```
 LOC        OBJECT CODE       ADDR1     ADDR2     STMT
                                                    2 ************************************************************************
                                                    3 *
                                                    4 *   Zvector E7 instruction tests for VRR-b encoded:
                                                    5 *
                                                    6 *   E795 VPKLS  - Vector Pack Logical Saturate
                                                    7 *   E797 VPKS   - Vector Pack Saturate
                                                    8 *   E7F8 VCEQ   - Vector Compare Equal
                                                    9 *   E7F9 VCHL   - Vector Compare High Logical
                                                   10 *   E7FB VCH    - Vector Compare High
                                                   11 *
                                                   12 *        James Wekel March 2025
                                                   13 ************************************************************************


                                                   15 ************************************************************************
                                                   16 *
                                                   17 *        basic instruction tests
                                                   18 *
                                                   19 ************************************************************************
                                                   20 *  This program tests proper functioning of the z/arch E7 VRR-b
                                                   21 *  Pack Logical Saturate, Pack Saturate, Compare, Compare Equal,
                                                   22 *  Compare High Logical instructions.
                                                   23 *  Exceptions are not tested.
                                                   24 *
                                                   25 *  PLEASE NOTE that the tests are very SIMPLE TESTS designed to catch
                                                   26 *  obvious coding errors.  None of the tests are thorough.  They are
                                                   27 *  NOT designed to test all aspects of any of the instructions.
                                                   28 *
                                                   29 ************************************************************************
                                                   30 *
                                                   31 *   *Testcase zvector-e7-16-PackCompare
                                                   32 *   *
                                                   33 *   *   Zvector E7 instruction tests for VRR-b encoded:
                                                   34 *   *
                                                   35 *   *   E795 VPKLS  - Vector Pack Logical Saturate
                                                   36 *   *   E797 VPKS   - Vector Pack Saturate
                                                   37 *   *   E7F8 VCEQ   - Vector Compare Equal
                                                   38 *   *   E7F9 VCHL   - Vector Compare High Logical
                                                   39 *   *   E7FB VCH    - Vector Compare High
                                                   40 *   *
                                                   41 *   *   # ------------------------------------------------------------
                                                   42 *   *   #  This tests only the basic function of the instruction.
                                                   43 *   *   #  Exceptions are NOT tested.
                                                   44 *   *   # ------------------------------------------------------------
                                                   45 *   *
                                                   46 *   mainsize    2
                                                   47 *   numcpu      1
                                                   48 *   sysclear
                                                   49 *   archlvl     z/Arch
                                                   50 *
                                                   51 *   loadcore    "$(testpath)/zvector-e7-16-PackCompare.core" 0x0
                                                   52 *
                                                   53 *   diag8cmd    enable    # (needed for messages to Hercules console)
                                                   54 *   runtest     5
                                                   55 *   diag8cmd    disable   # (reset back to default)
                                                   56 *
```

```
 LOC         OBJECT CODE       ADDR1     ADDR2     STMT

                                                    57 *    *Done
                                                    58 *
                                                    59 *
                                                    60 ********************************************************************************
```

```
 LOC        OBJECT CODE       ADDR1     ADDR2     STMT
                                                    62 ************************************************************************
                                                    63 *        FCHECK Macro - Is a Facility Bit set?
                                                    64 *
                                                    65 *        If the facility bit is NOT set, an message is issued and
                                                    66 *        the test is skipped.
                                                    67 *
                                                    68 *        Fcheck uses R0, R1 and R2
                                                    69 *
                                                    70 * eg.    FCHECK 134,'vector-packed-decimal'
                                                    71 ************************************************************************
                                                    72          MACRO
                                                    73          FCHECK &BITNO,&NOTSETMSG
                                                    74 .*                       &BITNO : facility bit number to check
                                                    75 .*                       &NOTSETMSG : 'facility name'
                                                    76          LCLA  &FBBYTE           Facility bit in Byte
                                                    77          LCLA  &FBBIT            Facility bit within Byte
                                                    78
                                                    79          LCLA  &L(8)
                                                    80 &L(1)    SetA  128,64,32,16,8,4,2,1  bit positions within byte
                                                    81
                                                    82 &FBBYTE  SETA  &BITNO/8
                                                    83 &FBBIT   SETA  &L((&BITNO-(&FBBYTE*8))+1)
                                                    84 .*       MNOTE 0,'checking Bit=&BITNO: FBBYTE=&FBBYTE, FBBIT=&FBBIT'
                                                    85
                                                    86          B     X&SYSNDX
                                                    87 *                                       Fcheck data area
                                                    88 *                                       skip messgae
                                                    89 SKT&SYSNDX DC  C'    Skipping tests: '
                                                    90          DC    C&NOTSETMSG
                                                    91          DC    C' (bit &BITNO) is not installed.'
                                                    92 SKL&SYSNDX EQU *-SKT&SYSNDX
                                                    93 *                                       facility bits
                                                    94          DS    FD                       gap
                                                    95 FB&SYSNDX DS   4FD
                                                    96          DS    FD                       gap
                                                    97 *
                                                    98 X&SYSNDX EQU *
                                                    99          LA    R0,((X&SYSNDX-FB&SYSNDX)/8)-1
                                                   100          STFLE FB&SYSNDX                get facility bits
                                                   101
                                                   102          XGR   R0,R0
                                                   103          IC    R0,FB&SYSNDX+&FBBYTE     get fbit byte
                                                   104          N     R0,=F'&FBBIT'            is bit set?
                                                   105          BNZ   XC&SYSNDX
                                                   106 *
                                                   107 * facility bit not set, issue message and exit
                                                   108 *
                                                   109          LA    R0,SKL&SYSNDX            message length
                                                   110          LA    R1,SKT&SYSNDX            message address
                                                   111          BAL   R2,MSG
                                                   112
                                                   113          B     EOJ
                                                   114 XC&SYSNDX EQU *
                                                   115          MEND
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
                                                     117 ************************************************************************
                                                     118 *        Low core PSWs
                                                     119 ************************************************************************
                               00000000  00009D6F    120 ZVE7TST  START 0
00000000                       00000000              121          USING ZVE7TST,R0            Low core addressability
                                                     122
                               00000140  00000000    123 SVOLDPSW EQU   ZVE7TST+X'140'        z/Arch Supervisor call old PSW

00000000                       00000000  000001A0    125          ORG   ZVE7TST+X'1A0'       z/Architecure RESTART PSW
000001A0  00000001 80000000                          126          DC    X'0000000180000000'
000001A8  00000000 00000200                          127          DC    AD(BEGIN)

000001B0                       000001B0  000001D0    129          ORG   ZVE7TST+X'1D0'       z/Architecure PROGRAM CHECK PSW
000001D0  00020001 80000000                          130          DC    X'0002000180000000'
000001D8  00000000 0000DEAD                          131          DC    AD(X'DEAD')

000001E0                       000001E0  00000200    133          ORG   ZVE7TST+X'200'       Start of actual test program...

                                                     135 ************************************************************************
                                                     136 *               The actual "ZVE7TST" program itself...
                                                     137 ************************************************************************
                                                     138 *
                                                     139 *  Architecture Mode: z/Arch
                                                     140 *  Register Usage:
                                                     141 *
                                                     142 *   R0       (work)
                                                     143 *   R1-4     (work)
                                                     144 *   R5       Testing control table - current test base
                                                     145 *   R6-R7    (work)
                                                     146 *   R8       First base register
                                                     147 *   R9       Second base register
                                                     148 *   R10      Third base register
                                                     149 *   R11      E7TEST call return
                                                     150 *   R12      E7TESTS register
                                                     151 *   R13      (work)
                                                     152 *   R14      Subroutine call
                                                     153 *   R15      Secondary Subroutine call or work
                                                     154 *
                                                     155 ************************************************************************

00000200                       00000200              157          USING BEGIN,R8          FIRST Base Register
00000200                       00001200              158          USING BEGIN+4096,R9     SECOND Base Register
00000200                       00002200              159          USING BEGIN+8192,R10    THIRD Base Register

00000200  0580                                       161 BEGIN    BALR  R8,0              Initalize FIRST base register
00000202  0680                                       162          BCTR  R8,0              Initalize FIRST base register
00000204  0680                                       163          BCTR  R8,0              Initalize FIRST base register

00000206  4190 8800                    00000800      165          LA    R9,2048(,R8)      Initalize SECOND base register
0000020A  4190 9800                    00000800      166          LA    R9,2048(,R9)      Initalize SECOND base register
                                                     167
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
0000020E  41A0 9800                     00000800   168          LA    R10,2048(,R9)    Initalize THIRD base register
00000212  41A0 A800                     00000800   169          LA    R10,2048(,R10)   Initalize THIRD base register
                                                   170
00000216  B600 8354                     00000554   171          STCTL R0,R0,CTLR0      Store CR0 to enable AFP
0000021A  9604 8355                     00000555   172          OI    CTLR0+1,X'04'    Turn on AFP bit
0000021E  9602 8355                     00000555   173          OI    CTLR0+1,X'02'    Turn on Vector bit
00000222  B700 8354                     00000554   174          LCTL  R0,R0,CTLR0      Reload updated CR0
                                                   175
                                                   176 ********************************************************************
                                                   177 * Is z/Architecture vector facility installed  (bit 129)
                                                   178 ********************************************************************
                                                   179
                                                   180          FCHECK 129,'z/Architecture vector facility'
00000226  47F0 80A8                     000002A8   181+         B     X0001
                                                   182+*                                  Fcheck data area
                                                   183+*                                  skip messgae
0000022A  40404040 E2928997                        184+SKT0001  DC    C'    Skipping tests: '
0000023E  A961C199 838889A3                        185+         DC    C'z/Architecture vector facility'
0000025C  404D8289 A340F1F2                        186+         DC    C' (bit 129) is not installed.'
                            0000004E  00000001     187+SKL0001  EQU   *-SKT0001
                                                   188+*                                  facility bits
00000278  00000000 00000000                        189+         DS    FD               gap
00000280  00000000 00000000                        190+FB0001   DS    4FD
000002A0  00000000 00000000                        191+         DS    FD               gap
                                                   192+*
                            000002A8  00000001     193+X0001    EQU   *
000002A8  4100 0004                     00000004   194+         LA    R0,((X0001-FB0001)/8)-1
000002AC  B2B0 8080                     00000280   195+         STFLE FB0001           get facility bits
000002B0  B982 0000                                196+         XGR   R0,R0
000002B4  4300 8090                     00000290   197+         IC    R0,FB0001+16     get fbit byte
000002B8  5400 8368                     00000568   198+         N     R0,=F'64'        is bit set?
000002BC  4770 80D0                     000002D0   199+         BNZ   XC0001
                                                   200+*
                                                   201+* facility bit not set, issue message and exit
                                                   202+*
000002C0  4100 004E                     0000004E   203+         LA    R0,SKL0001       message length
000002C4  4110 802A                     0000022A   204+         LA    R1,SKT0001       message address
000002C8  4520 8270                     00000470   205+         BAL   R2,MSG
000002CC  47F0 8338                     00000538   206+         B     EOJ
                            000002D0  00000001     207+XC0001   EQU   *
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
                                                    209 ********************************************************************************
                                                    210 *               Do tests in the E7TESTS table
                                                    211 ********************************************************************************
                                                    212
000002D0  58C0 836C                       0000056C  213           L     R12,=A(E7TESTS)          get table of test addresses
                                                    214
                                 000002D4 00000001  215 NEXTE7    EQU   *
000002D4  5850 C000                       00000000  216           L     R5,0(0,R12)              get test address
000002D8  1255                                      217           LTR   R5,R5                       have a test?
000002DA  4780 8228                       00000428  218           BZ    ENDTEST                        done?
                                                    219
000002DE                          00000000          220           USING E7TEST,R5
                                                    221
000002DE  4800 5004                       00000004  222           LH    R0,TNUM                  save current test number
000002E2  5000 8E04                       00001004  223           ST    R0,TESTING               for easy reference
                                                    224
000002E6  E760 8EF8 0806                  000010F8  225           VL    V22,V1FUDGE              using V22 as v1 for instruction
000002EC  58B0 5000                       00000000  226           L     R11,TSUB                 get address of test routine
000002F0  05BB                                      227           BALR  R11,R11                  do test
                                                    228
000002F2  E310 500A 0076                  0000000A  229           LB    R1,CCMASK                (failure CC mask)
000002F8  8910 0004                       00000004  230           SLL   R1,4                     (shift to BC instr CC position)
000002FC  4410 8118                       00000318  231           EX    R1,TESTCC                fail if...
                                                    232
                                 00000300 00000001  233 TESTREST EQU   *
00000300  E310 5030 0014                  00000030  234           LGF   R1,READDR                get address of expected result
00000306  D50F 5048 1000       00000048  00000000  235           CLC   V1OUTPUT,0(R1)           valid?
0000030C  4770 81B0                       000003B0  236           BNE   FAILMSG                     no, issue failed message
                                                    237
00000310  41C0 C004                       00000004  238           LA    R12,4(0,R12)             next test address
00000314  47F0 80D4                       000002D4  239           B     NEXTE7
                                                    240
00000318  4700 811C                       0000031C  241 TESTCC    BC    0,CCMSG                  (unexpected condition code?)
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
                                                    243 ********************************************************************************
                                                    244 * cc was not as expected
                                                    245 ********************************************************************************
                               0000031C  00000001   246 CCMSG    EQU   *
                                                    247 *
                                                    248 * is CS set by test?
                                                    249 *
0000031C  E310 5008 0076                 00000008   250          LB    R1,M5                    Get M5
00000322  E310 8360 0080                 00000560   251          NG    R1,=D'1'                   issolate CS
00000328  4780 8100                      00000300   252          BZ    TESTREST                     not set?
                                                    253 *
                                                    254 * extract CC from extracted PSW
                                                    255 *
0000032C  5810 500C                      0000000C   256          L     R1,CCPSW
00000330  8810 000C                      0000000C   257          SRL   R1,12
00000334  5410 8370                      00000570   258          N     R1,=XL4'3'
00000338  4210 5014                      00000014   259          STC   R1,CCFOUND               save cc
                                                    260 *
                                                    261 * FILL IN MESSAGE
                                                    262 *
0000033C  4820 5004                      00000004   263          LH    R2,TNUM                  get test number and convert
00000340  4E20 8ED6                      000010D6   264          CVD   R2,DECNUM
00000344  D211 8EC0 8EAA  000010C0       000010AA   265          MVC   PRT3,EDIT
0000034A  DE11 8EC0 8ED6  000010C0       000010D6   266          ED    PRT3,DECNUM
00000350  D202 8E65 8ECD  00001065       000010CD   267          MVC   CCPRTNUM(3),PRT3+13      fill in message with test #
                                                    268
00000356  D207 8E82 5015  00001082       00000015   269          MVC   CCPRTNAME,OPNAME         fill in message with instruction
                                                    270
0000035C  B982 0022                                 271          XGR   R2,R2                    get CC as U8
00000360  4320 5009                      00000009   272          IC    R2,CC
00000364  4E20 8ED6                      000010D6   273          CVD   R2,DECNUM                and convert
00000368  D211 8EC0 8EAA  000010C0       000010AA   274          MVC   PRT3,EDIT
0000036E  DE11 8EC0 8ED6  000010C0       000010D6   275          ED    PRT3,DECNUM
00000374  D200 8E98 8ECF  00001098       000010CF   276          MVC   CCPRTEXP(1),PRT3+15      fill in message with CC field
                                                    277
0000037A  B982 0022                                 278          XGR   R2,R2                    get CCFOUND as U8
0000037E  4320 5014                      00000014   279          IC    R2,CCFOUND
00000382  4E20 8ED6                      000010D6   280          CVD   R2,DECNUM                and convert
00000386  D211 8EC0 8EAA  000010C0       000010AA   281          MVC   PRT3,EDIT
0000038C  DE11 8EC0 8ED6  000010C0       000010D6   282          ED    PRT3,DECNUM
00000392  D200 8EA8 8ECF  000010A8       000010CF   283          MVC   CCPRTGOT(1),PRT3+15      fill in message with ccfound
                                                    284
00000398  4100 0055                      00000055   285          LA    R0,CCPRTLNG              message length
0000039C  4110 8E55                      00001055   286          LA    R1,CCPRTLINE             messagfe address
000003A0  45F0 8236                      00000436   287          BAL   R15,RPTERROR
                                                    288
000003A4  5800 8374                      00000574   289          L     R0,=F'1'                 set failed test indicator
000003A8  5000 8E00                      00001000   290          ST    R0,FAILED
                                                    291
000003AC  47F0 8100                      00000300   292          B     TESTREST
                                                    293
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
                                                    295 ************************************************************************
                                                    296 * result not as expected:
                                                    297 *        issue message with test number, instruction under test
                                                    298 *              and instruction m4, m5
                                                    299 ************************************************************************
                                 000003B0  00000001 300 FAILMSG  EQU   *
000003B0  4820 5004                        00000004 301           LH    R2,TNUM              get test number and convert
000003B4  4E20 8ED6                        000010D6 302           CVD   R2,DECNUM
000003B8  D211 8EC0 8EAA       000010C0   000010AA 303           MVC   PRT3,EDIT
000003BE  DE11 8EC0 8ED6       000010C0   000010D6 304           ED    PRT3,DECNUM
000003C4  D202 8E18 8ECD       00001018   000010CD 305           MVC   PRTNUM(3),PRT3+13    fill in message with test #
                                                    306
000003CA  D207 8E33 5015       00001033   00000015 307           MVC   PRTNAME,OPNAME       fill in message with instruction
                                                    308
000003D0  B982 0022                                309           XGR   R2,R2                get M4 as U8
000003D4  4320 5007                        00000007 310           IC    R2,M4
000003D8  4E20 8ED6                        000010D6 311           CVD   R2,DECNUM            and convert
000003DC  D211 8EC0 8EAA       000010C0   000010AA 312           MVC   PRT3,EDIT
000003E2  DE11 8EC0 8ED6       000010C0   000010D6 313           ED    PRT3,DECNUM
000003E8  D202 8E44 8ECD       00001044   000010CD 314           MVC   PRTM4(3),PRT3+13     fill in message with M4 field
                                                    315
000003EE  B982 0022                                316           XGR   R2,R2                get M5 as U8
000003F2  4320 5008                        00000008 317           IC    R2,M5
000003F6  4E20 8ED6                        000010D6 318           CVD   R2,DECNUM            and convert
000003FA  D211 8EC0 8EAA       000010C0   000010AA 319           MVC   PRT3,EDIT
00000400  DE11 8EC0 8ED6       000010C0   000010D6 320           ED    PRT3,DECNUM
00000406  D202 8E51 8ECD       00001051   000010CD 321           MVC   PRTM5(3),PRT3+13     fill in message with M5 field
                                                    322
0000040C  4100 004D                        0000004D 323           LA    R0,PRTLNG            message length
00000410  4110 8E08                        00001008 324           LA    R1,PRTLINE           messagfe address
00000414  45F0 8236                        00000436 325           BAL   R15,RPTERROR


                                                    327 ************************************************************************
                                                    328 * continue after a failed test
                                                    329 ************************************************************************
                                 00000418  00000001 330 FAILCONT EQU   *
00000418  5800 8374                        00000574 331           L     R0,=F'1'               set failed test indicator
0000041C  5000 8E00                        00001000 332           ST    R0,FAILED
                                                    333
00000420  41C0 C004                        00000004 334           LA    R12,4(0,R12)           next test address
00000424  47F0 80D4                        000002D4 335           B     NEXTE7


                                                    337 ************************************************************************
                                                    338 * end of testing; set ending psw
                                                    339 ************************************************************************
                                 00000428  00000001 340 ENDTEST  EQU   *
00000428  5810 8E00                        00001000 341           L     R1,FAILED              did a test fail?
0000042C  1211                                     342           LTR   R1,R1
0000042E  4780 8338                        00000538 343           BZ    EOJ                    No, exit
00000432  47F0 8350                        00000550 344           B     FAILTEST               Yes, exit with BAD PSW
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
                                                    346 ********************************************************************************
                                                    347 *        RPTERROR          Report instruction test in error
                                                    348 *                             R0 = MESSGAE LENGTH
                                                    349 *                             R1 = ADDRESS OF MESSAGE
                                                    350 ********************************************************************************

00000436  50F0 8254                 00000454   352 RPTERROR ST    R15,RPTSAVE          Save return address
0000043A  5050 8258                 00000458   353          ST    R5,RPTSVR5           Save R5
                                                    354 *
                                                    355 *        Use Hercules Diagnose for Message to console
                                                    356 *
0000043E  9002 8260                 00000460   357          STM   R0,R2,RPTDWSAV       save regs used by MSG
00000442  4520 8270                 00000470   358          BAL   R2,MSG               call Hercules console MSG display
00000446  9802 8260                 00000460   359          LM    R0,R2,RPTDWSAV       restore regs


0000044A  5850 8258                 00000458   361          L     R5,RPTSVR5           Restore R5
0000044E  58F0 8254                 00000454   362          L     R15,RPTSAVE          Restore return address
00000452  07FF                                 363          BR    R15                  Return to caller

00000454  00000000                             365 RPTSAVE  DC    F'0'                 R15 save area
00000458  00000000                             366 RPTSVR5  DC    F'0'                 R5 save area

00000460  00000000 00000000                    368 RPTDWSAV DC    2D'0'                R0-R2 save area for MSG call


                                                    370 ********************************************************************************
                                                    371 *        Issue HERCULES MESSAGE pointed to by R1, length in R0
                                                    372 *             R2 = return address
                                                    373 ********************************************************************************

00000470  4900 8378                 00000578   375 MSG      CH    R0,=H'0'             Do we even HAVE a message?
00000474  07D2                                 376          BNHR  R2                   No, ignore

00000476  9002 82AC                 000004AC   378          STM   R0,R2,MSGSAVE        Save registers

0000047A  4900 837A                 0000057A   380          CH    R0,=AL2(L'MSGMSG)    Message length within limits?
0000047E  47D0 8286                 00000486   381          BNH   MSGOK                Yes, continue
00000482  4100 005F                 0000005F   382          LA    R0,L'MSGMSG          No, set to maximum

00000486  1820                                 384 MSGOK    LR    R2,R0                Copy length to work register
00000488  0620                                 385          BCTR  R2,0                 Minus-1 for execute
0000048A  4420 82B8                 000004B8   386          EX    R2,MSGMVC            Copy message to O/P buffer

0000048E  4120 200A                 0000000A   388          LA    R2,1+L'MSGCMD(,R2)   Calculate true command length
00000492  4110 82BE                 000004BE   389          LA    R1,MSGCMD            Point to true command

00000496  83120008                             391          DC    X'83',X'12',X'0008'  Issue Hercules Diagnose X'008'
0000049A  4780 82A6                 000004A6   392          BZ    MSGRET               Return if successful
                                               393
0000049E  1222                                 394          LTR   R2,R2                Is Diag8 Ry (R2) 0?
000004A0  4780 82A6                 000004A6   395          BZ    MSGRET                 an error occurred but coninue
                                               396
000004A4  0000                                 397          DC    H'0'                 CRASH for debugging purposes

000004A6  9802 82AC                 000004AC   399 MSGRET   LM    R0,R2,MSGSAVE        Restore registers
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
000004AA  07F2                                      400           BR    R2                    Return to caller


000004AC  00000000 00000000                         402 MSGSAVE   DC    3F'0'                 Registers save area
000004B8  D200 82C7 1000      000004C7  00000000    403 MSGMVC    MVC   MSGMSG(0),0(R1)       Executed instruction

000004BE  D4E2C7D5 D6C8405C                         405 MSGCMD    DC    C'MSGNOH * '          *** HERCULES MESSAGE COMMAND ***
000004C7  40404040 40404040                         406 MSGMSG    DC    CL95' '               The message text to be displayed
                                                    407
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
                                                    409 ********************************************************************************
                                                    410 *        Normal completion or Abnormal termination PSWs
                                                    411 ********************************************************************************

00000528  00020001 80000000                         413 EOJPSW   DC    0D'0',X'0002000180000000',AD(0)
00000538  B2B2 8328                 00000528        415 EOJ      LPSWE EOJPSW                   Normal completion

00000540  00020001 80000000                         417 FAILPSW  DC    0D'0',X'0002000180000000',AD(X'BAD')
00000550  B2B2 8340                 00000540        419 FAILTEST LPSWE FAILPSW                  Abnormal termination

                                                    421 ********************************************************************************
                                                    422 *        Working Storage
                                                    423 ********************************************************************************

00000554  00000000                                  425 CTLR0    DS    F                        CR0
00000558  00000000                                  426          DS    F

00000560                                            428          LTORG ,                        Literals pool
00000560  00000000 00000001                         429                =D'1'
00000568  00000040                                  430                =F'64'
0000056C  00009AA0                                  431                =A(E7TESTS)
00000570  00000003                                  432                =XL4'3'
00000574  00000001                                  433                =F'1'
00000578  0000                                      434                =H'0'
0000057A  005F                                      435                =AL2(L'MSGMSG)
                                                    436
                                                    437 *        some constants
                                                    438
                    00000400  00000001              439 K        EQU   1024                     One KB
                    00001000  00000001              440 PAGE     EQU   (4*K)                    Size of one page
                    00010000  00000001              441 K64      EQU   (64*K)                   64 KB
                    00100000  00000001              442 MB       EQU   (K*K)                     1 MB
                                                    443
                    AABBCCDD  00000001              444 REG2PATT EQU   X'AABBCCDD'              Polluted Register pattern
                    000000DD  00000001              445 REG2LOW  EQU         X'DD'              (last byte above)
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
                                                    447 *=====================================================================
                                                    448 *
                                                    449 *  NOTE: start data on an address that is easy to display
                                                    450 *        within Hercules
                                                    451 *
                                                    452 *=====================================================================
                                                    453
0000057C                      0000057C  00001000    454          ORG   ZVE7TST+X'1000'
00001000  00000000                                  455 FAILED   DC    F'0'                    some test failed?
00001004  00000000                                  456 TESTING  DC    F'0'                    current test number

                                                    458 ***************************************************************************
                                                    459 *        TEST failed : result messgae
                                                    460 ***************************************************************************
                                                    461 *
                                                    462 *        failed message and associated editting
                                                    463 *
00001008  40404040 40404040                         464 PRTLINE  DC    C'         Test # '
00001018  A7A7A7                                    465 PRTNUM   DC    C'xxx'
0000101B  40868189 93858440                         466          DC    C' failed for instruction '
00001033  A7A7A7A7 A7A7A7A7                         467 PRTNAME  DC    CL8'xxxxxxxx'
0000103B  40A689A3 884094F4                         468          DC    C' with m4='
00001044  A7A7A7                                    469 PRTM4    DC    C'xxx'
00001047  6B                                        470          DC    C','
00001048  40A689A3 884094F5                         471          DC    C' with m5='
00001051  A7A7A7                                    472 PRTM5    DC    C'xxx'
00001054  4B                                        473          DC    C'.'
                                0000004D  00000001  474 PRTLNG   EQU   *-PRTLINE
                                                    475
                                                    476 ***************************************************************************
                                                    477 *        TEST failed : CC message
                                                    478 ***************************************************************************
                                                    479 *
                                                    480 *        failed message and associated editting
                                                    481 *
00001055  40404040 40404040                         482 CCPRTLINE DC   C'         Test # '
00001065  A7A7A7                                    483 CCPRTNUM DC    C'xxx'
00001068  40A69996 95874083                         484          DC    c' wrong cc for instruction '
00001082  A7A7A7A7 A7A7A7A7                         485 CCPRTNAME DC    CL8'xxxxxxxx'
0000108A  4085A797 8583A385                         486          DC    C' expected: cc='
00001098  A7                                        487 CCPRTEXP DC    C'x'
00001099  6B                                        488          DC    C','
0000109A  40998583 8589A585                         489          DC    C' received: cc='
000010A8  A7                                        490 CCPRTGOT DC    C'x'
000010A9  4B                                        491          DC    C'.'
                                00000055  00000001  492 CCPRTLNG   EQU   *-CCPRTLINE
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
                                                     494 ************************************************************************
                                                     495 *        TEST failed : message working storge
                                                     496 ************************************************************************
000010AA  40212020 20202020                          497 EDIT     DC    XL18'40212020202020202020202020202020'
                                                     498
000010BC  7E7E7E6E                                   499          DC    C'===>'
000010C0  40404040 40404040                          500 PRT3     DC    CL18' '
000010D2  4C7E7E7E                                   501          DC    C'<==='
000010D6  00000000 00000000                          502 DECNUM   DS    CL16


                                                     504 ************************************************************************
                                                     505 *        Vector instruction results, pollution and input
                                                     506 ************************************************************************
000010E8                                             507          DS    0F
000010E8  00000000 00000000                          508          DS    XL16                                    gap
000010F8  FFFFFFFF FFFFFFFF                          509 V1FUDGE  DC    XL16'FFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF'    V1 FUDGE
00001108  00000000 00000000                          510          DS    XL16


                                                     512 ************************************************************************
                                                     513 *        E7TEST DSECT
                                                     514 ************************************************************************


                                                     516 E7TEST   DSECT ,
00000000  00000000                                   517 TSUB     DC    A(0)                      pointer  to test
00000004  0000                                       518 TNUM     DC    H'00'                     Test Number
00000006  00                                         519          DC    X'00'
00000007  00                                         520 M4       DC    HL1'00'                   m4 used
00000008  00                                         521 M5       DC    HL1'00'                   m5 used
00000009  00                                         522 CC       DC    HL1'00'                   cc expected
0000000A  00                                         523 CCMASK   DC    HL1'00'                   not expected CC mask
                                                     524 *
                                                     525 *        CC extrtaction
                                                     526 *
0000000C  00000000 00000000                          527 CCPSW    DS    2F                        extract PSW after test (has CC)
00000014  00                                         528 CCFOUND  DS    X                         extracted cc
                                                     529
00000015  40404040 40404040                          530 OPNAME   DC    CL8' '                    E7 name
00000020  00000000                                   531 V1ADDR   DC    A(0)                      address of v1 result
00000024  00000000                                   532 V2ADDR   DC    A(0)                      address of v2 source
00000028  00000000                                   533 V3ADDR   DC    A(0)                      address of v3 source
0000002C  00000000                                   534 RELEN    DC    A(0)                      RESULT LENGTH
00000030  00000000                                   535 READDR   DC    A(0)                      result (expected) address
00000038  00000000 00000000                          536          DS    2FD                           gap
00000048  00000000 00000000                          537 V1OUTPUT DS    XL16                      V1 Output
00000058  00000000 00000000                          538          DS    2FD                           gap
                                                     539
                                                     540 *        test routine will be here (from VRR-b macro)
                                                     541 *
                                                     542 *        followed by
                                                     543 *              EXPECTED RESULT
```

```
  LOC         OBJECT CODE       ADDR1     ADDR2     STMT
                              00000000  00009D6F    545 ZVE7TST  CSECT ,
00001118                                          546          DS    0F


                                                    548 ********************************************************************************
                                                    549 *     Macros to help build test tables
                                                    550 ********************************************************************************


                                                    552 *
                                                    553 * macro to generate individual test
                                                    554 *
                                                    555          MACRO
                                                    556          VRR_B &INST,&M4,&CC
                                                    557 .*                                 &INST   - VRR-b instruction under test
                                                    558 .*                                 &M4     - m4 field - element size
                                                    559 .*                                 &CC     - expected CC
                                                    560
                                                    561          LCLA  &XCC(4)  &XCC has mask values for FAILED condition codes
                                                    562 &XCC(1)   SETA  7                  CC != 0
                                                    563 &XCC(2)   SETA  11                 CC != 1
                                                    564 &XCC(3)   SETA  13                 CC != 2
                                                    565 &XCC(4)   SETA  14                 CC != 3
                                                    566
                                                    567          GBLA  &TNUM
                                                    568 &TNUM    SETA  &TNUM+1
                                                    569
                                                    570          DS    0FD
                                                    571          USING *,R5               base for test data and test routine
                                                    572
                                                    573 T&TNUM   DC    A(X&TNUM)          address of test routine
                                                    574          DC    H'&TNUM'           test number
                                                    575          DC    X'00'
                                                    576          DC    HL1'&M4'                m4 used
                                                    577          DC    HL1'1'                  m5 used
                                                    578          DC    HL1'&CC'           CC
                                                    579          DC    HL1'&XCC(&CC+1)'   CC failed mask
                                                    580
                                                    581          DS    2F                 extracted PSW after test (has CC)
                                                    582          DC    X'FF'              extracted CC, if test failed
                                                    583
                                                    584          DC    CL8'&INST'         instruction name
                                                    585          DC    A(RE&TNUM)         address of v1 result
                                                    586          DC    A(RE&TNUM+16)      address of v2 source
                                                    587          DC    A(RE&TNUM+32)      address of v3 source
                                                    588          DC    A(16)              result length
                                                    589 REA&TNUM DC    A(RE&TNUM)         result address
                                                    590          DS    2FD                 gap
                                                    591 V1O&TNUM DS    XL16               V1 output
                                                    592          DS    2FD                 gap
                                                    593 .*
                                                    594 *
                                                    595 X&TNUM   DS    0F
                                                    596          LGF   R1,V2ADDR          load v2 source
                                                    597          VL    v22,0(R1)          use v21 to test decoder
                                                    598          LGF   R1,V3ADDR          load v3 source
```

```
  LOC         OBJECT CODE       ADDR1     ADDR2     STMT

                                                      599          VL    v23,0(R1)          use v22 to test decoder
                                                      600
                                                      601          &INST V21,V22,V23,&M4,1           test instruction
                                                      602
                                                      603          EPSW  R2,R0              extract psw
                                                      604          ST    R2,CCPSW              to save CC
                                                      605
                                                      606          VST   V21,V1O&TNUM       save v1 output
                                                      607
                                                      608          BR    R11                return
                                                      609
                                                      610 RE&TNUM  DC    0F                 V1 for this test
                                                      611
                                                      612          DROP  R5
                                                      613          MEND



                                                      615 *
                                                      616 * macro to generate table of pointers to individual tests
                                                      617 *
                                                      618          MACRO
                                                      619          PTTABLE
                                                      620          GBLA  &TNUM
                                                      621          LCLA  &CUR
                                                      622 &CUR     SETA  1
                                                      623 .*
                                                      624 TTABLE   DS    0F
                                                      625 .LOOP    ANOP
                                                      626 .*
                                                      627          DC    A(T&CUR)                 test address
                                                      628 .*
                                                      629 &CUR     SETA  &CUR+1
                                                      630          AIF   (&CUR LE &TNUM).LOOP
                                                      631 *
                                                      632          DC    A(0)                     end of table
                                                      633          DC    A(0)                     end of table
                                                      634 .*
                                                      635          MEND
                                                      636
```

```
  LOC         OBJECT CODE       ADDR1     ADDR2     STMT
                                                      638 ********************************************************************************
                                                      639 *        E7 VRR-b tests
                                                      640 ********************************************************************************
                                                      641          PRINT DATA
                                                      642 *
                                                      643 *
                                                      644 *   E795 VPKLS  - Vector Pack Logical Saturate
                                                      645 *   E797 VPKS   - Vector Pack Saturate
                                                      646 *   E7F8 VCEQ   - Vector Compare Equal
                                                      647 *   E7F9 VCHL   - Vector Compare High Logical
                                                      648 *   E7FB VCH    - Vector Compare High
                                                      649 *
                                                      650 *        VRR-b instruction,
                                                      651 *              M4,                    element size
                                                      652 *              CC                     expected condition code
                                                      653 *
                                                      654 *              followed by
                                                      655 *                 16 byte V1 result
                                                      656 *                 16 byte V2 source
                                                      657 *                 16 byte V3 source
                                                      658 *
                                                      659 * NOTE:  M5 is preset to 1; Condition Code Set (CS)
                                                      660 *
                                                      661 *-----------------------------------------------------------------------
                                                      662 * VPKLS  - Vector Pack Logical Saturate
                                                      663 *-----------------------------------------------------------------------
                                                      664 * cc=0: No saturation
                                                      665 * cc=1: At least one but not all elements saturated
                                                      666 * cc=3: Saturation on all elements
                                                      667 *-----------------------------------------------------------------------
                                                      668 * case -  simple cc debug
                                                      669 *-----------------------------------------------------------------------
                                                      670 *Halfword
                                                      671          VRR_B VPKLS,1,0
00001118                                              672+         DS    0FD
00001118                          00001118            673+         USING *,R5              base for test data and test routine
00001118  00001180                                    674+T1       DC    A(X1)             address of test routine
0000111C  0001                                        675+         DC    H'1'              test number
0000111E  00                                          676+         DC    X'00'
0000111F  01                                          677+         DC    HL1'1'                 m4 used
00001120  01                                          678+         DC    HL1'1'                 m5 used
00001121  00                                          679+         DC    HL1'0'            CC
00001122  07                                          680+         DC    HL1'7'            CC failed mask
00001124  00000000 00000000                           681+         DS    2F                extracted PSW after test (has CC)
0000112C  FF                                          682+         DC    X'FF'             extracted CC, if test failed
0000112D  E5D7D2D3 E2404040                           683+         DC    CL8'VPKLS'        instruction name
00001138  000011B0                                    684+         DC    A(RE1)            address of v1 result
0000113C  000011C0                                    685+         DC    A(RE1+16)         address of v2 source
00001140  000011D0                                    686+         DC    A(RE1+32)         address of v3 source
00001144  00000010                                    687+         DC    A(16)             result length
00001148  000011B0                                    688+REA1     DC    A(RE1)            result address
00001150  00000000 00000000                           689+         DS    2FD                gap
00001158  00000000 00000000
00001160  00000000 00000000                           690+V1O1     DS    XL16              V1 output
00001168  00000000 00000000
00001170  00000000 00000000                           691+         DS    2FD                gap
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
00001178  00000000 00000000                          692+*
00001180                                            693+X1       DS    0F
00001180  E310 5024 0014                 00000024   694+         LGF   R1,V2ADDR          load v2 source
00001186  E761 0000 0806                 00000000   695+         VL    v22,0(R1)          use v21 to test decoder
0000118C  E310 5028 0014                 00000028   696+         LGF   R1,V3ADDR          load v3 source
00001192  E771 0000 0806                 00000000   697+         VL    v23,0(R1)          use v22 to test decoder
00001198  E756 7010 1E95                            698+         VPKLS V21,V22,V23,1,1             test instruction
0000119E  B98D 0020                                 699+         EPSW  R2,R0              extract psw
000011A2  5020 500C                      0000000C   700+         ST    R2,CCPSW              to save CC
000011A6  E750 5048 080E                 00001160   701+         VST   V21,V1O1           save v1 output
000011AC  07FB                                      702+         BR    R11                return
000011B0                                            703+RE1      DC    0F                 V1 for this test
000011B0                                            704+         DROP  R5
000011B0  00000000 00000000                         705          DC    XL16'0000000000000000 0000000000000000'   result
000011B8  00000000 00000000
000011C0  00000000 00000000                         706          DC    XL16'0000000000000000 0000000000000000'   v2
000011C8  00000000 00000000
000011D0  00000000 00000000                         707          DC    XL16'0000000000000000 0000000000000000'   v3
000011D8  00000000 00000000
                                                    708
                                                    709          VRR_B VPKLS,1,1
000011E0                                            710+         DS    0FD
000011E0                    000011E0                711+         USING *,R5               base for test data and test routine
000011E0  00001248                                  712+T2       DC    A(X2)              address of test routine
000011E4  0002                                      713+         DC    H'2'               test number
000011E6  00                                        714+         DC    X'00'
000011E7  01                                        715+         DC    HL1'1'                  m4 used
000011E8  01                                        716+         DC    HL1'1'                  m5 used
000011E9  01                                        717+         DC    HL1'1'             CC
000011EA  0B                                        718+         DC    HL1'11'            CC failed mask
000011EC  00000000 00000000                         719+         DS    2F                 extracted PSW after test (has CC)
000011F4  FF                                        720+         DC    X'FF'              extracted CC, if test failed
000011F5  E5D7D2D3 E2404040                         721+         DC    CL8'VPKLS'         instruction name
00001200  00001278                                  722+         DC    A(RE2)             address of v1 result
00001204  00001288                                  723+         DC    A(RE2+16)          address of v2 source
00001208  00001298                                  724+         DC    A(RE2+32)          address of v3 source
0000120C  00000010                                  725+         DC    A(16)              result length
00001210  00001278                                  726+REA2     DC    A(RE2)             result address
00001218  00000000 00000000                         727+         DS    2FD                 gap
00001220  00000000 00000000
00001228  00000000 00000000                         728+V1O2     DS    XL16               V1 output
00001230  00000000 00000000
00001238  00000000 00000000                         729+         DS    2FD                 gap
00001240  00000000 00000000
                                                    730+*
00001248                                            731+X2       DS    0F
00001248  E310 5024 0014                 00000024   732+         LGF   R1,V2ADDR          load v2 source
0000124E  E761 0000 0806                 00000000   733+         VL    v22,0(R1)          use v21 to test decoder
00001254  E310 5028 0014                 00000028   734+         LGF   R1,V3ADDR          load v3 source
0000125A  E771 0000 0806                 00000000   735+         VL    v23,0(R1)          use v22 to test decoder
00001260  E756 7010 1E95                            736+         VPKLS V21,V22,V23,1,1             test instruction
00001266  B98D 0020                                 737+         EPSW  R2,R0              extract psw
0000126A  5020 500C                      0000000C   738+         ST    R2,CCPSW              to save CC
0000126E  E750 9028 080E                 00001228   739+         VST   V21,V1O2           save v1 output
00001274  07FB                                      740+         BR    R11                return
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
00001278                                            741+RE2      DC    0F                  V1 for this test
00001278                                            742+         DROP  R5
00001278  00000000 00000000                         743          DC    XL16'0000000000000000 FFFFFFFFFFFFFFFF'   result
00001280  FFFFFFFF FFFFFFFF
00001288  00000000 00000000                         744          DC    XL16'0000000000000000 0000000000000000'   v2
00001290  00000000 00000000
00001298  FFFFFFFF FFFFFFFF                         745          DC    XL16'FFFFFFFFFFFFFFFF FFFFFFFFFFFFFFFF'   v3
000012A0  FFFFFFFF FFFFFFFF
                                                    746
                                                    747          VRR_B VPKLS,1,3
000012A8                                            748+         DS    0FD
000012A8                      000012A8              749+         USING *,R5                base for test data and test routine
000012A8  00001310                                  750+T3       DC    A(X3)               address of test routine
000012AC  0003                                      751+         DC    H'3'                test number
000012AE  00                                        752+         DC    X'00'
000012AF  01                                        753+         DC    HL1'1'                   m4 used
000012B0  01                                        754+         DC    HL1'1'                   m5 used
000012B1  03                                        755+         DC    HL1'3'              CC
000012B2  0E                                        756+         DC    HL1'14'             CC failed mask
000012B4  00000000 00000000                         757+         DS    2F                  extracted PSW after test (has CC)
000012BC  FF                                        758+         DC    X'FF'               extracted CC, if test failed
000012BD  E5D7D2D3 E2404040                         759+         DC    CL8'VPKLS'          instruction name
000012C8  00001340                                  760+         DC    A(RE3)              address of v1 result
000012CC  00001350                                  761+         DC    A(RE3+16)           address of v2 source
000012D0  00001360                                  762+         DC    A(RE3+32)           address of v3 source
000012D4  00000010                                  763+         DC    A(16)               result length
000012D8  00001340                                  764+REA3     DC    A(RE3)              result address
000012E0  00000000 00000000                         765+         DS    2FD                  gap
000012E8  00000000 00000000
000012F0  00000000 00000000                         766+V1O3     DS    XL16                V1 output
000012F8  00000000 00000000
00001300  00000000 00000000                         767+         DS    2FD                  gap
00001308  00000000 00000000
                                                    768+*
00001310                                            769+X3       DS    0F
00001310  E310 5024 0014                 00000024   770+         LGF   R1,V2ADDR           load v2 source
00001316  E761 0000 0806                 00000000   771+         VL    v22,0(R1)           use v21 to test decoder
0000131C  E310 5028 0014                 00000028   772+         LGF   R1,V3ADDR           load v3 source
00001322  E771 0000 0806                 00000000   773+         VL    v23,0(R1)           use v22 to test decoder
00001328  E756 7010 1E95                            774+         VPKLS V21,V22,V23,1,1             test instruction
0000132E  B98D 0020                                 775+         EPSW  R2,R0               extract psw
00001332  5020 500C                      0000000C   776+         ST    R2,CCPSW               to save CC
00001336  E750 5048 080E                 000012F0   777+         VST   V21,V1O3            save v1 output
0000133C  07FB                                      778+         BR    R11                 return
00001340                                            779+RE3      DC    0F                  V1 for this test
00001340                                            780+         DROP  R5
00001340  FFFFFFFF FFFFFFFF                         781          DC    XL16'FFFFFFFFFFFFFFFF FFFFFFFFFFFFFFFF'   result
00001348  FFFFFFFF FFFFFFFF
00001350  FFFFFFFF FFFFFFFF                         782          DC    XL16'FFFFFFFFFFFFFFFF FFFFFFFFFFFFFFFF'   v2
00001358  FFFFFFFF FFFFFFFF
00001360  FFFFFFFF FFFFFFFF                         783          DC    XL16'FFFFFFFFFFFFFFFF FFFFFFFFFFFFFFFF'   v3
00001368  FFFFFFFF FFFFFFFF
                                                    784
                                                    785 *Word
                                                    786          VRR_B VPKLS,2,0
00001370                                            787+         DS    0FD
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

00001370                     00001370               788+         USING *,R5              base for test data and test routine
00001370  000013D8                                  789+T4       DC    A(X4)             address of test routine
00001374  0004                                      790+         DC    H'4'              test number
00001376  00                                        791+         DC    X'00'
00001377  02                                        792+         DC    HL1'2'                 m4 used
00001378  01                                        793+         DC    HL1'1'                 m5 used
00001379  00                                        794+         DC    HL1'0'            CC
0000137A  07                                        795+         DC    HL1'7'            CC failed mask
0000137C  00000000 00000000                         796+         DS    2F                extracted PSW after test (has CC)
00001384  FF                                        797+         DC    X'FF'             extracted CC, if test failed
00001385  E5D7D2D3 E2404040                         798+         DC    CL8'VPKLS'        instruction name
00001390  00001408                                  799+         DC    A(RE4)            address of v1 result
00001394  00001418                                  800+         DC    A(RE4+16)         address of v2 source
00001398  00001428                                  801+         DC    A(RE4+32)         address of v3 source
0000139C  00000010                                  802+         DC    A(16)             result length
000013A0  00001408                                  803+REA4     DC    A(RE4)            result address
000013A8  00000000 00000000                         804+         DS    2FD                gap
000013B0  00000000 00000000
000013B8  00000000 00000000                         805+V1O4     DS    XL16              V1 output
000013C0  00000000 00000000
000013C8  00000000 00000000                         806+         DS    2FD                gap
000013D0  00000000 00000000
                                                    807+*
000013D8                                            808+X4       DS    0F
000013D8  E310 5024 0014                 00000024   809+         LGF   R1,V2ADDR         load v2 source
000013DE  E761 0000 0806                 00000000   810+         VL    v22,0(R1)         use v21 to test decoder
000013E4  E310 5028 0014                 00000028   811+         LGF   R1,V3ADDR         load v3 source
000013EA  E771 0000 0806                 00000000   812+         VL    v23,0(R1)         use v22 to test decoder
000013F0  E756 7010 2E95                            813+         VPKLS V21,V22,V23,2,1              test instruction
000013F6  B98D 0020                                 814+         EPSW  R2,R0             extract psw
000013FA  5020 500C                      0000000C   815+         ST    R2,CCPSW             to save CC
000013FE  E750 5048 080E                 000013B8   816+         VST   V21,V1O4          save v1 output
00001404  07FB                                      817+         BR    R11               return
00001408                                            818+RE4      DC    0F                V1 for this test
00001408                                            819+         DROP  R5
00001408  00000000 00000000                         820          DC    XL16'0000000000000000 0000000000000000'   result
00001410  00000000 00000000
00001418  00000000 00000000                         821          DC    XL16'0000000000000000 0000000000000000'   v2
00001420  00000000 00000000
00001428  00000000 00000000                         822          DC    XL16'0000000000000000 0000000000000000'   v3
00001430  00000000 00000000
                                                    823
                                                    824          VRR_B VPKLS,2,1
00001438                                            825+         DS    0FD
00001438                         00001438           826+         USING *,R5              base for test data and test routine
00001438  000014A0                                  827+T5       DC    A(X5)             address of test routine
0000143C  0005                                      828+         DC    H'5'              test number
0000143E  00                                        829+         DC    X'00'
0000143F  02                                        830+         DC    HL1'2'                 m4 used
00001440  01                                        831+         DC    HL1'1'                 m5 used
00001441  01                                        832+         DC    HL1'1'            CC
00001442  0B                                        833+         DC    HL1'11'           CC failed mask
00001444  00000000 00000000                         834+         DS    2F                extracted PSW after test (has CC)
0000144C  FF                                        835+         DC    X'FF'             extracted CC, if test failed
0000144D  E5D7D2D3 E2404040                         836+         DC    CL8'VPKLS'        instruction name
00001458  000014D0                                  837+         DC    A(RE5)            address of v1 result
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
0000145C  000014E0                          838+          DC    A(RE5+16)           address of v2 source
00001460  000014F0                          839+          DC    A(RE5+32)           address of v3 source
00001464  00000010                          840+          DC    A(16)               result length
00001468  000014D0                          841+REA5      DC    A(RE5)              result address
00001470  00000000 00000000                 842+          DS    2FD                  gap
00001478  00000000 00000000
00001480  00000000 00000000                 843+V1O5      DS    XL16                V1 output
00001488  00000000 00000000
00001490  00000000 00000000                 844+          DS    2FD                  gap
00001498  00000000 00000000
                                            845+*
000014A0                                    846+X5        DS    0F
000014A0  E310 5024 0014                00000024    847+          LGF   R1,V2ADDR           load v2 source
000014A6  E761 0000 0806                00000000    848+          VL    v22,0(R1)           use v21 to test decoder
000014AC  E310 5028 0014                00000028    849+          LGF   R1,V3ADDR           load v3 source
000014B2  E771 0000 0806                00000000    850+          VL    v23,0(R1)           use v22 to test decoder
000014B8  E756 7010 2E95                            851+          VPKLS V21,V22,V23,2,1             test instruction
000014BE  B98D 0020                                 852+          EPSW  R2,R0               extract psw
000014C2  5020 500C                     0000000C    853+          ST    R2,CCPSW               to save CC
000014C6  E750 5048 080E                00001480    854+          VST   V21,V1O5            save v1 output
000014CC  07FB                                      855+          BR    R11                 return
000014D0                                            856+RE5       DC    0F                  V1 for this test
000014D0                                            857+          DROP  R5
000014D0  00000000 00000000                         858           DC    XL16'0000000000000000 FFFFFFFFFFFFFFFF'   result
000014D8  FFFFFFFF FFFFFFFF
000014E0  00000000 00000000                         859           DC    XL16'0000000000000000 0000000000000000'   v2
000014E8  00000000 00000000
000014F0  FFFFFFFF FFFFFFFF                         860           DC    XL16'FFFFFFFFFFFFFFFF FFFFFFFFFFFFFFFF'   v3
000014F8  FFFFFFFF FFFFFFFF
                                                    861
                                                    862           VRR_B VPKLS,2,3
00001500                                            863+          DS    0FD
00001500                        00001500            864+          USING *,R5                base for test data and test routine
00001500  00001568                                  865+T6        DC    A(X6)               address of test routine
00001504  0006                                      866+          DC    H'6'                test number
00001506  00                                        867+          DC    X'00'
00001507  02                                        868+          DC    HL1'2'                   m4 used
00001508  01                                        869+          DC    HL1'1'                   m5 used
00001509  03                                        870+          DC    HL1'3'              CC
0000150A  0E                                        871+          DC    HL1'14'             CC failed mask
0000150C  00000000 00000000                         872+          DS    2F                  extracted PSW after test (has CC)
00001514  FF                                        873+          DC    X'FF'               extracted CC, if test failed
00001515  E5D7D2D3 E2404040                         874+          DC    CL8'VPKLS'          instruction name
00001520  00001598                                  875+          DC    A(RE6)              address of v1 result
00001524  000015A8                                  876+          DC    A(RE6+16)           address of v2 source
00001528  000015B8                                  877+          DC    A(RE6+32)           address of v3 source
0000152C  00000010                                  878+          DC    A(16)               result length
00001530  00001598                                  879+REA6      DC    A(RE6)              result address
00001538  00000000 00000000                         880+          DS    2FD                  gap
00001540  00000000 00000000
00001548  00000000 00000000                         881+V1O6      DS    XL16                V1 output
00001550  00000000 00000000
00001558  00000000 00000000                         882+          DS    2FD                  gap
00001560  00000000 00000000
                                                    883+*
00001568                                            884+X6        DS    0F
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

00001568  E310 5024 0014                 00000024   885+          LGF   R1,V2ADDR           load v2 source
0000156E  E761 0000 0806                 00000000   886+          VL    v22,0(R1)           use v21 to test decoder
00001574  E310 5028 0014                 00000028   887+          LGF   R1,V3ADDR           load v3 source
0000157A  E771 0000 0806                 00000000   888+          VL    v23,0(R1)           use v22 to test decoder
00001580  E756 7010 2E95                            889+          VPKLS V21,V22,V23,2,1               test instruction
00001586  B98D 0020                                 890+          EPSW  R2,R0               extract psw
0000158A  5020 500C                      0000000C   891+          ST    R2,CCPSW               to save CC
0000158E  E750 5048 080E                 00001548   892+          VST   V21,V1O6            save v1 output
00001594  07FB                                      893+          BR    R11                 return
00001598                                            894+RE6       DC    0F                  V1 for this test
00001598                                            895+          DROP  R5
00001598  FFFFFFFF FFFFFFFF                         896           DC    XL16'FFFFFFFFFFFFFFFF FFFFFFFFFFFFFFFF'   result
000015A0  FFFFFFFF FFFFFFFF
000015A8  FFFFFFFF FFFFFFFF                         897           DC    XL16'FFFFFFFFFFFFFFFF FFFFFFFFFFFFFFFF'   v2
000015B0  FFFFFFFF FFFFFFFF
000015B8  FFFFFFFF FFFFFFFF                         898           DC    XL16'FFFFFFFFFFFFFFFF FFFFFFFFFFFFFFFF'   v3
000015C0  FFFFFFFF FFFFFFFF
                                                    899
                                                    900 *DoubleWord
                                                    901           VRR_B VPKLS,3,0
000015C8                                            902+          DS    0FD
000015C8                         000015C8           903+          USING *,R5                base for test data and test routine
000015C8  00001630                                  904+T7        DC    A(X7)               address of test routine
000015CC  0007                                      905+          DC    H'7'                test number
000015CE  00                                        906+          DC    X'00'
000015CF  03                                        907+          DC    HL1'3'                   m4 used
000015D0  01                                        908+          DC    HL1'1'                   m5 used
000015D1  00                                        909+          DC    HL1'0'              CC
000015D2  07                                        910+          DC    HL1'7'              CC failed mask
000015D4  00000000 00000000                         911+          DS    2F                  extracted PSW after test (has CC)
000015DC  FF                                        912+          DC    X'FF'               extracted CC, if test failed
000015DD  E5D7D2D3 E2404040                         913+          DC    CL8'VPKLS'          instruction name
000015E8  00001660                                  914+          DC    A(RE7)              address of v1 result
000015EC  00001670                                  915+          DC    A(RE7+16)           address of v2 source
000015F0  00001680                                  916+          DC    A(RE7+32)           address of v3 source
000015F4  00000010                                  917+          DC    A(16)               result length
000015F8  00001660                                  918+REA7      DC    A(RE7)              result address
00001600  00000000 00000000                         919+          DS    2FD                  gap
00001608  00000000 00000000
00001610  00000000 00000000                         920+V1O7      DS    XL16                V1 output
00001618  00000000 00000000
00001620  00000000 00000000                         921+          DS    2FD                  gap
00001628  00000000 00000000
                                                    922+*
00001630                                            923+X7        DS    0F
00001630  E310 5024 0014                 00000024   924+          LGF   R1,V2ADDR           load v2 source
00001636  E761 0000 0806                 00000000   925+          VL    v22,0(R1)           use v21 to test decoder
0000163C  E310 5028 0014                 00000028   926+          LGF   R1,V3ADDR           load v3 source
00001642  E771 0000 0806                 00000000   927+          VL    v23,0(R1)           use v22 to test decoder
00001648  E756 7010 3E95                            928+          VPKLS V21,V22,V23,3,1               test instruction
0000164E  B98D 0020                                 929+          EPSW  R2,R0               extract psw
00001652  5020 500C                      0000000C   930+          ST    R2,CCPSW               to save CC
00001656  E750 5048 080E                 00001610   931+          VST   V21,V1O7            save v1 output
0000165C  07FB                                      932+          BR    R11                 return
00001660                                            933+RE7       DC    0F                  V1 for this test
00001660                                            934+          DROP  R5
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
00001660  00000000 00000000                        935          DC    XL16'0000000000000000 0000000000000000'   result
00001668  00000000 00000000
00001670  00000000 00000000                        936          DC    XL16'0000000000000000 0000000000000000'   v2
00001678  00000000 00000000
00001680  00000000 00000000                        937          DC    XL16'0000000000000000 0000000000000000'   v3
00001688  00000000 00000000
                                                   938
                                                   939          VRR_B VPKLS,3,1
00001690                                           940+         DS    0FD
00001690                    00001690               941+         USING *,R5              base for test data and test routine
00001690  000016F8                                 942+T8       DC    A(X8)             address of test routine
00001694  0008                                     943+         DC    H'8'              test number
00001696  00                                       944+         DC    X'00'
00001697  03                                       945+         DC    HL1'3'                 m4 used
00001698  01                                       946+         DC    HL1'1'                 m5 used
00001699  01                                       947+         DC    HL1'1'            CC
0000169A  0B                                       948+         DC    HL1'11'           CC failed mask
0000169C  00000000 00000000                        949+         DS    2F                extracted PSW after test (has CC)
000016A4  FF                                       950+         DC    X'FF'             extracted CC, if test failed
000016A5  E5D7D2D3 E2404040                        951+         DC    CL8'VPKLS'        instruction name
000016B0  00001728                                 952+         DC    A(RE8)            address of v1 result
000016B4  00001738                                 953+         DC    A(RE8+16)         address of v2 source
000016B8  00001748                                 954+         DC    A(RE8+32)         address of v3 source
000016BC  00000010                                 955+         DC    A(16)             result length
000016C0  00001728                                 956+REA8     DC    A(RE8)            result address
000016C8  00000000 00000000                        957+         DS    2FD                gap
000016D0  00000000 00000000
000016D8  00000000 00000000                        958+V1O8     DS    XL16              V1 output
000016E0  00000000 00000000
000016E8  00000000 00000000                        959+         DS    2FD                gap
000016F0  00000000 00000000
                                                   960+*
000016F8                                           961+X8       DS    0F
000016F8  E310 5024 0014                 00000024  962+         LGF   R1,V2ADDR         load v2 source
000016FE  E761 0000 0806                 00000000  963+         VL    v22,0(R1)         use v21 to test decoder
00001704  E310 5028 0014                 00000028  964+         LGF   R1,V3ADDR         load v3 source
0000170A  E771 0000 0806                 00000000  965+         VL    v23,0(R1)         use v22 to test decoder
00001710  E756 7010 3E95                           966+         VPKLS V21,V22,V23,3,1           test instruction
00001716  B98D 0020                                967+         EPSW  R2,R0             extract psw
0000171A  5020 500C                      0000000C  968+         ST    R2,CCPSW             to save CC
0000171E  E750 5048 080E                 000016D8  969+         VST   V21,V1O8          save v1 output
00001724  07FB                                     970+         BR    R11               return
00001728                                           971+RE8      DC    0F                V1 for this test
00001728                                           972+         DROP  R5
00001728  00000000 00000000                        973          DC    XL16'0000000000000000 FFFFFFFFFFFFFFFF'   result
00001730  FFFFFFFF FFFFFFFF
00001738  00000000 00000000                        974          DC    XL16'0000000000000000 0000000000000000'   v2
00001740  00000000 00000000
00001748  FFFFFFFF FFFFFFFF                        975          DC    XL16'FFFFFFFFFFFFFFFF FFFFFFFFFFFFFFFF'   v3
00001750  FFFFFFFF FFFFFFFF
                                                   976
                                                   977          VRR_B VPKLS,3,3
00001758                                           978+         DS    0FD
00001758                    00001758               979+         USING *,R5              base for test data and test routine
00001758  000017C0                                 980+T9       DC    A(X9)             address of test routine
0000175C  0009                                     981+         DC    H'9'              test number
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
0000175E  00                                        982+         DC    X'00'
0000175F  03                                        983+         DC    HL1'3'                  m4 used
00001760  01                                        984+         DC    HL1'1'                  m5 used
00001761  03                                        985+         DC    HL1'3'             CC
00001762  0E                                        986+         DC    HL1'14'            CC failed mask
00001764  00000000 00000000                         987+         DS    2F                 extracted PSW after test (has CC)
0000176C  FF                                        988+         DC    X'FF'              extracted CC, if test failed
0000176D  E5D7D2D3 E2404040                         989+         DC    CL8'VPKLS'         instruction name
00001778  000017F0                                  990+         DC    A(RE9)             address of v1 result
0000177C  00001800                                  991+         DC    A(RE9+16)          address of v2 source
00001780  00001810                                  992+         DC    A(RE9+32)          address of v3 source
00001784  00000010                                  993+         DC    A(16)              result length
00001788  000017F0                                  994+REA9     DC    A(RE9)             result address
00001790  00000000 00000000                         995+         DS    2FD                 gap
00001798  00000000 00000000
000017A0  00000000 00000000                         996+V1O9     DS    XL16               V1 output
000017A8  00000000 00000000
000017B0  00000000 00000000                         997+         DS    2FD                 gap
000017B8  00000000 00000000
                                                    998+*
000017C0                                            999+X9       DS    0F
000017C0  E310 5024 0014                 00000024  1000+         LGF   R1,V2ADDR          load v2 source
000017C6  E761 0000 0806                 00000000  1001+         VL    v22,0(R1)          use v21 to test decoder
000017CC  E310 5028 0014                 00000028  1002+         LGF   R1,V3ADDR          load v3 source
000017D2  E771 0000 0806                 00000000  1003+         VL    v23,0(R1)          use v22 to test decoder
000017D8  E756 7010 3E95                           1004+         VPKLS V21,V22,V23,3,1               test instruction
000017DE  B98D 0020                                1005+         EPSW  R2,R0              extract psw
000017E2  5020 500C                      0000000C  1006+         ST    R2,CCPSW                 to save CC
000017E6  E750 5048 080E                 000017A0  1007+         VST   V21,V1O9           save v1 output
000017EC  07FB                                     1008+         BR    R11                return
000017F0                                           1009+RE9      DC    0F                 V1 for this test
000017F0                                           1010+         DROP  R5
000017F0  FFFFFFFF FFFFFFFF                        1011          DC    XL16'FFFFFFFFFFFFFFFF FFFFFFFFFFFFFFFF'   result
000017F8  FFFFFFFF FFFFFFFF
00001800  FFFFFFFF FFFFFFFF                        1012          DC    XL16'FFFFFFFFFFFFFFFF FFFFFFFFFFFFFFFF'   v2
00001808  FFFFFFFF FFFFFFFF
00001810  FFFFFFFF FFFFFFFF                        1013          DC    XL16'FFFFFFFFFFFFFFFF FFFFFFFFFFFFFFFF'   v3
00001818  FFFFFFFF FFFFFFFF
                                                   1014
                                                   1015 *-------------------------------------------------------------------
                                                   1016 * case -  general
                                                   1017 *-------------------------------------------------------------------
                                                   1018 *Halfword
                                                   1019          VRR_B VPKLS,1,0
00001820                                           1020+         DS    0FD
00001820                         00001820          1021+         USING *,R5               base for test data and test routine
00001820  00001888                                 1022+T10      DC    A(X10)             address of test routine
00001824  000A                                     1023+         DC    H'10'              test number
00001826  00                                       1024+         DC    X'00'
00001827  01                                       1025+         DC    HL1'1'                  m4 used
00001828  01                                       1026+         DC    HL1'1'                  m5 used
00001829  00                                       1027+         DC    HL1'0'             CC
0000182A  07                                       1028+         DC    HL1'7'             CC failed mask
0000182C  00000000 00000000                        1029+         DS    2F                 extracted PSW after test (has CC)
00001834  FF                                       1030+         DC    X'FF'              extracted CC, if test failed
00001835  E5D7D2D3 E2404040                        1031+         DC    CL8'VPKLS'         instruction name
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

00001840  000018B8                          1032+          DC    A(RE10)             address of v1 result
00001844  000018C8                          1033+          DC    A(RE10+16)          address of v2 source
00001848  000018D8                          1034+          DC    A(RE10+32)          address of v3 source
0000184C  00000010                          1035+          DC    A(16)               result length
00001850  000018B8                          1036+REA10     DC    A(RE10)             result address
00001858  00000000 00000000                 1037+          DS    2FD                  gap
00001860  00000000 00000000
00001868  00000000 00000000                 1038+V1O10     DS    XL16                V1 output
00001870  00000000 00000000
00001878  00000000 00000000                 1039+          DS    2FD                  gap
00001880  00000000 00000000
                                            1040+*
00001888                                    1041+X10       DS    0F
00001888  E310 5024 0014          00000024  1042+          LGF   R1,V2ADDR           load v2 source
0000188E  E761 0000 0806          00000000  1043+          VL    v22,0(R1)           use v21 to test decoder
00001894  E310 5028 0014          00000028  1044+          LGF   R1,V3ADDR           load v3 source
0000189A  E771 0000 0806          00000000  1045+          VL    v23,0(R1)           use v22 to test decoder
000018A0  E756 7010 1E95                    1046+          VPKLS V21,V22,V23,1,1               test instruction
000018A6  B98D 0020                         1047+          EPSW  R2,R0               extract psw
000018AA  5020 500C               0000000C  1048+          ST    R2,CCPSW               to save CC
000018AE  E750 5048 080E          00001868  1049+          VST   V21,V1O10           save v1 output
000018B4  07FB                              1050+          BR    R11                 return
000018B8                                    1051+RE10      DC    0F                  V1 for this test
000018B8                                    1052+          DROP  R5
000018B8  11335577 99BBDDFF                 1053           DC    XL16'1133557799BBDDFF FEFDFCFBFAF9F8F7'   result
000018C0  FEFDFCFB FAF9F8F7
000018C8  00110033 00550077                 1054           DC    XL16'0011003300550077 009900BB00DD00FF'   v2
000018D0  009900BB 00DD00FF
000018D8  00FE00FD 00FC00FB                 1055           DC    XL16'00FE00FD00FC00FB 00FA00F900F800F7'   v3
000018E0  00FA00F9 00F800F7
                                            1056
                                            1057           VRR_B VPKLS,1,0
000018E8                                    1058+          DS    0FD
000018E8                    000018E8        1059+          USING *,R5                base for test data and test routine
000018E8  00001950                          1060+T11       DC    A(X11)              address of test routine
000018EC  000B                              1061+          DC    H'11'               test number
000018EE  00                                1062+          DC    X'00'
000018EF  01                                1063+          DC    HL1'1'                   m4 used
000018F0  01                                1064+          DC    HL1'1'                   m5 used
000018F1  00                                1065+          DC    HL1'0'              CC
000018F2  07                                1066+          DC    HL1'7'              CC failed mask
000018F4  00000000 00000000                 1067+          DS    2F                  extracted PSW after test (has CC)
000018FC  FF                                1068+          DC    X'FF'               extracted CC, if test failed
000018FD  E5D7D2D3 E2404040                 1069+          DC    CL8'VPKLS'          instruction name
00001908  00001980                          1070+          DC    A(RE11)             address of v1 result
0000190C  00001990                          1071+          DC    A(RE11+16)          address of v2 source
00001910  000019A0                          1072+          DC    A(RE11+32)          address of v3 source
00001914  00000010                          1073+          DC    A(16)               result length
00001918  00001980                          1074+REA11     DC    A(RE11)             result address
00001920  00000000 00000000                 1075+          DS    2FD                  gap
00001928  00000000 00000000
00001930  00000000 00000000                 1076+V1O11     DS    XL16                V1 output
00001938  00000000 00000000
00001940  00000000 00000000                 1077+          DS    2FD                  gap
00001948  00000000 00000000
                                            1078+*
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
00001950                                           1079+X11      DS    0F
00001950  E310 5024 0014                 00000024  1080+          LGF   R1,V2ADDR          load v2 source
00001956  E761 0000 0806                 00000000  1081+          VL    v22,0(R1)          use v21 to test decoder
0000195C  E310 5028 0014                 00000028  1082+          LGF   R1,V3ADDR          load v3 source
00001962  E771 0000 0806                 00000000  1083+          VL    v23,0(R1)          use v22 to test decoder
00001968  E756 7010 1E95                           1084+          VPKLS V21,V22,V23,1,1              test instruction
0000196E  B98D 0020                                1085+          EPSW  R2,R0              extract psw
00001972  5020 500C                      0000000C  1086+          ST    R2,CCPSW              to save CC
00001976  E750 5048 080E                 00001930  1087+          VST   V21,V1O11          save v1 output
0000197C  07FB                                     1088+          BR    R11                return
00001980                                           1089+RE11     DC    0F                 V1 for this test
00001980                                           1090+          DROP  R5
00001980  FEFDFCFB FAF9F8F7                        1091           DC    XL16'FEFDFCFBFAF9F8F7 1133557799BBDDFF'   result
00001988  11335577 99BBDDFF
00001990  00FE00FD 00FC00FB                        1092           DC    XL16'00FE00FD00FC00FB 00FA00F900F800F7'   v2
00001998  00FA00F9 00F800F7
000019A0  00110033 00550077                        1093           DC    XL16'0011003300550077 009900BB00DD00FF'   v3
000019A8  009900BB 00DD00FF
                                                   1094
                                                   1095           VRR_B VPKLS,1,1
000019B0                                           1096+          DS    0FD
000019B0                         000019B0          1097+          USING *,R5               base for test data and test routine
000019B0  00001A18                                 1098+T12      DC    A(X12)             address of test routine
000019B4  000C                                     1099+          DC    H'12'              test number
000019B6  00                                       1100+          DC    X'00'
000019B7  01                                       1101+          DC    HL1'1'                  m4 used
000019B8  01                                       1102+          DC    HL1'1'                  m5 used
000019B9  01                                       1103+          DC    HL1'1'             CC
000019BA  0B                                       1104+          DC    HL1'11'            CC failed mask
000019BC  00000000 00000000                        1105+          DS    2F                 extracted PSW after test (has CC)
000019C4  FF                                       1106+          DC    X'FF'              extracted CC, if test failed
000019C5  E5D7D2D3 E2404040                        1107+          DC    CL8'VPKLS'         instruction name
000019D0  00001A48                                 1108+          DC    A(RE12)            address of v1 result
000019D4  00001A58                                 1109+          DC    A(RE12+16)         address of v2 source
000019D8  00001A68                                 1110+          DC    A(RE12+32)         address of v3 source
000019DC  00000010                                 1111+          DC    A(16)              result length
000019E0  00001A48                                 1112+REA12    DC    A(RE12)            result address
000019E8  00000000 00000000                        1113+          DS    2FD                 gap
000019F0  00000000 00000000
000019F8  00000000 00000000                        1114+V1O12    DS    XL16               V1 output
00001A00  00000000 00000000
00001A08  00000000 00000000                        1115+          DS    2FD                 gap
00001A10  00000000 00000000
                                                   1116+*
00001A18                                           1117+X12      DS    0F
00001A18  E310 5024 0014                 00000024  1118+          LGF   R1,V2ADDR          load v2 source
00001A1E  E761 0000 0806                 00000000  1119+          VL    v22,0(R1)          use v21 to test decoder
00001A24  E310 5028 0014                 00000028  1120+          LGF   R1,V3ADDR          load v3 source
00001A2A  E771 0000 0806                 00000000  1121+          VL    v23,0(R1)          use v22 to test decoder
00001A30  E756 7010 1E95                           1122+          VPKLS V21,V22,V23,1,1              test instruction
00001A36  B98D 0020                                1123+          EPSW  R2,R0              extract psw
00001A3A  5020 500C                      0000000C  1124+          ST    R2,CCPSW              to save CC
00001A3E  E750 5048 080E                 000019F8  1125+          VST   V21,V1O12          save v1 output
00001A44  07FB                                     1126+          BR    R11                return
00001A48                                           1127+RE12     DC    0F                 V1 for this test
00001A48                                           1128+          DROP  R5
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
00001A48  01FFFFFF FFFFFFFF                        1129           DC    XL16'01FFFFFFFFFFFFFF 1133557799BBDDFF'   result
00001A50  11335577 99BBDDFF
00001A58  00010203 04050607                        1130           DC    XL16'0001020304050607 08090A0B0C0D0E0F'   v2
00001A60  08090A0B 0C0D0E0F
00001A68  00110033 00550077                        1131           DC    XL16'0011003300550077 009900BB00DD00FF'   v3
00001A70  009900BB 00DD00FF
                                                   1132
                                                   1133           VRR_B VPKLS,1,1
00001A78                                           1134+          DS    0FD
