667 2668 2691 2692 2694 2695 2699 2700 2723 2724 2726 2727 2731 |
| | | | | | 2732 2755 2756 2758 2759 2763 2764 2787 2788 2790 2791 2795 2796 |
| | | | | | 2819 2820 2822 2823 2827 2828 2852 2853 2855 2856 2860 2861 2884 |
| | | | | | 2885 2887 2888 2892 2893 2916 2917 2919 2920 2924 2925 2948 2949 |
| | | | | | 2951 2952 2956 2957 2980 2981 2983 2984 2988 2989 3012 3013 3015 |
| | | | | | 3016 3020 3021 3046 3047 3049 3050 3054 3055 3078 3079 3081 3082 |
| | | | | | 3086 3087 3110 3111 3113 3114 3118 3119 3143 3144 3146 3147 3151 |
| | | | | | 3152 3175 3176 3178 3179 3183 3184 3207 3208 3210 3211 3215 3216 |
| | | | | | 3250 3251 3253 3254 3258 3259 3282 3283 3285 3286 3290 3291 3314 |
| | | | | | 3315 3317 3318 3322 3323 3346 3347 3349 3350 3354 3355 3378 3379 |
| | | | | | 3381 3382 3386 3387 3410 3411 3413 3414 3418 3419 3442 3443 3445 |
| | | | | | 3446 3450 3451 3475 3476 3478 3479 3483 3484 3508 3509 3511 3512 |
| | | | | | 3516 3517 3540 3541 3543 3544 3548 3549 3572 3573 3575 3576 3580 |
| | | | | | 3581 3604 3605 3607 3608 3612 3613 3639 3640 3642 3643 3647 3648 |
| | | | | | 3673 3674 3676 3677 3681 3682 3706 3707 3709 3710 3714 3715 3740 |
| | | | | | 3741 3743 3744 3748 3749 3774 3775 3777 3778 3782 3783 3817 3818 |
| | | | | | 3820 3821 3825 3826 3849 3850 3852 3853 3857 3858 3881 3882 3884 |
| | | | | | 3885 3889 3890 3913 3914 3916 3917 3921 3922 3945 3946 3948 3949 |
| | | | | | 3953 3954 3977 3978 3980 3981 3985 3986 4009 4010 4012 4013 4017 |
| | | | | | 4018 4041 4042 4044 4045 4049 4050 4074 4075 4077 4078 4082 4083 |
| | | | | | 4106 4107 4109 4110 4114 4115 4138 4139 4141 4142 4146 4147 4170 |
| | | | | | 4171 4173 4174 4178 4179 4202 4203 4205 4206 4210 4211 4234 4235 |
| | | | | | 4237 4238 4242 4243 4269 4270 4272 4273 4277 4278 4302 4303 4305 |
| | | | | | 4306 4310 4311 4335 4336 4338 4339 4343 4344 4369 4370 4372 4373 |
| | | | | | 4377 4378 4402 4403 4405 4406 4410 4411 4436 4437 4439 4440 4444 |
| | | | | | 4445 |
| R3 | U | 00000003 | 1 | 4593 | |
| R4 | U | 00000004 | 1 | 4594 | |
| R5 | U | 00000005 | 1 | 4595 | 126 127 132 260 268 564 591 596 623 628 655 660 687 |
| | | | | | 692 719 724 751 757 784 789 816 821 848 855 882 887 |
| | | | | | 914 919 946 955 982 987 1014 1019 1046 1051 1078 1083 1110 |
| | | | | | 1115 1142 1147 1174 1180 1207 1212 1239 1244 1271 1276 1303 1310 |
| | | | | | 1337 1342 1369 1374 1401 1406 1433 1442 1469 1474 1501 1506 1533 |
| | | | | | 1538 1565 1570 1597 1602 1629 1634 1661 1667 1694 1699 1726 1731 |
| | | | | | 1758 1763 1790 1795 1822 1829 1856 1862 1889 1894 1921 1926 1953 |
| | | | | | 1959 1986 1995 2022 2027 2054 2059 2086 2091 2118 2123 2150 2155 |
| | | | | | 2182 2187 2214 2220 2247 2252 2279 2284 2311 2316 2343 2348 2375 |
| | | | | | 2380 2407 2414 2441 2446 2473 2478 2505 2511 2538 2543 2570 2576 |
| | | | | | 2603 2612 2639 2644 2671 2676 2703 2708 2735 2740 2767 2772 2799 |
| | | | | | 2804 2831 2837 2864 2869 2896 2901 2928 2933 2960 2965 2992 2997 |
| | | | | | 3024 3031 3058 3063 3090 3095 3122 3128 3155 3160 3187 3192 3219 |
| | | | | | 3235 3262 3267 3294 3299 3326 3331 3358 3363 3390 3395 3422 3427 |
| | | | | | 3454 3460 3487 3493 3520 3525 3552 3557 3584 3589 3616 3624 3651 |
| | | | | | 3658 3685 3691 3718 3725 3752 3759 3786 3802 3829 3834 3861 3866 |
| | | | | | 3893 3898 3925 3930 3957 3962 3989 3994 4021 4026 4053 4059 4086 |
| | | | | | 4091 4118 4123 4150 4155 4182 4187 4214 4219 4246 4254 4281 4287 |
| | | | | | 4314 4320 4347 4354 4381 4387 4414 4421 4448 |
| R6 | U | 00000006 | 1 | 4596 | |
| R7 | U | 00000007 | 1 | 4597 | |

| SYMBOL | TYPE | VALUE | LENGTH | DEFN | REFERENCES |
|---|---|---|---|---|---|
| R8 | U | 00000008 | 1 | 4598 | 101 104 105 106 108 |
| R9 | U | 00000009 | 1 | 4599 | 102 108 109 111 |
| RE1 | F | 000011F4 | 4 | 590 | 576 |
| RE10 | F | 00001674 | 4 | 881 | 867 |
| RE100 | F | 00004374 | 4 | 3828 | 3814 |
| RE101 | F | 000043F4 | 4 | 3860 | 3846 |
| RE102 | F | 00004474 | 4 | 3892 | 3878 |
| RE103 | F | 000044F4 | 4 | 3924 | 3910 |
| RE104 | F | 00004574 | 4 | 3956 | 3942 |
| RE105 | F | 000045F4 | 4 | 3988 | 3974 |
| RE106 | F | 00004674 | 4 | 4020 | 4006 |
| RE107 | F | 000046F4 | 4 | 4052 | 4038 |
| RE108 | F | 00004774 | 4 | 4085 | 4071 |
| RE109 | F | 000047F4 | 4 | 4117 | 4103 |
| RE11 | F | 000016F4 | 4 | 913 | 899 |
| RE110 | F | 00004874 | 4 | 4149 | 4135 |
| RE111 | F | 000048F4 | 4 | 4181 | 4167 |
| RE112 | F | 00004974 | 4 | 4213 | 4199 |
| RE113 | F | 000049F4 | 4 | 4245 | 4231 |
| RE114 | F | 00004A74 | 4 | 4280 | 4266 |
| RE115 | F | 00004AF4 | 4 | 4313 | 4299 |
| RE116 | F | 00004B74 | 4 | 4346 | 4332 |
| RE117 | F | 00004BF4 | 4 | 4380 | 4366 |
| RE118 | F | 00004C74 | 4 | 4413 | 4399 |
| RE119 | F | 00004CF4 | 4 | 4447 | 4433 |
| RE12 | F | 00001774 | 4 | 945 | 931 |
| RE13 | F | 000017F4 | 4 | 981 | 967 |
| RE14 | F | 00001874 | 4 | 1013 | 999 |
| RE15 | F | 000018F4 | 4 | 1045 | 1031 |
| RE16 | F | 00001974 | 4 | 1077 | 1063 |
| RE17 | F | 000019F4 | 4 | 1109 | 1095 |
| RE18 | F | 00001A74 | 4 | 1141 | 1127 |
| RE19 | F | 00001AF4 | 4 | 1173 | 1159 |
| RE2 | F | 00001274 | 4 | 622 | 608 |
| RE20 | F | 00001B74 | 4 | 1206 | 1192 |
| RE21 | F | 00001BF4 | 4 | 1238 | 1224 |
| RE22 | F | 00001C74 | 4 | 1270 | 1256 |
| RE23 | F | 00001CF4 | 4 | 1302 | 1288 |
| RE24 | F | 00001D74 | 4 | 1336 | 1322 |
| RE25 | F | 00001DF4 | 4 | 1368 | 1354 |
| RE26 | F | 00001E74 | 4 | 1400 | 1386 |
| RE27 | F | 00001EF4 | 4 | 1432 | 1418 |
| RE28 | F | 00001F74 | 4 | 1468 | 1454 |
| RE29 | F | 00001FF4 | 4 | 1500 | 1486 |
| RE3 | F | 000012F4 | 4 | 654 | 640 |
| RE30 | F | 00002074 | 4 | 1532 | 1518 |
| RE31 | F | 000020F4 | 4 | 1564 | 1550 |
| RE32 | F | 00002174 | 4 | 1596 | 1582 |
| RE33 | F | 000021F4 | 4 | 1628 | 1614 |
| RE34 | F | 00002274 | 4 | 1660 | 1646 |
| RE35 | F | 000022F4 | 4 | 1693 | 1679 |
| RE36 | F | 00002374 | 4 | 1725 | 1711 |
| RE37 | F | 000023F4 | 4 | 1757 | 1743 |
| RE38 | F | 00002474 | 4 | 1789 | 1775 |
| RE39 | F | 000024F4 | 4 | 1821 | 1807 |
| RE4 | F | 00001374 | 4 | 686 | 672 |

