LOC	OBJECT CODE	ADDR1	ADDR2	STMT	

```
                                           2 ****************************************************************************
                                           3 *
                                           4 *          Zvector E6 instruction tests for VRR-k encoded:
                                           5 *
                                           6 *          E651 VCLZDP  - VECTOR COUNT LEADING ZERO DIGITS
                                           7 *             E654 VUPKZH  - VECTOR UNPACK ZONED HIGH
                                           8 *             E65C VUPKZL  - VECTOR UNPACK ZONED LOW
                                           9 *
                                          10 *          James Wekel June 2024
                                          11 ****************************************************************************
                                          12
                                          13 ****************************************************************************
                                          14 *
                                          15 *          basic instruction tests
                                          16 *
                                          17 ****************************************************************************
                                          18 *  This program tests proper functioning of the z/arch E6 VRR-k vector
                                          19 *  count leading zero digits, unpack zoned high and low instructions.
                                          20 *  Exceptions are not tested.
                                          21 *
                                          22 *  PLEASE NOTE that the tests are very SIMPLE TESTS designed to catch
                                          23 *  obvious coding errors.  None of the tests are thorough.  They are
                                          24 *  NOT designed to test all aspects of any of the instructions.
                                          25 *
                                          26 ****************************************************************************
                                          27 *
                                          28 *      *Testcase zvector-e6-12-countzonedhighlow: VECTOR E6 VRR-k
                                          29 *      *  Zvector E6 tests for VRR-k encoded instruction:
                                          30 *      *
                                          31 *      *    E651 VCLZDP  - VECTOR COUNT LEADING ZERO DIGITS
                                          32 *      *    E654 VUPKZH  - VECTOR UNPACK ZONED HIGH
                                          33 *      *    E65C VUPKZL  - VECTOR UNPACK ZONED LOW
                                          34 *      *
                                          35 *      *    # -------------------------------------------------------
                                          36 *      *    #  This tests only the basic function of the instruction.
                                          37 *      *    #  Exceptions are NOT tested.
                                          38 *      *    # -------------------------------------------------------
                                          39 *      *
                                          40 *          mainsize    2
                                          41 *          numcpu      1
                                          42 *          sysclear
                                          43 *          archlvl     z/Arch
                                          44 *
                                          45 *          diag8cmd    enable    # (needed for messages to Hercules console)
                                          46 *          loadcore    "$(testpath)/zvector-e6-12-countzonedhighlow.core" 0x0
                                          47 *          diag8cmd    disable   # (reset back to default)
                                          48 *
                                          49 *          *Done
                                          50 ****************************************************************************
```

LOC	OBJECT CODE	ADDR1	ADDR2	STMT	
		00000000	0000238F	52 ZVE6TST	START 0
00000000		00000000		53	USING ZVE6TST,R0 Low core addressability
				54	
		00000140	00000000	55 SVOLDPSW EQU	ZVE6TST+X'140' z/Arch Supervisor call old PSW

```
   LOC        OBJECT CODE      ADDR1     ADDR2     STMT

00000000                     00000000  000001A0    57          ORG     ZVE6TST+X'1A0'        z/Architecure RESTART PSW
000001A0   00000001 80000000                        58          DC      X'0000000180000000'
000001A8   00000000 00000200                        59          DC      AD(BEGIN)


000001B0                     000001B0  000001D0    61          ORG     ZVE6TST+X'1D0'        z/Architecure PROGRAM CHECK PSW
000001D0   00020001 80000000                        62          DC      X'0002000180000000'
000001D8   00000000 0000DEAD                        63          DC      AD(X'DEAD')


000001E0                     000001E0  00000200    65          ORG     ZVE6TST+X'200'        Start of actual test program..
                                                    66
```

```
  LOC        OBJECT CODE     ADDR1     ADDR2     STMT

                                                  68 ****************************************************************************
                                                  69 *            The actual "ZVE6TST" program itself...
                                                  70 ****************************************************************************
                                                  71 *
                                                  72 *   Architecture Mode: z/Arch
                                                  73 *   Register Usage:
                                                  74 *
                                                  75 *    R0        (work)
                                                  76 *    R1-4      (work)
                                                  77 *    R5        Testing control table - current test base
                                                  78 *    R6-R7     (work)
                                                  79 *    R8        First base register
                                                  80 *    R9        Second base register
                                                  81 *    R10       Third base register
                                                  82 *    R11       E6TEST call return
                                                  83 *    R12       E6TESTS register
                                                  84 *    R13       (work)
                                                  85 *    R14       Subroutine call
                                                  86 *    R15       Secondary Subroutine call or work
                                                  87 *
                                                  88 ****************************************************************************

00000200                     00000200            90          USING   BEGIN,R8          FIRST Base Register
00000200                     00001200            91          USING   BEGIN+4096,R9     SECOND Base Register

00000200  0580                                   93 BEGIN     BALR    R8,0             Initalize FIRST base register
00000202  0680                                   94          BCTR    R8,0             Initalize FIRST base register
00000204  0680                                   95          BCTR    R8,0             Initalize FIRST base register

00000206  4190 8800                   00000800   97          LA      R9,2048(,R8)     Initalize SECOND base register
0000020A  4190 9800                   00000800   98          LA      R9,2048(,R9)     Initalize SECOND base register

0000020E  41A0 9800                   00000800  100          LA      R10,2048(,R9)    Initalize THIRD base register
00000212  41A0 A800                   00000800  101          LA      R10,2048(,R10)   Initalize THIRD base register
                                                 102
00000216  B600 827C                   0000047C  103          STCTL   R0,R0,CTLR0      Store CR0 to enable AFP
0000021A  9604 827D                   0000047D  104          OI      CTLR0+1,X'04'    Turn on AFP bit
0000021E  9602 827D                   0000047D  105          OI      CTLR0+1,X'02'    Turn on Vector bit
00000222  B700 827C                   0000047C  106          LCTL    R0,R0,CTLR0      Reload updated CR0
```

```
  LOC          OBJECT CODE      ADDR1      ADDR2     STMT

                                                     108  ********************************************************************************
                                                     109  *              Do tests in the E6TESTS table
                                                     110  ********************************************************************************
                                                     111
00000226    58C0 8284                     00000484   112           L     R12,E6TADR       get table of test addresses
                                                     113
                            0000022A      00000001   114  NEXTE6   EQU   *
0000022A    5850 C000                     00000000   115           L     R5,0(0,R12)      get test address
0000022E    1255                                     116           LTR   R5,R5              have a test?
00000230    4780 8152                     00000352   117           BZ    ENDTEST              done?
                                                     118
00000234    B982 0000                                119           XGR   R0,R0            no cc error
                                                     120
00000238                    00000000                 121           USING E6TEST,R5
                                                     122
00000238    58B0 5000                     00000000   123           L     R11,TSUB         get address of test routine
0000023C    05BB                                     124           BALR  R11,R11          do test
                                                     125
0000023E    E310 5009 0076                00000009   126           LB    R1,CCMASK        (failure CC mask)
00000244    8910 0004                     00000004   127           SLL   R1,4             (shift to BC instr CC position)
00000248    4410 8064                     00000264   128           EX    R1,TESTCC          fail if...
                                                     129
                            0000024C      00000001   130  TESTREST EQU   *
0000024C    E310 5018 0014                00000018   131           LGF   R1,READDR        get address of expected result
00000252    D50F 8EF8 1000   000010F8     00000000   132           CLC   V10UTPUT,0(R1)   valid?
00000258    4770 80F8                     000002F8   133           BNE   FAILMSG            no, issue failed message
                                                     134
0000025C    41C0 C004                     00000004   135           LA    R12,4(0,R12)     next test address
00000260    47F0 802A                     0000022A   136           B     NEXTE6
                                                     137
00000264    4700 8068                     00000268   138  TESTCC   BC    0,CCMSG          (fail if unexpected condition code)
                                                     139
```

```
  LOC          OBJECT CODE       ADDR1     ADDR2     STMT

                                                     141 ****************************************************************************
                                                     142 * cc was not as expected
                                                     143 ****************************************************************************
                                 00000268  00000001  144 CCMSG    EQU     *
00000268  E310 0001 0082                   00000001  145          XG      R1,R1
0000026E  E310 5007 0076                   00000007  146          LB      R1,M3           m3 has CS bit
00000274  5410 8288                        00000488  147          N       R1,=F'1'        get CS (CC set) bit
00000278  4780 804C                        0000024C  148          BZ      TESTREST          ignore if not set
                                                     149 *
                                                     150 * extract CC extracted PSW
                                                     151 *
0000027C  5810 8ED4                        000010D4  152          L       R1,CCPSW
00000280  8810 000C                        0000000C  153          SRL     R1,12
00000284  5410 828C                        0000048C  154          N       R1,=XL4'3'
00000288  4210 8EDC                        000010DC  155          STC     R1,CCFOUND      save cc
                                                     156 *
                                                     157 * FILL IN MESSAGE
                                                     158 *
0000028C  4820 5004                        00000004  159          LH      R2,TNUM             get test number and convert
00000290  4E20 8EC4                        000010C4  160          CVD     R2,DECNUM
00000294  D211 8EAE 8E98         000010AE  00001098  161          MVC     PRT3,EDIT
0000029A  DE11 8EAE 8EC4         000010AE  000010C4  162          ED      PRT3,DECNUM
000002A0  D202 8E53 8EBB         00001053  000010BB  163          MVC     CCPRTNUM(3),PRT3+13   fill in message with test #
                                                     164
000002A6  D207 8E70 500A         00001070  0000000A  165          MVC     CCPRTNAME,OPNAME      fill in message with instruction
                                                     166
000002AC  B982 0022                                  167          XGR     R2,R2                get CC as U8
000002B0  4320 5008                        00000008  168          IC      R2,CC
000002B4  4E20 8EC4                        000010C4  169          CVD     R2,DECNUM            and convert
000002B8  D211 8EAE 8E98         000010AE  00001098  170          MVC     PRT3,EDIT
000002BE  DE11 8EAE 8EC4         000010AE  000010C4  171          ED      PRT3,DECNUM
000002C4  D200 8E86 8EBD         00001086  000010BD  172          MVC     CCPRTEXP(1),PRT3+15   fill in message with CC field
                                                     173
000002CA  B982 0022                                  174          XGR     R2,R2                get CCFOUND as U8
000002CE  4320 8EDC                        000010DC  175          IC      R2,CCFOUND
000002D2  4E20 8EC4                        000010C4  176          CVD     R2,DECNUM            and convert
000002D6  D211 8EAE 8E98         000010AE  00001098  177          MVC     PRT3,EDIT
000002DC  DE11 8EAE 8EC4         000010AE  000010C4  178          ED      PRT3,DECNUM
000002E2  D200 8E96 8EBD         00001096  000010BD  179          MVC     CCPRTGOT(1),PRT3+15   fill in message with ccfound
                                                     180
000002E8  4100 0055                        00000055  181          LA      R0,CCPRTLNG          message length
000002EC  4110 8E43                        00001043  182          LA      R1,CCPRTLINE         messagfe address
000002F0  45F0 8160                        00000360  183          BAL     R15,RPTERROR
                                                     184
000002F4  47F0 8142                        00000342  185          B       FAILCONT
```

```
  LOC        OBJECT CODE      ADDR1     ADDR2    STMT

                                                 187 ****************************************************************************
                                                 188 * result not as expected:
                                                 189 *       issue message with test number, instruction under test
                                                 190 *         and instruction l2
                                                 191 ****************************************************************************
                          000002F8  00000001     192 FAILMSG  EQU    *
000002F8  4820 5004                  00000004     193          LH     R2,TNUM             get test number and convert
000002FC  4E20 8EC4                  000010C4     194          CVD    R2,DECNUM
00000300  D211 8EAE 8E98  000010AE   00001098     195          MVC    PRT3,EDIT
00000306  DE11 8EAE 8EC4  000010AE   000010C4     196          ED     PRT3,DECNUM
0000030C  D202 8E14 8EBB  00001014   000010BB     197          MVC    PRTNUM(3),PRT3+13   fill in message with test #
                                                 198
00000312  D207 8E2F 500A  0000102F   0000000A     199          MVC    PRTNAME,OPNAME      fill in message with instruction
                                                 200
00000318  B982 0022                                201          XGR    R2,R2              get M3 as U8
0000031C  4320 5007                  00000007     202          IC     R2,M3              and convert
00000320  4E20 8EC4                  000010C4     203          CVD    R2,DECNUM
00000324  D211 8EAE 8E98  000010AE   00001098     204          MVC    PRT3,EDIT
0000032A  DE11 8EAE 8EC4  000010AE   000010C4     205          ED     PRT3,DECNUM
00000330  D201 8E40 8EBC  00001040   000010BC     206          MVC    PRTM3(2),PRT3+14    fill in message with m3 field
                                                 207
00000336  4100 003F                  0000003F     208          LA     R0,PRTLNG          message length
0000033A  4110 8E04                  00001004     209          LA     R1,PRTLINE         messagfe address
0000033E  45F0 8160                  00000360     210          BAL    R15,RPTERROR


                                                 212 ****************************************************************************
                                                 213 * continue after a failed test
                                                 214 ****************************************************************************
                          00000342  00000001     215 FAILCONT EQU    *
00000342  5800 8288                  00000488     216          L      R0,=F'1'           set GLOBAL failed test indicator
00000346  5000 8E00                  00001000     217          ST     R0,FAILED
                                                 218
0000034A  41C0 C004                  00000004     219          LA     R12,4(0,R12)       next test address
0000034E  47F0 802A                  0000022A     220          B      NEXTE6


                                                 222 ****************************************************************************
                                                 223 * end of testing; set ending psw
                                                 224 ****************************************************************************
                          00000352  00000001     225 ENDTEST  EQU    *
00000352  5810 8E00                  00001000     226          L      R1,FAILED          did a test fail?
00000356  1211                                    227          LTR    R1,R1
00000358  4780 8260                  00000460     228          BZ     EOJ                No, exit
0000035C  47F0 8278                  00000478     229          B      FAILTEST           Yes, exit with BAD PSW
                                                 230
```

```
   LOC        OBJECT CODE      ADDR1    ADDR2    STMT

                                                 232 *********************************************************************
                                                 233 *          RPTERROR           Report instruction test in error
                                                 234 *                                R0 = MESSGAE LENGTH
                                                 235 *                                R1 = ADDRESS OF MESSAGE
                                                 236 *********************************************************************

00000360   50F0 8180                  00000380   238 RPTERROR ST    R15,RPTSAVE          Save return address
00000364   5050 8184                  00000384   239          ST    R5,RPTSVR5           Save R5
                                                 240 *
                                                 241 *          Use Hercules Diagnose for Message to console
                                                 242 *
00000368   9002 8188                  00000388   243          STM   R0,R2,RPTDWSAV       save regs used by MSG
0000036C   4520 8198                  00000398   244          BAL   R2,MSG               call Hercules console MSG display
00000370   9802 8188                  00000388   245          LM    R0,R2,RPTDWSAV       restore regs

00000374   5850 8184                  00000384   247          L     R5,RPTSVR5           Restore R5
00000378   58F0 8180                  00000380   248          L     R15,RPTSAVE          Restore return address
0000037C   07FF                                  249          BR    R15                  Return to caller

00000380   00000000                              251 RPTSAVE  DC    F'0'                 R15 save area
00000384   00000000                              252 RPTSVR5  DC    F'0'                 R5 save area

00000388   00000000 00000000                     254 RPTDWSAV DC    2D'0'                R0-R2 save area for MSG call
```

```
 LOC         OBJECT CODE     ADDR1    ADDR2     STMT

                                               256 ***********************************************************************
                                               257 *          Issue HERCULES MESSAGE pointed to by R1, length in R0
                                               258 *               R2 = return address
                                               259 ***********************************************************************
                                               260
00000398    4900 8290                00000490  261 MSG      CH     R0,=H'0'                Do we even HAVE a message?
0000039C    07D2                               262          BNHR   R2                      No, ignore
                                               263
0000039E    9002 81D0                000003D0  264          STM    R0,R2,MSGSAVE           Save registers
                                               265
000003A2    4900 8292                00000492  266          CH     R0,=AL2(L'MSGMSG)       Message length within limits?
000003A6    47D0 81AE                000003AE  267          BNH    MSGOK                   Yes, continue
000003AA    4100 005F                0000005F  268          LA     R0,L'MSGMSG             No, set to maximum
                                               269
000003AE    1820                               270 MSGOK    LR     R2,R0                   Copy length to work register
000003B0    0620                               271          BCTR   R2,0                    Minus-1 for execute
000003B2    4420 81DC                000003DC  272          EX     R2,MSGMVC               Copy message to O/P buffer
                                               273
000003B6    4120 200A                0000000A  274          LA     R2,1+L'MSGCMD(,R2)      Calculate true command length
000003BA    4110 81E2                000003E2  275          LA     R1,MSGCMD               Point to true command
                                               276
000003BE    83120008                           277          DC     X'83',X'12',X'0008'     Issue Hercules Diagnose X'008'
000003C2    4780 81C8                000003C8  278          BZ     MSGRET                  Return if successful
000003C6    0000                               279          DC     H'0'                    CRASH for debugging purposes
                                               280
000003C8    9802 81D0                000003D0  281 MSGRET   LM     R0,R2,MSGSAVE           Restore registers
000003CC    07F2                               282          BR     R2                      Return to caller


000003D0    00000000 00000000                  284 MSGSAVE  DC     3F'0'                   Registers save area
000003DC    D200 81EB 1000  000003EB 00000000  285 MSGMVC   MVC    MSGMSG(0),0(R1)         Executed instruction


000003E2    D4E2C7D5 D6C8405C                   287 MSGCMD   DC     C'MSGNOH * '            *** HERCULES MESSAGE COMMAND ***
000003EB    40404040 40404040                   288 MSGMSG   DC     CL95' '                 The message text to be displayed
                                               289
```

```
  LOC         OBJECT CODE      ADDR1     ADDR2     STMT

                                                   291 ****************************************************************************
                                                   292 *           Normal completion or Abnormal termination PSWs
                                                   293 ****************************************************************************


00000450   00020001 80000000                       295 EOJPSW   DC     0D'0',X'0002000180000000',AD(0)

00000460   B2B2 8250                    00000450    297 EOJ      LPSWE EOJPSW                Normal completion


00000468   00020001 80000000                       299 FAILPSW  DC     0D'0',X'0002000180000000',AD(X'BAD')

00000478   B2B2 8268                    00000468    301 FAILTEST LPSWE FAILPSW               Abnormal termination


                                                   303 ****************************************************************************
                                                   304 *           Working Storage
                                                   305 ****************************************************************************


0000047C   00000000                                307 CTLR0    DS     F                    CR0
00000480   00000000                                308          DS     F
                                                   309
00000484   000022C8                                310 E6TADR   DC     A(E6TESTS)           address of E6 test table


00000488                                           312          LTORG ,                     Literals pool
00000488   00000001                                313                =F'1'
0000048C   00000003                                314                =XL4'3'
00000490   0000                                    315                =H'0'
00000492   005F                                    316                =AL2(L'MSGMSG)
                                                   317
                                                   318 *        some constants
                                                   319
                        00000400  00000001         320 K        EQU    1024                 One KB
                        00001000  00000001         321 PAGE     EQU    (4*K)                Size of one page
                        00010000  00000001         322 K64      EQU    (64*K)               64 KB
                        00100000  00000001         323 MB       EQU    (K*K)                1 MB
                                                   324
                                                   325
                        AABBCCDD  00000001         326 REG2PATT EQU    X'AABBCCDD'           Polluted Register pattern
                        000000DD  00000001         327 REG2LOW  EQU           X'DD'          (last byte above)
```

```
 LOC         OBJECT CODE      ADDR1     ADDR2     STMT

                                                  329 *===========================================================================
                                                  330 *
                                                  331 *   NOTE: start data on an address that is easy to display
                                                  332 *         within Hercules
                                                  333 *
                                                  334 *===========================================================================
                                                  335
00000494                      00000494  00001000  336            ORG     ZVE6TST+X'1000'
00001000    00000000                              337 FAILED   DC      F'0'                        some test failed?