00001A78                     00001A78              1135+          USING *,R5                base for test data and test routine
00001A78  00001AE0                                 1136+T13       DC    A(X13)              address of test routine
00001A7C  000D                                     1137+          DC    H'13'               test number
00001A7E  00                                       1138+          DC    X'00'
00001A7F  01                                       1139+          DC    HL1'1'                   m4 used
00001A80  01                                       1140+          DC    HL1'1'                   m5 used
00001A81  01                                       1141+          DC    HL1'1'              CC
00001A82  0B                                       1142+          DC    HL1'11'             CC failed mask
00001A84  00000000 00000000                        1143+          DS    2F                  extracted PSW after test (has CC)
00001A8C  FF                                       1144+          DC    X'FF'               extracted CC, if test failed
00001A8D  E5D7D2D3 E2404040                        1145+          DC    CL8'VPKLS'          instruction name
00001A98  00001B10                                 1146+          DC    A(RE13)             address of v1 result
00001A9C  00001B20                                 1147+          DC    A(RE13+16)          address of v2 source
00001AA0  00001B30                                 1148+          DC    A(RE13+32)          address of v3 source
00001AA4  00000010                                 1149+          DC    A(16)               result length
00001AA8  00001B10                                 1150+REA13     DC    A(RE13)             result address
00001AB0  00000000 00000000                        1151+          DS    2FD                  gap
00001AB8  00000000 00000000
00001AC0  00000000 00000000                        1152+V1O13     DS    XL16                V1 output
00001AC8  00000000 00000000
00001AD0  00000000 00000000                        1153+          DS    2FD                  gap
00001AD8  00000000 00000000
                                                   1154+*
00001AE0                                           1155+X13       DS    0F
00001AE0  E310 5024 0014                 00000024  1156+          LGF   R1,V2ADDR           load v2 source
00001AE6  E761 0000 0806                 00000000  1157+          VL    v22,0(R1)           use v21 to test decoder
00001AEC  E310 5028 0014                 00000028  1158+          LGF   R1,V3ADDR           load v3 source
00001AF2  E771 0000 0806                 00000000  1159+          VL    v23,0(R1)           use v22 to test decoder
00001AF8  E756 7010 1E95                           1160+          VPKLS V21,V22,V23,1,1               test instruction
00001AFE  B98D 0020                                1161+          EPSW  R2,R0               extract psw
00001B02  5020 500C                      0000000C  1162+          ST    R2,CCPSW               to save CC
00001B06  E750 5048 080E                 00001AC0  1163+          VST   V21,V1O13           save v1 output
00001B0C  07FB                                     1164+          BR    R11                 return
00001B10                                           1165+RE13      DC    0F                  V1 for this test
00001B10                                           1166+          DROP  R5
00001B10  11335577 99BBDDFF                        1167           DC    XL16'1133557799BBDDFF 01FFFFFFFFFFFFFF'   result
00001B18  01FFFFFF FFFFFFFF
00001B20  00110033 00550077                        1168           DC    XL16'0011003300550077 009900BB00DD00FF'   v2
00001B28  009900BB 00DD00FF
00001B30  00010203 04050607                        1169           DC    XL16'0001020304050607 08090A0B0C0D0E0F'   v3
00001B38  08090A0B 0C0D0E0F
                                                   1170
                                                   1171           VRR_B VPKLS,1,3
00001B40                                           1172+          DS    0FD
00001B40                     00001B40              1173+          USING *,R5                base for test data and test routine
00001B40  00001BA8                                 1174+T14       DC    A(X14)              address of test routine
00001B44  000E                                     1175+          DC    H'14'               test number
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
00001B46  00                                       1176+          DC    X'00'
00001B47  01                                       1177+          DC    HL1'1'                    m4 used
00001B48  01                                       1178+          DC    HL1'1'                    m5 used
00001B49  03                                       1179+          DC    HL1'3'              CC
00001B4A  0E                                       1180+          DC    HL1'14'             CC failed mask
00001B4C  00000000 00000000                        1181+          DS    2F                  extracted PSW after test (has CC)
00001B54  FF                                       1182+          DC    X'FF'               extracted CC, if test failed
00001B55  E5D7D2D3 E2404040                        1183+          DC    CL8'VPKLS'          instruction name
00001B60  00001BD8                                 1184+          DC    A(RE14)             address of v1 result
00001B64  00001BE8                                 1185+          DC    A(RE14+16)          address of v2 source
00001B68  00001BF8                                 1186+          DC    A(RE14+32)          address of v3 source
00001B6C  00000010                                 1187+          DC    A(16)               result length
00001B70  00001BD8                                 1188+REA14     DC    A(RE14)             result address
00001B78  00000000 00000000                        1189+          DS    2FD                  gap
00001B80  00000000 00000000
00001B88  00000000 00000000                        1190+V1O14     DS    XL16                V1 output
00001B90  00000000 00000000
00001B98  00000000 00000000                        1191+          DS    2FD                  gap
00001BA0  00000000 00000000
                                                   1192+*
00001BA8                                           1193+X14       DS    0F
00001BA8  E310 5024 0014                 00000024  1194+          LGF   R1,V2ADDR           load v2 source
00001BAE  E761 0000 0806                 00000000  1195+          VL    v22,0(R1)           use v21 to test decoder
00001BB4  E310 5028 0014                 00000028  1196+          LGF   R1,V3ADDR           load v3 source
00001BBA  E771 0000 0806                 00000000  1197+          VL    v23,0(R1)           use v22 to test decoder
00001BC0  E756 7010 1E95                           1198+          VPKLS V21,V22,V23,1,1              test instruction
00001BC6  B98D 0020                                1199+          EPSW  R2,R0               extract psw
00001BCA  5020 500C                      0000000C  1200+          ST    R2,CCPSW               to save CC
00001BCE  E750 5048 080E                 00001B88  1201+          VST   V21,V1O14           save v1 output
00001BD4  07FB                                     1202+          BR    R11                 return
00001BD8                                           1203+RE14      DC    0F                  V1 for this test
00001BD8                                           1204+          DROP  R5
00001BD8  FFFFFFFF FFFFFFFF                        1205           DC    XL16'FFFFFFFFFFFFFFFF FFFFFFFFFFFFFFFF'   result
00001BE0  FFFFFFFF FFFFFFFF
00001BE8  01110133 01550177                        1206           DC    XL16'0111013301550177 019901BB01DD01FF'   v2
00001BF0  019901BB 01DD01FF
00001BF8  01010203 04050607                        1207           DC    XL16'0101020304050607 08090A0B0C0D0E0F'   v3
00001C00  08090A0B 0C0D0E0F
                                                   1208
                                                   1209           VRR_B VPKLS,1,3
00001C08                                           1210+          DS    0FD
00001C08                       00001C08            1211+          USING *,R5                base for test data and test routine
00001C08  00001C70                                 1212+T15       DC    A(X15)              address of test routine
00001C0C  000F                                     1213+          DC    H'15'               test number
00001C0E  00                                       1214+          DC    X'00'
00001C0F  01                                       1215+          DC    HL1'1'                    m4 used
00001C10  01                                       1216+          DC    HL1'1'                    m5 used
00001C11  03                                       1217+          DC    HL1'3'              CC
00001C12  0E                                       1218+          DC    HL1'14'             CC failed mask
00001C14  00000000 00000000                        1219+          DS    2F                  extracted PSW after test (has CC)
00001C1C  FF                                       1220+          DC    X'FF'               extracted CC, if test failed
00001C1D  E5D7D2D3 E2404040                        1221+          DC    CL8'VPKLS'          instruction name
00001C28  00001CA0                                 1222+          DC    A(RE15)             address of v1 result
00001C2C  00001CB0                                 1223+          DC    A(RE15+16)          address of v2 source
00001C30  00001CC0                                 1224+          DC    A(RE15+32)          address of v3 source
00001C34  00000010                                 1225+          DC    A(16)               result length
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
00001C38  00001CA0                          1226+REA15    DC    A(RE15)            result address
00001C40  00000000 00000000                 1227+         DS    2FD                 gap
00001C48  00000000 00000000
00001C50  00000000 00000000                 1228+V1O15    DS    XL16               V1 output
00001C58  00000000 00000000
00001C60  00000000 00000000                 1229+         DS    2FD                 gap
00001C68  00000000 00000000
                                            1230+*
00001C70                                    1231+X15      DS    0F
00001C70  E310 5024 0014            00000024 1232+         LGF   R1,V2ADDR          load v2 source
00001C76  E761 0000 0806            00000000 1233+         VL    v22,0(R1)          use v21 to test decoder
00001C7C  E310 5028 0014            00000028 1234+         LGF   R1,V3ADDR          load v3 source
00001C82  E771 0000 0806            00000000 1235+         VL    v23,0(R1)          use v22 to test decoder
00001C88  E756 7010 1E95                     1236+         VPKLS V21,V22,V23,1,1              test instruction
00001C8E  B98D 0020                          1237+         EPSW  R2,R0              extract psw
00001C92  5020 500C                 0000000C 1238+         ST    R2,CCPSW              to save CC
00001C96  E750 5048 080E            00001C50 1239+         VST   V21,V1O15          save v1 output
00001C9C  07FB                               1240+         BR    R11                return
00001CA0                                     1241+RE15     DC    0F                 V1 for this test
00001CA0                                     1242+         DROP  R5
00001CA0  FFFFFFFF FFFFFFFF                  1243          DC    XL16'FFFFFFFFFFFFFFFF FFFFFFFFFFFFFFFF'   result
00001CA8  FFFFFFFF FFFFFFFF
00001CB0  01010203 04050607                  1244          DC    XL16'0101020304050607 08090A0B0C0D0E0F'   v2
00001CB8  08090A0B 0C0D0E0F
00001CC0  01110133 01550177                  1245          DC    XL16'0111013301550177 019901BB01DD01FF'   v3
00001CC8  019901BB 01DD01FF
                                             1246
                                             1247 *Word
                                             1248          VRR_B VPKLS,2,0
00001CD0                                     1249+         DS    0FD
00001CD0                  00001CD0           1250+         USING *,R5               base for test data and test routine
00001CD0  00001D38                           1251+T16      DC    A(X16)             address of test routine
00001CD4  0010                               1252+         DC    H'16'              test number
00001CD6  00                                 1253+         DC    X'00'
00001CD7  02                                 1254+         DC    HL1'2'                  m4 used
00001CD8  01                                 1255+         DC    HL1'1'                  m5 used
00001CD9  00                                 1256+         DC    HL1'0'             CC
00001CDA  07                                 1257+         DC    HL1'7'             CC failed mask
00001CDC  00000000 00000000                  1258+         DS    2F                 extracted PSW after test (has CC)
00001CE4  FF                                 1259+         DC    X'FF'              extracted CC, if test failed
00001CE5  E5D7D2D3 E2404040                  1260+         DC    CL8'VPKLS'         instruction name
00001CF0  00001D68                           1261+         DC    A(RE16)            address of v1 result
00001CF4  00001D78                           1262+         DC    A(RE16+16)         address of v2 source
00001CF8  00001D88                           1263+         DC    A(RE16+32)         address of v3 source
00001CFC  00000010                           1264+         DC    A(16)              result length
00001D00  00001D68                           1265+REA16    DC    A(RE16)            result address
00001D08  00000000 00000000                  1266+         DS    2FD                 gap
00001D10  00000000 00000000
00001D18  00000000 00000000                  1267+V1O16    DS    XL16               V1 output
00001D20  00000000 00000000
00001D28  00000000 00000000                  1268+         DS    2FD                 gap
00001D30  00000000 00000000
                                             1269+*
00001D38                                     1270+X16      DS    0F
00001D38  E310 5024 0014            00000024 1271+         LGF   R1,V2ADDR          load v2 source
00001D3E  E761 0000 0806            00000000 1272+         VL    v22,0(R1)          use v21 to test decoder
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

00001D44  E310 5028 0014                 00000028  1273+         LGF   R1,V3ADDR          load v3 source
00001D4A  E771 0000 0806                 00000000  1274+         VL    v23,0(R1)          use v22 to test decoder
00001D50  E756 7010 2E95                           1275+         VPKLS V21,V22,V23,2,1              test instruction
00001D56  B98D 0020                                1276+         EPSW  R2,R0              extract psw
00001D5A  5020 500C                      0000000C  1277+         ST    R2,CCPSW              to save CC
00001D5E  E750 5048 080E                 00001D18  1278+         VST   V21,V1O16          save v1 output
00001D64  07FB                                     1279+         BR    R11                return
00001D68                                           1280+RE16     DC    0F                 V1 for this test
00001D68                                           1281+         DROP  R5
00001D68  11335577 99BBDDFF                        1282          DC    XL16'1133557799BBDDFF FEFDFCFBFAF9F8F7'   result
00001D70  FEFDFCFB FAF9F8F7
00001D78  00001133 00005577                        1283          DC    XL16'0001133300005577 000099BB0000DDFF'   v2
00001D80  000099BB 0000DDFF
00001D88  0000FEFD 0000FCFB                        1284          DC    XL16'0000FEFD0000FCFB 0000FAF90000F8F7'   v3
00001D90  0000FAF9 0000F8F7
                                                   1285
                                                   1286          VRR_B VPKLS,2,0
00001D98                                           1287+         DS    0FD
00001D98                 00001D98                  1288+         USING *,R5               base for test data and test routine
00001D98  00001E00                                 1289+T17      DC    A(X17)             address of test routine
00001D9C  0011                                     1290+         DC    H'17'              test number
00001D9E  00                                       1291+         DC    X'00'
00001D9F  02                                       1292+         DC    HL1'2'                  m4 used
00001DA0  01                                       1293+         DC    HL1'1'                  m5 used
00001DA1  00                                       1294+         DC    HL1'0'             CC
00001DA2  07                                       1295+         DC    HL1'7'             CC failed mask
00001DA4  00000000 00000000                        1296+         DS    2F                 extracted PSW after test (has CC)
00001DAC  FF                                       1297+         DC    X'FF'              extracted CC, if test failed
00001DAD  E5D7D2D3 E2404040                        1298+         DC    CL8'VPKLS'         instruction name
00001DB8  00001E30                                 1299+         DC    A(RE17)            address of v1 result
00001DBC  00001E40                                 1300+         DC    A(RE17+16)         address of v2 source
00001DC0  00001E50                                 1301+         DC    A(RE17+32)         address of v3 source
00001DC4  00000010                                 1302+         DC    A(16)              result length
00001DC8  00001E30                                 1303+REA17    DC    A(RE17)            result address
00001DD0  00000000 00000000                        1304+         DS    2FD                 gap
00001DD8  00000000 00000000
00001DE0  00000000 00000000                        1305+V1O17    DS    XL16               V1 output
00001DE8  00000000 00000000
00001DF0  00000000 00000000                        1306+         DS    2FD                 gap
00001DF8  00000000 00000000
                                                   1307+*
00001E00                                           1308+X17      DS    0F
00001E00  E310 5024 0014                 00000024  1309+         LGF   R1,V2ADDR          load v2 source
00001E06  E761 0000 0806                 00000000  1310+         VL    v22,0(R1)          use v21 to test decoder
00001E0C  E310 5028 0014                 00000028  1311+         LGF   R1,V3ADDR          load v3 source
00001E12  E771 0000 0806                 00000000  1312+         VL    v23,0(R1)          use v22 to test decoder
00001E18  E756 7010 2E95                           1313+         VPKLS V21,V22,V23,2,1              test instruction
00001E1E  B98D 0020                                1314+         EPSW  R2,R0              extract psw
00001E22  5020 500C                      0000000C  1315+         ST    R2,CCPSW              to save CC
00001E26  E750 5048 080E                 00001DE0  1316+         VST   V21,V1O17          save v1 output
00001E2C  07FB                                     1317+         BR    R11                return
00001E30                                           1318+RE17     DC    0F                 V1 for this test
00001E30                                           1319+         DROP  R5
00001E30  FEFDFCFB FAF9F8F7                        1320          DC    XL16'FEFDFCFBFAF9F8F7 1133557799BBDDFF'   result
00001E38  11335577 99BBDDFF
00001E40  0000FEFD 0000FCFB                        1321          DC    XL16'0000FEFD0000FCFB 0000FAF90000F8F7'   v2
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
00001E48  0000FAF9 0000F8F7
00001E50  00001133 00005577                        1322           DC    XL16'0000113300005577 000099BB0000DDFF'   v3
00001E58  000099BB 0000DDFF
                                                   1323
                                                   1324           VRR_B VPKLS,2,1
00001E60                                           1325+          DS    0FD
00001E60                     00001E60              1326+          USING *,R5                base for test data and test routine
00001E60  00001EC8                                 1327+T18       DC    A(X18)              address of test routine
00001E64  0012                                     1328+          DC    H'18'               test number
00001E66  00                                       1329+          DC    X'00'
00001E67  02                                       1330+          DC    HL1'2'                   m4 used
00001E68  01                                       1331+          DC    HL1'1'                   m5 used
00001E69  01                                       1332+          DC    HL1'1'              CC
00001E6A  0B                                       1333+          DC    HL1'11'             CC failed mask
00001E6C  00000000 00000000                        1334+          DS    2F                  extracted PSW after test (has CC)
00001E74  FF                                       1335+          DC    X'FF'               extracted CC, if test failed
00001E75  E5D7D2D3 E2404040                        1336+          DC    CL8'VPKLS'          instruction name
00001E80  00001EF8                                 1337+          DC    A(RE18)             address of v1 result
00001E84  00001F08                                 1338+          DC    A(RE18+16)          address of v2 source
00001E88  00001F18                                 1339+          DC    A(RE18+32)          address of v3 source
00001E8C  00000010                                 1340+          DC    A(16)               result length
00001E90  00001EF8                                 1341+REA18     DC    A(RE18)             result address
00001E98  00000000 00000000                        1342+          DS    2FD                  gap
00001EA0  00000000 00000000
00001EA8  00000000 00000000                        1343+V1O18     DS    XL16                V1 output
00001EB0  00000000 00000000
00001EB8  00000000 00000000                        1344+          DS    2FD                  gap
00001EC0  00000000 00000000
                                                   1345+*
00001EC8                                           1346+X18       DS    0F
00001EC8  E310 5024 0014                 00000024  1347+          LGF   R1,V2ADDR           load v2 source
00001ECE  E761 0000 0806                 00000000  1348+          VL    v22,0(R1)           use v21 to test decoder
00001ED4  E310 5028 0014                 00000028  1349+          LGF   R1,V3ADDR           load v3 source
00001EDA  E771 0000 0806                 00000000  1350+          VL    v23,0(R1)           use v22 to test decoder
00001EE0  E756 7010 2E95                           1351+          VPKLS V21,V22,V23,2,1              test instruction
00001EE6  B98D 0020                                1352+          EPSW  R2,R0               extract psw
00001EEA  5020 500C                      0000000C  1353+          ST    R2,CCPSW               to save CC
00001EEE  E750 5048 080E                 00001EA8  1354+          VST   V21,V1O18           save v1 output
00001EF4  07FB                                     1355+          BR    R11                 return
00001EF8                                           1356+RE18      DC    0F                  V1 for this test
00001EF8                                           1357+          DROP  R5
00001EF8  1203FFFF FFFFFFFF                        1358           DC    XL16'1203FFFFFFFFFFFF 1133557799BBDDFF'   result
00001F00  11335577 99BBDDFF
00001F08  00001203 04050607                        1359           DC    XL16'0000120304050607 08090A0B0C0D0E0F'   v2
00001F10  08090A0B 0C0D0E0F
00001F18  00001133 00005577                        1360           DC    XL16'0000113300005577 000099BB0000DDFF'   v3
00001F20  000099BB 0000DDFF
                                                   1361
                                                   1362           VRR_B VPKLS,2,1
00001F28                                           1363+          DS    0FD
00001F28                     00001F28              1364+          USING *,R5                base for test data and test routine
00001F28  00001F90                                 1365+T19       DC    A(X19)              address of test routine
00001F2C  0013                                     1366+          DC    H'19'               test number
00001F2E  00                                       1367+          DC    X'00'
00001F2F  02                                       1368+          DC    HL1'2'                   m4 used
00001F30  01                                       1369+          DC    HL1'1'                   m5 used
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

00001F31  01                                       1370+          DC    HL1'1'              CC
00001F32  0B                                       1371+          DC    HL1'11'             CC failed mask
00001F34  00000000 00000000                        1372+          DS    2F                  extracted PSW after test (has CC)
00001F3C  FF                                       1373+          DC    X'FF'               extracted CC, if test failed
00001F3D  E5D7D2D3 E2404040                        1374+          DC    CL8'VPKLS'          instruction name
00001F48  00001FC0                                 1375+          DC    A(RE19)             address of v1 result
00001F4C  00001FD0                                 1376+          DC    A(RE19+16)          address of v2 source
00001F50  00001FE0                                 1377+          DC    A(RE19+32)          address of v3 source
00001F54  00000010                                 1378+          DC    A(16)               result length
00001F58  00001FC0                                 1379+REA19     DC    A(RE19)             result address
00001F60  00000000 00000000                        1380+          DS    2FD                  gap
00001F68  00000000 00000000
00001F70  00000000 00000000                        1381+V1O19     DS    XL16                V1 output
00001F78  00000000 00000000
00001F80  00000000 00000000                        1382+          DS    2FD                  gap
00001F88  00000000 00000000
                                                   1383+*
00001F90                                           1384+X19       DS    0F
00001F90  E310 5024 0014                 00000024  1385+          LGF   R1,V2ADDR           load v2 source
00001F96  E761 0000 0806                 00000000  1386+          VL    v22,0(R1)           use v21 to test decoder
00001F9C  E310 5028 0014                 00000028  1387+          LGF   R1,V3ADDR           load v3 source
00001FA2  E771 0000 0806                 00000000  1388+          VL    v23,0(R1)           use v22 to test decoder
00001FA8  E756 7010 2E95                           1389+          VPKLS V21,V22,V23,2,1              test instruction
00001FAE  B98D 0020                                1390+          EPSW  R2,R0               extract psw
00001FB2  5020 500C                      0000000C  1391+          ST    R2,CCPSW               to save CC
00001FB6  E750 5048 080E                 00001F70  1392+          VST   V21,V1O19           save v1 output
00001FBC  07FB                                     1393+          BR    R11                 return
00001FC0                                           1394+RE19      DC    0F                  V1 for this test
00001FC0                                           1395+          DROP  R5
00001FC0  11335577 99BBDDFF                        1396           DC    XL16'1133557799BBDDFF 1203FFFFFFFFFFFF'   result
00001FC8  1203FFFF FFFFFFFF
00001FD0  00001133 00005577                        1397           DC    XL16'0001133300005577 000099BB0000DDFF'   v2
00001FD8  000099BB 0000DDFF
00001FE0  00001203 04050607                        1398           DC    XL16'0001203040506070 8090A0B0C0D0E0F'   v3
00001FE8  08090A0B 0C0D0E0F
                                                   1399
                                                   1400           VRR_B VPKLS,2,3
00001FF0                                           1401+          DS    0FD
00001FF0                         00001FF0          1402+          USING *,R5                base for test data and test routine
00001FF0  00002058                                 1403+T20       DC    A(X20)              address of test routine
00001FF4  0014                                     1404+          DC    H'20'               test number
00001FF6  00                                       1405+          DC    X'00'
00001FF7  02                                       1406+          DC    HL1'2'                   m4 used
00001FF8  01                                       1407+          DC    HL1'1'                   m5 used
00001FF9  03                                       1408+          DC    HL1'3'              CC
00001FFA  0E                                       1409+          DC    HL1'14'             CC failed mask
00001FFC  00000000 00000000                        1410+          DS    2F                  extracted PSW after test (has CC)
00002004  FF                                       1411+          DC    X'FF'               extracted CC, if test failed
00002005  E5D7D2D3 E2404040                        1412+          DC    CL8'VPKLS'          instruction name
00002010  00002088                                 1413+          DC    A(RE20)             address of v1 result
00002014  00002098                                 1414+          DC    A(RE20+16)          address of v2 source
00002018  000020A8                                 1415+          DC    A(RE20+32)          address of v3 source
0000201C  00000010                                 1416+          DC    A(16)               result length
00002020  00002088                                 1417+REA20     DC    A(RE20)             result address
00002028  00000000 00000000                        1418+          DS    2FD                  gap
00002030  00000000 00000000
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
00002038  00000000 00000000                       1419+V1O20    DS    XL16               V1 output
00002040  00000000 00000000
00002048  00000000 00000000                       1420+         DS    2FD                 gap
00002050  00000000 00000000
                                                  1421+*
00002058                                          1422+X20      DS    0F
00002058  E310 5024 0014                 00000024 1423+         LGF   R1,V2ADDR          load v2 source
0000205E  E761 0000 0806                 00000000 1424+         VL    v22,0(R1)          use v21 to test decoder
00002064  E310 5028 0014                 00000028 1425+         LGF   R1,V3ADDR          load v3 source
0000206A  E771 0000 0806                 00000000 1426+         VL    v23,0(R1)          use v22 to test decoder
00002070  E756 7010 2E95                          1427+         VPKLS V21,V22,V23,2,1              test instruction
00002076  B98D 0020                               1428+         EPSW  R2,R0              extract psw
0000207A  5020 500C                      0000000C 1429+         ST    R2,CCPSW              to save CC
0000207E  E750 5048 080E                 00002038 1430+         VST   V21,V1O20          save v1 output
00002084  07FB                                    1431+         BR    R11                return
00002088                                          1432+RE20     DC    0F                 V1 for this test
00002088                                          1433+         DROP  R5
00002088  FFFFFFFF FFFFFFFF                       1434          DC    XL16'FFFFFFFFFFFFFFFF FFFFFFFFFFFFFFFF'   result
00002090  FFFFFFFF FFFFFFFF
00002098  01110133 01550177                       1435          DC    XL16'0111013301550177 019901BB01DD01FF'   v2
000020A0  019901BB 01DD01FF
000020A8  01010203 04050607                       1436          DC    XL16'0101020304050607 08090A0B0C0D0E0F'   v3
000020B0  08090A0B 0C0D0E0F
                                                  1437
                                                  1438          VRR_B VPKLS,2,3
000020B8                                          1439+         DS    0FD
000020B8                 000020B8                 1440+         USING *,R5               base for test data and test routine
000020B8  00002120                                1441+T21      DC    A(X21)             address of test routine
000020BC  0015                                    1442+         DC    H'21'              test number
000020BE  00                                      1443+         DC    X'00'
000020BF  02                                      1444+         DC    HL1'2'                  m4 used
000020C0  01                                      1445+         DC    HL1'1'                  m5 used
000020C1  03                                      1446+         DC    HL1'3'             CC
000020C2  0E                                      1447+         DC    HL1'14'            CC failed mask
000020C4  00000000 00000000                       1448+         DS    2F                 extracted PSW after test (has CC)
000020CC  FF                                      1449+         DC    X'FF'              extracted CC, if test failed
000020CD  E5D7D2D3 E2404040                       1450+         DC    CL8'VPKLS'         instruction name
000020D8  00002150                                1451+         DC    A(RE21)            address of v1 result
000020DC  00002160                                1452+         DC    A(RE21+16)         address of v2 source
000020E0  00002170                                1453+         DC    A(RE21+32)         address of v3 source
000020E4  00000010                                1454+         DC    A(16)              result length
000020E8  00002150                                1455+REA21    DC    A(RE21)            result address
000020F0  00000000 00000000                       1456+         DS    2FD                 gap
000020F8  00000000 00000000
00002100  00000000 00000000                       1457+V1O21    DS    XL16               V1 output
00002108  00000000 00000000
00002110  00000000 00000000                       1458+         DS    2FD                 gap
00002118  00000000 00000000
                                                  1459+*
00002120                                          1460+X21      DS    0F
00002120  E310 5024 0014                 00000024 1461+         LGF   R1,V2ADDR          load v2 source
00002126  E761 0000 0806                 00000000 1462+         VL    v22,0(R1)          use v21 to test decoder
0000212C  E310 5028 0014                 00000028 1463+         LGF   R1,V3ADDR          load v3 source
00002132  E771 0000 0806                 00000000 1464+         VL    v23,0(R1)          use v22 to test decoder
00002138  E756 7010 2E95                          1465+         VPKLS V21,V22,V23,2,1              test instruction
0000213E  B98D 0020                               1466+         EPSW  R2,R0              extract psw
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

00002142  5020 500C                     0000000C  1467+          ST    R2,CCPSW              to save CC
00002146  E750 5048 080E                 00002100  1468+          VST   V21,V1O21           save v1 output
0000214C  07FB                                     1469+          BR    R11                 return
00002150                                           1470+RE21      DC    0F                  V1 for this test
00002150                                           1471+          DROP  R5
00002150  FFFFFFFF FFFFFFFF                        1472           DC    XL16'FFFFFFFFFFFFFFFF FFFFFFFFFFFFFFFF'   result
00002158  FFFFFFFF FFFFFFFF
00002160  01010203 04050607                        1473           DC    XL16'0101020304050607 08090A0B0C0D0E0F'   v2
00002168  08090A0B 0C0D0E0F
00002170  01110133 01550177                        1474           DC    XL16'0111013301550177 019901BB01DD01FF'   v3
00002178  019901BB 01DD01FF
                                                   1475
                                                   1476 *Doubleword
                                                   1477           VRR_B VPKLS,3,0
00002180                                           1478+          DS    0FD
00002180                         00002180          1479+          USING *,R5                base for test data and test routine
00002180  000021E8                                 1480+T22       DC    A(X22)              address of test routine
00002184  0016                                     1481+          DC    H'22'               test number
00002186  00                                       1482+          DC    X'00'
00002187  03                                       1483+          DC    HL1'3'                  m4 used
00002188  01                                       1484+          DC    HL1'1'                  m5 used
00002189  00                                       1485+          DC    HL1'0'              CC
0000218A  07                                       1486+          DC    HL1'7'              CC failed mask
0000218C  00000000 00000000                        1487+          DS    2F                  extracted PSW after test (has CC)
00002194  FF                                       1488+          DC    X'FF'               extracted CC, if test failed
00002195  E5D7D2D3 E2404040                       1489+          DC    CL8'VPKLS'          instruction name
000021A0  00002218                                 1490+          DC    A(RE22)             address of v1 result
000021A4  00002228                                 1491+          DC    A(RE22+16)          address of v2 source
000021A8  00002238                                 1492+          DC    A(RE22+32)          address of v3 source
000021AC  00000010                                 1493+          DC    A(16)               result length
000021B0  00002218                                 1494+REA22     DC    A(RE22)             result address
000021B8  00000000 00000000                        1495+          DS    2FD                  gap
000021C0  00000000 00000000
000021C8  00000000 00000000                        1496+V1O22     DS    XL16                V1 output
000021D0  00000000 00000000
000021D8  00000000 00000000                        1497+          DS    2FD                  gap
000021E0  00000000 00000000
                                                   1498+*
000021E8                                           1499+X22       DS    0F
000021E8  E310 5024 0014                 00000024  1500+          LGF   R1,V2ADDR           load v2 source
000021EE  E761 0000 0806                 00000000  1501+          VL    v22,0(R1)           use v21 to test decoder
000021F4  E310 5028 0014                 00000028  1502+          LGF   R1,V3ADDR           load v3 source
000021FA  E771 0000 0806                 00000000  1503+          VL    v23,0(R1)           use v22 to test decoder
00002200  E756 7010 3E95                           1504+          VPKLS V21,V22,V23,3,1               test instruction
00002206  B98D 0020                                1505+          EPSW  R2,R0               extract psw
0000220A  5020 500C                      0000000C  1506+          ST    R2,CCPSW               to save CC
0000220E  E750 5048 080E                 000021C8  1507+          VST   V21,V1O22           save v1 output
00002214  07FB                                     1508+          BR    R11                 return
00002218                                           1509+RE22      DC    0F                  V1 for this test
00002218                                           1510+          DROP  R5
00002218  11335577 99BBDDFF                        1511           DC    XL16'1133557799BBDDFF FEFDFCFBFAF9F8F7'   result
00002220  FEFDFCFB FAF9F8F7
00002228  00000000 11335577                        1512           DC    XL16'0000000011335577 0000000099BBDDFF'   v2
00002230  00000000 99BBDDFF
00002238  00000000 FEFDFCFB                        1513           DC    XL16'00000000FEFDFCFB 00000000FAF9F8F7'   v3
00002240  00000000 FAF9F8F7
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
                                                    1514
                                                    1515          VRR_B VPKLS,3,0
00002248                                            1516+         DS    0FD
00002248                      00002248              1517+         USING *,R5              base for test data and test routine
00002248  000022B0                                  1518+T23      DC    A(X23)            address of test routine
0000224C  0017                                      1519+         DC    H'23'             test number
0000224E  00                                        1520+         DC    X'00'
0000224F  03                                        1521+         DC    HL1'3'                 m4 used
00002250  01                                        1522+         DC    HL1'1'                 m5 used
00002251  00                                        1523+         DC    HL1'0'            CC
00002252  07                                        1524+         DC    HL1'7'            CC failed mask
00002254  00000000 00000000                         1525+         DS    2F                extracted PSW after test (has CC)
0000225C  FF                                        1526+         DC    X'FF'             extracted CC, if test failed
0000225D  E5D7D2D3 E2404040                         1527+         DC    CL8'VPKLS'        instruction name
00002268  000022E0                                  1528+         DC    A(RE23)           address of v1 result
0000226C  000022F0                                  1529+         DC    A(RE23+16)        address of v2 source
00002270  00002300                                  1530+         DC    A(RE23+32)        address of v3 source
00002274  00000010                                  1531+         DC    A(16)             result length
00002278  000022E0                                  1532+REA23    DC    A(RE23)           result address
00002280  00000000 00000000                         1533+         DS    2FD                gap
00002288  00000000 00000000
00002290  00000000 00000000                         1534+V1O23    DS    XL16              V1 output
00002298  00000000 00000000
000022A0  00000000 00000000                         1535+         DS    2FD                gap
000022A8  00000000 00000000
                                                    1536+*
000022B0                                            1537+X23      DS    0F
000022B0  E310 5024 0014                  00000024  1538+         LGF   R1,V2ADDR         load v2 source
000022B6  E761 0000 0806                  00000000  1539+         VL    v22,0(R1)         use v21 to test decoder
000022BC  E310 5028 0014                  00000028  1540+         LGF   R1,V3ADDR         load v3 source
000022C2  E771 0000 0806                  00000000  1541+         VL    v23,0(R1)         use v22 to test decoder
000022C8  E756 7010 3E95                            1542+         VPKLS V21,V22,V23,3,1           test instruction
000022CE  B98D 0020                                 1543+         EPSW  R2,R0             extract psw
000022D2  5020 500C                       0000000C  1544+         ST    R2,CCPSW             to save CC
000022D6  E750 5048 080E                  00002290  1545+         VST   V21,V1O23         save v1 output
000022DC  07FB                                      1546+         BR    R11               return
000022E0                                            1547+RE23     DC    0F                V1 for this test
000022E0                                            1548+         DROP  R5
000022E0  FEFDFCFB FAF9F8F7                         1549          DC    XL16'FEFDFCFBFAF9F8F7 1133557799BBDDFF'   result
000022E8  11335577 99BBDDFF
000022F0  00000000 FEFDFCFB                         1550          DC    XL16'00000000FEFDFCFB 00000000FAF9F8F7'   v2
000022F8  00000000 FAF9F8F7
00002300  00000000 11335577                         1551          DC    XL16'0000000011335577 0000000099BBDDFF'   v3
00002308  00000000 99BBDDFF
                                                    1552
                                                    1553          VRR_B VPKLS,3,1
00002310                                            1554+         DS    0FD
00002310                      00002310              1555+         USING *,R5              base for test data and test routine
00002310  00002378                                  1556+T24      DC    A(X24)            address of test routine
00002314  0018                                      1557+         DC    H'24'             test number
00002316  00                                        1558+         DC    X'00'
00002317  03                                        1559+         DC    HL1'3'                 m4 used
00002318  01                                        1560+         DC    HL1'1'                 m5 used
00002319  01                                        1561+         DC    HL1'1'            CC
0000231A  0B                                        1562+         DC    HL1'11'           CC failed mask
0000231C  00000000 00000000                         1563+         DS    2F                extracted PSW after test (has CC)
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
00002324  FF                                       1564+          DC    X'FF'                extracted CC, if test failed
00002325  E5D7D2D3 E2404040                         1565+          DC    CL8'VPKLS'           instruction name
00002330  000023A8                                 1566+          DC    A(RE24)              address of v1 result
00002334  000023B8                                 1567+          DC    A(RE24+16)           address of v2 source
00002338  000023C8                                 1568+          DC    A(RE24+32)           address of v3 source
0000233C  00000010                                 1569+          DC    A(16)                result length
00002340  000023A8                                 1570+REA24     DC    A(RE24)              result address
00002348  00000000 00000000                        1571+          DS    2FD                   gap
00002350  00000000 00000000
00002358  00000000 00000000                        1572+V1O24     DS    XL16                 V1 output
00002360  00000000 00000000
00002368  00000000 00000000                        1573+          DS    2FD                   gap
00002370  00000000 00000000
                                                   1574+*
00002378                                           1575+X24       DS    0F
00002378  E310 5024 0014                 00000024  1576+          LGF   R1,V2ADDR            load v2 source
0000237E  E761 0000 0806                 00000000  1577+          VL    v22,0(R1)            use v21 to test decoder
00002384  E310 5028 0014                 00000028  1578+          LGF   R1,V3ADDR            load v3 source
0000238A  E771 0000 0806                 00000000  1579+          VL    v23,0(R1)            use v22 to test decoder
00002390  E756 7010 3E95                           1580+          VPKLS V21,V22,V23,3,1                test instruction
00002396  B98D 0020                                1581+          EPSW  R2,R0                extract psw
0000239A  5020 500C                      0000000C  1582+          ST    R2,CCPSW                to save CC
0000239E  E750 5048 080E                 00002358  1583+          VST   V21,V1O24            save v1 output
000023A4  07FB                                     1584+          BR    R11                  return
000023A8                                           1585+RE24      DC    0F                   V1 for this test
000023A8                                           1586+          DROP  R5
000023A8  FEFDFCFB FAF9F8F7                        1587           DC    XL16'FEFDFCFBFAF9F8F7 FFFFFFFFFFFFFFFF'   result
000023B0  FFFFFFFF FFFFFFFF
000023B8  00000000 FEFDFCFB                        1588           DC    XL16'00000000FEFDFCFB 00000000FAF9F8F7'   v2
000023C0  00000000 FAF9F8F7
000023C8  00001133 00005577                        1589           DC    XL16'0001133000005577 000099BB0000DDFF'   v3
000023D0  000099BB 0000DDFF
                                                   1590
                                                   1591           VRR_B VPKLS,3,1
000023D8                                           1592+          DS    0FD
000023D8                         000023D8          1593+          USING *,R5                 base for test data and test routine
000023D8  00002440                                 1594+T25       DC    A(X25)               address of test routine
000023DC  0019                                     1595+          DC    H'25'                test number
000023DE  00                                       1596+          DC    X'00'
000023DF  03                                       1597+          DC    HL1'3'                    m4 used
000023E0  01                                       1598+          DC    HL1'1'                    m5 used
000023E1  01                                       1599+          DC    HL1'1'               CC
000023E2  0B                                       1600+          DC    HL1'11'              CC failed mask
000023E4  00000000 00000000                        1601+          DS    2F                   extracted PSW after test (has CC)
000023EC  FF                                       1602+          DC    X'FF'                extracted CC, if test failed
000023ED  E5D7D2D3 E2404040                        1603+          DC    CL8'VPKLS'           instruction name
000023F8  00002470                                 1604+          DC    A(RE25)              address of v1 result
000023FC  00002480                                 1605+          DC    A(RE25+16)           address of v2 source
00002400  00002490                                 1606+          DC    A(RE25+32)           address of v3 source
00002404  00000010                                 1607+          DC    A(16)                result length
00002408  00002470                                 1608+REA25     DC    A(RE25)              result address
00002410  00000000 00000000                        1609+          DS    2FD                   gap
00002418  00000000 00000000
00002420  00000000 00000000                        1610+V1O25     DS    XL16                 V1 output
00002428  00000000 00000000
00002430  00000000 00000000                        1611+          DS    2FD                   gap
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
00002438  00000000 00000000                        1612+*
00002440                                           1613+X25      DS    0F
00002440  E310 5024 0014                 00000024  1614+         LGF   R1,V2ADDR          load v2 source
00002446  E761 0000 0806                 00000000  1615+         VL    v22,0(R1)          use v21 to test decoder
0000244C  E310 5028 0014                 00000028  1616+         LGF   R1,V3ADDR          load v3 source
00002452  E771 0000 0806                 00000000  1617+         VL    v23,0(R1)          use v22 to test decoder
00002458  E756 7010 3E95                           1618+         VPKLS V21,V22,V23,3,1              test instruction
0000245E  B98D 0020                                1619+         EPSW  R2,R0              extract psw
00002462  5020 500C                      0000000C  1620+         ST    R2,CCPSW              to save CC
00002466  E750 5048 080E                 00002420  1621+         VST   V21,V1O25          save v1 output
0000246C  07FB                                     1622+         BR    R11                return
00002470                                           1623+RE25     DC    0F                 V1 for this test
00002470                                           1624+         DROP  R5
00002470  FFFFFFFF FFFFFFFF                        1625          DC    XL16'FFFFFFFFFFFFFFFF FEFDFCFBFAF9F8F7'   result
00002478  FEFDFCFB FAF9F8F7
00002480  00001133 00005577                        1626          DC    XL16'0001133300005577 000099BB0000DDFF'   v2
00002488  000099BB 0000DDFF
00002490  00000000 FEFDFCFB                        1627          DC    XL16'00000000FEFDFCFB 00000000FAF9F8F7'   v3
00002498  00000000 FAF9F8F7
                                                   1628
                                                   1629          VRR_B VPKLS,3,3
000024A0                                           1630+         DS    0FD
000024A0                    000024A0               1631+         USING *,R5               base for test data and test routine
000024A0  00002508                                 1632+T26      DC    A(X26)             address of test routine
000024A4  001A                                     1633+         DC    H'26'              test number
000024A6  00                                       1634+         DC    X'00'
000024A7  03                                       1635+         DC    HL1'3'                  m4 used
000024A8  01                                       1636+         DC    HL1'1'                  m5 used
000024A9  03                                       1637+         DC    HL1'3'             CC
000024AA  0E                                       1638+         DC    HL1'14'            CC failed mask
000024AC  00000000 00000000                        1639+         DS    2F                 extracted PSW after test (has CC)
000024B4  FF                                       1640+         DC    X'FF'              extracted CC, if test failed
000024B5  E5D7D2D3 E2404040                        1641+         DC    CL8'VPKLS'         instruction name
000024C0  00002538                                 1642+         DC    A(RE26)            address of v1 result
000024C4  00002548                                 1643+         DC    A(RE26+16)         address of v2 source
000024C8  00002558                                 1644+         DC    A(RE26+32)         address of v3 source
000024CC  00000010                                 1645+         DC    A(16)              result length
000024D0  00002538                                 1646+REA26    DC    A(RE26)            result address
000024D8  00000000 00000000                        1647+         DS    2FD                 gap
000024E0  00000000 00000000
000024E8  00000000 00000000                        1648+V1O26    DS    XL16               V1 output
000024F0  00000000 00000000
000024F8  00000000 00000000                        1649+         DS    2FD                 gap
00002500  00000000 00000000
                                                   1650+*
00002508                                           1651+X26      DS    0F
00002508  E310 5024 0014                 00000024  1652+         LGF   R1,V2ADDR          load v2 source
0000250E  E761 0000 0806                 00000000  1653+         VL    v22,0(R1)          use v21 to test decoder
00002514  E310 5028 0014                 00000028  1654+         LGF   R1,V3ADDR          load v3 source
0000251A  E771 0000 0806                 00000000  1655+         VL    v23,0(R1)          use v22 to test decoder
00002520  E756 7010 3E95                           1656+         VPKLS V21,V22,V23,3,1              test instruction
00002526  B98D 0020                                1657+         EPSW  R2,R0              extract psw
0000252A  5020 500C                      0000000C  1658+         ST    R2,CCPSW              to save CC
0000252E  E750 5048 080E                 000024E8  1659+         VST   V21,V1O26          save v1 output
00002534  07FB                                     1660+         BR    R11                return
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
00002538                                           1661+RE26     DC    0F                  V1 for this test
00002538                                           1662+         DROP  R5
00002538  FFFFFFFF FFFFFFFF                        1663          DC    XL16'FFFFFFFFFFFFFFFF FFFFFFFFFFFFFFFF'   result
00002540  FFFFFFFF FFFFFFFF
00002548  01110133 01550177                        1664          DC    XL16'0111013301550177 019901BB01DD01FF'   v2
00002550  019901BB 01DD01FF
00002558  01010203 04050607                        1665          DC    XL16'0101020304050607 08090A0B0C0D0E0F'   v3
00002560  08090A0B 0C0D0E0F
                                                   1666
                                                   1667          VRR_B VPKLS,3,3
00002568                                           1668+         DS    0FD
00002568                      00002568             1669+         USING *,R5                base for test data and test routine
00002568  000025D0                                 1670+T27      DC    A(X27)              address of test routine
0000256C  001B                                     1671+         DC    H'27'               test number
0000256E  00                                       1672+         DC    X'00'
0000256F  03                                       1673+         DC    HL1'3'                   m4 used
00002570  01                                       1674+         DC    HL1'1'                   m5 used
00002571  03                                       1675+         DC    HL1'3'              CC
00002572  0E                                       1676+         DC    HL1'14'             CC failed mask
00002574  00000000 00000000                        1677+         DS    2F                  extracted PSW after test (has CC)
0000257C  FF                                       1678+         DC    X'FF'               extracted CC, if test failed
0000257D  E5D7D2D3 E2404040                        1679+         DC    CL8'VPKLS'          instruction name
00002588  00002600                                 1680+         DC    A(RE27)             address of v1 result
0000258C  00002610                                 1681+         DC    A(RE27+16)          address of v2 source
00002590  00002620                                 1682+         DC    A(RE27+32)          address of v3 source
00002594  00000010                                 1683+         DC    A(16)               result length
00002598  00002600                                 1684+REA27    DC    A(RE27)             result address
000025A0  00000000 00000000                        1685+         DS    2FD                  gap
000025A8  00000000 00000000
000025B0  00000000 00000000                        1686+V1O27    DS    XL16                V1 output
000025B8  00000000 00000000
000025C0  00000000 00000000                        1687+         DS    2FD                  gap
000025C8  00000000 00000000
                                                   1688+*
000025D0                                           1689+X27      DS    0F
000025D0  E310 5024 0014                 00000024  1690+         LGF   R1,V2ADDR           load v2 source
000025D6  E761 0000 0806                 00000000  1691+         VL    v22,0(R1)           use v21 to test decoder
000025DC  E310 5028 0014                 00000028  1692+         LGF   R1,V3ADDR           load v3 source
000025E2  E771 0000 0806                 00000000  1693+         VL    v23,0(R1)           use v22 to test decoder
000025E8  E756 7010 3E95                           1694+         VPKLS V21,V22,V23,3,1            test instruction
000025EE  B98D 0020                                1695+         EPSW  R2,R0               extract psw
000025F2  5020 500C                      0000000C  1696+         ST    R2,CCPSW               to save CC
000025F6  E750 5048 080E                 000025B0  1697+         VST   V21,V1O27           save v1 output
000025FC  07FB                                     1698+         BR    R11                 return
00002600                                           1699+RE27     DC    0F                  V1 for this test
00002600                                           1700+         DROP  R5
00002600  FFFFFFFF FFFFFFFF                        1701          DC    XL16'FFFFFFFFFFFFFFFF FFFFFFFFFFFFFFFF'   result
00002608  FFFFFFFF FFFFFFFF
00002610  01010203 04050607                        1702          DC    XL16'0101020304050607 08090A0B0C0D0E0F'   v2
00002618  08090A0B 0C0D0E0F
00002620  01110133 01550177                        1703          DC    XL16'0111013301550177 019901BB01DD01FF'   v3
00002628  019901BB 01DD01FF
                                                   1704
                                                   1705 *-------------------------------------------------------------------
                                                   1706 * VPKS   - Vector Pack Saturate
                                                   1707 *-------------------------------------------------------------------
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
                                                    1708 * cc=0: No saturation
                                                    1709 * cc=1: At least one but not all elements saturated
                                                    1710 * cc=3: Saturation on all elements
                                                    1711 *-------------------------------------------------------------------
                                                    1712 * case -  simple cc debug
                                                    1713 *-------------------------------------------------------------------
                                                    1714 *Halfword
                                                    1715          VRR_B VPKS,1,0
00002630                                            1716+         DS    0FD
00002630                      00002630              1717+         USING *,R5              base for test data and test routine
00002630  00002698                                  1718+T28      DC    A(X28)            address of test routine
00002634  001C                                      1719+         DC    H'28'             test number
00002636  00                                        1720+         DC    X'00'
00002637  01                                        1721+         DC    HL1'1'                 m4 used
00002638  01                                        1722+         DC    HL1'1'                 m5 used
00002639  00                                        1723+         DC    HL1'0'            CC
0000263A  07                                        1724+         DC    HL1'7'            CC failed mask
0000263C  00000000 00000000                         1725+         DS    2F                extracted PSW after test (has CC)
00002644  FF                                        1726+         DC    X'FF'             extracted CC, if test failed
00002645  E5D7D2E2 40404040                         1727+         DC    CL8'VPKS'         instruction name
00002650  000026C8                                  1728+         DC    A(RE28)           address of v1 result
00002654  000026D8                                  1729+         DC    A(RE28+16)        address of v2 source
00002658  000026E8                                  1730+         DC    A(RE28+32)        address of v3 source
0000265C  00000010                                  1731+         DC    A(16)             result length
00002660  000026C8                                  1732+REA28    DC    A(RE28)           result address
00002668  00000000 00000000                         1733+         DS    2FD                gap
00002670  00000000 00000000
00002678  00000000 00000000                         1734+V1O28    DS    XL16              V1 output
00002680  00000000 00000000
00002688  00000000 00000000                         1735+         DS    2FD                gap
00002690  00000000 00000000
                                                    1736+*
00002698                                            1737+X28      DS    0F
00002698  E310 5024 0014                  00000024  1738+         LGF   R1,V2ADDR         load v2 source
0000269E  E761 0000 0806                  00000000  1739+         VL    v22,0(R1)         use v21 to test decoder
000026A4  E310 5028 0014                  00000028  1740+         LGF   R1,V3ADDR         load v3 source
000026AA  E771 0000 0806                  00000000  1741+         VL    v23,0(R1)         use v22 to test decoder
000026B0  E756 7010 1E97                            1742+         VPKS  V21,V22,V23,1,1           test instruction
000026B6  B98D 0020                                 1743+         EPSW  R2,R0             extract psw
000026BA  5020 500C                       0000000C  1744+         ST    R2,CCPSW             to save CC
000026BE  E750 5048 080E                  00002678  1745+         VST   V21,V1O28         save v1 output
000026C4  07FB                                      1746+         BR    R11               return
000026C8                                            1747+RE28     DC    0F                V1 for this test
000026C8                                            1748+         DROP  R5
000026C8  00000000 00000000                         1749          DC    XL16'0000000000000000 0000000000000000'   result
000026D0  00000000 00000000
000026D8  00000000 00000000                         1750          DC    XL16'0000000000000000 0000000000000000'   v2
000026E0  00000000 00000000
000026E8  00000000 00000000                         1751          DC    XL16'0000000000000000 0000000000000000'   v3
000026F0  00000000 00000000
                                                    1752
                                                    1753          VRR_B VPKS,1,1
000026F8                                            1754+         DS    0FD
000026F8                      000026F8              1755+         USING *,R5              base for test data and test routine
000026F8  00002760                                  1756+T29      DC    A(X29)            address of test routine
000026FC  001D                                      1757+         DC    H'29'             test number
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
000026FE  00                                       1758+          DC    X'00'
000026FF  01                                       1759+          DC    HL1'1'                    m4 used
00002700  01                                       1760+          DC    HL1'1'                    m5 used
00002701  01                                       1761+          DC    HL1'1'              CC
00002702  0B                                       1762+          DC    HL1'11'             CC failed mask
00002704  00000000 00000000                        1763+          DS    2F                  extracted PSW after test (has CC)
0000270C  FF                                       1764+          DC    X'FF'               extracted CC, if test failed
0000270D  E5D7D2E2 40404040                        1765+          DC    CL8'VPKS'           instruction name
00002718  00002790                                 1766+          DC    A(RE29)             address of v1 result
0000271C  000027A0                                 1767+          DC    A(RE29+16)          address of v2 source
00002720  000027B0                                 1768+          DC    A(RE29+32)          address of v3 source
00002724  00000010                                 1769+          DC    A(16)               result length
00002728  00002790                                 1770+REA29     DC    A(RE29)             result address
00002730  00000000 00000000                        1771+          DS    2FD                  gap
00002738  00000000 00000000
00002740  00000000 00000000                        1772+V1O29     DS    XL16                V1 output
00002748  00000000 00000000
00002750  00000000 00000000                        1773+          DS    2FD                  gap
00002758  00000000 00000000
                                                   1774+*
00002760                                           1775+X29       DS    0F
00002760  E310 5024 0014                 00000024  1776+          LGF   R1,V2ADDR           load v2 source
00002766  E761 0000 0806                 00000000  1777+          VL    v22,0(R1)           use v21 to test decoder
0000276C  E310 5028 0014                 00000028  1778+          LGF   R1,V3ADDR           load v3 source
00002772  E771 0000 0806                 00000000  1779+          VL    v23,0(R1)           use v22 to test decoder
00002778  E756 7010 1E97                           1780+          VPKS  V21,V22,V23,1,1               test instruction
0000277E  B98D 0020                                1781+          EPSW  R2,R0               extract psw
00002782  5020 500C                      0000000C  1782+          ST    R2,CCPSW                 to save CC
00002786  E750 5048 080E                 00002740  1783+          VST   V21,V1O29           save v1 output
0000278C  07FB                                     1784+          BR    R11                 return
00002790                                           1785+RE29      DC    0F                  V1 for this test
00002790                                           1786+          DROP  R5
00002790  00000000 00000000                        1787           DC    XL16'0000000000000000 7F7F7F7F80808080'   result
00002798  7F7F7F7F 80808080
000027A0  00000000 00000000                        1788           DC    XL16'0000000000000000 0000000000000000'   v2
000027A8  00000000 00000000
000027B0  0FFF0FFF 0FFF0FFF                        1789           DC    XL16'0FFF0FFF0FFF0FFF 8FFF8FFF8FFF8FFF'   v3
000027B8  8FFF8FFF 8FFF8FFF
                                                   1790
                                                   1791           VRR_B VPKS,1,3
000027C0                                           1792+          DS    0FD
000027C0                       000027C0            1793+          USING *,R5                base for test data and test routine
000027C0  00002828                                 1794+T30       DC    A(X30)              address of test routine
000027C4  001E                                     1795+          DC    H'30'               test number
000027C6  00                                       1796+          DC    X'00'
000027C7  01                                       1797+          DC    HL1'1'                    m4 used
000027C8  01                                       1798+          DC    HL1'1'                    m5 used
000027C9  03                                       1799+          DC    HL1'3'              CC
000027CA  0E                                       1800+          DC    HL1'14'             CC failed mask
000027CC  00000000 00000000                        1801+          DS    2F                  extracted PSW after test (has CC)
000027D4  FF                                       1802+          DC    X'FF'               extracted CC, if test failed
000027D5  E5D7D2E2 40404040                        1803+          DC    CL8'VPKS'           instruction name
000027E0  00002858                                 1804+          DC    A(RE30)             address of v1 result
000027E4  00002868                                 1805+          DC    A(RE30+16)          address of v2 source
000027E8  00002878                                 1806+          DC    A(RE30+32)          address of v3 source
000027EC  00000010                                 1807+          DC    A(16)               result length
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
000027F0  00002858                                1808+REA30    DC    A(RE30)             result address
000027F8  00000000 00000000                       1809+         DS    2FD                  gap
00002800  00000000 00000000
00002808  00000000 00000000                       1810+V1O30    DS    XL16                V1 output
00002810  00000000 00000000
00002818  00000000 00000000                       1811+         DS    2FD                  gap
00002820  00000000 00000000
                                                  1812+*
00002828                                          1813+X30      DS    0F
00002828  E310 5024 0014                 00000024 1814+         LGF   R1,V2ADDR           load v2 source
0000282E  E761 0000 0806                 00000000 1815+         VL    v22,0(R1)           use v21 to test decoder
00002834  E310 5028 0014                 00000028 1816+         LGF   R1,V3ADDR           load v3 source
0000283A  E771 0000 0806                 00000000 1817+         VL    v23,0(R1)           use v22 to test decoder
00002840  E756 7010 1E97                          1818+         VPKS  V21,V22,V23,1,1              test instruction
00002846  B98D 0020                               1819+         EPSW  R2,R0               extract psw
0000284A  5020 500C                      0000000C 1820+         ST    R2,CCPSW               to save CC
0000284E  E750 5048 080E                 00002808 1821+         VST   V21,V1O30           save v1 output
00002854  07FB                                    1822+         BR    R11                 return
00002858                                          1823+RE30     DC    0F                  V1 for this test
00002858                                          1824+         DROP  R5
00002858  7F7F7F7F 80808080                       1825          DC    XL16'7F7F7F7F80808080 7F7F7F7F80808080'   result
00002860  7F7F7F7F 80808080
00002868  0FFF0FFF 0FFF0FFF                       1826          DC    XL16'0FFF0FFF0FFF0FFF 8FFF8FFF8FFF8FFF'   v2
00002870  8FFF8FFF 8FFF8FFF
00002878  0FFF0FFF 0FFF0FFF                       1827          DC    XL16'0FFF0FFF0FFF0FFF 8FFF8FFF8FFF8FFF'   v3
00002880  8FFF8FFF 8FFF8FFF
                                                  1828
                                                  1829 *Word
                                                  1830          VRR_B VPKS,2,0
00002888                                          1831+         DS    0FD
00002888                 00002888                 1832+         USING *,R5                base for test data and test routine
00002888  000028F0                                1833+T31      DC    A(X31)              address of test routine
0000288C  001F                                    1834+         DC    H'31'               test number
0000288E  00                                      1835+         DC    X'00'
0000288F  02                                      1836+         DC    HL1'2'                   m4 used
00002890  01                                      1837+         DC    HL1'1'                   m5 used
00002891  00                                      1838+         DC    HL1'0'              CC
00002892  07                                      1839+         DC    HL1'7'              CC failed mask
00002894  00000000 00000000                       1840+         DS    2F                  extracted PSW after test (has CC)
0000289C  FF                                      1841+         DC    X'FF'               extracted CC, if test failed
0000289D  E5D7D2E2 40404040                       1842+         DC    CL8'VPKS'           instruction name
000028A8  00002920                                1843+         DC    A(RE31)             address of v1 result
000028AC  00002930                                1844+         DC    A(RE31+16)          address of v2 source
000028B0  00002940                                1845+         DC    A(RE31+32)          address of v3 source
000028B4  00000010                                1846+         DC    A(16)               result length
000028B8  00002920                                1847+REA31    DC    A(RE31)             result address
000028C0  00000000 00000000                       1848+         DS    2FD                  gap
000028C8  00000000 00000000
000028D0  00000000 00000000                       1849+V1O31    DS    XL16                V1 output
000028D8  00000000 00000000
000028E0  00000000 00000000                       1850+         DS    2FD                  gap
000028E8  00000000 00000000
                                                  1851+*
000028F0                                          1852+X31      DS    0F
000028F0  E310 5024 0014                 00000024 1853+         LGF   R1,V2ADDR           load v2 source
000028F6  E761 0000 0806                 00000000 1854+         VL    v22,0(R1)           use v21 to test decoder
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

000028FC  E310 5028 0014                 00000028  1855+          LGF   R1,V3ADDR           load v3 source
00002902  E771 0000 0806                 00000000  1856+          VL    v23,0(R1)           use v22 to test decoder
00002908  E756 7010 2E97                           1857+          VPKS  V21,V22,V23,2,1              test instruction
0000290E  B98D 0020                                1858+          EPSW  R2,R0               extract psw
00002912  5020 500C                      0000000C  1859+          ST    R2,CCPSW               to save CC
00002916  E750 5048 080E                 000028D0  1860+          VST   V21,V1O31           save v1 output
0000291C  07FB                                     1861+          BR    R11                 return
00002920                                           1862+RE31      DC    0F                  V1 for this test
00002920                                           1863+          DROP  R5
00002920  00000000 00000000                        1864           DC    XL16'0000000000000000 0000000000000000'   result
00002928  00000000 00000000
00002930  00000000 00000000                        1865           DC    XL16'0000000000000000 0000000000000000'   v2
00002938  00000000 00000000
00002940  00000000 00000000                        1866           DC    XL16'0000000000000000 0000000000000000'   v3
00002948  00000000 00000000
                                                   1867
                                                   1868           VRR_B VPKS,2,1
00002950                                           1869+          DS    0FD
00002950                         00002950          1870+          USING *,R5                base for test data and test routine
00002950  000029B8                                 1871+T32       DC    A(X32)              address of test routine
00002954  0020                                     1872+          DC    H'32'               test number
00002956  00                                       1873+          DC    X'00'
00002957  02                                       1874+          DC    HL1'2'                   m4 used
00002958  01                                       1875+          DC    HL1'1'                   m5 used
00002959  01                                       1876+          DC    HL1'1'              CC
0000295A  0B                                       1877+          DC    HL1'11'             CC failed mask
0000295C  00000000 00000000                        1878+          DS    2F                  extracted PSW after test (has CC)
00002964  FF                                       1879+          DC    X'FF'               extracted CC, if test failed
00002965  E5D7D2E2 40404040                        1880+          DC    CL8'VPKS'           instruction name
00002970  000029E8                                 1881+          DC    A(RE32)             address of v1 result
00002974  000029F8                                 1882+          DC    A(RE32+16)          address of v2 source
00002978  00002A08                                 1883+          DC    A(RE32+32)          address of v3 source
0000297C  00000010                                 1884+          DC    A(16)               result length
00002980  000029E8                                 1885+REA32     DC    A(RE32)             result address
00002988  00000000 00000000                        1886+          DS    2FD                  gap
00002990  00000000 00000000
00002998  00000000 00000000                        1887+V1O32     DS    XL16                V1 output
000029A0  00000000 00000000
000029A8  00000000 00000000                        1888+          DS    2FD                  gap
000029B0  00000000 00000000
                                                   1889+*
000029B8                                           1890+X32       DS    0F
000029B8  E310 5024 0014                 00000024  1891+          LGF   R1,V2ADDR           load v2 source
000029BE  E761 0000 0806                 00000000  1892+          VL    v22,0(R1)           use v21 to test decoder
000029C4  E310 5028 0014                 00000028  1893+          LGF   R1,V3ADDR           load v3 source
000029CA  E771 0000 0806                 00000000  1894+          VL    v23,0(R1)           use v22 to test decoder
000029D0  E756 7010 2E97                           1895+          VPKS  V21,V22,V23,2,1              test instruction
000029D6  B98D 0020                                1896+          EPSW  R2,R0               extract psw
000029DA  5020 500C                      0000000C  1897+          ST    R2,CCPSW               to save CC
000029DE  E750 5048 080E                 00002998  1898+          VST   V21,V1O32           save v1 output
000029E4  07FB                                     1899+          BR    R11                 return
000029E8                                           1900+RE32      DC    0F                  V1 for this test
000029E8                                           1901+          DROP  R5
000029E8  00000000 00000000                        1902           DC    XL16'0000000000000000 7FFF7FFF80008000'   result
000029F0  7FFF7FFF 80008000
000029F8  00000000 00000000                        1903           DC    XL16'0000000000000000 0000000000000000'   v2
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
00002A00  00000000 00000000
00002A08  0000FFFF 0000FFFF                        1904          DC    XL16'0000FFFF0000FFFF 8FFF8FFF8FFF8FFF'   v3
00002A10  8FFF8FFF 8FFF8FFF
                                                   1905
                                                   1906          VRR_B VPKS,2,3
00002A18                                           1907+         DS    0FD
00002A18                     00002A18              1908+         USING *,R5              base for test data and test routine
00002A18  00002A80                                 1909+T33      DC    A(X33)            address of test routine
00002A1C  0021                                     1910+         DC    H'33'             test number
00002A1E  00                                       1911+         DC    X'00'
00002A1F  02                                       1912+         DC    HL1'2'                 m4 used
00002A20  01                                       1913+         DC    HL1'1'                 m5 used
00002A21  03                                       1914+         DC    HL1'3'            CC
00002A22  0E                                       1915+         DC    HL1'14'           CC failed mask
00002A24  00000000 00000000                        1916+         DS    2F                extracted PSW after test (has CC)
00002A2C  FF                                       1917+         DC    X'FF'             extracted CC, if test failed
00002A2D  E5D7D2E2 40404040                        1918+         DC    CL8'VPKS'         instruction name
00002A38  00002AB0                                 1919+         DC    A(RE33)           address of v1 result
00002A3C  00002AC0                                 1920+         DC    A(RE33+16)        address of v2 source
00002A40  00002AD0                                 1921+         DC    A(RE33+32)        address of v3 source
00002A44  00000010                                 1922+         DC    A(16)             result length
00002A48  00002AB0                                 1923+REA33    DC    A(RE33)           result address
00002A50  00000000 00000000                        1924+         DS    2FD                gap
00002A58  00000000 00000000
00002A60  00000000 00000000                        1925+V1O33    DS    XL16              V1 output
00002A68  00000000 00000000
00002A70  00000000 00000000                        1926+         DS    2FD                gap
00002A78  00000000 00000000
                                                   1927+*
00002A80                                           1928+X33      DS    0F
00002A80  E310 5024 0014                 00000024  1929+         LGF   R1,V2ADDR         load v2 source
00002A86  E761 0000 0806                 00000000  1930+         VL    v22,0(R1)         use v21 to test decoder
00002A8C  E310 5028 0014                 00000028  1931+         LGF   R1,V3ADDR         load v3 source
00002A92  E771 0000 0806                 00000000  1932+         VL    v23,0(R1)         use v22 to test decoder
00002A98  E756 7010 2E97                           1933+         VPKS  V21,V22,V23,2,1           test instruction
00002A9E  B98D 0020                                1934+         EPSW  R2,R0             extract psw
00002AA2  5020 500C                      0000000C  1935+         ST    R2,CCPSW             to save CC
00002AA6  E750 5048 080E                 00002A60  1936+         VST   V21,V1O33         save v1 output
00002AAC  07FB                                     1937+         BR    R11               return
00002AB0                                           1938+RE33     DC    0F                V1 for this test
00002AB0                                           1939+         DROP  R5
00002AB0  7FFF7FFF 80008000                        1940          DC    XL16'7FFF7FFF80008000 7FFF7FFF80008000'   result
00002AB8  7FFF7FFF 80008000
00002AC0  0000FFFF 0000FFFF                        1941          DC    XL16'0000FFFF0000FFFF 8FFF8FFF8FFF8FFF'   v2
00002AC8  8FFF8FFF 8FFF8FFF
00002AD0  0000FFFF 0000FFFF                        1942          DC    XL16'0000FFFF0000FFFF 8FFF8FFF8FFF8FFF'   v3
00002AD8  8FFF8FFF 8FFF8FFF
                                                   1943
                                                   1944 *DoubleWord
                                                   1945          VRR_B VPKS,3,0
00002AE0                                           1946+         DS    0FD
00002AE0                     00002AE0              1947+         USING *,R5              base for test data and test routine
00002AE0  00002B48                                 1948+T34      DC    A(X34)            address of test routine
00002AE4  0022                                     1949+         DC    H'34'             test number
00002AE6  00                                       1950+         DC    X'00'
00002AE7  03                                       1951+         DC    HL1'3'                 m4 used
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

00002AE8  01                                       1952+          DC    HL1'1'                m5 used
00002AE9  00                                       1953+          DC    HL1'0'                CC
00002AEA  07                                       1954+          DC    HL1'7'                CC failed mask
00002AEC  00000000 00000000                        1955+          DS    2F                    extracted PSW after test (has CC)
00002AF4  FF                                       1956+          DC    X'FF'                 extracted CC, if test failed
00002AF5  E5D7D2E2 40404040                        1957+          DC    CL8'VPKS'             instruction name
00002B00  00002B78                                 1958+          DC    A(RE34)               address of v1 result
00002B04  00002B88                                 1959+          DC    A(RE34+16)            address of v2 source
00002B08  00002B98                                 1960+          DC    A(RE34+32)            address of v3 source
00002B0C  00000010                                 1961+          DC    A(16)                 result length
00002B10  00002B78                                 1962+REA34     DC    A(RE34)               result address
00002B18  00000000 00000000                        1963+          DS    2FD                    gap
00002B20  00000000 00000000
00002B28  00000000 00000000                        1964+V1O34     DS    XL16                  V1 output
00002B30  00000000 00000000
00002B38  00000000 00000000                        1965+          DS    2FD                    gap
00002B40  00000000 00000000
                                                   1966+*
00002B48                                           1967+X34       DS    0F
00002B48  E310 5024 0014                 00000024  1968+           LGF   R1,V2ADDR             load v2 source
00002B4E  E761 0000 0806                 00000000  1969+           VL    v22,0(R1)             use v21 to test decoder
00002B54  E310 5028 0014                 00000028  1970+           LGF   R1,V3ADDR             load v3 source
00002B5A  E771 0000 0806                 00000000  1971+           VL    v23,0(R1)             use v22 to test decoder
00002B60  E756 7010 3E97                           1972+          VPKS  V21,V22,V23,3,1               test instruction
00002B66  B98D 0020                                1973+          EPSW  R2,R0                 extract psw
00002B6A  5020 500C                      0000000C  1974+          ST    R2,CCPSW                 to save CC
00002B6E  E750 5048 080E                 00002B28  1975+          VST   V21,V1O34             save v1 output
00002B74  07FB                                     1976+          BR    R11                   return
00002B78                                           1977+RE34      DC    0F                    V1 for this test
00002B78                                           1978+          DROP  R5
00002B78  00000000 00000000                        1979           DC    XL16'0000000000000000 0000000000000000'   result
00002B80  00000000 00000000
00002B88  00000000 00000000                        1980           DC    XL16'0000000000000000 0000000000000000'   v2
00002B90  00000000 00000000
00002B98  00000000 00000000                        1981           DC    XL16'0000000000000000 0000000000000000'   v3
00002BA0  00000000 00000000
                                                   1982
                                                   1983           VRR_B VPKS,3,1
00002BA8                                           1984+          DS    0FD
00002BA8                       00002BA8            1985+          USING *,R5                  base for test data and test routine
00002BA8  00002C10                                 1986+T35       DC    A(X35)                address of test routine
00002BAC  0023                                     1987+          DC    H'35'                 test number
00002BAE  00                                       1988+          DC    X'00'
00002BAF  03                                       1989+          DC    HL1'3'                    m4 used
00002BB0  01                                       1990+          DC    HL1'1'                    m5 used
00002BB1  01                                       1991+          DC    HL1'1'                CC
00002BB2  0B                                       1992+          DC    HL1'11'               CC failed mask
00002BB4  00000000 00000000                        1993+          DS    2F                    extracted PSW after test (has CC)
00002BBC  FF                                       1994+          DC    X'FF'                 extracted CC, if test failed
00002BBD  E5D7D2E2 40404040                        1995+          DC    CL8'VPKS'             instruction name
00002BC8  00002C40                                 1996+          DC    A(RE35)               address of v1 result
00002BCC  00002C50                                 1997+          DC    A(RE35+16)            address of v2 source
00002BD0  00002C60                                 1998+          DC    A(RE35+32)            address of v3 source
00002BD4  00000010                                 1999+          DC    A(16)                 result length
00002BD8  00002C40                                 2000+REA35     DC    A(RE35)               result address
00002BE0  00000000 00000000                        2001+          DS    2FD                    gap
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
00002BE8  00000000 00000000
00002BF0  00000000 00000000                       2002+V1O35     DS    XL16               V1 output
00002BF8  00000000 00000000
00002C00  00000000 00000000                       2003+          DS    2FD                 gap
00002C08  00000000 00000000
                                                  2004+*
00002C10                                          2005+X35       DS    0F
00002C10  E310 5024 0014                 00000024 2006+          LGF   R1,V2ADDR          load v2 source
00002C16  E761 0000 0806                 00000000 2007+          VL    v22,0(R1)          use v21 to test decoder
00002C1C  E310 5028 0014                 00000028 2008+          LGF   R1,V3ADDR          load v3 source
00002C22  E771 0000 0806                 00000000 2009+          VL    v23,0(R1)          use v22 to test decoder
00002C28  E756 7010 3E97                          2010+          VPKS  V21,V22,V23,3,1              test instruction
00002C2E  B98D 0020                               2011+          EPSW  R2,R0              extract psw
00002C32  5020 500C                      0000000C 2012+          ST    R2,CCPSW              to save CC
00002C36  E750 5048 080E                 00002BF0 2013+          VST   V21,V1O35          save v1 output
00002C3C  07FB                                    2014+          BR    R11                return
00002C40                                          2015+RE35      DC    0F                 V1 for this test
00002C40                                          2016+          DROP  R5
00002C40  00000000 7FFFFFFF                       2017           DC    XL16'000000007FFFFFFF 7FFFFFFF80000000'   result
00002C48  7FFFFFFF 80000000
00002C50  00000000 00000000                       2018           DC    XL16'0000000000000000 0FFFFFFFFFFFFFFF'   v2
00002C58  0FFFFFFF FFFFFFFF
00002C60  00000000 FFFFFFFF                       2019           DC    XL16'00000000FFFFFFFF 8FFFFFFFFFFFFFFF'   v3
00002C68  8FFFFFFF FFFFFFFF
                                                  2020
                                                  2021           VRR_B VPKS,3,3
00002C70                                          2022+          DS    0FD
00002C70                         00002C70         2023+          USING *,R5               base for test data and test routine
00002C70  00002CD8                                2024+T36       DC    A(X36)             address of test routine
00002C74  0024                                    2025+          DC    H'36'              test number
00002C76  00                                      2026+          DC    X'00'
00002C77  03                                      2027+          DC    HL1'3'                  m4 used
00002C78  01                                      2028+          DC    HL1'1'                  m5 used
00002C79  03                                      2029+          DC    HL1'3'             CC
00002C7A  0E                                      2030+          DC    HL1'14'            CC failed mask
00002C7C  00000000 00000000                       2031+          DS    2F                 extracted PSW after test (has CC)
00002C84  FF                                      2032+          DC    X'FF'              extracted CC, if test failed
00002C85  E5D7D2E2 40404040                       2033+          DC    CL8'VPKS'          instruction name
00002C90  00002D08                                2034+          DC    A(RE36)            address of v1 result
00002C94  00002D18                                2035+          DC    A(RE36+16)         address of v2 source
00002C98  00002D28                                2036+          DC    A(RE36+32)         address of v3 source
00002C9C  00000010                                2037+          DC    A(16)              result length
00002CA0  00002D08                                2038+REA36     DC    A(RE36)            result address
00002CA8  00000000 00000000                       2039+          DS    2FD                 gap
00002CB0  00000000 00000000
00002CB8  00000000 00000000                       2040+V1O36     DS    XL16               V1 output
00002CC0  00000000 00000000
00002CC8  00000000 00000000                       2041+          DS    2FD                 gap
00002CD0  00000000 00000000
                                                  2042+*
00002CD8                                          2043+X36       DS    0F
00002CD8  E310 5024 0014                 00000024 2044+          LGF   R1,V2ADDR          load v2 source
00002CDE  E761 0000 0806                 00000000 2045+          VL    v22,0(R1)          use v21 to test decoder
00002CE4  E310 5028 0014                 00000028 2046+          LGF   R1,V3ADDR          load v3 source
00002CEA  E771 0000 0806                 00000000 2047+          VL    v23,0(R1)          use v22 to test decoder
00002CF0  E756 7010 3E97                          2048+          VPKS  V21,V22,V23,3,1              test instruction
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
00002CF6  B98D 0020                            2049+         EPSW  R2,R0              extract psw
00002CFA  5020 500C                  0000000C  2050+         ST    R2,CCPSW             to save CC
00002CFE  E750 5048 080E             00002CB8  2051+         VST   V21,V1O36           save v1 output
00002D04  07FB                                 2052+         BR    R11                 return
00002D08                                       2053+RE36     DC    0F                  V1 for this test
00002D08                                       2054+         DROP  R5
00002D08  7FFFFFFF 80000000                    2055          DC    XL16'7FFFFFF80000000 7FFFFFF80000000'   result
00002D10  7FFFFFFF 80000000
00002D18  000000FF FFFFFFFF                    2056          DC    XL16'000000FFFFFFFFFF 8FFFFFFFFFFFFFF'   v2
00002D20  8FFFFFF FFFFFFFF
00002D28  000000FF FFFFFFFF                    2057          DC    XL16'000000FFFFFFFFFF 8FFFFFFFFFFFFFF'   v3
00002D30  8FFFFFF FFFFFFFF
                                               2058
                                               2059 *-------------------------------------------------------------------
                                               2060 * case -  general
                                               2061 *-------------------------------------------------------------------
                                               2062 *Halfword
                                               2063          VRR_B VPKS,1,0
00002D38                                       2064+         DS    0FD
00002D38                       00002D38        2065+         USING *,R5                base for test data and test routine
00002D38  00002DA0                             2066+T37      DC    A(X37)              address of test routine
00002D3C  0025                                 2067+         DC    H'37'               test number
00002D3E  00                                   2068+         DC    X'00'
00002D3F  01                                   2069+         DC    HL1'1'                   m4 used
00002D40  01                                   2070+         DC    HL1'1'                   m5 used
00002D41  00                                   2071+         DC    HL1'0'              CC
00002D42  07                                   2072+         DC    HL1'7'              CC failed mask
00002D44  00000000 00000000                    2073+         DS    2F                  extracted PSW after test (has CC)
00002D4C  FF                                   2074+         DC    X'FF'               extracted CC, if test failed
00002D4D  E5D7D2E2 40404040                    2075+         DC    CL8'VPKS'           instruction name
00002D58  00002DD0                             2076+         DC    A(RE37)             address of v1 result
00002D5C  00002DE0                             2077+         DC    A(RE37+16)          address of v2 source
00002D60  00002DF0                             2078+         DC    A(RE37+32)          address of v3 source
00002D64  00000010                             2079+         DC    A(16)               result length
00002D68  00002DD0                             2080+REA37    DC    A(RE37)             result address
00002D70  00000000 00000000                    2081+         DS    2FD                  gap
00002D78  00000000 00000000
00002D80  00000000 00000000                    2082+V1O37    DS    XL16                V1 output
00002D88  00000000 00000000
00002D90  00000000 00000000                    2083+         DS    2FD                  gap
00002D98  00000000 00000000
                                               2084+*
00002DA0                                       2085+X37      DS    0F
00002DA0  E310 5024 0014             00000024  2086+         LGF   R1,V2ADDR           load v2 source
00002DA6  E761 0000 0806             00000000  2087+         VL    v22,0(R1)           use v21 to test decoder
00002DAC  E310 5028 0014             00000028  2088+         LGF   R1,V3ADDR           load v3 source
00002DB2  E771 0000 0806             00000000  2089+         VL    v23,0(R1)           use v22 to test decoder
00002DB8  E756 7010 1E97                       2090+         VPKS  V21,V22,V23,1,1              test instruction
00002DBE  B98D 0020                            2091+         EPSW  R2,R0               extract psw
00002DC2  5020 500C                  0000000C  2092+         ST    R2,CCPSW             to save CC
00002DC6  E750 5048 080E             00002D80  2093+         VST   V21,V1O37           save v1 output
00002DCC  07FB                                 2094+         BR    R11                 return
00002DD0                                       2095+RE37     DC    0F                  V1 for this test
00002DD0                                       2096+         DROP  R5
00002DD0  11335577 22446608                    2097          DC    XL16'1133557722446608 FEFDFCFBFAF9F8F7'   result
00002DD8  FEFDFCFB FAF9F8F7
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
00002DE0  00110033 00550077                        2098           DC    XL16'0011003300550077 0022004400660008'   v2
00002DE8  00220044 00660008
00002DF0  FFFEFFFD FFFCFFFB                        2099           DC    XL16'FFFEFFFDFFFCFFFB FFFAFFF9FFF8FFF7'   v3
00002DF8  FFFAFFF9 FFF8FFF7
                                                   2100
                                                   2101           VRR_B VPKS,1,0
00002E00                                           2102+          DS    0FD
00002E00                           00002E00        2103+          USING *,R5                base for test data and test routine
00002E00  00002E68                                 2104+T38       DC    A(X38)              address of test routine
00002E04  0026                                     2105+          DC    H'38'               test number
00002E06  00                                       2106+          DC    X'00'
00002E07  01                                       2107+          DC    HL1'1'                   m4 used
00002E08  01                                       2108+          DC    HL1'1'                   m5 used
00002E09  00                                       2109+          DC    HL1'0'              CC
00002E0A  07                                       2110+          DC    HL1'7'              CC failed mask
00002E0C  00000000 00000000                        2111+          DS    2F                  extracted PSW after test (has CC)
00002E14  FF                                       2112+          DC    X'FF'               extracted CC, if test failed
00002E15  E5D7D2E2 40404040                        2113+          DC    CL8'VPKS'           instruction name
00002E20  00002E98                                 2114+          DC    A(RE38)             address of v1 result
00002E24  00002EA8                                 2115+          DC    A(RE38+16)          address of v2 source
00002E28  00002EB8                                 2116+          DC    A(RE38+32)          address of v3 source
00002E2C  00000010                                 2117+          DC    A(16)               result length
00002E30  00002E98                                 2118+REA38     DC    A(RE38)             result address
00002E38  00000000 00000000                        2119+          DS    2FD                  gap
00002E40  00000000 00000000
00002E48  00000000 00000000                        2120+V1O38     DS    XL16                V1 output
00002E50  00000000 00000000
00002E58  00000000 00000000                        2121+          DS    2FD                  gap
00002E60  00000000 00000000
                                                   2122+*
00002E68                                           2123+X38       DS    0F
00002E68  E310 5024 0014                 00000024  2124+          LGF   R1,V2ADDR           load v2 source
00002E6E  E761 0000 0806                 00000000  2125+          VL    v22,0(R1)           use v21 to test decoder
00002E74  E310 5028 0014                 00000028  2126+          LGF   R1,V3ADDR           load v3 source
00002E7A  E771 0000 0806                 00000000  2127+          VL    v23,0(R1)           use v22 to test decoder
00002E80  E756 7010 1E97                           2128+          VPKS  V21,V22,V23,1,1            test instruction
00002E86  B98D 0020                                2129+          EPSW  R2,R0               extract psw
00002E8A  5020 500C                      0000000C  2130+          ST    R2,CCPSW               to save CC
00002E8E  E750 5048 080E                 00002E48  2131+          VST   V21,V1O38           save v1 output
00002E94  07FB                                     2132+          BR    R11                 return
00002E98                                           2133+RE38      DC    0F                  V1 for this test
00002E98                                           2134+          DROP  R5
00002E98  FEFDFCFB FAF9F8F7                        2135           DC    XL16'FEFDFCFBFAF9F8F7 1133557722446608'   result
00002EA0  11335577 22446608
00002EA8  FFFEFFFD FFFCFFFB                        2136           DC    XL16'FFFEFFFDFFFCFFFB FFFAFFF9FFF8FFF7'   v2
00002EB0  FFFAFFF9 FFF8FFF7
00002EB8  00110033 00550077                        2137           DC    XL16'0011003300550077 0022004400660008'   v3
00002EC0  00220044 00660008
                                                   2138
                                                   2139           VRR_B VPKS,1,1
00002EC8                                           2140+          DS    0FD
00002EC8                           00002EC8        2141+          USING *,R5                base for test data and test routine
00002EC8  00002F30                                 2142+T39       DC    A(X39)              address of test routine
00002ECC  0027                                     2143+          DC    H'39'               test number
00002ECE  00                                       2144+          DC    X'00'
00002ECF  01                                       2145+          DC    HL1'1'                   m4 used
```