| SYMBOL | TYPE | VALUE | LENGTH | DEFN | REFERENCES |
|---|---|---|---|---|---|
| RE40 | F | 00002574 | 4 | 1855 | 1841 |
| RE41 | F | 000025F4 | 4 | 1888 | 1874 |
| RE42 | F | 00002674 | 4 | 1920 | 1906 |
| RE43 | F | 000026F4 | 4 | 1952 | 1938 |
| RE44 | F | 00002774 | 4 | 1985 | 1971 |
| RE45 | F | 000027F4 | 4 | 2021 | 2007 |
| RE46 | F | 00002874 | 4 | 2053 | 2039 |
| RE47 | F | 000028F4 | 4 | 2085 | 2071 |
| RE48 | F | 00002974 | 4 | 2117 | 2103 |
| RE49 | F | 000029F4 | 4 | 2149 | 2135 |
| RE5 | F | 000013F4 | 4 | 718 | 704 |
| RE50 | F | 00002A74 | 4 | 2181 | 2167 |
| RE51 | F | 00002AF4 | 4 | 2213 | 2199 |
| RE52 | F | 00002B74 | 4 | 2246 | 2232 |
| RE53 | F | 00002BF4 | 4 | 2278 | 2264 |
| RE54 | F | 00002C74 | 4 | 2310 | 2296 |
| RE55 | F | 00002CF4 | 4 | 2342 | 2328 |
| RE56 | F | 00002D74 | 4 | 2374 | 2360 |
| RE57 | F | 00002DF4 | 4 | 2406 | 2392 |
| RE58 | F | 00002E74 | 4 | 2440 | 2426 |
| RE59 | F | 00002EF4 | 4 | 2472 | 2458 |
| RE6 | F | 00001474 | 4 | 750 | 736 |
| RE60 | F | 00002F74 | 4 | 2504 | 2490 |
| RE61 | F | 00002FF4 | 4 | 2537 | 2523 |
| RE62 | F | 00003074 | 4 | 2569 | 2555 |
| RE63 | F | 000030F4 | 4 | 2602 | 2588 |
| RE64 | F | 00003174 | 4 | 2638 | 2624 |
| RE65 | F | 000031F4 | 4 | 2670 | 2656 |
| RE66 | F | 00003274 | 4 | 2702 | 2688 |
| RE67 | F | 000032F4 | 4 | 2734 | 2720 |
| RE68 | F | 00003374 | 4 | 2766 | 2752 |
| RE69 | F | 000033F4 | 4 | 2798 | 2784 |
| RE7 | F | 000014F4 | 4 | 783 | 769 |
| RE70 | F | 00003474 | 4 | 2830 | 2816 |
| RE71 | F | 000034F4 | 4 | 2863 | 2849 |
| RE72 | F | 00003574 | 4 | 2895 | 2881 |
| RE73 | F | 000035F4 | 4 | 2927 | 2913 |
| RE74 | F | 00003674 | 4 | 2959 | 2945 |
| RE75 | F | 000036F4 | 4 | 2991 | 2977 |
| RE76 | F | 00003774 | 4 | 3023 | 3009 |
| RE77 | F | 000037F4 | 4 | 3057 | 3043 |
| RE78 | F | 00003874 | 4 | 3089 | 3075 |
| RE79 | F | 000038F4 | 4 | 3121 | 3107 |
| RE8 | F | 00001574 | 4 | 815 | 801 |
| RE80 | F | 00003974 | 4 | 3154 | 3140 |
| RE81 | F | 000039F4 | 4 | 3186 | 3172 |
| RE82 | F | 00003A74 | 4 | 3218 | 3204 |
| RE83 | F | 00003AF4 | 4 | 3261 | 3247 |
| RE84 | F | 00003B74 | 4 | 3293 | 3279 |
| RE85 | F | 00003BF4 | 4 | 3325 | 3311 |
| RE86 | F | 00003C74 | 4 | 3357 | 3343 |
| RE87 | F | 00003CF4 | 4 | 3389 | 3375 |
| RE88 | F | 00003D74 | 4 | 3421 | 3407 |
| RE89 | F | 00003DF4 | 4 | 3453 | 3439 |
| RE9 | F | 000015F4 | 4 | 847 | 833 |
| RE90 | F | 00003E74 | 4 | 3486 | 3472 |

| SYMBOL | TYPE | VALUE | LENGTH | DEFN | REFERENCES |
|---|---|---|---|---|---|
| RE91 | F | 00003EF4 | 4 | 3519 | 3505 |
| RE92 | F | 00003F74 | 4 | 3551 | 3537 |
| RE93 | F | 00003FF4 | 4 | 3583 | 3569 |
| RE94 | F | 00004074 | 4 | 3615 | 3601 |
| RE95 | F | 000040F4 | 4 | 3650 | 3636 |
| RE96 | F | 00004174 | 4 | 3684 | 3670 |
| RE97 | F | 000041F4 | 4 | 3717 | 3703 |
| RE98 | F | 00004274 | 4 | 3751 | 3737 |
| RE99 | F | 000042F4 | 4 | 3785 | 3771 |
| REA1 | A | 000011B4 | 4 | 576 | |
| REA10 | A | 00001634 | 4 | 867 | |
| REA100 | A | 00004334 | 4 | 3814 | |
| REA101 | A | 000043B4 | 4 | 3846 | |
| REA102 | A | 00004434 | 4 | 3878 | |
| REA103 | A | 000044B4 | 4 | 3910 | |
| REA104 | A | 00004534 | 4 | 3942 | |
| REA105 | A | 000045B4 | 4 | 3974 | |
| REA106 | A | 00004634 | 4 | 4006 | |
| REA107 | A | 000046B4 | 4 | 4038 | |
| REA108 | A | 00004734 | 4 | 4071 | |
| REA109 | A | 000047B4 | 4 | 4103 | |
| REA11 | A | 000016B4 | 4 | 899 | |
| REA110 | A | 00004834 | 4 | 4135 | |
| REA111 | A | 000048B4 | 4 | 4167 | |
| REA112 | A | 00004934 | 4 | 4199 | |
| REA113 | A | 000049B4 | 4 | 4231 | |
| REA114 | A | 00004A34 | 4 | 4266 | |
| REA115 | A | 00004AB4 | 4 | 4299 | |
| REA116 | A | 00004B34 | 4 | 4332 | |
| REA117 | A | 00004BB4 | 4 | 4366 | |
| REA118 | A | 00004C34 | 4 | 4399 | |
| REA119 | A | 00004CB4 | 4 | 4433 | |
| REA12 | A | 00001734 | 4 | 931 | |
| REA13 | A | 000017B4 | 4 | 967 | |
| REA14 | A | 00001834 | 4 | 999 | |
| REA15 | A | 000018B4 | 4 | 1031 | |
| REA16 | A | 00001934 | 4 | 1063 | |
| REA17 | A | 000019B4 | 4 | 1095 | |
| REA18 | A | 00001A34 | 4 | 1127 | |
| REA19 | A | 00001AB4 | 4 | 1159 | |
| REA2 | A | 00001234 | 4 | 608 | |
| REA20 | A | 00001B34 | 4 | 1192 | |
| REA21 | A | 00001BB4 | 4 | 1224 | |
| REA22 | A | 00001C34 | 4 | 1256 | |
| REA23 | A | 00001CB4 | 4 | 1288 | |
| REA24 | A | 00001D34 | 4 | 1322 | |
| REA25 | A | 00001DB4 | 4 | 1354 | |
| REA26 | A | 00001E34 | 4 | 1386 | |
| REA27 | A | 00001EB4 | 4 | 1418 | |
| REA28 | A | 00001F34 | 4 | 1454 | |
| REA29 | A | 00001FB4 | 4 | 1486 | |
| REA3 | A | 000012B4 | 4 | 640 | |
| REA30 | A | 00002034 | 4 | 1518 | |
| REA31 | A | 000020B4 | 4 | 1550 | |
| REA32 | A | 00002134 | 4 | 1582 | |
| REA33 | A | 000021B4 | 4 | 1614 | |