                                                  339 ****************************************************************************
                                                  340 *         TEST failed : result messgae
                                                  341 ****************************************************************************
                                                  342 *
                                                  343 *         failed message and associated editting
                                                  344 *
00001004    40404040 40404040                     345 PRTLINE  DC      C'         Test # '
00001014    A7A7A7                                346 PRTNUM   DC      C'xxx'
00001017    40868189 93858440                     347          DC      C' failed for instruction '
0000102F    A7A7A7A7 A7A7A7A7                      348 PRTNAME  DC      CL8'xxxxxxxx'
00001037    40A689A3 884094F3                      349          DC      C' with m3='
00001040    A7A7                                   350 PRTM3    DC      C'xx'
00001042    4B                                     351          DC      C'.'
                              0000003F  00000001  352 PRTLNG   EQU     *-PRTLINE


                                                  354 ****************************************************************************
                                                  355 *         TEST failed : CC message
                                                  356 ****************************************************************************
                                                  357 *
                                                  358 *         failed message and associated editting
                                                  359 *
00001043    40404040 40404040                     360 CCPRTLINE DC     C'         Test # '
00001053    A7A7A7                                361 CCPRTNUM DC      C'xxx'
00001056    40A69996 95874083                     362          DC      c' wrong cc for instruction '
00001070    A7A7A7A7 A7A7A7A7                      363 CCPRTNAME DC      CL8'xxxxxxxx'
00001078    4085A797 8583A385                     364          DC      C' expected: cc='
00001086    A7                                     365 CCPRTEXP DC      C'x'
00001087    6B                                     366          DC      C','
00001088    40998583 8589A585                      367          DC      C' received: cc='
00001096    A7                                     368 CCPRTGOT DC      C'x'
00001097    4B                                     369          DC      C'.'
                              00000055  00000001  370 CCPRTLNG  EQU     *-CCPRTLINE
```

```
  LOC        OBJECT CODE      ADDR1     ADDR2    STMT

                                                 372 ******************************************************************************
                                                 373 *          TEST failed : message working storge
                                                 374 ******************************************************************************
00001098   40212020 20202020                     375 EDIT     DC     XL18'402120202020202020202020202020202020'
                                                 376
000010AA   7E7E7E6E                              377          DC     C'===>'
000010AE   40404040 40404040                     378 PRT3     DC     CL18' '
000010C0   4C7E7E7E                              379          DC     C'<==='
000010C4   00000000 00000000                     380 DECNUM   DS     CL16
                                                 381 *
                                                 382 *          CC extrtaction
                                                 383 *
000010D4   00000000 00000000                     384 CCPSW    DS     2F            extract PSW after test (has CC)
000010DC   00                                    385 CCFOUND  DS     X             extracted cc


                                                 387 ******************************************************************************
                                                 388 *          Vector instruction results, pollution and input
                                                 389 ******************************************************************************
000010E0                                         390          DS     0FD
000010E0   AABBCCDD EEFFAABB                     391 R1FUDGE  DC     XL8'AABBCCDDEEFFAABB'                          R1 FUDGE
000010E8   00000000 00000000                     392          DS     XL16                                             gap
000010F8   00000000 00000000                     393 V1OUTPUT DS     XL16                                          V1 OUTPUT
00001108   00000000 00000000                     394          DS     XL16                                             gap
00001118   00000000 00000000                     395 R1OUTPUT DS     FD                                            R1 OUTPUT
00001120   00000000 00000000                     396          DS     XL16                                             gap
00001130   FFFFFFFF FFFFFFFF                     397 V1FUDGE  DC     XL16'FFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF'         V1 FUDGE
00001140   BBBBBBBB BBBBBBBB                     398 V1FUDGEB DC     XL16'BBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBB'         V1 FUDGE b
00001150   F1F2F3F4 F5F6F7F8                     399 V1INPUT  DC     CL16'1234567890123456'                       V1 input
00001160   F7F8F9F0 F1F2F3F4                     400          DC     CL14'78901234567890'
0000116E   D9                                    401          DC     X'D9'
0000116F   00000000 00000000                     402          DS     XL16                                             gap
```

```
  LOC        OBJECT CODE      ADDR1      ADDR2      STMT

                                                   404 ***********************************************************************
                                                   405 *         E6TEST DSECT
                                                   406 ***********************************************************************

                                                   408 E6TEST    DSECT ,
00000000   00000000                                409 TSUB      DC      A(0)              pointer  to test
00000004   0000                                    410 TNUM      DC      H'00'             Test Number
00000006   00                                      411           DC      XL1'00'
00000007   00                                      412 M3        DC      HL1'00'           M3
00000008   00                                      413 CC        DC      HL1'00'           cc
00000009   00                                      414 CCMASK    DC      HL1'00'           not expected CC mask
                                                   415
0000000A   40404040 40404040                       416 OPNAME    DC      CL8' '            E6 name
                                                   417
00000014   00000000                                418 RELEN     DC      A(0)              RESULT LENGTH
00000018   00000000                                419 READDR    DC      A(0)              expected result address
                                                   420
                                                   421 **
                                                   422 *         test routine will be here (from VRS_D macro)
                                                   423 * followed by
                                                   424 *         16-byte EXPECTED RESULT
                                                   425 *         16-byte source
```

```
  LOC          OBJECT CODE      ADDR1     ADDR2     STMT

               427 *****************************************************************************
               428 *      Macros to help build test tables
               429 *----------------------------------------------------------------------------
               430 *      VRR_K Macro to help build test tables
               431 *****************************************************************************
               432          MACRO
               433          VRR_K &INST,&MB,&CC
               434 .*                                       &INST  - instruction under test
               435 .*                                       &MB
               436 .*                                       &CC    - expected CC
               437 .*
               438          LCLA  &XCC(4)   &CC has mask values for FAILED condition codes
               439 &XCC(1)  SETA  7                CC != 0
               440 &XCC(2)  SETA  11               CC != 1
               441 &XCC(3)  SETA  13               CC != 2
               442 &XCC(4)  SETA  14               CC != 3
               443
               444          GBLA  &TNUM
               445 &TNUM    SETA  &TNUM+1
               446
               447          DS    0FD
               448          USING *,R5            base for test data and test routine
               449
               450 T&TNUM   DC    A(X&TNUM)       address of test routine
               451          DC    H'&TNUM'        test number
               452          DC    XL1'00'
               453          DC    HL1'&MB'        &MB
               454          DC    HL1'&CC'        cc
               455          DC    HL1'&XCC(&CC+1)'  cc failed mask
               456
               457          DC    CL8'&INST'      instruction name
               458          DC    A(16)           result length
               459 REA&TNUM DC    A(RE&TNUM)      result address
               460 .*
               461 *                              INSTRUCTION UNDER TEST ROUTINE
               462 X&TNUM   DS    0F
               463          VL    V1,V1FUDGE      pollute V1
               464          VL    V2,RE&TNUM+16   get V2 source
               465
               466          &INST V1,V2,&MB       test instruction
               467
               468          VST   V1,V1OUTPUT     save
               469          EPSW  R2,R0           exptract psw
               470          ST    R2,CCPSW            to save CC
               471
               472          BR    R11             return
               473
               474 RE&TNUM  DC    0F
               475          DROP  R5
               476
               477          MEND
```

```
 LOC          OBJECT CODE       ADDR1     ADDR2     STMT

                                                    479 ******************************************************************************
                                                    480 *      PTTABLE Macro to generate table of pointers to individual tests
                                                    481 ******************************************************************************
                                                    482
                                                    483           MACRO
                                                    484           PTTABLE
                                                    485           GBLA  &TNUM
                                                    486           LCLA  &CUR
                                                    487 &CUR      SETA  1
                                                    488 .*
                                                    489 TTABLE    DS    0F
                                                    490 .LOOP     ANOP
                                                    491 .*
                                                    492           DC    A(T&CUR)        address of test
                                                    493 .*
                                                    494 &CUR      SETA  &CUR+1
                                                    495           AIF   (&CUR LE &TNUM).LOOP
                                                    496 *
                                                    497           DC    A(0)            END OF TABLE
                                                    498           DC    A(0)
                                                    499 .*
                                                    500           MEND
```

```
  LOC          OBJECT CODE      ADDR1     ADDR2     STMT

                                                    502 ********************************************************************
                                                    503 *        E6 VRR_K tests
                                                    504 ********************************************************************
                           00000000  0000238F       505 ZVE6TST  CSECT ,
00001180                                            506          DS    0F

                                                    508          PRINT DATA
                                                    509 *
                                                    510 *        E651 VCLZDP  - VECTOR COUNT LEADING ZERO DIGITS
                                                    511 *        E654 VUPKZH  - VECTOR UNPACK ZONED HIGH
                                                    512 *        E65C VUPKZL  - VECTOR UNPACK ZONED LOW
                                                    513 *
                                                    514 *        VRR_K instr, m3
                                                    515 *              followed by
                                                    516 *              v1      - expected result (16 bytes)
                                                    517 *              v2      - 16 byte packed decimal source
                                                    518
                                                    519 *--------------------------------------------------------------------
                                                    520 * VCLZDP  - VECTOR COUNT LEADING ZERO DIGITS
                                                    521 *--------------------------------------------------------------------
                                                    522 * VCLZDP simple                 m3= 1 ( NV=0, NZ=0 , CS=1)
                                                    523 *                               m3= 3 ( NV=0, NZ=1 , CS=1)
                                                    524 *                               m3= 5 ( NV=1, NZ=0 , CS=1)
                                                    525 *                               m3= 7 ( NV=1, NZ=1 , CS=1)
                                                    526          VRR_K VCLZDP, 1, 2
00001180                                            527+         DS    0FD
00001180                   00001180                 528+         USING *, R5            base for test data and test routine
00001180  0000119C                                  529+T1       DC    A(X1)            address of test routine
00001184  0001                                      530+         DC    H'1'             test number
00001186  00                                        531+         DC    XL1'00'
00001187  01                                        532+         DC    HL1'1'           &M3
00001188  02                                        533+         DC    HL1'2'           cc
00001189  0D                                        534+         DC    HL1'13'          cc failed mask
0000118A  E5C3D3E9 C4D74040                          535+        DC    CL8'VCLZDP'      instruction name
00001194  00000010                                  536+         DC    A(16)            result length
00001198  000011C0                                  537+REA1     DC    A(RE1)           result address
                                                    538+*                               INSTRUCTION UNDER TEST ROUTINE
0000119C                                            539+X1       DS    0F
0000119C  E710 8F30 0006      00001130              540+         VL    V1, V1FUDGE      pollute V1
000011A2  E720 5050 0006      000011D0              541+         VL    V2, RE1+16       get V2 source
000011A8  E612 0010 0051                            542+         VCLZDP V1, V2, 1       test instruction
000011AE  E710 8EF8 000E      000010F8              543+         VST   V1, V1OUTPUT     save
000011B4  B98D 0020                                 544+         EPSW  R2, R0           exptract psw
000011B8  5020 8ED4           000010D4              545+         ST    R2, CCPSW             to save CC
000011BC  07FB                                      546+         BR    R11              return
000011C0                                            547+RE1      DC    0F
000011C0                                            548+         DROP  R5
000011C0  00000000 0000001D                         549          DC    XL16'000000000000001D0000000000000000'    V1 result
000011C8  00000000 00000000
000011D0  00000000 00000000                         550          DC    XL16'0000000000000000000000000000010C'    V2 source
000011D8  00000000 0000010C
                                                    551
                                                    552          VRR_K VCLZDP, 1, 2
000011E0                                            553+         DS    0FD
000011E0                   000011E0                 554+         USING *, R5            base for test data and test routine
```

```
  LOC        OBJECT CODE      ADDR1     ADDR2     STMT

000011E0  000011FC                                555+T2    DC     A(X2)              address of test routine
000011E4  0002                                    556+      DC     H'2'               test number
000011E6  00                                      557+      DC     XL1'00'
000011E7  01                                      558+      DC     HL1'1'             &M3
000011E8  02                                      559+      DC     HL1'2'             cc
000011E9  0D                                      560+      DC     HL1'13'            cc failed mask
000011EA  E5C3D3E9 C4D74040                        561+      DC     CL8'VCLZDP'        instruction name
000011F4  00000010                                562+      DC     A(16)              result length
000011F8  00001220                                563+REA2  DC     A(RE2)             result address
                                                  564+*                               INSTRUCTION UNDER TEST ROUTINE
000011FC                                          565+X2    DS     0F
000011FC  E710 8F30 0006              00001130     566+      VL     V1,V1FUDGE         pollute V1
00001202  E720 9030 0006              00001230     567+      VL     V2,RE2+16          get V2 source
00001208  E612 0010 0051                           568+      VCLZDP V1,V2,1            test instruction
0000120E  E710 8EF8 000E              000010F8     569+      VST    V1,V1OUTPUT        save
00001214  B98D 0020                                570+      EPSW   R2,R0              exptract psw
00001218  5020 8ED4                   000010D4     571+      ST     R2,CCPSW              to save CC
0000121C  07FB                                     572+      BR     R11                return
00001220                                          573+RE2   DC     0F
00001220                                          574+      DROP   R5
00001220  00000000 0000000F                        575       DC     XL16'00000000000000F0000000000000000'    V1 result
00001228  00000000 00000000
00001230  00000000 00000001                        576       DC     XL16'0000000000000001110000000000010C'   V2 source
00001238  11000000 0000010C

                                                  577
                                                  578       VRR_K VCLZDP,1,1
00001240                                          579+      DS     0FD
00001240                        00001240           580+      USING  *,R5               base for test data and test routine
00001240  0000125C                                581+T3    DC     A(X3)              address of test routine
00001244  0003                                    582+      DC     H'3'               test number
00001246  00                                      583+      DC     XL1'00'
00001247  01                                      584+      DC     HL1'1'             &M3
00001248  01                                      585+      DC     HL1'1'             cc
00001249  0B                                      586+      DC     HL1'11'            cc failed mask
0000124A  E5C3D3E9 C4D74040                        587+      DC     CL8'VCLZDP'        instruction name
00001254  00000010                                588+      DC     A(16)              result length
00001258  00001280                                589+REA3  DC     A(RE3)             result address
                                                  590+*                               INSTRUCTION UNDER TEST ROUTINE
0000125C                                          591+X3    DS     0F
0000125C  E710 8F30 0006              00001130     592+      VL     V1,V1FUDGE         pollute V1
00001262  E720 5050 0006              00001290     593+      VL     V2,RE3+16          get V2 source
00001268  E612 0010 0051                           594+      VCLZDP V1,V2,1            test instruction
0000126E  E710 8EF8 000E              000010F8     595+      VST    V1,V1OUTPUT        save
00001274  B98D 0020                                596+      EPSW   R2,R0              exptract psw
00001278  5020 8ED4                   000010D4     597+      ST     R2,CCPSW              to save CC
0000127C  07FB                                     598+      BR     R11                return
00001280                                          599+RE3   DC     0F
00001280                                          600+      DROP   R5
00001280  00000000 0000000F                        601       DC     XL16'00000000000000F0000000000000000'    V1 result
00001288  00000000 00000000
00001290  00000000 00000001                        602       DC     XL16'0000000000000001110000000000010D'   V2 source
00001298  11000000 0000010D

                                                  603
                                                  604       VRR_K VCLZDP,1,0
000012A0                                          605+      DS     0FD
000012A0                        000012A0           606+      USING  *,R5               base for test data and test routine
```

```
 LOC        OBJECT CODE      ADDR1     ADDR2     STMT

000012A0  000012BC                              607+T4       DC    A(X4)              address of test routine
000012A4  0004                                  608+         DC    H'4'               test number
000012A6  00                                    609+         DC    XL1'00'
000012A7  01                                    610+         DC    HL1'1'             &M3
000012A8  00                                    611+         DC    HL1'0'             cc
000012A9  07                                    612+         DC    HL1'7'             cc failed mask
000012AA  E5C3D3E9 C4D74040                     613+         DC    CL8'VCLZDP'        instruction name
000012B4  00000010                              614+         DC    A(16)              result length
000012B8  000012E0                              615+REA4     DC    A(RE4)             result address
                                                616+*                                INSTRUCTION UNDER TEST ROUTINE