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  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
00002ED0  01                                      2146+          DC    HL1'1'                m5 used
00002ED1  01                                      2147+          DC    HL1'1'              CC
00002ED2  0B                                      2148+          DC    HL1'11'             CC failed mask
00002ED4  00000000 00000000                       2149+          DS    2F                  extracted PSW after test (has CC)
00002EDC  FF                                      2150+          DC    X'FF'               extracted CC, if test failed
00002EDD  E5D7D2E2 40404040                       2151+          DC    CL8'VPKS'           instruction name
00002EE8  00002F60                                2152+          DC    A(RE39)             address of v1 result
00002EEC  00002F70                                2153+          DC    A(RE39+16)          address of v2 source
00002EF0  00002F80                                2154+          DC    A(RE39+32)          address of v3 source
00002EF4  00000010                                2155+          DC    A(16)               result length
00002EF8  00002F60                                2156+REA39     DC    A(RE39)             result address
00002F00  00000000 00000000                       2157+          DS    2FD                  gap
00002F08  00000000 00000000
00002F10  00000000 00000000                       2158+V1O39     DS    XL16                V1 output
00002F18  00000000 00000000
00002F20  00000000 00000000                       2159+          DS    2FD                  gap
00002F28  00000000 00000000
                                                  2160+*
00002F30                                          2161+X39       DS    0F
00002F30  E310 5024 0014                 00000024 2162+          LGF   R1,V2ADDR           load v2 source
00002F36  E761 0000 0806                 00000000 2163+          VL    v22,0(R1)           use v21 to test decoder
00002F3C  E310 5028 0014                 00000028 2164+          LGF   R1,V3ADDR           load v3 source
00002F42  E771 0000 0806                 00000000 2165+          VL    v23,0(R1)           use v22 to test decoder
00002F48  E756 7010 1E97                          2166+          VPKS  V21,V22,V23,1,1             test instruction
00002F4E  B98D 0020                               2167+          EPSW  R2,R0               extract psw
00002F52  5020 500C                      0000000C 2168+          ST    R2,CCPSW               to save CC
00002F56  E750 5048 080E                 00002F10 2169+          VST   V21,V1O39           save v1 output
00002F5C  07FB                                    2170+          BR    R11                 return
00002F60                                          2171+RE39      DC    0F                  V1 for this test
00002F60                                          2172+          DROP  R5
00002F60  017F7F7F 7F7F7F80                       2173           DC    XL16'017F7F7F7F7F7F80 1133557722446600'   result
00002F68  11335577 22446600
00002F70  00010203 04050607                       2174           DC    XL16'0001020304050607 08090A0B0C0DFE0F'   v2
00002F78  08090A0B 0C0DFE0F
00002F80  00110033 00550077                       2175           DC    XL16'0011003300550077 0022004400660000'   v3
00002F88  00220044 00660000
                                                  2176
                                                  2177           VRR_B VPKS,1,1
00002F90                                          2178+          DS    0FD
00002F90                  00002F90                2179+          USING *,R5                base for test data and test routine
00002F90  00002FF8                                2180+T40       DC    A(X40)              address of test routine
00002F94  0028                                    2181+          DC    H'40'               test number
00002F96  00                                      2182+          DC    X'00'
00002F97  01                                      2183+          DC    HL1'1'                m4 used
00002F98  01                                      2184+          DC    HL1'1'                m5 used
00002F99  01                                      2185+          DC    HL1'1'              CC
00002F9A  0B                                      2186+          DC    HL1'11'             CC failed mask
00002F9C  00000000 00000000                       2187+          DS    2F                  extracted PSW after test (has CC)
00002FA4  FF                                      2188+          DC    X'FF'               extracted CC, if test failed
00002FA5  E5D7D2E2 40404040                       2189+          DC    CL8'VPKS'           instruction name
00002FB0  00003028                                2190+          DC    A(RE40)             address of v1 result
00002FB4  00003038                                2191+          DC    A(RE40+16)          address of v2 source
00002FB8  00003048                                2192+          DC    A(RE40+32)          address of v3 source
00002FBC  00000010                                2193+          DC    A(16)               result length
00002FC0  00003028                                2194+REA40     DC    A(RE40)             result address
00002FC8  00000000 00000000                       2195+          DS    2FD                  gap
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
00002FD0  00000000 00000000
00002FD8  00000000 00000000                      2196+V1O40    DS    XL16               V1 output
00002FE0  00000000 00000000
00002FE8  00000000 00000000                      2197+         DS    2FD                 gap
00002FF0  00000000 00000000
                                                 2198+*
00002FF8                                         2199+X40      DS    0F
00002FF8  E310 5024 0014                00000024 2200+         LGF   R1,V2ADDR          load v2 source
00002FFE  E761 0000 0806                00000000 2201+         VL    v22,0(R1)          use v21 to test decoder
00003004  E310 5028 0014                00000028 2202+         LGF   R1,V3ADDR          load v3 source
0000300A  E771 0000 0806                00000000 2203+         VL    v23,0(R1)          use v22 to test decoder
00003010  E756 7010 1E97                         2204+         VPKS  V21,V22,V23,1,1              test instruction
00003016  B98D 0020                              2205+         EPSW  R2,R0              extract psw
0000301A  5020 500C                     0000000C 2206+         ST    R2,CCPSW             to save CC
0000301E  E750 5048 080E                00002FD8 2207+         VST   V21,V1O40          save v1 output
00003024  07FB                                   2208+         BR    R11                return
00003028                                         2209+RE40     DC    0F                 V1 for this test
00003028                                         2210+         DROP  R5
00003028  11335577 22446600                      2211          DC    XL16'1133557722446600 017F7F7F7F7F7F80'   result
00003030  017F7F7F 7F7F7F80
00003038  00110033 00550077                      2212          DC    XL16'0011003300550077 0022004400660000'   v2
00003040  00220044 00660000
00003048  00010203 04050607                      2213          DC    XL16'0001020304050607 08090A0B0C0DFE0F'   v3
00003050  08090A0B 0C0DFE0F
                                                 2214
                                                 2215          VRR_B VPKS,1,3
00003058                                         2216+         DS    0FD
00003058                        00003058         2217+         USING *,R5               base for test data and test routine
00003058  000030C0                               2218+T41      DC    A(X41)             address of test routine
0000305C  0029                                   2219+         DC    H'41'              test number
0000305E  00                                     2220+         DC    X'00'
0000305F  01                                     2221+         DC    HL1'1'                  m4 used
00003060  01                                     2222+         DC    HL1'1'                  m5 used
00003061  03                                     2223+         DC    HL1'3'             CC
00003062  0E                                     2224+         DC    HL1'14'            CC failed mask
00003064  00000000 00000000                      2225+         DS    2F                 extracted PSW after test (has CC)
0000306C  FF                                     2226+         DC    X'FF'              extracted CC, if test failed
0000306D  E5D7D2E2 40404040                      2227+         DC    CL8'VPKS'          instruction name
00003078  000030F0                               2228+         DC    A(RE41)            address of v1 result
0000307C  00003100                               2229+         DC    A(RE41+16)         address of v2 source
00003080  00003110                               2230+         DC    A(RE41+32)         address of v3 source
00003084  00000010                               2231+         DC    A(16)              result length
00003088  000030F0                               2232+REA41    DC    A(RE41)            result address
00003090  00000000 00000000                      2233+         DS    2FD                 gap
00003098  00000000 00000000
000030A0  00000000 00000000                      2234+V1O41    DS    XL16               V1 output
000030A8  00000000 00000000
000030B0  00000000 00000000                      2235+         DS    2FD                 gap
000030B8  00000000 00000000
                                                 2236+*
000030C0                                         2237+X41      DS    0F
000030C0  E310 5024 0014                00000024 2238+         LGF   R1,V2ADDR          load v2 source
000030C6  E761 0000 0806                00000000 2239+         VL    v22,0(R1)          use v21 to test decoder
000030CC  E310 5028 0014                00000028 2240+         LGF   R1,V3ADDR          load v3 source
000030D2  E771 0000 0806                00000000 2241+         VL    v23,0(R1)          use v22 to test decoder
000030D8  E756 7010 1E97                         2242+         VPKS  V21,V22,V23,1,1              test instruction
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

