```
  LOC         OBJECT CODE       ADDR1     ADDR2     STMT
                                                        2 ************************************************************************
                                                        3 *
                                                        4 *        Zvector E6 instruction tests for VRR-i encoded:
                                                        5 *
                                                        6 *        E650 VCVB    - VECTOR CONVERT TO BINARY  (32)
                                                        7 *        E652 VCVBG   - VECTOR CONVERT TO BINARY  (64)
                                                        8 *
                                                        9 *        James Wekel June 2024
                                                       10 ************************************************************************
                                                       11
                                                       12 ************************************************************************
                                                       13 *
                                                       14 *        basic instruction tests
                                                       15 *
                                                       16 ************************************************************************
                                                       17 *  This program tests proper functioning of the z/arch E6 VRR-i vector
                                                       18 *  convert to binary instructions. Exceptions are not tested.
                                                       19 *
                                                       20 *  PLEASE NOTE that the tests are very SIMPLE TESTS designed to catch
                                                       21 *  obvious coding errors.  None of the tests are thorough.  They are
                                                       22 *  NOT designed to test all aspects of any of the instructions.
                                                       23 *
                                                       24 ************************************************************************
                                                       25 *
                                                       26 *   *Testcase zvector-e6-11-convertbinary: VECTOR E6 VRR-i instruction
                                                       27 *   *
                                                       28 *   *   Zvector E6 tests for VRR-i encoded instruction:
                                                       29 *   *
                                                       30 *   *   E650 VCVB    - VECTOR CONVERT TO BINARY  (32)
                                                       31 *   *   E652 VCVBG   - VECTOR CONVERT TO BINARY  (64)
                                                       32 *   *
                                                       33 *   *   # ---------------------------------------------------
                                                       34 *   *   #  This tests only the basic function of the instruction.
                                                       35 *   *   #  Exceptions are NOT tested.
                                                       36 *   *   # ---------------------------------------------------
                                                       37 *   *
                                                       38 *   mainsize    2
                                                       39 *   numcpu      1
                                                       40 *   sysclear
                                                       41 *   archlvl     z/Arch
                                                       42 *
                                                       43 *   diag8cmd    enable    # (needed for messages to Hercules console)
                                                       44 *   loadcore    "$(testpath)/zvector-e6-11-convertbinary.core" 0x0
                                                       45 *   diag8cmd    disable   # (reset back to default)
                                                       46 *
                                                       47 *   *Done
                                                       48 ************************************************************************

                          00000000  0000221F     50 ZVE6TST  START 0
00000000                  00000000               51          USING ZVE6TST,R0            Low core addressability
                                                       52
                          00000140  00000000     53 SVOLDPSW EQU   ZVE6TST+X'140'        z/Arch Supervisor call old PSW

00000000                  00000000  000001A0     55          ORG   ZVE6TST+X'1A0'        z/Architecure RESTART PSW
```

```
  LOC         OBJECT CODE       ADDR1     ADDR2     STMT
000001A0  00000001 80000000                           56          DC    X'0000000180000000'
000001A8  00000000 00000200                           57          DC    AD(BEGIN)

000001B0                      000001B0  000001D0      59          ORG   ZVE6TST+X'1D0'        z/Architecure PROGRAM CHECK PSW
000001D0  00020001 80000000                           60          DC    X'0002000180000000'
000001D8  00000000 0000DEAD                           61          DC    AD(X'DEAD')

000001E0                      000001E0  00000200      63          ORG   ZVE6TST+X'200'        Start of actual test program...
                                                      64
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

                                                      66 ************************************************************************
                                                      67 *               The actual "ZVE6TST" program itself...
                                                      68 ************************************************************************
                                                      69 *
                                                      70 *  Architecture Mode: z/Arch
                                                      71 *  Register Usage:
                                                      72 *
                                                      73 *   R0       (work)
                                                      74 *   R1-4     (work)
                                                      75 *   R5       Testing control table - current test base
                                                      76 *   R6-R7    (work)
                                                      77 *   R8       First base register
                                                      78 *   R9       Second base register
                                                      79 *   R10      Third base register
                                                      80 *   R11      E6TEST call return
                                                      81 *   R12      E6TESTS register
                                                      82 *   R13      (work)
                                                      83 *   R14      Subroutine call
                                                      84 *   R15      Secondary Subroutine call or work
                                                      85 *
                                                      86 ************************************************************************

00000200                          00000200            88          USING  BEGIN,R8        FIRST Base Register
00000200                          00001200            89          USING  BEGIN+4096,R9   SECOND Base Register

00000200  0580                                        91 BEGIN    BALR  R8,0             Initalize FIRST base register
00000202  0680                                        92          BCTR  R8,0             Initalize FIRST base register
00000204  0680                                        93          BCTR  R8,0             Initalize FIRST base register

00000206  4190 8800                     00000800      95          LA    R9,2048(,R8)     Initalize SECOND base register
0000020A  4190 9800                     00000800      96          LA    R9,2048(,R9)     Initalize SECOND base register

0000020E  41A0 9800                     00000800      98          LA    R10,2048(,R9)    Initalize THIRD base register
00000212  41A0 A800                     00000800      99          LA    R10,2048(,R10)   Initalize THIRD base register
                                                     100
00000216  B600 827C                     0000047C     101          STCTL R0,R0,CTLR0      Store CR0 to enable AFP
0000021A  9604 827D                     0000047D     102          OI    CTLR0+1,X'04'    Turn on AFP bit
0000021E  9602 827D                     0000047D     103          OI    CTLR0+1,X'02'    Turn on Vector bit
00000222  B700 827C                     0000047C     104          LCTL  R0,R0,CTLR0      Reload updated CR0
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
                                                    106 ********************************************************************************
                                                    107 *               Do tests in the E6TESTS table
                                                    108 ********************************************************************************
                                                    109
00000226  58C0 8284                       00000484 110           L     R12,E6TADR       get table of test addresses
                                                    111
                                0000022A  00000001 112 NEXTE6    EQU   *
0000022A  5850 C000                       00000000 113           L     R5,0(0,R12)       get test address
0000022E  1255                                     114           LTR   R5,R5                have a test?
00000230  4780 8152                       00000352 115           BZ    ENDTEST                 done?
                                                    116
00000234  B982 0000                                117           XGR   R0,R0              no cc error
                                                    118
00000238                  00000000                 119           USING E6TEST,R5
                                                    120
00000238  58B0 5000                       00000000 121           L     R11,TSUB           get address of test routine
0000023C  05BB                                     122           BALR  R11,R11            do test
                                                    123
0000023E  E310 5009 0076                  00000009 124           LB    R1,CCMASK          (failure CC mask)
00000244  8910 0004                       00000004 125           SLL   R1,4               (shift to BC instr CC position)
00000248  4410 8064                       00000264 126           EX    R1,TESTCC             fail if...
                                                    127
                                0000024C  00000001 128 TESTREST  EQU   *
0000024C  E310 5018 0014                  00000018 129           LGF   R1,READDR          get address of expected result
00000252  D507 8F18 1000  00001118        00000000 130           CLC   R1OUTPUT,0(R1)     valid?
00000258  4770 80F8                       000002F8 131           BNE   FAILMSG               no, issue failed message
                                                    132
0000025C  41C0 C004                       00000004 133           LA    R12,4(0,R12)       next test address
00000260  47F0 802A                       0000022A 134           B     NEXTE6
                                                    135
00000264  4700 8068                       00000268 136 TESTCC    BC    0,CCMSG          (fail if unexpected condition code)
                                                    137
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
                                                    139 ********************************************************************************
                                                    140 * cc was not as expected
                                                    141 ********************************************************************************
                                00000268  00000001  142 CCMSG    EQU   *
00000268  E310 0001 0082                  00000001  143          XG    R1,R1
0000026E  E310 5007 0076                  00000007  144          LB    R1,M3           m3 has CS bit
00000274  5410 8288                       00000488  145          N     R1,=F'1'        get CS (CC set) bit
00000278  4780 804C                       0000024C  146          BZ    TESTREST           ignore if not set
                                                    147 *
                                                    148 * extract CC extracted PSW
                                                    149 *
0000027C  5810 8ED4                       000010D4  150          L     R1,CCPSW
00000280  8810 000C                       0000000C  151          SRL   R1,12
00000284  5410 828C                       0000048C  152          N     R1,=XL4'3'
00000288  4210 8EDC                       000010DC  153          STC   R1,CCFOUND      save cc
                                                    154 *
                                                    155 * FILL IN MESSAGE
                                                    156 *
0000028C  4820 5004                       00000004  157          LH    R2,TNUM                  get test number and convert
00000290  4E20 8EC4                       000010C4  158          CVD   R2,DECNUM
00000294  D211 8EAE 8E98      000010AE    00001098  159          MVC   PRT3,EDIT
0000029A  DE11 8EAE 8EC4      000010AE    000010C4  160          ED    PRT3,DECNUM
000002A0  D202 8E53 8EBB      00001053    000010BB  161          MVC   CCPRTNUM(3),PRT3+13      fill in message with test #
                                                    162
000002A6  D207 8E70 500A      00001070    0000000A  163          MVC   CCPRTNAME,OPNAME         fill in message with instruction
                                                    164
000002AC  B982 0022                                 165          XGR   R2,R2                    get CC as U8
000002B0  4320 5008                       00000008  166          IC    R2,CC
000002B4  4E20 8EC4                       000010C4  167          CVD   R2,DECNUM                and convert
000002B8  D211 8EAE 8E98      000010AE    00001098  168          MVC   PRT3,EDIT
000002BE  DE11 8EAE 8EC4      000010AE    000010C4  169          ED    PRT3,DECNUM
000002C4  D200 8E86 8EBD      00001086    000010BD  170          MVC   CCPRTEXP(1),PRT3+15      fill in message with CC field
                                                    171
000002CA  B982 0022                                 172          XGR   R2,R2                    get CCFOUND as U8
000002CE  4320 8EDC                       000010DC  173          IC    R2,CCFOUND
000002D2  4E20 8EC4                       000010C4  174          CVD   R2,DECNUM                and convert
000002D6  D211 8EAE 8E98      000010AE    00001098  175          MVC   PRT3,EDIT
000002DC  DE11 8EAE 8EC4      000010AE    000010C4  176          ED    PRT3,DECNUM
000002E2  D200 8E96 8EBD      00001096    000010BD  177          MVC   CCPRTGOT(1),PRT3+15    fill in message with ccfound
                                                    178
000002E8  4100 0055                       00000055  179          LA    R0,CCPRTLNG            message length
000002EC  4110 8E43                       00001043  180          LA    R1,CCPRTLINE           messagfe address
000002F0  45F0 8160                       00000360  181          BAL   R15,RPTERROR
                                                    182
000002F4  47F0 8142                       00000342  183          B     FAILCONT
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
                                                    185 ************************************************************************
                                                    186 * result not as expected:
                                                    187 *        issue message with test number, instruction under test
                                                    188 *              and instruction l2
                                                    189 ************************************************************************
                                 000002F8  00000001 190 FAILMSG  EQU   *
000002F8  4820 5004                        00000004 191          LH    R2,TNUM             get test number and convert
000002FC  4E20 8EC4                        000010C4 192          CVD   R2,DECNUM
00000300  D211 8EAE 8E98        000010AE  00001098 193          MVC   PRT3,EDIT
00000306  DE11 8EAE 8EC4        000010AE  000010C4 194          ED    PRT3,DECNUM
0000030C  D202 8E14 8EBB        00001014  000010BB 195          MVC   PRTNUM(3),PRT3+13   fill in message with test #
                                                    196
00000312  D207 8E2F 500A        0000102F  0000000A 197          MVC   PRTNAME,OPNAME      fill in message with instruction
                                                    198
00000318  B982 0022                                 199          XGR   R2,R2               get M3 as U8
0000031C  4320 5007                        00000007 200          IC    R2,M3               and convert
00000320  4E20 8EC4                        000010C4 201          CVD   R2,DECNUM
00000324  D211 8EAE 8E98        000010AE  00001098 202          MVC   PRT3,EDIT
0000032A  DE11 8EAE 8EC4        000010AE  000010C4 203          ED    PRT3,DECNUM
00000330  D201 8E40 8EBC        00001040  000010BC 204          MVC   PRTM3(2),PRT3+14    fill in message with m3 field
                                                    205
00000336  4100 003F                        0000003F 206          LA    R0,PRTLNG           message length
0000033A  4110 8E04                        00001004 207          LA    R1,PRTLINE          messagfe address
0000033E  45F0 8160                        00000360 208          BAL   R15,RPTERROR
```

```
                                                    210 ************************************************************************
                                                    211 * continue after a failed test
                                                    212 ************************************************************************
                                 00000342  00000001 213 FAILCONT EQU   *
00000342  5800 8288                        00000488 214          L     R0,=F'1'            set GLOBAL failed test indicator
00000346  5000 8E00                        00001000 215          ST    R0,FAILED
                                                    216
0000034A  41C0 C004                        00000004 217          LA    R12,4(0,R12)        next test address
0000034E  47F0 802A                        0000022A 218          B     NEXTE6
```

```
                                                    220 ************************************************************************
                                                    221 * end of testing; set ending psw
                                                    222 ************************************************************************
                                 00000352  00000001 223 ENDTEST  EQU   *
00000352  5810 8E00                        00001000 224          L     R1,FAILED           did a test fail?
00000356  1211                                      225          LTR   R1,R1
00000358  4780 8260                        00000460 226          BZ    EOJ                    No, exit
0000035C  47F0 8278                        00000478 227          B     FAILTEST               Yes, exit with BAD PSW
                                                    228
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
                                                    230 ************************************************************************
                                                    231 *        RPTERROR          Report instruction test in error
                                                    232 *                             R0 = MESSGAE LENGTH
                                                    233 *                             R1 = ADDRESS OF MESSAGE
                                                    234 ************************************************************************

00000360  50F0 8180                 00000380    236 RPTERROR ST    R15,RPTSAVE          Save return address
00000364  5050 8184                 00000384    237          ST    R5,RPTSVR5           Save R5
                                                    238 *
                                                    239 *        Use Hercules Diagnose for Message to console
                                                    240 *
00000368  9002 8188                 00000388    241          STM   R0,R2,RPTDWSAV       save regs used by MSG
0000036C  4520 8198                 00000398    242          BAL   R2,MSG               call Hercules console MSG display
00000370  9802 8188                 00000388    243          LM    R0,R2,RPTDWSAV       restore regs


00000374  5850 8184                 00000384    245          L     R5,RPTSVR5           Restore R5
00000378  58F0 8180                 00000380    246          L     R15,RPTSAVE          Restore return address
0000037C  07FF                                  247          BR    R15                  Return to caller

00000380  00000000                              249 RPTSAVE  DC    F'0'                 R15 save area
00000384  00000000                              250 RPTSVR5  DC    F'0'                 R5 save area

00000388  00000000 00000000                     252 RPTDWSAV DC    2D'0'                R0-R2 save area for MSG call
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
                                                    254 ********************************************************************************
                                                    255 *        Issue HERCULES MESSAGE pointed to by R1, length in R0
                                                    256 *              R2 = return address
                                                    257 ********************************************************************************
                                                    258
00000398  4900 8290                 00000490       259 MSG      CH    R0,=H'0'                Do we even HAVE a message?
0000039C  07D2                                     260          BNHR  R2                      No, ignore
                                                   261
0000039E  9002 81D0                 000003D0       262          STM   R0,R2,MSGSAVE           Save registers
                                                   263
000003A2  4900 8292                 00000492       264          CH    R0,=AL2(L'MSGMSG)       Message length within limits?
000003A6  47D0 81AE                 000003AE       265          BNH   MSGOK                   Yes, continue
000003AA  4100 005F                 0000005F       266          LA    R0,L'MSGMSG             No, set to maximum
                                                   267
000003AE  1820                                     268 MSGOK    LR    R2,R0                   Copy length to work register
000003B0  0620                                     269          BCTR  R2,0                    Minus-1 for execute
000003B2  4420 81DC                 000003DC       270          EX    R2,MSGMVC               Copy message to O/P buffer
                                                   271
000003B6  4120 200A                 0000000A       272          LA    R2,1+L'MSGCMD(,R2)      Calculate true command length
000003BA  4110 81E2                 000003E2       273          LA    R1,MSGCMD               Point to true command
                                                   274
000003BE  83120008                                 275          DC    X'83',X'12',X'0008'     Issue Hercules Diagnose X'008'
000003C2  4780 81C8                 000003C8       276          BZ    MSGRET                  Return if successful
000003C6  0000                                     277          DC    H'0'                    CRASH for debugging purposes
                                                   278
000003C8  9802 81D0                 000003D0       279 MSGRET   LM    R0,R2,MSGSAVE           Restore registers
000003CC  07F2                                     280          BR    R2                      Return to caller


000003D0  00000000 00000000                        282 MSGSAVE  DC    3F'0'                   Registers save area
000003DC  D200 81EB 1000      000003EB  00000000   283 MSGMVC   MVC   MSGMSG(0),0(R1)         Executed instruction


000003E2  D4E2C7D5 D6C8405C                        285 MSGCMD   DC    C'MSGNOH * '            *** HERCULES MESSAGE COMMAND ***
000003EB  40404040 40404040                        286 MSGMSG   DC    CL95' '                 The message text to be displayed
                                                   287
```

```
  LOC         OBJECT CODE       ADDR1     ADDR2     STMT
                                                     289 ********************************************************************************
                                                     290 *        Normal completion or Abnormal termination PSWs
                                                     291 ********************************************************************************


00000450  00020001 80000000                          293 EOJPSW   DC    0D'0',X'0002000180000000',AD(0)
00000460  B2B2 8250                    00000450      295 EOJ      LPSWE EOJPSW               Normal completion


00000468  00020001 80000000                          297 FAILPSW  DC    0D'0',X'0002000180000000',AD(X'BAD')
00000478  B2B2 8268                    00000468      299 FAILTEST LPSWE FAILPSW              Abnormal termination


                                                     301 ********************************************************************************
                                                     302 *        Working Storage
                                                     303 ********************************************************************************


0000047C  00000000                                   305 CTLR0    DS    F                    CR0
00000480  00000000                                   306          DS    F
                                                     307
00000484  00002158                                   308 E6TADR   DC    A(E6TESTS)           address of E6 test table


00000488                                             310          LTORG ,                    Literals pool
00000488  00000001                                   311                =F'1'
0000048C  00000003                                   312                =XL4'3'