000012BC                                        617+X4       DS    0F
000012BC  E710 8F30 0006             00001130   618+         VL    V1,V1FUDGE         pollute V1
000012C2  E720 5050 0006             000012F0   619+         VL    V2,RE4+16          get V2 source
000012C8  E612 0010 0051                        620+         VCLZDP V1,V2,1           test instruction
000012CE  E710 8EF8 000E             000010F8   621+         VST   V1,V10OUTPUT       save
000012D4  B98D 0020                             622+         EPSW  R2,R0              exptract psw
000012D8  5020 8ED4                  000010D4   623+         ST    R2,CCPSW              to save CC
000012DC  07FB                                  624+         BR    R11                return
000012E0                                        625+RE4      DC    0F
000012E0                                        626+         DROP  R5
000012E0  00000000 0000001F                     627          DC    XL16'000000000000001F0000000000000000'    V1 result
000012E8  00000000 00000000
000012F0  00000000 00000000                     628          DC    XL16'000000000000000000000000000000000C'  V2 source
000012F8  00000000 0000000C

                                                629
                                                630          VRR_K VCLZDP,1,0
00001300                                        631+         DS    0FD
00001300                            00001300    632+         USING *,R5              base for test data and test routine
00001300  0000131C                              633+T5       DC    A(X5)              address of test routine
00001304  0005                                  634+         DC    H'5'               test number
00001306  00                                    635+         DC    XL1'00'
00001307  01                                    636+         DC    HL1'1'             &M3
00001308  00                                    637+         DC    HL1'0'             cc
00001309  07                                    638+         DC    HL1'7'             cc failed mask
0000130A  E5C3D3E9 C4D74040                     639+         DC    CL8'VCLZDP'        instruction name
00001314  00000010                              640+         DC    A(16)              result length
00001318  00001340                              641+REA5     DC    A(RE5)             result address
                                                642+*                                INSTRUCTION UNDER TEST ROUTINE
0000131C                                        643+X5       DS    0F
0000131C  E710 8F30 0006             00001130   644+         VL    V1,V1FUDGE         pollute V1
00001322  E720 5050 0006             00001350   645+         VL    V2,RE5+16          get V2 source
00001328  E612 0010 0051                        646+         VCLZDP V1,V2,1           test instruction
0000132E  E710 8EF8 000E             000010F8   647+         VST   V1,V10OUTPUT       save
00001334  B98D 0020                             648+         EPSW  R2,R0              exptract psw
00001338  5020 8ED4                  000010D4   649+         ST    R2,CCPSW              to save CC
0000133C  07FB                                  650+         BR    R11                return
00001340                                        651+RE5      DC    0F
00001340                                        652+         DROP  R5
00001340  00000000 0000001F                     653          DC    XL16'000000000000001F0000000000000000'    V1 result
00001348  00000000 00000000
00001350  00000000 00000000                     654          DC    XL16'000000000000000000000000000000000D'  V2 source
00001358  00000000 0000000D

                                                655
                                                656  * VCLZDP with                m3= 3 ( NV=0, NZ=1 , CS=1)
                                                657
                                                658          VRR_K VCLZDP,3,2
```

```
  LOC          OBJECT CODE       ADDR1     ADDR2     STMT

00001360                                             659+           DS     0FD
00001360                         00001360            660+           USING  *,R5                   base for test data and test routine
00001360   0000137C                                  661+T6         DC     A(X6)                   address of test routine
00001364   0006                                      662+           DC     H'6'                    test number
00001366   00                                        663+           DC     XL1'00'
00001367   03                                        664+           DC     HL1'3'                  &M3
00001368   02                                        665+           DC     HL1'2'                  cc
00001369   0D                                        666+           DC     HL1'13'                 cc failed mask
0000136A   E5C3D3E9 C4D74040                          667+           DC     CL8'VCLZDP'             instruction name
00001374   00000010                                  668+           DC     A(16)                   result length
00001378   000013A0                                  669+REA6       DC     A(RE6)                  result address
                                                     670+*                                         INSTRUCTION UNDER TEST ROUTINE
0000137C                                             671+X6         DS     0F
0000137C   E710 8F30 0006                 00001130   672+           VL     V1,V1FUDGE              pollute V1
00001382   E720 5050 0006                 000013B0   673+           VL     V2,RE6+16              get V2 source
00001388   E612 0030 0051                            674+           VCLZDP V1,V2,3                 test instruction
0000138E   E710 8EF8 000E                 000010F8   675+           VST    V1,V10UTPUT            save
00001394   B98D 0020                                 676+           EPSW   R2,R0                   exptract psw
00001398   5020 8ED4                      000010D4   677+           ST     R2,CCPSW                  to save CC
0000139C   07FB                                      678+           BR     R11                     return
000013A0                                             679+RE6        DC     0F
000013A0                                             680+           DROP   R5
000013A0   00000000 0000001D                          681            DC     XL16'00000000000000 1D0000000000000000'    V1 result
000013A8   00000000 00000000
000013B0   00000000 00000000                          682            DC     XL16'000000000000000000000000000000 10C'   V2 source
000013B8   00000000 0000010C
                                                      683
                                                      684           VRR_K  VCLZDP,3,2
000013C0                                              685+          DS     0FD
000013C0                         000013C0             686+          USING  *,R5                    base for test data and test routine
000013C0   000013DC                                   687+T7        DC     A(X7)                   address of test routine
000013C4   0007                                       688+          DC     H'7'                    test number
000013C6   00                                         689+          DC     XL1'00'
000013C7   03                                         690+          DC     HL1'3'                  &M3
000013C8   02                                         691+          DC     HL1'2'                  cc
000013C9   0D                                         692+          DC     HL1'13'                 cc failed mask
000013CA   E5C3D3E9 C4D74040                            693+          DC     CL8'VCLZDP'             instruction name
000013D4   00000010                                   694+          DC     A(16)                   result length
000013D8   00001400                                   695+REA7      DC     A(RE7)                  result address
                                                      696+*                                        INSTRUCTION UNDER TEST ROUTINE
000013DC                                              697+X7        DS     0F
000013DC   E710 8F30 0006                 00001130    698+          VL     V1,V1FUDGE              pollute V1
000013E2   E720 5050 0006                 00001410    699+          VL     V2,RE7+16              get V2 source
000013E8   E612 0030 0051                             700+          VCLZDP V1,V2,3                 test instruction
000013EE   E710 8EF8 000E                 000010F8    701+          VST    V1,V10UTPUT            save
000013F4   B98D 0020                                  702+          EPSW   R2,R0                   exptract psw
000013F8   5020 8ED4                      000010D4    703+          ST     R2,CCPSW                  to save CC
000013FC   07FB                                       704+          BR     R11                     return
00001400                                              705+RE7       DC     0F
00001400                                              706+          DROP   R5
00001400   00000000 0000000F                           707           DC     XL16'000000000000000F0000000000000000'    V1 result
00001408   00000000 00000000
00001410   00000000 00000001                           708           DC     XL16'00000000000000011 0000000000010C'    V2 source
00001418   11000000 0000010C
                                                       709
                                                       710          VRR_K  VCLZDP,3,1
```

```
  LOC        OBJECT CODE     ADDR1    ADDR2    STMT

00001420                                      711+          DS     0FD
00001420                     00001420         712+          USING  *,R5                   base for test data and test routine
00001420   0000143C                           713+T8        DC     A(X8)                   address of test routine
00001424   0008                               714+          DC     H'8'                    test number
00001426   00                                 715+          DC     XL1'00'
00001427   03                                 716+          DC     HL1'3'                  &M3
00001428   01                                 717+          DC     HL1'1'                  cc
00001429   0B                                 718+          DC     HL1'11'                 cc failed mask
0000142A   E5C3D3E9 C4D74040                   719+          DC     CL8'VCLZDP'             instruction name
00001434   00000010                           720+          DC     A(16)                   result length
00001438   00001460                           721+REA8      DC     A(RE8)                  result address
                                              722+*                                        INSTRUCTION UNDER TEST ROUTINE
0000143C                                      723+X8         DS     0F
0000143C   E710 8F30 0006              00001130 724+        VL     V1,V1FUDGE              pollute V1
00001442   E720 5050 0006              00001470 725+        VL     V2,RE8+16              get V2 source
00001448   E612 0030 0051                      726+          VCLZDP V1,V2,3               test instruction
0000144E   E710 8EF8 000E              000010F8 727+        VST    V1,V10UTPUT            save
00001454   B98D 0020                           728+          EPSW   R2,R0                   exptract psw
00001458   5020 8ED4                   000010D4 729+        ST     R2,CCPSW                   to save CC
0000145C   07FB                                730+          BR     R11                     return
00001460                                      731+RE8        DC     0F
00001460                                      732+          DROP   R5
00001460   00000000 0000000F                   733           DC     XL16'00000000000000F0000000000000000'    V1 result
00001468   00000000 00000000
00001470   00000000 00000001                   734           DC     XL16'0000000000000001110000000000010D'    V2 source
00001478   11000000 0000010D

                                              735
                                              736           VRR_K VCLZDP,3,0
00001480                                      737+          DS     0FD
00001480                     00001480         738+          USING  *,R5                   base for test data and test routine
00001480   0000149C                           739+T9        DC     A(X9)                   address of test routine
00001484   0009                               740+          DC     H'9'                    test number
00001486   00                                 741+          DC     XL1'00'
00001487   03                                 742+          DC     HL1'3'                  &M3
00001488   00                                 743+          DC     HL1'0'                  cc
00001489   07                                 744+          DC     HL1'7'                  cc failed mask
0000148A   E5C3D3E9 C4D74040                   745+          DC     CL8'VCLZDP'             instruction name
00001494   00000010                           746+          DC     A(16)                   result length
00001498   000014C0                           747+REA9      DC     A(RE9)                  result address
                                              748+*                                        INSTRUCTION UNDER TEST ROUTINE
0000149C                                      749+X9         DS     0F
0000149C   E710 8F30 0006              00001130 750+        VL     V1,V1FUDGE              pollute V1
000014A2   E720 5050 0006              000014D0 751+        VL     V2,RE9+16              get V2 source
000014A8   E612 0030 0051                      752+          VCLZDP V1,V2,3               test instruction
000014AE   E710 8EF8 000E              000010F8 753+        VST    V1,V10UTPUT            save
000014B4   B98D 0020                           754+          EPSW   R2,R0                   exptract psw
000014B8   5020 8ED4                   000010D4 755+        ST     R2,CCPSW                   to save CC
000014BC   07FB                                756+          BR     R11                     return
000014C0                                      757+RE9        DC     0F
000014C0                                      758+          DROP   R5
000014C0   00000000 0000001F                   759           DC     XL16'00000000000001F0000000000000000'    V1 result
000014C8   00000000 00000000
000014D0   00000000 00000000                   760           DC     XL16'0000000000000000000000000000000C'    V2 source
000014D8   00000000 0000000C

                                              761
                                              762           VRR_K VCLZDP,3,1
```

```
  LOC         OBJECT CODE     ADDR1     ADDR2     STMT

000014E0                                          763+          DS      0FD
000014E0                      000014E0            764+          USING   *,R5                base for test data and test routine
000014E0   000014FC                               765+T10       DC      A(X10)              address of test routine
000014E4   000A                                   766+          DC      H'10'               test number
000014E6   00                                     767+          DC      XL1'00'
000014E7   03                                      768+          DC      HL1'3'              &M3
000014E8   01                                      769+          DC      HL1'1'              cc
000014E9   0B                                      770+          DC      HL1'11'             cc failed mask
000014EA   E5C3D3E9 C4D74040                       771+          DC      CL8'VCLZDP'         instruction name
000014F4   00000010                                772+          DC      A(16)               result length
000014F8   00001520                                773+REA10     DC      A(RE10)             result address
                                                   774+*                                     INSTRUCTION UNDER TEST ROUTINE
000014FC                                           775+X10       DS      0F
000014FC   E710 8F30 0006                00001130  776+          VL      V1,V1FUDGE          pollute V1
00001502   E720 5050 0006                00001530  777+          VL      V2,RE10+16          get V2 source
00001508   E612 0030 0051                          778+          VCLZDP  V1,V2,3             test instruction
0000150E   E710 8EF8 000E                000010F8  779+          VST     V1,V10UTPUT         save
00001514   B98D 0020                               780+          EPSW    R2,R0               exptract psw
00001518   5020 8ED4                     000010D4  781+          ST      R2,CCPSW                to save CC
0000151C   07FB                                    782+          BR      R11                 return
00001520                                           783+RE10      DC      0F
00001520                                           784+          DROP    R5
00001520   00000000 0000001F                       785          DC      XL16'000000000000001F0000000000000000'    V1 result
00001528   00000000 00000000
00001530   00000000 00000000                       786          DC      XL16'0000000000000000000000000000000D'    V2 source
00001538   00000000 0000000D

                                                   787
                                                   788 * VCLZDP with                        m3= 5 ( NV=1, NZ=0 , CS=1)
                                                   789
                                                   790          VRR_K VCLZDP,5,2
00001540                                           791+          DS      0FD
00001540                      00001540            792+          USING   *,R5                base for test data and test routine
00001540   0000155C                                793+T11       DC      A(X11)              address of test routine
00001544   000B                                    794+          DC      H'11'               test number
00001546   00                                      795+          DC      XL1'00'
00001547   05                                      796+          DC      HL1'5'              &M3
00001548   02                                      797+          DC      HL1'2'              cc
00001549   0D                                      798+          DC      HL1'13'             cc failed mask
0000154A   E5C3D3E9 C4D74040                       799+          DC      CL8'VCLZDP'         instruction name
00001554   00000010                                800+          DC      A(16)               result length
00001558   00001580                                801+REA11     DC      A(RE11)             result address
                                                   802+*                                     INSTRUCTION UNDER TEST ROUTINE
0000155C                                           803+X11       DS      0F
0000155C   E710 8F30 0006                00001130  804+          VL      V1,V1FUDGE          pollute V1
00001562   E720 5050 0006                00001590  805+          VL      V2,RE11+16          get V2 source
00001568   E612 0050 0051                          806+          VCLZDP  V1,V2,5             test instruction
0000156E   E710 8EF8 000E                000010F8  807+          VST     V1,V10UTPUT         save
00001574   B98D 0020                               808+          EPSW    R2,R0               exptract psw
00001578   5020 8ED4                     000010D4  809+          ST      R2,CCPSW                to save CC
0000157C   07FB                                    810+          BR      R11                 return
00001580                                           811+RE11      DC      0F
00001580                                           812+          DROP    R5
00001580   00000000 0000001D                       813          DC      XL16'000000000000001D0000000000000000'    V1 result
00001588   00000000 00000000
00001590   00000000 00000000                       814          DC      XL16'0000000000000000000000000000010C'    V2 source
00001598   00000000 0000010C
```

```
  LOC           OBJECT CODE       ADDR1     ADDR2     STMT

                                                      815
                                                      816           VRR_K VCLZDP, 5, 2
000015A0                                              817+          DS    0FD
000015A0                          000015A0            818+          USING *, R5                base for test data and test routine
000015A0    000015BC                                  819+T12       DC    A(X12)               address of test routine
000015A4    000C                                      820+          DC    H'12'                test number
000015A6    00                                        821+          DC    XL1'00'
000015A7    05                                        822+          DC    HL1'5'               &M3
000015A8    02                                        823+          DC    HL1'2'               cc
000015A9    0D                                        824+          DC    HL1'13'              cc failed mask
000015AA    E5C3D3E9 C4D74040                          825+          DC    CL8'VCLZDP'          instruction name
000015B4    00000010                                  826+          DC    A(16)                result length
000015B8    000015E0                                  827+REA12     DC    A(RE12)              result address
                                                      828+*                                   INSTRUCTION UNDER TEST ROUTINE
000015BC                                              829+X12       DS    0F
000015BC    E710 8F30 0006                  00001130  830+          VL    V1, V1FUDGE          pollute V1
000015C2    E720 5050 0006                  000015F0  831+          VL    V2, RE12+16          get V2 source
000015C8    E612 0050 0051                            832+          VCLZDP V1, V2, 5           test instruction
000015CE    E710 8EF8 000E                  000010F8  833+          VST   V1, V10UTPUT         save
000015D4    B98D 0020                                 834+          EPSW  R2, R0               exptract psw
000015D8    5020 8ED4                       000010D4  835+          ST    R2, CCPSW               to save CC
000015DC    07FB                                      836+          BR    R11                  return
000015E0                                              837+RE12      DC    0F
000015E0                                              838+          DROP  R5
000015E0    00000000 0000000F                          839          DC    XL16'000000000000000F0000000000000000'     V1 result
000015E8    00000000 00000000
000015F0    00000000 00000001                          840          DC    XL16'000000000000000111000000000000010C'     V2 source
000015F8    11000000 0000010C

                                                      841
                                                      842           VRR_K VCLZDP, 5, 1
00001600                                              843+          DS    0FD
00001600                          00001600            844+          USING *, R5                base for test data and test routine
00001600    0000161C                                  845+T13       DC    A(X13)               address of test routine
00001604    000D                                      846+          DC    H'13'                test number
00001606    00                                        847+          DC    XL1'00'