| SYMBOL | TYPE | VALUE | LENGTH | DEFN | REFERENCES |
|---|---|---|---|---|---|
| REA34 | A | 00002234 | 4 | 1646 | |
| REA35 | A | 000022B4 | 4 | 1679 | |
| REA36 | A | 00002334 | 4 | 1711 | |
| REA37 | A | 000023B4 | 4 | 1743 | |
| REA38 | A | 00002434 | 4 | 1775 | |
| REA39 | A | 000024B4 | 4 | 1807 | |
| REA4 | A | 00001334 | 4 | 672 | |
| REA40 | A | 00002534 | 4 | 1841 | |
| REA41 | A | 000025B4 | 4 | 1874 | |
| REA42 | A | 00002634 | 4 | 1906 | |
| REA43 | A | 000026B4 | 4 | 1938 | |
| REA44 | A | 00002734 | 4 | 1971 | |
| REA45 | A | 000027B4 | 4 | 2007 | |
| REA46 | A | 00002834 | 4 | 2039 | |
| REA47 | A | 000028B4 | 4 | 2071 | |
| REA48 | A | 00002934 | 4 | 2103 | |
| REA49 | A | 000029B4 | 4 | 2135 | |
| REA5 | A | 000013B4 | 4 | 704 | |
| REA50 | A | 00002A34 | 4 | 2167 | |
| REA51 | A | 00002AB4 | 4 | 2199 | |
| REA52 | A | 00002B34 | 4 | 2232 | |
| REA53 | A | 00002BB4 | 4 | 2264 | |
| REA54 | A | 00002C34 | 4 | 2296 | |
| REA55 | A | 00002CB4 | 4 | 2328 | |
| REA56 | A | 00002D34 | 4 | 2360 | |
| REA57 | A | 00002DB4 | 4 | 2392 | |
| REA58 | A | 00002E34 | 4 | 2426 | |
| REA59 | A | 00002EB4 | 4 | 2458 | |
| REA6 | A | 00001434 | 4 | 736 | |
| REA60 | A | 00002F34 | 4 | 2490 | |
| REA61 | A | 00002FB4 | 4 | 2523 | |
| REA62 | A | 00003034 | 4 | 2555 | |
| REA63 | A | 000030B4 | 4 | 2588 | |
| REA64 | A | 00003134 | 4 | 2624 | |
| REA65 | A | 000031B4 | 4 | 2656 | |
| REA66 | A | 00003234 | 4 | 2688 | |
| REA67 | A | 000032B4 | 4 | 2720 | |
| REA68 | A | 00003334 | 4 | 2752 | |
| REA69 | A | 000033B4 | 4 | 2784 | |
| REA7 | A | 000014B4 | 4 | 769 | |
| REA70 | A | 00003434 | 4 | 2816 | |
| REA71 | A | 000034B4 | 4 | 2849 | |
| REA72 | A | 00003534 | 4 | 2881 | |
| REA73 | A | 000035B4 | 4 | 2913 | |
| REA74 | A | 00003634 | 4 | 2945 | |
| REA75 | A | 000036B4 | 4 | 2977 | |
| REA76 | A | 00003734 | 4 | 3009 | |
| REA77 | A | 000037B4 | 4 | 3043 | |
| REA78 | A | 00003834 | 4 | 3075 | |
| REA79 | A | 000038B4 | 4 | 3107 | |
| REA8 | A | 00001534 | 4 | 801 | |
| REA80 | A | 00003934 | 4 | 3140 | |
| REA81 | A | 000039B4 | 4 | 3172 | |
| REA82 | A | 00003A34 | 4 | 3204 | |
| REA83 | A | 00003AB4 | 4 | 3247 | |
| REA84 | A | 00003B34 | 4 | 3279 | |

| SYMBOL | TYPE | VALUE | LENGTH | DEFN | REFERENCES | |
|---|---|---|---|---|---|---|
| REA85 | A | 00003BB4 | 4 | 3311 | | |
| REA86 | A | 00003C34 | 4 | 3343 | | |
| REA87 | A | 00003CB4 | 4 | 3375 | | |
| REA88 | A | 00003D34 | 4 | 3407 | | |
| REA89 | A | 00003DB4 | 4 | 3439 | | |
| REA9 | A | 000015B4 | 4 | 833 | | |
| REA90 | A | 00003E34 | 4 | 3472 | | |
| REA91 | A | 00003EB4 | 4 | 3505 | | |
| REA92 | A | 00003F34 | 4 | 3537 | | |
| REA93 | A | 00003FB4 | 4 | 3569 | | |
| REA94 | A | 00004034 | 4 | 3601 | | |
| REA95 | A | 000040B4 | 4 | 3636 | | |
| REA96 | A | 00004134 | 4 | 3670 | | |
| REA97 | A | 000041B4 | 4 | 3703 | | |
| REA98 | A | 00004234 | 4 | 3737 | | |
| REA99 | A | 000042B4 | 4 | 3771 | | |
| READDR | A | 0000002C | 4 | 449 | 146 | |
| REG2LOW | U | 000000DD | 1 | 351 | | |
| REG2PATT | U | AABBCCDD | 1 | 350 | | |
| RELEN | A | 00000028 | 4 | 448 | | |
| RPTDWSAV | D | 000003B8 | 8 | 275 | 264 | 266 |
| RPTERROR | I | 0000038C | 4 | 259 | 197 | 231 |
| RPTSAVE | F | 000003AC | 4 | 272 | 259 | 269 |
| RPTSVR5 | F | 000003B0 | 4 | 273 | 260 | 268 |
| SVOLDPSW | U | 00000140 | 0 | 66 | | |
| T1 | A | 00001188 | 4 | 565 | 4460 | |
| T10 | A | 00001608 | 4 | 856 | 4469 | |
| T100 | A | 00004308 | 4 | 3803 | 4559 | |
| T101 | A | 00004388 | 4 | 3835 | 4560 | |
| T102 | A | 00004408 | 4 | 3867 | 4561 | |
| T103 | A | 00004488 | 4 | 3899 | 4562 | |
| T104 | A | 00004508 | 4 | 3931 | 4563 | |
| T105 | A | 00004588 | 4 | 3963 | 4564 | |
| T106 | A | 00004608 | 4 | 3995 | 4565 | |
| T107 | A | 00004688 | 4 | 4027 | 4566 | |
| T108 | A | 00004708 | 4 | 4060 | 4567 | |
| T109 | A | 00004788 | 4 | 4092 | 4568 | |
| T11 | A | 00001688 | 4 | 888 | 4470 | |
| T110 | A | 00004808 | 4 | 4124 | 4569 | |
| T111 | A | 00004888 | 4 | 4156 | 4570 | |
| T112 | A | 00004908 | 4 | 4188 | 4571 | |
| T113 | A | 00004988 | 4 | 4220 | 4572 | |
| T114 | A | 00004A08 | 4 | 4255 | 4573 | |
| T115 | A | 00004A88 | 4 | 4288 | 4574 | |
| T116 | A | 00004B08 | 4 | 4321 | 4575 | |
| T117 | A | 00004B88 | 4 | 4355 | 4576 | |
| T118 | A | 00004C08 | 4 | 4388 | 4577 | |
| T119 | A | 00004C88 | 4 | 4422 | 4578 | |
| T12 | A | 00001708 | 4 | 920 | 4471 | |
| T13 | A | 00001788 | 4 | 956 | 4472 | |
| T14 | A | 00001808 | 4 | 988 | 4473 | |
| T15 | A | 00001888 | 4 | 1020 | 4474 | |
| T16 | A | 00001908 | 4 | 1052 | 4475 | |
| T17 | A | 00001988 | 4 | 1084 | 4476 | |
| T18 | A | 00001A08 | 4 | 1116 | 4477 | |
| T19 | A | 00001A88 | 4 | 1148 | 4478 | |

| SYMBOL | TYPE | VALUE | LENGTH | DEFN | REFERENCES |
|---|---|---|---|---|---|
| T2 | A | 00001208 | 4 | 597 | 4461 |
| T20 | A | 00001B08 | 4 | 1181 | 4479 |
| T21 | A | 00001B88 | 4 | 1213 | 4480 |
| T22 | A | 00001C08 | 4 | 1245 | 4481 |
| T23 | A | 00001C88 | 4 | 1277 | 4482 |
| T24 | A | 00001D08 | 4 | 1311 | 4483 |
| T25 | A | 00001D88 | 4 | 1343 | 4484 |
| T26 | A | 00001E08 | 4 | 1375 | 4485 |
| T27 | A | 00001E88 | 4 | 1407 | 4486 |
| T28 | A | 00001F08 | 4 | 1443 | 4487 |
| T29 | A | 00001F88 | 4 | 1475 | 4488 |
| T3 | A | 00001288 | 4 | 629 | 4462 |
| T30 | A | 00002008 | 4 | 1507 | 4489 |
| T31 | A | 00002088 | 4 | 1539 | 4490 |
| T32 | A | 00002108 | 4 | 1571 | 4491 |
| T33 | A | 00002188 | 4 | 1603 | 4492 |
| T34 | A | 00002208 | 4 | 1635 | 4493 |
| T35 | A | 00002288 | 4 | 1668 | 4494 |
| T36 | A | 00002308 | 4 | 1700 | 4495 |
| T37 | A | 00002388 | 4 | 1732 | 4496 |
| T38 | A | 00002408 | 4 | 1764 | 4497 |
| T39 | A | 00002488 | 4 | 1796 | 4498 |
| T4 | A | 00001308 | 4 | 661 | 4463 |
| T40 | A | 00002508 | 4 | 1830 | 4499 |
| T41 | A | 00002588 | 4 | 1863 | 4500 |
| T42 | A | 00002608 | 4 | 1895 | 4501 |
| T43 | A | 00002688 | 4 | 1927 | 4502 |
| T44 | A | 00002708 | 4 | 1960 | 4503 |
| T45 | A | 00002788 | 4 | 1996 | 4504 |
| T46 | A | 00002808 | 4 | 2028 | 4505 |
| T47 | A | 00002888 | 4 | 2060 | 4506 |
| T48 | A | 00002908 | 4 | 2092 | 4507 |
| T49 | A | 00002988 | 4 | 2124 | 4508 |
| T5 | A | 00001388 | 4 | 693 | 4464 |
| T50 | A | 00002A08 | 4 | 2156 | 4509 |
| T51 | A | 00002A88 | 4 | 2188 | 4510 |
| T52 | A | 00002B08 | 4 | 2221 | 4511 |
| T53 | A | 00002B88 | 4 | 2253 | 4512 |
| T54 | A | 00002C08 | 4 | 2285 | 4513 |
| T55 | A | 00002C88 | 4 | 2317 | 4514 |
| T56 | A | 00002D08 | 4 | 2349 | 4515 |
| T57 | A | 00002D88 | 4 | 2381 | 4516 |
| T58 | A | 00002E08 | 4 | 2415 | 4517 |
| T59 | A | 00002E88 | 4 | 2447 | 4518 |
| T6 | A | 00001408 | 4 | 725 | 4465 |
| T60 | A | 00002F08 | 4 | 2479 | 4519 |
| T61 | A | 00002F88 | 4 | 2512 | 4520 |
| T62 | A | 00003008 | 4 | 2544 | 4521 |
| T63 | A | 00003088 | 4 | 2577 | 4522 |
| T64 | A | 00003108 | 4 | 2613 | 4523 |
| T65 | A | 00003188 | 4 | 2645 | 4524 |
| T66 | A | 00003208 | 4 | 2677 | 4525 |
| T67 | A | 00003288 | 4 | 2709 | 4526 |
| T68 | A | 00003308 | 4 | 2741 | 4527 |
| T69 | A | 00003388 | 4 | 2773 | 4528 |
| T7 | A | 00001488 | 4 | 758 | 4466 |