00000490  0000                                       313                =H'0'
00000492  005F                                       314                =AL2(L'MSGMSG)
                                                     315
                                                     316 *        some constants
                                                     317
                          00000400  00000001        318 K        EQU   1024                 One KB
                          00001000  00000001        319 PAGE     EQU   (4*K)                Size of one page
                          00010000  00000001        320 K64      EQU   (64*K)               64 KB
                          00100000  00000001        321 MB       EQU   (K*K)                 1 MB
                                                     322
                                                     323
                          AABBCCDD  00000001        324 REG2PATT EQU   X'AABBCCDD'      Polluted Register pattern
                          000000DD  00000001        325 REG2LOW  EQU         X'DD'      (last byte above)
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
                                                     327 *=====================================================================
                                                     328 *
                                                     329 *  NOTE: start data on an address that is easy to display
                                                     330 *        within Hercules
                                                     331 *
                                                     332 *=====================================================================
                                                     333
00000494                      00000494  00001000     334          ORG   ZVE6TST+X'1000'
00001000  00000000                                   335 FAILED   DC    F'0'                      some test failed?


                                                     337 ************************************************************************
                                                     338 *        TEST failed : result messgae
                                                     339 ************************************************************************
                                                     340 *
                                                     341 *        failed message and associated editting
                                                     342 *
00001004  40404040 40404040                          343 PRTLINE  DC    C'         Test # '
00001014  A7A7A7                                     344 PRTNUM   DC    C'xxx'
00001017  40868189 93858440                          345          DC    C' failed for instruction '
0000102F  A7A7A7A7 A7A7A7A7                          346 PRTNAME  DC    CL8'xxxxxxxx'
00001037  40A689A3 884094F3                          347          DC    C' with m3='
00001040  A7A7                                       348 PRTM3    DC    C'xx'
00001042  4B                                         349          DC    C'.'
                              0000003F  00000001     350 PRTLNG   EQU   *-PRTLINE


                                                     352 ************************************************************************
                                                     353 *        TEST failed : CC message
                                                     354 ************************************************************************
                                                     355 *
                                                     356 *        failed message and associated editting
                                                     357 *
00001043  40404040 40404040                          358 CCPRTLINE DC   C'         Test # '
00001053  A7A7A7                                     359 CCPRTNUM DC    C'xxx'
00001056  40A69996 95874083                          360          DC    c' wrong cc for instruction '
00001070  A7A7A7A7 A7A7A7A7                          361 CCPRTNAME DC    CL8'xxxxxxxx'
00001078  4085A797 8583A385                          362          DC    C' expected: cc='
00001086  A7                                        363 CCPRTEXP DC    C'x'
00001087  6B                                         364          DC    C','
00001088  40998583 8589A585                          365          DC    C' received: cc='
00001096  A7                                         366 CCPRTGOT DC    C'x'
00001097  4B                                         367          DC    C'.'
                              00000055  00000001     368 CCPRTLNG   EQU   *-CCPRTLINE
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
                                                     370 ************************************************************************
                                                     371 *        TEST failed : message working storge
                                                     372 ************************************************************************
00001098  40212020 20202020                          373 EDIT     DC    XL18'40212020202020202020202020202020'
                                                     374
000010AA  7E7E7E6E                                   375          DC    C'===>'
000010AE  40404040 40404040                          376 PRT3     DC    CL18' '
000010C0  4C7E7E7E                                   377          DC    C'<==='
000010C4  00000000 00000000                          378 DECNUM   DS    CL16
                                                     379 *
                                                     380 *        CC extrtaction
                                                     381 *
000010D4  00000000 00000000                          382 CCPSW    DS    2F          extract PSW after test (has CC)
000010DC  00                                         383 CCFOUND  DS    X           extracted cc

                                                     385 ************************************************************************
                                                     386 *        Vector instruction results, pollution and input
                                                     387 ************************************************************************
000010E0                                             388          DS    0FD
000010E0  AABBCCDD EEFFAABB                          389 R1FUDGE  DC    XL8'AABBCCDDEEFFAABB'                    R1 FUDGE
000010E8  00000000 00000000                          390          DS    XL16                                        gap
000010F8  00000000 00000000                          391 V1OUTPUT DS    XL16                                     V1 OUTPUT
00001108  00000000 00000000                          392          DS    XL16                                        gap
00001118  00000000 00000000                          393 R1OUTPUT DS    FD                                       R1 OUTPUT
00001120  00000000 00000000                          394          DS    XL16                                        gap
00001130  FFFFFFFF FFFFFFFF                          395 V1FUDGE  DC    XL16'FFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF'   V1 FUDGE
00001140  BBBBBBBB BBBBBBBB                          396 V1FUDGEB DC    XL16'BBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBB'   V1 FUDGE b
00001150  F1F2F3F4 F5F6F7F8                          397 V1INPUT  DC    CL16'1234567890123456'                   V1 input
00001160  F7F8F9F0 F1F2F3F4                          398          DC    CL14'78901234567890'
0000116E  D9                                         399          DC    X'D9'
0000116F  00000000 00000000                          400          DS    XL16                                        gap
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
                                                     402 ********************************************************************************
                                                     403 *        E6TEST DSECT
                                                     404 ********************************************************************************


                                                     406 E6TEST   DSECT ,
00000000  00000000                                   407 TSUB     DC    A(0)           pointer  to test
00000004  0000                                       408 TNUM     DC    H'00'          Test Number
00000006  00                                         409          DC    XL1'00'
00000007  00                                         410 M3       DC    HL1'00'        M3
00000008  00                                         411 CC       DC    HL1'00'        cc
00000009  00                                         412 CCMASK   DC    HL1'00'        not expected CC mask
                                                     413
0000000A  40404040 40404040                          414 OPNAME   DC    CL8' '         E6 name
                                                     415
00000014  00000000                                   416 RELEN    DC    A(0)           RESULT LENGTH
00000018  00000000                                   417 READDR   DC    A(0)           expected result address
                                                     418
                                                     419 **
                                                     420 *        test routine will be here (from VRR_I macro)
                                                     421 *              followed by
                                                     422 *              r1     - expected result (64 bits) (even for VCVB)
                                                     423 *              v1     - 16 byte packed decimal source
```

```
 LOC        OBJECT CODE       ADDR1     ADDR2     STMT
                                                   425 ************************************************************************
                                                   426 *     Macros to help build test tables
                                                   427 *----------------------------------------------------------------------
                                                   428 *     VRR_I Macro to help build test tables
                                                   429 ************************************************************************
                                                   430          MACRO
                                                   431          VRR_I &INST,&M3,&CC
                                                   432 .*                                  &INST  - VRS-d instruction under test
                                                   433 .*                                  &M3    - P2 (bit 0), P1 (bit 2) and
                                                   434 .*                                    CS (bit 3)
                                                   435 .*                                  &CC    - expected CC
                                                   436 .*
                                                   437 .*                       note:      M4    - bit 0   IOM (always 0)
                                                   438 .*
                                                   439 .*
                                                   440          LCLA  &XCC(4)  &CC has mask values for FAILED condition codes
                                                   441 &XCC(1)  SETA  7                    CC != 0
                                                   442 &XCC(2)  SETA  11                   CC != 1
                                                   443 &XCC(3)  SETA  13                   CC != 2
                                                   444 &XCC(4)  SETA  14                   CC != 3
                                                   445
                                                   446          GBLA  &TNUM
                                                   447 &TNUM    SETA  &TNUM+1
                                                   448
                                                   449          DS    0FD
                                                   450          USING *,R5                base for test data and test routine
                                                   451
                                                   452 T&TNUM   DC    A(X&TNUM)           address of test routine
                                                   453          DC    H'&TNUM'            test number
                                                   454          DC    XL1'00'
                                                   455          DC    HL1'&M3'            &M3
                                                   456          DC    HL1'&CC'            cc
                                                   457          DC    HL1'&XCC(&CC+1)'    cc failed mask
                                                   458
                                                   459          DC    CL8'&INST'          instruction name
                                                   460          DC    A(16)               result length
                                                   461 REA&TNUM DC    A(RE&TNUM)          result address
                                                   462 .*
                                                   463 *                                  INSTRUCTION UNDER TEST ROUTINE
                                                   464 X&TNUM   DS    0F
                                                   465          LG    R1,R1FUDGE          pollute R1
                                                   466          VL    V1,RE&TNUM+8        get V1 source
                                                   467
                                                   468          &INST R1,V1,&M3           test instruction
                                                   469
                                                   470          STG   R1,R1OUTPUT         save
                                                   471          EPSW  R2,R0               exptract psw
                                                   472          ST    R2,CCPSW                to save CC
                                                   473
                                                   474          BR    R11                 return
                                                   475
                                                   476 RE&TNUM  DC    0F
                                                   477          DROP  R5
                                                   478
                                                   479          MEND
```

```
 LOC         OBJECT CODE       ADDR1     ADDR2     STMT

                                                     481 ********************************************************************************
                                                     482 *     PTTABLE Macro to generate table of pointers to individual tests
                                                     483 ********************************************************************************
                                                     484
                                                     485          MACRO
                                                     486          PTTABLE
                                                     487          GBLA  &TNUM
                                                     488          LCLA  &CUR
                                                     489 &CUR     SETA  1
                                                     490 .*
                                                     491 TTABLE   DS    0F
                                                     492 .LOOP    ANOP
                                                     493 .*
                                                     494          DC    A(T&CUR)           address of test
                                                     495 .*
                                                     496 &CUR     SETA  &CUR+1
                                                     497          AIF   (&CUR LE &TNUM).LOOP
                                                     498 *
                                                     499          DC    A(0)               END OF TABLE
                                                     500          DC    A(0)
                                                     501 .*
                                                     502          MEND
```

```
  LOC         OBJECT CODE       ADDR1     ADDR2     STMT
                                                      504 ********************************************************************************
                                                      505 *        E6 VRR_I tests
                                                      506 ********************************************************************************
                              00000000  0000221F    507 ZVE6TST  CSECT ,
00001180                                            508          DS    0F


                                                      510          PRINT DATA
                                                      511 *
                                                      512 *        E650 VCVB    - VECTOR CONVERT TO BINARY  (32)
                                                      513 *        E652 VCVBG   - VECTOR CONVERT TO BINARY  (64)
                                                      514 *
                                                      515 *        VRR_I instr, m3, m4
                                                      516 *             followed by
                                                      517 *             r1     - expected result (64 bits) (even for VCVB)
                                                      518 *             v1     - 16 byte packed decimal source
                                                      519
                                                      520 *-------------------------------------------------------------------
                                                      521 * VCVB    - VECTOR CONVERT TO BINARY  (32)
                                                      522 *-------------------------------------------------------------------
                                                      523 * VCVB simple
                                                      524          VRR_I VCVB,1,0
00001180                                              525+         DS    0FD
00001180                              00001180        526+         USING *,R5              base for test data and test routine
00001180  0000119C                                    527+T1       DC    A(X1)             address of test routine
00001184  0001                                        528+         DC    H'1'              test number
00001186  00                                          529+         DC    XL1'00'
00001187  01                                          530+         DC    HL1'1'            &M3
00001188  00                                          531+         DC    HL1'0'            cc
00001189  07                                          532+         DC    HL1'7'            cc failed mask
0000118A  E5C3E5C2 40404040                           533+         DC    CL8'VCVB'         instruction name
00001194  00000010                                    534+         DC    A(16)             result length
00001198  000011C0                                    535+REA1     DC    A(RE1)            result address
                                                      536+*                                  INSTRUCTION UNDER TEST ROUTINE
0000119C                                              537+X1       DS    0F
0000119C  E310 8EE0 0004                 000010E0     538+         LG    R1,R1FUDGE        pollute R1
000011A2  E710 5048 0006                 000011C8     539+         VL    V1,RE1+8          get V1 source
000011A8  E611 0010 0050                              540+         VCVB  R1,V1,1           test instruction
000011AE  E310 8F18 0024                 00001118     541+         STG   R1,R1OUTPUT       save
000011B4  B98D 0020                                   542+         EPSW  R2,R0             exptract psw
000011B8  5020 8ED4                      000010D4     543+         ST    R2,CCPSW              to save CC
000011BC  07FB                                        544+         BR    R11               return
000011C0                                              545+RE1      DC    0F
000011C0                                              546+         DROP  R5
000011C0  AABBCCDD 0000000A                           547          DC    XL08'AABBCCDD0000000A'                    R1 result
000011C8  00000000 00000000                           548          DC    XL16'0000000000000000000000000000010C'    V1 source
000011D0  00000000 0000010C
                                                      549
                                                      550          VRR_I VCVB,1,0
000011D8                                              551+         DS    0FD
000011D8                    000011D8                  552+         USING *,R5              base for test data and test routine
000011D8  000011F4                                    553+T2       DC    A(X2)             address of test routine
000011DC  0002                                        554+         DC    H'2'              test number
000011DE  00                                          555+         DC    XL1'00'
000011DF  01                                          556+         DC    HL1'1'            &M3
000011E0  00                                          557+         DC    HL1'0'            cc
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

000011E1  07                                       558+          DC    HL1'7'              cc failed mask
000011E2  E5C3E5C2 40404040                        559+          DC    CL8'VCVB'           instruction name
000011EC  00000010                                 560+          DC    A(16)               result length
000011F0  00001218                                 561+REA2      DC    A(RE2)              result address
                                                   562+*                                   INSTRUCTION UNDER TEST ROUTINE
000011F4                                           563+X2        DS    0F
000011F4  E310 8EE0 0004                 000010E0  564+          LG    R1,R1FUDGE          pollute R1
000011FA  E710 9020 0006                 00001220  565+          VL    V1,RE2+8            get V1 source
00001200  E611 0010 0050                           566+          VCVB  R1,V1,1             test instruction
00001206  E310 8F18 0024                 00001118  567+          STG   R1,R1OUTPUT         save
0000120C  B98D 0020                                568+          EPSW  R2,R0               exptract psw
00001210  5020 8ED4                      000010D4  569+          ST    R2,CCPSW                to save CC
00001214  07FB                                     570+          BR    R11                 return
00001218                                           571+RE2       DC    0F
00001218                                           572+          DROP  R5
00001218  AABBCCDD FFFFFFF6                        573           DC    XL08'AABBCCDDFFFFFFF6'                    R1 result
00001220  00000000 00000000                        574           DC    XL16'0000000000000000000000000000010D'    V1 source
00001228  00000000 0000010D
                                                   575
                                                   576           VRR_I VCVB,1,0
00001230                                           577+          DS    0FD
00001230                 00001230                  578+          USING *,R5                base for test data and test routine
00001230  0000124C                                 579+T3        DC    A(X3)               address of test routine
00001234  0003                                     580+          DC    H'3'                test number
00001236  00                                       581+          DC    XL1'00'
00001237  01                                       582+          DC    HL1'1'              &M3
00001238  00                                       583+          DC    HL1'0'              cc
00001239  07                                       584+          DC    HL1'7'              cc failed mask
0000123A  E5C3E5C2 40404040                        585+          DC    CL8'VCVB'           instruction name
00001244  00000010                                 586+          DC    A(16)               result length
00001248  00001270                                 587+REA3      DC    A(RE3)              result address
                                                   588+*                                   INSTRUCTION UNDER TEST ROUTINE
0000124C                                           589+X3        DS    0F
0000124C  E310 8EE0 0004                 000010E0  590+          LG    R1,R1FUDGE          pollute R1
00001252  E710 5048 0006                 00001278  591+          VL    V1,RE3+8            get V1 source
00001258  E611 0010 0050                           592+          VCVB  R1,V1,1             test instruction
0000125E  E310 8F18 0024                 00001118  593+          STG   R1,R1OUTPUT         save
00001264  B98D 0020                                594+          EPSW  R2,R0               exptract psw
00001268  5020 8ED4                      000010D4  595+          ST    R2,CCPSW                to save CC
0000126C  07FB                                     596+          BR    R11                 return
00001270                                           597+RE3       DC    0F
00001270                                           598+          DROP  R5
00001270  AABBCCDD 0008A160                        599           DC    XL08'AABBCCDD0008A160'                    R1 result
00001278  00000000 00000000                        600           DC    XL16'0000000000000000000000000565600C'    V1 source
00001280  00000000 0565600C
                                                   601
                                                   602           VRR_I VCVB,1,0
00001288                                           603+          DS    0FD
00001288                 00001288                  604+          USING *,R5                base for test data and test routine
00001288  000012A4                                 605+T4        DC    A(X4)               address of test routine
0000128C  0004                                     606+          DC    H'4'                test number
0000128E  00                                       607+          DC    XL1'00'
0000128F  01                                       608+          DC    HL1'1'              &M3
00001290  00                                       609+          DC    HL1'0'              cc
00001291  07                                       610+          DC    HL1'7'              cc failed mask
00001292  E5C3E5C2 40404040                        611+          DC    CL8'VCVB'           instruction name
```