00001607    05                                        848+          DC    HL1'5'               &M3
00001608    01                                        849+          DC    HL1'1'               cc
00001609    0B                                        850+          DC    HL1'11'              cc failed mask
0000160A    E5C3D3E9 C4D74040                          851+          DC    CL8'VCLZDP'          instruction name
00001614    00000010                                  852+          DC    A(16)                result length
00001618    00001640                                  853+REA13     DC    A(RE13)              result address
                                                      854+*                                   INSTRUCTION UNDER TEST ROUTINE
0000161C                                              855+X13       DS    0F
0000161C    E710 8F30 0006                  00001130  856+          VL    V1, V1FUDGE          pollute V1
00001622    E720 5050 0006                  00001650  857+          VL    V2, RE13+16          get V2 source
00001628    E612 0050 0051                            858+          VCLZDP V1, V2, 5           test instruction
0000162E    E710 8EF8 000E                  000010F8  859+          VST   V1, V10UTPUT         save
00001634    B98D 0020                                 860+          EPSW  R2, R0               exptract psw
00001638    5020 8ED4                       000010D4  861+          ST    R2, CCPSW               to save CC
0000163C    07FB                                      862+          BR    R11                  return
00001640                                              863+RE13      DC    0F
00001640                                              864+          DROP  R5
00001640    00000000 0000000F                          865          DC    XL16'000000000000000F0000000000000000'     V1 result
00001648    00000000 00000000
00001650    00000000 00000001                          866          DC    XL16'000000000000000111000000000000010D'     V2 source
00001658    11000000 0000010D
```

```
  LOC        OBJECT CODE      ADDR1     ADDR2     STMT


                                                 867
                                                 868          VRR_K VCLZDP,5,0
00001660                                         869+         DS    0FD
00001660                        00001660         870+         USING *,R5              base for test data and test routine
00001660   0000167C                              871+T14      DC    A(X14)             address of test routine
00001664   000E                                  872+         DC    H'14'              test number
00001666   00                                    873+         DC    XL1'00'
00001667   05                                    874+         DC    HL1'5'             &M3
00001668   00                                    875+         DC    HL1'0'             cc
00001669   07                                    876+         DC    HL1'7'             cc failed mask
0000166A   E5C3D3E9 C4D74040                      877+         DC    CL8'VCLZDP'        instruction name
00001674   00000010                              878+         DC    A(16)              result length
00001678   000016A0                              879+REA14    DC    A(RE14)            result address
                                                 880+*                                 INSTRUCTION UNDER TEST ROUTINE
0000167C                                         881+X14      DS    0F
0000167C   E710 8F30 0006          00001130      882+         VL    V1,V1FUDGE         pollute V1
00001682   E720 5050 0006          000016B0      883+         VL    V2,RE14+16         get V2 source
00001688   E612 0050 0051                        884+         VCLZDP V1,V2,5           test instruction
0000168E   E710 8EF8 000E          000010F8      885+         VST   V1,V10OUTPUT       save
00001694   B98D 0020                             886+         EPSW  R2,R0              exptract psw
00001698   5020 8ED4               000010D4      887+         ST    R2,CCPSW              to save CC
0000169C   07FB                                  888+         BR    R11                return
000016A0                                         889+RE14     DC    0F
000016A0                                         890+         DROP  R5
000016A0   00000000 0000001F                     891          DC    XL16'000000000000001F0000000000000000'   V1 result
000016A8   00000000 00000000
000016B0   00000000 00000000                     892          DC    XL16'0000000000000000000000000000000C'   V2 source
000016B8   00000000 0000000C

                                                 893
                                                 894          VRR_K VCLZDP,5,0
000016C0                                         895+         DS    0FD
000016C0                        000016C0         896+         USING *,R5              base for test data and test routine
000016C0   000016DC                              897+T15      DC    A(X15)             address of test routine
000016C4   000F                                  898+         DC    H'15'              test number
000016C6   00                                    899+         DC    XL1'00'
000016C7   05                                    900+         DC    HL1'5'             &M3
000016C8   00                                    901+         DC    HL1'0'             cc
000016C9   07                                    902+         DC    HL1'7'             cc failed mask
000016CA   E5C3D3E9 C4D74040                      903+         DC    CL8'VCLZDP'        instruction name
000016D4   00000010                              904+         DC    A(16)              result length
000016D8   00001700                              905+REA15    DC    A(RE15)            result address
                                                 906+*                                 INSTRUCTION UNDER TEST ROUTINE
000016DC                                         907+X15      DS    0F
000016DC   E710 8F30 0006          00001130      908+         VL    V1,V1FUDGE         pollute V1
000016E2   E720 5050 0006          00001710      909+         VL    V2,RE15+16         get V2 source
000016E8   E612 0050 0051                        910+         VCLZDP V1,V2,5           test instruction
000016EE   E710 8EF8 000E          000010F8      911+         VST   V1,V10OUTPUT       save
000016F4   B98D 0020                             912+         EPSW  R2,R0              exptract psw
000016F8   5020 8ED4               000010D4      913+         ST    R2,CCPSW              to save CC
000016FC   07FB                                  914+         BR    R11                return
00001700                                         915+RE15     DC    0F
00001700                                         916+         DROP  R5
00001700   00000000 0000001F                     917          DC    XL16'000000000000001F0000000000000000'   V1 result
00001708   00000000 00000000
00001710   00000000 00000000                     918          DC    XL16'0000000000000000000000000000000D'   V2 source
00001718   00000000 0000000D
```

LOC	OBJECT CODE	ADDR1	ADDR2	STMT			
				919			
				920		VRR_K VCLZDP, 5, 3	
00001720				921+	DS	0FD	
00001720		00001720		922+	USING	*, R5	base for test data and test routine
00001720	0000173C			923+T16	DC	A(X16)	address of test routine
00001724	0010			924+	DC	H'16'	test number
00001726	00			925+	DC	XL1'00'	
00001727	05			926+	DC	HL1'5'	&M3
00001728	03			927+	DC	HL1'3'	cc
00001729	0E			928+	DC	HL1'14'	cc failed mask
0000172A	E5C3D3E9 C4D74040			929+	DC	CL8'VCLZDP'	instruction name
00001734	00000010			930+	DC	A(16)	result length
00001738	00001760			931+REA16	DC	A(RE16)	result address
				932+*			INSTRUCTION UNDER TEST ROUTINE
0000173C				933+X16	DS	0F	
0000173C	E710 8F30 0006		00001130	934+	VL	V1, V1FUDGE	pollute V1
00001742	E720 5050 0006		00001770	935+	VL	V2, RE16+16	get V2 source
00001748	E612 0050 0051			936+	VCLZDP V1, V2, 5		test instruction
0000174E	E710 8EF8 000E		000010F8	937+	VST	V1, V10UTPUT	save
00001754	B98D 0020			938+	EPSW	R2, R0	exptract psw
00001758	5020 8ED4		000010D4	939+	ST	R2, CCPSW	to save CC
0000175C	07FB			940+	BR	R11	return
00001760				941+RE16	DC	0F	
00001760				942+	DROP	R5	
00001760	00000000 00000002			943	DC	XL16'00000000000000020000000000000000'	V1 result
00001768	00000000 00000000						
00001770	00AAA000 00000000			944	DC	XL16'00AAA000000000000000000000000000D'	V2 source
00001778	00000000 0000000D						
				945			
				946 * VCLZDP with			m3= 7 (NV=1, NZ=1 , CS=1)
				947			
				948		VRR_K VCLZDP, 7, 2	
00001780				949+	DS	0FD	
00001780		00001780		950+	USING	*, R5	base for test data and test routine
00001780	0000179C			951+T17	DC	A(X17)	address of test routine
00001784	0011			952+	DC	H'17'	test number
00001786	00			953+	DC	XL1'00'	
00001787	07			954+	DC	HL1'7'	&M3
00001788	02			955+	DC	HL1'2'	cc
00001789	0D			956+	DC	HL1'13'	cc failed mask
0000178A	E5C3D3E9 C4D74040			957+	DC	CL8'VCLZDP'	instruction name
00001794	00000010			958+	DC	A(16)	result length
00001798	000017C0			959+REA17	DC	A(RE17)	result address
				960+*			INSTRUCTION UNDER TEST ROUTINE
0000179C				961+X17	DS	0F	
0000179C	E710 8F30 0006		00001130	962+	VL	V1, V1FUDGE	pollute V1
000017A2	E720 5050 0006		000017D0	963+	VL	V2, RE17+16	get V2 source
000017A8	E612 0070 0051			964+	VCLZDP V1, V2, 7		test instruction
000017AE	E710 8EF8 000E		000010F8	965+	VST	V1, V10UTPUT	save
000017B4	B98D 0020			966+	EPSW	R2, R0	exptract psw
000017B8	5020 8ED4		000010D4	967+	ST	R2, CCPSW	to save CC
000017BC	07FB			968+	BR	R11	return
000017C0				969+RE17	DC	0F	
000017C0				970+	DROP	R5	
000017C0	00000000 0000001D			971	DC	XL16'000000000000001D0000000000000000'	V1 result
000017C8	00000000 00000000						

```
  LOC          OBJECT CODE      ADDR1      ADDR2      STMT

000017D0  00000000 00000000                          972         DC      XL16'0000000000000000000000000000010C'    V2 source
000017D8  00000000 0000010C

                                                     973
                                                     974         VRR_K  VCLZDP, 7, 2
000017E0                                             975+        DS     0FD
000017E0                         000017E0            976+        USING  *, R5                 base for test data and test routine
000017E0  000017FC                                   977+T18     DC     A(X18)                address of test routine
000017E4  0012                                       978+        DC     H'18'                 test number
000017E6  00                                         979+        DC     XL1'00'
000017E7  07                                         980+        DC     HL1'7'                &M3
000017E8  02                                         981+        DC     HL1'2'                cc
000017E9  0D                                         982+        DC     HL1'13'               cc failed mask
000017EA  E5C3D3E9 C4D74040                           983+        DC     CL8'VCLZDP'           instruction name
000017F4  00000010                                   984+        DC     A(16)                 result length
000017F8  00001820                                   985+REA18   DC     A(RE18)               result address
                                                     986+*                                    INSTRUCTION UNDER TEST ROUTINE
000017FC                                             987+X18     DS     0F
000017FC  E710 8F30 0006                   00001130  988+        VL     V1, V1FUDGE           pollute V1
00001802  E720 5050 0006                   00001830  989+        VL     V2, RE18+16           get V2 source
00001808  E612 0070 0051                             990+        VCLZDP V1, V2, 7             test instruction
0000180E  E710 8EF8 000E                   000010F8  991+        VST    V1, V1OUTPUT          save
00001814  B98D 0020                                  992+        EPSW   R2, R0                exptract psw
00001818  5020 8ED4                        000010D4  993+        ST     R2, CCPSW                to save CC
0000181C  07FB                                       994+        BR     R11                   return
00001820                                             995+RE18    DC     0F
00001820                                             996+        DROP   R5
00001820  00000000 0000000F                          997         DC      XL16'00000000000000F0000000000000000'     V1 result
00001828  00000000 00000000
00001830  00000000 00000001                          998         DC      XL16'0000000000000001110000000000010C'    V2 source
00001838  11000000 0000010C

                                                     999
                                                     1000        VRR_K  VCLZDP, 7, 1
00001840                                             1001+       DS     0FD
00001840                         00001840            1002+       USING  *, R5                 base for test data and test routine
00001840  0000185C                                   1003+T19    DC     A(X19)                address of test routine
00001844  0013                                       1004+       DC     H'19'                 test number
00001846  00                                         1005+       DC     XL1'00'
00001847  07                                         1006+       DC     HL1'7'                &M3
00001848  01                                         1007+       DC     HL1'1'                cc
00001849  0B                                         1008+       DC     HL1'11'               cc failed mask
0000184A  E5C3D3E9 C4D74040                           1009+       DC     CL8'VCLZDP'           instruction name
00001854  00000010                                   1010+       DC     A(16)                 result length
00001858  00001880                                   1011+REA19  DC     A(RE19)               result address
                                                     1012+*                                   INSTRUCTION UNDER TEST ROUTINE
0000185C                                             1013+X19    DS     0F
0000185C  E710 8F30 0006                   00001130  1014+       VL     V1, V1FUDGE           pollute V1
00001862  E720 5050 0006                   00001890  1015+       VL     V2, RE19+16           get V2 source
00001868  E612 0070 0051                             1016+       VCLZDP V1, V2, 7             test instruction
0000186E  E710 8EF8 000E                   000010F8  1017+       VST    V1, V1OUTPUT          save
00001874  B98D 0020                                  1018+       EPSW   R2, R0                exptract psw
00001878  5020 8ED4                        000010D4  1019+       ST     R2, CCPSW                to save CC
0000187C  07FB                                       1020+       BR     R11                   return
00001880                                             1021+RE19   DC     0F
00001880                                             1022+       DROP   R5
00001880  00000000 0000000F                          1023        DC      XL16'00000000000000F0000000000000000'     V1 result
00001888  00000000 00000000
```

```
  LOC        OBJECT CODE      ADDR1     ADDR2     STMT

00001890  00000000 00000001                      1024        DC      XL16'00000000000000111000000000000010D'     V2 source
00001898  11000000 0000010D

                                                 1025
                                                 1026        VRR_K VCLZDP,7,0
000018A0                                         1027+       DS      0FD
000018A0                      000018A0           1028+       USING *,R5                 base for test data and test routine
000018A0  000018BC                               1029+T20    DC      A(X20)             address of test routine
000018A4  0014                                   1030+       DC      H'20'              test number
000018A6  00                                     1031+       DC      XL1'00'
000018A7  07                                     1032+       DC      HL1'7'             &M3
000018A8  00                                     1033+       DC      HL1'0'             cc
000018A9  07                                     1034+       DC      HL1'7'             cc failed mask
000018AA  E5C3D3E9 C4D74040                       1035+       DC      CL8'VCLZDP'        instruction name
000018B4  00000010                               1036+       DC      A(16)              result length
000018B8  000018E0                               1037+REA20  DC      A(RE20)            result address
                                                 1038+*                                 INSTRUCTION UNDER TEST ROUTINE
000018BC                                         1039+X20    DS      0F
000018BC  E710 8F30 0006           00001130      1040+       VL      V1,V1FUDGE         pollute V1
000018C2  E720 5050 0006           000018F0      1041+       VL      V2,RE20+16         get V2 source
000018C8  E612 0070 0051                          1042+       VCLZDP V1,V2,7            test instruction
000018CE  E710 8EF8 000E           000010F8      1043+       VST     V1,V1OUTPUT        save
000018D4  B98D 0020                               1044+       EPSW    R2,R0             exptract psw
000018D8  5020 8ED4                000010D4      1045+       ST      R2,CCPSW             to save CC
000018DC  07FB                                    1046+       BR      R11               return
000018E0                                          1047+RE20   DC      0F
000018E0                                          1048+       DROP    R5
000018E0  00000000 0000001F                       1049        DC      XL16'00000000000001F0000000000000000'     V1 result
000018E8  00000000 00000000
000018F0  00000000 00000000                       1050        DC      XL16'0000000000000000000000000000000C'     V2 source
000018F8  00000000 0000000C

                                                 1051
                                                 1052        VRR_K VCLZDP,7,1
00001900                                         1053+       DS      0FD
00001900                      00001900           1054+       USING *,R5                 base for test data and test routine
00001900  0000191C                               1055+T21    DC      A(X21)             address of test routine
00001904  0015                                   1056+       DC      H'21'              test number
00001906  00                                     1057+       DC      XL1'00'
00001907  07                                     1058+       DC      HL1'7'             &M3
00001908  01                                     1059+       DC      HL1'1'             cc
00001909  0B                                     1060+       DC      HL1'11'            cc failed mask
0000190A  E5C3D3E9 C4D74040                       1061+       DC      CL8'VCLZDP'        instruction name
00001914  00000010                               1062+       DC      A(16)              result length
00001918  00001940                               1063+REA21  DC      A(RE21)            result address
                                                 1064+*                                 INSTRUCTION UNDER TEST ROUTINE
0000191C                                         1065+X21    DS      0F
0000191C  E710 8F30 0006           00001130      1066+       VL      V1,V1FUDGE         pollute V1
00001922  E720 5050 0006           00001950      1067+       VL      V2,RE21+16         get V2 source
00001928  E612 0070 0051                          1068+       VCLZDP V1,V2,7            test instruction
0000192E  E710 8EF8 000E           000010F8      1069+       VST     V1,V1OUTPUT        save
00001934  B98D 0020                               1070+       EPSW    R2,R0             exptract psw
00001938  5020 8ED4                000010D4      1071+       ST      R2,CCPSW             to save CC
0000193C  07FB                                    1072+       BR      R11               return
00001940                                          1073+RE21   DC      0F
00001940                                          1074+       DROP    R5
00001940  00000000 0000001F                       1075        DC      XL16'00000000000001F0000000000000000'     V1 result
00001948  00000000 00000000
```

```
  LOC        OBJECT CODE      ADDR1     ADDR2      STMT

00001950  00000000 00000000                       1076           DC      XL16'00000000000000000000000000000000D'    V2 source
00001958  00000000 0000000D
                                                  1077
                                                  1078           VRR_K VCLZDP, 7, 3
00001960                                          1079+          DS      0FD
00001960                           00001960        1080+          USING *, R5                 base for test data and test routine
00001960  0000197C                                1081+T22        DC      A(X22)                  address of test routine
00001964  0016                                    1082+          DC      H'22'                   test number
00001966  00                                      1083+          DC      XL1'00'
00001967  07                                      1084+          DC      HL1'7'                  &M3
00001968  03                                      1085+          DC      HL1'3'                  cc
00001969  0E                                      1086+          DC      HL1'14'                 cc failed mask
0000196A  E5C3D3E9 C4D74040                       1087+          DC      CL8'VCLZDP'             instruction name
00001974  00000010                                1088+          DC      A(16)                   result length
00001978  000019A0                                1089+REA22      DC      A(RE22)                 result address
                                                  1090+*                                         INSTRUCTION UNDER TEST ROUTINE
0000197C                                          1091+X22        DS      0F
0000197C  E710 8F30 0006              00001130     1092+          VL      V1, V1FUDGE             pollute V1
00001982  E720 5050 0006              000019B0     1093+          VL      V2, RE22+16            get V2 source
00001988  E612 0070 0051                          1094+          VCLZDP V1, V2, 7               test instruction
0000198E  E710 8EF8 000E              000010F8     1095+          VST     V1, V1OUTPUT           save
00001994  B98D 0020                               1096+          EPSW    R2, R0                  exptract psw
00001998  5020 8ED4                   000010D4     1097+          ST      R2, CCPSW                 to save CC
0000199C  07FB                                    1098+          BR      R11                     return
000019A0                                          1099+RE22       DC      0F
000019A0                                          1100+          DROP    R5
000019A0  00000000 00000002                       1101           DC      XL16'00000000000000020000000000000000'    V1 result
000019A8  00000000 00000000
000019B0  00AAA000 00000000                       1102           DC      XL16'00AAA0000000000000000000000000000D'   V2 source
000019B8  00000000 0000000D
                                                  1103
                                                  1104 *----------------------------------------------------------------
                                                  1105 * VUPKZH  - VECTOR UNPACK ZONED HIGH
                                                  1106 *----------------------------------------------------------------
                                                  1107 * NOTE NOTE: VUPKZH does NOT set the condition code!