| SYMBOL | TYPE | VALUE | LENGTH | DEFN | REFERENCES |
|---|---|---|---|---|---|
| T70 | A | 00003408 | 4 | 2805 | 4529 |
| T71 | A | 00003488 | 4 | 2838 | 4530 |
| T72 | A | 00003508 | 4 | 2870 | 4531 |
| T73 | A | 00003588 | 4 | 2902 | 4532 |
| T74 | A | 00003608 | 4 | 2934 | 4533 |
| T75 | A | 00003688 | 4 | 2966 | 4534 |
| T76 | A | 00003708 | 4 | 2998 | 4535 |
| T77 | A | 00003788 | 4 | 3032 | 4536 |
| T78 | A | 00003808 | 4 | 3064 | 4537 |
| T79 | A | 00003888 | 4 | 3096 | 4538 |
| T8 | A | 00001508 | 4 | 790 | 4467 |
| T80 | A | 00003908 | 4 | 3129 | 4539 |
| T81 | A | 00003988 | 4 | 3161 | 4540 |
| T82 | A | 00003A08 | 4 | 3193 | 4541 |
| T83 | A | 00003A88 | 4 | 3236 | 4542 |
| T84 | A | 00003B08 | 4 | 3268 | 4543 |
| T85 | A | 00003B88 | 4 | 3300 | 4544 |
| T86 | A | 00003C08 | 4 | 3332 | 4545 |
| T87 | A | 00003C88 | 4 | 3364 | 4546 |
| T88 | A | 00003D08 | 4 | 3396 | 4547 |
| T89 | A | 00003D88 | 4 | 3428 | 4548 |
| T9 | A | 00001588 | 4 | 822 | 4468 |
| T90 | A | 00003E08 | 4 | 3461 | 4549 |
| T91 | A | 00003E88 | 4 | 3494 | 4550 |
| T92 | A | 00003F08 | 4 | 3526 | 4551 |
| T93 | A | 00003F88 | 4 | 3558 | 4552 |
| T94 | A | 00004008 | 4 | 3590 | 4553 |
| T95 | A | 00004088 | 4 | 3625 | 4554 |
| T96 | A | 00004108 | 4 | 3659 | 4555 |
| T97 | A | 00004188 | 4 | 3692 | 4556 |
| T98 | A | 00004208 | 4 | 3726 | 4557 |
| T99 | A | 00004288 | 4 | 3760 | 4558 |
| TESTCC | I | 00000272 | 4 | 153 | 143 |
| TESTING | F | 00001004 | 4 | 362 | 135 |
| TESTREST | U | 0000025A | 1 | 145 | 162 |
| TNUM | H | 00000004 | 2 | 436 | 134 173 207 |
| TSUB | A | 00000000 | 4 | 435 | 138 |
| TTABLE | F | 00004D0C | 4 | 4459 | |
| V0 | U | 00000000 | 1 | 4611 | |
| V1 | U | 00000001 | 1 | 4612 | 137 585 586 617 618 649 650 681 682 713 714 745 746 778 779 810 811 842 843 876 877 908 909 940 941 976 977 1008 1009 1040 1041 1072 1073 1104 1105 1136 1137 1168 1169 1201 1202 1233 1234 1265 1266 1297 1298 1331 1332 1363 1364 1395 1396 1427 1428 1463 1464 1495 1496 1527 1528 1559 1560 1591 1592 1623 1624 1655 1656 1688 1689 1720 1721 1752 1753 1784 1785 1816 1817 1850 1851 1883 1884 1915 1916 1947 1948 1980 1981 2016 2017 2048 2049 2080 2081 2112 2113 2144 2145 2176 2177 2208 2209 2241 2242 2273 2274 2305 2306 2337 2338 2369 2370 2401 2402 2435 2436 2467 2468 2499 2500 2532 2533 2564 2565 2597 2598 2633 2634 2665 2666 2697 2698 2729 2730 2761 2762 2793 2794 2825 2826 2858 2859 2890 2891 2922 2923 2954 2955 2986 2987 3018 3019 3052 3053 3084 3085 3116 3117 3149 3150 3181 3182 3213 3214 3256 3257 3288 3289 3320 3321 3352 3353 3384 3385 3416 3417 3448 3449 3481 3482 3514 3515 3546 3547 3578 3579 3610 3611 3645 3646 3679 3680 3712 3713 3746 3747 3780 3781 3823 3824 3855 3856 3887 3888 3919 3920 3951 3952 3983 3984 4015 4016 4047 4048 4080 4081 4112 4113 4144 4145 |

| SYMBOL | TYPE | VALUE | LENGTH | DEFN | REFERENCES |
|---|---|---|---|---|---|
| | | | | | 4176 4177 4208 4209 4240 4241 4275 4276 4308 4309 4341 4342 4375 4376 4408 4409 4442 4443 |
| V10 | U | 0000000A | 1 | 4621 | |
| V11 | U | 0000000B | 1 | 4622 | |
| V12 | U | 0000000C | 1 | 4623 | |
| V13 | U | 0000000D | 1 | 4624 | |
| V14 | U | 0000000E | 1 | 4625 | |
| V15 | U | 0000000F | 1 | 4626 | |
| V16 | U | 00000010 | 1 | 4627 | |
| V17 | U | 00000011 | 1 | 4628 | |
| V18 | U | 00000012 | 1 | 4629 | |
| V19 | U | 00000013 | 1 | 4630 | |
| V1FUDGE | X | 00001128 | 16 | 422 | 137 |
| V1INPUT | C | 00001138 | 16 | 423 | |
| V1OUTPUT | X | 00001108 | 16 | 420 | 147 586 618 650 682 714 746 779 811 843 877 909 941 977 1009 1041 1073 1105 1137 1169 1202 1234 1266 1298 1332 1364 1396 1428 1464 1496 1528 1560 1592 1624 1656 1689 1721 1753 1785 1817 1851 1884 1916 1948 1981 2017 2049 2081 2113 2145 2177 2209 2242 2274 2306 2338 2370 2402 2436 2468 2500 2533 2565 2598 2634 2666 2698 2730 2762 2794 2826 2859 2891 2923 2955 2987 3019 3053 3085 3117 3150 3182 3214 3257 3289 3321 3353 3385 3417 3449 3482 3515 3547 3579 3611 3646 3680 3713 3747 3781 3824 3856 3888 3920 3952 3984 4016 4048 4081 4113 4145 4177 4209 4241 4276 4309 4342 4376 4409 4443 |
| V2 | U | 00000002 | 1 | 4613 | 581 585 613 617 645 649 677 681 709 713 741 745 774 778 806 810 838 842 872 876 904 908 936 940 972 976 1004 1008 1036 1040 1068 1072 1100 1104 1132 1136 1164 1168 1197 1201 1229 1233 1261 1265 1293 1297 1327 1331 1359 1363 1391 1395 1423 1427 1459 1463 1491 1495 1523 1527 1555 1559 1587 1591 1619 1623 1651 1655 1684 1688 1716 1720 1748 1752 1780 1784 1812 1816 1846 1850 1879 1883 1911 1915 1943 1947 1976 1980 2012 2016 2044 2048 2076 2080 2108 2112 2140 2144 2172 2176 2204 2208 2237 2241 2269 2273 2301 2305 2333 2337 2365 2369 2397 2401 2431 2435 2463 2467 2495 2499 2528 2532 2560 2564 2593 2597 2629 2633 2661 2665 2693 2697 2725 2729 2757 2761 2789 2793 2821 2825 2854 2858 2886 2890 2918 2922 2950 2954 2982 2986 3014 3018 3048 3052 3080 3084 3112 3116 3145 3149 3177 3181 3209 3213 3252 3256 3284 3288 3316 3320 3348 3352 3380 3384 3412 3416 3444 3448 3477 3481 3510 3514 3542 3546 3574 3578 3606 3610 3641 3645 3675 3679 3708 3712 3742 3746 3776 3780 3819 3823 3851 3855 3883 3887 3915 3919 3947 3951 3979 3983 4011 4015 4043 4047 4076 4080 4108 4112 4140 4144 4172 4176 4204 4208 4236 4240 4271 4275 4304 4308 4337 4341 4371 4375 4404 4408 4438 4442 |
| V20 | U | 00000014 | 1 | 4631 | |
| V21 | U | 00000015 | 1 | 4632 | |
| V22 | U | 00000016 | 1 | 4633 | |
| V23 | U | 00000017 | 1 | 4634 | |
| V24 | U | 00000018 | 1 | 4635 | |
| V25 | U | 00000019 | 1 | 4636 | |
| V26 | U | 0000001A | 1 | 4637 | |
| V27 | U | 0000001B | 1 | 4638 | |
| V28 | U | 0000001C | 1 | 4639 | |
| V29 | U | 0000001D | 1 | 4640 | |
| V2PACKED | X | 00001157 | 16 | 426 | 580 581 612 613 644 645 676 677 708 709 740 741 773 774 805 806 837 838 871 872 903 904 935 936 971 972 1003 1004 1035 1036 1067 1068 1099 1100 1131 1132 1163 1164 1196 |