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  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

0000129C  00000010                                612+         DC    A(16)             result length
000012A0  000012C8                                613+REA4     DC    A(RE4)            result address
                                                  614+*                                INSTRUCTION UNDER TEST ROUTINE
000012A4                                          615+X4       DS    0F
000012A4  E310 8EE0 0004                 000010E0 616+         LG    R1,R1FUDGE        pollute R1
000012AA  E710 5048 0006                 000012D0 617+         VL    V1,RE4+8          get V1 source
000012B0  E611 0010 0050                          618+         VCVB  R1,V1,1           test instruction
000012B6  E310 8F18 0024                 00001118 619+         STG   R1,R1OUTPUT       save
000012BC  B98D 0020                               620+         EPSW  R2,R0             exptract psw
000012C0  5020 8ED4                      000010D4 621+         ST    R2,CCPSW              to save CC
000012C4  07FB                                    622+         BR    R11               return
000012C8                                          623+RE4      DC    0F
000012C8                                          624+         DROP  R5
000012C8  AABBCCDD FFF75EA0                       625          DC    XL08'AABBCCDDFFF75EA0'                    R1 result
000012D0  00000000 00000000                       626          DC    XL16'0000000000000000000000000565600D'    V1 source
000012D8  00000000 0565600D
                                                  627
                                                  628          VRR_I VCVB,1,0                                  INT_MAX
000012E0                                          629+         DS    0FD
000012E0                          000012E0        630+         USING *,R5              base for test data and test routine
000012E0  000012FC                                631+T5       DC    A(X5)             address of test routine
000012E4  0005                                    632+         DC    H'5'              test number
000012E6  00                                      633+         DC    XL1'00'
000012E7  01                                      634+         DC    HL1'1'            &M3
000012E8  00                                      635+         DC    HL1'0'            cc
000012E9  07                                      636+         DC    HL1'7'            cc failed mask
000012EA  E5C3E5C2 40404040                       637+         DC    CL8'VCVB'         instruction name
000012F4  00000010                                638+         DC    A(16)             result length
000012F8  00001320                                639+REA5     DC    A(RE5)            result address
                                                  640+*                                INSTRUCTION UNDER TEST ROUTINE
000012FC                                          641+X5       DS    0F
000012FC  E310 8EE0 0004                 000010E0 642+         LG    R1,R1FUDGE        pollute R1
00001302  E710 5048 0006                 00001328 643+         VL    V1,RE5+8          get V1 source
00001308  E611 0010 0050                          644+         VCVB  R1,V1,1           test instruction
0000130E  E310 8F18 0024                 00001118 645+         STG   R1,R1OUTPUT       save
00001314  B98D 0020                               646+         EPSW  R2,R0             exptract psw
00001318  5020 8ED4                      000010D4 647+         ST    R2,CCPSW              to save CC
0000131C  07FB                                    648+         BR    R11               return
00001320                                          649+RE5      DC    0F
00001320                                          650+         DROP  R5
00001320  AABBCCDD 7FFFFFFF                       651          DC    XL08'AABBCCDD7FFFFFFF'                    R1 result
00001328  00000000 00000000                       652          DC    XL16'0000000000000000000002147483647C'    V1 source
00001330  00000214 7483647C
                                                  653
                                                  654          VRR_I VCVB,1,0                                  INT_MIN
00001338                                          655+         DS    0FD
00001338                          00001338        656+         USING *,R5              base for test data and test routine
00001338  00001354                                657+T6       DC    A(X6)             address of test routine
0000133C  0006                                    658+         DC    H'6'              test number
0000133E  00                                      659+         DC    XL1'00'
0000133F  01                                      660+         DC    HL1'1'            &M3
00001340  00                                      661+         DC    HL1'0'            cc
00001341  07                                      662+         DC    HL1'7'            cc failed mask
00001342  E5C3E5C2 40404040                       663+         DC    CL8'VCVB'         instruction name
0000134C  00000010                                664+         DC    A(16)             result length
00001350  00001378                                665+REA6     DC    A(RE6)            result address
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
                                          666+*                          INSTRUCTION UNDER TEST ROUTINE
00001354                                  667+X6       DS    0F
00001354  E310 8EE0 0004                  668+         LG    R1,R1FUDGE       pollute R1
0000135A  E710 5048 0006                  669+         VL    V1,RE6+8         get V1 source
00001360  E611 0010 0050                  670+         VCVB  R1,V1,1          test instruction
00001366  E310 8F18 0024                  671+         STG   R1,R1OUTPUT      save
0000136C  B98D 0020                       672+         EPSW  R2,R0            exptract psw
00001370  5020 8ED4                       673+         ST    R2,CCPSW             to save CC
00001374  07FB                            674+         BR    R11              return
00001378                                  675+RE6      DC    0F
00001378                                  676+         DROP  R5
00001378  AABBCCDD 80000000               677          DC    XL08'AABBCCDD80000000'                    R1 result
00001380  00000000 00000000               678          DC    XL16'00000000000000000000002147483648D'   V1 source
00001388  00000214 7483648D
                                          679
                                          680          VRR_I VCVB,3,0                                  UINT_MAX
00001390                                  681+         DS    0FD
00001390                  00001390        682+         USING *,R5             base for test data and test routine
00001390  000013AC                        683+T7       DC    A(X7)            address of test routine
00001394  0007                            684+         DC    H'7'             test number
00001396  00                              685+         DC    XL1'00'
00001397  03                              686+         DC    HL1'3'           &M3
00001398  00                              687+         DC    HL1'0'           cc
00001399  07                              688+         DC    HL1'7'           cc failed mask
0000139A  E5C3E5C2 40404040               689+         DC    CL8'VCVB'        instruction name
000013A4  00000010                        690+         DC    A(16)            result length
000013A8  000013D0                        691+REA7     DC    A(RE7)           result address
                                          692+*                          INSTRUCTION UNDER TEST ROUTINE
000013AC                                  693+X7       DS    0F
000013AC  E310 8EE0 0004          000010E0 694+         LG    R1,R1FUDGE       pollute R1
000013B2  E710 5048 0006          000013D8 695+         VL    V1,RE7+8         get V1 source
000013B8  E611 0030 0050                  696+         VCVB  R1,V1,3          test instruction
000013BE  E310 8F18 0024          00001118 697+         STG   R1,R1OUTPUT      save
000013C4  B98D 0020                       698+         EPSW  R2,R0            exptract psw
000013C8  5020 8ED4               000010D4 699+         ST    R2,CCPSW             to save CC
000013CC  07FB                            700+         BR    R11              return
000013D0                                  701+RE7      DC    0F
000013D0                                  702+         DROP  R5
000013D0  AABBCCDD FFFFFFFF               703          DC    XL08'AABBCCDDFFFFFFFF'                    R1 result
000013D8  00000000 00000000               704          DC    XL16'00000000000000000000004294967295C'   V1 source
000013E0  00000429 4967295C
                                          705
                                          706          VRR_I VCVB,3,3                                  UINT_MAX +1
000013E8                                  707+         DS    0FD
000013E8                  000013E8        708+         USING *,R5             base for test data and test routine
000013E8  00001404                        709+T8       DC    A(X8)            address of test routine
000013EC  0008                            710+         DC    H'8'             test number
000013EE  00                              711+         DC    XL1'00'
000013EF  03                              712+         DC    HL1'3'           &M3
000013F0  03                              713+         DC    HL1'3'           cc
000013F1  0E                              714+         DC    HL1'14'          cc failed mask
000013F2  E5C3E5C2 40404040               715+         DC    CL8'VCVB'        instruction name
000013FC  00000010                        716+         DC    A(16)            result length
00001400  00001428                        717+REA8     DC    A(RE8)           result address
                                          718+*                          INSTRUCTION UNDER TEST ROUTINE
00001404                                  719+X8       DS    0F
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

00001404  E310 8EE0 0004                 000010E0   720+         LG    R1,R1FUDGE        pollute R1
0000140A  E710 5048 0006                 00001430   721+         VL    V1,RE8+8          get V1 source
00001410  E611 0030 0050                            722+         VCVB  R1,V1,3           test instruction
00001416  E310 8F18 0024                 00001118   723+         STG   R1,R1OUTPUT       save
0000141C  B98D 0020                                 724+         EPSW  R2,R0             exptract psw
00001420  5020 8ED4                      000010D4   725+         ST    R2,CCPSW              to save CC
00001424  07FB                                      726+         BR    R11               return
00001428                                            727+RE8      DC    0F
00001428                                            728+         DROP  R5
00001428  AABBCCDD 00000000                         729          DC    XL08'AABBCCDD00000000'                    R1 result
00001430  00000000 00000000                         730          DC    XL16'00000000000000000000004294967296C'   V1 source
00001438  00000429 4967296C
                                                    731
                                                    732          VRR_I VCVB,1,3
00001440                                            733+         DS    0FD
00001440                         00001440           734+         USING *,R5              base for test data and test routine
00001440  0000145C                                  735+T9       DC    A(X9)             address of test routine
00001444  0009                                      736+         DC    H'9'              test number
00001446  00                                        737+         DC    XL1'00'
00001447  01                                        738+         DC    HL1'1'            &M3
00001448  03                                        739+         DC    HL1'3'            cc
00001449  0E                                        740+         DC    HL1'14'           cc failed mask
0000144A  E5C3E5C2 40404040                         741+         DC    CL8'VCVB'         instruction name
00001454  00000010                                  742+         DC    A(16)             result length
00001458  00001480                                  743+REA9     DC    A(RE9)            result address
                                                    744+*                                INSTRUCTION UNDER TEST ROUTINE
0000145C                                            745+X9       DS    0F
0000145C  E310 8EE0 0004                 000010E0   746+         LG    R1,R1FUDGE        pollute R1
00001462  E710 5048 0006                 00001488   747+         VL    V1,RE9+8          get V1 source
00001468  E611 0010 0050                            748+         VCVB  R1,V1,1           test instruction
0000146E  E310 8F18 0024                 00001118   749+         STG   R1,R1OUTPUT       save
00001474  B98D 0020                                 750+         EPSW  R2,R0             exptract psw
00001478  5020 8ED4                      000010D4   751+         ST    R2,CCPSW              to save CC
0000147C  07FB                                      752+         BR    R11               return
00001480                                            753+RE9      DC    0F
00001480                                            754+         DROP  R5
00001480  AABBCCDD DF8E1660                         755          DC    XL08'AABBCCDDDF8E1660'                    R1 result
00001488  00000000 00000000                         756          DC    XL16'00000000000000000000012340565600C'   V1 source
00001490  00001234 0565600C
                                                    757
                                                    758 * VCVB simple: p2=1
                                                    759          VRR_I VCVB,9,0
00001498                                            760+         DS    0FD
00001498                         00001498           761+         USING *,R5              base for test data and test routine
00001498  000014B4                                  762+T10      DC    A(X10)            address of test routine
0000149C  000A                                      763+         DC    H'10'             test number
0000149E  00                                        764+         DC    XL1'00'
0000149F  09                                        765+         DC    HL1'9'            &M3
000014A0  00                                        766+         DC    HL1'0'            cc
000014A1  07                                        767+         DC    HL1'7'            cc failed mask
000014A2  E5C3E5C2 40404040                         768+         DC    CL8'VCVB'         instruction name
000014AC  00000010                                  769+         DC    A(16)             result length
000014B0  000014D8                                  770+REA10    DC    A(RE10)           result address
                                                    771+*                                INSTRUCTION UNDER TEST ROUTINE
000014B4                                            772+X10      DS    0F
000014B4  E310 8EE0 0004                 000010E0   773+         LG    R1,R1FUDGE        pollute R1
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

000014BA  E710 5048 0006                 000014E0   774+         VL    V1,RE10+8          get V1 source
000014C0  E611 0090 0050                            775+         VCVB  R1,V1,9            test instruction
000014C6  E310 8F18 0024                 00001118   776+         STG   R1,R1OUTPUT        save
000014CC  B98D 0020                                 777+         EPSW  R2,R0              exptract psw
000014D0  5020 8ED4                      000010D4   778+         ST    R2,CCPSW                to save CC
000014D4  07FB                                      779+         BR    R11                return
000014D8                                            780+RE10     DC    0F
000014D8                                            781+         DROP  R5
000014D8  AABBCCDD 0000000A                         782          DC    XL08'AABBCCDD0000000A'                     R1 result
000014E0  00000000 00000000                         783          DC    XL16'0000000000000000000000000000010C'     V1 source
000014E8  00000000 0000010C
                                                    784
                                                    785          VRR_I VCVB,9,0
000014F0                                            786+         DS    0FD
000014F0                         000014F0           787+         USING *,R5               base for test data and test routine
000014F0  0000150C                                  788+T11      DC    A(X11)             address of test routine
000014F4  000B                                      789+         DC    H'11'              test number
000014F6  00                                        790+         DC    XL1'00'
000014F7  09                                        791+         DC    HL1'9'             &M3
000014F8  00                                        792+         DC    HL1'0'             cc
000014F9  07                                        793+         DC    HL1'7'             cc failed mask
000014FA  E5C3E5C2 40404040                         794+         DC    CL8'VCVB'          instruction name
00001504  00000010                                  795+         DC    A(16)              result length
00001508  00001530                                  796+REA11    DC    A(RE11)            result address
                                                    797+*                                 INSTRUCTION UNDER TEST ROUTINE
0000150C                                            798+X11      DS    0F
0000150C  E310 8EE0 0004                 000010E0   799+         LG    R1,R1FUDGE         pollute R1
00001512  E710 5048 0006                 00001538   800+         VL    V1,RE11+8          get V1 source
00001518  E611 0090 0050                            801+         VCVB  R1,V1,9            test instruction
0000151E  E310 8F18 0024                 00001118   802+         STG   R1,R1OUTPUT        save
00001524  B98D 0020                                 803+         EPSW  R2,R0              exptract psw
00001528  5020 8ED4                      000010D4   804+         ST    R2,CCPSW                to save CC
0000152C  07FB                                      805+         BR    R11                return
00001530                                            806+RE11     DC    0F
00001530                                            807+         DROP  R5
00001530  AABBCCDD 0000000A                         808          DC    XL08'AABBCCDD0000000A'                     R1 result
00001538  00000000 00000000                         809          DC    XL16'0000000000000000000000000000010D'     V1 source
00001540  00000000 0000010D
                                                    810
                                                    811          VRR_I VCVB,9,0
00001548                                            812+         DS    0FD
00001548                         00001548           813+         USING *,R5               base for test data and test routine
00001548  00001564                                  814+T12      DC    A(X12)             address of test routine
0000154C  000C                                      815+         DC    H'12'              test number
0000154E  00                                        816+         DC    XL1'00'
0000154F  09                                        817+         DC    HL1'9'             &M3
00001550  00                                        818+         DC    HL1'0'             cc
00001551  07                                        819+         DC    HL1'7'             cc failed mask
00001552  E5C3E5C2 40404040                         820+         DC    CL8'VCVB'          instruction name
0000155C  00000010                                  821+         DC    A(16)              result length
00001560  00001588                                  822+REA12    DC    A(RE12)            result address
                                                    823+*                                 INSTRUCTION UNDER TEST ROUTINE
00001564                                            824+X12      DS    0F
00001564  E310 8EE0 0004                 000010E0   825+         LG    R1,R1FUDGE         pollute R1
0000156A  E710 5048 0006                 00001590   826+         VL    V1,RE12+8          get V1 source
00001570  E611 0090 0050                            827+         VCVB  R1,V1,9            test instruction
```

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  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

00001576  E310 8F18 0024                 00001118   828+          STG   R1,R1OUTPUT       save
0000157C  B98D 0020                                 829+          EPSW  R2,R0             exptract psw
00001580  5020 8ED4                      000010D4   830+          ST    R2,CCPSW              to save CC
00001584  07FB                                      831+          BR    R11               return
00001588                                            832+RE12      DC    0F
00001588                                            833+          DROP  R5
00001588  AABBCCDD 0008A160                         834           DC    XL08'AABBCCDD0008A160'                    R1 result
00001590  00000000 00000000                         835           DC    XL16'0000000000000000000000000565600C'    V1 source
00001598  00000000 0565600C
                                                    836
                                                    837           VRR_I VCVB,9,0
000015A0                                            838+          DS    0FD
000015A0                         000015A0           839+          USING *,R5              base for test data and test routine
000015A0  000015BC                                  840+T13       DC    A(X13)            address of test routine
000015A4  000D                                      841+          DC    H'13'             test number
000015A6  00                                        842+          DC    XL1'00'
000015A7  09                                        843+          DC    HL1'9'            &M3
000015A8  00                                        844+          DC    HL1'0'            cc
000015A9  07                                        845+          DC    HL1'7'            cc failed mask
000015AA  E5C3E5C2 40404040                         846+          DC    CL8'VCVB'         instruction name
000015B4  00000010                                  847+          DC    A(16)             result length
000015B8  000015E0                                  848+REA13     DC    A(RE13)           result address
                                                    849+*                                 INSTRUCTION UNDER TEST ROUTINE
000015BC                                            850+X13       DS    0F
000015BC  E310 8EE0 0004                 000010E0   851+          LG    R1,R1FUDGE        pollute R1
000015C2  E710 5048 0006                 000015E8   852+          VL    V1,RE13+8         get V1 source
000015C8  E611 0090 0050                            853+          VCVB  R1,V1,9           test instruction
000015CE  E310 8F18 0024                 00001118   854+          STG   R1,R1OUTPUT       save
000015D4  B98D 0020                                 855+          EPSW  R2,R0             exptract psw
000015D8  5020 8ED4                      000010D4   856+          ST    R2,CCPSW              to save CC
000015DC  07FB                                      857+          BR    R11               return
000015E0                                            858+RE13      DC    0F
000015E0                                            859+          DROP  R5
000015E0  AABBCCDD 0008A160                         860           DC    XL08'AABBCCDD0008A160'                    R1 result
000015E8  00000000 00000000                         861           DC    XL16'0000000000000000000000000565600D'    V1 source
000015F0  00000000 0565600D
                                                    862
                                                    863           VRR_I VCVB,9,0                                  INT_MAX
000015F8                                            864+          DS    0FD
000015F8                         000015F8           865+          USING *,R5              base for test data and test routine
000015F8  00001614                                  866+T14       DC    A(X14)            address of test routine
000015FC  000E                                      867+          DC    H'14'             test number
000015FE  00                                        868+          DC    XL1'00'
000015FF  09                                        869+          DC    HL1'9'            &M3
00001600  00                                        870+          DC    HL1'0'            cc
00001601  07                                        871+          DC    HL1'7'            cc failed mask
00001602  E5C3E5C2 40404040                         872+          DC    CL8'VCVB'         instruction name
0000160C  00000010                                  873+          DC    A(16)             result length
00001610  00001638                                  874+REA14     DC    A(RE14)           result address
                                                    875+*                                 INSTRUCTION UNDER TEST ROUTINE
00001614                                            876+X14       DS    0F
00001614  E310 8EE0 0004                 000010E0   877+          LG    R1,R1FUDGE        pollute R1
0000161A  E710 5048 0006                 00001640   878+          VL    V1,RE14+8         get V1 source
00001620  E611 0090 0050                            879+          VCVB  R1,V1,9           test instruction
00001626  E310 8F18 0024                 00001118   880+          STG   R1,R1OUTPUT       save
0000162C  B98D 0020                                 881+          EPSW  R2,R0             exptract psw
```