                                                  1108 *       m3 bit 3 should be ZERO (which matches the CS bit of VCLZDP
                                                  1109 *              so CC checking should be skipped!! )
                                                  1110 *----------------------------------------------------------------
                                                  1111 * VUPKZH simple              m3= 0  ( NSV=0, NV=0 , fake CS=0)
                                                  1112 *                            m3= 4  ( NSV=0, NV=1 , fake CS=0)
                                                  1113 *                            m3= 8  ( NSV=1, NV=0 , fake CS=0)
                                                  1114 *                            m3= 12 ( NSV=1, NV=1 , fake CS=0)
                                                  1115           VRR_K VUPKZH, 0, 0
000019C0                                          1116+          DS      0FD
000019C0                           000019C0        1117+          USING *, R5                 base for test data and test routine
000019C0  000019DC                                1118+T23        DC      A(X23)                  address of test routine
000019C4  0017                                    1119+          DC      H'23'                   test number
000019C6  00                                      1120+          DC      XL1'00'
000019C7  00                                      1121+          DC      HL1'0'                  &M3
000019C8  00                                      1122+          DC      HL1'0'                  cc
000019C9  07                                      1123+          DC      HL1'7'                  cc failed mask
000019CA  E5E4D7D2 E9C84040                       1124+          DC      CL8'VUPKZH'             instruction name
000019D4  00000010                                1125+          DC      A(16)                   result length
000019D8  00001A00                                1126+REA23      DC      A(RE23)                 result address
                                                  1127+*                                         INSTRUCTION UNDER TEST ROUTINE
000019DC                                          1128+X23        DS      0F
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

000019DC  E710 8F30 0006                00001130  1129+         VL     V1,V1FUDGE         pollute V1
000019E2  E720 5050 0006                00001A10  1130+         VL     V2,RE23+16         get V2 source
000019E8  E612 0000 0054                          1131+         VUPKZH V1,V2,0           test instruction
000019EE  E710 8EF8 000E                000010F8  1132+         VST    V1,V10UTPUT        save
000019F4  B98D 0020                               1133+         EPSW   R2,R0             exptract psw
000019F8  5020 8ED4                     000010D4  1134+         ST     R2,CCPSW              to save CC
000019FC  07FB                                    1135+         BR     R11               return
00001A00                                          1136+RE23     DC     0F
00001A00                                          1137+         DROP   R5
00001A00  F0F1F2F3 F4F5F6F7                        1138          DC     XL16'F0F1F2F3F4F5F6F7F8F9F0F1F2F3F4F5'   V1 result
00001A08  F8F9F0F1 F2F3F4F5
00001A10  12345678 90123456                        1139          DC     XL16'12345678901234567890012345678901C'   V2 source
00001A18  78901234 5678901C
                                                   1140
                                                   1141          VRR_K VUPKZH,0,0
00001A20                                          1142+         DS     0FD
00001A20                       00001A20           1143+         USING  *,R5              base for test data and test routine
00001A20  00001A3C                                1144+T24      DC     A(X24)            address of test routine
00001A24  0018                                    1145+         DC     H'24'             test number
00001A26  00                                      1146+         DC     XL1'00'
00001A27  00                                      1147+         DC     HL1'0'            &M3
00001A28  00                                      1148+         DC     HL1'0'            cc
00001A29  07                                      1149+         DC     HL1'7'            cc failed mask
00001A2A  E5E4D7D2 E9C84040                       1150+         DC     CL8'VUPKZH'       instruction name
00001A34  00000010                                1151+         DC     A(16)             result length
00001A38  00001A60                                1152+REA24    DC     A(RE24)           result address
                                                   1153+*                                INSTRUCTION UNDER TEST ROUTINE
00001A3C                                          1154+X24      DS     0F
00001A3C  E710 8F30 0006                00001130  1155+         VL     V1,V1FUDGE         pollute V1
00001A42  E720 5050 0006                00001A70  1156+         VL     V2,RE24+16         get V2 source
00001A48  E612 0000 0054                          1157+         VUPKZH V1,V2,0           test instruction
00001A4E  E710 8EF8 000E                000010F8  1158+         VST    V1,V10UTPUT        save
00001A54  B98D 0020                               1159+         EPSW   R2,R0             exptract psw
00001A58  5020 8ED4                     000010D4  1160+         ST     R2,CCPSW              to save CC
00001A5C  07FB                                    1161+         BR     R11               return
00001A60                                          1162+RE24     DC     0F
00001A60                                          1163+         DROP   R5
00001A60  F0F5F6F7 F8F9F0F1                        1164          DC     XL16'F0F5F6F7F8F9F0F1F2F3F4F5F6F7F8F9'   V1 result
00001A68  F2F3F4F5 F6F7F8F9
00001A70  56789012 34567890                        1165          DC     XL16'567890123456789012345678901 2345D'   V2 source
00001A78  12345678 9012345D
                                                   1166
                                                   1167 * VUPKZH                         m3= 4  ( NSV=0, NV=1 , fake CS=0)
                                                   1168          VRR_K VUPKZH,4,0
00001A80                                          1169+         DS     0FD
00001A80                       00001A80           1170+         USING  *,R5              base for test data and test routine
00001A80  00001A9C                                1171+T25      DC     A(X25)            address of test routine
00001A84  0019                                    1172+         DC     H'25'             test number
00001A86  00                                      1173+         DC     XL1'00'
00001A87  04                                      1174+         DC     HL1'4'            &M3
00001A88  00                                      1175+         DC     HL1'0'            cc
00001A89  07                                      1176+         DC     HL1'7'            cc failed mask
00001A8A  E5E4D7D2 E9C84040                       1177+         DC     CL8'VUPKZH'       instruction name
00001A94  00000010                                1178+         DC     A(16)             result length
00001A98  00001AC0                                1179+REA25    DC     A(RE25)           result address
                                                   1180+*                                INSTRUCTION UNDER TEST ROUTINE
```

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  LOC         OBJECT CODE      ADDR1     ADDR2     STMT

00001A9C                                           1181+X25      DS    0F
00001A9C  E710 8F30 0006                 00001130  1182+         VL    V1,V1FUDGE          pollute V1
00001AA2  E720 5050 0006                 00001AD0  1183+         VL    V2,RE25+16          get V2 source
00001AA8  E612 0040 0054                           1184+         VUPKZH V1,V2,4            test instruction
00001AAE  E710 8EF8 000E                 000010F8  1185+         VST   V1,V10UTPUT         save
00001AB4  B98D 0020                                1186+         EPSW  R2,R0              exptract psw
00001AB8  5020 8ED4                      000010D4  1187+         ST    R2,CCPSW              to save CC
00001ABC  07FB                                     1188+         BR    R11                return
00001AC0                                           1189+RE25     DC    0F
00001AC0                                           1190+         DROP  R5
00001AC0  F0F1FFFF FFF5F6F7                         1191          DC    XL16'F0F1FFFFFFFF5F6F7F8F9F0F1F2F3F4F5'   V1 result
00001AC8  F8F9F0F1 F2F3F4F5
00001AD0  1FFF5678 90123456                         1192          DC    XL16'1FFF5678901234567890123456789901C'   V2 source
00001AD8  78901234 5678901C
                                                   1193
                                                   1194          VRR_K VUPKZH,4,0
00001AE0                                           1195+         DS    0FD
00001AE0                      00001AE0             1196+         USING *,R5              base for test data and test routine
00001AE0  00001AFC                                 1197+T26      DC    A(X26)             address of test routine
00001AE4  001A                                     1198+         DC    H'26'              test number
00001AE6  00                                       1199+         DC    XL1'00'
00001AE7  04                                       1200+         DC    HL1'4'             &M3
00001AE8  00                                       1201+         DC    HL1'0'             cc
00001AE9  07                                       1202+         DC    HL1'7'             cc failed mask
00001AEA  E5E4D7D2 E9C84040                         1203+         DC    CL8'VUPKZH'        instruction name
00001AF4  00000010                                 1204+         DC    A(16)              result length
00001AF8  00001B20                                 1205+REA26    DC    A(RE26)            result address
                                                   1206+*                                INSTRUCTION UNDER TEST ROUTINE
00001AFC                                           1207+X26      DS    0F
00001AFC  E710 8F30 0006                 00001130  1208+         VL    V1,V1FUDGE          pollute V1
00001B02  E720 5050 0006                 00001B30  1209+         VL    V2,RE26+16          get V2 source
00001B08  E612 0040 0054                           1210+         VUPKZH V1,V2,4            test instruction
00001B0E  E710 8EF8 000E                 000010F8  1211+         VST   V1,V10UTPUT         save
00001B14  B98D 0020                                1212+         EPSW  R2,R0              exptract psw
00001B18  5020 8ED4                      000010D4  1213+         ST    R2,CCPSW              to save CC
00001B1C  07FB                                     1214+         BR    R11                return
00001B20                                           1215+RE26     DC    0F
00001B20                                           1216+         DROP  R5
00001B20  F0F5F6F7 F8F9F0F1                         1217          DC    XL16'F0F5F6F7F8F9F0F1F2F3F4F5F6F7F8F9'   V1 result
00001B28  F2F3F4F5 F6F7F8F9
00001B30  56789012 34567890                         1218          DC    XL16'567890123456789012345678901234459'   V2 source
00001B38  12345678 90123459
                                                   1219
                                                   1220 * VUPKZH                          m3= 8  ( NSV=1, NV=0 , fake CS=0)
                                                   1221          VRR_K VUPKZH,8,0
00001B40                                           1222+         DS    0FD
00001B40                      00001B40             1223+         USING *,R5              base for test data and test routine
00001B40  00001B5C                                 1224+T27      DC    A(X27)             address of test routine
00001B44  001B                                     1225+         DC    H'27'              test number
00001B46  00                                       1226+         DC    XL1'00'
00001B47  08                                       1227+         DC    HL1'8'             &M3
00001B48  00                                       1228+         DC    HL1'0'             cc
00001B49  07                                       1229+         DC    HL1'7'             cc failed mask
00001B4A  E5E4D7D2 E9C84040                         1230+         DC    CL8'VUPKZH'        instruction name
00001B54  00000010                                 1231+         DC    A(16)              result length
00001B58  00001B80                                 1232+REA27    DC    A(RE27)            result address
```

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  LOC         OBJECT CODE      ADDR1     ADDR2     STMT

                                                   1233+*                                        INSTRUCTION UNDER TEST ROUTINE
00001B5C                                           1234+X27        DS    0F
00001B5C   E710 8F30 0006              00001130    1235+           VL    V1,V1FUDGE              pollute V1
00001B62   E720 5050 0006              00001B90    1236+           VL    V2,RE27+16             get V2 source
00001B68   E612 0080 0054                          1237+           VUPKZH V1,V2,8               test instruction
00001B6E   E710 8EF8 000E              000010F8    1238+           VST   V1,V10OUTPUT           save
00001B74   B98D 0020                               1239+           EPSW  R2,R0                  exptract psw
00001B78   5020 8ED4                   000010D4    1240+           ST    R2,CCPSW                  to save CC
00001B7C   07FB                                    1241+           BR    R11                    return
00001B80                                           1242+RE27       DC    0F
00001B80                                           1243+           DROP  R5
00001B80   F0F1F2F3 F4F5F6F7                        1244           DC    XL16'F0F1F2F3F4F5F6F7F8F9F0F1F2F3F4F5'    V1 result
00001B88   F8F9F0F1 F2F3F4F5
00001B90   12345678 90123456                        1245           DC    XL16'12345678901234567890123456789 01C'  V2 source
00001B98   78901234 5678901C

                                                    1246
                                                    1247           VRR_K VUPKZH,8,0
00001BA0                                           1248+           DS    0FD
00001BA0                       00001BA0            1249+           USING *,R5                    base for test data and test routine
00001BA0   00001BBC                               1250+T28         DC    A(X28)                  address of test routine
00001BA4   001C                                   1251+           DC    H'28'                   test number
00001BA6   00                                     1252+           DC    XL1'00'
00001BA7   08                                     1253+           DC    HL1'8'                  &M3
00001BA8   00                                     1254+           DC    HL1'0'                  cc
00001BA9   07                                     1255+           DC    HL1'7'                  cc failed mask
00001BAA   E5E4D7D2 E9C84040                      1256+           DC    CL8'VUPKZH'             instruction name
00001BB4   00000010                               1257+           DC    A(16)                   result length
00001BB8   00001BE0                               1258+REA28       DC    A(RE28)                 result address
                                                   1259+*                                        INSTRUCTION UNDER TEST ROUTINE
00001BBC                                           1260+X28        DS    0F
00001BBC   E710 8F30 0006              00001130    1261+           VL    V1,V1FUDGE              pollute V1
00001BC2   E720 5050 0006              00001BF0    1262+           VL    V2,RE28+16             get V2 source
00001BC8   E612 0080 0054                          1263+           VUPKZH V1,V2,8               test instruction
00001BCE   E710 8EF8 000E              000010F8    1264+           VST   V1,V10OUTPUT           save
00001BD4   B98D 0020                               1265+           EPSW  R2,R0                  exptract psw
00001BD8   5020 8ED4                   000010D4    1266+           ST    R2,CCPSW                  to save CC
00001BDC   07FB                                    1267+           BR    R11                    return
00001BE0                                           1268+RE28       DC    0F
00001BE0                                           1269+           DROP  R5
00001BE0   F0F5F6F7 F8F9F0F1                        1270           DC    XL16'F0F5F6F7F8F9F0F1F2F3F4F5F6F7F8F9'    V1 result
00001BE8   F2F3F4F5 F6F7F8F9
00001BF0   56789012 34567890                        1271           DC    XL16'56789012345678901234567890123459'   V2 source
00001BF8   12345678 90123459

                                                    1272
                                                    1273 * VUPKZH                               m3= 12 ( NSV=1, NV=1 , fake CS=0)
                                                    1274           VRR_K VUPKZH,12,0
00001C00                                           1275+           DS    0FD
00001C00                       00001C00            1276+           USING *,R5                    base for test data and test routine
00001C00   00001C1C                               1277+T29         DC    A(X29)                  address of test routine
00001C04   001D                                   1278+           DC    H'29'                   test number
00001C06   00                                     1279+           DC    XL1'00'
00001C07   0C                                     1280+           DC    HL1'12'                 &M3
00001C08   00                                     1281+           DC    HL1'0'                  cc
00001C09   07                                     1282+           DC    HL1'7'                  cc failed mask
00001C0A   E5E4D7D2 E9C84040                      1283+           DC    CL8'VUPKZH'             instruction name
00001C14   00000010                               1284+           DC    A(16)                   result length
```

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  LOC        OBJECT CODE      ADDR1    ADDR2    STMT

00001C18  00001C40                             1285+REA29   DC      A(RE29)              result address
                                               1286+*                                   INSTRUCTION UNDER TEST ROUTINE
00001C1C                                       1287+X29     DS      0F
00001C1C  E710 8F30 0006            00001130   1288+        VL      V1,V1FUDGE           pollute V1
00001C22  E720 5050 0006            00001C50   1289+        VL      V2,RE29+16           get V2 source
00001C28  E612 00C0 0054                       1290+        VUPKZH V1,V2,12              test instruction
00001C2E  E710 8EF8 000E            000010F8   1291+        VST     V1,V10UTPUT          save
00001C34  B98D 0020                            1292+        EPSW    R2,R0                exptract psw
00001C38  5020 8ED4                 000010D4   1293+        ST      R2,CCPSW                to save CC
00001C3C  07FB                                 1294+        BR      R11                  return
00001C40                                       1295+RE29    DC      0F
00001C40                                       1296+        DROP    R5
00001C40  F0F1FFFF FFF5F6F7                    1297         DC      XL16'F0F1FFFFFFF5F6F7F8F9F0F1F2F3F4F5'   V1 result
00001C48  F8F9F0F1 F2F3F4F5
00001C50  1FFF5678 90123456                    1298         DC      XL16'1FFF567890123456789012345678901C'   V2 source
00001C58  78901234 5678901C

                                               1299
                                               1300         VRR_K VUPKZH,12,0
00001C60                                       1301+        DS      0FD
00001C60                    00001C60           1302+        USING *,R5                   base for test data and test routine
00001C60  00001C7C                             1303+T30     DC      A(X30)               address of test routine
00001C64  001E                                 1304+        DC      H'30'                test number
00001C66  00                                   1305+        DC      XL1'00'
00001C67  0C                                   1306+        DC      HL1'12'              &M3
00001C68  00                                   1307+        DC      HL1'0'               cc
00001C69  07                                   1308+        DC      HL1'7'               cc failed mask
00001C6A  E5E4D7D2 E9C84040                    1309+        DC      CL8'VUPKZH'          instruction name
00001C74  00000010                             1310+        DC      A(16)                result length
00001C78  00001CA0                             1311+REA30   DC      A(RE30)              result address
                                               1312+*                                   INSTRUCTION UNDER TEST ROUTINE
00001C7C                                       1313+X30     DS      0F
00001C7C  E710 8F30 0006            00001130   1314+        VL      V1,V1FUDGE           pollute V1
00001C82  E720 5050 0006            00001CB0   1315+        VL      V2,RE30+16           get V2 source
00001C88  E612 00C0 0054                       1316+        VUPKZH V1,V2,12              test instruction
00001C8E  E710 8EF8 000E            000010F8   1317+        VST     V1,V10UTPUT          save
00001C94  B98D 0020                            1318+        EPSW    R2,R0                exptract psw
00001C98  5020 8ED4                 000010D4   1319+        ST      R2,CCPSW                to save CC
00001C9C  07FB                                 1320+        BR      R11                  return
00001CA0                                       1321+RE30    DC      0F
00001CA0                                       1322+        DROP    R5
00001CA0  F0F5F6F7 F8F9F0F1                    1323         DC      XL16'F0F5F6F7F8F9F0F1F2F3F4F5F6F7F8F9'   V1 result
00001CA8  F2F3F4F5 F6F7F8F9
00001CB0  56789012 34567890                    1324         DC      XL16'567890123456789012345678901234559'   V2 source
00001CB8  12345678 90123459

                                               1325
                                               1326 *-------------------------------------------------------------------
                                               1327 * VUPKZL  - VECTOR UNPACK ZONED LOW
                                               1328 *-------------------------------------------------------------------
                                               1329 * NOTE NOTE: VUPKZL does NOT set the condition code!