000030DE  B98D 0020                            2243+          EPSW  R2,R0               extract psw
000030E2  5020 500C                  0000000C  2244+          ST    R2,CCPSW              to save CC
000030E6  E750 5048 080E             000030A0  2245+          VST   V21,V1O41             save v1 output
000030EC  07FB                                 2246+          BR    R11                   return
000030F0                                       2247+RE41      DC    0F                    V1 for this test
000030F0                                       2248+          DROP  R5
000030F0  7F7F7F7F 7F7F7F7F                    2249           DC    XL16'7F7F7F7F7F7F7F7F 7F7F7F7F7F7F7F7F'   result
000030F8  7F7F7F7F 7F7F7F7F
00003100  01110133 01550177                    2250           DC    XL16'0111013301550177 019901BB01DD01FF'   v2
00003108  019901BB 01DD01FF
00003110  01010203 04050607                    2251           DC    XL16'0101020304050607 08090A0B0C0D0E0F'   v3
00003118  08090A0B 0C0D0E0F
                                               2252
                                               2253           VRR_B VPKS,1,3
00003120                                       2254+          DS    0FD
00003120                       00003120        2255+          USING *,R5                  base for test data and test routine
00003120  00003188                             2256+T42       DC    A(X42)                address of test routine
00003124  002A                                 2257+          DC    H'42'                 test number
00003126  00                                   2258+          DC    X'00'
00003127  01                                   2259+          DC    HL1'1'                     m4 used
00003128  01                                   2260+          DC    HL1'1'                     m5 used
00003129  03                                   2261+          DC    HL1'3'                CC
0000312A  0E                                   2262+          DC    HL1'14'               CC failed mask
0000312C  00000000 00000000                    2263+          DS    2F                    extracted PSW after test (has CC)
00003134  FF                                   2264+          DC    X'FF'                 extracted CC, if test failed
00003135  E5D7D2E2 40404040                    2265+          DC    CL8'VPKS'             instruction name
00003140  000031B8                             2266+          DC    A(RE42)               address of v1 result
00003144  000031C8                             2267+          DC    A(RE42+16)            address of v2 source
00003148  000031D8                             2268+          DC    A(RE42+32)            address of v3 source
0000314C  00000010                             2269+          DC    A(16)                 result length
00003150  000031B8                             2270+REA42     DC    A(RE42)               result address
00003158  00000000 00000000                    2271+          DS    2FD                    gap
00003160  00000000 00000000
00003168  00000000 00000000                    2272+V1O42     DS    XL16                  V1 output
00003170  00000000 00000000
00003178  00000000 00000000                    2273+          DS    2FD                    gap
00003180  00000000 00000000
                                               2274+*
00003188                                       2275+X42       DS    0F
00003188  E310 5024 0014             00000024  2276+          LGF   R1,V2ADDR             load v2 source
0000318E  E761 0000 0806             00000000  2277+          VL    v22,0(R1)             use v21 to test decoder
00003194  E310 5028 0014             00000028  2278+          LGF   R1,V3ADDR             load v3 source
0000319A  E771 0000 0806             00000000  2279+          VL    v23,0(R1)             use v22 to test decoder
000031A0  E756 7010 1E97                       2280+          VPKS  V21,V22,V23,1,1                test instruction
000031A6  B98D 0020                            2281+          EPSW  R2,R0                 extract psw
000031AA  5020 500C                  0000000C  2282+          ST    R2,CCPSW              to save CC
000031AE  E750 5048 080E             00003168  2283+          VST   V21,V1O42             save v1 output
000031B4  07FB                                 2284+          BR    R11                   return
000031B8                                       2285+RE42      DC    0F                    V1 for this test
000031B8                                       2286+          DROP  R5
000031B8  7F7F7F7F 7F7F7F7F                    2287           DC    XL16'7F7F7F7F7F7F7F7F 7F7F7F7F7F7F7F7F'   result
000031C0  7F7F7F7F 7F7F7F7F
000031C8  01010203 04050607                    2288           DC    XL16'0101020304050607 08090A0B0C0D0E0F'   v2
000031D0  08090A0B 0C0D0E0F
000031D8  01110133 01550177                    2289           DC    XL16'0111013301550177 019901BB01DD01FF'   v3
000031E0  019901BB 01DD01FF
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
                                                    2290
                                                    2291          VRR_B VPKS,1,3
000031E8                                            2292+         DS    0FD
000031E8                      000031E8              2293+         USING *,R5              base for test data and test routine
000031E8  00003250                                  2294+T43      DC    A(X43)            address of test routine
000031EC  002B                                      2295+         DC    H'43'             test number
000031EE  00                                        2296+         DC    X'00'
000031EF  01                                        2297+         DC    HL1'1'                 m4 used
000031F0  01                                        2298+         DC    HL1'1'                 m5 used
000031F1  03                                        2299+         DC    HL1'3'            CC
000031F2  0E                                        2300+         DC    HL1'14'           CC failed mask
000031F4  00000000 00000000                         2301+         DS    2F                extracted PSW after test (has CC)
000031FC  FF                                        2302+         DC    X'FF'             extracted CC, if test failed
000031FD  E5D7D2E2 40404040                         2303+         DC    CL8'VPKS'         instruction name
00003208  00003280                                  2304+         DC    A(RE43)           address of v1 result
0000320C  00003290                                  2305+         DC    A(RE43+16)        address of v2 source
00003210  000032A0                                  2306+         DC    A(RE43+32)        address of v3 source
00003214  00000010                                  2307+         DC    A(16)             result length
00003218  00003280                                  2308+REA43    DC    A(RE43)           result address
00003220  00000000 00000000                         2309+         DS    2FD                gap
00003228  00000000 00000000
00003230  00000000 00000000                         2310+V1043    DS    XL16              V1 output
00003238  00000000 00000000
00003240  00000000 00000000                         2311+         DS    2FD                gap
00003248  00000000 00000000
                                                    2312+*
00003250                                            2313+X43      DS    0F
00003250  E310 5024 0014                  00000024  2314+         LGF   R1,V2ADDR         load v2 source
00003256  E761 0000 0806                  00000000  2315+         VL    v22,0(R1)         use v21 to test decoder
0000325C  E310 5028 0014                  00000028  2316+         LGF   R1,V3ADDR         load v3 source
00003262  E771 0000 0806                  00000000  2317+         VL    v23,0(R1)         use v22 to test decoder
00003268  E756 7010 1E97                            2318+         VPKS  V21,V22,V23,1,1           test instruction
0000326E  B98D 0020                                 2319+         EPSW  R2,R0             extract psw
00003272  5020 500C                       0000000C  2320+         ST    R2,CCPSW             to save CC
00003276  E750 5048 080E                  00003230  2321+         VST   V21,V1043         save v1 output
0000327C  07FB                                      2322+         BR    R11               return
00003280                                            2323+RE43     DC    0F                V1 for this test
00003280                                            2324+         DROP  R5
00003280  80808080 80808080                         2325          DC    XL16'8080808080808080 8080808080808080'   result
00003288  80808080 80808080
00003290  F111F133 F155F177                         2326          DC    XL16'F111F133F155F177 F199F1BBF1DDF1FF'   v2
00003298  F199F1BB F1DDF1FF
000032A0  F101F203 F405F607                         2327          DC    XL16'F101F203F405F607 F809FAFBFCFDFE0F'   v3
000032A8  F809FAFB FCFDFE0F
                                                    2328
                                                    2329          VRR_B VPKS,1,3
000032B0                                            2330+         DS    0FD
000032B0                      000032B0              2331+         USING *,R5              base for test data and test routine
000032B0  00003318                                  2332+T44      DC    A(X44)            address of test routine
000032B4  002C                                      2333+         DC    H'44'             test number
000032B6  00                                        2334+         DC    X'00'
000032B7  01                                        2335+         DC    HL1'1'                 m4 used
000032B8  01                                        2336+         DC    HL1'1'                 m5 used
000032B9  03                                        2337+         DC    HL1'3'            CC
000032BA  0E                                        2338+         DC    HL1'14'           CC failed mask
000032BC  00000000 00000000                         2339+         DS    2F                extracted PSW after test (has CC)
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
000032C4  FF                                      2340+          DC    X'FF'                 extracted CC, if test failed
000032C5  E5D7D2E2 40404040                       2341+          DC    CL8'VPKS'             instruction name
000032D0  00003348                                2342+          DC    A(RE44)               address of v1 result
000032D4  00003358                                2343+          DC    A(RE44+16)            address of v2 source
000032D8  00003368                                2344+          DC    A(RE44+32)            address of v3 source
000032DC  00000010                                2345+          DC    A(16)                 result length
000032E0  00003348                                2346+REA44     DC    A(RE44)               result address
000032E8  00000000 00000000                       2347+          DS    2FD                    gap
000032F0  00000000 00000000
000032F8  00000000 00000000                       2348+V1O44     DS    XL16                  V1 output
00003300  00000000 00000000
00003308  00000000 00000000                       2349+          DS    2FD                    gap
00003310  00000000 00000000
                                                  2350+*
00003318                                          2351+X44       DS    0F
00003318  E310 5024 0014                 00000024 2352+          LGF   R1,V2ADDR             load v2 source
0000331E  E761 0000 0806                 00000000 2353+          VL    v22,0(R1)             use v21 to test decoder
00003324  E310 5028 0014                 00000028 2354+          LGF   R1,V3ADDR             load v3 source
0000332A  E771 0000 0806                 00000000 2355+          VL    v23,0(R1)             use v22 to test decoder
00003330  E756 7010 1E97                          2356+          VPKS  V21,V22,V23,1,1                 test instruction
00003336  B98D 0020                               2357+          EPSW  R2,R0                 extract psw
0000333A  5020 500C                      0000000C 2358+          ST    R2,CCPSW                 to save CC
0000333E  E750 5048 080E                 000032F8 2359+          VST   V21,V1O44             save v1 output
00003344  07FB                                    2360+          BR    R11                   return
00003348                                          2361+RE44      DC    0F                    V1 for this test
00003348                                          2362+          DROP  R5
00003348  80808080 80808080                       2363           DC    XL16'8080808080808080 8080808080808080'   result
00003350  80808080 80808080
00003358  F101F203 F405F607                       2364           DC    XL16'F101F203F405F607 F809FAFBFCFDFE0F'   v2
00003360  F809FAFB FCFDFE0F
00003368  F111F133 F155F177                       2365           DC    XL16'F111F133F155F177 F199F1BBF1DDF1FF'   v3
00003370  F199F1BB F1DDF1FF
                                                  2366
                                                  2367 *Word
                                                  2368           VRR_B VPKS,2,0
00003378                                          2369+          DS    0FD
00003378                          00003378        2370+          USING *,R5                  base for test data and test routine
00003378  000033E0                                2371+T45       DC    A(X45)                address of test routine
0000337C  002D                                    2372+          DC    H'45'                 test number
0000337E  00                                      2373+          DC    X'00'
0000337F  02                                      2374+          DC    HL1'2'                     m4 used
00003380  01                                      2375+          DC    HL1'1'                     m5 used
00003381  00                                      2376+          DC    HL1'0'                CC
00003382  07                                      2377+          DC    HL1'7'                CC failed mask
00003384  00000000 00000000                       2378+          DS    2F                    extracted PSW after test (has CC)
0000338C  FF                                      2379+          DC    X'FF'                 extracted CC, if test failed
0000338D  E5D7D2E2 40404040                       2380+          DC    CL8'VPKS'             instruction name
00003398  00003410                                2381+          DC    A(RE45)               address of v1 result
0000339C  00003420                                2382+          DC    A(RE45+16)            address of v2 source
000033A0  00003430                                2383+          DC    A(RE45+32)            address of v3 source
000033A4  00000010                                2384+          DC    A(16)                 result length
000033A8  00003410                                2385+REA45     DC    A(RE45)               result address
000033B0  00000000 00000000                       2386+          DS    2FD                    gap
000033B8  00000000 00000000
000033C0  00000000 00000000                       2387+V1O45     DS    XL16                  V1 output
000033C8  00000000 00000000
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
000033D0  00000000 00000000                       2388+          DS    2FD                  gap
000033D8  00000000 00000000
                                                  2389+*
000033E0                                          2390+X45       DS    0F
000033E0  E310 5024 0014                 00000024 2391+          LGF   R1,V2ADDR           load v2 source
000033E6  E761 0000 0806                 00000000 2392+          VL    v22,0(R1)          use v21 to test decoder
000033EC  E310 5028 0014                 00000028 2393+          LGF   R1,V3ADDR          load v3 source
000033F2  E771 0000 0806                 00000000 2394+          VL    v23,0(R1)          use v22 to test decoder
000033F8  E756 7010 2E97                          2395+          VPKS  V21,V22,V23,2,1             test instruction
000033FE  B98D 0020                               2396+          EPSW  R2,R0              extract psw
00003402  5020 500C                      0000000C 2397+          ST    R2,CCPSW              to save CC
00003406  E750 5048 080E                 000033C0 2398+          VST   V21,V1O45          save v1 output
0000340C  07FB                                    2399+          BR    R11                return
00003410                                          2400+RE45      DC    0F                 V1 for this test
00003410                                          2401+          DROP  R5
00003410  11335577 22446688                       2402           DC    XL16'1133557722446688 FEFDFCFBFAF9F8F7'   result
00003418  FEFDFCFB FAF9F8F7
00003420  00001133 00005577                       2403           DC    XL16'0001133300005577 0002244400006688'   v2
00003428  00002244 00006688
00003430  FFFFFEFD FFFFFCFB                       2404           DC    XL16'FFFFFEFDFFFFFCFB FFFFFAF9FFFFF8F7'   v3
00003438  FFFFFAF9 FFFFF8F7
                                                  2405
                                                  2406           VRR_B VPKS,2,0
00003440                                          2407+          DS    0FD
00003440                 00003440                 2408+          USING *,R5               base for test data and test routine
00003440  000034A8                                2409+T46       DC    A(X46)             address of test routine
00003444  002E                                    2410+          DC    H'46'              test number
00003446  00                                      2411+          DC    X'00'
00003447  02                                      2412+          DC    HL1'2'                  m4 used
00003448  01                                      2413+          DC    HL1'1'                  m5 used
00003449  00                                      2414+          DC    HL1'0'             CC
0000344A  07                                      2415+          DC    HL1'7'             CC failed mask
0000344C  00000000 00000000                       2416+          DS    2F                 extracted PSW after test (has CC)
00003454  FF                                      2417+          DC    X'FF'              extracted CC, if test failed
00003455  E5D7D2E2 40404040                       2418+          DC    CL8'VPKS'          instruction name
00003460  000034D8                                2419+          DC    A(RE46)            address of v1 result
00003464  000034E8                                2420+          DC    A(RE46+16)         address of v2 source
00003468  000034F8                                2421+          DC    A(RE46+32)         address of v3 source
0000346C  00000010                                2422+          DC    A(16)              result length
00003470  000034D8                                2423+REA46     DC    A(RE46)            result address
00003478  00000000 00000000                       2424+          DS    2FD                 gap
00003480  00000000 00000000
00003488  00000000 00000000                       2425+V1O46     DS    XL16               V1 output
00003490  00000000 00000000
00003498  00000000 00000000                       2426+          DS    2FD                 gap
000034A0  00000000 00000000
                                                  2427+*
000034A8                                          2428+X46       DS    0F
000034A8  E310 5024 0014                 00000024 2429+          LGF   R1,V2ADDR           load v2 source
000034AE  E761 0000 0806                 00000000 2430+          VL    v22,0(R1)          use v21 to test decoder
000034B4  E310 5028 0014                 00000028 2431+          LGF   R1,V3ADDR          load v3 source
000034BA  E771 0000 0806                 00000000 2432+          VL    v23,0(R1)          use v22 to test decoder
000034C0  E756 7010 2E97                          2433+          VPKS  V21,V22,V23,2,1             test instruction
000034C6  B98D 0020                               2434+          EPSW  R2,R0              extract psw
000034CA  5020 500C                      0000000C 2435+          ST    R2,CCPSW              to save CC
000034CE  E750 5048 080E                 00003488 2436+          VST   V21,V1O46          save v1 output
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
000034D4  07FB                                    2437+         BR    R11                 return
000034D8                                          2438+RE46     DC    0F                  V1 for this test
000034D8                                          2439+         DROP  R5
000034D8  FEFDFCFB FAF9F8F7                       2440          DC    XL16'FEFDFCFBFAF9F8F7 1133557722446688'   result
000034E0  11335577 22446688
000034E8  FFFFFEFD FFFFFCFB                       2441          DC    XL16'FFFFFEFDFFFFFCFB FFFFFAF9FFFFF8F7'   v2
000034F0  FFFFFAF9 FFFFF8F7
000034F8  00001133 00005577                       2442          DC    XL16'0000113300005577 0000224400006688'   v3
00003500  00002244 00006688
                                                  2443
                                                  2444          VRR_B VPKS,2,1
00003508                                          2445+         DS    0FD
00003508                    00003508              2446+         USING *,R5                base for test data and test routine
00003508  00003570                                2447+T47      DC    A(X47)              address of test routine
0000350C  002F                                    2448+         DC    H'47'               test number
0000350E  00                                      2449+         DC    X'00'
0000350F  02                                      2450+         DC    HL1'2'                   m4 used
00003510  01                                      2451+         DC    HL1'1'                   m5 used
00003511  01                                      2452+         DC    HL1'1'              CC
00003512  0B                                      2453+         DC    HL1'11'             CC failed mask
00003514  00000000 00000000                       2454+         DS    2F                  extracted PSW after test (has CC)
0000351C  FF                                      2455+         DC    X'FF'               extracted CC, if test failed
0000351D  E5D7D2E2 40404040                       2456+         DC    CL8'VPKS'           instruction name
00003528  000035A0                                2457+         DC    A(RE47)             address of v1 result
0000352C  000035B0                                2458+         DC    A(RE47+16)          address of v2 source
00003530  000035C0                                2459+         DC    A(RE47+32)          address of v3 source
00003534  00000010                                2460+         DC    A(16)               result length
00003538  000035A0                                2461+REA47    DC    A(RE47)             result address
00003540  00000000 00000000                       2462+         DS    2FD                  gap
00003548  00000000 00000000
00003550  00000000 00000000                       2463+V1O47    DS    XL16                V1 output
00003558  00000000 00000000
00003560  00000000 00000000                       2464+         DS    2FD                  gap
00003568  00000000 00000000
                                                  2465+*
00003570                                          2466+X47      DS    0F
00003570  E310 5024 0014              00000024    2467+         LGF   R1,V2ADDR           load v2 source
00003576  E761 0000 0806              00000000    2468+         VL    v22,0(R1)           use v21 to test decoder
0000357C  E310 5028 0014              00000028    2469+         LGF   R1,V3ADDR           load v3 source
00003582  E771 0000 0806              00000000    2470+         VL    v23,0(R1)           use v22 to test decoder
00003588  E756 7010 2E97                          2471+         VPKS  V21,V22,V23,2,1            test instruction
0000358E  B98D 0020                               2472+         EPSW  R2,R0               extract psw
00003592  5020 500C                   0000000C    2473+         ST    R2,CCPSW               to save CC
00003596  E750 5048 080E              00003550    2474+         VST   V21,V1O47           save v1 output
0000359C  07FB                                    2475+         BR    R11                 return
000035A0                                          2476+RE47     DC    0F                  V1 for this test
000035A0                                          2477+         DROP  R5
000035A0  12037FFF 7FFF7FFF                       2478          DC    XL16'12037FFF7FFF7FFF 1133557719BB2DFF'   result
000035A8  11335577 19BB2DFF
000035B0  00001203 04050607                       2479          DC    XL16'0000120304050607 08090A0B0C0D0E0F'   v2
000035B8  08090A0B 0C0D0E0F
000035C0  00001133 00005577                       2480          DC    XL16'0000113300005577 000019BB00002DFF'   v3
000035C8  000019BB 00002DFF
                                                  2481
                                                  2482          VRR_B VPKS,2,1
000035D0                                          2483+         DS    0FD
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