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  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
00001630  5020 8ED4                      000010D4   882+          ST    R2,CCPSW              to save CC
00001634  07FB                                       883+          BR    R11                 return
00001638                                             884+RE14      DC    0F
00001638                                             885+          DROP  R5
00001638  AABBCCDD 7FFFFFFF                          886           DC    XL08'AABBCCDD7FFFFFFF'                    R1 result
00001640  00000000 00000000                          887           DC    XL16'0000000000000000000002147483647C'    V1 source
00001648  00000214 7483647C
                                                     888
                                                     889           VRR_I VCVB,9,3                                  INT_MIN
00001650                                             890+          DS    0FD
00001650                    00001650                 891+          USING *,R5                base for test data and test routine
00001650  0000166C                                   892+T15       DC    A(X15)              address of test routine
00001654  000F                                       893+          DC    H'15'               test number
00001656  00                                         894+          DC    XL1'00'
00001657  09                                         895+          DC    HL1'9'              &M3
00001658  03                                         896+          DC    HL1'3'              cc
00001659  0E                                         897+          DC    HL1'14'             cc failed mask
0000165A  E5C3E5C2 40404040                          898+          DC    CL8'VCVB'           instruction name
00001664  00000010                                   899+          DC    A(16)               result length
00001668  00001690                                   900+REA15     DC    A(RE15)             result address
                                                     901+*                                   INSTRUCTION UNDER TEST ROUTINE
0000166C                                             902+X15       DS    0F
0000166C  E310 8EE0 0004                 000010E0    903+          LG    R1,R1FUDGE          pollute R1
00001672  E710 5048 0006                 00001698    904+          VL    V1,RE15+8           get V1 source
00001678  E611 0090 0050                             905+          VCVB  R1,V1,9             test instruction
0000167E  E310 8F18 0024                 00001118    906+          STG   R1,R1OUTPUT         save
00001684  B98D 0020                                  907+          EPSW  R2,R0               exptract psw
00001688  5020 8ED4                      000010D4    908+          ST    R2,CCPSW              to save CC
0000168C  07FB                                       909+          BR    R11                 return
00001690                                             910+RE15      DC    0F
00001690                                             911+          DROP  R5
00001690  AABBCCDD 80000000                          912           DC    XL08'AABBCCDD80000000'                    R1 result
00001698  00000000 00000000                          913           DC    XL16'0000000000000000000002147483648D'    V1 source
000016A0  00000214 7483648D
                                                     914
                                                     915           VRR_I VCVB,11,0                                 UINT_MAX
000016A8                                             916+          DS    0FD
000016A8                    000016A8                 917+          USING *,R5                base for test data and test routine
000016A8  000016C4                                   918+T16       DC    A(X16)              address of test routine
000016AC  0010                                       919+          DC    H'16'               test number
000016AE  00                                         920+          DC    XL1'00'
000016AF  0B                                         921+          DC    HL1'11'             &M3
000016B0  00                                         922+          DC    HL1'0'              cc
000016B1  07                                         923+          DC    HL1'7'              cc failed mask
000016B2  E5C3E5C2 40404040                          924+          DC    CL8'VCVB'           instruction name
000016BC  00000010                                   925+          DC    A(16)               result length
000016C0  000016E8                                   926+REA16     DC    A(RE16)             result address
                                                     927+*                                   INSTRUCTION UNDER TEST ROUTINE
000016C4                                             928+X16       DS    0F
000016C4  E310 8EE0 0004                 000010E0    929+          LG    R1,R1FUDGE          pollute R1
000016CA  E710 5048 0006                 000016F0    930+          VL    V1,RE16+8           get V1 source
000016D0  E611 00B0 0050                             931+          VCVB  R1,V1,11            test instruction
000016D6  E310 8F18 0024                 00001118    932+          STG   R1,R1OUTPUT         save
000016DC  B98D 0020                                  933+          EPSW  R2,R0               exptract psw
000016E0  5020 8ED4                      000010D4    934+          ST    R2,CCPSW              to save CC
000016E4  07FB                                       935+          BR    R11                 return
```

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  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

000016E8                                           936+RE16     DC    0F
000016E8                                           937+         DROP  R5
000016E8  AABBCCDD FFFFFFFF                        938          DC    XL08'AABBCCDDFFFFFFFF'                    R1 result
000016F0  00000000 00000000                        939          DC    XL16'00000000000000000000004294967295C'   V1 source
000016F8  00000429 4967295C
                                                   940
                                                   941          VRR_I VCVB,11,3                                  UINT_MAX +1
00001700                                           942+         DS    0FD
00001700                     00001700              943+         USING *,R5              base for test data and test routine
00001700  0000171C                                 944+T17      DC    A(X17)            address of test routine
00001704  0011                                     945+         DC    H'17'             test number
00001706  00                                       946+         DC    XL1'00'
00001707  0B                                       947+         DC    HL1'11'           &M3
00001708  03                                       948+         DC    HL1'3'            cc
00001709  0E                                       949+         DC    HL1'14'           cc failed mask
0000170A  E5C3E5C2 40404040                        950+         DC    CL8'VCVB'         instruction name
00001714  00000010                                 951+         DC    A(16)             result length
00001718  00001740                                 952+REA17    DC    A(RE17)           result address
                                                   953+*                                INSTRUCTION UNDER TEST ROUTINE
0000171C                                           954+X17      DS    0F
0000171C  E310 8EE0 0004              000010E0     955+         LG    R1,R1FUDGE        pollute R1
00001722  E710 5048 0006              00001748     956+         VL    V1,RE17+8         get V1 source
00001728  E611 00B0 0050                           957+         VCVB  R1,V1,11          test instruction
0000172E  E310 8F18 0024              00001118     958+         STG   R1,R1OUTPUT       save
00001734  B98D 0020                                959+         EPSW  R2,R0             exptract psw
00001738  5020 8ED4                   000010D4     960+         ST    R2,CCPSW              to save CC
0000173C  07FB                                     961+         BR    R11               return
00001740                                           962+RE17     DC    0F
00001740                                           963+         DROP  R5
00001740  AABBCCDD 00000000                        964          DC    XL08'AABBCCDD00000000'                    R1 result
00001748  00000000 00000000                        965          DC    XL16'00000000000000000000004294967296C'   V1 source
00001750  00000429 4967296C
                                                   966
                                                   967          VRR_I VCVB,9,3
00001758                                           968+         DS    0FD
00001758                     00001758              969+         USING *,R5              base for test data and test routine
00001758  00001774                                 970+T18      DC    A(X18)            address of test routine
0000175C  0012                                     971+         DC    H'18'             test number
0000175E  00                                       972+         DC    XL1'00'
0000175F  09                                       973+         DC    HL1'9'            &M3
00001760  03                                       974+         DC    HL1'3'            cc
00001761  0E                                       975+         DC    HL1'14'           cc failed mask
00001762  E5C3E5C2 40404040                        976+         DC    CL8'VCVB'         instruction name
0000176C  00000010                                 977+         DC    A(16)             result length
00001770  00001798                                 978+REA18    DC    A(RE18)           result address
                                                   979+*                                INSTRUCTION UNDER TEST ROUTINE
00001774                                           980+X18      DS    0F
00001774  E310 8EE0 0004              000010E0     981+         LG    R1,R1FUDGE        pollute R1
0000177A  E710 5048 0006              000017A0     982+         VL    V1,RE18+8         get V1 source
00001780  E611 0090 0050                           983+         VCVB  R1,V1,9           test instruction
00001786  E310 8F18 0024              00001118     984+         STG   R1,R1OUTPUT       save
0000178C  B98D 0020                                985+         EPSW  R2,R0             exptract psw
00001790  5020 8ED4                   000010D4     986+         ST    R2,CCPSW              to save CC
00001794  07FB                                     987+         BR    R11               return
00001798                                           988+RE18     DC    0F
00001798                                           989+         DROP  R5
```

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  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