| SYMBOL | TYPE | VALUE | LENGTH | DEFN | REFERENCES |
|---|---|---|---|---|---|
| | | | | | 1197 1228 1229 1260 1261 1292 1293 1326 1327 1358 1359 1390 1391 |
| | | | | | 1422 1423 1458 1459 1490 1491 1522 1523 1554 1555 1586 1587 1618 |
| | | | | | 1619 1650 1651 1683 1684 1715 1716 1747 1748 1779 1780 1811 1812 |
| | | | | | 1845 1846 1878 1879 1910 1911 1942 1943 1975 1976 2011 2012 2043 |
| | | | | | 2044 2075 2076 2107 2108 2139 2140 2171 2172 2203 2204 2236 2237 |
| | | | | | 2268 2269 2300 2301 2332 2333 2364 2365 2396 2397 2430 2431 2462 |
| | | | | | 2463 2494 2495 2527 2528 2559 2560 2592 2593 2628 2629 2660 2661 |
| | | | | | 2692 2693 2724 2725 2756 2757 2788 2789 2820 2821 2853 2854 2885 |
| | | | | | 2886 2917 2918 2949 2950 2981 2982 3013 3014 3047 3048 3079 3080 |
| | | | | | 3111 3112 3144 3145 3176 3177 3208 3209 3251 3252 3283 3284 3315 |
| | | | | | 3316 3347 3348 3379 3380 3411 3412 3443 3444 3476 3477 3509 3510 |
| | | | | | 3541 3542 3573 3574 3605 3606 3640 3641 3674 3675 3707 3708 3741 |
| | | | | | 3742 3775 3776 3818 3819 3850 3851 3882 3883 3914 3915 3946 3947 |
| | | | | | 3978 3979 4010 4011 4042 4043 4075 4076 4107 4108 4139 4140 4171 |
| | | | | | 4172 4203 4204 4235 4236 4270 4271 4303 4304 4336 4337 4370 4371 |
| | | | | | 4403 4404 4437 4438 |
| V2VALUE | F | 00000010 | 8 | 443 | |
| V2_1 | F | 00001198 | 8 | 572 | 579 |
| V2_10 | F | 00001618 | 8 | 863 | 870 |
| V2_100 | F | 00004318 | 8 | 3810 | 3817 |
| V2_101 | F | 00004398 | 8 | 3842 | 3849 |
| V2_102 | F | 00004418 | 8 | 3874 | 3881 |
| V2_103 | F | 00004498 | 8 | 3906 | 3913 |
| V2_104 | F | 00004518 | 8 | 3938 | 3945 |
| V2_105 | F | 00004598 | 8 | 3970 | 3977 |
| V2_106 | F | 00004618 | 8 | 4002 | 4009 |
| V2_107 | F | 00004698 | 8 | 4034 | 4041 |
| V2_108 | F | 00004718 | 8 | 4067 | 4074 |
| V2_109 | F | 00004798 | 8 | 4099 | 4106 |
| V2_11 | F | 00001698 | 8 | 895 | 902 |
| V2_110 | F | 00004818 | 8 | 4131 | 4138 |
| V2_111 | F | 00004898 | 8 | 4163 | 4170 |
| V2_112 | F | 00004918 | 8 | 4195 | 4202 |
| V2_113 | F | 00004998 | 8 | 4227 | 4234 |
| V2_114 | F | 00004A18 | 8 | 4262 | 4269 |
| V2_115 | F | 00004A98 | 8 | 4295 | 4302 |
| V2_116 | F | 00004B18 | 8 | 4328 | 4335 |
| V2_117 | F | 00004B98 | 8 | 4362 | 4369 |
| V2_118 | F | 00004C18 | 8 | 4395 | 4402 |
| V2_119 | F | 00004C98 | 8 | 4429 | 4436 |
| V2_12 | F | 00001718 | 8 | 927 | 934 |
| V2_13 | F | 00001798 | 8 | 963 | 970 |
| V2_14 | F | 00001818 | 8 | 995 | 1002 |
| V2_15 | F | 00001898 | 8 | 1027 | 1034 |
| V2_16 | F | 00001918 | 8 | 1059 | 1066 |
| V2_17 | F | 00001998 | 8 | 1091 | 1098 |
| V2_18 | F | 00001A18 | 8 | 1123 | 1130 |
| V2_19 | F | 00001A98 | 8 | 1155 | 1162 |
| V2_2 | F | 00001218 | 8 | 604 | 611 |
| V2_20 | F | 00001B18 | 8 | 1188 | 1195 |
| V2_21 | F | 00001B98 | 8 | 1220 | 1227 |
| V2_22 | F | 00001C18 | 8 | 1252 | 1259 |
| V2_23 | F | 00001C98 | 8 | 1284 | 1291 |
| V2_24 | F | 00001D18 | 8 | 1318 | 1325 |
| V2_25 | F | 00001D98 | 8 | 1350 | 1357 |
| V2_26 | F | 00001E18 | 8 | 1382 | 1389 |

| SYMBOL | TYPE | VALUE | LENGTH | DEFN | REFERENCES |
|---|---|---|---|---|---|
| V2_27 | F | 00001E98 | 8 | 1414 | 1421 |
| V2_28 | F | 00001F18 | 8 | 1450 | 1457 |
| V2_29 | F | 00001F98 | 8 | 1482 | 1489 |
| V2_3 | F | 00001298 | 8 | 636 | 643 |
| V2_30 | F | 00002018 | 8 | 1514 | 1521 |
| V2_31 | F | 00002098 | 8 | 1546 | 1553 |
| V2_32 | F | 00002118 | 8 | 1578 | 1585 |
| V2_33 | F | 00002198 | 8 | 1610 | 1617 |
| V2_34 | F | 00002218 | 8 | 1642 | 1649 |
| V2_35 | F | 00002298 | 8 | 1675 | 1682 |
| V2_36 | F | 00002318 | 8 | 1707 | 1714 |
| V2_37 | F | 00002398 | 8 | 1739 | 1746 |
| V2_38 | F | 00002418 | 8 | 1771 | 1778 |
| V2_39 | F | 00002498 | 8 | 1803 | 1810 |
| V2_4 | F | 00001318 | 8 | 668 | 675 |
| V2_40 | F | 00002518 | 8 | 1837 | 1844 |
| V2_41 | F | 00002598 | 8 | 1870 | 1877 |
| V2_42 | F | 00002618 | 8 | 1902 | 1909 |
| V2_43 | F | 00002698 | 8 | 1934 | 1941 |
| V2_44 | F | 00002718 | 8 | 1967 | 1974 |
| V2_45 | F | 00002798 | 8 | 2003 | 2010 |
| V2_46 | F | 00002818 | 8 | 2035 | 2042 |
| V2_47 | F | 00002898 | 8 | 2067 | 2074 |
| V2_48 | F | 00002918 | 8 | 2099 | 2106 |
| V2_49 | F | 00002998 | 8 | 2131 | 2138 |
| V2_5 | F | 00001398 | 8 | 700 | 707 |
| V2_50 | F | 00002A18 | 8 | 2163 | 2170 |
| V2_51 | F | 00002A98 | 8 | 2195 | 2202 |
| V2_52 | F | 00002B18 | 8 | 2228 | 2235 |
| V2_53 | F | 00002B98 | 8 | 2260 | 2267 |
| V2_54 | F | 00002C18 | 8 | 2292 | 2299 |
| V2_55 | F | 00002C98 | 8 | 2324 | 2331 |
| V2_56 | F | 00002D18 | 8 | 2356 | 2363 |
| V2_57 | F | 00002D98 | 8 | 2388 | 2395 |
| V2_58 | F | 00002E18 | 8 | 2422 | 2429 |
| V2_59 | F | 00002E98 | 8 | 2454 | 2461 |
| V2_6 | F | 00001418 | 8 | 732 | 739 |
| V2_60 | F | 00002F18 | 8 | 2486 | 2493 |
| V2_61 | F | 00002F98 | 8 | 2519 | 2526 |
| V2_62 | F | 00003018 | 8 | 2551 | 2558 |
| V2_63 | F | 00003098 | 8 | 2584 | 2591 |
| V2_64 | F | 00003118 | 8 | 2620 | 2627 |
| V2_65 | F | 00003198 | 8 | 2652 | 2659 |
| V2_66 | F | 00003218 | 8 | 2684 | 2691 |
| V2_67 | F | 00003298 | 8 | 2716 | 2723 |
| V2_68 | F | 00003318 | 8 | 2748 | 2755 |
| V2_69 | F | 00003398 | 8 | 2780 | 2787 |
| V2_7 | F | 00001498 | 8 | 765 | 772 |
| V2_70 | F | 00003418 | 8 | 2812 | 2819 |
| V2_71 | F | 00003498 | 8 | 2845 | 2852 |
| V2_72 | F | 00003518 | 8 | 2877 | 2884 |
| V2_73 | F | 00003598 | 8 | 2909 | 2916 |
| V2_74 | F | 00003618 | 8 | 2941 | 2948 |
| V2_75 | F | 00003698 | 8 | 2973 | 2980 |
| V2_76 | F | 00003718 | 8 | 3005 | 3012 |
| V2_77 | F | 00003798 | 8 | 3039 | 3046 |