                                               1330 *           m3 bit 3 should be ZERO (which matches the CS bit of VCLZDP
                                               1331 *              so CC checking should be skipped!! )
                                               1332 *-------------------------------------------------------------------
                                               1333 * VUPKZL simple              m3= 0  ( NSV=0, NV=0 , P1=0, fake CS=0)
                                               1334 *                            m3= 2  ( NSV=0, NV=1 , P1=1, fake CS=0)
                                               1335 *                            m3= 4  ( NSV=0, NV=1 , P1=0, fake CS=0)
                                               1336 *                            m3= 6  ( NSV=0, NV=1 , P1=1, fake CS=0)
```

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  LOC         OBJECT CODE      ADDR1     ADDR2     STMT

                                                   1337 *                                  m3= 8  ( NSV=1, NV=0 , P1=0, fake CS=0)
                                                   1338 *                                  m3= 10 ( NSV=1, NV=0 , P1=1, fake CS=0)
                                                   1339 *                                  m3= 12 ( NSV=1, NV=1 , P1=0, fake CS=0)
                                                   1340 *                                  m3= 14 ( NSV=1, NV=1 , P1=1, fake CS=0)
                                                   1341          VRR_K VUPKZL, 0, 0
00001CC0                                           1342+         DS    0FD
00001CC0                           00001CC0        1343+         USING *, R5             base for test data and test routine
00001CC0    00001CDC                               1344+T31      DC    A(X31)             address of test routine
00001CC4    001F                                   1345+         DC    H'31'              test number
00001CC6    00                                     1346+         DC    XL1'00'
00001CC7    00                                     1347+         DC    HL1'0'             &M3
00001CC8    00                                     1348+         DC    HL1'0'             cc
00001CC9    07                                     1349+         DC    HL1'7'             cc failed mask
00001CCA    E5E4D7D2 E9D34040                      1350+         DC    CL8'VUPKZL'        instruction name
00001CD4    00000010                               1351+         DC    A(16)              result length
00001CD8    00001D00                               1352+REA31    DC    A(RE31)            result address
                                                   1353+*                                INSTRUCTION UNDER TEST ROUTINE
00001CDC                                           1354+X31      DS    0F
00001CDC    E710 8F30 0006            00001130     1355+         VL    V1, V1FUDGE        pollute V1
00001CE2    E720 5050 0006            00001D10     1356+         VL    V2, RE31+16        get V2 source
00001CE8    E612 0000 005C                         1357+         VUPKZL V1, V2, 0         test instruction
00001CEE    E710 8EF8 000E            000010F8     1358+         VST   V1, V1OUTPUT       save
00001CF4    B98D 0020                              1359+         EPSW  R2, R0             exptract psw
00001CF8    5020 8ED4                 000010D4     1360+         ST    R2, CCPSW              to save CC
00001CFC    07FB                                   1361+         BR    R11                return
00001D00                                           1362+RE31     DC    0F
00001D00                                           1363+         DROP  R5
00001D00    F6F7F8F9 F0F1F2F3                       1364         DC    XL16'F6F7F8F9F0F1F2F3F4F5F6F7F8F9F0C1'    V1 result
00001D08    F4F5F6F7 F8F9F0C1
00001D10    12345678 90123456                       1365         DC    XL16'1234567890123456789012345678901C'    V2 source
00001D18    78901234 5678901C
                                                    1366
                                                    1367          VRR_K VUPKZL, 0, 0
00001D20                                            1368+         DS    0FD
00001D20                           00001D20         1369+         USING *, R5             base for test data and test routine
00001D20    00001D3C                                1370+T32      DC    A(X32)             address of test routine
00001D24    0020                                    1371+         DC    H'32'              test number
00001D26    00                                      1372+         DC    XL1'00'
00001D27    00                                      1373+         DC    HL1'0'             &M3
00001D28    00                                      1374+         DC    HL1'0'             cc
00001D29    07                                      1375+         DC    HL1'7'             cc failed mask
00001D2A    E5E4D7D2 E9D34040                       1376+         DC    CL8'VUPKZL'        instruction name
00001D34    00000010                                1377+         DC    A(16)              result length
00001D38    00001D60                                1378+REA32    DC    A(RE32)            result address
                                                    1379+*                                INSTRUCTION UNDER TEST ROUTINE
00001D3C                                            1380+X32      DS    0F
00001D3C    E710 8F30 0006            00001130      1381+         VL    V1, V1FUDGE        pollute V1
00001D42    E720 5050 0006            00001D70      1382+         VL    V2, RE32+16        get V2 source
00001D48    E612 0000 005C                          1383+         VUPKZL V1, V2, 0         test instruction
00001D4E    E710 8EF8 000E            000010F8      1384+         VST   V1, V1OUTPUT       save
00001D54    B98D 0020                               1385+         EPSW  R2, R0             exptract psw
00001D58    5020 8ED4                 000010D4      1386+         ST    R2, CCPSW              to save CC
00001D5C    07FB                                    1387+         BR    R11                return
00001D60                                            1388+RE32     DC    0F
00001D60                                            1389+         DROP  R5
00001D60    F0F1F2F3 F4F5F6F7                        1390         DC    XL16'F0F1F2F3F4F5F6F7F8F9F0F1F2F3F4D5'    V1 result
```

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  LOC        OBJECT CODE      ADDR1    ADDR2    STMT

00001D68  F8F9F0F1 F2F3F4D5
00001D70  56789012 34567890            1391           DC     XL16'56789012345678901234567890012345D'    V2 source
00001D78  12345678 9012345D
                                       1392
                                       1393 * VUPKZL                   m3= 2  ( NSV=0, NV=1 , P1=1, fake CS=0)
                                       1394           VRR_K VUPKZL, 2, 0
00001D80                               1395+          DS     0FD
00001D80                    00001D80   1396+          USING  *, R5                  base for test data and test routine
00001D80  00001D9C                     1397+T33       DC     A(X33)                 address of test routine
00001D84  0021                         1398+          DC     H'33'                  test number
00001D86  00                           1399+          DC     XL1'00'
00001D87  02                           1400+          DC     HL1'2'                 &M3
00001D88  00                           1401+          DC     HL1'0'                 cc
00001D89  07                           1402+          DC     HL1'7'                 cc failed mask
00001D8A  E5E4D7D2 E9D34040            1403+          DC     CL8'VUPKZL'            instruction name
00001D94  00000010                     1404+          DC     A(16)                  result length
00001D98  00001DC0                     1405+REA33     DC     A(RE33)                result address
                                       1406+*                                      INSTRUCTION UNDER TEST ROUTINE
00001D9C                               1407+X33       DS     0F
00001D9C  E710 8F30 0006      00001130 1408+          VL     V1, V1FUDGE            pollute V1
00001DA2  E720 5050 0006      00001DD0 1409+          VL     V2, RE33+16            get V2 source
00001DA8  E612 0020 005C               1410+          VUPKZL V1, V2, 2             test instruction
00001DAE  E710 8EF8 000E      000010F8 1411+          VST    V1, V1OUTPUT           save
00001DB4  B98D 0020                    1412+          EPSW   R2, R0                 exptract psw
00001DB8  5020 8ED4           000010D4 1413+          ST     R2, CCPSW                to save CC
00001DBC  07FB                         1414+          BR     R11                    return
00001DC0                               1415+RE33      DC     0F
00001DC0                               1416+          DROP   R5
00001DC0  F6F7F8F9 F0F1F2F3            1417           DC     XL16'F6F7F8F9F0F1F2F3F4F5F6F7F8F9F0F1'    V1 result
00001DC8  F4F5F6F7 F8F9F0F1
00001DD0  12345678 90123456            1418           DC     XL16'12345678901234567890123456789001C'    V2 source
00001DD8  78901234 5678901C
                                       1419
                                       1420           VRR_K VUPKZL, 2, 0
00001DE0                               1421+          DS     0FD
00001DE0                    00001DE0   1422+          USING  *, R5                  base for test data and test routine
00001DE0  00001DFC                     1423+T34       DC     A(X34)                 address of test routine
00001DE4  0022                         1424+          DC     H'34'                  test number
00001DE6  00                           1425+          DC     XL1'00'
00001DE7  02                           1426+          DC     HL1'2'                 &M3
00001DE8  00                           1427+          DC     HL1'0'                 cc
00001DE9  07                           1428+          DC     HL1'7'                 cc failed mask
00001DEA  E5E4D7D2 E9D34040            1429+          DC     CL8'VUPKZL'            instruction name
00001DF4  00000010                     1430+          DC     A(16)                  result length
00001DF8  00001E20                     1431+REA34     DC     A(RE34)                result address
                                       1432+*                                      INSTRUCTION UNDER TEST ROUTINE
00001DFC                               1433+X34       DS     0F
00001DFC  E710 8F30 0006      00001130 1434+          VL     V1, V1FUDGE            pollute V1
00001E02  E720 5050 0006      00001E30 1435+          VL     V2, RE34+16            get V2 source
00001E08  E612 0020 005C               1436+          VUPKZL V1, V2, 2             test instruction
00001E0E  E710 8EF8 000E      000010F8 1437+          VST    V1, V1OUTPUT           save
00001E14  B98D 0020                    1438+          EPSW   R2, R0                 exptract psw
00001E18  5020 8ED4           000010D4 1439+          ST     R2, CCPSW                to save CC
00001E1C  07FB                         1440+          BR     R11                    return
00001E20                               1441+RE34      DC     0F
00001E20                               1442+          DROP   R5
```

LOC	OBJECT CODE	ADDR1	ADDR2	STMT			
00001E20	F0F1F2F3 F4F5F6F7			1443	DC	XL16'F0F1F2F3F4F5F6F7F8F9F0F1F2F3F4F5'	V1 result
00001E28	F8F9F0F1 F2F3F4F5						
00001E30	56789012 34567890			1444	DC	XL16'567890123456789012345678901234 5D'	V2 source
00001E38	12345678 9012345D						
				1445			
				1446 * VUPKZL		m3= 4 (NSV=0, NV=1 , P1=0, fake CS=0)	
				1447	VRR_K	VUPKZL, 4, 0	
00001E40				1448+	DS	0FD	
00001E40		00001E40		1449+	USING	*, R5	base for test data and test routine
00001E40	00001E5C			1450+T35	DC	A(X35)	address of test routine
00001E44	0023			1451+	DC	H'35'	test number
00001E46	00			1452+	DC	XL1'00'	
00001E47	04			1453+	DC	HL1'4'	&M3
00001E48	00			1454+	DC	HL1'0'	cc
00001E49	07			1455+	DC	HL1'7'	cc failed mask
00001E4A	E5E4D7D2 E9D34040			1456+	DC	CL8'VUPKZL'	instruction name
00001E54	00000010			1457+	DC	A(16)	result length
00001E58	00001E80			1458+REA35	DC	A(RE35)	result address
				1459+*			INSTRUCTION UNDER TEST ROUTINE
00001E5C				1460+X35	DS	0F	
00001E5C	E710 8F30 0006		00001130	1461+	VL	V1, V1FUDGE	pollute V1
00001E62	E720 5050 0006		00001E90	1462+	VL	V2, RE35+16	get V2 source
00001E68	E612 0040 005C			1463+	VUPKZL	V1, V2, 4	test instruction
00001E6E	E710 8EF8 000E		000010F8	1464+	VST	V1, V1OUTPUT	save
00001E74	B98D 0020			1465+	EPSW	R2, R0	exptract psw
00001E78	5020 8ED4		000010D4	1466+	ST	R2, CCPSW	to save CC
00001E7C	07FB			1467+	BR	R11	return
00001E80				1468+RE35	DC	0F	
00001E80				1469+	DROP	R5	
00001E80	F6F7F8F9 F0F1F2F3			1470	DC	XL16'F6F7F8F9F0F1F2F3F4F5F6F7F8F9F091'	V1 result
00001E88	F4F5F6F7 F8F9F091						
00001E90	12345678 90123456			1471	DC	XL16'123456789012345678901234567890 19'	V2 source
00001E98	78901234 56789019						
				1472			
				1473	VRR_K	VUPKZL, 4, 0	
00001EA0				1474+	DS	0FD	
00001EA0		00001EA0		1475+	USING	*, R5	base for test data and test routine
00001EA0	00001EBC			1476+T36	DC	A(X36)	address of test routine
00001EA4	0024			1477+	DC	H'36'	test number
00001EA6	00			1478+	DC	XL1'00'	
00001EA7	04			1479+	DC	HL1'4'	&M3
00001EA8	00			1480+	DC	HL1'0'	cc
00001EA9	07			1481+	DC	HL1'7'	cc failed mask
00001EAA	E5E4D7D2 E9D34040			1482+	DC	CL8'VUPKZL'	instruction name
00001EB4	00000010			1483+	DC	A(16)	result length
00001EB8	00001EE0			1484+REA36	DC	A(RE36)	result address
				1485+*			INSTRUCTION UNDER TEST ROUTINE
00001EBC				1486+X36	DS	0F	
00001EBC	E710 8F30 0006		00001130	1487+	VL	V1, V1FUDGE	pollute V1
00001EC2	E720 5050 0006		00001EF0	1488+	VL	V2, RE36+16	get V2 source
00001EC8	E612 0040 005C			1489+	VUPKZL	V1, V2, 4	test instruction
00001ECE	E710 8EF8 000E		000010F8	1490+	VST	V1, V1OUTPUT	save
00001ED4	B98D 0020			1491+	EPSW	R2, R0	exptract psw
00001ED8	5020 8ED4		000010D4	1492+	ST	R2, CCPSW	to save CC
00001EDC	07FB			1493+	BR	R11	return
00001EE0				1494+RE36	DC	0F	

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  LOC        OBJECT CODE        ADDR1     ADDR2     STMT

00001EE0                                           1495+          DROP   R5
00001EE0   F0F1F2F3 F4F5F6F7                        1496           DC     XL16'F0F1F2F3F4F5F6F7F8F9FFF1F2F3F4D5'    V1 result
00001EE8   F8F9FFF1 F2F3F4D5
00001EF0   56789012 34567890                        1497           DC     XL16'56789012345678901234567B9F12345D'   V2 source
00001EF8   12345678 9F12345D
                                                    1498
                                                    1499 * VUPKZL                          m3= 6  ( NSV=0, NV=1 , P1=1, fake CS=0
                                                    1500           VRR_K  VUPKZL, 6, 0
00001F00                                            1501+          DS     0FD
00001F00                           00001F00         1502+          USING  *, R5                     base for test data and test routine
00001F00   00001F1C                                 1503+T37       DC     A(X37)                     address of test routine
00001F04   0025                                     1504+          DC     H'37'                      test number
00001F06   00                                       1505+          DC     XL1'00'
00001F07   06                                       1506+          DC     HL1'6'                     &M3
00001F08   00                                       1507+          DC     HL1'0'                     cc
00001F09   07                                       1508+          DC     HL1'7'                     cc failed mask
00001F0A   E5E4D7D2 E9D34040                        1509+          DC     CL8'VUPKZL'                instruction name
00001F14   00000010                                 1510+          DC     A(16)                      result length
00001F18   00001F40                                 1511+REA37     DC     A(RE37)                    result address
                                                    1512+*                                INSTRUCTION UNDER TEST ROUTINE
00001F1C                                            1513+X37       DS     0F
00001F1C   E710 8F30 0006         00001130          1514+          VL     V1, V1FUDGE                pollute V1
00001F22   E720 5050 0006         00001F50          1515+          VL     V2, RE37+16                get V2 source
00001F28   E612 0060 005C                           1516+          VUPKZL V1, V2, 6                  test instruction
00001F2E   E710 8EF8 000E         000010F8          1517+          VST    V1, V10OUTPUT              save
00001F34   B98D 0020                                1518+          EPSW   R2, R0                     exptract psw
00001F38   5020 8ED4              000010D4          1519+          ST     R2, CCPSW                     to save CC
00001F3C   07FB                                     1520+          BR     R11                        return
00001F40                                            1521+RE37      DC     0F
00001F40                                            1522+          DROP   R5
00001F40   F6F7F8F9 F0F1F2F3                        1523           DC     XL16'F6F7F8F9F0F1F2F3F4F5F6F7F8F9F0F1'    V1 result
00001F48   F4F5F6F7 F8F9F0F1
00001F50   12345678 90123456                        1524           DC     XL16'12345678901234567890123456789019'   V2 source
00001F58   78901234 56789019
                                                    1525
                                                    1526           VRR_K  VUPKZL, 6, 0
00001F60                                            1527+          DS     0FD
00001F60                           00001F60         1528+          USING  *, R5                     base for test data and test routine
00001F60   00001F7C                                 1529+T38       DC     A(X38)                     address of test routine
00001F64   0026                                     1530+          DC     H'38'                      test number
00001F66   00                                       1531+          DC     XL1'00'
00001F67   06                                       1532+          DC     HL1'6'                     &M3
00001F68   00                                       1533+          DC     HL1'0'                     cc
00001F69   07                                       1534+          DC     HL1'7'                     cc failed mask
00001F6A   E5E4D7D2 E9D34040                        1535+          DC     CL8'VUPKZL'                instruction name
00001F74   00000010                                 1536+          DC     A(16)                      result length
00001F78   00001FA0                                 1537+REA38     DC     A(RE38)                    result address
                                                    1538+*                                INSTRUCTION UNDER TEST ROUTINE
00001F7C                                            1539+X38       DS     0F
00001F7C   E710 8F30 0006         00001130          1540+          VL     V1, V1FUDGE                pollute V1
00001F82   E720 5050 0006         00001FB0          1541+          VL     V2, RE38+16                get V2 source
00001F88   E612 0060 005C                           1542+          VUPKZL V1, V2, 6                  test instruction
00001F8E   E710 8EF8 000E         000010F8          1543+          VST    V1, V10OUTPUT              save
00001F94   B98D 0020                                1544+          EPSW   R2, R0                     exptract psw
00001F98   5020 8ED4              000010D4          1545+          ST     R2, CCPSW                     to save CC
00001F9C   07FB                                     1546+          BR     R11                        return
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  LOC        OBJECT CODE     ADDR1     ADDR2     STMT

00001FA0                                        1547+RE38    DC     0F
00001FA0                                        1548+        DROP   R5
00001FA0   F0F1F2F3 F4F5F6F7                    1549         DC     XL16'F0F1F2F3F4F5F6F7F8F9FFF1F2F3F4F5'   V1 result
00001FA8   F8F9FFF1 F2F3F4F5
00001FB0   56789012 34567890                    1550         DC     XL16'567890123456789012345 6789F12345D'   V2 source
00001FB8   12345678 9F12345D
                                                1551
                                                1552 * VUPKZL                           m3= 8  ( NSV=1, NV=0 , P1=0, fake CS=0)
                                                1553         VRR_K  VUPKZL, 8, 0
00001FC0                                        1554+        DS     0FD
00001FC0                     00001FC0           1555+        USING  *,R5               base for test data and test routine
00001FC0   00001FDC                             1556+T39     DC     A(X39)             address of test routine
00001FC4   0027                                 1557+        DC     H'39'              test number
00001FC6   00                                   1558+        DC     XL1'00'
00001FC7   08                                   1559+        DC     HL1'8'             &M3
00001FC8   00                                   1560+        DC     HL1'0'             cc
00001FC9   07                                   1561+        DC     HL1'7'             cc failed mask
00001FCA   E5E4D7D2 E9D34040                    1562+        DC     CL8'VUPKZL'        instruction name