00001798  AABBCCDD DF8E1660                          990          DC    XL08'AABBCCDDDF8E1660'                    R1 result
000017A0  00000000 00000000                          991          DC    XL16'0000000000000000000012340565600C'  V1 source
000017A8  00001234 0565600C
                                                     992
                                                     993 *-------------------------------------------------------------------
                                                     994 * VCVBG   - VECTOR CONVERT TO BINARY  (64)
                                                     995 *-------------------------------------------------------------------
                                                     996 * VCVBG simple
                                                     997          VRR_I VCVBG,1,0
000017B0                                             998+         DS    0FD
000017B0                          000017B0           999+         USING *,R5               base for test data and test routine
000017B0  000017CC                                  1000+T19      DC    A(X19)             address of test routine
000017B4  0013                                      1001+         DC    H'19'              test number
000017B6  00                                        1002+         DC    XL1'00'
000017B7  01                                        1003+         DC    HL1'1'             &M3
000017B8  00                                        1004+         DC    HL1'0'             cc
000017B9  07                                        1005+         DC    HL1'7'             cc failed mask
000017BA  E5C3E5C2 C7404040                        1006+         DC    CL8'VCVBG'         instruction name
000017C4  00000010                                  1007+         DC    A(16)              result length
000017C8  000017F0                                  1008+REA19    DC    A(RE19)            result address
                                                    1009+*                                 INSTRUCTION UNDER TEST ROUTINE
000017CC                                            1010+X19      DS    0F
000017CC  E310 8EE0 0004                 000010E0   1011+         LG    R1,R1FUDGE         pollute R1
000017D2  E710 5048 0006                 000017F8   1012+         VL    V1,RE19+8          get V1 source
000017D8  E611 0010 0052                            1013+         VCVBG R1,V1,1            test instruction
000017DE  E310 8F18 0024                 00001118   1014+         STG   R1,R1OUTPUT        save
000017E4  B98D 0020                                 1015+         EPSW  R2,R0              exptract psw
000017E8  5020 8ED4                      000010D4   1016+         ST    R2,CCPSW               to save CC
000017EC  07FB                                      1017+         BR    R11                return
000017F0                                            1018+RE19     DC    0F
000017F0                                            1019+         DROP  R5
000017F0  00000000 0000000A                        1020          DC    XL08'000000000000000A'                    R1 result
000017F8  00000000 00000000                        1021          DC    XL16'0000000000000000000000000000010C'  V1 source
00001800  00000000 0000010C
                                                    1022
                                                    1023          VRR_I VCVBG,1,0
00001808                                            1024+         DS    0FD
00001808                          00001808          1025+         USING *,R5               base for test data and test routine
00001808  00001824                                  1026+T20      DC    A(X20)             address of test routine
0000180C  0014                                      1027+         DC    H'20'              test number
0000180E  00                                        1028+         DC    XL1'00'
0000180F  01                                        1029+         DC    HL1'1'             &M3
00001810  00                                        1030+         DC    HL1'0'             cc
00001811  07                                        1031+         DC    HL1'7'             cc failed mask
00001812  E5C3E5C2 C7404040                        1032+         DC    CL8'VCVBG'         instruction name
0000181C  00000010                                  1033+         DC    A(16)              result length
00001820  00001848                                  1034+REA20    DC    A(RE20)            result address
                                                    1035+*                                 INSTRUCTION UNDER TEST ROUTINE
00001824                                            1036+X20      DS    0F
00001824  E310 8EE0 0004                 000010E0   1037+         LG    R1,R1FUDGE         pollute R1
0000182A  E710 5048 0006                 00001850   1038+         VL    V1,RE20+8          get V1 source
00001830  E611 0010 0052                            1039+         VCVBG R1,V1,1            test instruction
00001836  E310 8F18 0024                 00001118   1040+         STG   R1,R1OUTPUT        save
0000183C  B98D 0020                                 1041+         EPSW  R2,R0              exptract psw
00001840  5020 8ED4                      000010D4   1042+         ST    R2,CCPSW               to save CC
00001844  07FB                                      1043+         BR    R11                return
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  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
00001848                                           1044+RE20     DC    0F
00001848                                           1045+         DROP  R5
00001848  FFFFFFFF FFFFFFF6                        1046          DC    XL08'FFFFFFFFFFFFFFF6'                    R1 result
00001850  00000000 00000000                        1047          DC    XL16'0000000000000000000000000000010D'    V1 source
00001858  00000000 0000010D
                                                   1048
                                                   1049          VRR_I VCVBG,1,0
00001860                                           1050+         DS    0FD
00001860                     00001860              1051+         USING *,R5              base for test data and test routine
00001860  0000187C                                 1052+T21      DC    A(X21)            address of test routine
00001864  0015                                     1053+         DC    H'21'             test number
00001866  00                                       1054+         DC    XL1'00'
00001867  01                                       1055+         DC    HL1'1'            &M3
00001868  00                                       1056+         DC    HL1'0'            cc
00001869  07                                       1057+         DC    HL1'7'            cc failed mask
0000186A  E5C3E5C2 C7404040                        1058+         DC    CL8'VCVBG'        instruction name
00001874  00000010                                 1059+         DC    A(16)             result length
00001878  000018A0                                 1060+REA21    DC    A(RE21)           result address
                                                   1061+*                                INSTRUCTION UNDER TEST ROUTINE
0000187C                                           1062+X21      DS    0F
0000187C  E310 8EE0 0004              000010E0     1063+         LG    R1,R1FUDGE        pollute R1
00001882  E710 5048 0006              000018A8     1064+         VL    V1,RE21+8         get V1 source
00001888  E611 0010 0052                           1065+         VCVBG R1,V1,1           test instruction
0000188E  E310 8F18 0024              00001118     1066+         STG   R1,R1OUTPUT       save
00001894  B98D 0020                                1067+         EPSW  R2,R0             exptract psw
00001898  5020 8ED4                   000010D4     1068+         ST    R2,CCPSW              to save CC
0000189C  07FB                                     1069+         BR    R11               return
000018A0                                           1070+RE21     DC    0F
000018A0                                           1071+         DROP  R5
000018A0  00000000 0008A160                        1072          DC    XL08'000000000008A160'                    R1 result
000018A8  00000000 00000000                        1073          DC    XL16'0000000000000000000000000565600C'    V1 source
000018B0  00000000 0565600C
                                                   1074
                                                   1075          VRR_I VCVBG,1,0
000018B8                                           1076+         DS    0FD
000018B8                     000018B8              1077+         USING *,R5              base for test data and test routine
000018B8  000018D4                                 1078+T22      DC    A(X22)            address of test routine
000018BC  0016                                     1079+         DC    H'22'             test number
000018BE  00                                       1080+         DC    XL1'00'
000018BF  01                                       1081+         DC    HL1'1'            &M3
000018C0  00                                       1082+         DC    HL1'0'            cc
000018C1  07                                       1083+         DC    HL1'7'            cc failed mask
000018C2  E5C3E5C2 C7404040                        1084+         DC    CL8'VCVBG'        instruction name
000018CC  00000010                                 1085+         DC    A(16)             result length
000018D0  000018F8                                 1086+REA22    DC    A(RE22)           result address
                                                   1087+*                                INSTRUCTION UNDER TEST ROUTINE
000018D4                                           1088+X22      DS    0F
000018D4  E310 8EE0 0004              000010E0     1089+         LG    R1,R1FUDGE        pollute R1
000018DA  E710 5048 0006              00001900     1090+         VL    V1,RE22+8         get V1 source
000018E0  E611 0010 0052                           1091+         VCVBG R1,V1,1           test instruction
000018E6  E310 8F18 0024              00001118     1092+         STG   R1,R1OUTPUT       save
000018EC  B98D 0020                                1093+         EPSW  R2,R0             exptract psw
000018F0  5020 8ED4                   000010D4     1094+         ST    R2,CCPSW              to save CC
000018F4  07FB                                     1095+         BR    R11               return
000018F8                                           1096+RE22     DC    0F
000018F8                                           1097+         DROP  R5
```

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  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
000018F8  FFFFFFFF FFF75EA0                        1098          DC    XL08'FFFFFFFFFFF75EA0'                    R1 result
00001900  00000000 00000000                        1099          DC    XL16'0000000000000000000000000565600D'    V1 source
00001908  00000000 0565600D
                                                   1100
                                                   1101          VRR_I VCVBG,1,0                                 INT_MAX
00001910                                           1102+         DS    0FD
00001910                     00001910              1103+         USING *,R5              base for test data and test routine
00001910  0000192C                                 1104+T23      DC    A(X23)            address of test routine
00001914  0017                                     1105+         DC    H'23'             test number
00001916  00                                       1106+         DC    XL1'00'
00001917  01                                       1107+         DC    HL1'1'            &M3
00001918  00                                       1108+         DC    HL1'0'            cc
00001919  07                                       1109+         DC    HL1'7'            cc failed mask
0000191A  E5C3E5C2 C7404040                        1110+         DC    CL8'VCVBG'        instruction name
00001924  00000010                                 1111+         DC    A(16)             result length
00001928  00001950                                 1112+REA23    DC    A(RE23)           result address
                                                   1113+*                                INSTRUCTION UNDER TEST ROUTINE
0000192C                                           1114+X23      DS    0F
0000192C  E310 8EE0 0004               000010E0    1115+         LG    R1,R1FUDGE        pollute R1
00001932  E710 5048 0006               00001958    1116+         VL    V1,RE23+8         get V1 source
00001938  E611 0010 0052                           1117+         VCVBG R1,V1,1           test instruction
0000193E  E310 8F18 0024               00001118    1118+         STG   R1,R1OUTPUT       save
00001944  B98D 0020                                1119+         EPSW  R2,R0             exptract psw
00001948  5020 8ED4                    000010D4    1120+         ST    R2,CCPSW              to save CC
0000194C  07FB                                     1121+         BR    R11               return
00001950                                           1122+RE23     DC    0F
00001950                                           1123+         DROP  R5
00001950  00000000 7FFFFFFF                        1124          DC    XL08'000000007FFFFFFF'                    R1 result
00001958  00000000 00000000                        1125          DC    XL16'0000000000000000000002147483647C'    V1 source
00001960  00000214 7483647C
                                                   1126
                                                   1127          VRR_I VCVBG,1,0                                 INT_MIN
00001968                                           1128+         DS    0FD
00001968                     00001968              1129+         USING *,R5              base for test data and test routine
00001968  00001984                                 1130+T24      DC    A(X24)            address of test routine
0000196C  0018                                     1131+         DC    H'24'             test number
0000196E  00                                       1132+         DC    XL1'00'
0000196F  01                                       1133+         DC    HL1'1'            &M3
00001970  00                                       1134+         DC    HL1'0'            cc
00001971  07                                       1135+         DC    HL1'7'            cc failed mask
00001972  E5C3E5C2 C7404040                        1136+         DC    CL8'VCVBG'        instruction name
0000197C  00000010                                 1137+         DC    A(16)             result length
00001980  000019A8                                 1138+REA24    DC    A(RE24)           result address
                                                   1139+*                                INSTRUCTION UNDER TEST ROUTINE
00001984                                           1140+X24      DS    0F
00001984  E310 8EE0 0004               000010E0    1141+         LG    R1,R1FUDGE        pollute R1
0000198A  E710 5048 0006               000019B0    1142+         VL    V1,RE24+8         get V1 source
00001990  E611 0010 0052                           1143+         VCVBG R1,V1,1           test instruction
00001996  E310 8F18 0024               00001118    1144+         STG   R1,R1OUTPUT       save
0000199C  B98D 0020                                1145+         EPSW  R2,R0             exptract psw
000019A0  5020 8ED4                    000010D4    1146+         ST    R2,CCPSW              to save CC
000019A4  07FB                                     1147+         BR    R11               return
000019A8                                           1148+RE24     DC    0F
000019A8                                           1149+         DROP  R5
000019A8  FFFFFFFF 80000000                        1150          DC    XL08'FFFFFFFF80000000'                    R1 result
000019B0  00000000 00000000                        1151          DC    XL16'0000000000000000000002147483648D'    V1 source
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
000019B8  00000214 7483648D                          1152
                                                     1153          VRR_I VCVBG,1,0                                 UINT_MAX
000019C0                                             1154+         DS    0FD
000019C0                        000019C0             1155+         USING *,R5              base for test data and test routine
000019C0  000019DC                                   1156+T25      DC    A(X25)            address of test routine
000019C4  0019                                       1157+         DC    H'25'             test number
000019C6  00                                         1158+         DC    XL1'00'
000019C7  01                                         1159+         DC    HL1'1'            &M3
000019C8  00                                         1160+         DC    HL1'0'            cc
000019C9  07                                         1161+         DC    HL1'7'            cc failed mask
000019CA  E5C3E5C2 C7404040                          1162+         DC    CL8'VCVBG'        instruction name
000019D4  00000010                                   1163+         DC    A(16)             result length
000019D8  00001A00                                   1164+REA25    DC    A(RE25)           result address
                                                     1165+*                                  INSTRUCTION UNDER TEST ROUTINE
000019DC                                             1166+X25      DS    0F
000019DC  E310 8EE0 0004                 000010E0    1167+         LG    R1,R1FUDGE        pollute R1
000019E2  E710 5048 0006                 00001A08    1168+         VL    V1,RE25+8         get V1 source
000019E8  E611 0010 0052                             1169+         VCVBG R1,V1,1           test instruction
000019EE  E310 8F18 0024                 00001118    1170+         STG   R1,R1OUTPUT       save
000019F4  B98D 0020                                  1171+         EPSW  R2,R0             exptract psw
000019F8  5020 8ED4                      000010D4    1172+         ST    R2,CCPSW              to save CC
000019FC  07FB                                       1173+         BR    R11               return
00001A00                                             1174+RE25     DC    0F
00001A00                                             1175+         DROP  R5
00001A00  00000000 FFFFFFFF                          1176          DC    XL08'00000000FFFFFFFF'                    R1 result
00001A08  00000000 00000000                          1177          DC    XL16'0000000000000000000004294967295C'    V1 source
00001A10  00000429 4967295C
                                                     1178
                                                     1179          VRR_I VCVBG,1,0                                 UINT_MAX +1
00001A18                                             1180+         DS    0FD
00001A18                        00001A18             1181+         USING *,R5              base for test data and test routine
00001A18  00001A34                                   1182+T26      DC    A(X26)            address of test routine
00001A1C  001A                                       1183+         DC    H'26'             test number
00001A1E  00                                         1184+         DC    XL1'00'
00001A1F  01                                         1185+         DC    HL1'1'            &M3
00001A20  00                                         1186+         DC    HL1'0'            cc
00001A21  07                                         1187+         DC    HL1'7'            cc failed mask
00001A22  E5C3E5C2 C7404040                          1188+         DC    CL8'VCVBG'        instruction name
00001A2C  00000010                                   1189+         DC    A(16)             result length
00001A30  00001A58                                   1190+REA26    DC    A(RE26)           result address
                                                     1191+*                                  INSTRUCTION UNDER TEST ROUTINE
00001A34                                             1192+X26      DS    0F
00001A34  E310 8EE0 0004                 000010E0    1193+         LG    R1,R1FUDGE        pollute R1
00001A3A  E710 5048 0006                 00001A60    1194+         VL    V1,RE26+8         get V1 source
00001A40  E611 0010 0052                             1195+         VCVBG R1,V1,1           test instruction
00001A46  E310 8F18 0024                 00001118    1196+         STG   R1,R1OUTPUT       save
00001A4C  B98D 0020                                  1197+         EPSW  R2,R0             exptract psw
00001A50  5020 8ED4                      000010D4    1198+         ST    R2,CCPSW              to save CC
00001A54  07FB                                       1199+         BR    R11               return
00001A58                                             1200+RE26     DC    0F
00001A58                                             1201+         DROP  R5
00001A58  00000001 00000000                          1202          DC    XL08'0000000100000000'                    R1 result
00001A60  00000000 00000000                          1203          DC    XL16'0000000000000000000004294967296C'    V1 source
00001A68  00000429 4967296C
                                                     1204
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
                                                   1205          VRR_I VCVBG,1,0
00001A70                                           1206+         DS    0FD
00001A70                     00001A70              1207+         USING *,R5              base for test data and test routine
00001A70  00001A8C                                 1208+T27      DC    A(X27)            address of test routine
00001A74  001B                                     1209+         DC    H'27'             test number
00001A76  00                                       1210+         DC    XL1'00'
00001A77  01                                       1211+         DC    HL1'1'            &M3
00001A78  00                                       1212+         DC    HL1'0'            cc
00001A79  07                                       1213+         DC    HL1'7'            cc failed mask
00001A7A  E5C3E5C2 C7404040                        1214+         DC    CL8'VCVBG'        instruction name
00001A84  00000010                                 1215+         DC    A(16)             result length
00001A88  00001AB0                                 1216+REA27    DC    A(RE27)           result address
                                                   1217+*                                INSTRUCTION UNDER TEST ROUTINE
00001A8C                                           1218+X27      DS    0F
00001A8C  E310 8EE0 0004              000010E0     1219+         LG    R1,R1FUDGE        pollute R1
00001A92  E710 5048 0006              00001AB8     1220+         VL    V1,RE27+8         get V1 source
00001A98  E611 0010 0052                           1221+         VCVBG R1,V1,1           test instruction
00001A9E  E310 8F18 0024              00001118     1222+         STG   R1,R1OUTPUT       save
00001AA4  B98D 0020                                1223+         EPSW  R2,R0             exptract psw
00001AA8  5020 8ED4                   000010D4     1224+         ST    R2,CCPSW              to save CC
00001AAC  07FB                                     1225+         BR    R11               return
00001AB0                                           1226+RE27     DC    0F
00001AB0                                           1227+         DROP  R5
00001AB0  00000002 DF8E1660                        1228          DC    XL08'00000002DF8E1660'                    R1 result
00001AB8  00000000 00000000                        1229          DC    XL16'00000000000000000000012340565600C'   V1 source
00001AC0  00001234 0565600C
                                                   1230
                                                   1231          VRR_I VCVBG,1,0                                 LONG_MAX
00001AC8                                           1232+         DS    0FD
00001AC8                     00001AC8              1233+         USING *,R5              base for test data and test routine
00001AC8  00001AE4                                 1234+T28      DC    A(X28)            address of test routine
00001ACC  001C                                     1235+         DC    H'28'             test number
00001ACE  00                                       1236+         DC    XL1'00'
00001ACF  01                                       1237+         DC    HL1'1'            &M3
00001AD0  00                                       1238+         DC    HL1'0'            cc
00001AD1  07                                       1239+         DC    HL1'7'            cc failed mask
00001AD2  E5C3E5C2 C7404040                        1240+         DC    CL8'VCVBG'        instruction name
00001ADC  00000010                                 1241+         DC    A(16)             result length
00001AE0  00001B08                                 1242+REA28    DC    A(RE28)           result address
                                                   1243+*                                INSTRUCTION UNDER TEST ROUTINE
00001AE4                                           1244+X28      DS    0F
00001AE4  E310 8EE0 0004              000010E0     1245+         LG    R1,R1FUDGE        pollute R1
00001AEA  E710 5048 0006              00001B10     1246+         VL    V1,RE28+8         get V1 source
00001AF0  E611 0010 0052                           1247+         VCVBG R1,V1,1           test instruction
00001AF6  E310 8F18 0024              00001118     1248+         STG   R1,R1OUTPUT       save
00001AFC  B98D 0020                                1249+         EPSW  R2,R0             exptract psw
00001B00  5020 8ED4                   000010D4     1250+         ST    R2,CCPSW              to save CC
00001B04  07FB                                     1251+         BR    R11               return
00001B08                                           1252+RE28     DC    0F
00001B08                                           1253+         DROP  R5
00001B08  7FFFFFFF FFFFFFFF                        1254          DC    XL08'7FFFFFFFFFFFFFFF'                    R1 result
00001B10  00000000 00009223                        1255          DC    XL16'00000000000092233720368547758O7C'    V1 source
00001B18  37203685 4775807C
                                                   1256
                                                   1257          VRR_I VCVBG,1,0                                 LONG_MIN
00001B20                                           1258+         DS    0FD
```

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  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

00001B20                     00001B20              1259+         USING *,R5              base for test data and test routine
00001B20  00001B3C                                 1260+T29      DC    A(X29)            address of test routine
00001B24  001D                                     1261+         DC    H'29'             test number
00001B26  00                                       1262+         DC    XL1'00'
00001B27  01                                       1263+         DC    HL1'1'            &M3
00001B28  00                                       1264+         DC    HL1'0'            cc
00001B29  07                                       1265+         DC    HL1'7'            cc failed mask
00001B2A  E5C3E5C2 C7404040                        1266+         DC    CL8'VCVBG'        instruction name
00001B34  00000010                                 1267+         DC    A(16)             result length
00001B38  00001B60                                 1268+REA29    DC    A(RE29)           result address
                                                   1269+*                                  INSTRUCTION UNDER TEST ROUTINE
00001B3C                                           1270+X29      DS    0F
00001B3C  E310 8EE0 0004              000010E0     1271+         LG    R1,R1FUDGE        pollute R1
00001B42  E710 5048 0006              00001B68     1272+         VL    V1,RE29+8         get V1 source
00001B48  E611 0010 0052                           1273+         VCVBG R1,V1,1           test instruction
00001B4E  E310 8F18 0024              00001118     1274+         STG   R1,R1OUTPUT       save
00001B54  B98D 0020                                1275+         EPSW  R2,R0             exptract psw
00001B58  5020 8ED4                   000010D4     1276+         ST    R2,CCPSW              to save CC
00001B5C  07FB                                     1277+         BR    R11               return
00001B60                                           1278+RE29     DC    0F
00001B60                                           1279+         DROP  R5
00001B60  80000000 00000000                        1280          DC    XL08'8000000000000000'                    R1 result
00001B68  00000000 00009223                        1281          DC    XL16'00000000000092233720368547758080'    V1 source
00001B70  37203685 4775808D
                                                   1282
                                                   1283          VRR_I VCVBG,3,0                                 ULONG_MAX

00001B78                                           1284+         DS    0FD
00001B78                     00001B78              1285+         USING *,R5              base for test data and test routine
00001B78  00001B94                                 1286+T30      DC    A(X30)            address of test routine
00001B7C  001E                                     1287+         DC    H'30'             test number
00001B7E  00                                       1288+         DC    XL1'00'
00001B7F  03                                       1289+         DC    HL1'3'            &M3
00001B80  00                                       1290+         DC    HL1'0'            cc
00001B81  07                                       1291+         DC    HL1'7'            cc failed mask
00001B82  E5C3E5C2 C7404040                        1292+         DC    CL8'VCVBG'        instruction name
00001B8C  00000010                                 1293+         DC    A(16)             result length
00001B90  00001BB8                                 1294+REA30    DC    A(RE30)           result address
                                                   1295+*                                  INSTRUCTION UNDER TEST ROUTINE
00001B94                                           1296+X30      DS    0F
00001B94  E310 8EE0 0004              000010E0     1297+         LG    R1,R1FUDGE        pollute R1
00001B9A  E710 5048 0006              00001BC0     1298+         VL    V1,RE30+8         get V1 source
00001BA0  E611 0030 0052                           1299+         VCVBG R1,V1,3           test instruction
00001BA6  E310 8F18 0024              00001118     1300+         STG   R1,R1OUTPUT       save
00001BAC  B98D 0020                                1301+         EPSW  R2,R0             exptract psw
00001BB0  5020 8ED4                   000010D4     1302+         ST    R2,CCPSW              to save CC
00001BB4  07FB                                     1303+         BR    R11               return
00001BB8                                           1304+RE30     DC    0F
00001BB8                                           1305+         DROP  R5
00001BB8  FFFFFFFF FFFFFFFF                        1306          DC    XL08'FFFFFFFFFFFFFFFF'                    R1 result
00001BC0  00000000 00018446                        1307          DC    XL16'0000000000018446744073709551615C'    V1 source
00001BC8  74407370 9551615C
                                                   1308
                                                   1309          VRR_I VCVBG,3,3                                 ULONG_MAX +1

00001BD0                                           1310+         DS    0FD
00001BD0                     00001BD0              1311+         USING *,R5              base for test data and test routine
00001BD0  00001BEC                                 1312+T31      DC    A(X31)            address of test routine
```

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  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

00001BD4  001F                                     1313+          DC    H'31'              test number
00001BD6  00                                       1314+          DC    XL1'00'
00001BD7  03                                       1315+          DC    HL1'3'             &M3
00001BD8  03                                       1316+          DC    HL1'3'             cc
00001BD9  0E                                       1317+          DC    HL1'14'            cc failed mask
00001BDA  E5C3E5C2 C7404040                        1318+          DC    CL8'VCVBG'         instruction name
00001BE4  00000010                                 1319+          DC    A(16)              result length
00001BE8  00001C10                                 1320+REA31     DC    A(RE31)            result address
                                                   1321+*                                  INSTRUCTION UNDER TEST ROUTINE
00001BEC                                           1322+X31       DS    0F
00001BEC  E310 8EE0 0004                 000010E0  1323+          LG    R1,R1FUDGE         pollute R1
00001BF2  E710 5048 0006                 00001C18  1324+          VL    V1,RE31+8          get V1 source
00001BF8  E611 0030 0052                           1325+          VCVBG R1,V1,3            test instruction
00001BFE  E310 8F18 0024                 00001118  1326+          STG   R1,R1OUTPUT        save
00001C04  B98D 0020                                1327+          EPSW  R2,R0              exptract psw
00001C08  5020 8ED4                      000010D4  1328+          ST    R2,CCPSW               to save CC
00001C0C  07FB                                     1329+          BR    R11                return
00001C10                                           1330+RE31      DC    0F
00001C10                                           1331+          DROP  R5
00001C10  00000000 00000000                        1332           DC    XL08'0000000000000000'                    R1 result
00001C18  00000000 00018446                        1333           DC    XL16'00000000000184467440737095516l6C'    V1 source
00001C20  74407370 9551616C
                                                   1334
                                                   1335           VRR_I VCVBG,3,3                                 ULONG_MAX +11
00001C28                                           1336+          DS    0FD
00001C28                         00001C28          1337+          USING *,R5               base for test data and test routine
00001C28  00001C44                                 1338+T32       DC    A(X32)             address of test routine
00001C2C  0020                                     1339+          DC    H'32'              test number
00001C2E  00                                       1340+          DC    XL1'00'
00001C2F  03                                       1341+          DC    HL1'3'             &M3
00001C30  03                                       1342+          DC    HL1'3'             cc
00001C31  0E                                       1343+          DC    HL1'14'            cc failed mask
00001C32  E5C3E5C2 C7404040                        1344+          DC    CL8'VCVBG'         instruction name
00001C3C  00000010                                 1345+          DC    A(16)              result length
00001C40  00001C68                                 1346+REA32     DC    A(RE32)            result address
                                                   1347+*                                  INSTRUCTION UNDER TEST ROUTINE
00001C44                                           1348+X32       DS    0F
00001C44  E310 8EE0 0004                 000010E0  1349+          LG    R1,R1FUDGE         pollute R1
00001C4A  E710 5048 0006                 00001C70  1350+          VL    V1,RE32+8          get V1 source
00001C50  E611 0030 0052                           1351+          VCVBG R1,V1,3            test instruction
00001C56  E310 8F18 0024                 00001118  1352+          STG   R1,R1OUTPUT        save
00001C5C  B98D 0020                                1353+          EPSW  R2,R0              exptract psw
00001C60  5020 8ED4                      000010D4  1354+          ST    R2,CCPSW               to save CC
00001C64  07FB                                     1355+          BR    R11                return
00001C68                                           1356+RE32      DC    0F
00001C68                                           1357+          DROP  R5
00001C68  00000000 0000000A                        1358           DC    XL08'000000000000000A'                    R1 result
00001C70  00000000 00018446                        1359           DC    XL16'00000000000184467440737095516l6C'    V1 source
00001C78  74407370 9551626C
                                                   1360
                                                   1361 * VCVBG simple: p2=1
                                                   1362           VRR_I VCVBG,9,0
00001C80                                           1363+          DS    0FD
00001C80                         00001C80          1364+          USING *,R5               base for test data and test routine
00001C80  00001C9C                                 1365+T33       DC    A(X33)             address of test routine
00001C84  0021                                     1366+          DC    H'33'              test number
```