| SYMBOL | TYPE | VALUE | LENGTH | DEFN | REFERENCES |
|---|---|---|---|---|---|
| V2_78 | F | 00003818 | 8 | 3071 | 3078 |
| V2_79 | F | 00003898 | 8 | 3103 | 3110 |
| V2_8 | F | 00001518 | 8 | 797 | 804 |
| V2_80 | F | 00003918 | 8 | 3136 | 3143 |
| V2_81 | F | 00003998 | 8 | 3168 | 3175 |
| V2_82 | F | 00003A18 | 8 | 3200 | 3207 |
| V2_83 | F | 00003A98 | 8 | 3243 | 3250 |
| V2_84 | F | 00003B18 | 8 | 3275 | 3282 |
| V2_85 | F | 00003B98 | 8 | 3307 | 3314 |
| V2_86 | F | 00003C18 | 8 | 3339 | 3346 |
| V2_87 | F | 00003C98 | 8 | 3371 | 3378 |
| V2_88 | F | 00003D18 | 8 | 3403 | 3410 |
| V2_89 | F | 00003D98 | 8 | 3435 | 3442 |
| V2_9 | F | 00001598 | 8 | 829 | 836 |
| V2_90 | F | 00003E18 | 8 | 3468 | 3475 |
| V2_91 | F | 00003E98 | 8 | 3501 | 3508 |
| V2_92 | F | 00003F18 | 8 | 3533 | 3540 |
| V2_93 | F | 00003F98 | 8 | 3565 | 3572 |
| V2_94 | F | 00004018 | 8 | 3597 | 3604 |
| V2_95 | F | 00004098 | 8 | 3632 | 3639 |
| V2_96 | F | 00004118 | 8 | 3666 | 3673 |
| V2_97 | F | 00004198 | 8 | 3699 | 3706 |
| V2_98 | F | 00004218 | 8 | 3733 | 3740 |
| V2_99 | F | 00004298 | 8 | 3767 | 3774 |
| V3 | U | 00000003 | 1 | 4614 | 584 585 616 617 648 649 680 681 712 713 744 745 777 778 809 810 841 842 875 876 907 908 939 940 975 976 1007 1008 1039 1040 1071 1072 1103 1104 1135 1136 1167 1168 1200 1201 1232 1233 1264 1265 1296 1297 1330 1331 1362 1363 1394 1395 1426 1427 1462 1463 1494 1495 1526 1527 1558 1559 1590 1591 1622 1623 1654 1655 1687 1688 1719 1720 1751 1752 1783 1784 1815 1816 1849 1850 1882 1883 1914 1915 1946 1947 1979 1980 2015 2016 2047 2048 2079 2080 2111 2112 2143 2144 2175 2176 2207 2208 2240 2241 2272 2273 2304 2305 2336 2337 2368 2369 2400 2401 2434 2435 2466 2467 2498 2499 2531 2532 2563 2564 2596 2597 2632 2633 2664 2665 2696 2697 2728 2729 2760 2761 2792 2793 2824 2825 2857 2858 2889 2890 2921 2922 2953 2954 2985 2986 3017 3018 3051 3052 3083 3084 3115 3116 3148 3149 3180 3181 3212 3213 3255 3256 3287 3288 3319 3320 3351 3352 3383 3384 3415 3416 3447 3448 3480 3481 3513 3514 3545 3546 3577 3578 3609 3610 3644 3645 3678 3679 3711 3712 3745 3746 3779 3780 3822 3823 3854 3855 3886 3887 3918 3919 3950 3951 3982 3983 4014 4015 4046 4047 4079 4080 4111 4112 4143 4144 4175 4176 4207 4208 4239 4240 4274 4275 4307 4308 4340 4341 4374 4375 4407 4408 4441 4442 |
| V30 | U | 0000001E | 1 | 4641 | |
| V31 | U | 0000001F | 1 | 4642 | |
| V3PACKED | X | 00001167 | 16 | 427 | 583 584 615 616 647 648 679 680 711 712 743 744 776 777 808 809 840 841 874 875 906 907 938 939 974 975 1006 1007 1038 1039 1070 1071 1102 1103 1134 1135 1166 1167 1199 1200 1231 1232 1263 1264 1295 1296 1329 1330 1361 1362 1393 1394 1425 1426 1461 1462 1493 1494 1525 1526 1557 1558 1589 1590 1621 1622 1653 1654 1686 1687 1718 1719 1750 1751 1782 1783 1814 1815 1848 1849 1881 1882 1913 1914 1945 1946 1978 1979 2014 2015 2046 2047 2078 2079 2110 2111 2142 2143 2174 2175 2206 2207 2239 2240 2271 2272 2303 2304 2335 2336 2367 2368 2399 2400 2433 2434 2465 2466 2497 2498 2530 2531 2562 2563 2595 2596 2631 2632 2663 2664 2695 2696 2727 2728 2759 2760 2791 2792 2823 2824 2856 2857 2888 |

| SYMBOL | TYPE | VALUE | LENGTH | DEFN | REFERENCES |
|---|---|---|---|---|---|
| | | | | | 2889 2920 2921 2952 2953 2984 2985 3016 3017 3050 3051 3082 3083 3114 3115 3147 3148 3179 3180 3211 3212 3254 3255 3286 3287 3318 3319 3350 3351 3382 3383 3414 3415 3446 3447 3479 3480 3512 3513 3544 3545 3576 3577 3608 3609 3643 3644 3677 3678 3710 3711 3744 3745 3778 3779 3821 3822 3853 3854 3885 3886 3917 3918 3949 3950 3981 3982 4013 4014 4045 4046 4078 4079 4110 4111 4142 4143 4174 4175 4206 4207 4238 4239 4273 4274 4306 4307 4339 4340 4373 4374 4406 4407 4440 4441 |
| V3VALUE | F | 00000018 | 8 | 444 | |
| V3_1 | F | 000011A0 | 8 | 573 | 582 |
| V3_10 | F | 00001620 | 8 | 864 | 873 |
| V3_100 | F | 00004320 | 8 | 3811 | 3820 |
| V3_101 | F | 000043A0 | 8 | 3843 | 3852 |
| V3_102 | F | 00004420 | 8 | 3875 | 3884 |
| V3_103 | F | 000044A0 | 8 | 3907 | 3916 |
| V3_104 | F | 00004520 | 8 | 3939 | 3948 |
| V3_105 | F | 000045A0 | 8 | 3971 | 3980 |
| V3_106 | F | 00004620 | 8 | 4003 | 4012 |
| V3_107 | F | 000046A0 | 8 | 4035 | 4044 |
| V3_108 | F | 00004720 | 8 | 4068 | 4077 |
| V3_109 | F | 000047A0 | 8 | 4100 | 4109 |
| V3_11 | F | 000016A0 | 8 | 896 | 905 |
| V3_110 | F | 00004820 | 8 | 4132 | 4141 |
| V3_111 | F | 000048A0 | 8 | 4164 | 4173 |
| V3_112 | F | 00004920 | 8 | 4196 | 4205 |
| V3_113 | F | 000049A0 | 8 | 4228 | 4237 |
| V3_114 | F | 00004A20 | 8 | 4263 | 4272 |
| V3_115 | F | 00004AA0 | 8 | 4296 | 4305 |
| V3_116 | F | 00004B20 | 8 | 4329 | 4338 |
| V3_117 | F | 00004BA0 | 8 | 4363 | 4372 |
| V3_118 | F | 00004C20 | 8 | 4396 | 4405 |
| V3_119 | F | 00004CA0 | 8 | 4430 | 4439 |
| V3_12 | F | 00001720 | 8 | 928 | 937 |
| V3_13 | F | 000017A0 | 8 | 964 | 973 |
| V3_14 | F | 00001820 | 8 | 996 | 1005 |
| V3_15 | F | 000018A0 | 8 | 1028 | 1037 |
| V3_16 | F | 00001920 | 8 | 1060 | 1069 |
| V3_17 | F | 000019A0 | 8 | 1092 | 1101 |
| V3_18 | F | 00001A20 | 8 | 1124 | 1133 |
| V3_19 | F | 00001AA0 | 8 | 1156 | 1165 |
| V3_2 | F | 00001220 | 8 | 605 | 614 |
| V3_20 | F | 00001B20 | 8 | 1189 | 1198 |
| V3_21 | F | 00001BA0 | 8 | 1221 | 1230 |
| V3_22 | F | 00001C20 | 8 | 1253 | 1262 |
| V3_23 | F | 00001CA0 | 8 | 1285 | 1294 |
| V3_24 | F | 00001D20 | 8 | 1319 | 1328 |
| V3_25 | F | 00001DA0 | 8 | 1351 | 1360 |
| V3_26 | F | 00001E20 | 8 | 1383 | 1392 |
| V3_27 | F | 00001EA0 | 8 | 1415 | 1424 |
| V3_28 | F | 00001F20 | 8 | 1451 | 1460 |
| V3_29 | F | 00001FA0 | 8 | 1483 | 1492 |
| V3_3 | F | 000012A0 | 8 | 637 | 646 |
| V3_30 | F | 00002020 | 8 | 1515 | 1524 |
| V3_31 | F | 000020A0 | 8 | 1547 | 1556 |
| V3_32 | F | 00002120 | 8 | 1579 | 1588 |
| V3_33 | F | 000021A0 | 8 | 1611 | 1620 |