00001FD4   00000010                             1563+        DC     A(16)              result length
00001FD8   00002000                             1564+REA39   DC     A(RE39)            result address
                                                1565+*                                 INSTRUCTION UNDER TEST ROUTINE
00001FDC                                        1566+X39     DS     0F
00001FDC   E710 8F30 0006          00001130     1567+        VL     V1,V1FUDGE         pollute V1
00001FE2   E720 5050 0006          00002010     1568+        VL     V2,RE39+16         get V2 source
00001FE8   E612 0080 005C                        1569+        VUPKZL V1,V2,8           test instruction
00001FEE   E710 8EF8 000E          000010F8     1570+        VST    V1,V10UTPUT        save
00001FF4   B98D 0020                            1571+        EPSW   R2,R0              exptract psw
00001FF8   5020 8ED4               000010D4     1572+        ST     R2,CCPSW              to save CC
00001FFC   07FB                                 1573+        BR     R11                return
00002000                                        1574+RE39    DC     0F
00002000                                        1575+        DROP   R5
00002000   F6F7F8F9 F0F1F2F3                    1576         DC     XL16'F6F7F8F9F0F1F2F3F4F5F6F7F8F9F091'   V1 result
00002008   F4F5F6F7 F8F9F091
00002010   12345678 90123456                    1577         DC     XL16'123456789012345678901 23456789019'   V2 source
00002018   78901234 56789019
                                                1578
                                                1579         VRR_K  VUPKZL, 8, 0
00002020                                        1580+        DS     0FD
00002020                     00002020           1581+        USING  *,R5               base for test data and test routine
00002020   0000203C                             1582+T40     DC     A(X40)             address of test routine
00002024   0028                                 1583+        DC     H'40'              test number
00002026   00                                   1584+        DC     XL1'00'
00002027   08                                   1585+        DC     HL1'8'             &M3
00002028   00                                   1586+        DC     HL1'0'             cc
00002029   07                                   1587+        DC     HL1'7'             cc failed mask
0000202A   E5E4D7D2 E9D34040                    1588+        DC     CL8'VUPKZL'        instruction name
00002034   00000010                             1589+        DC     A(16)              result length
00002038   00002060                             1590+REA40   DC     A(RE40)            result address
                                                1591+*                                 INSTRUCTION UNDER TEST ROUTINE
0000203C                                        1592+X40     DS     0F
0000203C   E710 8F30 0006          00001130     1593+        VL     V1,V1FUDGE         pollute V1
00002042   E720 5050 0006          00002070     1594+        VL     V2,RE40+16         get V2 source
00002048   E612 0080 005C                        1595+        VUPKZL V1,V2,8           test instruction
0000204E   E710 8EF8 000E          000010F8     1596+        VST    V1,V10UTPUT        save
00002054   B98D 0020                            1597+        EPSW   R2,R0              exptract psw
00002058   5020 8ED4               000010D4     1598+        ST     R2,CCPSW              to save CC
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LOC	OBJECT CODE	ADDR1	ADDR2	STMT			
0000205C	07FB			1599+	BR	R11	return
00002060				1600+RE40	DC	0F	
00002060				1601+	DROP	R5	
00002060	F0F1F2F3 F4F5F6F7			1602	DC	XL16'F0F1F2F3F4F5F6F7F8F9F0F1F2F3F4A5'	V1 result
00002068	F8F9F0F1 F2F3F4A5						
00002070	56789012 34567890			1603	DC	XL16'567890123456789012345678912345A'	V2 source
00002078	12345678 9012345A						
				1604			
				1605 * VUPKZL		m3= 10 (NSV=1, NV=0 , P1=1, fake CS=0)	
				1606	VRR_K	VUPKZL,10,0	
00002080				1607+	DS	0FD	
00002080		00002080		1608+	USING	*,R5	base for test data and test routine
00002080	0000209C			1609+T41	DC	A(X41)	address of test routine
00002084	0029			1610+	DC	H'41'	test number
00002086	00			1611+	DC	XL1'00'	
00002087	0A			1612+	DC	HL1'10'	&M3
00002088	00			1613+	DC	HL1'0'	cc
00002089	07			1614+	DC	HL1'7'	cc failed mask
0000208A	E5E4D7D2 E9D34040			1615+	DC	CL8'VUPKZL'	instruction name
00002094	00000010			1616+	DC	A(16)	result length
00002098	000020C0			1617+REA41	DC	A(RE41)	result address
				1618+*			INSTRUCTION UNDER TEST ROUTINE
0000209C				1619+X41	DS	0F	
0000209C	E710 8F30 0006		00001130	1620+	VL	V1,V1FUDGE	pollute V1
000020A2	E720 5050 0006		000020D0	1621+	VL	V2,RE41+16	get V2 source
000020A8	E612 00A0 005C			1622+	VUPKZL	V1,V2,10	test instruction
000020AE	E710 8EF8 000E		000010F8	1623+	VST	V1,V10UTPUT	save
000020B4	B98D 0020			1624+	EPSW	R2,R0	exptract psw
000020B8	5020 8ED4		000010D4	1625+	ST	R2,CCPSW	to save CC
000020BC	07FB			1626+	BR	R11	return
000020C0				1627+RE41	DC	0F	
000020C0				1628+	DROP	R5	
000020C0	F6F7F8F9 F0F1F2F3			1629	DC	XL16'F6F7F8F9F0F1F2F3F4F5F6F7F8F9F0F1'	V1 result
000020C8	F4F5F6F7 F8F9F0F1						
000020D0	12345678 90123456			1630	DC	XL16'123456789012345678901234567890 19'	V2 source
000020D8	78901234 56789019						
				1631			
				1632	VRR_K	VUPKZL,10,0	
000020E0				1633+	DS	0FD	
000020E0		000020E0		1634+	USING	*,R5	base for test data and test routine
000020E0	000020FC			1635+T42	DC	A(X42)	address of test routine
000020E4	002A			1636+	DC	H'42'	test number
000020E6	00			1637+	DC	XL1'00'	
000020E7	0A			1638+	DC	HL1'10'	&M3
000020E8	00			1639+	DC	HL1'0'	cc
000020E9	07			1640+	DC	HL1'7'	cc failed mask
000020EA	E5E4D7D2 E9D34040			1641+	DC	CL8'VUPKZL'	instruction name
000020F4	00000010			1642+	DC	A(16)	result length
000020F8	00002120			1643+REA42	DC	A(RE42)	result address
				1644+*			INSTRUCTION UNDER TEST ROUTINE
000020FC				1645+X42	DS	0F	
000020FC	E710 8F30 0006		00001130	1646+	VL	V1,V1FUDGE	pollute V1
00002102	E720 5050 0006		00002130	1647+	VL	V2,RE42+16	get V2 source
00002108	E612 00A0 005C			1648+	VUPKZL	V1,V2,10	test instruction
0000210E	E710 8EF8 000E		000010F8	1649+	VST	V1,V10UTPUT	save
00002114	B98D 0020			1650+	EPSW	R2,R0	exptract psw

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  LOC         OBJECT CODE        ADDR1     ADDR2     STMT

00002118  5020 8ED4                       000010D4  1651+          ST      R2,CCPSW            to save CC
0000211C  07FB                                      1652+          BR      R11                return
00002120                                            1653+RE42      DC      0F
00002120                                            1654+          DROP    R5
00002120  F0F1F2F3 F4F5F6F7                          1655          DC      XL16'F0F1F2F3F4F5F6F7F8F9F0F1F2F3F4F5'    V1 result
00002128  F8F9F0F1 F2F3F4F5
00002130  56789012 34567890                          1656          DC      XL16'5678901234567890123456789012345A'    V2 source
00002138  12345678 9012345A
                                                     1657
                                                     1658 * VUPKZL                               m3= 12 ( NSV=1, NV=1 , P1=0, fake CS=0)
                                                     1659          VRR_K VUPKZL,12,0
00002140                                            1660+          DS      0FD
00002140                             00002140        1661+          USING   *,R5               base for test data and test routine
00002140  0000215C                                  1662+T43       DC      A(X43)             address of test routine
00002144  002B                                      1663+          DC      H'43'              test number
00002146  00                                        1664+          DC      XL1'00'
00002147  0C                                        1665+          DC      HL1'12'            &M3
00002148  00                                        1666+          DC      HL1'0'             cc
00002149  07                                        1667+          DC      HL1'7'             cc failed mask
0000214A  E5E4D7D2 E9D34040                          1668+          DC      CL8'VUPKZL'        instruction name
00002154  00000010                                  1669+          DC      A(16)              result length
00002158  00002180                                  1670+REA43     DC      A(RE43)            result address
                                                     1671+*                                   INSTRUCTION UNDER TEST ROUTINE
0000215C                                            1672+X43       DS      0F
0000215C  E710 8F30 0006                 00001130    1673+          VL      V1,V1FUDGE         pollute V1
00002162  E720 5050 0006                 00002190    1674+          VL      V2,RE43+16         get V2 source
00002168  E612 00C0 005C                             1675+          VUPKZL  V1,V2,12           test instruction
0000216E  E710 8EF8 000E                 000010F8    1676+          VST     V1,V10UTPUT        save
00002174  B98D 0020                                  1677+          EPSW    R2,R0              exptract psw
00002178  5020 8ED4                      000010D4    1678+          ST      R2,CCPSW            to save CC
0000217C  07FB                                       1679+          BR      R11                return
00002180                                            1680+RE43      DC      0F
00002180                                            1681+          DROP    R5
00002180  F6F7F8F9 FDF1F2F3                          1682          DC      XL16'F6F7F8F9FDF1F2F3F4F5F6F7F8F9F091'    V1 result
00002188  F4F5F6F7 F8F9F091
00002190  12345678 90123456                          1683          DC      XL16'1234567890123456789D123456789019'    V2 source
00002198  789D1234 56789019
                                                     1684
                                                     1685          VRR_K VUPKZL,12,0
000021A0                                            1686+          DS      0FD
000021A0                             000021A0        1687+          USING   *,R5               base for test data and test routine
000021A0  000021BC                                  1688+T44       DC      A(X44)             address of test routine
000021A4  002C                                      1689+          DC      H'44'              test number
000021A6  00                                        1690+          DC      XL1'00'
000021A7  0C                                        1691+          DC      HL1'12'            &M3
000021A8  00                                        1692+          DC      HL1'0'             cc
000021A9  07                                        1693+          DC      HL1'7'             cc failed mask
000021AA  E5E4D7D2 E9D34040                          1694+          DC      CL8'VUPKZL'        instruction name
000021B4  00000010                                  1695+          DC      A(16)              result length
000021B8  000021E0                                  1696+REA44     DC      A(RE44)            result address
                                                     1697+*                                   INSTRUCTION UNDER TEST ROUTINE
000021BC                                            1698+X44       DS      0F
000021BC  E710 8F30 0006                 00001130    1699+          VL      V1,V1FUDGE         pollute V1
000021C2  E720 5050 0006                 000021F0    1700+          VL      V2,RE44+16         get V2 source
000021C8  E612 00C0 005C                             1701+          VUPKZL  V1,V2,12           test instruction
000021CE  E710 8EF8 000E                 000010F8    1702+          VST     V1,V10UTPUT        save
```

```
  LOC         OBJECT CODE       ADDR1     ADDR2     STMT

000021D4  B98D 0020                                1703+          EPSW  R2,R0              exptract psw
000021D8  5020 8ED4                     000010D4   1704+          ST    R2,CCPSW              to save CC
000021DC  07FB                                     1705+          BR    R11                return
000021E0                                           1706+RE44      DC    0F
000021E0                                           1707+          DROP  R5
000021E0  F0F1F2F3 F4F5F6F7                         1708          DC    XL16'F0F1F2F3F4F5F6F7F8F9FBF1F2F3F415'   V1 result
000021E8  F8F9FBF1 F2F3F415
000021F0  56789012 34567890                         1709          DC    XL16'5678901234567890123456789B123451'   V2 source
000021F8  12345678 9B123451

                                                    1710
                                                    1711 * VUPKZL                          m3= 14 ( NSV=1, NV=1 , P1=1, fake CS=0)
                                                    1712          VRR_K VUPKZL,14,0
00002200                                            1713+         DS    0FD
00002200                          00002200          1714+         USING *,R5              base for test data and test routine
00002200  0000221C                                  1715+T45      DC    A(X45)             address of test routine
00002204  002D                                      1716+         DC    H'45'              test number
00002206  00                                        1717+         DC    XL1'00'
00002207  0E                                        1718+         DC    HL1'14'            &M3
00002208  00                                        1719+         DC    HL1'0'             cc
00002209  07                                        1720+         DC    HL1'7'             cc failed mask
0000220A  E5E4D7D2 E9D34040                         1721+         DC    CL8'VUPKZL'        instruction name
00002214  00000010                                  1722+         DC    A(16)              result length
00002218  00002240                                  1723+REA45    DC    A(RE45)            result address
                                                    1724+*                                 INSTRUCTION UNDER TEST ROUTINE
0000221C                                            1725+X45      DS    0F
0000221C  E710 8F30 0006         00001130           1726+         VL    V1,V1FUDGE         pollute V1
00002222  E720 5050 0006         00002250           1727+         VL    V2,RE45+16         get V2 source
00002228  E612 00E0 005C                            1728+         VUPKZL V1,V2,14           test instruction
0000222E  E710 8EF8 000E         000010F8           1729+         VST   V1,V1OUTPUT        save
00002234  B98D 0020                                 1730+         EPSW  R2,R0              exptract psw
00002238  5020 8ED4              000010D4           1731+         ST    R2,CCPSW              to save CC
0000223C  07FB                                      1732+         BR    R11                return
00002240                                            1733+RE45     DC    0F
00002240                                            1734+         DROP  R5
00002240  F6F7F8F9 FDF1F2F3                         1735          DC    XL16'F6F7F8F9FDF1F2F3F4F5F6F7F8F9F0F1'   V1 result
00002248  F4F5F6F7 F8F9F0F1
00002250  12345678 90123456                         1736          DC    XL16'1234567890123456789D123456789019'   V2 source
00002258  789D1234 56789019

                                                    1737
                                                    1738          VRR_K VUPKZL,14,0
00002260                                            1739+         DS    0FD
00002260                          00002260          1740+         USING *,R5              base for test data and test routine
00002260  0000227C                                  1741+T46      DC    A(X46)             address of test routine
00002264  002E                                      1742+         DC    H'46'              test number
00002266  00                                        1743+         DC    XL1'00'
00002267  0E                                        1744+         DC    HL1'14'            &M3
00002268  00                                        1745+         DC    HL1'0'             cc
00002269  07                                        1746+         DC    HL1'7'             cc failed mask
0000226A  E5E4D7D2 E9D34040                         1747+         DC    CL8'VUPKZL'        instruction name
00002274  00000010                                  1748+         DC    A(16)              result length
00002278  000022A0                                  1749+REA46    DC    A(RE46)            result address
                                                    1750+*                                 INSTRUCTION UNDER TEST ROUTINE
0000227C                                            1751+X46      DS    0F
0000227C  E710 8F30 0006         00001130           1752+         VL    V1,V1FUDGE         pollute V1
00002282  E720 5050 0006         000022B0           1753+         VL    V2,RE46+16         get V2 source
00002288  E612 00E0 005C                            1754+         VUPKZL V1,V2,14           test instruction
```

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   LOC          OBJECT CODE      ADDR1     ADDR2     STMT

0000228E  E710 8EF8 000E              000010F8  1755+         VST   V1,V10UTPUT      save
00002294  B98D 0020                             1756+         EPSW  R2,R0            exptract psw
00002298  5020 8ED4                   000010D4  1757+         ST    R2,CCPSW             to save CC
0000229C  07FB                                  1758+         BR    R11              return
000022A0                                        1759+RE46     DC    0F
000022A0                                        1760+         DROP  R5
000022A0  F0F1F2F3 F4F5F6F7                     1761          DC    XL16'F0F1F2F3F4F5F6F7F8F9FBF1F2F3F4F5'   V1 result
000022A8  F8F9FBF1 F2F3F4F5
000022B0  56789012 34567890                     1762          DC    XL16'567890123456789012 3456789B123451'  V2 source
000022B8  12345678 9B123451
                                                1763
000022C0  00000000                              1764          DC    F'0'       END OF TABLE
000022C4  00000000                              1765          DC    F'0'
                                                1766 *
                                                1767 * table of pointers to individual load test
                                                1768 *
000022C8                                        1769 E6TESTS  DS    0F
                                                1770          PTTABLE
000022C8                                        1771+TTABLE   DS    0F
000022C8  00001180                              1772+         DC    A(T1)            address of test
000022CC  000011E0                              1773+         DC    A(T2)            address of test
000022D0  00001240                              1774+         DC    A(T3)            address of test
000022D4  000012A0                              1775+         DC    A(T4)            address of test
000022D8  00001300                              1776+         DC    A(T5)            address of test
000022DC  00001360                              1777+         DC    A(T6)            address of test
000022E0  000013C0                              1778+         DC    A(T7)            address of test
000022E4  00001420                              1779+         DC    A(T8)            address of test
000022E8  00001480                              1780+         DC    A(T9)            address of test
000022EC  000014E0                              1781+         DC    A(T10)           address of test
000022F0  00001540                              1782+         DC    A(T11)           address of test
000022F4  000015A0                              1783+         DC    A(T12)           address of test
000022F8  00001600                              1784+         DC    A(T13)           address of test
000022FC  00001660                              1785+         DC    A(T14)           address of test
00002300  000016C0                              1786+         DC    A(T15)           address of test
00002304  00001720                              1787+         DC    A(T16)           address of test
00002308  00001780                              1788+         DC    A(T17)           address of test
0000230C  000017E0                              1789+         DC    A(T18)           address of test
00002310  00001840                              1790+         DC    A(T19)           address of test
00002314  000018A0                              1791+         DC    A(T20)           address of test
00002318  00001900                              1792+         DC    A(T21)           address of test
0000231C  00001960                              1793+         DC    A(T22)           address of test
00002320  000019C0                              1794+         DC    A(T23)           address of test
00002324  00001A20                              1795+         DC    A(T24)           address of test
00002328  00001A80                              1796+         DC    A(T25)           address of test
0000232C  00001AE0                              1797+         DC    A(T26)           address of test
00002330  00001B40                              1798+         DC    A(T27)           address of test
00002334  00001BA0                              1799+         DC    A(T28)           address of test