000035D0                     000035D0               2484+         USING *,R5              base for test data and test routine
000035D0  00003638                                  2485+T48      DC    A(X48)            address of test routine
000035D4  0030                                      2486+         DC    H'48'             test number
000035D6  00                                        2487+         DC    X'00'
000035D7  02                                        2488+         DC    HL1'2'                 m4 used
000035D8  01                                        2489+         DC    HL1'1'                 m5 used
000035D9  01                                        2490+         DC    HL1'1'            CC
000035DA  0B                                        2491+         DC    HL1'11'           CC failed mask
000035DC  00000000 00000000                         2492+         DS    2F                extracted PSW after test (has CC)
000035E4  FF                                        2493+         DC    X'FF'             extracted CC, if test failed
000035E5  E5D7D2E2 40404040                         2494+         DC    CL8'VPKS'         instruction name
000035F0  00003668                                  2495+         DC    A(RE48)           address of v1 result
000035F4  00003678                                  2496+         DC    A(RE48+16)        address of v2 source
000035F8  00003688                                  2497+         DC    A(RE48+32)        address of v3 source
000035FC  00000010                                  2498+         DC    A(16)             result length
00003600  00003668                                  2499+REA48    DC    A(RE48)           result address
00003608  00000000 00000000                         2500+         DS    2FD                gap
00003610  00000000 00000000
00003618  00000000 00000000                         2501+V1O48    DS    XL16              V1 output
00003620  00000000 00000000
00003628  00000000 00000000                         2502+         DS    2FD                gap
00003630  00000000 00000000
                                                    2503+*
00003638                                            2504+X48      DS    0F
00003638  E310 5024 0014                 00000024   2505+         LGF   R1,V2ADDR         load v2 source
0000363E  E761 0000 0806                 00000000   2506+         VL    v22,0(R1)         use v21 to test decoder
00003644  E310 5028 0014                 00000028   2507+         LGF   R1,V3ADDR         load v3 source
0000364A  E771 0000 0806                 00000000   2508+         VL    v23,0(R1)         use v22 to test decoder
00003650  E756 7010 2E97                            2509+         VPKS  V21,V22,V23,2,1           test instruction
00003656  B98D 0020                                 2510+         EPSW  R2,R0             extract psw
0000365A  5020 500C                      0000000C   2511+         ST    R2,CCPSW             to save CC
0000365E  E750 5048 080E                 00003618   2512+         VST   V21,V1O48         save v1 output
00003664  07FB                                      2513+         BR    R11               return
00003668                                            2514+RE48     DC    0F                V1 for this test
00003668                                            2515+         DROP  R5
00003668  11335577 19BB2DFF                         2516          DC    XL16'1133557719BB2DFF 12037FFF7FFF7FFF'   result
00003670  12037FFF 7FFF7FFF
00003678  00001133 00005577                         2517          DC    XL16'0000113300005577 000019BB00002DFF'   v2
00003680  000019BB 00002DFF
00003688  00001203 04050607                         2518          DC    XL16'0000120304050607 08090A0B0C0D0E0F'   v3
00003690  08090A0B 0C0D0E0F
                                                    2519
                                                    2520          VRR_B VPKS,2,3
00003698                                            2521+         DS    0FD
00003698                         00003698           2522+         USING *,R5              base for test data and test routine
00003698  00003700                                  2523+T49      DC    A(X49)            address of test routine
0000369C  0031                                      2524+         DC    H'49'             test number
0000369E  00                                        2525+         DC    X'00'
0000369F  02                                        2526+         DC    HL1'2'                 m4 used
000036A0  01                                        2527+         DC    HL1'1'                 m5 used
000036A1  03                                        2528+         DC    HL1'3'            CC
000036A2  0E                                        2529+         DC    HL1'14'           CC failed mask
000036A4  00000000 00000000                         2530+         DS    2F                extracted PSW after test (has CC)
000036AC  FF                                        2531+         DC    X'FF'             extracted CC, if test failed
000036AD  E5D7D2E2 40404040                         2532+         DC    CL8'VPKS'         instruction name
000036B8  00003730                                  2533+         DC    A(RE49)           address of v1 result
```

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  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

000036BC  00003740                             2534+          DC    A(RE49+16)          address of v2 source
000036C0  00003750                             2535+          DC    A(RE49+32)          address of v3 source
000036C4  00000010                             2536+          DC    A(16)               result length
000036C8  00003730                             2537+REA49     DC    A(RE49)             result address
000036D0  00000000 00000000                    2538+          DS    2FD                  gap
000036D8  00000000 00000000
000036E0  00000000 00000000                    2539+V1O49     DS    XL16                V1 output
000036E8  00000000 00000000
000036F0  00000000 00000000                    2540+          DS    2FD                  gap
000036F8  00000000 00000000
                                               2541+*
00003700                                       2542+X49       DS    0F
00003700  E310 5024 0014                00000024  2543+          LGF   R1,V2ADDR           load v2 source
00003706  E761 0000 0806                00000000  2544+          VL    v22,0(R1)           use v21 to test decoder
0000370C  E310 5028 0014                00000028  2545+          LGF   R1,V3ADDR           load v3 source
00003712  E771 0000 0806                00000000  2546+          VL    v23,0(R1)           use v22 to test decoder
00003718  E756 7010 2E97                          2547+          VPKS  V21,V22,V23,2,1              test instruction
0000371E  B98D 0020                               2548+          EPSW  R2,R0               extract psw
00003722  5020 500C                     0000000C  2549+          ST    R2,CCPSW               to save CC
00003726  E750 5048 080E                000036E0  2550+          VST   V21,V1O49           save v1 output
0000372C  07FB                                    2551+          BR    R11                 return
00003730                                       2552+RE49      DC    0F                  V1 for this test
00003730                                       2553+          DROP  R5
00003730  7FFF7FFF 7FFF7FFF                    2554           DC    XL16'7FFF7FFF7FFF7FFF 7FFF7FFF7FFF7FFF'   result
00003738  7FFF7FFF 7FFF7FFF
00003740  01110133 01550177                    2555           DC    XL16'0111013301550177 019901BB01DD01FF'   v2
00003748  019901BB 01DD01FF
00003750  01010203 04050607                    2556           DC    XL16'0101020304050607 08090A0B0C0D0E0F'   v3
00003758  08090A0B 0C0D0E0F
                                               2557
                                               2558           VRR_B VPKS,2,3
00003760                                       2559+          DS    0FD
00003760                        00003760       2560+          USING *,R5                base for test data and test routine
00003760  000037C8                             2561+T50       DC    A(X50)              address of test routine
00003764  0032                                 2562+          DC    H'50'               test number
00003766  00                                   2563+          DC    X'00'
00003767  02                                   2564+          DC    HL1'2'                   m4 used
00003768  01                                   2565+          DC    HL1'1'                   m5 used
00003769  03                                   2566+          DC    HL1'3'              CC
0000376A  0E                                   2567+          DC    HL1'14'             CC failed mask
0000376C  00000000 00000000                    2568+          DS    2F                  extracted PSW after test (has CC)
00003774  FF                                   2569+          DC    X'FF'               extracted CC, if test failed
00003775  E5D7D2E2 40404040                    2570+          DC    CL8'VPKS'           instruction name
00003780  000037F8                             2571+          DC    A(RE50)             address of v1 result
00003784  00003808                             2572+          DC    A(RE50+16)          address of v2 source
00003788  00003818                             2573+          DC    A(RE50+32)          address of v3 source
0000378C  00000010                             2574+          DC    A(16)               result length
00003790  000037F8                             2575+REA50     DC    A(RE50)             result address
00003798  00000000 00000000                    2576+          DS    2FD                  gap
000037A0  00000000 00000000
000037A8  00000000 00000000                    2577+V1O50     DS    XL16                V1 output
000037B0  00000000 00000000
000037B8  00000000 00000000                    2578+          DS    2FD                  gap
000037C0  00000000 00000000
                                               2579+*
000037C8                                       2580+X50       DS    0F
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

000037C8  E310 5024 0014                 00000024  2581+          LGF   R1,V2ADDR           load v2 source
000037CE  E761 0000 0806                 00000000  2582+          VL    v22,0(R1)           use v21 to test decoder
000037D4  E310 5028 0014                 00000028  2583+          LGF   R1,V3ADDR           load v3 source
000037DA  E771 0000 0806                 00000000  2584+          VL    v23,0(R1)           use v22 to test decoder
000037E0  E756 7010 2E97                           2585+          VPKS  V21,V22,V23,2,1               test instruction
000037E6  B98D 0020                                2586+          EPSW  R2,R0               extract psw
000037EA  5020 500C                      0000000C  2587+          ST    R2,CCPSW               to save CC
000037EE  E750 5048 080E                 000037A8  2588+          VST   V21,V1O50           save v1 output
000037F4  07FB                                     2589+          BR    R11                 return
000037F8                                           2590+RE50      DC    0F                  V1 for this test
000037F8                                           2591+          DROP  R5
000037F8  7FFF7FFF 7FFF7FFF                        2592           DC    XL16'7FFF7FFF7FFF7FFF 7FFF7FFF7FFF7FFF'   result
00003800  7FFF7FFF 7FFF7FFF
00003808  01010203 04050607                        2593           DC    XL16'0101020304050607 08090A0B0C0D0E0F'   v2
00003810  08090A0B 0C0D0E0F
00003818  01110133 01550177                        2594           DC    XL16'0111013301550177 019901BB01DD01FF'   v3
00003820  019901BB 01DD01FF
                                                   2595
                                                   2596           VRR_B VPKS,2,3
00003828                                           2597+          DS    0FD
00003828                           00003828        2598+          USING *,R5                base for test data and test routine
00003828  00003890                                 2599+T51       DC    A(X51)              address of test routine
0000382C  0033                                     2600+          DC    H'51'               test number
0000382E  00                                       2601+          DC    X'00'
0000382F  02                                       2602+          DC    HL1'2'                  m4 used
00003830  01                                       2603+          DC    HL1'1'                  m5 used
00003831  03                                       2604+          DC    HL1'3'              CC
00003832  0E                                       2605+          DC    HL1'14'             CC failed mask
00003834  00000000 00000000                        2606+          DS    2F                  extracted PSW after test (has CC)
0000383C  FF                                       2607+          DC    X'FF'               extracted CC, if test failed
0000383D  E5D7D2E2 40404040                        2608+          DC    CL8'VPKS'           instruction name
00003848  000038C0                                 2609+          DC    A(RE51)             address of v1 result
0000384C  000038D0                                 2610+          DC    A(RE51+16)          address of v2 source
00003850  000038E0                                 2611+          DC    A(RE51+32)          address of v3 source
00003854  00000010                                 2612+          DC    A(16)               result length
00003858  000038C0                                 2613+REA51     DC    A(RE51)             result address
00003860  00000000 00000000                        2614+          DS    2FD                  gap
00003868  00000000 00000000
00003870  00000000 00000000                        2615+V1O51     DS    XL16                V1 output
00003878  00000000 00000000
00003880  00000000 00000000                        2616+          DS    2FD                  gap
00003888  00000000 00000000
                                                   2617+*
00003890                                           2618+X51       DS    0F
00003890  E310 5024 0014                 00000024  2619+          LGF   R1,V2ADDR           load v2 source
00003896  E761 0000 0806                 00000000  2620+          VL    v22,0(R1)           use v21 to test decoder
0000389C  E310 5028 0014                 00000028  2621+          LGF   R1,V3ADDR           load v3 source
000038A2  E771 0000 0806                 00000000  2622+          VL    v23,0(R1)           use v22 to test decoder
000038A8  E756 7010 2E97                           2623+          VPKS  V21,V22,V23,2,1               test instruction
000038AE  B98D 0020                                2624+          EPSW  R2,R0               extract psw
000038B2  5020 500C                      0000000C  2625+          ST    R2,CCPSW               to save CC
000038B6  E750 5048 080E                 00003870  2626+          VST   V21,V1O51           save v1 output
000038BC  07FB                                     2627+          BR    R11                 return
000038C0                                           2628+RE51      DC    0F                  V1 for this test
000038C0                                           2629+          DROP  R5
000038C0  80008000 80008000                        2630           DC    XL16'8000800080008000 8000800080008000'   result
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
000038C8  80008000 80008000
000038D0  F111F133 F155F177                        2631           DC    XL16'F111F133F155F177 F199F1BBF1DDF1FF'   v2
000038D8  F199F1BB F1DDF1FF
000038E0  F101F203 F405F607                        2632           DC    XL16'F101F203F405F607 F809FAFBFCFDFE0F'   v3
000038E8  F809FAFB FCFDFE0F
                                                   2633
                                                   2634           VRR_B VPKS,2,3
000038F0                                           2635+          DS    0FD
000038F0                     000038F0              2636+          USING *,R5                base for test data and test routine
000038F0  00003958                                 2637+T52       DC    A(X52)              address of test routine
000038F4  0034                                     2638+          DC    H'52'               test number
000038F6  00                                       2639+          DC    X'00'
000038F7  02                                       2640+          DC    HL1'2'                   m4 used
000038F8  01                                       2641+          DC    HL1'1'                   m5 used
000038F9  03                                       2642+          DC    HL1'3'              CC
000038FA  0E                                       2643+          DC    HL1'14'             CC failed mask
000038FC  00000000 00000000                        2644+          DS    2F                  extracted PSW after test (has CC)
00003904  FF                                       2645+          DC    X'FF'               extracted CC, if test failed
00003905  E5D7D2E2 40404040                        2646+          DC    CL8'VPKS'           instruction name
00003910  00003988                                 2647+          DC    A(RE52)             address of v1 result
00003914  00003998                                 2648+          DC    A(RE52+16)          address of v2 source
00003918  000039A8                                 2649+          DC    A(RE52+32)          address of v3 source
0000391C  00000010                                 2650+          DC    A(16)               result length
00003920  00003988                                 2651+REA52     DC    A(RE52)             result address
00003928  00000000 00000000                        2652+          DS    2FD                  gap
00003930  00000000 00000000
00003938  00000000 00000000                        2653+V1O52     DS    XL16                V1 output
00003940  00000000 00000000
00003948  00000000 00000000                        2654+          DS    2FD                  gap
00003950  00000000 00000000
                                                   2655+*
00003958                                           2656+X52       DS    0F
00003958  E310 5024 0014                 00000024  2657+          LGF   R1,V2ADDR           load v2 source
0000395E  E761 0000 0806                 00000000  2658+          VL    v22,0(R1)           use v21 to test decoder
00003964  E310 5028 0014                 00000028  2659+          LGF   R1,V3ADDR           load v3 source
0000396A  E771 0000 0806                 00000000  2660+          VL    v23,0(R1)           use v22 to test decoder
00003970  E756 7010 2E97                           2661+          VPKS  V21,V22,V23,2,1            test instruction
00003976  B98D 0020                                2662+          EPSW  R2,R0               extract psw
0000397A  5020 500C                      0000000C  2663+          ST    R2,CCPSW               to save CC
0000397E  E750 5048 080E                 00003938  2664+          VST   V21,V1O52           save v1 output
00003984  07FB                                     2665+          BR    R11                 return
00003988                                           2666+RE52      DC    0F                  V1 for this test
00003988                                           2667+          DROP  R5
00003988  80008000 80008000                        2668           DC    XL16'8000800080008000 8000800080008000'   result
00003990  80008000 80008000
00003998  F101F203 F405F607                        2669           DC    XL16'F101F203F405F607 F809FAFBFCFDFE0F'   v2
000039A0  F809FAFB FCFDFE0F
000039A8  F111F133 F155F177                        2670           DC    XL16'F111F133F155F177 F199F1BBF1DDF1FF'   v3
000039B0  F199F1BB F1DDF1FF
                                                   2671
                                                   2672 *Doubleword
                                                   2673           VRR_B VPKS,3,0
000039B8                                           2674+          DS    0FD
000039B8                     000039B8              2675+          USING *,R5                base for test data and test routine
000039B8  00003A20                                 2676+T53       DC    A(X53)              address of test routine
000039BC  0035                                     2677+          DC    H'53'               test number
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
000039BE  00                               2678+          DC    X'00'
000039BF  03                               2679+          DC    HL1'3'                  m4 used
000039C0  01                               2680+          DC    HL1'1'                  m5 used
000039C1  00                               2681+          DC    HL1'0'             CC
000039C2  07                               2682+          DC    HL1'7'             CC failed mask
000039C4  00000000 00000000                2683+          DS    2F                 extracted PSW after test (has CC)
000039CC  FF                               2684+          DC    X'FF'              extracted CC, if test failed
000039CD  E5D7D2E2 40404040                2685+          DC    CL8'VPKS'          instruction name
000039D8  00003A50                         2686+          DC    A(RE53)            address of v1 result
000039DC  00003A60                         2687+          DC    A(RE53+16)         address of v2 source
000039E0  00003A70                         2688+          DC    A(RE53+32)         address of v3 source
000039E4  00000010                         2689+          DC    A(16)              result length
000039E8  00003A50                         2690+REA53     DC    A(RE53)            result address
000039F0  00000000 00000000                2691+          DS    2FD                 gap
000039F8  00000000 00000000
00003A00  00000000 00000000                2692+V1O53     DS    XL16               V1 output
00003A08  00000000 00000000
00003A10  00000000 00000000                2693+          DS    2FD                 gap
00003A18  00000000 00000000
                                           2694+*
00003A20                                   2695+X53       DS    0F
00003A20  E310 5024 0014          00000024 2696+          LGF   R1,V2ADDR          load v2 source
00003A26  E761 0000 0806          00000000 2697+          VL    v22,0(R1)          use v21 to test decoder
00003A2C  E310 5028 0014          00000028 2698+          LGF   R1,V3ADDR          load v3 source
00003A32  E771 0000 0806          00000000 2699+          VL    v23,0(R1)          use v22 to test decoder
00003A38  E756 7010 3E97                   2700+          VPKS  V21,V22,V23,3,1             test instruction
00003A3E  B98D 0020                        2701+          EPSW  R2,R0              extract psw
00003A42  5020 500C               0000000C 2702+          ST    R2,CCPSW              to save CC
00003A46  E750 5048 080E          00003A00 2703+          VST   V21,V1O53          save v1 output
00003A4C  07FB                             2704+          BR    R11                return
00003A50                                   2705+RE53      DC    0F                 V1 for this test
00003A50                                   2706+          DROP  R5
00003A50  11335577 22446688                2707           DC    XL16'1133557722446688 FEFDFCFBFAF9F8F7'   result
00003A58  FEFDFCFB FAF9F8F7
00003A60  00000000 11335577                2708           DC    XL16'0000000011335577 0000000022446688'   v2
00003A68  00000000 22446688
00003A70  FFFFFFFF FEFDFCFB                2709           DC    XL16'FFFFFFFFFEFDFCFB FFFFFFFFFAF9F8F7'   v3
00003A78  FFFFFFFF FAF9F8F7
                                           2710
                                           2711           VRR_B VPKS,3,0
00003A80                                   2712+          DS    0FD
00003A80                    00003A80       2713+          USING *,R5               base for test data and test routine
00003A80  00003AE8                         2714+T54       DC    A(X54)             address of test routine
00003A84  0036                             2715+          DC    H'54'              test number
00003A86  00                               2716+          DC    X'00'
00003A87  03                               2717+          DC    HL1'3'                  m4 used
00003A88  01                               2718+          DC    HL1'1'                  m5 used
00003A89  00                               2719+          DC    HL1'0'             CC
00003A8A  07                               2720+          DC    HL1'7'             CC failed mask
00003A8C  00000000 00000000                2721+          DS    2F                 extracted PSW after test (has CC)
00003A94  FF                               2722+          DC    X'FF'              extracted CC, if test failed
00003A95  E5D7D2E2 40404040                2723+          DC    CL8'VPKS'          instruction name
00003AA0  00003B18                         2724+          DC    A(RE54)            address of v1 result
00003AA4  00003B28                         2725+          DC    A(RE54+16)         address of v2 source
00003AA8  00003B38                         2726+          DC    A(RE54+32)         address of v3 source
00003AAC  00000010                         2727+          DC    A(16)              result length
```

```
  LOC         OBJECT CODE       ADDR1     ADDR2     STMT
00003AB0  00003B18                          2728+REA54    DC    A(RE54)             result address
00003AB8  00000000 00000000                 2729+         DS    2FD                  gap
00003AC0  00000000 00000000
00003AC8  00000000 00000000                 2730+V1O54    DS    XL16                V1 output
00003AD0  00000000 00000000
00003AD8  00000000 00000000                 2731+         DS    2FD                  gap
00003AE0  00000000 00000000
                                            2732+*
00003AE8                                    2733+X54      DS    0F
00003AE8  E310 5024 0014          00000024  2734+         LGF   R1,V2ADDR           load v2 source
00003AEE  E761 0000 0806          00000000  2735+         VL    v22,0(R1)           use v21 to test decoder
00003AF4  E310 5028 0014          00000028  2736+         LGF   R1,V3ADDR           load v3 source
00003AFA  E771 0000 0806          00000000  2737+         VL    v23,0(R1)           use v22 to test decoder
00003B00  E756 7010 3E97                    2738+         VPKS  V21,V22,V23,3,1              test instruction
00003B06  B98D 0020                         2739+         EPSW  R2,R0               extract psw
00003B0A  5020 500C               0000000C  2740+         ST    R2,CCPSW               to save CC
00003B0E  E750 5048 080E          00003AC8  2741+         VST   V21,V1O54           save v1 output
00003B14  07FB                              2742+         BR    R11                 return
00003B18                                    2743+RE54     DC    0F                  V1 for this test
00003B18                                    2744+         DROP  R5
00003B18  FEFDFCFB FAF9F8F7                 2745          DC    XL16'FEFDFCFBFAF9F8F7 1133557722446688 '  result
00003B20  11335577 22446688
00003B28  FFFFFFFF FEFDFCFB                 2746          DC    XL16'FFFFFFFFFEFDFCFB FFFFFFFFAF9F8F7'   v2
00003B30  FFFFFFFF FAF9F8F7
00003B38  00000000 11335577                 2747          DC    XL16'0000000011335577 0000000022446688'   v3
00003B40  00000000 22446688
                                            2748
                                            2749          VRR_B VPKS,3,1
00003B48                                    2750+         DS    0FD
00003B48                    00003B48        2751+         USING *,R5                base for test data and test routine
00003B48  00003BB0                          2752+T55      DC    A(X55)              address of test routine
00003B4C  0037                              2753+         DC    H'55'               test number
00003B4E  00                                2754+         DC    X'00'
00003B4F  03                                2755+         DC    HL1'3'                   m4 used
00003B50  01                                2756+         DC    HL1'1'                   m5 used
00003B51  01                                2757+         DC    HL1'1'              CC
00003B52  0B                                2758+         DC    HL1'11'             CC failed mask
00003B54  00000000 00000000                 2759+         DS    2F                  extracted PSW after test (has CC)
00003B5C  FF                                2760+         DC    X'FF'               extracted CC, if test failed
00003B5D  E5D7D2E2 40404040                 2761+         DC    CL8'VPKS'           instruction name
00003B68  00003BE0                          2762+         DC    A(RE55)             address of v1 result
00003B6C  00003BF0                          2763+         DC    A(RE55+16)          address of v2 source
00003B70  00003C00                          2764+         DC    A(RE55+32)          address of v3 source
00003B74  00000010                          2765+         DC    A(16)               result length
00003B78  00003BE0                          2766+REA55    DC    A(RE55)             result address
00003B80  00000000 00000000                 2767+         DS    2FD                  gap
00003B88  00000000 00000000
00003B90  00000000 00000000                 2768+V1O55    DS    XL16                V1 output
00003B98  00000000 00000000
00003BA0  00000000 00000000                 2769+         DS    2FD                  gap
00003BA8  00000000 00000000
                                            2770+*
00003BB0                                    2771+X55      DS    0F
00003BB0  E310 5024 0014          00000024  2772+         LGF   R1,V2ADDR           load v2 source
00003BB6  E761 0000 0806          00000000  2773+         VL    v22,0(R1)           use v21 to test decoder
00003BBC  E310 5028 0014          00000028  2774+         LGF   R1,V3ADDR           load v3 source
```