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  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

00001C86  00                                       1367+          DC    XL1'00'
00001C87  09                                       1368+          DC    HL1'9'             &M3
00001C88  00                                       1369+          DC    HL1'0'             cc
00001C89  07                                       1370+          DC    HL1'7'             cc failed mask
00001C8A  E5C3E5C2 C7404040                        1371+          DC    CL8'VCVBG'         instruction name
00001C94  00000010                                 1372+          DC    A(16)              result length
00001C98  00001CC0                                 1373+REA33     DC    A(RE33)            result address
                                                   1374+*                                  INSTRUCTION UNDER TEST ROUTINE
00001C9C                                           1375+X33       DS    0F
00001C9C  E310 8EE0 0004                 000010E0  1376+          LG    R1,R1FUDGE         pollute R1
00001CA2  E710 5048 0006                 00001CC8  1377+          VL    V1,RE33+8          get V1 source
00001CA8  E611 0090 0052                           1378+          VCVBG R1,V1,9            test instruction
00001CAE  E310 8F18 0024                 00001118  1379+          STG   R1,R1OUTPUT        save
00001CB4  B98D 0020                                1380+          EPSW  R2,R0              exptract psw
00001CB8  5020 8ED4                      000010D4  1381+          ST    R2,CCPSW                 to save CC
00001CBC  07FB                                     1382+          BR    R11                return
00001CC0                                           1383+RE33      DC    0F
00001CC0                                           1384+          DROP  R5
00001CC0  00000000 0000000A                        1385           DC    XL08'000000000000000A'                    R1 result
00001CC8  00000000 00000000                        1386           DC    XL16'00000000000000000000000000000000'    V1 source
00001CD0  00000000 0000010C
                                                   1387
                                                   1388           VRR_I VCVBG,9,0
00001CD8                                           1389+          DS    0FD
00001CD8                       00001CD8            1390+          USING *,R5               base for test data and test routine
00001CD8  00001CF4                                 1391+T34       DC    A(X34)             address of test routine
00001CDC  0022                                     1392+          DC    H'34'              test number
00001CDE  00                                       1393+          DC    XL1'00'
00001CDF  09                                       1394+          DC    HL1'9'             &M3
00001CE0  00                                       1395+          DC    HL1'0'             cc
00001CE1  07                                       1396+          DC    HL1'7'             cc failed mask
00001CE2  E5C3E5C2 C7404040                        1397+          DC    CL8'VCVBG'         instruction name
00001CEC  00000010                                 1398+          DC    A(16)              result length
00001CF0  00001D18                                 1399+REA34     DC    A(RE34)            result address
                                                   1400+*                                  INSTRUCTION UNDER TEST ROUTINE
00001CF4                                           1401+X34       DS    0F
00001CF4  E310 8EE0 0004                 000010E0  1402+          LG    R1,R1FUDGE         pollute R1
00001CFA  E710 5048 0006                 00001D20  1403+          VL    V1,RE34+8          get V1 source
00001D00  E611 0090 0052                           1404+          VCVBG R1,V1,9            test instruction
00001D06  E310 8F18 0024                 00001118  1405+          STG   R1,R1OUTPUT        save
00001D0C  B98D 0020                                1406+          EPSW  R2,R0              exptract psw
00001D10  5020 8ED4                      000010D4  1407+          ST    R2,CCPSW               to save CC
00001D14  07FB                                     1408+          BR    R11                return
00001D18                                           1409+RE34      DC    0F
00001D18                                           1410+          DROP  R5
00001D18  00000000 0000000A                        1411           DC    XL08'000000000000000A'                    R1 result
00001D20  00000000 00000000                        1412           DC    XL16'00000000000000000000000000000000'    V1 source
00001D28  00000000 0000010D
                                                   1413
                                                   1414           VRR_I VCVBG,9,0
00001D30                                           1415+          DS    0FD
00001D30                       00001D30            1416+          USING *,R5               base for test data and test routine
00001D30  00001D4C                                 1417+T35       DC    A(X35)             address of test routine
00001D34  0023                                     1418+          DC    H'35'              test number
00001D36  00                                       1419+          DC    XL1'00'
00001D37  09                                       1420+          DC    HL1'9'             &M3
```

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  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
00001D38  00                                       1421+          DC    HL1'0'              cc
00001D39  07                                       1422+          DC    HL1'7'              cc failed mask
00001D3A  E5C3E5C2 C7404040                        1423+          DC    CL8'VCVBG'          instruction name
00001D44  00000010                                 1424+          DC    A(16)               result length
00001D48  00001D70                                 1425+REA35     DC    A(RE35)             result address
                                                   1426+*                                   INSTRUCTION UNDER TEST ROUTINE
00001D4C                                           1427+X35       DS    0F
00001D4C  E310 8EE0 0004                 000010E0  1428+          LG    R1,R1FUDGE          pollute R1
00001D52  E710 5048 0006                 00001D78  1429+          VL    V1,RE35+8           get V1 source
00001D58  E611 0090 0052                           1430+          VCVBG R1,V1,9             test instruction
00001D5E  E310 8F18 0024                 00001118  1431+          STG   R1,R1OUTPUT         save
00001D64  B98D 0020                                1432+          EPSW  R2,R0               exptract psw
00001D68  5020 8ED4                      000010D4  1433+          ST    R2,CCPSW                to save CC
00001D6C  07FB                                     1434+          BR    R11                 return
00001D70                                           1435+RE35      DC    0F
00001D70                                           1436+          DROP  R5
00001D70  00000000 0008A160                        1437           DC    XL08'000000000008A160'                    R1 result
00001D78  00000000 00000000                        1438           DC    XL16'0000000000000000000000000565600C'    V1 source
00001D80  00000000 0565600C
                                                   1439
                                                   1440           VRR_I VCVBG,9,0
00001D88                                           1441+          DS    0FD
00001D88                    00001D88               1442+          USING *,R5                base for test data and test routine
00001D88  00001DA4                                 1443+T36       DC    A(X36)              address of test routine
00001D8C  0024                                     1444+          DC    H'36'               test number
00001D8E  00                                       1445+          DC    XL1'00'
00001D8F  09                                       1446+          DC    HL1'9'              &M3
00001D90  00                                       1447+          DC    HL1'0'              cc
00001D91  07                                       1448+          DC    HL1'7'              cc failed mask
00001D92  E5C3E5C2 C7404040                        1449+          DC    CL8'VCVBG'          instruction name
00001D9C  00000010                                 1450+          DC    A(16)               result length
00001DA0  00001DC8                                 1451+REA36     DC    A(RE36)             result address
                                                   1452+*                                   INSTRUCTION UNDER TEST ROUTINE
00001DA4                                           1453+X36       DS    0F
00001DA4  E310 8EE0 0004                 000010E0  1454+          LG    R1,R1FUDGE          pollute R1
00001DAA  E710 5048 0006                 00001DD0  1455+          VL    V1,RE36+8           get V1 source
00001DB0  E611 0090 0052                           1456+          VCVBG R1,V1,9             test instruction
00001DB6  E310 8F18 0024                 00001118  1457+          STG   R1,R1OUTPUT         save
00001DBC  B98D 0020                                1458+          EPSW  R2,R0               exptract psw
00001DC0  5020 8ED4                      000010D4  1459+          ST    R2,CCPSW                to save CC
00001DC4  07FB                                     1460+          BR    R11                 return
00001DC8                                           1461+RE36      DC    0F
00001DC8                                           1462+          DROP  R5
00001DC8  00000000 0008A160                        1463           DC    XL08'000000000008A160'                    R1 result
00001DD0  00000000 00000000                        1464           DC    XL16'0000000000000000000000000565600D'    V1 source
00001DD8  00000000 0565600D
                                                   1465
                                                   1466           VRR_I VCVBG,9,0                                 INT_MAX
00001DE0                                           1467+          DS    0FD
00001DE0                    00001DE0               1468+          USING *,R5                base for test data and test routine
00001DE0  00001DFC                                 1469+T37       DC    A(X37)              address of test routine
00001DE4  0025                                     1470+          DC    H'37'               test number
00001DE6  00                                       1471+          DC    XL1'00'
00001DE7  09                                       1472+          DC    HL1'9'              &M3
00001DE8  00                                       1473+          DC    HL1'0'              cc
00001DE9  07                                       1474+          DC    HL1'7'              cc failed mask
```

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  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

00001DEA  E5C3E5C2 C7404040                        1475+          DC    CL8'VCVBG'          instruction name
00001DF4  00000010                                 1476+          DC    A(16)               result length
00001DF8  00001E20                                 1477+REA37     DC    A(RE37)             result address
                                                   1478+*                                   INSTRUCTION UNDER TEST ROUTINE
00001DFC                                           1479+X37       DS    0F
00001DFC  E310 8EE0 0004                 000010E0  1480+          LG    R1,R1FUDGE          pollute R1
00001E02  E710 5048 0006                 00001E28  1481+          VL    V1,RE37+8           get V1 source
00001E08  E611 0090 0052                           1482+          VCVBG R1,V1,9             test instruction
00001E0E  E310 8F18 0024                 00001118  1483+          STG   R1,R1OUTPUT         save
00001E14  B98D 0020                                1484+          EPSW  R2,R0               exptract psw
00001E18  5020 8ED4                      000010D4  1485+          ST    R2,CCPSW                to save CC
00001E1C  07FB                                     1486+          BR    R11                 return
00001E20                                           1487+RE37      DC    0F
00001E20                                           1488+          DROP  R5
00001E20  00000000 7FFFFFFF                        1489           DC    XL08'000000007FFFFFFF'                      R1 result
00001E28  00000000 00000000                        1490           DC    XL16'0000000000000000000002147483647C'      V1 source
00001E30  00000214 7483647C
                                                   1491
                                                   1492           VRR_I VCVBG,9,0                                   INT_MIN
00001E38                                           1493+          DS    0FD
00001E38                         00001E38          1494+          USING *,R5                base for test data and test routine
00001E38  00001E54                                 1495+T38       DC    A(X38)              address of test routine
00001E3C  0026                                     1496+          DC    H'38'               test number
00001E3E  00                                       1497+          DC    XL1'00'
00001E3F  09                                       1498+          DC    HL1'9'              &M3
00001E40  00                                       1499+          DC    HL1'0'              cc
00001E41  07                                       1500+          DC    HL1'7'              cc failed mask
00001E42  E5C3E5C2 C7404040                        1501+          DC    CL8'VCVBG'          instruction name
00001E4C  00000010                                 1502+          DC    A(16)               result length
00001E50  00001E78                                 1503+REA38     DC    A(RE38)             result address
                                                   1504+*                                   INSTRUCTION UNDER TEST ROUTINE
00001E54                                           1505+X38       DS    0F
00001E54  E310 8EE0 0004                 000010E0  1506+          LG    R1,R1FUDGE          pollute R1
00001E5A  E710 5048 0006                 00001E80  1507+          VL    V1,RE38+8           get V1 source
00001E60  E611 0090 0052                           1508+          VCVBG R1,V1,9             test instruction
00001E66  E310 8F18 0024                 00001118  1509+          STG   R1,R1OUTPUT         save
00001E6C  B98D 0020                                1510+          EPSW  R2,R0               exptract psw
00001E70  5020 8ED4                      000010D4  1511+          ST    R2,CCPSW                to save CC
00001E74  07FB                                     1512+          BR    R11                 return
00001E78                                           1513+RE38      DC    0F
00001E78                                           1514+          DROP  R5
00001E78  00000000 80000000                        1515           DC    XL08'0000000080000000'                      R1 result
00001E80  00000000 00000000                        1516           DC    XL16'0000000000000000000002147483648D'      V1 source
00001E88  00000214 7483648D
                                                   1517
                                                   1518           VRR_I VCVBG,9,0                                   UINT_MAX
00001E90                                           1519+          DS    0FD
00001E90                         00001E90          1520+          USING *,R5                base for test data and test routine
00001E90  00001EAC                                 1521+T39       DC    A(X39)              address of test routine
00001E94  0027                                     1522+          DC    H'39'               test number
00001E96  00                                       1523+          DC    XL1'00'
00001E97  09                                       1524+          DC    HL1'9'              &M3
00001E98  00                                       1525+          DC    HL1'0'              cc
00001E99  07                                       1526+          DC    HL1'7'              cc failed mask
00001E9A  E5C3E5C2 C7404040                        1527+          DC    CL8'VCVBG'          instruction name
00001EA4  00000010                                 1528+          DC    A(16)               result length
```

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  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
00001EA8  00001ED0                        1529+REA39    DC    A(RE39)           result address
                                          1530+*                                INSTRUCTION UNDER TEST ROUTINE
00001EAC                                  1531+X39      DS    0F
00001EAC  E310 8EE0 0004            000010E0 1532+          LG    R1,R1FUDGE        pollute R1
00001EB2  E710 5048 0006            00001ED8 1533+          VL    V1,RE39+8         get V1 source
00001EB8  E611 0090 0052                     1534+          VCVBG R1,V1,9           test instruction
00001EBE  E310 8F18 0024            00001118 1535+          STG   R1,R1OUTPUT       save
00001EC4  B98D 0020                          1536+          EPSW  R2,R0             exptract psw
00001EC8  5020 8ED4                 000010D4 1537+          ST    R2,CCPSW              to save CC
00001ECC  07FB                               1538+          BR    R11               return
00001ED0                                  1539+RE39     DC    0F
00001ED0                                  1540+         DROP  R5
00001ED0  00000000 FFFFFFFF               1541          DC    XL08'00000000FFFFFFFF'                    R1 result
00001ED8  00000000 00000000               1542          DC    XL16'0000000000000000000004294967295C'    V1 source
00001EE0  00000429 4967295C
                                          1543
                                          1544          VRR_I VCVBG,9,0                                 UINT_MAX +1
00001EE8                                  1545+         DS    0FD
00001EE8                  00001EE8        1546+         USING *,R5              base for test data and test routine
00001EE8  00001F04                        1547+T40      DC    A(X40)            address of test routine
00001EEC  0028                            1548+         DC    H'40'             test number
00001EEE  00                              1549+         DC    XL1'00'
00001EEF  09                              1550+         DC    HL1'9'            &M3
00001EF0  00                              1551+         DC    HL1'0'            cc
00001EF1  07                              1552+         DC    HL1'7'            cc failed mask
00001EF2  E5C3E5C2 C7404040               1553+         DC    CL8'VCVBG'        instruction name
00001EFC  00000010                        1554+         DC    A(16)             result length
00001F00  00001F28                        1555+REA40    DC    A(RE40)           result address
                                          1556+*                                INSTRUCTION UNDER TEST ROUTINE
00001F04                                  1557+X40      DS    0F
00001F04  E310 8EE0 0004            000010E0 1558+          LG    R1,R1FUDGE        pollute R1
00001F0A  E710 5048 0006            00001F30 1559+          VL    V1,RE40+8         get V1 source
00001F10  E611 0090 0052                     1560+          VCVBG R1,V1,9           test instruction
00001F16  E310 8F18 0024            00001118 1561+          STG   R1,R1OUTPUT       save
00001F1C  B98D 0020                          1562+          EPSW  R2,R0             exptract psw
00001F20  5020 8ED4                 000010D4 1563+          ST    R2,CCPSW              to save CC
00001F24  07FB                               1564+          BR    R11               return
00001F28                                  1565+RE40     DC    0F
00001F28                                  1566+         DROP  R5
00001F28  00000001 00000000               1567          DC    XL08'0000000100000000'                    R1 result
00001F30  00000000 00000000               1568          DC    XL16'0000000000000000000004294967296C'    V1 source
00001F38  00000429 4967296C
                                          1569
                                          1570          VRR_I VCVBG,9,0
00001F40                                  1571+         DS    0FD
00001F40                  00001F40        1572+         USING *,R5              base for test data and test routine
00001F40  00001F5C                        1573+T41      DC    A(X41)            address of test routine
00001F44  0029                            1574+         DC    H'41'             test number
00001F46  00                              1575+         DC    XL1'00'
00001F47  09                              1576+         DC    HL1'9'            &M3
00001F48  00                              1577+         DC    HL1'0'            cc
00001F49  07                              1578+         DC    HL1'7'            cc failed mask
00001F4A  E5C3E5C2 C7404040               1579+         DC    CL8'VCVBG'        instruction name
00001F54  00000010                        1580+         DC    A(16)             result length
00001F58  00001F80                        1581+REA41    DC    A(RE41)           result address
                                          1582+*                                INSTRUCTION UNDER TEST ROUTINE
```