| SYMBOL | TYPE | VALUE | LENGTH | DEFN | REFERENCES |
|---|---|---|---|---|---|
| V3_34 | F | 00002220 | 8 | 1643 | 1652 |
| V3_35 | F | 000022A0 | 8 | 1676 | 1685 |
| V3_36 | F | 00002320 | 8 | 1708 | 1717 |
| V3_37 | F | 000023A0 | 8 | 1740 | 1749 |
| V3_38 | F | 00002420 | 8 | 1772 | 1781 |
| V3_39 | F | 000024A0 | 8 | 1804 | 1813 |
| V3_4 | F | 00001320 | 8 | 669 | 678 |
| V3_40 | F | 00002520 | 8 | 1838 | 1847 |
| V3_41 | F | 000025A0 | 8 | 1871 | 1880 |
| V3_42 | F | 00002620 | 8 | 1903 | 1912 |
| V3_43 | F | 000026A0 | 8 | 1935 | 1944 |
| V3_44 | F | 00002720 | 8 | 1968 | 1977 |
| V3_45 | F | 000027A0 | 8 | 2004 | 2013 |
| V3_46 | F | 00002820 | 8 | 2036 | 2045 |
| V3_47 | F | 000028A0 | 8 | 2068 | 2077 |
| V3_48 | F | 00002920 | 8 | 2100 | 2109 |
| V3_49 | F | 000029A0 | 8 | 2132 | 2141 |
| V3_5 | F | 000013A0 | 8 | 701 | 710 |
| V3_50 | F | 00002A20 | 8 | 2164 | 2173 |
| V3_51 | F | 00002AA0 | 8 | 2196 | 2205 |
| V3_52 | F | 00002B20 | 8 | 2229 | 2238 |
| V3_53 | F | 00002BA0 | 8 | 2261 | 2270 |
| V3_54 | F | 00002C20 | 8 | 2293 | 2302 |
| V3_55 | F | 00002CA0 | 8 | 2325 | 2334 |
| V3_56 | F | 00002D20 | 8 | 2357 | 2366 |
| V3_57 | F | 00002DA0 | 8 | 2389 | 2398 |
| V3_58 | F | 00002E20 | 8 | 2423 | 2432 |
| V3_59 | F | 00002EA0 | 8 | 2455 | 2464 |
| V3_6 | F | 00001420 | 8 | 733 | 742 |
| V3_60 | F | 00002F20 | 8 | 2487 | 2496 |
| V3_61 | F | 00002FA0 | 8 | 2520 | 2529 |
| V3_62 | F | 00003020 | 8 | 2552 | 2561 |
| V3_63 | F | 000030A0 | 8 | 2585 | 2594 |
| V3_64 | F | 00003120 | 8 | 2621 | 2630 |
| V3_65 | F | 000031A0 | 8 | 2653 | 2662 |
| V3_66 | F | 00003220 | 8 | 2685 | 2694 |
| V3_67 | F | 000032A0 | 8 | 2717 | 2726 |
| V3_68 | F | 00003320 | 8 | 2749 | 2758 |
| V3_69 | F | 000033A0 | 8 | 2781 | 2790 |
| V3_7 | F | 000014A0 | 8 | 766 | 775 |
| V3_70 | F | 00003420 | 8 | 2813 | 2822 |
| V3_71 | F | 000034A0 | 8 | 2846 | 2855 |
| V3_72 | F | 00003520 | 8 | 2878 | 2887 |
| V3_73 | F | 000035A0 | 8 | 2910 | 2919 |
| V3_74 | F | 00003620 | 8 | 2942 | 2951 |
| V3_75 | F | 000036A0 | 8 | 2974 | 2983 |
| V3_76 | F | 00003720 | 8 | 3006 | 3015 |
| V3_77 | F | 000037A0 | 8 | 3040 | 3049 |
| V3_78 | F | 00003820 | 8 | 3072 | 3081 |
| V3_79 | F | 000038A0 | 8 | 3104 | 3113 |
| V3_8 | F | 00001520 | 8 | 798 | 807 |
| V3_80 | F | 00003920 | 8 | 3137 | 3146 |
| V3_81 | F | 000039A0 | 8 | 3169 | 3178 |
| V3_82 | F | 00003A20 | 8 | 3201 | 3210 |
| V3_83 | F | 00003AA0 | 8 | 3244 | 3253 |
| V3_84 | F | 00003B20 | 8 | 3276 | 3285 |

| SYMBOL | TYPE | VALUE | LENGTH | DEFN | REFERENCES |
|---|---|---|---|---|---|
| V3_85 | F | 00003BA0 | 8 | 3308 | 3317 |
| V3_86 | F | 00003C20 | 8 | 3340 | 3349 |
| V3_87 | F | 00003CA0 | 8 | 3372 | 3381 |
| V3_88 | F | 00003D20 | 8 | 3404 | 3413 |
| V3_89 | F | 00003DA0 | 8 | 3436 | 3445 |
| V3_9 | F | 000015A0 | 8 | 830 | 839 |
| V3_90 | F | 00003E20 | 8 | 3469 | 3478 |
| V3_91 | F | 00003EA0 | 8 | 3502 | 3511 |
| V3_92 | F | 00003F20 | 8 | 3534 | 3543 |
| V3_93 | F | 00003FA0 | 8 | 3566 | 3575 |
| V3_94 | F | 00004020 | 8 | 3598 | 3607 |
| V3_95 | F | 000040A0 | 8 | 3633 | 3642 |
| V3_96 | F | 00004120 | 8 | 3667 | 3676 |
| V3_97 | F | 000041A0 | 8 | 3700 | 3709 |
| V3_98 | F | 00004220 | 8 | 3734 | 3743 |
| V3_99 | F | 000042A0 | 8 | 3768 | 3777 |
| V4 | U | 00000004 | 1 | 4615 | |
| V5 | U | 00000005 | 1 | 4616 | |
| V6 | U | 00000006 | 1 | 4617 | |
| V7 | U | 00000007 | 1 | 4618 | |
| V8 | U | 00000008 | 1 | 4619 | |
| V9 | U | 00000009 | 1 | 4620 | |
| X1 | F | 000011B8 | 4 | 578 | 565 |
| X10 | F | 00001638 | 4 | 869 | 856 |
| X100 | F | 00004338 | 4 | 3816 | 3803 |
| X101 | F | 000043B8 | 4 | 3848 | 3835 |
| X102 | F | 00004438 | 4 | 3880 | 3867 |
| X103 | F | 000044B8 | 4 | 3912 | 3899 |
| X104 | F | 00004538 | 4 | 3944 | 3931 |
| X105 | F | 000045B8 | 4 | 3976 | 3963 |
| X106 | F | 00004638 | 4 | 4008 | 3995 |
| X107 | F | 000046B8 | 4 | 4040 | 4027 |
| X108 | F | 00004738 | 4 | 4073 | 4060 |
| X109 | F | 000047B8 | 4 | 4105 | 4092 |
| X11 | F | 000016B8 | 4 | 901 | 888 |
| X110 | F | 00004838 | 4 | 4137 | 4124 |
| X111 | F | 000048B8 | 4 | 4169 | 4156 |
| X112 | F | 00004938 | 4 | 4201 | 4188 |
| X113 | F | 000049B8 | 4 | 4233 | 4220 |
| X114 | F | 00004A38 | 4 | 4268 | 4255 |
| X115 | F | 00004AB8 | 4 | 4301 | 4288 |
| X116 | F | 00004B38 | 4 | 4334 | 4321 |
| X117 | F | 00004BB8 | 4 | 4368 | 4355 |
| X118 | F | 00004C38 | 4 | 4401 | 4388 |
| X119 | F | 00004CB8 | 4 | 4435 | 4422 |
| X12 | F | 00001738 | 4 | 933 | 920 |
| X13 | F | 000017B8 | 4 | 969 | 956 |
| X14 | F | 00001838 | 4 | 1001 | 988 |
| X15 | F | 000018B8 | 4 | 1033 | 1020 |
| X16 | F | 00001938 | 4 | 1065 | 1052 |
| X17 | F | 000019B8 | 4 | 1097 | 1084 |
| X18 | F | 00001A38 | 4 | 1129 | 1116 |
| X19 | F | 00001AB8 | 4 | 1161 | 1148 |
| X2 | F | 00001238 | 4 | 610 | 597 |
| X20 | F | 00001B38 | 4 | 1194 | 1181 |
| X21 | F | 00001BB8 | 4 | 1226 | 1213 |