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  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

00003BC2  E771 0000 0806                 00000000  2775+         VL    v23,0(R1)           use v22 to test decoder
00003BC8  E756 7010 3E97                           2776+         VPKS  V21,V22,V23,3,1             test instruction
00003BCE  B98D 0020                                2777+         EPSW  R2,R0               extract psw
00003BD2  5020 500C                      0000000C  2778+         ST    R2,CCPSW               to save CC
00003BD6  E750 5048 080E                 00003B90  2779+         VST   V21,V1O55           save v1 output
00003BDC  07FB                                     2780+         BR    R11                 return
00003BE0                                           2781+RE55     DC    0F                  V1 for this test
00003BE0                                           2782+         DROP  R5
00003BE0  12030405 7FFFFFFF                        2783          DC    XL16'120304057FFFFFFF 1133557719BB2DFF'   result
00003BE8  11335577 19BB2DFF
00003BF0  00000000 12030405                        2784          DC    XL16'0000000012030405 08090A0B0C0D0E0F'   v2
00003BF8  08090A0B 0C0D0E0F
00003C00  00000000 11335577                        2785          DC    XL16'0000000011335577 0000000019BB2DFF'   v3
00003C08  00000000 19BB2DFF
                                                   2786
                                                   2787          VRR_B VPKS,3,1
00003C10                                           2788+         DS    0FD
00003C10                           00003C10        2789+         USING *,R5                base for test data and test routine
00003C10  00003C78                                 2790+T56      DC    A(X56)              address of test routine
00003C14  0038                                     2791+         DC    H'56'               test number
00003C16  00                                       2792+         DC    X'00'
00003C17  03                                       2793+         DC    HL1'3'                   m4 used
00003C18  01                                       2794+         DC    HL1'1'                   m5 used
00003C19  01                                       2795+         DC    HL1'1'              CC
00003C1A  0B                                       2796+         DC    HL1'11'             CC failed mask
00003C1C  00000000 00000000                        2797+         DS    2F                  extracted PSW after test (has CC)
00003C24  FF                                       2798+         DC    X'FF'               extracted CC, if test failed
00003C25  E5D7D2E2 40404040                        2799+         DC    CL8'VPKS'           instruction name
00003C30  00003CA8                                 2800+         DC    A(RE56)             address of v1 result
00003C34  00003CB8                                 2801+         DC    A(RE56+16)          address of v2 source
00003C38  00003CC8                                 2802+         DC    A(RE56+32)          address of v3 source
00003C3C  00000010                                 2803+         DC    A(16)               result length
00003C40  00003CA8                                 2804+REA56    DC    A(RE56)             result address
00003C48  00000000 00000000                        2805+         DS    2FD                  gap
00003C50  00000000 00000000
00003C58  00000000 00000000                        2806+V1O56    DS    XL16                V1 output
00003C60  00000000 00000000
00003C68  00000000 00000000                        2807+         DS    2FD                  gap
00003C70  00000000 00000000
                                                   2808+*
00003C78                                           2809+X56      DS    0F
00003C78  E310 5024 0014                 00000024  2810+         LGF   R1,V2ADDR           load v2 source
00003C7E  E761 0000 0806                 00000000  2811+         VL    v22,0(R1)           use v21 to test decoder
00003C84  E310 5028 0014                 00000028  2812+         LGF   R1,V3ADDR           load v3 source
00003C8A  E771 0000 0806                 00000000  2813+         VL    v23,0(R1)           use v22 to test decoder
00003C90  E756 7010 3E97                           2814+         VPKS  V21,V22,V23,3,1             test instruction
00003C96  B98D 0020                                2815+         EPSW  R2,R0               extract psw
00003C9A  5020 500C                      0000000C  2816+         ST    R2,CCPSW               to save CC
00003C9E  E750 5048 080E                 00003C58  2817+         VST   V21,V1O56           save v1 output
00003CA4  07FB                                     2818+         BR    R11                 return
00003CA8                                           2819+RE56     DC    0F                  V1 for this test
00003CA8                                           2820+         DROP  R5
00003CA8  11335577 19BB2DFF                        2821          DC    XL16'1133557719BB2DFF 120304057FFFFFFF'   result
00003CB0  12030405 7FFFFFFF
00003CB8  00000000 11335577                        2822          DC    XL16'0000000011335577 0000000019BB2DFF'   v2
00003CC0  00000000 19BB2DFF
```

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  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

00003CC8  00000000 12030405                        2823          DC    XL16'0000000012030405 08090A0B0C0D0E0F'   v3
00003CD0  08090A0B 0C0D0E0F
                                                   2824
                                                   2825          VRR_B VPKS,3,3
00003CD8                                           2826+         DS    0FD
00003CD8                     00003CD8              2827+         USING *,R5                base for test data and test routine
00003CD8  00003D40                                 2828+T57      DC    A(X57)              address of test routine
00003CDC  0039                                     2829+         DC    H'57'               test number
00003CDE  00                                       2830+         DC    X'00'
00003CDF  03                                       2831+         DC    HL1'3'                   m4 used
00003CE0  01                                       2832+         DC    HL1'1'                   m5 used
00003CE1  03                                       2833+         DC    HL1'3'              CC
00003CE2  0E                                       2834+         DC    HL1'14'             CC failed mask
00003CE4  00000000 00000000                        2835+         DS    2F                  extracted PSW after test (has CC)
00003CEC  FF                                       2836+         DC    X'FF'               extracted CC, if test failed
00003CED  E5D7D2E2 40404040                        2837+         DC    CL8'VPKS'           instruction name
00003CF8  00003D70                                 2838+         DC    A(RE57)             address of v1 result
00003CFC  00003D80                                 2839+         DC    A(RE57+16)          address of v2 source
00003D00  00003D90                                 2840+         DC    A(RE57+32)          address of v3 source
00003D04  00000010                                 2841+         DC    A(16)               result length
00003D08  00003D70                                 2842+REA57    DC    A(RE57)             result address
00003D10  00000000 00000000                        2843+         DS    2FD                  gap
00003D18  00000000 00000000
00003D20  00000000 00000000                        2844+V1O57    DS    XL16                V1 output
00003D28  00000000 00000000
00003D30  00000000 00000000                        2845+         DS    2FD                  gap
00003D38  00000000 00000000
                                                   2846+*
00003D40                                           2847+X57      DS    0F
00003D40  E310 5024 0014                 00000024  2848+         LGF   R1,V2ADDR           load v2 source
00003D46  E761 0000 0806                 00000000  2849+         VL    v22,0(R1)           use v21 to test decoder
00003D4C  E310 5028 0014                 00000028  2850+         LGF   R1,V3ADDR           load v3 source
00003D52  E771 0000 0806                 00000000  2851+         VL    v23,0(R1)           use v22 to test decoder
00003D58  E756 7010 3E97                           2852+         VPKS  V21,V22,V23,3,1               test instruction
00003D5E  B98D 0020                                2853+         EPSW  R2,R0               extract psw
00003D62  5020 500C                      0000000C  2854+         ST    R2,CCPSW               to save CC
00003D66  E750 5048 080E                 00003D20  2855+         VST   V21,V1O57           save v1 output
00003D6C  07FB                                     2856+         BR    R11                 return
00003D70                                           2857+RE57     DC    0F                  V1 for this test
00003D70                                           2858+         DROP  R5
00003D70  7FFFFFFF 7FFFFFFF                        2859          DC    XL16'7FFFFFFF7FFFFFFF 7FFFFFFF7FFFFFFF'   result
00003D78  7FFFFFFF 7FFFFFFF
00003D80  01110133 01550177                        2860          DC    XL16'0111013301550177 019901BB01DD01FF'   v2
00003D88  019901BB 01DD01FF
00003D90  01010203 04050607                        2861          DC    XL16'0101020304050607 08090A0B0C0D0E0F'   v3
00003D98  08090A0B 0C0D0E0F
                                                   2862
                                                   2863          VRR_B VPKS,3,3
00003DA0                                           2864+         DS    0FD
00003DA0                     00003DA0              2865+         USING *,R5                base for test data and test routine
00003DA0  00003E08                                 2866+T58      DC    A(X58)              address of test routine
00003DA4  003A                                     2867+         DC    H'58'               test number
00003DA6  00                                       2868+         DC    X'00'
00003DA7  03                                       2869+         DC    HL1'3'                   m4 used
00003DA8  01                                       2870+         DC    HL1'1'                   m5 used
00003DA9  03                                       2871+         DC    HL1'3'              CC
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

00003DAA  0E                                       2872+          DC    HL1'14'              CC failed mask
00003DAC  00000000 00000000                        2873+          DS    2F                   extracted PSW after test (has CC)
00003DB4  FF                                       2874+          DC    X'FF'                extracted CC, if test failed
00003DB5  E5D7D2E2 40404040                        2875+          DC    CL8'VPKS'            instruction name
00003DC0  00003E38                                 2876+          DC    A(RE58)              address of v1 result
00003DC4  00003E48                                 2877+          DC    A(RE58+16)           address of v2 source
00003DC8  00003E58                                 2878+          DC    A(RE58+32)           address of v3 source
00003DCC  00000010                                 2879+          DC    A(16)                result length
00003DD0  00003E38                                 2880+REA58     DC    A(RE58)              result address
00003DD8  00000000 00000000                        2881+          DS    2FD                   gap
00003DE0  00000000 00000000
00003DE8  00000000 00000000                        2882+V1O58     DS    XL16                 V1 output
00003DF0  00000000 00000000
00003DF8  00000000 00000000                        2883+          DS    2FD                   gap
00003E00  00000000 00000000
                                                   2884+*
00003E08                                           2885+X58       DS    0F
00003E08  E310 5024 0014                 00000024  2886+          LGF   R1,V2ADDR            load v2 source
00003E0E  E761 0000 0806                 00000000  2887+          VL    v22,0(R1)            use v21 to test decoder
00003E14  E310 5028 0014                 00000028  2888+          LGF   R1,V3ADDR            load v3 source
00003E1A  E771 0000 0806                 00000000  2889+          VL    v23,0(R1)            use v22 to test decoder
00003E20  E756 7010 3E97                           2890+          VPKS  V21,V22,V23,3,1                test instruction
00003E26  B98D 0020                                2891+          EPSW  R2,R0                extract psw
00003E2A  5020 500C                      0000000C  2892+          ST    R2,CCPSW                to save CC
00003E2E  E750 5048 080E                 00003DE8  2893+          VST   V21,V1O58            save v1 output
00003E34  07FB                                     2894+          BR    R11                  return
00003E38                                           2895+RE58      DC    0F                   V1 for this test
00003E38                                           2896+          DROP  R5
00003E38  7FFFFFFF 7FFFFFFF                        2897           DC    XL16'7FFFFFFF7FFFFFFF 7FFFFFFF7FFFFFFF'   result
00003E40  7FFFFFFF 7FFFFFFF
00003E48  01010203 04050607                        2898           DC    XL16'0101020304050607 08090A0B0C0D0E0F'   v2
00003E50  08090A0B 0C0D0E0F
00003E58  01110133 01550177                        2899           DC    XL16'0111013301550177 019901BB01DD01FF'   v3
00003E60  019901BB 01DD01FF
                                                   2900
                                                   2901           VRR_B VPKS,3,3
00003E68                                           2902+          DS    0FD
00003E68                           00003E68        2903+          USING *,R5                 base for test data and test routine
00003E68  00003ED0                                 2904+T59       DC    A(X59)               address of test routine
00003E6C  003B                                     2905+          DC    H'59'                test number
00003E6E  00                                       2906+          DC    X'00'
00003E6F  03                                       2907+          DC    HL1'3'                    m4 used
00003E70  01                                       2908+          DC    HL1'1'                    m5 used
00003E71  03                                       2909+          DC    HL1'3'               CC
00003E72  0E                                       2910+          DC    HL1'14'              CC failed mask
00003E74  00000000 00000000                        2911+          DS    2F                   extracted PSW after test (has CC)
00003E7C  FF                                       2912+          DC    X'FF'                extracted CC, if test failed
00003E7D  E5D7D2E2 40404040                        2913+          DC    CL8'VPKS'            instruction name
00003E88  00003F00                                 2914+          DC    A(RE59)              address of v1 result
00003E8C  00003F10                                 2915+          DC    A(RE59+16)           address of v2 source
00003E90  00003F20                                 2916+          DC    A(RE59+32)           address of v3 source
00003E94  00000010                                 2917+          DC    A(16)                result length
00003E98  00003F00                                 2918+REA59     DC    A(RE59)              result address
00003EA0  00000000 00000000                        2919+          DS    2FD                   gap
00003EA8  00000000 00000000
00003EB0  00000000 00000000                        2920+V1O59     DS    XL16                 V1 output
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

00003EB8  00000000 00000000
00003EC0  00000000 00000000                        2921+          DS    2FD                  gap
00003EC8  00000000 00000000
                                                   2922+*
00003ED0                                           2923+X59       DS    0F
00003ED0  E310 5024 0014                 00000024  2924+          LGF   R1,V2ADDR           load v2 source
00003ED6  E761 0000 0806                 00000000  2925+          VL    v22,0(R1)          use v21 to test decoder
00003EDC  E310 5028 0014                 00000028  2926+          LGF   R1,V3ADDR          load v3 source
00003EE2  E771 0000 0806                 00000000  2927+          VL    v23,0(R1)          use v22 to test decoder
00003EE8  E756 7010 3E97                           2928+          VPKS  V21,V22,V23,3,1            test instruction
00003EEE  B98D 0020                                2929+          EPSW  R2,R0              extract psw
00003EF2  5020 500C                      0000000C  2930+          ST    R2,CCPSW              to save CC
00003EF6  E750 5048 080E                 00003EB0  2931+          VST   V21,V1O59          save v1 output
00003EFC  07FB                                     2932+          BR    R11                return
00003F00                                           2933+RE59      DC    0F                 V1 for this test
00003F00                                           2934+          DROP  R5
00003F00  80000000 80000000                        2935           DC    XL16'8000000080000000 8000000080000000'   result
00003F08  80000000 80000000
00003F10  F111F133 F155F177                        2936           DC    XL16'F111F133F155F177 F199F1BBF1DDF1FF'   v2
00003F18  F199F1BB F1DDF1FF
00003F20  F101F203 F405F607                        2937           DC    XL16'F101F203F405F607 F809FAFBFCFDFE0F'   v3
00003F28  F809FAFB FCFDFE0F
                                                   2938
                                                   2939           VRR_B VPKS,3,3
00003F30                                           2940+          DS    0FD
00003F30                 00003F30                  2941+          USING *,R5               base for test data and test routine
00003F30  00003F98                                 2942+T60       DC    A(X60)             address of test routine
00003F34  003C                                     2943+          DC    H'60'              test number
00003F36  00                                       2944+          DC    X'00'
00003F37  03                                       2945+          DC    HL1'3'                  m4 used
00003F38  01                                       2946+          DC    HL1'1'                  m5 used
00003F39  03                                       2947+          DC    HL1'3'             CC
00003F3A  0E                                       2948+          DC    HL1'14'            CC failed mask
00003F3C  00000000 00000000                        2949+          DS    2F                 extracted PSW after test (has CC)
00003F44  FF                                       2950+          DC    X'FF'              extracted CC, if test failed
00003F45  E5D7D2E2 40404040                        2951+          DC    CL8'VPKS'          instruction name
00003F50  00003FC8                                 2952+          DC    A(RE60)            address of v1 result
00003F54  00003FD8                                 2953+          DC    A(RE60+16)         address of v2 source
00003F58  00003FE8                                 2954+          DC    A(RE60+32)         address of v3 source
00003F5C  00000010                                 2955+          DC    A(16)              result length
00003F60  00003FC8                                 2956+REA60     DC    A(RE60)            result address
00003F68  00000000 00000000                        2957+          DS    2FD                 gap
00003F70  00000000 00000000
00003F78  00000000 00000000                        2958+V1O60     DS    XL16               V1 output
00003F80  00000000 00000000
00003F88  00000000 00000000                        2959+          DS    2FD                 gap
00003F90  00000000 00000000
                                                   2960+*
00003F98                                           2961+X60       DS    0F
00003F98  E310 5024 0014                 00000024  2962+          LGF   R1,V2ADDR          load v2 source
00003F9E  E761 0000 0806                 00000000  2963+          VL    v22,0(R1)          use v21 to test decoder
00003FA4  E310 5028 0014                 00000028  2964+          LGF   R1,V3ADDR          load v3 source
00003FAA  E771 0000 0806                 00000000  2965+          VL    v23,0(R1)          use v22 to test decoder
00003FB0  E756 7010 3E97                           2966+          VPKS  V21,V22,V23,3,1            test instruction
00003FB6  B98D 0020                                2967+          EPSW  R2,R0              extract psw
00003FBA  5020 500C                      0000000C  2968+          ST    R2,CCPSW              to save CC
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
00003FBE  E750 5048 080E                 00003F78  2969+         VST   V21,V1O60          save v1 output
00003FC4  07FB                                     2970+         BR    R11               return
00003FC8                                           2971+RE60     DC    0F                V1 for this test
00003FC8                                           2972+         DROP  R5
00003FC8  80000000 80000000                        2973          DC    XL16'8000000080000000 8000000080000000'   result
00003FD0  80000000 80000000
00003FD8  F101F203 F405F607                        2974          DC    XL16'F101F203F405F607 F809FAFBFCFDFE0F'   v2
00003FE0  F809FAFB FCFDFE0F
00003FE8  F111F133 F155F177                        2975          DC    XL16'F111F133F155F177 F199F1BBF1DDF1FF'   v3
00003FF0  F199F1BB F1DDF1FF
                                                   2976
                                                   2977 *-------------------------------------------------------------------
                                                   2978 * VCEQ   - Vector Compare Equal
                                                   2979 *-------------------------------------------------------------------
                                                   2980 * cc=0: All elements equal
                                                   2981 * cc=1: At least one, but not all elements equal
                                                   2982 * cc=3: No element equal
                                                   2983 *-------------------------------------------------------------------
                                                   2984 * case -  simple cc debug
                                                   2985 *-------------------------------------------------------------------
                                                   2986 *Byte
                                                   2987          VRR_B VCEQ,0,0
00003FF8                                           2988+         DS    0FD
00003FF8                          00003FF8         2989+         USING *,R5              base for test data and test routine
00003FF8  00004060                                 2990+T61      DC    A(X61)            address of test routine
00003FFC  003D                                     2991+         DC    H'61'             test number
00003FFE  00                                       2992+         DC    X'00'
00003FFF  00                                       2993+         DC    HL1'0'                 m4 used
00004000  01                                       2994+         DC    HL1'1'                 m5 used
00004001  00                                       2995+         DC    HL1'0'            CC
00004002  07                                       2996+         DC    HL1'7'            CC failed mask
00004004  00000000 00000000                        2997+         DS    2F                extracted PSW after test (has CC)
0000400C  FF                                       2998+         DC    X'FF'             extracted CC, if test failed
0000400D  E5C3C5D8 40404040                        2999+         DC    CL8'VCEQ'         instruction name
00004018  00004090                                 3000+         DC    A(RE61)           address of v1 result
0000401C  000040A0                                 3001+         DC    A(RE61+16)        address of v2 source
00004020  000040B0                                 3002+         DC    A(RE61+32)        address of v3 source
00004024  00000010                                 3003+         DC    A(16)             result length
00004028  00004090                                 3004+REA61    DC    A(RE61)           result address
00004030  00000000 00000000                        3005+         DS    2FD                gap
00004038  00000000 00000000
00004040  00000000 00000000                        3006+V1O61    DS    XL16              V1 output
00004048  00000000 00000000
00004050  00000000 00000000                        3007+         DS    2FD                gap
00004058  00000000 00000000
                                                   3008+*
00004060                                           3009+X61      DS    0F
00004060  E310 5024 0014                 00000024  3010+         LGF   R1,V2ADDR         load v2 source
00004066  E761 0000 0806                 00000000  3011+         VL    v22,0(R1)         use v21 to test decoder
0000406C  E310 5028 0014                 00000028  3012+         LGF   R1,V3ADDR         load v3 source
00004072  E771 0000 0806                 00000000  3013+         VL    v23,0(R1)         use v22 to test decoder
00004078  E756 7010 0EF8                           3014+         VCEQ  V21,V22,V23,0,1           test instruction
0000407E  B98D 0020                                3015+         EPSW  R2,R0             extract psw
00004082  5020 500C                      0000000C  3016+         ST    R2,CCPSW             to save CC
00004086  E750 5048 080E                 00004040  3017+         VST   V21,V1O61         save v1 output
0000408C  07FB                                     3018+         BR    R11               return
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
00004090                                           3019+RE61     DC    0F                  V1 for this test
00004090                                           3020+         DROP  R5
00004090  FFFFFFFF FFFFFFFF                        3021          DC    XL16'FFFFFFFFFFFFFFFF FFFFFFFFFFFFFFFF'   result
00004098  FFFFFFFF FFFFFFFF
000040A0  00000000 00000000                        3022          DC    XL16'0000000000000000 0000000000000000'   v2
000040A8  00000000 00000000
000040B0  00000000 00000000                        3023          DC    XL16'0000000000000000 0000000000000000'   v3
000040B8  00000000 00000000
                                                   3024
                                                   3025          VRR_B VCEQ,0,1
000040C0                                           3026+         DS    0FD
000040C0                      000040C0             3027+         USING *,R5                base for test data and test routine
000040C0  00004128                                 3028+T62      DC    A(X62)              address of test routine
000040C4  003E                                     3029+         DC    H'62'               test number
000040C6  00                                       3030+         DC    X'00'
000040C7  00                                       3031+         DC    HL1'0'                   m4 used
000040C8  01                                       3032+         DC    HL1'1'                   m5 used
000040C9  01                                       3033+         DC    HL1'1'              CC
000040CA  0B                                       3034+         DC    HL1'11'             CC failed mask
000040CC  00000000 00000000                        3035+         DS    2F                  extracted PSW after test (has CC)
000040D4  FF                                       3036+         DC    X'FF'               extracted CC, if test failed
000040D5  E5C3C5D8 40404040                        3037+         DC    CL8'VCEQ'           instruction name
000040E0  00004158                                 3038+         DC    A(RE62)             address of v1 result
000040E4  00004168                                 3039+         DC    A(RE62+16)          address of v2 source
000040E8  00004178                                 3040+         DC    A(RE62+32)          address of v3 source
000040EC  00000010                                 3041+         DC    A(16)               result length
000040F0  00004158                                 3042+REA62    DC    A(RE62)             result address
000040F8  00000000 00000000                        3043+         DS    2FD                  gap
00004100  00000000 00000000
00004108  00000000 00000000                        3044+V1O62    DS    XL16                V1 output
00004110  00000000 00000000
00004118  00000000 00000000                        3045+         DS    2FD                  gap
00004120  00000000 00000000
                                                   3046+*
00004128                                           3047+X62      DS    0F
00004128  E310 5024 0014                 00000024  3048+         LGF   R1,V2ADDR           load v2 source
0000412E  E761 0000 0806                 00000000  3049+         VL    v22,0(R1)           use v21 to test decoder
00004134  E310 5028 0014                 00000028  3050+         LGF   R1,V3ADDR           load v3 source
0000413A  E771 0000 0806                 00000000  3051+         VL    v23,0(R1)           use v22 to test decoder
00004140  E756 7010 0EF8                           3052+         VCEQ  V21,V22,V23,0,1            test instruction
00004146  B98D 0020                                3053+         EPSW  R2,R0               extract psw
0000414A  5020 500C                      0000000C  3054+         ST    R2,CCPSW               to save CC
0000414E  E750 5048 080E                 00004108  3055+         VST   V21,V1O62           save v1 output
00004154  07FB                                     3056+         BR    R11                 return
00004158                                           3057+RE62     DC    0F                  V1 for this test
00004158                                           3058+         DROP  R5
00004158  FFFFFFFF FFFFFFFF                        3059          DC    XL16'FFFFFFFFFFFFFFFF 00000000FFFFFFFF'   result
00004160  00000000 FFFFFFFF
00004168  00000000 00000000                        3060          DC    XL16'0000000000000000 0000000000000000'   v2
00004170  00000000 00000000
00004178  00000000 00000000                        3061          DC    XL16'0000000000000000 8FFF8FFF00000000'   v3
00004180  8FFF8FFF 00000000
                                                   3062
                                                   3063          VRR_B VCEQ,0,3
00004188                                           3064+         DS    0FD
00004188                      00004188             3065+         USING *,R5                base for test data and test routine
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
00004188  000041F0                                3066+T63      DC    A(X63)            address of test routine
0000418C  003F                                    3067+         DC    H'63'             test number
0000418E  00                                      3068+         DC    X'00'
0000418F  00                                      3069+         DC    HL1'0'                 m4 used
00004190  01                                      3070+         DC    HL1'1'                 m5 used
00004191  03                                      3071+         DC    HL1'3'            CC
00004192  0E                                      3072+         DC    HL1'14'           CC failed mask
00004194  00000000 00000000                       3073+         DS    2F                extracted PSW after test (has CC)
0000419C  FF                                      3074+         DC    X'FF'             extracted CC, if test failed
0000419D  E5C3C5D8 40404040                       3075+         DC    CL8'VCEQ'         instruction name
000041A8  00004220                                3076+         DC    A(RE63)           address of v1 result
000041AC  00004230                                3077+         DC    A(RE63+16)        address of v2 source
000041B0  00004240                                3078+         DC    A(RE63+32)        address of v3 source
000041B4  00000010                                3079+         DC    A(16)             result length
000041B8  00004220                                3080+REA63    DC    A(RE63)           result address
000041C0  00000000 00000000                       3081+         DS    2FD                gap
000041C8  00000000 00000000
000041D0  00000000 00000000                       3082+V1O63    DS    XL16              V1 output
000041D8  00000000 00000000
000041E0  00000000 00000000                       3083+         DS    2FD                gap
000041E8  00000000 00000000
                                                  3084+*
000041F0                                          3085+X63      DS    0F
000041F0  E310 5024 0014                 00000024 3086+         LGF   R1,V2ADDR         load v2 source
000041F6  E761 0000 0806                 00000000 3087+         VL    v22,0(R1)         use v21 to test decoder
000041FC  E310 5028 0014                 00000028 3088+         LGF   R1,V3ADDR         load v3 source
00004202  E771 0000 0806                 00000000 3089+         VL    v23,0(R1)         use v22 to test decoder
00004208  E756 7010 0EF8                          3090+         VCEQ  V21,V22,V23,0,1           test instruction
0000420E  B98D 0020                               3091+         EPSW  R2,R0             extract psw
00004212  5020 500C                      0000000C 3092+         ST    R2,CCPSW             to save CC
00004216  E750 5048 080E                 000041D0 3093+         VST   V21,V1O63         save v1 output
0000421C  07FB                                    3094+         BR    R11               return
00004220                                          3095+RE63     DC    0F                V1 for this test
00004220                                          3096+         DROP  R5
00004220  00000000 00000000                       3097          DC    XL16'0000000000000000 0000000000000000'   result
00004228  00000000 00000000
00004230  FFFFFFFF FFFFFFFF                       3098          DC    XL16'FFFFFFFFFFFFFFFF FFFFFFFFFFFFFFFF'   v2
00004238  FFFFFFFF FFFFFFFF
00004240  00000000 00000000                       3099          DC    XL16'0000000000000000 0000000000000000'   v3
00004248  00000000 00000000
                                                  3100
                                                  3101 *Halfword
                                                  3102          VRR_B VCEQ,1,0
00004250                                          3103+         DS    0FD
00004250                         00004250         3104+         USING *,R5              base for test data and test routine
00004250  000042B8                                3105+T64      DC    A(X64)            address of test routine
00004254  0040                                    3106+         DC    H'64'             test number
00004256  00                                      3107+         DC    X'00'
00004257  01                                      3108+         DC    HL1'1'                 m4 used
00004258  01                                      3109+         DC    HL1'1'                 m5 used
00004259  00                                      3110+         DC    HL1'0'            CC
0000425A  07                                      3111+         DC    HL1'7'            CC failed mask
0000425C  00000000 00000000                       3112+         DS    2F                extracted PSW after test (has CC)
00004264  FF                                      3113+         DC    X'FF'             extracted CC, if test failed
00004265  E5C3C5D8 40404040                       3114+         DC    CL8'VCEQ'         instruction name
00004270  000042E8                                3115+         DC    A(RE64)           address of v1 result
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
00004274  000042F8                          3116+          DC    A(RE64+16)          address of v2 source
00004278  00004308                          3117+          DC    A(RE64+32)          address of v3 source
0000427C  00000010                          3118+          DC    A(16)               result length
00004280  000042E8                          3119+REA64     DC    A(RE64)             result address
00004288  00000000 00000000                 3120+          DS    2FD                  gap
00004290  00000000 00000000
00004298  00000000 00000000                 3121+V1O64     DS    XL16                V1 output
000042A0  00000000 00000000
000042A8  00000000 00000000                 3122+          DS    2FD                  gap
000042B0  00000000 00000000
                                            3123+*
000042B8                                    3124+X64       DS    0F
000042B8  E310 5024 0014          00000024  3125+          LGF   R1,V2ADDR           load v2 source
000042BE  E761 0000 0806          00000000  3126+          VL    v22,0(R1)           use v21 to test decoder
000042C4  E310 5028 0014          00000028  3127+          LGF   R1,V3ADDR           load v3 source
000042CA  E771 0000 0806          00000000  3128+          VL    v23,0(R1)           use v22 to test decoder
000042D0  E756 7010 1EF8                    3129+          VCEQ  V21,V22,V23,1,1              test instruction
000042D6  B98D 0020                         3130+          EPSW  R2,R0               extract psw
000042DA  5020 500C               0000000C  3131+          ST    R2,CCPSW               to save CC
000042DE  E750 5048 080E          00004298  3132+          VST   V21,V1O64           save v1 output
000042E4  07FB                              3133+          BR    R11                 return
000042E8                                    3134+RE64      DC    0F                  V1 for this test
000042E8                                    3135+          DROP  R5
000042E8  FFFFFFFF FFFFFFFF                 3136           DC    XL16'FFFFFFFFFFFFFFFF FFFFFFFFFFFFFFFF'   result
000042F0  FFFFFFFF FFFFFFFF
000042F8  00000000 00000000                 3137           DC    XL16'0000000000000000 0000000000000000'   v2
00004300  00000000 00000000
00004308  00000000 00000000                 3138           DC    XL16'0000000000000000 0000000000000000'   v3
00004310  00000000 00000000
                                            3139
                                            3140           VRR_B VCEQ,1,1
00004318                                    3141+          DS    0FD
00004318                    00004318        3142+          USING *,R5                base for test data and test routine
00004318  00004380                          3143+T65       DC    A(X65)              address of test routine
0000431C  0041                              3144+          DC    H'65'               test number
0000431E  00                                3145+          DC    X'00'
0000431F  01                                3146+          DC    HL1'1'                   m4 used
00004320  01                                3147+          DC    HL1'1'                   m5 used
00004321  01                                3148+          DC    HL1'1'              CC
00004322  0B                                3149+          DC    HL1'11'             CC failed mask
00004324  00000000 00000000                 3150+          DS    2F                  extracted PSW after test (has CC)
0000432C  FF                                3151+          DC    X'FF'               extracted CC, if test failed
0000432D  E5C3C5D8 40404040                 3152+          DC    CL8'VCEQ'           instruction name
00004338  000043B0                          3153+          DC    A(RE65)             address of v1 result
0000433C  000043C0                          3154+          DC    A(RE65+16)          address of v2 source
00004340  000043D0                          3155+          DC    A(RE65+32)          address of v3 source
00004344  00000010                          3156+          DC    A(16)               result length
00004348  000043B0                          3157+REA65     DC    A(RE65)             result address
00004350  00000000 00000000                 3158+          DS    2FD                  gap
00004358  00000000 00000000
00004360  00000000 00000000                 3159+V1O65     DS    XL16                V1 output
00004368  00000000 00000000
00004370  00000000 00000000                 3160+          DS    2FD                  gap
00004378  00000000 00000000
                                            3161+*
00004380                                    3162+X65       DS    0F
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

00004380  E310 5024 0014                 00000024  3163+          LGF    R1,V2ADDR           load v2 source
00004386  E761 0000 0806                 00000000  3164+          VL     v22,0(R1)           use v21 to test decoder
0000438C  E310 5028 0014                 00000028  3165+          LGF    R1,V3ADDR           load v3 source
00004392  E771 0000 0806                 00000000  3166+          VL     v23,0(R1)           use v22 to test decoder
00004398  E756 7010 1EF8                           3167+          VCEQ   V21,V22,V23,1,1               test instruction
0000439E  B98D 0020                                3168+          EPSW   R2,R0               extract psw
000043A2  5020 500C                      0000000C  3169+          ST     R2,CCPSW               to save CC
000043A6  E750 5048 080E                 00004360  3170+          VST    V21,V1O65           save v1 output
000043AC  07FB                                     3171+          BR     R11                 return
000043B0                                           3172+RE65      DC     0F                  V1 for this test
000043B0                                           3173+          DROP   R5
000043B0  FFFFFFFF FFFFFFFF                        3174           DC     XL16'FFFFFFFFFFFFFFFF 00000000FFFFFFFF'   result
000043B8  00000000 FFFFFFFF
000043C0  00000000 00000000                        3175           DC     XL16'0000000000000000 0000000000000000'   v2
000043C8  00000000 00000000
000043D0  00000000 00000000                        3176           DC     XL16'0000000000000000 8FFF8FFF00000000'   v3
000043D8  8FFF8FFF 00000000
                                                   3177
                                                   3178           VRR_B  VCEQ,1,3
000043E0                                           3179+          DS     0FD
000043E0                         000043E0          3180+          USING  *,R5                base for test data and test routine
000043E0  00004448                                 3181+T66       DC     A(X66)              address of test routine
000043E4  0042                                     3182+          DC     H'66'               test number
000043E6  00                                       3183+          DC     X'00'
000043E7  01                                       3184+          DC     HL1'1'                  m4 used
000043E8  01                                       3185+          DC     HL1'1'                  m5 used
000043E9  03                                       3186+          DC     HL1'3'              CC
000043EA  0E                                       3187+          DC     HL1'14'             CC failed mask
000043EC  00000000 00000000                        3188+          DS     2F                  extracted PSW after test (has CC)
000043F4  FF                                       3189+          DC     X'FF'               extracted CC, if test failed
000043F5  E5C3C5D8 40404040                        3190+          DC     CL8'VCEQ'           instruction name
00004400  00004478                                 3191+          DC     A(RE66)             address of v1 result
00004404  00004488                                 3192+          DC     A(RE66+16)          address of v2 source
00004408  00004498                                 3193+          DC     A(RE66+32)          address of v3 source
0000440C  00000010                                 3194+          DC     A(16)               result length
00004410  00004478                                 3195+REA66     DC     A(RE66)             result address
00004418  00000000 00000000                        3196+          DS     2FD                  gap
00004420  00000000 00000000
00004428  00000000 00000000                        3197+V1O66     DS     XL16                V1 output
00004430  00000000 00000000
00004438  00000000 00000000                        3198+          DS     2FD                  gap
00004440  00000000 00000000
                                                   3199+*
00004448                                           3200+X66       DS     0F
00004448  E310 5024 0014                 00000024  3201+          LGF    R1,V2ADDR           load v2 source
0000444E  E761 0000 0806                 00000000  3202+          VL     v22,0(R1)           use v21 to test decoder
00004454  E310 5028 0014                 00000028  3203+          LGF    R1,V3ADDR           load v3 source
0000445A  E771 0000 0806                 00000000  3204+          VL     v23,0(R1)           use v22 to test decoder
00004460  E756 7010 1EF8                           3205+          VCEQ   V21,V22,V23,1,1               test instruction
00004466  B98D 0020                                3206+          EPSW   R2,R0               extract psw
0000446A  5020 500C                      0000000C  3207+          ST     R2,CCPSW               to save CC
0000446E  E750 5048 080E                 00004428  3208+          VST    V21,V1O66           save v1 output
00004474  07FB                                     3209+          BR     R11                 return
00004478                                           3210+RE66      DC     0F                  V1 for this test
00004478                                           3211+          DROP   R5
00004478  00000000 00000000                        3212           DC     XL16'0000000000000000 0000000000000000'   result
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
00004480  00000000 00000000
00004488  FFFFFFFF FFFFFFFF                       3213           DC    XL16'FFFFFFFFFFFFFFFF FFFFFFFFFFFFFFFF'   v2
00004490  FFFFFFFF FFFFFFFF
00004498  00000000 00000000                       3214           DC    XL16'0000000000000000 0000000000000000'   v3
000044A0  00000000 00000000
                                                  3215
                                                  3216 *Word
                                                  3217           VRR_B VCEQ,2,0
000044A8                                          3218+          DS    0FD
000044A8                    000044A8              3219+          USING *,R5                base for test data and test routine
000044A8  00004510                                3220+T67       DC    A(X67)              address of test routine
000044AC  0043                                    3221+          DC    H'67'               test number
000044AE  00                                      3222+          DC    X'00'
000044AF  02                                      3223+          DC    HL1'2'                   m4 used
000044B0  01                                      3224+          DC    HL1'1'                   m5 used
000044B1  00                                      3225+          DC    HL1'0'              CC
000044B2  07                                      3226+          DC    HL1'7'              CC failed mask
000044B4  00000000 00000000                       3227+          DS    2F                  extracted PSW after test (has CC)
000044BC  FF                                      3228+          DC    X'FF'               extracted CC, if test failed
000044BD  E5C3C5D8 40404040                       3229+          DC    CL8'VCEQ'           instruction name
000044C8  00004540                                3230+          DC    A(RE67)             address of v1 result
000044CC  00004550                                3231+          DC    A(RE67+16)          address of v2 source
000044D0  00004560                                3232+          DC    A(RE67+32)          address of v3 source
000044D4  00000010                                3233+          DC    A(16)               result length
000044D8  00004540                                3234+REA67     DC    A(RE67)             result address
000044E0  00000000 00000000                       3235+          DS    2FD                  gap
000044E8  00000000 00000000
000044F0  00000000 00000000                       3236+V1O67     DS    XL16                V1 output
000044F8  00000000 00000000
00004500  00000000 00000000                       3237+          DS    2FD                  gap
00004508  00000000 00000000
                                                  3238+*
00004510                                          3239+X67       DS    0F
00004510  E310 5024 0014                  00000024 3240+          LGF   R1,V2ADDR           load v2 source
00004516  E761 0000 0806                  00000000 3241+          VL    v22,0(R1)           use v21 to test decoder
0000451C  E310 5028 0014                  00000028 3242+          LGF   R1,V3ADDR           load v3 source
00004522  E771 0000 0806                  00000000 3243+          VL    v23,0(R1)           use v22 to test decoder
00004528  E756 7010 2EF8                           3244+          VCEQ  V21,V22,V23,2,1               test instruction
0000452E  B98D 0020                                3245+          EPSW  R2,R0               extract psw
00004532  5020 500C                       0000000C 3246+          ST    R2,CCPSW               to save CC
00004536  E750 5048 080E                  000044F0 3247+          VST   V21,V1O67           save v1 output
0000453C  07FB                                     3248+          BR    R11                 return
00004540                                           3249+RE67      DC    0F                  V1 for this test
00004540                                           3250+          DROP  R5
00004540  FFFFFFFF FFFFFFFF                       3251           DC    XL16'FFFFFFFFFFFFFFFF FFFFFFFFFFFFFFFF'   result
00004548  FFFFFFFF FFFFFFFF
00004550  00000000 00000000                       3252           DC    XL16'0000000000000000 0000000000000000'   v2
00004558  00000000 00000000
00004560  00000000 00000000                       3253           DC    XL16'0000000000000000 0000000000000000'   v3
00004568  00000000 00000000
                                                  3254
                                                  3255           VRR_B VCEQ,2,1
00004570                                          3256+          DS    0FD
00004570                    00004570              3257+          USING *,R5                base for test data and test routine
00004570  000045D8                                3258+T68       DC    A(X68)              address of test routine
00004574  0044                                    3259+          DC    H'68'               test number
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
00004576  00                                       3260+          DC    X'00'
00004577  02                                       3261+          DC    HL1'2'                    m4 used
00004578  01                                       3262+          DC    HL1'1'                    m5 used
00004579  01                                       3263+          DC    HL1'1'              CC
0000457A  0B                                       3264+          DC    HL1'11'             CC failed mask
0000457C  00000000 00000000                        3265+          DS    2F                  extracted PSW after test (has CC)
00004584  FF                                       3266+          DC    X'FF'               extracted CC, if test failed
00004585  E5C3C5D8 40404040                       3267+          DC    CL8'VCEQ'           instruction name
00004590  00004608                                 3268+          DC    A(RE68)             address of v1 result
00004594  00004618                                 3269+          DC    A(RE68+16)          address of v2 source
00004598  00004628                                 3270+          DC    A(RE68+32)          address of v3 source
0000459C  00000010                                 3271+          DC    A(16)               result length
000045A0  00004608                                 3272+REA68     DC    A(RE68)             result address
000045A8  00000000 00000000                        3273+          DS    2FD                  gap
000045B0  00000000 00000000
000045B8  00000000 00000000                        3274+V1O68     DS    XL16                V1 output
000045C0  00000000 00000000
000045C8  00000000 00000000                        3275+          DS    2FD                  gap
000045D0  00000000 00000000
                                                   3276+*
000045D8                                           3277+X68       DS    0F
000045D8  E310 5024 0014                 00000024  3278+          LGF   R1,V2ADDR           load v2 source
000045DE  E761 0000 0806                 00000000  3279+          VL    v22,0(R1)           use v21 to test decoder
000045E4  E310 5028 0014                 00000028  3280+          LGF   R1,V3ADDR           load v3 source
000045EA  E771 0000 0806                 00000000  3281+          VL    v23,0(R1)           use v22 to test decoder
000045F0  E756 7010 2EF8                           3282+          VCEQ  V21,V22,V23,2,1               test instruction
000045F6  B98D 0020                                3283+          EPSW  R2,R0               extract psw
000045FA  5020 500C                      0000000C  3284+          ST    R2,CCPSW                 to save CC
000045FE  E750 5048 080E                 000045B8  3285+          VST   V21,V1O68           save v1 output
00004604  07FB                                     3286+          BR    R11                 return
00004608                                           3287+RE68      DC    0F                  V1 for this test
00004608                                           3288+          DROP  R5
00004608  FFFFFFFF FFFFFFFF                        3289           DC    XL16'FFFFFFFFFFFFFFFF 00000000FFFFFFFF'   result
00004610  00000000 FFFFFFFF
00004618  00000000 00000000                        3290           DC    XL16'0000000000000000 0000000000000000'   v2
00004620  00000000 00000000
00004628  00000000 00000000                        3291           DC    XL16'0000000000000000 8FFF8FFF00000000'   v3
00004630  8FFF8FFF 00000000
                                                   3292
                                                   3293           VRR_B VCEQ,2,3
00004638                                           3294+          DS    0FD
00004638                         00004638          3295+          USING *,R5                base for test data and test routine
00004638  000046A0                                 3296+T69       DC    A(X69)              address of test routine
0000463C  0045                                     3297+          DC    H'69'               test number
0000463E  00                                       3298+          DC    X'00'
0000463F  02                                       3299+          DC    HL1'2'                    m4 used
00004640  01                                       3300+          DC    HL1'1'                    m5 used
00004641  03                                       3301+          DC    HL1'3'              CC
00004642  0E                                       3302+          DC    HL1'14'             CC failed mask
00004644  00000000 00000000                        3303+          DS    2F                  extracted PSW after test (has CC)
0000464C  FF                                       3304+          DC    X'FF'               extracted CC, if test failed
0000464D  E5C3C5D8 40404040                        3305+          DC    CL8'VCEQ'           instruction name
00004658  000046D0                                 3306+          DC    A(RE69)             address of v1 result
0000465C  000046E0                                 3307+          DC    A(RE69+16)          address of v2 source
00004660  000046F0                                 3308+          DC    A(RE69+32)          address of v3 source
00004664  00000010                                 3309+          DC    A(16)               result length
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
00004668  000046D0                          3310+REA69    DC    A(RE69)            result address
00004670  00000000 00000000                 3311+         DS    2FD                 gap
00004678  00000000 00000000
00004680  00000000 00000000                 3312+V1O69    DS    XL16               V1 output
00004688  00000000 00000000
00004690  00000000 00000000                 3313+         DS    2FD                 gap
00004698  00000000 00000000
                                            3314+*
000046A0                                    3315+X69      DS    0F
000046A0  E310 5024 0014              00000024  3316+     LGF   R1,V2ADDR          load v2 source
000046A6  E761 0000 0806              00000000  3317+     VL    v22,0(R1)          use v21 to test decoder
000046AC  E310 5028 0014              00000028  3318+     LGF   R1,V3ADDR          load v3 source
000046B2  E771 0000 0806              00000000  3319+     VL    v23,0(R1)          use v22 to test decoder
000046B8  E756 7010 2EF8                        3320+     VCEQ  V21,V22,V23,2,1              test instruction
000046BE  B98D 0020                             3321+     EPSW  R2,R0              extract psw
000046C2  5020 500C                   0000000C  3322+     ST    R2,CCPSW              to save CC
000046C6  E750 5048 080E              00004680  3323+     VST   V21,V1O69          save v1 output
000046CC  07FB                                  3324+     BR    R11                return
000046D0                                        3325+RE69 DC    0F                 V1 for this test
000046D0                                        3326+     DROP  R5
000046D0  00000000 00000000                     3327      DC    XL16'0000000000000000 0000000000000000'   result
000046D8  00000000 00000000
000046E0  FFFFFFFF FFFFFFFF                     3328      DC    XL16'FFFFFFFFFFFFFFFF FFFFFFFFFFFFFFFF'   v2
000046E8  FFFFFFFF FFFFFFFF
000046F0  00000000 00000000                     3329      DC    XL16'0000000000000000 0000000000000000'   v3
000046F8  00000000 00000000
                                                3330
                                                3331 *Doubleword
                                                3332      VRR_B VCEQ,3,0
00004700                                        3333+     DS    0FD
00004700                        00004700        3334+     USING *,R5               base for test data and test routine
00004700  00004768                              3335+T70  DC    A(X70)             address of test routine
00004704  0046                                  3336+     DC    H'70'              test number
00004706  00                                    3337+     DC    X'00'
00004707  03                                    3338+     DC    HL1'3'                  m4 used
00004708  01                                    3339+     DC    HL1'1'                  m5 used
00004709  00                                    3340+     DC    HL1'0'             CC
0000470A  07                                    3341+     DC    HL1'7'             CC failed mask
0000470C  00000000 00000000                     3342+     DS    2F                 extracted PSW after test (has CC)
00004714  FF                                    3343+     DC    X'FF'              extracted CC, if test failed
00004715  E5C3C5D8 40404040                     3344+     DC    CL8'VCEQ'          instruction name
00004720  00004798                              3345+     DC    A(RE70)            address of v1 result
00004724  000047A8                              3346+     DC    A(RE70+16)         address of v2 source
00004728  000047B8                              3347+     DC    A(RE70+32)         address of v3 source
0000472C  00000010                              3348+     DC    A(16)              result length
00004730  00004798                              3349+REA70 DC   A(RE70)            result address
00004738  00000000 00000000                     3350+     DS    2FD                 gap
00004740  00000000 00000000
00004748  00000000 00000000                     3351+V1O70    DS    XL16           V1 output
00004750  00000000 00000000
00004758  00000000 00000000                     3352+     DS    2FD                 gap
00004760  00000000 00000000
                                                3353+*
00004768                                        3354+X70  DS    0F
00004768  E310 5024 0014              00000024  3355+     LGF   R1,V2ADDR          load v2 source
0000476E  E761 0000 0806              00000000  3356+     VL    v22,0(R1)          use v21 to test decoder
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

00004774  E310 5028 0014                 00000028  3357+         LGF   R1,V3ADDR          load v3 source
0000477A  E771 0000 0806                 00000000  3358+         VL    v23,0(R1)          use v22 to test decoder
00004780  E756 7010 3EF8                           3359+         VCEQ  V21,V22,V23,3,1              test instruction
00004786  B98D 0020                                3360+         EPSW  R2,R0              extract psw
0000478A  5020 500C                      0000000C  3361+         ST    R2,CCPSW              to save CC
0000478E  E750 5048 080E                 00004748  3362+         VST   V21,V1O70          save v1 output
00004794  07FB                                     3363+         BR    R11                return
00004798                                           3364+RE70     DC    0F                 V1 for this test
00004798                                           3365+         DROP  R5
00004798  FFFFFFFF FFFFFFFF                        3366          DC    XL16'FFFFFFFFFFFFFFFF FFFFFFFFFFFFFFFF'   result
000047A0  FFFFFFFF FFFFFFFF
000047A8  00000000 00000000                        3367          DC    XL16'0000000000000000 0000000000000000'   v2
000047B0  00000000 00000000
000047B8  00000000 00000000                        3368          DC    XL16'0000000000000000 0000000000000000'   v3
000047C0  00000000 00000000
                                                   3369
                                                   3370          VRR_B VCEQ,3,1
000047C8                                           3371+         DS    0FD
000047C8                         000047C8          3372+         USING *,R5               base for test data and test routine
000047C8  00004830                                 3373+T71      DC    A(X71)             address of test routine
000047CC  0047                                     3374+         DC    H'71'              test number
000047CE  00                                       3375+         DC    X'00'
000047CF  03                                       3376+         DC    HL1'3'                  m4 used
000047D0  01                                       3377+         DC    HL1'1'                  m5 used
000047D1  01                                       3378+         DC    HL1'1'             CC
000047D2  0B                                       3379+         DC    HL1'11'            CC failed mask
000047D4  00000000 00000000                        3380+         DS    2F                 extracted PSW after test (has CC)
000047DC  FF                                       3381+         DC    X'FF'              extracted CC, if test failed
000047DD  E5C3C5D8 40404040                        3382+         DC    CL8'VCEQ'          instruction name
000047E8  00004860                                 3383+         DC    A(RE71)            address of v1 result
000047EC  00004870                                 3384+         DC    A(RE71+16)         address of v2 source
000047F0  00004880                                 3385+         DC    A(RE71+32)         address of v3 source
000047F4  00000010                                 3386+         DC    A(16)              result length
000047F8  00004860                                 3387+REA71    DC    A(RE71)            result address
00004800  00000000 00000000                        3388+         DS    2FD                 gap
00004808  00000000 00000000
00004810  00000000 00000000                        3389+V1O71    DS    XL16               V1 output
00004818  00000000 00000000
00004820  00000000 00000000                        3390+         DS    2FD                 gap
00004828  00000000 00000000
                                                   3391+*
00004830                                           3392+X71      DS    0F
00004830  E310 5024 0014                 00000024  3393+         LGF   R1,V2ADDR          load v2 source
00004836  E761 0000 0806                 00000000  3394+         VL    v22,0(R1)          use v21 to test decoder
0000483C  E310 5028 0014                 00000028  3395+         LGF   R1,V3ADDR          load v3 source
00004842  E771 0000 0806                 00000000  3396+         VL    v23,0(R1)          use v22 to test decoder
00004848  E756 7010 3EF8                           3397+         VCEQ  V21,V22,V23,3,1              test instruction
0000484E  B98D 0020                                3398+         EPSW  R2,R0              extract psw
00004852  5020 500C                      0000000C  3399+         ST    R2,CCPSW              to save CC
00004856  E750 5048 080E                 00004810  3400+         VST   V21,V1O71          save v1 output
0000485C  07FB                                     3401+         BR    R11                return
00004860                                           3402+RE71     DC    0F                 V1 for this test
00004860                                           3403+         DROP  R5
00004860  FFFFFFFF FFFFFFFF                        3404          DC    XL16'FFFFFFFFFFFFFFFF 0000000000000000'   result
00004868  00000000 00000000
00004870  00000000 00000000                        3405          DC    XL16'0000000000000000 0000000000000000'   v2
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
00004878  00000000 00000000
00004880  00000000 00000000                       3406          DC    XL16'0000000000000000 8FFF8FFF00000000'   v3
00004888  8FFF8FFF 00000000
                                                  3407
                                                  3408          VRR_B VCEQ,3,3
00004890                                          3409+         DS    0FD
00004890                    00004890              3410+         USING *,R5              base for test data and test routine
00004890  000048F8                                3411+T72      DC    A(X72)            address of test routine
00004894  0048                                    3412+         DC    H'72'             test number
00004896  00                                      3413+         DC    X'00'
00004897  03                                      3414+         DC    HL1'3'                 m4 used
00004898  01                                      3415+         DC    HL1'1'                 m5 used
00004899  03                                      3416+         DC    HL1'3'            CC
0000489A  0E                                      3417+         DC    HL1'14'           CC failed mask
0000489C  00000000 00000000                       3418+         DS    2F                extracted PSW after test (has CC)
000048A4  FF                                      3419+         DC    X'FF'             extracted CC, if test failed
000048A5  E5C3C5D8 40404040                       3420+         DC    CL8'VCEQ'         instruction name
000048B0  00004928                                3421+         DC    A(RE72)           address of v1 result
000048B4  00004938                                3422+         DC    A(RE72+16)        address of v2 source
000048B8  00004948                                3423+         DC    A(RE72+32)        address of v3 source
000048BC  00000010                                3424+         DC    A(16)             result length
000048C0  00004928                                3425+REA72    DC    A(RE72)           result address
000048C8  00000000 00000000                       3426+         DS    2FD                gap
000048D0  00000000 00000000
000048D8  00000000 00000000                       3427+V1O72    DS    XL16              V1 output
000048E0  00000000 00000000
000048E8  00000000 00000000                       3428+         DS    2FD                gap
000048F0  00000000 00000000
                                                  3429+*
000048F8                                          3430+X72      DS    0F
000048F8  E310 5024 0014                00000024  3431+         LGF   R1,V2ADDR         load v2 source
000048FE  E761 0000 0806                00000000  3432+         VL    v22,0(R1)         use v21 to test decoder
00004904  E310 5028 0014                00000028  3433+         LGF   R1,V3ADDR         load v3 source
0000490A  E771 0000 0806                00000000  3434+         VL    v23,0(R1)         use v22 to test decoder
00004910  E756 7010 3EF8                          3435+         VCEQ  V21,V22,V23,3,1           test instruction
00004916  B98D 0020                               3436+         EPSW  R2,R0             extract psw
0000491A  5020 500C                     0000000C  3437+         ST    R2,CCPSW             to save CC
0000491E  E750 5048 080E                000048D8  3438+         VST   V21,V1O72         save v1 output
00004924  07FB                                    3439+         BR    R11               return
00004928                                          3440+RE72     DC    0F                V1 for this test
00004928                                          3441+         DROP  R5
00004928  00000000 00000000                       3442          DC    XL16'0000000000000000 0000000000000000'   result
00004930  00000000 00000000
00004938  FFFFFFFF FFFFFFFF                       3443          DC    XL16'FFFFFFFFFFFFFFFF FFFFFFFFFFFFFFFF'   v2
00004940  FFFFFFFF FFFFFFFF
00004948  00000000 00000000                       3444          DC    XL16'0000000000000000 0000000000000000'   v3
00004950  00000000 00000000
                                                  3445
                                                  3446 *-------------------------------------------------------------------
                                                  3447 * case -  general
                                                  3448 *-------------------------------------------------------------------
                                                  3449 *Byte
                                                  3450          VRR_B VCEQ,0,0
00004958                                          3451+         DS    0FD
00004958                    00004958              3452+         USING *,R5              base for test data and test routine
00004958  000049C0                                3453+T73      DC    A(X73)            address of test routine
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

0000495C  0049                           3454+          DC    H'73'               test number
0000495E  00                             3455+          DC    X'00'
0000495F  00                             3456+          DC    HL1'0'                   m4 used
00004960  01                             3457+          DC    HL1'1'                   m5 used
00004961  00                             3458+          DC    HL1'0'              CC
00004962  07                             3459+          DC    HL1'7'              CC failed mask
00004964  00000000 00000000              3460+          DS    2F                  extracted PSW after test (has CC)
0000496C  FF                             3461+          DC    X'FF'               extracted CC, if test failed
0000496D  E5C3C5D8 40404040              3462+          DC    CL8'VCEQ'           instruction name
00004978  000049F0                       3463+          DC    A(RE73)             address of v1 result
0000497C  00004A00                       3464+          DC    A(RE73+16)          address of v2 source
00004980  00004A10                       3465+          DC    A(RE73+32)          address of v3 source
00004984  00000010                       3466+          DC    A(16)               result length
00004988  000049F0                       3467+REA73     DC    A(RE73)             result address
00004990  00000000 00000000              3468+          DS    2FD                  gap
00004998  00000000 00000000
000049A0  00000000 00000000              3469+V1O73     DS    XL16                V1 output
000049A8  00000000 00000000
000049B0  00000000 00000000              3470+          DS    2FD                  gap
000049B8  00000000 00000000
                                         3471+*
000049C0                                 3472+X73       DS    0F
000049C0  E310 5024 0014         00000024 3473+          LGF   R1,V2ADDR           load v2 source
000049C6  E761 0000 0806         00000000 3474+          VL    v22,0(R1)           use v21 to test decoder
000049CC  E310 5028 0014         00000028 3475+          LGF   R1,V3ADDR           load v3 source
000049D2  E771 0000 0806         00000000 3476+          VL    v23,0(R1)           use v22 to test decoder
000049D8  E756 7010 0EF8                 3477+          VCEQ  V21,V22,V23,0,1                test instruction
000049DE  B98D 0020                      3478+          EPSW  R2,R0               extract psw
000049E2  5020 500C              0000000C 3479+          ST    R2,CCPSW               to save CC
000049E6  E750 5048 080E         000049A0 3480+          VST   V21,V1O73           save v1 output
000049EC  07FB                           3481+          BR    R11                 return
000049F0                                 3482+RE73      DC    0F                  V1 for this test
000049F0                                 3483+          DROP  R5
000049F0  FFFFFFFF FFFFFFFF              3484           DC    XL16'FFFFFFFFFFFFFFFF FFFFFFFFFFFFFFFF'   result
000049F8  FFFFFFFF FFFFFFFF
00004A00  00110033 00550077              3485           DC    XL16'0011003300550077 0022004400660008'   v2
00004A08  00220044 00660008
00004A10  00110033 00550077              3486           DC    XL16'0011003300550077 0022004400660008'   v3
00004A18  00220044 00660008
                                         3487
                                         3488           VRR_B VCEQ,0,0
00004A20                                 3489+          DS    0FD
00004A20                  00004A20       3490+          USING *,R5                base for test data and test routine
00004A20  00004A88                       3491+T74       DC    A(X74)              address of test routine
00004A24  004A                           3492+          DC    H'74'               test number
00004A26  00                             3493+          DC    X'00'
00004A27  00                             3494+          DC    HL1'0'                   m4 used
00004A28  01                             3495+          DC    HL1'1'                   m5 used
00004A29  00                             3496+          DC    HL1'0'              CC
00004A2A  07                             3497+          DC    HL1'7'              CC failed mask
00004A2C  00000000 00000000              3498+          DS    2F                  extracted PSW after test (has CC)
00004A34  FF                             3499+          DC    X'FF'               extracted CC, if test failed
00004A35  E5C3C5D8 40404040              3500+          DC    CL8'VCEQ'           instruction name
00004A40  00004AB8                       3501+          DC    A(RE74)             address of v1 result
00004A44  00004AC8                       3502+          DC    A(RE74+16)          address of v2 source
00004A48  00004AD8                       3503+          DC    A(RE74+32)          address of v3 source
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
00004A4C  00000010                                3504+          DC    A(16)               result length
00004A50  00004AB8                                3505+REA74     DC    A(RE74)             result address
00004A58  00000000 00000000                       3506+          DS    2FD                  gap
00004A60  00000000 00000000
00004A68  00000000 00000000                       3507+V1O74     DS    XL16                V1 output
00004A70  00000000 00000000
00004A78  00000000 00000000                       3508+          DS    2FD                  gap
00004A80  00000000 00000000
                                                  3509+*
00004A88                                          3510+X74       DS    0F
00004A88  E310 5024 0014                 00000024 3511+          LGF   R1,V2ADDR           load v2 source
00004A8E  E761 0000 0806                 00000000 3512+          VL    v22,0(R1)           use v21 to test decoder
00004A94  E310 5028 0014                 00000028 3513+          LGF   R1,V3ADDR           load v3 source
00004A9A  E771 0000 0806                 00000000 3514+          VL    v23,0(R1)           use v22 to test decoder
00004AA0  E756 7010 0EF8                          3515+          VCEQ  V21,V22,V23,0,1              test instruction
00004AA6  B98D 0020                               3516+          EPSW  R2,R0               extract psw
00004AAA  5020 500C                      0000000C 3517+          ST    R2,CCPSW               to save CC
00004AAE  E750 5048 080E                 00004A68 3518+          VST   V21,V1O74           save v1 output
00004AB4  07FB                                    3519+          BR    R11                 return
00004AB8                                          3520+RE74      DC    0F                  V1 for this test
00004AB8                                          3521+          DROP  R5
00004AB8  FFFFFFFF FFFFFFFF                       3522           DC    XL16'FFFFFFFFFFFFFFFF FFFFFFFFFFFFFFFF'   result
00004AC0  FFFFFFFF FFFFFFFF
00004AC8  FFFEFFFD FFFCFFFB                       3523           DC    XL16'FFFEFFFDFFFCFFFB FFFAFFF9FFF8FFF7'   v2
00004AD0  FFFAFFF9 FFF8FFF7
00004AD8  FFFEFFFD FFFCFFFB                       3524           DC    XL16'FFFEFFFDFFFCFFFB FFFAFFF9FFF8FFF7'   v3
00004AE0  FFFAFFF9 FFF8FFF7
                                                  3525
                                                  3526           VRR_B VCEQ,0,1
00004AE8                                          3527+          DS    0FD
00004AE8                         00004AE8         3528+          USING *,R5                base for test data and test routine
00004AE8  00004B50                                3529+T75       DC    A(X75)              address of test routine
00004AEC  004B                                    3530+          DC    H'75'               test number
00004AEE  00                                      3531+          DC    X'00'
00004AEF  00                                      3532+          DC    HL1'0'                   m4 used
00004AF0  01                                      3533+          DC    HL1'1'                   m5 used
00004AF1  01                                      3534+          DC    HL1'1'              CC
00004AF2  0B                                      3535+          DC    HL1'11'             CC failed mask
00004AF4  00000000 00000000                       3536+          DS    2F                  extracted PSW after test (has CC)
00004AFC  FF                                      3537+          DC    X'FF'               extracted CC, if test failed
00004AFD  E5C3C5D8 40404040                       3538+          DC    CL8'VCEQ'           instruction name
00004B08  00004B80                                3539+          DC    A(RE75)             address of v1 result
00004B0C  00004B90                                3540+          DC    A(RE75+16)          address of v2 source
00004B10  00004BA0                                3541+          DC    A(RE75+32)          address of v3 source
00004B14  00000010                                3542+          DC    A(16)               result length
00004B18  00004B80                                3543+REA75     DC    A(RE75)             result address
00004B20  00000000 00000000                       3544+          DS    2FD                  gap
00004B28  00000000 00000000
00004B30  00000000 00000000                       3545+V1O75     DS    XL16                V1 output
00004B38  00000000 00000000
00004B40  00000000 00000000                       3546+          DS    2FD                  gap
00004B48  00000000 00000000
                                                  3547+*
00004B50                                          3548+X75       DS    0F
00004B50  E310 5024 0014                 00000024 3549+          LGF   R1,V2ADDR           load v2 source
00004B56  E761 0000 0806                 00000000 3550+          VL    v22,0(R1)           use v21 to test decoder
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

00004B5C  E310 5028 0014                 00000028  3551+         LGF   R1,V3ADDR          load v3 source
00004B62  E771 0000 0806                 00000000  3552+         VL    v23,0(R1)          use v22 to test decoder
00004B68  E756 7010 0EF8                           3553+         VCEQ  V21,V22,V23,0,1              test instruction
00004B6E  B98D 0020                                3554+         EPSW  R2,R0              extract psw
00004B72  5020 500C                      0000000C  3555+         ST    R2,CCPSW              to save CC
00004B76  E750 5048 080E                 00004B30  3556+         VST   V21,V1O75          save v1 output
00004B7C  07FB                                     3557+         BR    R11                return
00004B80                                           3558+RE75     DC    0F                 V1 for this test
00004B80                                           3559+         DROP  R5
00004B80  FF000000 00000000                        3560          DC    XL16'FF00000000000000 FFFFFFFFFFFFFFFF'   result
00004B88  FFFFFFFF FFFFFFFF
00004B90  00010203 04050607                        3561          DC    XL16'0001020304050607 08090A0B0C0DFE0F'   v2
00004B98  08090A0B 0C0DFE0F
00004BA0  00110033 00550077                        3562          DC    XL16'0011003300550077 08090A0B0C0DFE0F'   v3
00004BA8  08090A0B 0C0DFE0F
                                                   3563
                                                   3564          VRR_B VCEQ,0,1
00004BB0                                           3565+         DS    0FD
00004BB0                           00004BB0        3566+         USING *,R5               base for test data and test routine
00004BB0  00004C18                                 3567+T76      DC    A(X76)             address of test routine
00004BB4  004C                                     3568+         DC    H'76'              test number
00004BB6  00                                       3569+         DC    X'00'
00004BB7  00                                       3570+         DC    HL1'0'                  m4 used
00004BB8  01                                       3571+         DC    HL1'1'                  m5 used
00004BB9  01                                       3572+         DC    HL1'1'             CC
00004BBA  0B                                       3573+         DC    HL1'11'            CC failed mask
00004BBC  00000000 00000000                        3574+         DS    2F                 extracted PSW after test (has CC)
00004BC4  FF                                       3575+         DC    X'FF'              extracted CC, if test failed
00004BC5  E5C3C5D8 40404040                        3576+         DC    CL8'VCEQ'          instruction name
00004BD0  00004C48                                 3577+         DC    A(RE76)            address of v1 result
00004BD4  00004C58                                 3578+         DC    A(RE76+16)         address of v2 source
00004BD8  00004C68                                 3579+         DC    A(RE76+32)         address of v3 source
00004BDC  00000010                                 3580+         DC    A(16)              result length
00004BE0  00004C48                                 3581+REA76    DC    A(RE76)            result address
00004BE8  00000000 00000000                        3582+         DS    2FD                 gap
00004BF0  00000000 00000000
00004BF8  00000000 00000000                        3583+V1O76    DS    XL16               V1 output
00004C00  00000000 00000000
00004C08  00000000 00000000                        3584+         DS    2FD                 gap
00004C10  00000000 00000000
                                                   3585+*
00004C18                                           3586+X76      DS    0F
00004C18  E310 5024 0014                 00000024  3587+         LGF   R1,V2ADDR          load v2 source
00004C1E  E761 0000 0806                 00000000  3588+         VL    v22,0(R1)          use v21 to test decoder
00004C24  E310 5028 0014                 00000028  3589+         LGF   R1,V3ADDR          load v3 source
00004C2A  E771 0000 0806                 00000000  3590+         VL    v23,0(R1)          use v22 to test decoder
00004C30  E756 7010 0EF8                           3591+         VCEQ  V21,V22,V23,0,1              test instruction
00004C36  B98D 0020                                3592+         EPSW  R2,R0              extract psw
00004C3A  5020 500C                      0000000C  3593+         ST    R2,CCPSW              to save CC
00004C3E  E750 5048 080E                 00004BF8  3594+         VST   V21,V1O76          save v1 output
00004C44  07FB                                     3595+         BR    R11                return
00004C48                                           3596+RE76     DC    0F                 V1 for this test
00004C48                                           3597+         DROP  R5
00004C48  FFFFFFFF FFFFFFFF                        3598          DC    XL16'FFFFFFFFFFFFFFFF FF00000000000000'   result
00004C50  FF000000 00000000
00004C58  08090A0B 0C0DFE0F                        3599          DC    XL16'08090A0B0C0DFE0F 0001020304050607'   v2
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
00004C60  00010203 04050607
00004C68  08090A0B 0C0DFE0F                        3600           DC    XL16'08090A0B0C0DFE0F 0011003300550077'   v3
00004C70  00110033 00550077
                                                   3601
                                                   3602           VRR_B VCEQ,0,3
00004C78                                           3603+          DS    0FD
00004C78                     00004C78              3604+          USING *,R5               base for test data and test routine
00004C78  00004CE0                                 3605+T77       DC    A(X77)             address of test routine
00004C7C  004D                                     3606+          DC    H'77'              test number
00004C7E  00                                       3607+          DC    X'00'
00004C7F  00                                       3608+          DC    HL1'0'                  m4 used
00004C80  01                                       3609+          DC    HL1'1'                  m5 used
00004C81  03                                       3610+          DC    HL1'3'             CC
00004C82  0E                                       3611+          DC    HL1'14'            CC failed mask
00004C84  00000000 00000000                        3612+          DS    2F                 extracted PSW after test (has CC)
00004C8C  FF                                       3613+          DC    X'FF'              extracted CC, if test failed
00004C8D  E5C3C5D8 40404040                        3614+          DC    CL8'VCEQ'          instruction name
00004C98  00004D10                                 3615+          DC    A(RE77)            address of v1 result
00004C9C  00004D20                                 3616+          DC    A(RE77+16)         address of v2 source
00004CA0  00004D30                                 3617+          DC    A(RE77+32)         address of v3 source
00004CA4  00000010                                 3618+          DC    A(16)              result length
00004CA8  00004D10                                 3619+REA77     DC    A(RE77)            result address
00004CB0  00000000 00000000                        3620+          DS    2FD                 gap
00004CB8  00000000 00000000
00004CC0  00000000 00000000                        3621+V1O77     DS    XL16               V1 output
00004CC8  00000000 00000000
00004CD0  00000000 00000000                        3622+          DS    2FD                 gap
00004CD8  00000000 00000000
                                                   3623+*
00004CE0                                           3624+X77       DS    0F
00004CE0  E310 5024 0014                 00000024  3625+          LGF   R1,V2ADDR          load v2 source
00004CE6  E761 0000 0806                 00000000  3626+          VL    v22,0(R1)          use v21 to test decoder
00004CEC  E310 5028 0014                 00000028  3627+          LGF   R1,V3ADDR          load v3 source
00004CF2  E771 0000 0806                 00000000  3628+          VL    v23,0(R1)          use v22 to test decoder
00004CF8  E756 7010 0EF8                           3629+          VCEQ  V21,V22,V23,0,1             test instruction
00004CFE  B98D 0020                                3630+          EPSW  R2,R0              extract psw
00004D02  5020 500C                      0000000C  3631+          ST    R2,CCPSW              to save CC
00004D06  E750 5048 080E                 00004CC0  3632+          VST   V21,V1O77          save v1 output
00004D0C  07FB                                     3633+          BR    R11                return
00004D10                                           3634+RE77      DC    0F                 V1 for this test
00004D10                                           3635+          DROP  R5
00004D10  00000000 00000000                        3636           DC    XL16'0000000000000000 0000000000000000'   result
00004D18  00000000 00000000
00004D20  01110133 01550177                        3637           DC    XL16'0111013301550177 019901BB01DD01FF'   v2
00004D28  019901BB 01DD01FF
00004D30  00010203 04050607                        3638           DC    XL16'0001020304050607 08090A0B0C0D0E0F'   v3
00004D38  08090A0B 0C0D0E0F
                                                   3639
                                                   3640           VRR_B VCEQ,0,3
00004D40                                           3641+          DS    0FD
00004D40                     00004D40              3642+          USING *,R5               base for test data and test routine
00004D40  00004DA8                                 3643+T78       DC    A(X78)             address of test routine
00004D44  004E                                     3644+          DC    H'78'              test number
00004D46  00                                       3645+          DC    X'00'
00004D47  00                                       3646+          DC    HL1'0'                  m4 used
00004D48  01                                       3647+          DC    HL1'1'                  m5 used
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
00004D49  03                                       3648+          DC    HL1'3'                CC
00004D4A  0E                                       3649+          DC    HL1'14'               CC failed mask
00004D4C  00000000 00000000                        3650+          DS    2F                    extracted PSW after test (has CC)
00004D54  FF                                       3651+          DC    X'FF'                 extracted CC, if test failed
00004D55  E5C3C5D8 40404040                        3652+          DC    CL8'VCEQ'             instruction name
00004D60  00004DD8                                 3653+          DC    A(RE78)               address of v1 result
00004D64  00004DE8                                 3654+          DC    A(RE78+16)            address of v2 source
00004D68  00004DF8                                 3655+          DC    A(RE78+32)            address of v3 source
00004D6C  00000010                                 3656+          DC    A(16)                 result length
00004D70  00004DD8                                 3657+REA78     DC    A(RE78)               result address
00004D78  00000000 00000000                        3658+          DS    2FD                    gap
00004D80  00000000 00000000
00004D88  00000000 00000000                        3659+V1O78     DS    XL16                  V1 output
00004D90  00000000 00000000
00004D98  00000000 00000000                        3660+          DS    2FD                    gap
00004DA0  00000000 00000000
                                                   3661+*
00004DA8                                           3662+X78       DS    0F
00004DA8  E310 5024 0014                 00000024  3663+          LGF   R1,V2ADDR             load v2 source
00004DAE  E761 0000 0806                 00000000  3664+          VL    v22,0(R1)             use v21 to test decoder
00004DB4  E310 5028 0014                 00000028  3665+          LGF   R1,V3ADDR             load v3 source
00004DBA  E771 0000 0806                 00000000  3666+          VL    v23,0(R1)             use v22 to test decoder
00004DC0  E756 7010 0EF8                           3667+          VCEQ  V21,V22,V23,0,1                test instruction
00004DC6  B98D 0020                                3668+          EPSW  R2,R0                 extract psw
00004DCA  5020 500C                      0000000C  3669+          ST    R2,CCPSW                 to save CC
00004DCE  E750 5048 080E                 00004D88  3670+          VST   V21,V1O78             save v1 output
00004DD4  07FB                                     3671+          BR    R11                   return
00004DD8                                           3672+RE78      DC    0F                    V1 for this test
00004DD8                                           3673+          DROP  R5
00004DD8  00000000 00000000                        3674           DC    XL16'0000000000000000 0000000000000000'   result
00004DE0  00000000 00000000
00004DE8  00010203 04050607                        3675           DC    XL16'0001020304050607 08090A0B0C0D0E0F'   v2
00004DF0  08090A0B 0C0D0E0F
00004DF8  01110133 01550177                        3676           DC    XL16'0111013301550177 019901BB01DD01FF'   v3
00004E00  019901BB 01DD01FF
                                                   3677
                                                   3678 *Halfword
                                                   3679           VRR_B VCEQ,1,0
00004E08                                           3680+          DS    0FD
00004E08                       00004E08            3681+          USING *,R5                  base for test data and test routine
00004E08  00004E70                                 3682+T79       DC    A(X79)                address of test routine
00004E0C  004F                                     3683+          DC    H'79'                 test number
00004E0E  00                                       3684+          DC    X'00'
00004E0F  01                                       3685+          DC    HL1'1'                     m4 used
00004E10  01                                       3686+          DC    HL1'1'                     m5 used
00004E11  00                                       3687+          DC    HL1'0'                CC
00004E12  07                                       3688+          DC    HL1'7'                CC failed mask
00004E14  00000000 00000000                        3689+          DS    2F                    extracted PSW after test (has CC)
00004E1C  FF                                       3690+          DC    X'FF'                 extracted CC, if test failed
00004E1D  E5C3C5D8 40404040                        3691+          DC    CL8'VCEQ'             instruction name
00004E28  00004EA0                                 3692+          DC    A(RE79)               address of v1 result
00004E2C  00004EB0                                 3693+          DC    A(RE79+16)            address of v2 source
00004E30  00004EC0                                 3694+          DC    A(RE79+32)            address of v3 source
00004E34  00000010                                 3695+          DC    A(16)                 result length
00004E38  00004EA0                                 3696+REA79     DC    A(RE79)               result address
00004E40  00000000 00000000                        3697+          DS    2FD                    gap
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
00004E48  00000000 00000000
00004E50  00000000 00000000                        3698+V1O79    DS    XL16               V1 output
00004E58  00000000 00000000
00004E60  00000000 00000000                        3699+         DS    2FD                 gap
00004E68  00000000 00000000
                                                   3700+*
00004E70                                           3701+X79      DS    0F
00004E70  E310 5024 0014                 00000024  3702+          LGF   R1,V2ADDR          load v2 source
00004E76  E761 0000 0806                 00000000  3703+          VL    v22,0(R1)          use v21 to test decoder
00004E7C  E310 5028 0014                 00000028  3704+          LGF   R1,V3ADDR          load v3 source
00004E82  E771 0000 0806                 00000000  3705+          VL    v23,0(R1)          use v22 to test decoder
00004E88  E756 7010 1EF8                           3706+          VCEQ  V21,V22,V23,1,1              test instruction
00004E8E  B98D 0020                                3707+          EPSW  R2,R0              extract psw
00004E92  5020 500C                      0000000C  3708+          ST    R2,CCPSW              to save CC
00004E96  E750 5048 080E                 00004E50  3709+          VST   V21,V1O79          save v1 output
00004E9C  07FB                                     3710+          BR    R11                return
00004EA0                                           3711+RE79     DC    0F                 V1 for this test
00004EA0                                           3712+          DROP  R5
00004EA0  FFFFFFFF FFFFFFFF                        3713           DC    XL16'FFFFFFFFFFFFFFFF FFFFFFFFFFFFFFFF'   result
00004EA8  FFFFFFFF FFFFFFFF
00004EB0  00110033 00550077                        3714           DC    XL16'0011003300550077 0022004400660008'   v2
00004EB8  00220044 00660008
00004EC0  00110033 00550077                        3715           DC    XL16'0011003300550077 0022004400660008'   v3
00004EC8  00220044 00660008
                                                   3716
                                                   3717           VRR_B VCEQ,1,0
00004ED0                                           3718+          DS    0FD
00004ED0                         00004ED0          3719+          USING *,R5               base for test data and test routine
00004ED0  00004F38                                 3720+T80       DC    A(X80)             address of test routine
00004ED4  0050                                     3721+          DC    H'80'              test number
00004ED6  00                                       3722+          DC    X'00'
00004ED7  01                                       3723+          DC    HL1'1'                  m4 used
00004ED8  01                                       3724+          DC    HL1'1'                  m5 used
00004ED9  00                                       3725+          DC    HL1'0'             CC
00004EDA  07                                       3726+          DC    HL1'7'             CC failed mask
00004EDC  00000000 00000000                        3727+          DS    2F                 extracted PSW after test (has CC)
00004EE4  FF                                       3728+          DC    X'FF'              extracted CC, if test failed
00004EE5  E5C3C5D8 40404040                        3729+          DC    CL8'VCEQ'          instruction name
00004EF0  00004F68                                 3730+          DC    A(RE80)            address of v1 result
00004EF4  00004F78                                 3731+          DC    A(RE80+16)         address of v2 source
00004EF8  00004F88                                 3732+          DC    A(RE80+32)         address of v3 source
00004EFC  00000010                                 3733+          DC    A(16)              result length
00004F00  00004F68                                 3734+REA80     DC    A(RE80)            result address
00004F08  00000000 00000000                        3735+          DS    2FD                 gap
00004F10  00000000 00000000
00004F18  00000000 00000000                        3736+V1O80     DS    XL16               V1 output
00004F20  00000000 00000000
00004F28  00000000 00000000                        3737+          DS    2FD                 gap
00004F30  00000000 00000000
                                                   3738+*
00004F38                                           3739+X80       DS    0F
00004F38  E310 5024 0014                 00000024  3740+          LGF   R1,V2ADDR          load v2 source
00004F3E  E761 0000 0806                 00000000  3741+          VL    v22,0(R1)          use v21 to test decoder
00004F44  E310 5028 0014                 00000028  3742+          LGF   R1,V3ADDR          load v3 source
00004F4A  E771 0000 0806                 00000000  3743+          VL    v23,0(R1)          use v22 to test decoder
00004F50  E756 7010 1EF8                           3744+          VCEQ  V21,V22,V23,1,1              test instruction
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

00004F56  B98D 0020                            3745+          EPSW  R2,R0               extract psw
00004F5A  5020 500C                 0000000C   3746+          ST    R2,CCPSW              to save CC
00004F5E  E750 5048 080E            00004F18   3747+          VST   V21,V1O80             save v1 output
00004F64  07FB                                 3748+          BR    R11                   return
00004F68                                       3749+RE80      DC    0F                    V1 for this test
00004F68                                       3750+          DROP  R5
00004F68  FFFFFFFF FFFFFFFF                    3751           DC    XL16'FFFFFFFFFFFFFFFF FFFFFFFFFFFFFFFF'   result
00004F70  FFFFFFFF FFFFFFFF
00004F78  FFFEFFFD FFFCFFFB                    3752           DC    XL16'FFFEFFFDFFFCFFFB FFFAFFF9FFF8FFF7'   v2
00004F80  FFFAFFF9 FFF8FFF7
00004F88  FFFEFFFD FFFCFFFB                    3753           DC    XL16'FFFEFFFDFFFCFFFB FFFAFFF9FFF8FFF7'   v3
00004F90  FFFAFFF9 FFF8FFF7
                                               3754
                                               3755           VRR_B VCEQ,1,1
00004F98                                       3756+          DS    0FD
00004F98                    00004F98           3757+          USING *,R5                  base for test data and test routine
00004F98  00005000                             3758+T81       DC    A(X81)                address of test routine
00004F9C  0051                                 3759+          DC    H'81'                 test number
00004F9E  00                                   3760+          DC    X'00'
00004F9F  01                                   3761+          DC    HL1'1'                     m4 used
00004FA0  01                                   3762+          DC    HL1'1'                     m5 used
00004FA1  01                                   3763+          DC    HL1'1'                CC
00004FA2  0B                                   3764+          DC    HL1'11'               CC failed mask
00004FA4  00000000 00000000                    3765+          DS    2F                    extracted PSW after test (has CC)
00004FAC  FF                                   3766+          DC    X'FF'                 extracted CC, if test failed
00004FAD  E5C3C5D8 40404040                    3767+          DC    CL8'VCEQ'             instruction name
00004FB8  00005030                             3768+          DC    A(RE81)               address of v1 result
00004FBC  00005040                             3769+          DC    A(RE81+16)            address of v2 source
00004FC0  00005050                             3770+          DC    A(RE81+32)            address of v3 source
00004FC4  00000010                             3771+          DC    A(16)                 result length
00004FC8  00005030                             3772+REA81     DC    A(RE81)               result address
00004FD0  00000000 00000000                    3773+          DS    2FD                    gap
00004FD8  00000000 00000000
00004FE0  00000000 00000000                    3774+V1O81     DS    XL16                  V1 output
00004FE8  00000000 00000000
00004FF0  00000000 00000000                    3775+          DS    2FD                    gap
00004FF8  00000000 00000000
                                               3776+*
00005000                                       3777+X81       DS    0F
00005000  E310 5024 0014            00000024   3778+          LGF   R1,V2ADDR             load v2 source
00005006  E761 0000 0806            00000000   3779+          VL    v22,0(R1)             use v21 to test decoder
0000500C  E310 5028 0014            00000028   3780+          LGF   R1,V3ADDR             load v3 source
00005012  E771 0000 0806            00000000   3781+          VL    v23,0(R1)             use v22 to test decoder
00005018  E756 7010 1EF8                       3782+          VCEQ  V21,V22,V23,1,1               test instruction
0000501E  B98D 0020                            3783+          EPSW  R2,R0                 extract psw
00005022  5020 500C                 0000000C   3784+          ST    R2,CCPSW              to save CC
00005026  E750 5048 080E            00004FE0   3785+          VST   V21,V1O81             save v1 output
0000502C  07FB                                 3786+          BR    R11                   return
00005030                                       3787+RE81      DC    0F                    V1 for this test
00005030                                       3788+          DROP  R5
00005030  FFFF0000 00000000                    3789           DC    XL16'FFFF000000000000 FFFFFFFFFFFFFFFF'   result
00005038  FFFFFFFF FFFFFFFF
00005040  00010203 04050607                    3790           DC    XL16'0001020304050607 08090A0B0C0DFE0F'   v2
00005048  08090A0B 0C0DFE0F
00005050  00010033 00550077                    3791           DC    XL16'0001003300550077 08090A0B0C0DFE0F'   v3
00005058  08090A0B 0C0DFE0F
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
                                                    3792
                                                    3793          VRR_B VCEQ,1,1
00005060                                            3794+         DS    0FD
00005060                      00005060              3795+         USING *,R5              base for test data and test routine
00005060  000050C8                                  3796+T82      DC    A(X82)            address of test routine
00005064  0052                                      3797+         DC    H'82'             test number
00005066  00                                        3798+         DC    X'00'
00005067  01                                        3799+         DC    HL1'1'                 m4 used
00005068  01                                        3800+         DC    HL1'1'                 m5 used
00005069  01                                        3801+         DC    HL1'1'            CC
0000506A  0B                                        3802+         DC    HL1'11'           CC failed mask
0000506C  00000000 00000000                         3803+         DS    2F                extracted PSW after test (has CC)
00005074  FF                                        3804+         DC    X'FF'             extracted CC, if test failed
00005075  E5C3C5D8 40404040                         3805+         DC    CL8'VCEQ'         instruction name
00005080  000050F8                                  3806+         DC    A(RE82)           address of v1 result
00005084  00005108                                  3807+         DC    A(RE82+16)        address of v2 source
00005088  00005118                                  3808+         DC    A(RE82+32)        address of v3 source
0000508C  00000010                                  3809+         DC    A(16)             result length
00005090  000050F8                                  3810+REA82    DC    A(RE82)           result address
00005098  00000000 00000000                         3811+         DS    2FD                gap
000050A0  00000000 00000000
000050A8  00000000 00000000                         3812+V1O82    DS    XL16              V1 output
000050B0  00000000 00000000
000050B8  00000000 00000000                         3813+         DS    2FD                gap
000050C0  00000000 00000000
                                                    3814+*
000050C8                                            3815+X82      DS    0F
000050C8  E310 5024 0014                 00000024   3816+         LGF   R1,V2ADDR         load v2 source
000050CE  E761 0000 0806                 00000000   3817+         VL    v22,0(R1)         use v21 to test decoder
000050D4  E310 5028 0014                 00000028   3818+         LGF   R1,V3ADDR         load v3 source
000050DA  E771 0000 0806                 00000000   3819+         VL    v23,0(R1)         use v22 to test decoder
000050E0  E756 7010 1EF8                            3820+         VCEQ  V21,V22,V23,1,1           test instruction
000050E6  B98D 0020                                 3821+         EPSW  R2,R0             extract psw
000050EA  5020 500C                      0000000C   3822+         ST    R2,CCPSW             to save CC
000050EE  E750 5048 080E                 000050A8   3823+         VST   V21,V1O82         save v1 output
000050F4  07FB                                      3824+         BR    R11               return
000050F8                                            3825+RE82     DC    0F                V1 for this test
000050F8                                            3826+         DROP  R5
000050F8  FFFFFFFF FFFFFFFF                         3827          DC    XL16'FFFFFFFFFFFFFFFF 000000000000FFFF'   result
00005100  00000000 0000FFFF
00005108  08090A0B 0C0DFE0F                         3828          DC    XL16'08090A0B0C0DFE0F 0001020304050607'   v2
00005110  00010203 04050607
00005118  08090A0B 0C0DFE0F                         3829          DC    XL16'08090A0B0C0DFE0F 0011003300550607'   v3
00005120  00110033 00550607
                                                    3830
                                                    3831          VRR_B VCEQ,1,3
00005128                                            3832+         DS    0FD
00005128                      00005128              3833+         USING *,R5              base for test data and test routine
00005128  00005190                                  3834+T83      DC    A(X83)            address of test routine
0000512C  0053                                      3835+         DC    H'83'             test number
0000512E  00                                        3836+         DC    X'00'
0000512F  01                                        3837+         DC    HL1'1'                 m4 used
00005130  01                                        3838+         DC    HL1'1'                 m5 used
00005131  03                                        3839+         DC    HL1'3'            CC
00005132  0E                                        3840+         DC    HL1'14'           CC failed mask
00005134  00000000 00000000                         3841+         DS    2F                extracted PSW after test (has CC)
```