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  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
00001F5C                                           1583+X41      DS    0F
00001F5C  E310 8EE0 0004                 000010E0  1584+          LG    R1,R1FUDGE        pollute R1
00001F62  E710 5048 0006                 00001F88  1585+          VL    V1,RE41+8         get V1 source
00001F68  E611 0090 0052                           1586+          VCVBG R1,V1,9           test instruction
00001F6E  E310 8F18 0024                 00001118  1587+          STG   R1,R1OUTPUT       save
00001F74  B98D 0020                                1588+          EPSW  R2,R0             exptract psw
00001F78  5020 8ED4                      000010D4  1589+          ST    R2,CCPSW              to save CC
00001F7C  07FB                                     1590+          BR    R11               return
00001F80                                           1591+RE41      DC    0F
00001F80                                           1592+          DROP  R5
00001F80  00000002 DF8E1660                        1593           DC    XL08'00000002DF8E1660'                    R1 result
00001F88  00000000 00000000                        1594           DC    XL16'00000000000000000000012340565600C'   V1 source
00001F90  00001234 0565600C
                                                   1595
                                                   1596           VRR_I VCVBG,9,0                                 LONG_MAX
00001F98                                           1597+          DS    0FD
00001F98                           00001F98        1598+          USING *,R5              base for test data and test routine
00001F98  00001FB4                                 1599+T42       DC    A(X42)            address of test routine
00001F9C  002A                                     1600+          DC    H'42'             test number
00001F9E  00                                       1601+          DC    XL1'00'
00001F9F  09                                       1602+          DC    HL1'9'            &M3
00001FA0  00                                       1603+          DC    HL1'0'            cc
00001FA1  07                                       1604+          DC    HL1'7'            cc failed mask
00001FA2  E5C3E5C2 C7404040                        1605+          DC    CL8'VCVBG'        instruction name
00001FAC  00000010                                 1606+          DC    A(16)             result length
00001FB0  00001FD8                                 1607+REA42     DC    A(RE42)           result address
                                                   1608+*                                 INSTRUCTION UNDER TEST ROUTINE
00001FB4                                           1609+X42       DS    0F
00001FB4  E310 8EE0 0004                 000010E0  1610+          LG    R1,R1FUDGE        pollute R1
00001FBA  E710 5048 0006                 00001FE0  1611+          VL    V1,RE42+8         get V1 source
00001FC0  E611 0090 0052                           1612+          VCVBG R1,V1,9           test instruction
00001FC6  E310 8F18 0024                 00001118  1613+          STG   R1,R1OUTPUT       save
00001FCC  B98D 0020                                1614+          EPSW  R2,R0             exptract psw
00001FD0  5020 8ED4                      000010D4  1615+          ST    R2,CCPSW              to save CC
00001FD4  07FB                                     1616+          BR    R11               return
00001FD8                                           1617+RE42      DC    0F
00001FD8                                           1618+          DROP  R5
00001FD8  7FFFFFFF FFFFFFFF                        1619           DC    XL08'7FFFFFFFFFFFFFFF'                    R1 result
00001FE0  00000000 00009223                        1620           DC    XL16'00000000000092233720368547758O7C'   V1 source
00001FE8  37203685 4775807C
                                                   1621
                                                   1622           VRR_I VCVBG,9,0                                 LONG_MIN
00001FF0                                           1623+          DS    0FD
00001FF0                           00001FF0        1624+          USING *,R5              base for test data and test routine
00001FF0  0000200C                                 1625+T43       DC    A(X43)            address of test routine
00001FF4  002B                                     1626+          DC    H'43'             test number
00001FF6  00                                       1627+          DC    XL1'00'
00001FF7  09                                       1628+          DC    HL1'9'            &M3
00001FF8  00                                       1629+          DC    HL1'0'            cc
00001FF9  07                                       1630+          DC    HL1'7'            cc failed mask
00001FFA  E5C3E5C2 C7404040                        1631+          DC    CL8'VCVBG'        instruction name
00002004  00000010                                 1632+          DC    A(16)             result length
00002008  00002030                                 1633+REA43     DC    A(RE43)           result address
                                                   1634+*                                 INSTRUCTION UNDER TEST ROUTINE
0000200C                                           1635+X43       DS    0F
0000200C  E310 8EE0 0004                 000010E0  1636+          LG    R1,R1FUDGE        pollute R1
```

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  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

00002012  E710 5048 0006                 00002038  1637+         VL    V1,RE43+8         get V1 source
00002018  E611 0090 0052                           1638+         VCVBG R1,V1,9           test instruction
0000201E  E310 8F18 0024                 00001118  1639+         STG   R1,R1OUTPUT       save
00002024  B98D 0020                                1640+         EPSW  R2,R0             exptract psw
00002028  5020 8ED4                      000010D4  1641+         ST    R2,CCPSW                to save CC
0000202C  07FB                                     1642+         BR    R11               return
00002030                                           1643+RE43     DC    0F
00002030                                           1644+         DROP  R5
00002030  80000000 00000000                        1645          DC    XL08'8000000000000000'                      R1 result
00002038  00000000 00009223                        1646          DC    XL16'0000000000009223372036854775808D'      V1 source
00002040  37203685 4775808D
                                                   1647
                                                   1648          VRR_I VCVBG,11,0                                  ULONG_MAX
00002048                                           1649+         DS    0FD
00002048                         00002048          1650+         USING *,R5              base for test data and test routine
00002048  00002064                                 1651+T44      DC    A(X44)            address of test routine
0000204C  002C                                     1652+         DC    H'44'             test number
0000204E  00                                       1653+         DC    XL1'00'
0000204F  0B                                       1654+         DC    HL1'11'           &M3
00002050  00                                       1655+         DC    HL1'0'            cc
00002051  07                                       1656+         DC    HL1'7'            cc failed mask
00002052  E5C3E5C2 C7404040                        1657+         DC    CL8'VCVBG'        instruction name
0000205C  00000010                                 1658+         DC    A(16)             result length
00002060  00002088                                 1659+REA44    DC    A(RE44)           result address
                                                   1660+*                                INSTRUCTION UNDER TEST ROUTINE
00002064                                           1661+X44      DS    0F
00002064  E310 8EE0 0004                 000010E0  1662+         LG    R1,R1FUDGE        pollute R1
0000206A  E710 5048 0006                 00002090  1663+         VL    V1,RE44+8         get V1 source
00002070  E611 00B0 0052                           1664+         VCVBG R1,V1,11          test instruction
00002076  E310 8F18 0024                 00001118  1665+         STG   R1,R1OUTPUT       save
0000207C  B98D 0020                                1666+         EPSW  R2,R0             exptract psw
00002080  5020 8ED4                      000010D4  1667+         ST    R2,CCPSW                to save CC
00002084  07FB                                     1668+         BR    R11               return
00002088                                           1669+RE44     DC    0F
00002088                                           1670+         DROP  R5
00002088  FFFFFFFF FFFFFFFF                        1671          DC    XL08'FFFFFFFFFFFFFFFF'                      R1 result
00002090  00000000 00018446                        1672          DC    XL16'0000000000018446744073709551615C'      V1 source
00002098  74407370 9551615C
                                                   1673
                                                   1674          VRR_I VCVBG,11,3                                  ULONG_MAX +1
000020A0                                           1675+         DS    0FD
000020A0                         000020A0          1676+         USING *,R5              base for test data and test routine
000020A0  000020BC                                 1677+T45      DC    A(X45)            address of test routine
000020A4  002D                                     1678+         DC    H'45'             test number
000020A6  00                                       1679+         DC    XL1'00'
000020A7  0B                                       1680+         DC    HL1'11'           &M3
000020A8  03                                       1681+         DC    HL1'3'            cc
000020A9  0E                                       1682+         DC    HL1'14'           cc failed mask
000020AA  E5C3E5C2 C7404040                        1683+         DC    CL8'VCVBG'        instruction name
000020B4  00000010                                 1684+         DC    A(16)             result length
000020B8  000020E0                                 1685+REA45    DC    A(RE45)           result address
                                                   1686+*                                INSTRUCTION UNDER TEST ROUTINE
000020BC                                           1687+X45      DS    0F
000020BC  E310 8EE0 0004                 000010E0  1688+         LG    R1,R1FUDGE        pollute R1
000020C2  E710 5048 0006                 000020E8  1689+         VL    V1,RE45+8         get V1 source
000020C8  E611 00B0 0052                           1690+         VCVBG R1,V1,11          test instruction
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  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

000020CE  E310 8F18 0024                 00001118  1691+          STG   R1,R1OUTPUT       save
000020D4  B98D 0020                               1692+          EPSW  R2,R0             exptract psw
000020D8  5020 8ED4                      000010D4  1693+          ST    R2,CCPSW              to save CC
000020DC  07FB                                    1694+          BR    R11               return
000020E0                                          1695+RE45      DC    0F
000020E0                                          1696+          DROP  R5
000020E0  00000000 00000000                       1697           DC    XL08'0000000000000000'                  R1 result
000020E8  00000000 00018446                       1698           DC    XL16'00000000000184467440737095516l6C'  V1 source
000020F0  74407370 9551616C
                                                  1699
                                                  1700           VRR_I VCVBG,11,3                              ULONG_MAX +11
000020F8                                          1701+          DS    0FD
000020F8                 000020F8                 1702+          USING *,R5              base for test data and test routine
000020F8  00002114                                1703+T46       DC    A(X46)            address of test routine
000020FC  002E                                    1704+          DC    H'46'             test number
000020FE  00                                      1705+          DC    XL1'00'
000020FF  0B                                      1706+          DC    HL1'11'           &M3
00002100  03                                      1707+          DC    HL1'3'            cc
00002101  0E                                      1708+          DC    HL1'14'           cc failed mask
00002102  E5C3E5C2 C7404040                       1709+          DC    CL8'VCVBG'        instruction name
0000210C  00000010                                1710+          DC    A(16)             result length
00002110  00002138                                1711+REA46     DC    A(RE46)           result address
                                                  1712+*                                 INSTRUCTION UNDER TEST ROUTINE
00002114                                          1713+X46       DS    0F
00002114  E310 8EE0 0004                 000010E0 1714+          LG    R1,R1FUDGE        pollute R1
0000211A  E710 5048 0006                 00002140 1715+          VL    V1,RE46+8         get V1 source
00002120  E611 00B0 0052                          1716+          VCVBG R1,V1,11          test instruction
00002126  E310 8F18 0024                 00001118 1717+          STG   R1,R1OUTPUT       save
0000212C  B98D 0020                               1718+          EPSW  R2,R0             exptract psw
00002130  5020 8ED4                      000010D4 1719+          ST    R2,CCPSW              to save CC
00002134  07FB                                    1720+          BR    R11               return
00002138                                          1721+RE46      DC    0F
00002138                                          1722+          DROP  R5
00002138  00000000 0000000A                       1723           DC    XL08'000000000000000A'                  R1 result
00002140  00000000 00018446                       1724           DC    XL16'00000000000184467440737095516l6C'  V1 source
00002148  74407370 9551626C
                                                  1725
00002150  00000000                                1726           DC    F'0'      END OF TABLE
00002154  00000000                                1727           DC    F'0'
                                                  1728 *
                                                  1729 * table of pointers to individual load test
                                                  1730 *
00002158                                          1731 E6TESTS   DS    0F
                                                  1732           PTTABLE
00002158                                          1733+TTABLE    DS    0F
00002158  00001180                                1734+          DC    A(T1)             address of test
0000215C  000011D8                                1735+          DC    A(T2)             address of test
00002160  00001230                                1736+          DC    A(T3)             address of test
00002164  00001288                                1737+          DC    A(T4)             address of test
00002168  000012E0                                1738+          DC    A(T5)             address of test
0000216C  00001338                                1739+          DC    A(T6)             address of test
00002170  00001390                                1740+          DC    A(T7)             address of test
00002174  000013E8                                1741+          DC    A(T8)             address of test
00002178  00001440                                1742+          DC    A(T9)             address of test
0000217C  00001498                                1743+          DC    A(T10)            address of test
00002180  000014F0                                1744+          DC    A(T11)            address of test
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

00002184  00001548                          1745+         DC    A(T12)            address of test
00002188  000015A0                          1746+         DC    A(T13)            address of test
0000218C  000015F8                          1747+         DC    A(T14)            address of test
00002190  00001650                          1748+         DC    A(T15)            address of test
00002194  000016A8                          1749+         DC    A(T16)            address of test
00002198  00001700                          1750+         DC    A(T17)            address of test
0000219C  00001758                          1751+         DC    A(T18)            address of test
000021A0  000017B0                          1752+         DC    A(T19)            address of test
000021A4  00001808                          1753+         DC    A(T20)            address of test
000021A8  00001860                          1754+         DC    A(T21)            address of test
000021AC  000018B8                          1755+         DC    A(T22)            address of test
000021B0  00001910                          1756+         DC    A(T23)            address of test
000021B4  00001968                          1757+         DC    A(T24)            address of test
000021B8  000019C0                          1758+         DC    A(T25)            address of test
000021BC  00001A18                          1759+         DC    A(T26)            address of test
000021C0  00001A70                          1760+         DC    A(T27)            address of test
000021C4  00001AC8                          1761+         DC    A(T28)            address of test
000021C8  00001B20                          1762+         DC    A(T29)            address of test
000021CC  00001B78                          1763+         DC    A(T30)            address of test
000021D0  00001BD0                          1764+         DC    A(T31)            address of test
000021D4  00001C28                          1765+         DC    A(T32)            address of test
000021D8  00001C80                          1766+         DC    A(T33)            address of test
000021DC  00001CD8                          1767+         DC    A(T34)            address of test
000021E0  00001D30                          1768+         DC    A(T35)            address of test
000021E4  00001D88                          1769+         DC    A(T36)            address of test
000021E8  00001DE0                          1770+         DC    A(T37)            address of test
000021EC  00001E38                          1771+         DC    A(T38)            address of test
000021F0  00001E90                          1772+         DC    A(T39)            address of test
000021F4  00001EE8                          1773+         DC    A(T40)            address of test
000021F8  00001F40                          1774+         DC    A(T41)            address of test
000021FC  00001F98                          1775+         DC    A(T42)            address of test
00002200  00001FF0                          1776+         DC    A(T43)            address of test
00002204  00002048                          1777+         DC    A(T44)            address of test
00002208  000020A0                          1778+         DC    A(T45)            address of test
0000220C  000020F8                          1779+         DC    A(T46)            address of test
                                            1780+*
00002210  00000000                          1781+         DC    A(0)              END OF TABLE
00002214  00000000                          1782+         DC    A(0)
                                            1783
00002218  00000000                          1784          DC    F'0'      END OF TABLE
0000221C  00000000                          1785          DC    F'0'
```

```
 LOC        OBJECT CODE       ADDR1     ADDR2     STMT
                                         1787 ********************************************************************************
                                         1788 *        Register equates
                                         1789 ********************************************************************************

                            00000000  00000001  1791 R0       EQU   0
                            00000001  00000001  1792 R1       EQU   1
                            00000002  00000001  1793 R2       EQU   2
                            00000003  00000001  1794 R3       EQU   3
                            00000004  00000001  1795 R4       EQU   4
                            00000005  00000001  1796 R5       EQU   5
                            00000006  00000001  1797 R6       EQU   6
                            00000007  00000001  1798 R7       EQU   7
                            00000008  00000001  1799 R8       EQU   8
                            00000009  00000001  1800 R9       EQU   9
                            0000000A  00000001  1801 R10      EQU   10
                            0000000B  00000001  1802 R11      EQU   11
                            0000000C  00000001  1803 R12      EQU   12
                            0000000D  00000001  1804 R13      EQU   13
                            0000000E  00000001  1805 R14      EQU   14
                            0000000F  00000001  1806 R15      EQU   15

                                         1808 ********************************************************************************
                                         1809 *        Register equates
                                         1810 ********************************************************************************

                            00000000  00000001  1812 V0       EQU   0
                            00000001  00000001  1813 V1       EQU   1
                            00000002  00000001  1814 V2       EQU   2
                            00000003  00000001  1815 V3       EQU   3
                            00000004  00000001  1816 V4       EQU   4
                            00000005  00000001  1817 V5       EQU   5
                            00000006  00000001  1818 V6       EQU   6
                            00000007  00000001  1819 V7       EQU   7
                            00000008  00000001  1820 V8       EQU   8
                            00000009  00000001  1821 V9       EQU   9
                            0000000A  00000001  1822 V10      EQU   10
                            0000000B  00000001  1823 V11      EQU   11
                            0000000C  00000001  1824 V12      EQU   12
                            0000000D  00000001  1825 V13      EQU   13
                            0000000E  00000001  1826 V14      EQU   14
                            0000000F  00000001  1827 V15      EQU   15
                            00000010  00000001  1828 V16      EQU   16
                            00000011  00000001  1829 V17      EQU   17
                            00000012  00000001  1830 V18      EQU   18
                            00000013  00000001  1831 V19      EQU   19
                            00000014  00000001  1832 V20      EQU   20
                            00000015  00000001  1833 V21      EQU   21
```

```
  LOC         OBJECT CODE       ADDR1     ADDR2     STMT
                                00000016  00000001  1834 V22       EQU   22
                                00000017  00000001  1835 V23       EQU   23
                                00000018  00000001  1836 V24       EQU   24
                                00000019  00000001  1837 V25       EQU   25
                                0000001A  00000001  1838 V26       EQU   26
                                0000001B  00000001  1839 V27       EQU   27
                                0000001C  00000001  1840 V28       EQU   28
                                0000001D  00000001  1841 V29       EQU   29
                                0000001E  00000001  1842 V30       EQU   30
                                0000001F  00000001  1843 V31       EQU   31
                                                    1844
                                                    1845           END
```