00002338  00001C00                              1800+         DC    A(T29)           address of test
0000233C  00001C60                              1801+         DC    A(T30)           address of test
00002340  00001CC0                              1802+         DC    A(T31)           address of test
00002344  00001D20                              1803+         DC    A(T32)           address of test
00002348  00001D80                              1804+         DC    A(T33)           address of test
0000234C  00001DE0                              1805+         DC    A(T34)           address of test
00002350  00001E40                              1806+         DC    A(T35)           address of test
00002354  00001EA0                              1807+         DC    A(T36)           address of test
00002358  00001F00                              1808+         DC    A(T37)           address of test
```

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 LOC        OBJECT CODE      ADDR1     ADDR2     STMT

0000235C  00001F60                                1809+        DC     A(T38)           address of test
00002360  00001FC0                                1810+        DC     A(T39)           address of test
00002364  00002020                                1811+        DC     A(T40)           address of test
00002368  00002080                                1812+        DC     A(T41)           address of test
0000236C  000020E0                                1813+        DC     A(T42)           address of test
00002370  00002140                                1814+        DC     A(T43)           address of test
00002374  000021A0                                1815+        DC     A(T44)           address of test
00002378  00002200                                1816+        DC     A(T45)           address of test
0000237C  00002260                                1817+        DC     A(T46)           address of test
                                                  1818+*
00002380  00000000                                1819+        DC     A(0)             END OF TABLE
00002384  00000000                                1820+        DC     A(0)
                                                  1821
00002388  00000000                                1822         DC     F'0'    END OF TABLE
0000238C  00000000                                1823         DC     F'0'
```

```
     LOC       OBJECT CODE      ADDR1      ADDR2      STMT

                                                     1825 ****************************************************************************
                                                     1826 *         Register equates
                                                     1827 ****************************************************************************

                               00000000   00000001   1829 R0        EQU    0
                               00000001   00000001   1830 R1        EQU    1
                               00000002   00000001   1831 R2        EQU    2
                               00000003   00000001   1832 R3        EQU    3
                               00000004   00000001   1833 R4        EQU    4
                               00000005   00000001   1834 R5        EQU    5
                               00000006   00000001   1835 R6        EQU    6
                               00000007   00000001   1836 R7        EQU    7
                               00000008   00000001   1837 R8        EQU    8
                               00000009   00000001   1838 R9        EQU    9
                               0000000A   00000001   1839 R10       EQU    10
                               0000000B   00000001   1840 R11       EQU    11
                               0000000C   00000001   1841 R12       EQU    12
                               0000000D   00000001   1842 R13       EQU    13
                               0000000E   00000001   1843 R14       EQU    14
                               0000000F   00000001   1844 R15       EQU    15


                                                     1846 ****************************************************************************
                                                     1847 *         Register equates
                                                     1848 ****************************************************************************

                               00000000   00000001   1850 V0        EQU    0
                               00000001   00000001   1851 V1        EQU    1
                               00000002   00000001   1852 V2        EQU    2
                               00000003   00000001   1853 V3        EQU    3
                               00000004   00000001   1854 V4        EQU    4
                               00000005   00000001   1855 V5        EQU    5
                               00000006   00000001   1856 V6        EQU    6
                               00000007   00000001   1857 V7        EQU    7
                               00000008   00000001   1858 V8        EQU    8
                               00000009   00000001   1859 V9        EQU    9
                               0000000A   00000001   1860 V10       EQU    10
                               0000000B   00000001   1861 V11       EQU    11
                               0000000C   00000001   1862 V12       EQU    12
                               0000000D   00000001   1863 V13       EQU    13
                               0000000E   00000001   1864 V14       EQU    14
                               0000000F   00000001   1865 V15       EQU    15
                               00000010   00000001   1866 V16       EQU    16
                               00000011   00000001   1867 V17       EQU    17
                               00000012   00000001   1868 V18       EQU    18
                               00000013   00000001   1869 V19       EQU    19
                               00000014   00000001   1870 V20       EQU    20
                               00000015   00000001   1871 V21       EQU    21
```

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  LOC          OBJECT CODE      ADDR1      ADDR2      STMT

                                00000016  00000001   1872 V22        EQU   22
                                00000017  00000001   1873 V23        EQU   23
                                00000018  00000001   1874 V24        EQU   24
                                00000019  00000001   1875 V25        EQU   25
                                0000001A  00000001   1876 V26        EQU   26
                                0000001B  00000001   1877 V27        EQU   27
                                0000001C  00000001   1878 V28        EQU   28
                                0000001D  00000001   1879 V29        EQU   29
                                0000001E  00000001   1880 V30        EQU   30
                                0000001F  00000001   1881 V31        EQU   31
                                                     1882
                                                     1883            END
```

SYMBOL	TYPE	VALUE	LENGTH	DEFN	REFERENCES												
BEGIN	I	00000200	2	93	59	90	91										
CC	U	00000008	1	413	168												
CCFOUND	X	000010DC	1	385	155	175											
CCMASK	U	00000009	1	414	126												
CCMSG	U	00000268	1	144	138												
CCPRTEXP	C	00001086	1	365	172												
CCPRTGOT	C	00001096	1	368	179												
CCPRTLINE	C	00001043	16	360	370	182											
CCPRTLNG	U	00000055	1	370	181												
CCPRTNAME	C	00001070	8	363	165												
CCPRTNUM	C	00001053	3	361	163												
CCPSW	F	000010D4	4	384	152	545	571	597	623	649	677	703	729	755	781	809	835
					861	887	913	939	967	993	1019	1045	1071	1097	1134	1160	1187
					1213	1240	1266	1293	1319	1360	1386	1413	1439	1466	1492	1519	1545
					1572	1598	1625	1651	1678	1704	1731	1757					
CTLR0	F	0000047C	4	307	103	104	105	106									
DECNUM	C	000010C4	16	380	160	162	169	171	176	178	194	196	203	205			
E6TADR	A	00000484	4	310	112												
E6TEST	4	00000000	28	408	121												
E6TESTS	F	000022C8	4	1769	310												
EDIT	X	00001098	18	375	161	170	177	195	204								
ENDTEST	U	00000352	1	225	117												
EOJ	I	00000460	4	297	228												
EOJPSW	D	00000450	8	295	297												
FAILCONT	U	00000342	1	215	185												
FAILED	F	00001000	4	337	217	226											
FAILMSG	U	000002F8	1	192	133												
FAILPSW	D	00000468	8	299	301												
FAILTEST	I	00000478	4	301	229												
IMAGE	1	00000000	9104	0													
K	U	00000400	1	320	321	322	323										
K64	U	00010000	1	322													
M3	U	00000007	1	412	146	202											
MB	U	00100000	1	323													
MSG	I	00000398	4	261	244												
MSGCMD	C	000003E2	9	287	274	275											
MSGMSG	C	000003EB	95	288	268	285	266										
MSGMVC	I	000003DC	6	285	272												
MSGOK	I	000003AE	2	270	267												
MSGRET	I	000003C8	4	281	278												
MSGSAVE	F	000003D0	4	284	264	281											
NEXTE6	U	0000022A	1	114	136	220											
OPNAME	C	0000000A	8	416	165	199											
PAGE	U	00001000	1	321													
PRT3	C	000010AE	18	378	161	162	163	170	171	172	177	178	179	195	196	197	204
					205	206	209										
PRTLINE	C	00001004	16	345	352												
PRTLNG	U	0000003F	1	352	208												
PRTM3	C	00001040	2	350	206												
PRTNAME	C	0000102F	8	348	199												
PRTNUM	C	00001014	3	346	197												
R0	U	00000000	1	1829	53	103	106	119	181	208	216	217	243	245	261	264	266
					268	270	281	544	570	596	622	648	676	702	728	754	780
					808	834	860	886	912	938	966	992	1018	1044	1070	1096	1133
					1159	1186	1212	1239	1265	1292	1318	1359	1385	1412	1438	1465	1491
					1518	1544	1571	1597	1624	1650	1677	1703	1730	1756			

SYMBOL	TYPE	VALUE	LENGTH	DEFN	REFERENCES												
R1	U	00000001	1	1830	126	127	128	131	132	145	146	147	152	153	154	155	182
					209	226	227	275	285								
R10	U	0000000A	1	1839	100	101											
R11	U	0000000B	1	1840	123	124	546	572	598	624	650	678	704	730	756	782	810
					836	862	888	914	940	968	994	1020	1046	1072	1098	1135	1161
					1188	1214	1241	1267	1294	1320	1361	1387	1414	1440	1467	1493	1520
					1546	1573	1599	1626	1652	1679	1705	1732	1758				
R12	U	0000000C	1	1841	112	115	135	219									
R13	U	0000000D	1	1842													
R14	U	0000000E	1	1843													
R15	U	0000000F	1	1844	183	210	238	248	249								
R1FUDGE	X	000010E0	8	391													
R10UTPUT	F	00001118	8	395													
R2	U	00000002	1	1831	159	160	167	168	169	174	175	176	193	194	201	202	203
					243	244	245	262	264	270	271	272	274	281	282	544	545
					570	571	596	597	622	623	648	649	676	677	702	703	728
					729	754	755	780	781	808	809	834	835	860	861	886	887
					912	913	938	939	966	967	992	993	1018	1019	1044	1045	1070
					1071	1096	1097	1133	1134	1159	1160	1186	1187	1212	1213	1239	1240
					1265	1266	1292	1293	1318	1319	1359	1360	1385	1386	1412	1413	1438
					1439	1465	1466	1491	1492	1518	1519	1544	1545	1571	1572	1597	1598
					1624	1625	1650	1651	1677	1678	1703	1704	1730	1731	1756	1757	
R3	U	00000003	1	1832													
R4	U	00000004	1	1833													
R5	U	00000005	1	1834	115	116	121	239	247	528	548	554	574	580	600	606	626
					632	652	660	680	686	706	712	732	738	758	764	784	792
					812	818	838	844	864	870	890	896	916	922	942	950	970
					976	996	1002	1022	1028	1048	1054	1074	1080	1100	1117	1137	1143
					1163	1170	1190	1196	1216	1223	1243	1249	1269	1276	1296	1302	1322
					1343	1363	1369	1389	1396	1416	1422	1442	1449	1469	1475	1495	1502
					1522	1528	1548	1555	1575	1581	1601	1608	1628	1634	1654	1661	1681
					1687	1707	1714	1734	1740	1760							
R6	U	00000006	1	1835													
R7	U	00000007	1	1836													
R8	U	00000008	1	1837	90	93	94	95	97								
R9	U	00000009	1	1838	91	97	98	100									
RE1	F	000011C0	4	547	537	541											
RE10	F	00001520	4	783	773	777											
RE11	F	00001580	4	811	801	805											
RE12	F	000015E0	4	837	827	831											
RE13	F	00001640	4	863	853	857											
RE14	F	000016A0	4	889	879	883											
RE15	F	00001700	4	915	905	909											
RE16	F	00001760	4	941	931	935											
RE17	F	000017C0	4	969	959	963											
RE18	F	00001820	4	995	985	989											
RE19	F	00001880	4	1021	1011	1015											
RE2	F	00001220	4	573	563	567											
RE20	F	000018E0	4	1047	1037	1041											
RE21	F	00001940	4	1073	1063	1067											
RE22	F	000019A0	4	1099	1089	1093											
RE23	F	00001A00	4	1136	1126	1130											
RE24	F	00001A60	4	1162	1152	1156											
RE25	F	00001AC0	4	1189	1179	1183											
RE26	F	00001B20	4	1215	1205	1209											
RE27	F	00001B80	4	1242	1232	1236											

SYMBOL	TYPE	VALUE	LENGTH	DEFN	REFERENCES	
RE28	F	00001BE0	4	1268	1258	1262
RE29	F	00001C40	4	1295	1285	1289
RE3	F	00001280	4	599	589	593
RE30	F	00001CA0	4	1321	1311	1315
RE31	F	00001D00	4	1362	1352	1356
RE32	F	00001D60	4	1388	1378	1382
RE33	F	00001DC0	4	1415	1405	1409
RE34	F	00001E20	4	1441	1431	1435
RE35	F	00001E80	4	1468	1458	1462
RE36	F	00001EE0	4	1494	1484	1488
RE37	F	00001F40	4	1521	1511	1515
RE38	F	00001FA0	4	1547	1537	1541
RE39	F	00002000	4	1574	1564	1568
RE4	F	000012E0	4	625	615	619
RE40	F	00002060	4	1600	1590	1594
RE41	F	000020C0	4	1627	1617	1621
RE42	F	00002120	4	1653	1643	1647
RE43	F	00002180	4	1680	1670	1674
RE44	F	000021E0	4	1706	1696	1700
RE45	F	00002240	4	1733	1723	1727
RE46	F	000022A0	4	1759	1749	1753
RE5	F	00001340	4	651	641	645
RE6	F	000013A0	4	679	669	673
RE7	F	00001400	4	705	695	699
RE8	F	00001460	4	731	721	725
RE9	F	000014C0	4	757	747	751
REA1	A	00001198	4	537		
REA10	A	000014F8	4	773		
REA11	A	00001558	4	801		
REA12	A	000015B8	4	827		
REA13	A	00001618	4	853		
REA14	A	00001678	4	879		
REA15	A	000016D8	4	905		
REA16	A	00001738	4	931		
REA17	A	00001798	4	959		
REA18	A	000017F8	4	985		
REA19	A	00001858	4	1011		
REA2	A	000011F8	4	563		
REA20	A	000018B8	4	1037		
REA21	A	00001918	4	1063		
REA22	A	00001978	4	1089		
REA23	A	000019D8	4	1126		
REA24	A	00001A38	4	1152		
REA25	A	00001A98	4	1179		
REA26	A	00001AF8	4	1205		
REA27	A	00001B58	4	1232		
REA28	A	00001BB8	4	1258		
REA29	A	00001C18	4	1285		
REA3	A	00001258	4	589		
REA30	A	00001C78	4	1311		
REA31	A	00001CD8	4	1352		
REA32	A	00001D38	4	1378		
REA33	A	00001D98	4	1405		
REA34	A	00001DF8	4	1431		
REA35	A	00001E58	4	1458		
REA36	A	00001EB8	4	1484		

SYMBOL	TYPE	VALUE	LENGTH	DEFN	REFERENCES	
REA37	A	00001F18	4	1511		
REA38	A	00001F78	4	1537		
REA39	A	00001FD8	4	1564		
REA4	A	000012B8	4	615		
REA40	A	00002038	4	1590		
REA41	A	00002098	4	1617		
REA42	A	000020F8	4	1643		
REA43	A	00002158	4	1670		
REA44	A	000021B8	4	1696		
REA45	A	00002218	4	1723		
REA46	A	00002278	4	1749		
REA5	A	00001318	4	641		
REA6	A	00001378	4	669		
REA7	A	000013D8	4	695		
REA8	A	00001438	4	721		
REA9	A	00001498	4	747		
READDR	A	00000018	4	419	131	
REG2LOW	U	000000DD	1	327		
REG2PATT	U	AABBCCDD	1	326		
RELEN	A	00000014	4	418		
RPTDWSAV	D	00000388	8	254	243	245
RPTERROR	I	00000360	4	238	183	210
RPTSAVE	F	00000380	4	251	238	248
RPTSVR5	F	00000384	4	252	239	247
SVOLDPSW	U	00000140	0	55		
T1	A	00001180	4	529	1772	
T10	A	000014E0	4	765	1781	
T11	A	00001540	4	793	1782	
T12	A	000015A0	4	819	1783	
T13	A	00001600	4	845	1784	
T14	A	00001660	4	871	1785	
T15	A	000016C0	4	897	1786	
T16	A	00001720	4	923	1787	
T17	A	00001780	4	951	1788	
T18	A	000017E0	4	977	1789	
T19	A	00001840	4	1003	1790	
T2	A	000011E0	4	555	1773	
T20	A	000018A0	4	1029	1791	
T21	A	00001900	4	1055	1792	
T22	A	00001960	4	1081	1793	
T23	A	000019C0	4	1118	1794	
T24	A	00001A20	4	1144	1795	
T25	A	00001A80	4	1171	1796	
T26	A	00001AE0	4	1197	1797	
T27	A	00001B40	4	1224	1798	
T28	A	00001BA0	4	1250	1799	
T29	A	00001C00	4	1277	1800	
T3	A	00001240	4	581	1774	
T30	A	00001C60	4	1303	1801	
T31	A	00001CC0	4	1344	1802	
T32	A	00001D20	4	1370	1803	
T33	A	00001D80	4	1397	1804	
T34	A	00001DE0	4	1423	1805	
T35	A	00001E40	4	1450	1806	
T36	A	00001EA0	4	1476	1807	
T37	A	00001F00	4	1503	1808	

SYMBOL	TYPE	VALUE	LENGTH	DEFN	REFERENCES												
T38	A	00001F60	4	1529	1809												
T39	A	00001FC0	4	1556	1810												
T4	A	000012A0	4	607	1775												
T40	A	00002020	4	1582	1811												
T41	A	00002080	4	1609	1812												
T42	A	000020E0	4	1635	1813												
T43	A	00002140	4	1662	1814												
T44	A	000021A0	4	1688	1815												
T45	A	00002200	4	1715	1816												
T46	A	00002260	4	1741	1817												
T5	A	00001300	4	633	1776												
T6	A	00001360	4	661	1777												
T7	A	000013C0	4	687	1778												
T8	A	00001420	4	713	1779												
T9	A	00001480	4	739	1780												
TESTCC	I	00000264	4	138	128												
TESTREST	U	0000024C	1	130	148												
TNUM	H	00000004	2	410	159	193											
TSUB	A	00000000	4	409	123												
TTABLE	F	000022C8	4	1771													
V0	U	00000000	1	1850													
V1	U	00000001	1	1851	540	542	543	566	568	569	592	594	595	618	620	621	644
					646	647	672	674	675	698	700	701	724	726	727	750	752
					753	776	778	779	804	806	807	830	832	833	856	858	859
					882	884	885	908	910	911	934	936	937	962	964	965	988
					990	991	1014	1016	1017	1040	1042	1043	1066	1068	1069	1092	1094
					1095	1129	1131	1132	1155	1157	1158	1182	1184	1185	1208	1210	1211
					1235	1237	1238	1261	1263	1264	1288	1290	1291	1314	1316	1317	1355
					1357	1358	1381	1383	1384	1408	1410	1411	1434	1436	1437	1461	1463
					1464	1487	1489	1490	1514	1516	1517	1540	1542	1543	1567	1569	1570
					1593	1595	1596	1620	1622	1623	1646	1648	1649	1673	1675	1676	1699
					1701	1702	1726	1728	1729	1752	1754	1755					
V10	U	0000000A	1	1860													
V11	U	0000000B	1	1861													
V12	U	0000000C	1	1862													
V13	U	0000000D	1	1863													
V14	U	0000000E	1	1864													
V15	U	0000000F	1	1865													
V16	U	00000010	1	1866													
V17	U	00000011	1	1867													
V18	U	00000012	1	1868													
V19	U	00000013	1	1869													
V1FUDGE	X	00001130	16	397	540	566	592	618	644	672	698	724	750	776	804	830	856
					882	908	934	962	988	1014	1040	1066	1092	1129	1155	1182	1208
					1235	1261	1288	1314	1355	1381	1408	1434	1461	1487	1514	1540	1567
					1593	1620	1646	1673	1699	1726	1752						
V1FUDGEB	X	00001140	16	398													
V1INPUT	C	00001150	16	399													
V1OUTPUT	X	000010F8	16	393	132	543	569	595	621	647	675	701	727	753	779	807	833
					859	885	911	937	965	991	1017	1043	1069	1095	1132	1158	1185
					1211	1238	1264	1291	1317	1358	1384	1411	1437	1464	1490	1517	1543
					1570	1596	1623	1649	1676	1702	1729	1755					
V2	U	00000002	1	1852	541	542	567	568	593	594	619	620	645	646	673	674	699
					700	725	726	751	752	777	778	805	806	831	832	857	858
					883	884	909	910	935	936	963	964	989	990	1015	1016	1041
					1042	1067	1068	1093	1094	1130	1131	1156	1157	1183	1184	1209	1210

SYMBOL	TYPE	VALUE	LENGTH	DEFN	REFERENCES
					1236 1237 1262 1263 1289 1290 1315 1316 1356 1357 1382 1383 1409
					1410 1435 1436 1462 1463 1488 1489 1515 1516 1541 1542 1568 1569
					1594 1595 1621 1622 1647 1648 1674 1675 1700 1701 1727 1728 1753
					1754
V20	U	00000014	1	1870	
V21	U	00000015	1	1871	
V22	U	00000016	1	1872	
V23	U	00000017	1	1873	
V24	U	00000018	1	1874	
V25	U	00000019	1	1875	
V26	U	0000001A	1	1876	
V27	U	0000001B	1	1877	
V28	U	0000001C	1	1878	
V29	U	0000001D	1	1879	
V3	U	00000003	1	1853	
V30	U	0000001E	1	1880	
V31	U	0000001F	1	1881	
V4	U	00000004	1	1854	
V5	U	00000005	1	1855	
V6	U	00000006	1	1856	
V7	U	00000007	1	1857	
V8	U	00000008	1	1858	
V9	U	00000009	1	1859	
X1	F	0000119C	4	539	529
X10	F	000014FC	4	775	765
X11	F	0000155C	4	803	793
X12	F	000015BC	4	829	819
X13	F	0000161C	4	855	845
X14	F	0000167C	4	881	871
X15	F	000016DC	4	907	897
X16	F	0000173C	4	933	923
X17	F	0000179C	4	961	951
X18	F	000017FC	4	987	977
X19	F	0000185C	4	1013	1003
X2	F	000011FC	4	565	555
X20	F	000018BC	4	1039	1029
X21	F	0000191C	4	1065	1055
X22	F	0000197C	4	1091	1081
X23	F	000019DC	4	1128	1118
X24	F	00001A3C	4	1154	1144
X25	F	00001A9C	4	1181	1171
X26	F	00001AFC	4	1207	1197
X27	F	00001B5C	4	1234	1224
X28	F	00001BBC	4	1260	1250
X29	F	00001C1C	4	1287	1277
X3	F	0000125C	4	591	581
X30	F	00001C7C	4	1313	1303
X31	F	00001CDC	4	1354	1344
X32	F	00001D3C	4	1380	1370
X33	F	00001D9C	4	1407	1397
X34	F	00001DFC	4	1433	1423
X35	F	00001E5C	4	1460	1450
X36	F	00001EBC	4	1486	1476
X37	F	00001F1C	4	1513	1503
X38	F	00001F7C	4	1539	1529
X39	F	00001FDC	4	1566	1556

SYMBOL	TYPE	VALUE	LENGTH	DEFN	REFERENCES				
X4	F	000012BC	4	617	607				
X40	F	0000203C	4	1592	1582				
X41	F	0000209C	4	1619	1609				
X42	F	000020FC	4	1645	1635				
X43	F	0000215C	4	1672	1662				
X44	F	000021BC	4	1698	1688				
X45	F	0000221C	4	1725	1715				
X46	F	0000227C	4	1751	1741				
X5	F	0000131C	4	643	633				
X6	F	0000137C	4	671	661				
X7	F	000013DC	4	697	687				
X8	F	0000143C	4	723	713				
X9	F	0000149C	4	749	739				
ZVE6TST	J	00000000	9104	52	55	57	61	65	336	53
=AL2(L'MSGMSG)	R	00000492	2	316	266				
=F'1'	F	00000488	4	313	147	216			
=H'0'	H	00000490	2	315	261				
=XL4'3'	X	0000048C	4	314	154				

MACRO   DEFN   REFERENCES

MACRO	DEFN	REFERENCES															
PTTABLE	484	1770															
VRR_K	433	526	552	578	604	630	658	684	710	736	762	790	816	842	868	894	920	948
		974	1000	1026	1052	1078	1115	1141	1168	1194	1221	1247	1274	1300	1341	1367	1394	1420
		1447	1473	1500	1526	1553	1579	1606	1632	1659	1685	1712	1738					

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    DESC      SYMBOL  SIZE      POS         ADDR

Entry: 0

Image       IMAGE   9104   0000-238F   0000-238F
  Region            9104   0000-238F   0000-238F
    CSECT   ZVE6TST 9104   0000-238F   0000-238F
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STMT   FILE NAME

1   /devstor/dev/tests/zvector-e6-12-countzonedhighlow.asm

** NO ERRORS FOUND **