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  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

0000513C  FF                                       3842+          DC    X'FF'                extracted CC, if test failed
0000513D  E5C3C5D8 40404040                        3843+          DC    CL8'VCEQ'            instruction name
00005148  000051C0                                 3844+          DC    A(RE83)              address of v1 result
0000514C  000051D0                                 3845+          DC    A(RE83+16)           address of v2 source
00005150  000051E0                                 3846+          DC    A(RE83+32)           address of v3 source
00005154  00000010                                 3847+          DC    A(16)                result length
00005158  000051C0                                 3848+REA83     DC    A(RE83)              result address
00005160  00000000 00000000                        3849+          DS    2FD                   gap
00005168  00000000 00000000
00005170  00000000 00000000                        3850+V1O83     DS    XL16                 V1 output
00005178  00000000 00000000
00005180  00000000 00000000                        3851+          DS    2FD                   gap
00005188  00000000 00000000
                                                   3852+*
00005190                                           3853+X83       DS    0F
00005190  E310 5024 0014                 00000024  3854+          LGF   R1,V2ADDR            load v2 source
00005196  E761 0000 0806                 00000000  3855+          VL    v22,0(R1)            use v21 to test decoder
0000519C  E310 5028 0014                 00000028  3856+          LGF   R1,V3ADDR            load v3 source
000051A2  E771 0000 0806                 00000000  3857+          VL    v23,0(R1)            use v22 to test decoder
000051A8  E756 7010 1EF8                           3858+          VCEQ  V21,V22,V23,1,1                test instruction
000051AE  B98D 0020                                3859+          EPSW  R2,R0                extract psw
000051B2  5020 500C                      0000000C  3860+          ST    R2,CCPSW                to save CC
000051B6  E750 5048 080E                 00005170  3861+          VST   V21,V1O83            save v1 output
000051BC  07FB                                     3862+          BR    R11                  return
000051C0                                           3863+RE83      DC    0F                   V1 for this test
000051C0                                           3864+          DROP  R5
000051C0  00000000 00000000                       3865           DC    XL16'00000000000000000000000000000000'   result
000051C8  00000000 00000000
000051D0  01110133 01550177                        3866           DC    XL16'0111013301550177 019901BB01DD01FF'   v2
000051D8  019901BB 01DD01FF
000051E0  00010203 04050607                        3867           DC    XL16'0001020304050607 08090A0B0C0D0E0F'   v3
000051E8  08090A0B 0C0D0E0F
                                                   3868
                                                   3869           VRR_B VCEQ,1,3
000051F0                                           3870+          DS    0FD
000051F0                       000051F0            3871+          USING *,R5                 base for test data and test routine
000051F0  00005258                                 3872+T84       DC    A(X84)               address of test routine
000051F4  0054                                     3873+          DC    H'84'                test number
000051F6  00                                       3874+          DC    X'00'
000051F7  01                                       3875+          DC    HL1'1'                    m4 used
000051F8  01                                       3876+          DC    HL1'1'                    m5 used
000051F9  03                                       3877+          DC    HL1'3'               CC
000051FA  0E                                       3878+          DC    HL1'14'              CC failed mask
000051FC  00000000 00000000                        3879+          DS    2F                   extracted PSW after test (has CC)
00005204  FF                                       3880+          DC    X'FF'                extracted CC, if test failed
00005205  E5C3C5D8 40404040                        3881+          DC    CL8'VCEQ'            instruction name
00005210  00005288                                 3882+          DC    A(RE84)              address of v1 result
00005214  00005298                                 3883+          DC    A(RE84+16)           address of v2 source
00005218  000052A8                                 3884+          DC    A(RE84+32)           address of v3 source
0000521C  00000010                                 3885+          DC    A(16)                result length
00005220  00005288                                 3886+REA84     DC    A(RE84)              result address
00005228  00000000 00000000                        3887+          DS    2FD                   gap
00005230  00000000 00000000
00005238  00000000 00000000                        3888+V1O84     DS    XL16                 V1 output
00005240  00000000 00000000
00005248  00000000 00000000                        3889+          DS    2FD                   gap
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
00005250  00000000 00000000                        3890+*
00005258                                           3891+X84      DS    0F
00005258  E310 5024 0014                 00000024  3892+         LGF   R1,V2ADDR          load v2 source
0000525E  E761 0000 0806                 00000000  3893+         VL    v22,0(R1)          use v21 to test decoder
00005264  E310 5028 0014                 00000028  3894+         LGF   R1,V3ADDR          load v3 source
0000526A  E771 0000 0806                 00000000  3895+         VL    v23,0(R1)          use v22 to test decoder
00005270  E756 7010 1EF8                           3896+         VCEQ  V21,V22,V23,1,1            test instruction
00005276  B98D 0020                                3897+         EPSW  R2,R0              extract psw
0000527A  5020 500C                      0000000C  3898+         ST    R2,CCPSW              to save CC
0000527E  E750 5048 080E                 00005238  3899+         VST   V21,V1O84          save v1 output
00005284  07FB                                     3900+         BR    R11                return
00005288                                           3901+RE84     DC    0F                 V1 for this test
00005288                                           3902+         DROP  R5
00005288  00000000 00000000                        3903          DC    XL16'0000000000000000 0000000000000000'   result
00005290  00000000 00000000
00005298  00010203 04050607                        3904          DC    XL16'0001020304050607 08090A0B0C0D0E0F'   v2
000052A0  08090A0B 0C0D0E0F
000052A8  01110133 01550177                        3905          DC    XL16'0111013301550177 019901BB01DD01FF'   v3
000052B0  019901BB 01DD01FF
                                                   3906
                                                   3907 *Word
                                                   3908          VRR_B VCEQ,2,0
000052B8                                           3909+         DS    0FD
000052B8                         000052B8          3910+         USING *,R5               base for test data and test routine
000052B8  00005320                                 3911+T85      DC    A(X85)             address of test routine
000052BC  0055                                     3912+         DC    H'85'              test number
000052BE  00                                       3913+         DC    X'00'
000052BF  02                                       3914+         DC    HL1'2'                  m4 used
000052C0  01                                       3915+         DC    HL1'1'                  m5 used
000052C1  00                                       3916+         DC    HL1'0'             CC
000052C2  07                                       3917+         DC    HL1'7'             CC failed mask
000052C4  00000000 00000000                        3918+         DS    2F                 extracted PSW after test (has CC)
000052CC  FF                                       3919+         DC    X'FF'              extracted CC, if test failed
000052CD  E5C3C5D8 40404040                        3920+         DC    CL8'VCEQ'          instruction name
000052D8  00005350                                 3921+         DC    A(RE85)            address of v1 result
000052DC  00005360                                 3922+         DC    A(RE85+16)         address of v2 source
000052E0  00005370                                 3923+         DC    A(RE85+32)         address of v3 source
000052E4  00000010                                 3924+         DC    A(16)              result length
000052E8  00005350                                 3925+REA85    DC    A(RE85)            result address
000052F0  00000000 00000000                        3926+         DS    2FD                 gap
000052F8  00000000 00000000
00005300  00000000 00000000                        3927+V1O85    DS    XL16               V1 output
00005308  00000000 00000000
00005310  00000000 00000000                        3928+         DS    2FD                 gap
00005318  00000000 00000000
                                                   3929+*
00005320                                           3930+X85      DS    0F
00005320  E310 5024 0014                 00000024  3931+         LGF   R1,V2ADDR          load v2 source
00005326  E761 0000 0806                 00000000  3932+         VL    v22,0(R1)          use v21 to test decoder
0000532C  E310 5028 0014                 00000028  3933+         LGF   R1,V3ADDR          load v3 source
00005332  E771 0000 0806                 00000000  3934+         VL    v23,0(R1)          use v22 to test decoder
00005338  E756 7010 2EF8                           3935+         VCEQ  V21,V22,V23,2,1            test instruction
0000533E  B98D 0020                                3936+         EPSW  R2,R0              extract psw
00005342  5020 500C                      0000000C  3937+         ST    R2,CCPSW              to save CC
00005346  E750 5048 080E                 00005300  3938+         VST   V21,V1O85          save v1 output
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
0000534C  07FB                                    3939+          BR    R11                 return
00005350                                          3940+RE85      DC    0F                  V1 for this test
00005350                                          3941+          DROP  R5
00005350  FFFFFFFF FFFFFFFF                       3942           DC    XL16'FFFFFFFFFFFFFFFF FFFFFFFFFFFFFFFF'   result
00005358  FFFFFFFF FFFFFFFF
00005360  00110033 00550077                       3943           DC    XL16'0011003300550077 0022004400660008'   v2
00005368  00220044 00660008
00005370  00110033 00550077                       3944           DC    XL16'0011003300550077 0022004400660008'   v3
00005378  00220044 00660008
                                                  3945
                                                  3946           VRR_B VCEQ,2,0
00005380                                          3947+          DS    0FD
00005380                    00005380              3948+          USING *,R5                base for test data and test routine
00005380  000053E8                                3949+T86       DC    A(X86)              address of test routine
00005384  0056                                    3950+          DC    H'86'               test number
00005386  00                                      3951+          DC    X'00'
00005387  02                                      3952+          DC    HL1'2'                   m4 used
00005388  01                                      3953+          DC    HL1'1'                   m5 used
00005389  00                                      3954+          DC    HL1'0'              CC
0000538A  07                                      3955+          DC    HL1'7'              CC failed mask
0000538C  00000000 00000000                       3956+          DS    2F                  extracted PSW after test (has CC)
00005394  FF                                      3957+          DC    X'FF'               extracted CC, if test failed
00005395  E5C3C5D8 40404040                       3958+          DC    CL8'VCEQ'           instruction name
000053A0  00005418                                3959+          DC    A(RE86)             address of v1 result
000053A4  00005428                                3960+          DC    A(RE86+16)          address of v2 source
000053A8  00005438                                3961+          DC    A(RE86+32)          address of v3 source
000053AC  00000010                                3962+          DC    A(16)               result length
000053B0  00005418                                3963+REA86     DC    A(RE86)             result address
000053B8  00000000 00000000                       3964+          DS    2FD                  gap
000053C0  00000000 00000000
000053C8  00000000 00000000                       3965+V1O86     DS    XL16                V1 output
000053D0  00000000 00000000
000053D8  00000000 00000000                       3966+          DS    2FD                  gap
000053E0  00000000 00000000
                                                  3967+*
000053E8                                          3968+X86       DS    0F
000053E8  E310 5024 0014                  00000024 3969+          LGF   R1,V2ADDR           load v2 source
000053EE  E761 0000 0806                  00000000 3970+          VL    v22,0(R1)           use v21 to test decoder
000053F4  E310 5028 0014                  00000028 3971+          LGF   R1,V3ADDR           load v3 source
000053FA  E771 0000 0806                  00000000 3972+          VL    v23,0(R1)           use v22 to test decoder
00005400  E756 7010 2EF8                           3973+          VCEQ  V21,V22,V23,2,1              test instruction
00005406  B98D 0020                                3974+          EPSW  R2,R0               extract psw
0000540A  5020 500C                       0000000C 3975+          ST    R2,CCPSW               to save CC
0000540E  E750 5048 080E                  000053C8 3976+          VST   V21,V1O86           save v1 output
00005414  07FB                                     3977+          BR    R11                 return
00005418                                          3978+RE86      DC    0F                  V1 for this test
00005418                                          3979+          DROP  R5
00005418  FFFFFFFF FFFFFFFF                       3980           DC    XL16'FFFFFFFFFFFFFFFF FFFFFFFFFFFFFFFF'   result
00005420  FFFFFFFF FFFFFFFF
00005428  FFFEFFFD FFFCFFFB                       3981           DC    XL16'FFFEFFFDFFFCFFFB FFFAFFF9FFF8FFF7'   v2
00005430  FFFAFFF9 FFF8FFF7
00005438  FFFEFFFD FFFCFFFB                       3982           DC    XL16'FFFEFFFDFFFCFFFB FFFAFFF9FFF8FFF7'   v3
00005440  FFFAFFF9 FFF8FFF7
                                                  3983
                                                  3984           VRR_B VCEQ,2,1
00005448                                          3985+          DS    0FD
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

00005448                     00005448              3986+         USING *,R5              base for test data and test routine
00005448  000054B0                                 3987+T87      DC    A(X87)            address of test routine
0000544C  0057                                     3988+         DC    H'87'             test number
0000544E  00                                       3989+         DC    X'00'
0000544F  02                                       3990+         DC    HL1'2'                 m4 used
00005450  01                                       3991+         DC    HL1'1'                 m5 used
00005451  01                                       3992+         DC    HL1'1'            CC
00005452  0B                                       3993+         DC    HL1'11'           CC failed mask
00005454  00000000 00000000                        3994+         DS    2F                extracted PSW after test (has CC)
0000545C  FF                                       3995+         DC    X'FF'             extracted CC, if test failed
0000545D  E5C3C5D8 40404040                        3996+         DC    CL8'VCEQ'         instruction name
00005468  000054E0                                 3997+         DC    A(RE87)           address of v1 result
0000546C  000054F0                                 3998+         DC    A(RE87+16)        address of v2 source
00005470  00005500                                 3999+         DC    A(RE87+32)        address of v3 source
00005474  00000010                                 4000+         DC    A(16)             result length
00005478  000054E0                                 4001+REA87    DC    A(RE87)           result address
00005480  00000000 00000000                        4002+         DS    2FD                gap
00005488  00000000 00000000
00005490  00000000 00000000                        4003+V1O87    DS    XL16              V1 output
00005498  00000000 00000000
000054A0  00000000 00000000                        4004+         DS    2FD                gap
000054A8  00000000 00000000
                                                   4005+*
000054B0                                           4006+X87      DS    0F
000054B0  E310 5024 0014                 00000024  4007+         LGF   R1,V2ADDR         load v2 source
000054B6  E761 0000 0806                 00000000  4008+         VL    v22,0(R1)         use v21 to test decoder
000054BC  E310 5028 0014                 00000028  4009+         LGF   R1,V3ADDR         load v3 source
000054C2  E771 0000 0806                 00000000  4010+         VL    v23,0(R1)         use v22 to test decoder
000054C8  E756 7010 2EF8                           4011+         VCEQ  V21,V22,V23,2,1           test instruction
000054CE  B98D 0020                                4012+         EPSW  R2,R0             extract psw
000054D2  5020 500C                      0000000C  4013+         ST    R2,CCPSW             to save CC
000054D6  E750 5048 080E                 00005490  4014+         VST   V21,V1O87         save v1 output
000054DC  07FB                                     4015+         BR    R11               return
000054E0                                           4016+RE87     DC    0F                V1 for this test
000054E0                                           4017+         DROP  R5
000054E0  FFFFFFFF 00000000                        4018          DC    XL16'FFFFFFFF00000000 FFFFFFFFFFFFFFFF'   result
000054E8  FFFFFFFF FFFFFFFF
000054F0  00010203 04050607                        4019          DC    XL16'0001020304050607 08090A0B0C0DFE0F'   v2
000054F8  08090A0B 0C0DFE0F
00005500  00010203 00550077                        4020          DC    XL16'0001020300550077 08090A0B0C0DFE0F'   v3
00005508  08090A0B 0C0DFE0F
                                                   4021
                                                   4022          VRR_B VCEQ,2,1
00005510                                           4023+         DS    0FD
00005510                         00005510          4024+         USING *,R5              base for test data and test routine
00005510  00005578                                 4025+T88      DC    A(X88)            address of test routine
00005514  0058                                     4026+         DC    H'88'             test number
00005516  00                                       4027+         DC    X'00'
00005517  02                                       4028+         DC    HL1'2'                 m4 used
00005518  01                                       4029+         DC    HL1'1'                 m5 used
00005519  01                                       4030+         DC    HL1'1'            CC
0000551A  0B                                       4031+         DC    HL1'11'           CC failed mask
0000551C  00000000 00000000                        4032+         DS    2F                extracted PSW after test (has CC)
00005524  FF                                       4033+         DC    X'FF'             extracted CC, if test failed
00005525  E5C3C5D8 40404040                        4034+         DC    CL8'VCEQ'         instruction name
00005530  000055A8                                 4035+         DC    A(RE88)           address of v1 result
```

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  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

00005534  000055B8                          4036+          DC    A(RE88+16)          address of v2 source
00005538  000055C8                          4037+          DC    A(RE88+32)          address of v3 source
0000553C  00000010                          4038+          DC    A(16)               result length
00005540  000055A8                          4039+REA88     DC    A(RE88)             result address
00005548  00000000 00000000                 4040+          DS    2FD                  gap
00005550  00000000 00000000
00005558  00000000 00000000                 4041+V1O88     DS    XL16                V1 output
00005560  00000000 00000000
00005568  00000000 00000000                 4042+          DS    2FD                  gap
00005570  00000000 00000000
                                            4043+*
00005578                                    4044+X88       DS    0F
00005578  E310 5024 0014          00000024  4045+          LGF   R1,V2ADDR           load v2 source
0000557E  E761 0000 0806          00000000  4046+          VL    v22,0(R1)           use v21 to test decoder
00005584  E310 5028 0014          00000028  4047+          LGF   R1,V3ADDR           load v3 source
0000558A  E771 0000 0806          00000000  4048+          VL    v23,0(R1)           use v22 to test decoder
00005590  E756 7010 2EF8                    4049+          VCEQ  V21,V22,V23,2,1              test instruction
00005596  B98D 0020                         4050+          EPSW  R2,R0               extract psw
0000559A  5020 500C               0000000C  4051+          ST    R2,CCPSW               to save CC
0000559E  E750 5048 080E          00005558  4052+          VST   V21,V1O88           save v1 output
000055A4  07FB                              4053+          BR    R11                 return
000055A8                                    4054+RE88      DC    0F                  V1 for this test
000055A8                                    4055+          DROP  R5
000055A8  FFFFFFFF FFFFFFFF                 4056           DC    XL16'FFFFFFFFFFFFFFFF 00000000FFFFFFFF'   result
000055B0  00000000 FFFFFFFF
000055B8  08090A0B 0C0DFE0F                 4057           DC    XL16'08090A0B0C0DFE0F 0001020304050607'   v2
000055C0  00010203 04050607
000055C8  08090A0B 0C0DFE0F                 4058           DC    XL16'08090A0B0C0DFE0F 0011003304050607'   v3
000055D0  00110033 04050607
                                            4059
                                            4060           VRR_B VCEQ,2,3
000055D8                                    4061+          DS    0FD
000055D8                       000055D8     4062+          USING *,R5                base for test data and test routine
000055D8  00005640                          4063+T89       DC    A(X89)              address of test routine
000055DC  0059                              4064+          DC    H'89'               test number
000055DE  00                                4065+          DC    X'00'
000055DF  02                                4066+          DC    HL1'2'                   m4 used
000055E0  01                                4067+          DC    HL1'1'                   m5 used
000055E1  03                                4068+          DC    HL1'3'              CC
000055E2  0E                                4069+          DC    HL1'14'             CC failed mask
000055E4  00000000 00000000                 4070+          DS    2F                  extracted PSW after test (has CC)
000055EC  FF                                4071+          DC    X'FF'               extracted CC, if test failed
000055ED  E5C3C5D8 40404040                 4072+          DC    CL8'VCEQ'           instruction name
000055F8  00005670                          4073+          DC    A(RE89)             address of v1 result
000055FC  00005680                          4074+          DC    A(RE89+16)          address of v2 source
00005600  00005690                          4075+          DC    A(RE89+32)          address of v3 source
00005604  00000010                          4076+          DC    A(16)               result length
00005608  00005670                          4077+REA89     DC    A(RE89)             result address
00005610  00000000 00000000                 4078+          DS    2FD                  gap
00005618  00000000 00000000
00005620  00000000 00000000                 4079+V1O89     DS    XL16                V1 output
00005628  00000000 00000000
00005630  00000000 00000000                 4080+          DS    2FD                  gap
00005638  00000000 00000000
                                            4081+*
00005640                                    4082+X89       DS    0F
```

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  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

00005640  E310 5024 0014                 00000024  4083+          LGF    R1,V2ADDR           load v2 source
00005646  E761 0000 0806                 00000000  4084+          VL     v22,0(R1)           use v21 to test decoder
0000564C  E310 5028 0014                 00000028  4085+          LGF    R1,V3ADDR           load v3 source
00005652  E771 0000 0806                 00000000  4086+          VL     v23,0(R1)           use v22 to test decoder
00005658  E756 7010 2EF8                           4087+          VCEQ   V21,V22,V23,2,1               test instruction
0000565E  B98D 0020                                4088+          EPSW   R2,R0               extract psw
00005662  5020 500C                      0000000C  4089+          ST     R2,CCPSW               to save CC
00005666  E750 5048 080E                 00005620  4090+          VST    V21,V1O89           save v1 output
0000566C  07FB                                     4091+          BR     R11                 return
00005670                                           4092+RE89      DC     0F                  V1 for this test
00005670                                           4093+          DROP   R5
00005670  00000000 00000000                        4094           DC     XL16'0000000000000000 0000000000000000'   result
00005678  00000000 00000000
00005680  01110133 01550177                        4095           DC     XL16'0111013301550177 019901BB01DD01FF'   v2
00005688  019901BB 01DD01FF
00005690  00010203 04050607                        4096           DC     XL16'0001020304050607 08090A0B0C0D0E0F'   v3
00005698  08090A0B 0C0D0E0F
                                                   4097
                                                   4098           VRR_B  VCEQ,2,3
000056A0                                           4099+          DS     0FD
000056A0                         000056A0          4100+          USING  *,R5                base for test data and test routine
000056A0  00005708                                 4101+T90       DC     A(X90)              address of test routine
000056A4  005A                                     4102+          DC     H'90'               test number
000056A6  00                                       4103+          DC     X'00'
000056A7  02                                       4104+          DC     HL1'2'                  m4 used
000056A8  01                                       4105+          DC     HL1'1'                  m5 used
000056A9  03                                       4106+          DC     HL1'3'              CC
000056AA  0E                                       4107+          DC     HL1'14'             CC failed mask
000056AC  00000000 00000000                        4108+          DS     2F                  extracted PSW after test (has CC)
000056B4  FF                                       4109+          DC     X'FF'               extracted CC, if test failed
000056B5  E5C3C5D8 40404040                        4110+          DC     CL8'VCEQ'           instruction name
000056C0  00005738                                 4111+          DC     A(RE90)             address of v1 result
000056C4  00005748                                 4112+          DC     A(RE90+16)          address of v2 source
000056C8  00005758                                 4113+          DC     A(RE90+32)          address of v3 source
000056CC  00000010                                 4114+          DC     A(16)               result length
000056D0  00005738                                 4115+REA90     DC     A(RE90)             result address
000056D8  00000000 00000000                        4116+          DS     2FD                  gap
000056E0  00000000 00000000
000056E8  00000000 00000000                        4117+V1O90     DS     XL16                V1 output
000056F0  00000000 00000000
000056F8  00000000 00000000                        4118+          DS     2FD                  gap
00005700  00000000 00000000
                                                   4119+*
00005708                                           4120+X90       DS     0F
00005708  E310 5024 0014                 00000024  4121+          LGF    R1,V2ADDR           load v2 source
0000570E  E761 0000 0806                 00000000  4122+          VL     v22,0(R1)           use v21 to test decoder
00005714  E310 5028 0014                 00000028  4123+          LGF    R1,V3ADDR           load v3 source
0000571A  E771 0000 0806                 00000000  4124+          VL     v23,0(R1)           use v22 to test decoder
00005720  E756 7010 2EF8                           4125+          VCEQ   V21,V22,V23,2,1               test instruction
00005726  B98D 0020                                4126+          EPSW   R2,R0               extract psw
0000572A  5020 500C                      0000000C  4127+          ST     R2,CCPSW               to save CC
0000572E  E750 5048 080E                 000056E8  4128+          VST    V21,V1O90           save v1 output
00005734  07FB                                     4129+          BR     R11                 return
00005738                                           4130+RE90      DC     0F                  V1 for this test
00005738                                           4131+          DROP   R5
00005738  00000000 00000000                        4132           DC     XL16'0000000000000000 0000000000000000'   result
```

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  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
00005740  00000000 00000000
00005748  00010203 04050607                       4133           DC    XL16'0001020304050607 08090A0B0C0D0E0F'   v2
00005750  08090A0B 0C0D0E0F
00005758  01110133 01550177                       4134           DC    XL16'0111013301550177 019901BB01DD01FF'   v3
00005760  019901BB 01DD01FF
                                                  4135
                                                  4136 *Doubleword
                                                  4137           VRR_B VCEQ,3,0
00005768                                          4138+          DS    0FD
00005768                    00005768              4139+          USING *,R5                base for test data and test routine
00005768  000057D0                                4140+T91       DC    A(X91)              address of test routine
0000576C  005B                                    4141+          DC    H'91'               test number
0000576E  00                                      4142+          DC    X'00'
0000576F  03                                      4143+          DC    HL1'3'                   m4 used
00005770  01                                      4144+          DC    HL1'1'                   m5 used
00005771  00                                      4145+          DC    HL1'0'              CC
00005772  07                                      4146+          DC    HL1'7'              CC failed mask
00005774  00000000 00000000                       4147+          DS    2F                  extracted PSW after test (has CC)
0000577C  FF                                      4148+          DC    X'FF'               extracted CC, if test failed
0000577D  E5C3C5D8 40404040                       4149+          DC    CL8'VCEQ'           instruction name
00005788  00005800                                4150+          DC    A(RE91)             address of v1 result
0000578C  00005810                                4151+          DC    A(RE91+16)          address of v2 source
00005790  00005820                                4152+          DC    A(RE91+32)          address of v3 source
00005794  00000010                                4153+          DC    A(16)               result length
00005798  00005800                                4154+REA91     DC    A(RE91)             result address
000057A0  00000000 00000000                       4155+          DS    2FD                  gap
000057A8  00000000 00000000
000057B0  00000000 00000000                       4156+V1O91     DS    XL16                V1 output
000057B8  00000000 00000000
000057C0  00000000 00000000                       4157+          DS    2FD                  gap
000057C8  00000000 00000000
                                                  4158+*
000057D0                                          4159+X91       DS    0F
000057D0  E310 5024 0014                 00000024 4160+          LGF   R1,V2ADDR           load v2 source
000057D6  E761 0000 0806                 00000000 4161+          VL    v22,0(R1)           use v21 to test decoder
000057DC  E310 5028 0014                 00000028 4162+          LGF   R1,V3ADDR           load v3 source
000057E2  E771 0000 0806                 00000000 4163+          VL    v23,0(R1)           use v22 to test decoder
000057E8  E756 7010 3EF8                          4164+          VCEQ  V21,V22,V23,3,1             test instruction
000057EE  B98D 0020                               4165+          EPSW  R2,R0               extract psw
000057F2  5020 500C                      0000000C 4166+          ST    R2,CCPSW               to save CC
000057F6  E750 5048 080E                 000057B0 4167+          VST   V21,V1O91           save v1 output
000057FC  07FB                                    4168+          BR    R11                 return
00005800                                          4169+RE91      DC    0F                  V1 for this test
00005800                                          4170+          DROP  R5
00005800  FFFFFFFF FFFFFFFF                       4171           DC    XL16'FFFFFFFFFFFFFFFF FFFFFFFFFFFFFFFF'   result
00005808  FFFFFFFF FFFFFFFF
00005810  00110033 00550077                       4172           DC    XL16'0011003300550077 0022004400660008'   v2
00005818  00220044 00660008
00005820  00110033 00550077                       4173           DC    XL16'0011003300550077 0022004400660008'   v3
00005828  00220044 00660008
                                                  4174
                                                  4175           VRR_B VCEQ,3,0
00005830                                          4176+          DS    0FD
00005830                    00005830              4177+          USING *,R5                base for test data and test routine
00005830  00005898                                4178+T92       DC    A(X92)              address of test routine
00005834  005C                                    4179+          DC    H'92'               test number
```