SYMBOL	TYPE	VALUE	LENGTH	DEFN	REFERENCES
BEGIN	I	00000200	2	91	57 88 89
CC	U	00000008	1	411	166
CCFOUND	X	000010DC	1	383	153 173
CCMASK	U	00000009	1	412	124
CCMSG	U	00000268	1	142	136
CCPRTEXP	C	00001086	1	363	170
CCPRTGOT	C	00001096	1	366	177
CCPRTLINE	C	00001043	16	358	368 180
CCPRTLNG	U	00000055	1	368	179
CCPRTNAME	C	00001070	8	361	163
CCPRTNUM	C	00001053	3	359	161
CCPSW	F	000010D4	4	382	150 543 569 595 621 647 673 699 725 751 778 804 830 856 882 908 934 960 986 1016 1042 1068 1094 1120 1146 1172 1198 1224 1250 1276 1302 1328 1354 1381 1407 1433 1459 1485 1511 1537 1563 1589 1615 1641 1667 1693 1719
CTLR0	F	0000047C	4	305	101 102 103 104
DECNUM	C	000010C4	16	378	158 160 167 169 174 176 192 194 201 203
E6TADR	A	00000484	4	308	110
E6TEST	4	00000000	28	406	119
E6TESTS	F	00002158	4	1731	308
EDIT	X	00001098	18	373	159 168 175 193 202
ENDTEST	U	00000352	1	223	115
EOJ	I	00000460	4	295	226
EOJPSW	D	00000450	8	293	295
FAILCONT	U	00000342	1	213	183
FAILED	F	00001000	4	335	215 224
FAILMSG	U	000002F8	1	190	131
FAILPSW	D	00000468	8	297	299
FAILTEST	I	00000478	4	299	227
IMAGE	1	00000000	8736	0	
K	U	00000400	1	318	319 320 321
K64	U	00010000	1	320	
M3	U	00000007	1	410	144 200
MB	U	00100000	1	321	
MSG	I	00000398	4	259	242
MSGCMD	C	000003E2	9	285	272 273
MSGMSG	C	000003EB	95	286	266 283 264
MSGMVC	I	000003DC	6	283	270
MSGOK	I	000003AE	2	268	265
MSGRET	I	000003C8	4	279	276
MSGSAVE	F	000003D0	4	282	262 279
NEXTE6	U	0000022A	1	112	134 218
OPNAME	C	0000000A	8	414	163 197
PAGE	U	00001000	1	319	
PRT3	C	000010AE	18	376	159 160 161 168 169 170 175 176 177 193 194 195 202 203 204
PRTLINE	C	00001004	16	343	350 207
PRTLNG	U	0000003F	1	350	206
PRTM3	C	00001040	2	348	204
PRTNAME	C	0000102F	8	346	197
PRTNUM	C	00001014	3	344	195
R0	U	00000000	1	1791	51 101 104 117 179 206 214 215 241 243 259 262 264 266 268 279 542 568 594 620 646 672 698 724 750 777 803 829 855 881 907 933 959 985 1015 1041 1067 1093 1119 1145 1171 1197 1223 1249 1275 1301 1327 1353 1380 1406 1432 1458 1484 1510 1536 1562 1588 1614 1640 1666 1692 1718

SYMBOL	TYPE	VALUE	LENGTH	DEFN	REFERENCES
R1	U	00000001	1	1792	124 125 126 129 130 143 144 145 150 151 152 153 180 207 224 225 273 283 538 540 541 564 566 567 590 592 593 616 618 619 642 644 645 668 670 671 694 696 697 720 722 723 746 748 749 773 775 776 799 801 802 825 827 828 851 853 854 877 879 880 903 905 906 929 931 932 955 957 958 981 983 984 1011 1013 1014 1037 1039 1040 1063 1065 1066 1089 1091 1092 1115 1117 1118 1141 1143 1144 1167 1169 1170 1193 1195 1196 1219 1221 1222 1245 1247 1248 1271 1273 1274 1297 1299 1300 1323 1325 1326 1349 1351 1352 1376 1378 1379 1402 1404 1405 1428 1430 1431 1454 1456 1457 1480 1482 1483 1506 1508 1509 1532 1534 1535 1558 1560 1561 1584 1586 1587 1610 1612 1613 1636 1638 1639 1662 1664 1665 1688 1690 1691 1714 1716 1717
R10	U	0000000A	1	1801	98 99
R11	U	0000000B	1	1802	121 122 544 570 596 622 648 674 700 726 752 779 805 831 857 883 909 935 961 987 1017 1043 1069 1095 1121 1147 1173 1199 1225 1251 1277 1303 1329 1355 1382 1408 1434 1460 1486 1512 1538 1564 1590 1616 1642 1668 1694 1720
R12	U	0000000C	1	1803	110 113 133 217
R13	U	0000000D	1	1804	
R14	U	0000000E	1	1805	
R15	U	0000000F	1	1806	181 208 236 246 247
R1FUDGE	X	000010E0	8	389	538 564 590 616 642 668 694 720 746 773 799 825 851 877 903 929 955 981 1011 1037 1063 1089 1115 1141 1167 1193 1219 1245 1271 1297 1323 1349 1376 1402 1428 1454 1480 1506 1532 1558 1584 1610 1636 1662 1688 1714
R1OUTPUT	F	00001118	8	393	130 541 567 593 619 645 671 697 723 749 776 802 828 854 880 906 932 958 984 1014 1040 1066 1092 1118 1144 1170 1196 1222 1248 1274 1300 1326 1352 1379 1405 1431 1457 1483 1509 1535 1561 1587 1613 1639 1665 1691 1717
R2	U	00000002	1	1793	157 158 165 166 167 172 173 174 191 192 199 200 201 241 242 243 260 262 268 269 270 272 279 280 542 543 568 569 594 595 620 621 646 647 672 673 698 699 724 725 750 751 777 778 803 804 829 830 855 856 881 882 907 908 933 934 959 960 985 986 1015 1016 1041 1042 1067 1068 1093 1094 1119 1120 1145 1146 1171 1172 1197 1198 1223 1224 1249 1250 1275 1276 1301 1302 1327 1328 1353 1354 1380 1381 1406 1407 1432 1433 1458 1459 1484 1485 1510 1511 1536 1537 1562 1563 1588 1589 1614 1615 1640 1641 1666 1667 1692 1693 1718 1719
R3	U	00000003	1	1794	
R4	U	00000004	1	1795	
R5	U	00000005	1	1796	113 114 119 237 245 526 546 552 572 578 598 604 624 630 650 656 676 682 702 708 728 734 754 761 781 787 807 813 833 839 859 865 885 891 911 917 937 943 963 969 989 999 1019 1025 1045 1051 1071 1077 1097 1103 1123 1129 1149 1155 1175 1181 1201 1207 1227 1233 1253 1259 1279 1285 1305 1311 1331 1337 1357 1364 1384 1390 1410 1416 1436 1442 1462 1468 1488 1494 1514 1520 1540 1546 1566 1572 1592 1598 1618 1624 1644 1650 1670 1676 1696 1702 1722
R6	U	00000006	1	1797	
R7	U	00000007	1	1798	
R8	U	00000008	1	1799	88 91 92 93 95
R9	U	00000009	1	1800	89 95 96 98
RE1	F	000011C0	4	545	535 539
RE10	F	000014D8	4	780	770 774
RE11	F	00001530	4	806	796 800
RE12	F	00001588	4	832	822 826

SYMBOL	TYPE	VALUE	LENGTH	DEFN	REFERENCES
RE13	F	000015E0	4	858	848 852
RE14	F	00001638	4	884	874 878
RE15	F	00001690	4	910	900 904
RE16	F	000016E8	4	936	926 930
RE17	F	00001740	4	962	952 956
RE18	F	00001798	4	988	978 982
RE19	F	000017F0	4	1018	1008 1012
RE2	F	00001218	4	571	561 565
RE20	F	00001848	4	1044	1034 1038
RE21	F	000018A0	4	1070	1060 1064
RE22	F	000018F8	4	1096	1086 1090
RE23	F	00001950	4	1122	1112 1116
RE24	F	000019A8	4	1148	1138 1142
RE25	F	00001A00	4	1174	1164 1168
RE26	F	00001A58	4	1200	1190 1194
RE27	F	00001AB0	4	1226	1216 1220
RE28	F	00001B08	4	1252	1242 1246
RE29	F	00001B60	4	1278	1268 1272
RE3	F	00001270	4	597	587 591
RE30	F	00001BB8	4	1304	1294 1298
RE31	F	00001C10	4	1330	1320 1324
RE32	F	00001C68	4	1356	1346 1350
RE33	F	00001CC0	4	1383	1373 1377
RE34	F	00001D18	4	1409	1399 1403
RE35	F	00001D70	4	1435	1425 1429
RE36	F	00001DC8	4	1461	1451 1455
RE37	F	00001E20	4	1487	1477 1481
RE38	F	00001E78	4	1513	1503 1507
RE39	F	00001ED0	4	1539	1529 1533
RE4	F	000012C8	4	623	613 617
RE40	F	00001F28	4	1565	1555 1559
RE41	F	00001F80	4	1591	1581 1585
RE42	F	00001FD8	4	1617	1607 1611
RE43	F	00002030	4	1643	1633 1637
RE44	F	00002088	4	1669	1659 1663
RE45	F	000020E0	4	1695	1685 1689
RE46	F	00002138	4	1721	1711 1715
RE5	F	00001320	4	649	639 643
RE6	F	00001378	4	675	665 669
RE7	F	000013D0	4	701	691 695
RE8	F	00001428	4	727	717 721
RE9	F	00001480	4	753	743 747
REA1	A	00001198	4	535	
REA10	A	000014B0	4	770	
REA11	A	00001508	4	796	
REA12	A	00001560	4	822	
REA13	A	000015B8	4	848	
REA14	A	00001610	4	874	
REA15	A	00001668	4	900	
REA16	A	000016C0	4	926	
REA17	A	00001718	4	952	
REA18	A	00001770	4	978	
REA19	A	000017C8	4	1008	
REA2	A	000011F0	4	561	
REA20	A	00001820	4	1034	
REA21	A	00001878	4	1060	

SYMBOL	TYPE	VALUE	LENGTH	DEFN	REFERENCES		
REA22	A	000018D0	4	1086			
REA23	A	00001928	4	1112			
REA24	A	00001980	4	1138			
REA25	A	000019D8	4	1164			
REA26	A	00001A30	4	1190			
REA27	A	00001A88	4	1216			
REA28	A	00001AE0	4	1242			
REA29	A	00001B38	4	1268			
REA3	A	00001248	4	587			
REA30	A	00001B90	4	1294			
REA31	A	00001BE8	4	1320			
REA32	A	00001C40	4	1346			
REA33	A	00001C98	4	1373			
REA34	A	00001CF0	4	1399			
REA35	A	00001D48	4	1425			
REA36	A	00001DA0	4	1451			
REA37	A	00001DF8	4	1477			
REA38	A	00001E50	4	1503			
REA39	A	00001EA8	4	1529			
REA4	A	000012A0	4	613			
REA40	A	00001F00	4	1555			
REA41	A	00001F58	4	1581			
REA42	A	00001FB0	4	1607			
REA43	A	00002008	4	1633			
REA44	A	00002060	4	1659			
REA45	A	000020B8	4	1685			
REA46	A	00002110	4	1711			
REA5	A	000012F8	4	639			
REA6	A	00001350	4	665			
REA7	A	000013A8	4	691			
REA8	A	00001400	4	717			
REA9	A	00001458	4	743			
READDR	A	00000018	4	417	129		
REG2LOW	U	000000DD	1	325			
REG2PATT	U	AABBCCDD	1	324			
RELEN	A	00000014	4	416			
RPTDWSAV	D	00000388	8	252	241	243	
RPTERROR	I	00000360	4	236	181	208	
RPTSAVE	F	00000380	4	249	236	246	
RPTSVR5	F	00000384	4	250	237	245	
SVOLDPSW	U	00000140	0	53			
T1	A	00001180	4	527	1734		
T10	A	00001498	4	762	1743		
T11	A	000014F0	4	788	1744		
T12	A	00001548	4	814	1745		
T13	A	000015A0	4	840	1746		
T14	A	000015F8	4	866	1747		
T15	A	00001650	4	892	1748		
T16	A	000016A8	4	918	1749		
T17	A	00001700	4	944	1750		
T18	A	00001758	4	970	1751		
T19	A	000017B0	4	1000	1752		
T2	A	000011D8	4	553	1735		
T20	A	00001808	4	1026	1753		
T21	A	00001860	4	1052	1754		
T22	A	000018B8	4	1078	1755		

SYMBOL	TYPE	VALUE	LENGTH	DEFN	REFERENCES
T23	A	00001910	4	1104	1756
T24	A	00001968	4	1130	1757
T25	A	000019C0	4	1156	1758
T26	A	00001A18	4	1182	1759
T27	A	00001A70	4	1208	1760
T28	A	00001AC8	4	1234	1761
T29	A	00001B20	4	1260	1762
T3	A	00001230	4	579	1736
T30	A	00001B78	4	1286	1763
T31	A	00001BD0	4	1312	1764
T32	A	00001C28	4	1338	1765
T33	A	00001C80	4	1365	1766
T34	A	00001CD8	4	1391	1767
T35	A	00001D30	4	1417	1768
T36	A	00001D88	4	1443	1769
T37	A	00001DE0	4	1469	1770
T38	A	00001E38	4	1495	1771
T39	A	00001E90	4	1521	1772
T4	A	00001288	4	605	1737
T40	A	00001EE8	4	1547	1773
T41	A	00001F40	4	1573	1774
T42	A	00001F98	4	1599	1775
T43	A	00001FF0	4	1625	1776
T44	A	00002048	4	1651	1777
T45	A	000020A0	4	1677	1778
T46	A	000020F8	4	1703	1779
T5	A	000012E0	4	631	1738
T6	A	00001338	4	657	1739
T7	A	00001390	4	683	1740
T8	A	000013E8	4	709	1741
T9	A	00001440	4	735	1742
TESTCC	I	00000264	4	136	126
TESTREST	U	0000024C	1	128	146
TNUM	H	00000004	2	408	157 191
TSUB	A	00000000	4	407	121
TTABLE	F	00002158	4	1733	
V0	U	00000000	1	1812	
V1	U	00000001	1	1813	539 540 565 566 591 592 617 618 643 644 669 670 695 696 721 722 747 748 774 775 800 801 826 827 852 853 878 879 904 905 930 931 956 957 982 983 1012 1013 1038 1039 1064 1065 1090 1091 1116 1117 1142 1143 1168 1169 1194 1195 1220 1221 1246 1247 1272 1273 1298 1299 1324 1325 1350 1351 1377 1378 1403 1404 1429 1430 1455 1456 1481 1482 1507 1508 1533 1534 1559 1560 1585 1586 1611 1612 1637 1638 1663 1664 1689 1690 1715 1716
V10	U	0000000A	1	1822	
V11	U	0000000B	1	1823	
V12	U	0000000C	1	1824	
V13	U	0000000D	1	1825	
V14	U	0000000E	1	1826	
V15	U	0000000F	1	1827	
V16	U	00000010	1	1828	
V17	U	00000011	1	1829	
V18	U	00000012	1	1830	
V19	U	00000013	1	1831	
V1FUDGE	X	00001130	16	395	

SYMBOL	TYPE	VALUE	LENGTH	DEFN	REFERENCES
V1FUDGEB	X	00001140	16	396	
V1INPUT	C	00001150	16	397	
V1OUTPUT	X	000010F8	16	391	
V2	U	00000002	1	1814	
V20	U	00000014	1	1832	
V21	U	00000015	1	1833	
V22	U	00000016	1	1834	
V23	U	00000017	1	1835	
V24	U	00000018	1	1836	
V25	U	00000019	1	1837	
V26	U	0000001A	1	1838	
V27	U	0000001B	1	1839	
V28	U	0000001C	1	1840	
V29	U	0000001D	1	1841	
V3	U	00000003	1	1815	
V30	U	0000001E	1	1842	
V31	U	0000001F	1	1843	
V4	U	00000004	1	1816	
V5	U	00000005	1	1817	
V6	U	00000006	1	1818	
V7	U	00000007	1	1819	
V8	U	00000008	1	1820	
V9	U	00000009	1	1821	
X1	F	0000119C	4	537	527
X10	F	000014B4	4	772	762
X11	F	0000150C	4	798	788
X12	F	00001564	4	824	814
X13	F	000015BC	4	850	840
X14	F	00001614	4	876	866
X15	F	0000166C	4	902	892
X16	F	000016C4	4	928	918
X17	F	0000171C	4	954	944
X18	F	00001774	4	980	970
X19	F	000017CC	4	1010	1000
X2	F	000011F4	4	563	553
X20	F	00001824	4	1036	1026
X21	F	0000187C	4	1062	1052
X22	F	000018D4	4	1088	1078
X23	F	0000192C	4	1114	1104
X24	F	00001984	4	1140	1130
X25	F	000019DC	4	1166	1156
X26	F	00001A34	4	1192	1182
X27	F	00001A8C	4	1218	1208
X28	F	00001AE4	4	1244	1234
X29	F	00001B3C	4	1270	1260
X3	F	0000124C	4	589	579
X30	F	00001B94	4	1296	1286
X31	F	00001BEC	4	1322	1312
X32	F	00001C44	4	1348	1338
X33	F	00001C9C	4	1375	1365
X34	F	00001CF4	4	1401	1391
X35	F	00001D4C	4	1427	1417
X36	F	00001DA4	4	1453	1443
X37	F	00001DFC	4	1479	1469
X38	F	00001E54	4	1505	1495
X39	F	00001EAC	4	1531	1521

SYMBOL	TYPE	VALUE	LENGTH	DEFN	REFERENCES
X4	F	000012A4	4	615	605
X40	F	00001F04	4	1557	1547
X41	F	00001F5C	4	1583	1573
X42	F	00001FB4	4	1609	1599
X43	F	0000200C	4	1635	1625
X44	F	00002064	4	1661	1651
X45	F	000020BC	4	1687	1677
X46	F	00002114	4	1713	1703
X5	F	000012FC	4	641	631
X6	F	00001354	4	667	657
X7	F	000013AC	4	693	683
X8	F	00001404	4	719	709
X9	F	0000145C	4	745	735
ZVE6TST	J	00000000	8736	50	53 55 59 63 334 51
=AL2(L'MSGMSG)	R	00000492	2	314	264
=F'1'	F	00000488	4	311	145 214
=H'0'	H	00000490	2	313	259
=XL4'3'	X	0000048C	4	312	152

```
 MACRO    DEFN   REFERENCES

PTTABLE    486    1732
VRR_I      431     524     550     576     602     628     654     680     706     732     759     785     811     837     863     889     915     941
                   967     997    1023    1049    1075    1101    1127    1153    1179    1205    1231    1257    1283    1309    1335    1362    1388
                  1414    1440    1466    1492    1518    1544    1570    1596    1622    1648    1674    1700
```

```
   DESC      SYMBOL   SIZE     POS         ADDR

Entry: 0

Image       IMAGE    8736  0000-221F  0000-221F
  Region             8736  0000-221F  0000-221F
    CSECT   ZVE6TST  8736  0000-221F  0000-221F
```

```
   STMT                        FILE NAME
1     /devstor/dev/tests/zvector-e6-11-convertbinary.asm

** NO ERRORS FOUND **
```