| SYMBOL | TYPE | VALUE | LENGTH | DEFN | REFERENCES |
|---|---|---|---|---|---|
| X22 | F | 00001C38 | 4 | 1258 | 1245 |
| X23 | F | 00001CB8 | 4 | 1290 | 1277 |
| X24 | F | 00001D38 | 4 | 1324 | 1311 |
| X25 | F | 00001DB8 | 4 | 1356 | 1343 |
| X26 | F | 00001E38 | 4 | 1388 | 1375 |
| X27 | F | 00001EB8 | 4 | 1420 | 1407 |
| X28 | F | 00001F38 | 4 | 1456 | 1443 |
| X29 | F | 00001FB8 | 4 | 1488 | 1475 |
| X3 | F | 000012B8 | 4 | 642 | 629 |
| X30 | F | 00002038 | 4 | 1520 | 1507 |
| X31 | F | 000020B8 | 4 | 1552 | 1539 |
| X32 | F | 00002138 | 4 | 1584 | 1571 |
| X33 | F | 000021B8 | 4 | 1616 | 1603 |
| X34 | F | 00002238 | 4 | 1648 | 1635 |
| X35 | F | 000022B8 | 4 | 1681 | 1668 |
| X36 | F | 00002338 | 4 | 1713 | 1700 |
| X37 | F | 000023B8 | 4 | 1745 | 1732 |
| X38 | F | 00002438 | 4 | 1777 | 1764 |
| X39 | F | 000024B8 | 4 | 1809 | 1796 |
| X4 | F | 00001338 | 4 | 674 | 661 |
| X40 | F | 00002538 | 4 | 1843 | 1830 |
| X41 | F | 000025B8 | 4 | 1876 | 1863 |
| X42 | F | 00002638 | 4 | 1908 | 1895 |
| X43 | F | 000026B8 | 4 | 1940 | 1927 |
| X44 | F | 00002738 | 4 | 1973 | 1960 |
| X45 | F | 000027B8 | 4 | 2009 | 1996 |
| X46 | F | 00002838 | 4 | 2041 | 2028 |
| X47 | F | 000028B8 | 4 | 2073 | 2060 |
| X48 | F | 00002938 | 4 | 2105 | 2092 |
| X49 | F | 000029B8 | 4 | 2137 | 2124 |
| X5 | F | 000013B8 | 4 | 706 | 693 |
| X50 | F | 00002A38 | 4 | 2169 | 2156 |
| X51 | F | 00002AB8 | 4 | 2201 | 2188 |
| X52 | F | 00002B38 | 4 | 2234 | 2221 |
| X53 | F | 00002BB8 | 4 | 2266 | 2253 |
| X54 | F | 00002C38 | 4 | 2298 | 2285 |
| X55 | F | 00002CB8 | 4 | 2330 | 2317 |
| X56 | F | 00002D38 | 4 | 2362 | 2349 |
| X57 | F | 00002DB8 | 4 | 2394 | 2381 |
| X58 | F | 00002E38 | 4 | 2428 | 2415 |
| X59 | F | 00002EB8 | 4 | 2460 | 2447 |
| X6 | F | 00001438 | 4 | 738 | 725 |
| X60 | F | 00002F38 | 4 | 2492 | 2479 |
| X61 | F | 00002FB8 | 4 | 2525 | 2512 |
| X62 | F | 00003038 | 4 | 2557 | 2544 |
| X63 | F | 000030B8 | 4 | 2590 | 2577 |
| X64 | F | 00003138 | 4 | 2626 | 2613 |
| X65 | F | 000031B8 | 4 | 2658 | 2645 |
| X66 | F | 00003238 | 4 | 2690 | 2677 |
| X67 | F | 000032B8 | 4 | 2722 | 2709 |
| X68 | F | 00003338 | 4 | 2754 | 2741 |
| X69 | F | 000033B8 | 4 | 2786 | 2773 |
| X7 | F | 000014B8 | 4 | 771 | 758 |
| X70 | F | 00003438 | 4 | 2818 | 2805 |
| X71 | F | 000034B8 | 4 | 2851 | 2838 |
| X72 | F | 00003538 | 4 | 2883 | 2870 |

| SYMBOL | TYPE | VALUE | LENGTH | DEFN | REFERENCES |
|---|---|---|---|---|---|
| X73 | F | 000035B8 | 4 | 2915 | 2902 |
| X74 | F | 00003638 | 4 | 2947 | 2934 |
| X75 | F | 000036B8 | 4 | 2979 | 2966 |
| X76 | F | 00003738 | 4 | 3011 | 2998 |
| X77 | F | 000037B8 | 4 | 3045 | 3032 |
| X78 | F | 00003838 | 4 | 3077 | 3064 |
| X79 | F | 000038B8 | 4 | 3109 | 3096 |
| X8 | F | 00001538 | 4 | 803 | 790 |
| X80 | F | 00003938 | 4 | 3142 | 3129 |
| X81 | F | 000039B8 | 4 | 3174 | 3161 |
| X82 | F | 00003A38 | 4 | 3206 | 3193 |
| X83 | F | 00003AB8 | 4 | 3249 | 3236 |
| X84 | F | 00003B38 | 4 | 3281 | 3268 |
| X85 | F | 00003BB8 | 4 | 3313 | 3300 |
| X86 | F | 00003C38 | 4 | 3345 | 3332 |
| X87 | F | 00003CB8 | 4 | 3377 | 3364 |
| X88 | F | 00003D38 | 4 | 3409 | 3396 |
| X89 | F | 00003DB8 | 4 | 3441 | 3428 |
| X9 | F | 000015B8 | 4 | 835 | 822 |
| X90 | F | 00003E38 | 4 | 3474 | 3461 |
| X91 | F | 00003EB8 | 4 | 3507 | 3494 |
| X92 | F | 00003F38 | 4 | 3539 | 3526 |
| X93 | F | 00003FB8 | 4 | 3571 | 3558 |
| X94 | F | 00004038 | 4 | 3603 | 3590 |
| X95 | F | 000040B8 | 4 | 3638 | 3625 |
| X96 | F | 00004138 | 4 | 3672 | 3659 |
| X97 | F | 000041B8 | 4 | 3705 | 3692 |
| X98 | F | 00004238 | 4 | 3739 | 3726 |
| X99 | F | 000042B8 | 4 | 3773 | 3760 |
| ZVE6TST | J | 00000000 | 20216 | 63 | 66 68 72 76 360 64 |
| =AL2(L'MSGMSG) | R | 000004C2 | 2 | 341 | 287 |
| =F'1' | F | 000004B8 | 4 | 338 | 161 237 |
| =H'0' | H | 000004C0 | 2 | 340 | 282 |
| =XL4'3' | X | 000004BC | 4 | 339 | 168 |

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 MACRO    DEFN   REFERENCES

PTTABLE    521    4458
VRI_F      461     562    594    626    658    690    722    755    787    819    853    885    917    953    985   1017   1049   1081
                  1113   1145   1178   1210   1242   1274   1308   1340   1372   1404   1440   1472   1504   1536   1568   1600   1632
                  1665   1697   1729   1761   1793   1827   1860   1892   1924   1957   1993   2025   2057   2089   2121   2153   2185
                  2218   2250   2282   2314   2346   2378   2412   2444   2476   2509   2541   2574   2610   2642   2674   2706   2738
                  2770   2802   2835   2867   2899   2931   2963   2995   3029   3061   3093   3126   3158   3190   3233   3265   3297
                  3329   3361   3393   3425   3458   3491   3523   3555   3587   3622   3656   3689   3723   3757   3800   3832   3864
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   DESC      SYMBOL    SIZE      POS         ADDR

Entry: 0

Image       IMAGE     20216   0000-4EF7   0000-4EF7
  Region              20216   0000-4EF7   0000-4EF7
    CSECT   ZVE6TST   20216   0000-4EF7   0000-4EF7
```

```
   STMT                          FILE NAME
1     /home/tn529/sharedvfp/tests/zvector-e6-05-packarith.asm

** NO ERRORS FOUND **
```