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  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
00005836  00                                       4180+          DC    X'00'
00005837  03                                       4181+          DC    HL1'3'                  m4 used
00005838  01                                       4182+          DC    HL1'1'                  m5 used
00005839  00                                       4183+          DC    HL1'0'             CC
0000583A  07                                       4184+          DC    HL1'7'             CC failed mask
0000583C  00000000 00000000                        4185+          DS    2F                 extracted PSW after test (has CC)
00005844  FF                                       4186+          DC    X'FF'              extracted CC, if test failed
00005845  E5C3C5D8 40404040                        4187+          DC    CL8'VCEQ'          instruction name
00005850  000058C8                                 4188+          DC    A(RE92)            address of v1 result
00005854  000058D8                                 4189+          DC    A(RE92+16)         address of v2 source
00005858  000058E8                                 4190+          DC    A(RE92+32)         address of v3 source
0000585C  00000010                                 4191+          DC    A(16)              result length
00005860  000058C8                                 4192+REA92     DC    A(RE92)            result address
00005868  00000000 00000000                        4193+          DS    2FD                 gap
00005870  00000000 00000000
00005878  00000000 00000000                        4194+V1O92     DS    XL16               V1 output
00005880  00000000 00000000
00005888  00000000 00000000                        4195+          DS    2FD                 gap
00005890  00000000 00000000
                                                   4196+*
00005898                                           4197+X92       DS    0F
00005898  E310 5024 0014                 00000024  4198+          LGF   R1,V2ADDR          load v2 source
0000589E  E761 0000 0806                 00000000  4199+          VL    v22,0(R1)          use v21 to test decoder
000058A4  E310 5028 0014                 00000028  4200+          LGF   R1,V3ADDR          load v3 source
000058AA  E771 0000 0806                 00000000  4201+          VL    v23,0(R1)          use v22 to test decoder
000058B0  E756 7010 3EF8                           4202+          VCEQ  V21,V22,V23,3,1              test instruction
000058B6  B98D 0020                                4203+          EPSW  R2,R0              extract psw
000058BA  5020 500C                      0000000C  4204+          ST    R2,CCPSW                to save CC
000058BE  E750 5048 080E                 00005878  4205+          VST   V21,V1O92          save v1 output
000058C4  07FB                                     4206+          BR    R11                return
000058C8                                           4207+RE92      DC    0F                 V1 for this test
000058C8                                           4208+          DROP  R5
000058C8  FFFFFFFF FFFFFFFF                        4209           DC    XL16'FFFFFFFFFFFFFFFF FFFFFFFFFFFFFFFF'   result
000058D0  FFFFFFFF FFFFFFFF
000058D8  FFFEFFFD FFFCFFFB                        4210           DC    XL16'FFFEFFFDFFFCFFFB FFFAFFF9FFF8FFF7'   v2
000058E0  FFFAFFF9 FFF8FFF7
000058E8  FFFEFFFD FFFCFFFB                        4211           DC    XL16'FFFEFFFDFFFCFFFB FFFAFFF9FFF8FFF7'   v3
000058F0  FFFAFFF9 FFF8FFF7
                                                   4212
                                                   4213           VRR_B VCEQ,3,1
000058F8                                           4214+          DS    0FD
000058F8                      000058F8             4215+          USING *,R5               base for test data and test routine
000058F8  00005960                                 4216+T93       DC    A(X93)             address of test routine
000058FC  005D                                     4217+          DC    H'93'              test number
000058FE  00                                       4218+          DC    X'00'
000058FF  03                                       4219+          DC    HL1'3'                  m4 used
00005900  01                                       4220+          DC    HL1'1'                  m5 used
00005901  01                                       4221+          DC    HL1'1'             CC
00005902  0B                                       4222+          DC    HL1'11'            CC failed mask
00005904  00000000 00000000                        4223+          DS    2F                 extracted PSW after test (has CC)
0000590C  FF                                       4224+          DC    X'FF'              extracted CC, if test failed
0000590D  E5C3C5D8 40404040                        4225+          DC    CL8'VCEQ'          instruction name
00005918  00005990                                 4226+          DC    A(RE93)            address of v1 result
0000591C  000059A0                                 4227+          DC    A(RE93+16)         address of v2 source
00005920  000059B0                                 4228+          DC    A(RE93+32)         address of v3 source
00005924  00000010                                 4229+          DC    A(16)              result length
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  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
00005928  00005990                          4230+REA93     DC    A(RE93)             result address
00005930  00000000 00000000                 4231+          DS    2FD                  gap
00005938  00000000 00000000
00005940  00000000 00000000                 4232+V1O93     DS    XL16                V1 output
00005948  00000000 00000000
00005950  00000000 00000000                 4233+          DS    2FD                  gap
00005958  00000000 00000000
                                            4234+*
00005960                                    4235+X93       DS    0F
00005960  E310 5024 0014          00000024  4236+          LGF   R1,V2ADDR           load v2 source
00005966  E761 0000 0806          00000000  4237+          VL    v22,0(R1)           use v21 to test decoder
0000596C  E310 5028 0014          00000028  4238+          LGF   R1,V3ADDR           load v3 source
00005972  E771 0000 0806          00000000  4239+          VL    v23,0(R1)           use v22 to test decoder
00005978  E756 7010 3EF8                    4240+          VCEQ  V21,V22,V23,3,1              test instruction
0000597E  B98D 0020                         4241+          EPSW  R2,R0               extract psw
00005982  5020 500C               0000000C  4242+          ST    R2,CCPSW               to save CC
00005986  E750 5048 080E          00005940  4243+          VST   V21,V1O93           save v1 output
0000598C  07FB                              4244+          BR    R11                 return
00005990                                    4245+RE93      DC    0F                  V1 for this test
00005990                                    4246+          DROP  R5
00005990  00000000 00000000                 4247           DC    XL16'0000000000000000 FFFFFFFFFFFFFFFF'   result
00005998  FFFFFFFF FFFFFFFF
000059A0  00010203 04050607                 4248           DC    XL16'0001020304050607 08090A0B0C0DFE0F'   v2
000059A8  08090A0B 0C0DFE0F
000059B0  00110033 00550077                 4249           DC    XL16'0011003300550077 08090A0B0C0DFE0F'   v3
000059B8  08090A0B 0C0DFE0F
                                            4250
                                            4251           VRR_B VCEQ,3,1
000059C0                                    4252+          DS    0FD
000059C0                    000059C0        4253+          USING *,R5                base for test data and test routine
000059C0  00005A28                          4254+T94       DC    A(X94)              address of test routine
000059C4  005E                              4255+          DC    H'94'               test number
000059C6  00                                4256+          DC    X'00'
000059C7  03                                4257+          DC    HL1'3'                   m4 used
000059C8  01                                4258+          DC    HL1'1'                   m5 used
000059C9  01                                4259+          DC    HL1'1'              CC
000059CA  0B                                4260+          DC    HL1'11'             CC failed mask
000059CC  00000000 00000000                 4261+          DS    2F                  extracted PSW after test (has CC)
000059D4  FF                                4262+          DC    X'FF'               extracted CC, if test failed
000059D5  E5C3C5D8 40404040                 4263+          DC    CL8'VCEQ'           instruction name
000059E0  00005A58                          4264+          DC    A(RE94)             address of v1 result
000059E4  00005A68                          4265+          DC    A(RE94+16)          address of v2 source
000059E8  00005A78                          4266+          DC    A(RE94+32)          address of v3 source
000059EC  00000010                          4267+          DC    A(16)               result length
000059F0  00005A58                          4268+REA94     DC    A(RE94)             result address
000059F8  00000000 00000000                 4269+          DS    2FD                  gap
00005A00  00000000 00000000
00005A08  00000000 00000000                 4270+V1O94     DS    XL16                V1 output
00005A10  00000000 00000000
00005A18  00000000 00000000                 4271+          DS    2FD                  gap
00005A20  00000000 00000000
                                            4272+*
00005A28                                    4273+X94       DS    0F
00005A28  E310 5024 0014          00000024  4274+          LGF   R1,V2ADDR           load v2 source
00005A2E  E761 0000 0806          00000000  4275+          VL    v22,0(R1)           use v21 to test decoder
00005A34  E310 5028 0014          00000028  4276+          LGF   R1,V3ADDR           load v3 source
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

00005A3A  E771 0000 0806                 00000000  4277+         VL    v23,0(R1)           use v22 to test decoder
00005A40  E756 7010 3EF8                           4278+         VCEQ  V21,V22,V23,3,1             test instruction
00005A46  B98D 0020                                4279+         EPSW  R2,R0               extract psw
00005A4A  5020 500C                      0000000C  4280+         ST    R2,CCPSW               to save CC
00005A4E  E750 5048 080E                 00005A08  4281+         VST   V21,V1O94           save v1 output
00005A54  07FB                                     4282+         BR    R11                 return
00005A58                                           4283+RE94     DC    0F                  V1 for this test
00005A58                                           4284+         DROP  R5
00005A58  FFFFFFFF FFFFFFFF                        4285          DC    XL16'FFFFFFFFFFFFFFFF 0000000000000000'   result
00005A60  00000000 00000000
00005A68  08090A0B 0C0DFE0F                        4286          DC    XL16'08090A0B0C0DFE0F 0001020304050607'   v2
00005A70  00010203 04050607
00005A78  08090A0B 0C0DFE0F                        4287          DC    XL16'08090A0B0C0DFE0F 0011003300550077'   v3
00005A80  00110033 00550077
                                                   4288
                                                   4289          VRR_B VCEQ,3,3
00005A88                                           4290+         DS    0FD
00005A88                           00005A88        4291+         USING *,R5                base for test data and test routine
00005A88  00005AF0                                 4292+T95      DC    A(X95)              address of test routine
00005A8C  005F                                     4293+         DC    H'95'               test number
00005A8E  00                                       4294+         DC    X'00'
00005A8F  03                                       4295+         DC    HL1'3'                   m4 used
00005A90  01                                       4296+         DC    HL1'1'                   m5 used
00005A91  03                                       4297+         DC    HL1'3'              CC
00005A92  0E                                       4298+         DC    HL1'14'             CC failed mask
00005A94  00000000 00000000                        4299+         DS    2F                  extracted PSW after test (has CC)
00005A9C  FF                                       4300+         DC    X'FF'               extracted CC, if test failed
00005A9D  E5C3C5D8 40404040                        4301+         DC    CL8'VCEQ'           instruction name
00005AA8  00005B20                                 4302+         DC    A(RE95)             address of v1 result
00005AAC  00005B30                                 4303+         DC    A(RE95+16)          address of v2 source
00005AB0  00005B40                                 4304+         DC    A(RE95+32)          address of v3 source
00005AB4  00000010                                 4305+         DC    A(16)               result length
00005AB8  00005B20                                 4306+REA95    DC    A(RE95)             result address
00005AC0  00000000 00000000                        4307+         DS    2FD                  gap
00005AC8  00000000 00000000
00005AD0  00000000 00000000                        4308+V1O95    DS    XL16                V1 output
00005AD8  00000000 00000000
00005AE0  00000000 00000000                        4309+         DS    2FD                  gap
00005AE8  00000000 00000000
                                                   4310+*
00005AF0                                           4311+X95      DS    0F
00005AF0  E310 5024 0014                 00000024  4312+         LGF   R1,V2ADDR           load v2 source
00005AF6  E761 0000 0806                 00000000  4313+         VL    v22,0(R1)           use v21 to test decoder
00005AFC  E310 5028 0014                 00000028  4314+         LGF   R1,V3ADDR           load v3 source
00005B02  E771 0000 0806                 00000000  4315+         VL    v23,0(R1)           use v22 to test decoder
00005B08  E756 7010 3EF8                           4316+         VCEQ  V21,V22,V23,3,1             test instruction
00005B0E  B98D 0020                                4317+         EPSW  R2,R0               extract psw
00005B12  5020 500C                      0000000C  4318+         ST    R2,CCPSW               to save CC
00005B16  E750 5048 080E                 00005AD0  4319+         VST   V21,V1O95           save v1 output
00005B1C  07FB                                     4320+         BR    R11                 return
00005B20                                           4321+RE95     DC    0F                  V1 for this test
00005B20                                           4322+         DROP  R5
00005B20  00000000 00000000                        4323          DC    XL16'0000000000000000 0000000000000000'   result
00005B28  00000000 00000000
00005B30  01110133 01550177                        4324          DC    XL16'0111013301550177 019901BB01DD01FF'   v2
00005B38  019901BB 01DD01FF
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
00005B40  00010203 04050607                        4325           DC    XL16'0001020304050607 08090A0B0C0D0E0F'   v3
00005B48  08090A0B 0C0D0E0F
                                                   4326
                                                   4327           VRR_B VCEQ,3,3
00005B50                                           4328+          DS    0FD
00005B50                     00005B50              4329+          USING *,R5               base for test data and test routine
00005B50  00005BB8                                 4330+T96       DC    A(X96)             address of test routine
00005B54  0060                                     4331+          DC    H'96'              test number
00005B56  00                                       4332+          DC    X'00'
00005B57  03                                       4333+          DC    HL1'3'                  m4 used
00005B58  01                                       4334+          DC    HL1'1'                  m5 used
00005B59  03                                       4335+          DC    HL1'3'             CC
00005B5A  0E                                       4336+          DC    HL1'14'            CC failed mask
00005B5C  00000000 00000000                        4337+          DS    2F                 extracted PSW after test (has CC)
00005B64  FF                                       4338+          DC    X'FF'              extracted CC, if test failed
00005B65  E5C3C5D8 40404040                        4339+          DC    CL8'VCEQ'          instruction name
00005B70  00005BE8                                 4340+          DC    A(RE96)            address of v1 result
00005B74  00005BF8                                 4341+          DC    A(RE96+16)         address of v2 source
00005B78  00005C08                                 4342+          DC    A(RE96+32)         address of v3 source
00005B7C  00000010                                 4343+          DC    A(16)              result length
00005B80  00005BE8                                 4344+REA96     DC    A(RE96)            result address
00005B88  00000000 00000000                        4345+          DS    2FD                 gap
00005B90  00000000 00000000
00005B98  00000000 00000000                        4346+V1O96     DS    XL16               V1 output
00005BA0  00000000 00000000
00005BA8  00000000 00000000                        4347+          DS    2FD                 gap
00005BB0  00000000 00000000
                                                   4348+*
00005BB8                                           4349+X96       DS    0F
00005BB8  E310 5024 0014                 00000024  4350+          LGF   R1,V2ADDR          load v2 source
00005BBE  E761 0000 0806                 00000000  4351+          VL    v22,0(R1)          use v21 to test decoder
00005BC4  E310 5028 0014                 00000028  4352+          LGF   R1,V3ADDR          load v3 source
00005BCA  E771 0000 0806                 00000000  4353+          VL    v23,0(R1)          use v22 to test decoder
00005BD0  E756 7010 3EF8                           4354+          VCEQ  V21,V22,V23,3,1            test instruction
00005BD6  B98D 0020                                4355+          EPSW  R2,R0              extract psw
00005BDA  5020 500C                      0000000C  4356+          ST    R2,CCPSW              to save CC
00005BDE  E750 5048 080E                 00005B98  4357+          VST   V21,V1O96          save v1 output
00005BE4  07FB                                     4358+          BR    R11                return
00005BE8                                           4359+RE96      DC    0F                 V1 for this test
00005BE8                                           4360+          DROP  R5
00005BE8  00000000 00000000                        4361           DC    XL16'0000000000000000 0000000000000000'   result
00005BF0  00000000 00000000
00005BF8  00010203 04050607                        4362           DC    XL16'0001020304050607 08090A0B0C0D0E0F'   v2
00005C00  08090A0B 0C0D0E0F
00005C08  01110133 01550177                        4363           DC    XL16'0111013301550177 019901BB01DD01FF'   v3
00005C10  019901BB 01DD01FF
                                                   4364
                                                   4365 *-------------------------------------------------------------------
                                                   4366 * VCHL   - Vector Compare High Logical
                                                   4367 *-------------------------------------------------------------------
                                                   4368 * cc=0: All elements highl
                                                   4369 * cc=1: Some elements high
                                                   4370 * cc=3: No element high
                                                   4371 *-------------------------------------------------------------------
                                                   4372 * case -  simple cc debug
                                                   4373 *-------------------------------------------------------------------
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

                                                   4374 *Byte
                                                   4375          VRR_B VCHL,0,0
00005C18                                           4376+         DS    0FD
00005C18                       00005C18            4377+         USING *,R5              base for test data and test routine
00005C18  00005C80                                 4378+T97      DC    A(X97)            address of test routine
00005C1C  0061                                     4379+         DC    H'97'             test number
00005C1E  00                                       4380+         DC    X'00'
00005C1F  00                                       4381+         DC    HL1'0'                 m4 used
00005C20  01                                       4382+         DC    HL1'1'                 m5 used
00005C21  00                                       4383+         DC    HL1'0'            CC
00005C22  07                                       4384+         DC    HL1'7'            CC failed mask
00005C24  00000000 00000000                        4385+         DS    2F                extracted PSW after test (has CC)
00005C2C  FF                                       4386+         DC    X'FF'             extracted CC, if test failed
00005C2D  E5C3C8D3 40404040                        4387+         DC    CL8'VCHL'         instruction name
00005C38  00005CB0                                 4388+         DC    A(RE97)           address of v1 result
00005C3C  00005CC0                                 4389+         DC    A(RE97+16)        address of v2 source
00005C40  00005CD0                                 4390+         DC    A(RE97+32)        address of v3 source
00005C44  00000010                                 4391+         DC    A(16)             result length
00005C48  00005CB0                                 4392+REA97    DC    A(RE97)           result address
00005C50  00000000 00000000                        4393+         DS    2FD                gap
00005C58  00000000 00000000
00005C60  00000000 00000000                        4394+V1O97    DS    XL16              V1 output
00005C68  00000000 00000000
00005C70  00000000 00000000                        4395+         DS    2FD                gap
00005C78  00000000 00000000
                                                   4396+*
00005C80                                           4397+X97      DS    0F
00005C80  E310 5024 0014                 00000024  4398+         LGF   R1,V2ADDR         load v2 source
00005C86  E761 0000 0806                 00000000  4399+         VL    v22,0(R1)         use v21 to test decoder
00005C8C  E310 5028 0014                 00000028  4400+         LGF   R1,V3ADDR         load v3 source
00005C92  E771 0000 0806                 00000000  4401+         VL    v23,0(R1)         use v22 to test decoder
00005C98  E756 7010 0EF9                           4402+         VCHL  V21,V22,V23,0,1           test instruction
00005C9E  B98D 0020                                4403+         EPSW  R2,R0             extract psw
00005CA2  5020 500C                      0000000C  4404+         ST    R2,CCPSW             to save CC
00005CA6  E750 5048 080E                 00005C60  4405+         VST   V21,V1O97         save v1 output
00005CAC  07FB                                     4406+         BR    R11               return
00005CB0                                           4407+RE97     DC    0F                V1 for this test
00005CB0                                           4408+         DROP  R5
00005CB0  FFFFFFFF FFFFFFFF                        4409          DC    XL16'FFFFFFFFFFFFFFFF FFFFFFFFFFFFFFFF'   result
00005CB8  FFFFFFFF FFFFFFFF
00005CC0  FFFFFFFF FFFFFFFF                        4410          DC    XL16'FFFFFFFFFFFFFFFF FFFFFFFFFFFFFFFF'   v2
00005CC8  FFFFFFFF FFFFFFFF
00005CD0  00000000 00000000                        4411          DC    XL16'0000000000000000 0000000000000000'   v3
00005CD8  00000000 00000000
                                                   4412
                                                   4413          VRR_B VCHL,0,1
00005CE0                                           4414+         DS    0FD
00005CE0                       00005CE0            4415+         USING *,R5              base for test data and test routine
00005CE0  00005D48                                 4416+T98      DC    A(X98)            address of test routine
00005CE4  0062                                     4417+         DC    H'98'             test number
00005CE6  00                                       4418+         DC    X'00'
00005CE7  00                                       4419+         DC    HL1'0'                 m4 used
00005CE8  01                                       4420+         DC    HL1'1'                 m5 used
00005CE9  01                                       4421+         DC    HL1'1'            CC
00005CEA  0B                                       4422+         DC    HL1'11'           CC failed mask
00005CEC  00000000 00000000                        4423+         DS    2F                extracted PSW after test (has CC)
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
00005CF4  FF                                      4424+          DC    X'FF'                extracted CC, if test failed
00005CF5  E5C3C8D3 40404040                       4425+          DC    CL8'VCHL'            instruction name
00005D00  00005D78                                4426+          DC    A(RE98)              address of v1 result
00005D04  00005D88                                4427+          DC    A(RE98+16)           address of v2 source
00005D08  00005D98                                4428+          DC    A(RE98+32)           address of v3 source
00005D0C  00000010                                4429+          DC    A(16)                result length
00005D10  00005D78                                4430+REA98     DC    A(RE98)              result address
00005D18  00000000 00000000                       4431+          DS    2FD                   gap
00005D20  00000000 00000000
00005D28  00000000 00000000                       4432+V1O98     DS    XL16                 V1 output
00005D30  00000000 00000000
00005D38  00000000 00000000                       4433+          DS    2FD                   gap
00005D40  00000000 00000000
                                                  4434+*
00005D48                                          4435+X98       DS    0F
00005D48  E310 5024 0014                 00000024 4436+          LGF   R1,V2ADDR            load v2 source
00005D4E  E761 0000 0806                 00000000 4437+          VL    v22,0(R1)            use v21 to test decoder
00005D54  E310 5028 0014                 00000028 4438+          LGF   R1,V3ADDR            load v3 source
00005D5A  E771 0000 0806                 00000000 4439+          VL    v23,0(R1)            use v22 to test decoder
00005D60  E756 7010 0EF9                          4440+          VCHL  V21,V22,V23,0,1                test instruction
00005D66  B98D 0020                               4441+          EPSW  R2,R0                extract psw
00005D6A  5020 500C                      0000000C 4442+          ST    R2,CCPSW                to save CC
00005D6E  E750 5048 080E                 00005D28 4443+          VST   V21,V1O98            save v1 output
00005D74  07FB                                    4444+          BR    R11                  return
00005D78                                          4445+RE98      DC    0F                   V1 for this test
00005D78                                          4446+          DROP  R5
00005D78  00000000 00000000                       4447           DC    XL16'0000000000000000 FFFFFFFF00000000'   result
00005D80  FFFFFFFF 00000000
00005D88  00000000 00000000                       4448           DC    XL16'0000000000000000 8FFF8FFF00000000'   v2
00005D90  8FFF8FFF 00000000
00005D98  00000000 00000000                       4449           DC    XL16'0000000000000000 0000000000000000'   v3
00005DA0  00000000 00000000
                                                  4450
                                                  4451           VRR_B VCHL,0,3
00005DA8                                          4452+          DS    0FD
00005DA8                         00005DA8         4453+          USING *,R5                 base for test data and test routine
00005DA8  00005E10                                4454+T99       DC    A(X99)               address of test routine
00005DAC  0063                                    4455+          DC    H'99'                test number
00005DAE  00                                      4456+          DC    X'00'
00005DAF  00                                      4457+          DC    HL1'0'                    m4 used
00005DB0  01                                      4458+          DC    HL1'1'                    m5 used
00005DB1  03                                      4459+          DC    HL1'3'               CC
00005DB2  0E                                      4460+          DC    HL1'14'              CC failed mask
00005DB4  00000000 00000000                       4461+          DS    2F                   extracted PSW after test (has CC)
00005DBC  FF                                      4462+          DC    X'FF'                extracted CC, if test failed
00005DBD  E5C3C8D3 40404040                       4463+          DC    CL8'VCHL'            instruction name
00005DC8  00005E40                                4464+          DC    A(RE99)              address of v1 result
00005DCC  00005E50                                4465+          DC    A(RE99+16)           address of v2 source
00005DD0  00005E60                                4466+          DC    A(RE99+32)           address of v3 source
00005DD4  00000010                                4467+          DC    A(16)                result length
00005DD8  00005E40                                4468+REA99     DC    A(RE99)              result address
00005DE0  00000000 00000000                       4469+          DS    2FD                   gap
00005DE8  00000000 00000000
00005DF0  00000000 00000000                       4470+V1O99     DS    XL16                 V1 output
00005DF8  00000000 00000000
00005E00  00000000 00000000                       4471+          DS    2FD                   gap
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
00005E08  00000000 00000000                        4472+*
00005E10                                           4473+X99      DS    0F
00005E10  E310 5024 0014                 00000024  4474+          LGF   R1,V2ADDR          load v2 source
00005E16  E761 0000 0806                 00000000  4475+          VL    v22,0(R1)          use v21 to test decoder
00005E1C  E310 5028 0014                 00000028  4476+          LGF   R1,V3ADDR          load v3 source
00005E22  E771 0000 0806                 00000000  4477+          VL    v23,0(R1)          use v22 to test decoder
00005E28  E756 7010 0EF9                           4478+          VCHL  V21,V22,V23,0,1              test instruction
00005E2E  B98D 0020                                4479+          EPSW  R2,R0              extract psw
00005E32  5020 500C                      0000000C  4480+          ST    R2,CCPSW             to save CC
00005E36  E750 5048 080E                 00005DF0  4481+          VST   V21,V1O99          save v1 output
00005E3C  07FB                                     4482+          BR    R11                return
00005E40                                           4483+RE99     DC    0F                 V1 for this test
00005E40                                           4484+          DROP  R5
00005E40  00000000 00000000                        4485           DC    XL16'0000000000000000 0000000000000000'   result
00005E48  00000000 00000000
00005E50  00000000 00000000                        4486           DC    XL16'0000000000000000 0000000000000000'   v2
00005E58  00000000 00000000
00005E60  00000000 00000000                        4487           DC    XL16'0000000000000000 0000000000000000'   v3
00005E68  00000000 00000000
                                                   4488
                                                   4489 *Halfword
                                                   4490           VRR_B VCHL,1,0
00005E70                                           4491+          DS    0FD
00005E70                 00005E70                  4492+          USING *,R5               base for test data and test routine
00005E70  00005ED8                                 4493+T100     DC    A(X100)            address of test routine
00005E74  0064                                     4494+          DC    H'100'             test number
00005E76  00                                       4495+          DC    X'00'
00005E77  01                                       4496+          DC    HL1'1'                  m4 used
00005E78  01                                       4497+          DC    HL1'1'                  m5 used
00005E79  00                                       4498+          DC    HL1'0'             CC
00005E7A  07                                       4499+          DC    HL1'7'             CC failed mask
00005E7C  00000000 00000000                        4500+          DS    2F                 extracted PSW after test (has CC)
00005E84  FF                                       4501+          DC    X'FF'              extracted CC, if test failed
00005E85  E5C3C8D3 40404040                        4502+          DC    CL8'VCHL'          instruction name
00005E90  00005F08                                 4503+          DC    A(RE100)           address of v1 result
00005E94  00005F18                                 4504+          DC    A(RE100+16)        address of v2 source
00005E98  00005F28                                 4505+          DC    A(RE100+32)        address of v3 source
00005E9C  00000010                                 4506+          DC    A(16)              result length
00005EA0  00005F08                                 4507+REA100   DC    A(RE100)           result address
00005EA8  00000000 00000000                        4508+          DS    2FD                 gap
00005EB0  00000000 00000000
00005EB8  00000000 00000000                        4509+V1O100   DS    XL16               V1 output
00005EC0  00000000 00000000
00005EC8  00000000 00000000                        4510+          DS    2FD                 gap
00005ED0  00000000 00000000
                                                   4511+*
00005ED8                                           4512+X100     DS    0F
00005ED8  E310 5024 0014                 00000024  4513+          LGF   R1,V2ADDR          load v2 source
00005EDE  E761 0000 0806                 00000000  4514+          VL    v22,0(R1)          use v21 to test decoder
00005EE4  E310 5028 0014                 00000028  4515+          LGF   R1,V3ADDR          load v3 source
00005EEA  E771 0000 0806                 00000000  4516+          VL    v23,0(R1)          use v22 to test decoder
00005EF0  E756 7010 1EF9                           4517+          VCHL  V21,V22,V23,1,1              test instruction
00005EF6  B98D 0020                                4518+          EPSW  R2,R0              extract psw
00005EFA  5020 500C                      0000000C  4519+          ST    R2,CCPSW             to save CC
00005EFE  E750 5048 080E                 00005EB8  4520+          VST   V21,V1O100         save v1 output
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

00005F04  07FB                                     4521+         BR    R11                 return
00005F08                                           4522+RE100    DC    0F                  V1 for this test
00005F08                                           4523+         DROP  R5
00005F08  FFFFFFFF FFFFFFFF                        4524          DC    XL16'FFFFFFFFFFFFFFFF FFFFFFFFFFFFFFFF'   result
00005F10  FFFFFFFF FFFFFFFF
00005F18  FFFFFFFF FFFFFFFF                        4525          DC    XL16'FFFFFFFFFFFFFFFF FFFFFFFFFFFFFFFF'   v2
00005F20  FFFFFFFF FFFFFFFF
00005F28  00000000 00000000                        4526          DC    XL16'0000000000000000 0000000000000000'   v3
00005F30  00000000 00000000
                                                   4527
                                                   4528          VRR_B VCHL,1,1
00005F38                                           4529+         DS    0FD
00005F38                      00005F38             4530+         USING *,R5                base for test data and test routine
00005F38  00005FA0                                 4531+T101     DC    A(X101)             address of test routine
00005F3C  0065                                     4532+         DC    H'101'              test number
00005F3E  00                                       4533+         DC    X'00'
00005F3F  01                                       4534+         DC    HL1'1'                   m4 used
00005F40  01                                       4535+         DC    HL1'1'                   m5 used
00005F41  01                                       4536+         DC    HL1'1'              CC
00005F42  0B                                       4537+         DC    HL1'11'             CC failed mask
00005F44  00000000 00000000                        4538+         DS    2F                  extracted PSW after test (has CC)
00005F4C  FF                                       4539+         DC    X'FF'               extracted CC, if test failed
00005F4D  E5C3C8D3 40404040                        4540+         DC    CL8'VCHL'           instruction name
00005F58  00005FD0                                 4541+         DC    A(RE101)            address of v1 result
00005F5C  00005FE0                                 4542+         DC    A(RE101+16)         address of v2 source
00005F60  00005FF0                                 4543+         DC    A(RE101+32)         address of v3 source
00005F64  00000010                                 4544+         DC    A(16)               result length
00005F68  00005FD0                                 4545+REA101   DC    A(RE101)            result address
00005F70  00000000 00000000                        4546+         DS    2FD                  gap
00005F78  00000000 00000000
00005F80  00000000 00000000                        4547+V1O101   DS    XL16                V1 output
00005F88  00000000 00000000
00005F90  00000000 00000000                        4548+         DS    2FD                  gap
00005F98  00000000 00000000
                                                   4549+*
00005FA0                                           4550+X101     DS    0F
00005FA0  E310 5024 0014                 00000024  4551+         LGF   R1,V2ADDR           load v2 source
00005FA6  E761 0000 0806                 00000000  4552+         VL    v22,0(R1)           use v21 to test decoder
00005FAC  E310 5028 0014                 00000028  4553+         LGF   R1,V3ADDR           load v3 source
00005FB2  E771 0000 0806                 00000000  4554+         VL    v23,0(R1)           use v22 to test decoder
00005FB8  E756 7010 1EF9                           4555+         VCHL  V21,V22,V23,1,1            test instruction
00005FBE  B98D 0020                                4556+         EPSW  R2,R0               extract psw
00005FC2  5020 500C                      0000000C  4557+         ST    R2,CCPSW               to save CC
00005FC6  E750 5048 080E                 00005F80  4558+         VST   V21,V1O101          save v1 output
00005FCC  07FB                                     4559+         BR    R11                 return
00005FD0                                           4560+RE101    DC    0F                  V1 for this test
00005FD0                                           4561+         DROP  R5
00005FD0  00000000 00000000                        4562          DC    XL16'0000000000000000 FFFFFFFF00000000'   result
00005FD8  FFFFFFFF 00000000
00005FE0  00000000 00000000                        4563          DC    XL16'0000000000000000 8FFF8FFF00000000'   v3
00005FE8  8FFF8FFF 00000000
00005FF0  00000000 00000000                        4564          DC    XL16'0000000000000000 0000000000000000'   v2
00005FF8  00000000 00000000
                                                   4565
                                                   4566          VRR_B VCHL,1,3
00006000                                           4567+         DS    0FD
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

00006000                     00006000              4568+          USING *,R5              base for test data and test routine
00006000  00006068                                 4569+T102      DC    A(X102)           address of test routine
00006004  0066                                     4570+          DC    H'102'            test number
00006006  00                                       4571+          DC    X'00'
00006007  01                                       4572+          DC    HL1'1'                 m4 used
00006008  01                                       4573+          DC    HL1'1'                 m5 used
00006009  03                                       4574+          DC    HL1'3'            CC
0000600A  0E                                       4575+          DC    HL1'14'           CC failed mask
0000600C  00000000 00000000                        4576+          DS    2F                extracted PSW after test (has CC)
00006014  FF                                       4577+          DC    X'FF'             extracted CC, if test failed
00006015  E5C3C8D3 40404040                        4578+          DC    CL8'VCHL'         instruction name
00006020  00006098                                 4579+          DC    A(RE102)          address of v1 result
00006024  000060A8                                 4580+          DC    A(RE102+16)       address of v2 source
00006028  000060B8                                 4581+          DC    A(RE102+32)       address of v3 source
0000602C  00000010                                 4582+          DC    A(16)             result length
00006030  00006098                                 4583+REA102    DC    A(RE102)          result address
00006038  00000000 00000000                        4584+          DS    2FD                gap
00006040  00000000 00000000
00006048  00000000 00000000                        4585+V1O102    DS    XL16              V1 output
00006050  00000000 00000000
00006058  00000000 00000000                        4586+          DS    2FD                gap
00006060  00000000 00000000
                                                   4587+*
00006068                                           4588+X102      DS    0F
00006068  E310 5024 0014                 00000024  4589+          LGF   R1,V2ADDR         load v2 source
0000606E  E761 0000 0806                 00000000  4590+          VL    v22,0(R1)         use v21 to test decoder
00006074  E310 5028 0014                 00000028  4591+          LGF   R1,V3ADDR         load v3 source
0000607A  E771 0000 0806                 00000000  4592+          VL    v23,0(R1)         use v22 to test decoder
00006080  E756 7010 1EF9                           4593+          VCHL  V21,V22,V23,1,1           test instruction
00006086  B98D 0020                                4594+          EPSW  R2,R0             extract psw
0000608A  5020 500C                      0000000C  4595+          ST    R2,CCPSW             to save CC
0000608E  E750 5048 080E                 00006048  4596+          VST   V21,V1O102        save v1 output
00006094  07FB                                     4597+          BR    R11               return
00006098                                           4598+RE102     DC    0F                V1 for this test
00006098                                           4599+          DROP  R5
00006098  00000000 00000000                        4600           DC    XL16'0000000000000000 0000000000000000'   result
000060A0  00000000 00000000
000060A8  00000000 00000000                        4601           DC    XL16'0000000000000000 0000000000000000'   v2
000060B0  00000000 00000000
000060B8  00000000 00000000                        4602           DC    XL16'0000000000000000 0000000000000000'   v3
000060C0  00000000 00000000
                                                   4603
                                                   4604 *Word
                                                   4605           VRR_B VCHL,2,0
000060C8                                           4606+          DS    0FD
000060C8                      000060C8             4607+          USING *,R5              base for test data and test routine
000060C8  00006130                                 4608+T103      DC    A(X103)           address of test routine
000060CC  0067                                     4609+          DC    H'103'            test number
000060CE  00                                       4610+          DC    X'00'
000060CF  02                                       4611+          DC    HL1'2'                 m4 used
000060D0  01                                       4612+          DC    HL1'1'                 m5 used
000060D1  00                                       4613+          DC    HL1'0'            CC
000060D2  07                                       4614+          DC    HL1'7'            CC failed mask
000060D4  00000000 00000000                        4615+          DS    2F                extracted PSW after test (has CC)
000060DC  FF                                       4616+          DC    X'FF'             extracted CC, if test failed
000060DD  E5C3C8D3 40404040                        4617+          DC    CL8'VCHL'         instruction name
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
000060E8  00006160                          4618+          DC    A(RE103)            address of v1 result
000060EC  00006170                          4619+          DC    A(RE103+16)         address of v2 source
000060F0  00006180                          4620+          DC    A(RE103+32)         address of v3 source
000060F4  00000010                          4621+          DC    A(16)               result length
000060F8  00006160                          4622+REA103    DC    A(RE103)            result address
00006100  00000000 00000000                 4623+          DS    2FD                  gap
00006108  00000000 00000000
00006110  00000000 00000000                 4624+V1O103    DS    XL16                V1 output
00006118  00000000 00000000
00006120  00000000 00000000                 4625+          DS    2FD                  gap
00006128  00000000 00000000
                                            4626+*
00006130                                    4627+X103      DS    0F
00006130  E310 5024 0014              00000024  4628+      LGF   R1,V2ADDR           load v2 source
00006136  E761 0000 0806              00000000  4629+      VL    v22,0(R1)           use v21 to test decoder
0000613C  E310 5028 0014              00000028  4630+      LGF   R1,V3ADDR           load v3 source
00006142  E771 0000 0806              00000000  4631+      VL    v23,0(R1)           use v22 to test decoder
00006148  E756 7010 2EF9                        4632+      VCHL  V21,V22,V23,2,1             test instruction
0000614E  B98D 0020                             4633+      EPSW  R2,R0               extract psw
00006152  5020 500C                   0000000C  4634+      ST    R2,CCPSW               to save CC
00006156  E750 5048 080E              00006110  4635+      VST   V21,V1O103          save v1 output
0000615C  07FB                                  4636+      BR    R11                 return
00006160                                        4637+RE103 DC    0F                  V1 for this test
00006160                                        4638+      DROP  R5
00006160  FFFFFFFF FFFFFFFF                    4639       DC    XL16'FFFFFFFFFFFFFFFF FFFFFFFFFFFFFFFF'   result
00006168  FFFFFFFF FFFFFFFF
00006170  FFFFFFFF FFFFFFFF                    4640       DC    XL16'FFFFFFFFFFFFFFFF FFFFFFFFFFFFFFFF'   v2
00006178  FFFFFFFF FFFFFFFF
00006180  00000000 00000000                    4641       DC    XL16'0000000000000000 0000000000000000'   v3
00006188  00000000 00000000
                                            4642
                                            4643           VRR_B VCHL,2,1
00006190                                    4644+          DS    0FD
00006190                    00006190        4645+          USING *,R5                base for test data and test routine
00006190  000061F8                          4646+T104      DC    A(X104)             address of test routine
00006194  0068                              4647+          DC    H'104'              test number
00006196  00                                4648+          DC    X'00'
00006197  02                                4649+          DC    HL1'2'                   m4 used
00006198  01                                4650+          DC    HL1'1'                   m5 used
00006199  01                                4651+          DC    HL1'1'              CC
0000619A  0B                                4652+          DC    HL1'11'             CC failed mask
0000619C  00000000 00000000                 4653+          DS    2F                  extracted PSW after test (has CC)
000061A4  FF                                4654+          DC    X'FF'               extracted CC, if test failed
000061A5  E5C3C8D3 40404040                 4655+          DC    CL8'VCHL'           instruction name
000061B0  00006228                          4656+          DC    A(RE104)            address of v1 result
000061B4  00006238                          4657+          DC    A(RE104+16)         address of v2 source
000061B8  00006248                          4658+          DC    A(RE104+32)         address of v3 source
000061BC  00000010                          4659+          DC    A(16)               result length
000061C0  00006228                          4660+REA104    DC    A(RE104)            result address
000061C8  00000000 00000000                 4661+          DS    2FD                  gap
000061D0  00000000 00000000
000061D8  00000000 00000000                 4662+V1O104    DS    XL16                V1 output
000061E0  00000000 00000000
000061E8  00000000 00000000                 4663+          DS    2FD                  gap
000061F0  00000000 00000000
                                            4664+*
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
000061F8                                           4665+X104     DS    0F
000061F8  E310 5024 0014                 00000024  4666+         LGF   R1,V2ADDR          load v2 source
000061FE  E761 0000 0806                 00000000  4667+         VL    v22,0(R1)          use v21 to test decoder
00006204  E310 5028 0014                 00000028  4668+         LGF   R1,V3ADDR          load v3 source
0000620A  E771 0000 0806                 00000000  4669+         VL    v23,0(R1)          use v22 to test decoder
00006210  E756 7010 2EF9                           4670+         VCHL  V21,V22,V23,2,1              test instruction
00006216  B98D 0020                                4671+         EPSW  R2,R0              extract psw
0000621A  5020 500C                      0000000C  4672+         ST    R2,CCPSW              to save CC
0000621E  E750 5048 080E                 000061D8  4673+         VST   V21,V1O104         save v1 output
00006224  07FB                                     4674+         BR    R11                return
00006228                                           4675+RE104    DC    0F                 V1 for this test
00006228                                           4676+         DROP  R5
00006228  00000000 00000000                        4677          DC    XL16'0000000000000000 FFFFFFFF00000000'   result
00006230  FFFFFFFF 00000000
00006238  00000000 00000000                        4678          DC    XL16'0000000000000000 8FFF8FFF00000000'   v3
00006240  8FFF8FFF 00000000
00006248  00000000 00000000                        4679          DC    XL16'0000000000000000 0000000000000000'   v2
00006250  00000000 00000000
                                                   4680
                                                   4681          VRR_B VCHL,2,3
00006258                                           4682+         DS    0FD
00006258                         00006258          4683+         USING *,R5               base for test data and test routine
00006258  000062C0                                 4684+T105     DC    A(X105)            address of test routine
0000625C  0069                                     4685+         DC    H'105'             test number
0000625E  00                                       4686+         DC    X'00'
0000625F  02                                       4687+         DC    HL1'2'                  m4 used
00006260  01                                       4688+         DC    HL1'1'                  m5 used
00006261  03                                       4689+         DC    HL1'3'             CC
00006262  0E                                       4690+         DC    HL1'14'            CC failed mask
00006264  00000000 00000000                        4691+         DS    2F                 extracted PSW after test (has CC)
0000626C  FF                                       4692+         DC    X'FF'              extracted CC, if test failed
0000626D  E5C3C8D3 40404040                        4693+         DC    CL8'VCHL'          instruction name
00006278  000062F0                                 4694+         DC    A(RE105)           address of v1 result
0000627C  00006300                                 4695+         DC    A(RE105+16)        address of v2 source
00006280  00006310                                 4696+         DC    A(RE105+32)        address of v3 source
00006284  00000010                                 4697+         DC    A(16)              result length
00006288  000062F0                                 4698+REA105   DC    A(RE105)           result address
00006290  00000000 00000000                        4699+         DS    2FD                 gap
00006298  00000000 00000000
000062A0  00000000 00000000                        4700+V1O105   DS    XL16               V1 output
000062A8  00000000 00000000
000062B0  00000000 00000000                        4701+         DS    2FD                 gap
000062B8  00000000 00000000
                                                   4702+*
000062C0                                           4703+X105     DS    0F
000062C0  E310 5024 0014                 00000024  4704+         LGF   R1,V2ADDR          load v2 source
000062C6  E761 0000 0806                 00000000  4705+         VL    v22,0(R1)          use v21 to test decoder
000062CC  E310 5028 0014                 00000028  4706+         LGF   R1,V3ADDR          load v3 source
000062D2  E771 0000 0806                 00000000  4707+         VL    v23,0(R1)          use v22 to test decoder
000062D8  E756 7010 2EF9                           4708+         VCHL  V21,V22,V23,2,1              test instruction
000062DE  B98D 0020                                4709+         EPSW  R2,R0              extract psw
000062E2  5020 500C                      0000000C  4710+         ST    R2,CCPSW              to save CC
000062E6  E750 5048 080E                 000062A0  4711+         VST   V21,V1O105         save v1 output
000062EC  07FB                                     4712+         BR    R11                return
000062F0                                           4713+RE105    DC    0F                 V1 for this test
000062F0                                           4714+         DROP  R5
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
000062F0  00000000 00000000                        4715           DC    XL16'0000000000000000 0000000000000000'   result
000062F8  00000000 00000000
00006300  00000000 00000000                        4716           DC    XL16'0000000000000000 0000000000000000'   v2
00006308  00000000 00000000
00006310  00000000 00000000                        4717           DC    XL16'0000000000000000 0000000000000000'   v3
00006318  00000000 00000000
                                                   4718
                                                   4719 *Doubleword
                                                   4720           VRR_B VCHL,3,0
00006320                                           4721+          DS    0FD
00006320                          00006320         4722+          USING *,R5                base for test data and test routine
00006320  00006388                                 4723+T106      DC    A(X106)             address of test routine
00006324  006A                                     4724+          DC    H'106'              test number
00006326  00                                       4725+          DC    X'00'
00006327  03                                       4726+          DC    HL1'3'                   m4 used
00006328  01                                       4727+          DC    HL1'1'                   m5 used
00006329  00                                       4728+          DC    HL1'0'              CC
0000632A  07                                       4729+          DC    HL1'7'              CC failed mask
0000632C  00000000 00000000                        4730+          DS    2F                  extracted PSW after test (has CC)
00006334  FF                                       4731+          DC    X'FF'               extracted CC, if test failed
00006335  E5C3C8D3 40404040                       4732+          DC    CL8'VCHL'           instruction name
00006340  000063B8                                 4733+          DC    A(RE106)            address of v1 result
00006344  000063C8                                 4734+          DC    A(RE106+16)         address of v2 source
00006348  000063D8                                 4735+          DC    A(RE106+32)         address of v3 source
0000634C  00000010                                 4736+          DC    A(16)               result length
00006350  000063B8                                 4737+REA106    DC    A(RE106)            result address
00006358  00000000 00000000                        4738+          DS    2FD                  gap
00006360  00000000 00000000
00006368  00000000 00000000                        4739+V1O106    DS    XL16                V1 output
00006370  00000000 00000000
00006378  00000000 00000000                        4740+          DS    2FD                  gap
00006380  00000000 00000000
                                                   4741+*
00006388                                           4742+X106      DS    0F
00006388  E310 5024 0014                 00000024  4743+          LGF   R1,V2ADDR           load v2 source
0000638E  E761 0000 0806                 00000000  4744+          VL    v22,0(R1)           use v21 to test decoder
00006394  E310 5028 0014                 00000028  4745+          LGF   R1,V3ADDR           load v3 source
0000639A  E771 0000 0806                 00000000  4746+          VL    v23,0(R1)           use v22 to test decoder
000063A0  E756 7010 3EF9                           4747+          VCHL  V21,V22,V23,3,1              test instruction
000063A6  B98D 0020                                4748+          EPSW  R2,R0               extract psw
000063AA  5020 500C                      0000000C  4749+          ST    R2,CCPSW               to save CC
000063AE  E750 5048 080E                 00006368  4750+          VST   V21,V1O106          save v1 output
000063B4  07FB                                     4751+          BR    R11                 return
000063B8                                           4752+RE106     DC    0F                  V1 for this test
000063B8                                           4753+          DROP  R5
000063B8  FFFFFFFF FFFFFFFF                        4754           DC    XL16'FFFFFFFFFFFFFFFF FFFFFFFFFFFFFFFF'   result
000063C0  FFFFFFFF FFFFFFFF
000063C8  FFFFFFFF FFFFFFFF                        4755           DC    XL16'FFFFFFFFFFFFFFFF FFFFFFFFFFFFFFFF'   v2
000063D0  FFFFFFFF FFFFFFFF
000063D8  00000000 00000000                        4756           DC    XL16'0000000000000000 0000000000000000'   v3
000063E0  00000000 00000000
                                                   4757
                                                   4758           VRR_B VCHL,3,1
000063E8                                           4759+          DS    0FD
000063E8                          000063E8         4760+          USING *,R5                base for test data and test routine
000063E8  00006450                                 4761+T107      DC    A(X107)             address of test routine
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
000063EC  006B                                    4762+          DC    H'107'              test number
000063EE  00                                      4763+          DC    X'00'
000063EF  03                                      4764+          DC    HL1'3'                   m4 used
000063F0  01                                      4765+          DC    HL1'1'                   m5 used
000063F1  01                                      4766+          DC    HL1'1'              CC
000063F2  0B                                      4767+          DC    HL1'11'             CC failed mask
000063F4  00000000 00000000                       4768+          DS    2F                  extracted PSW after test (has CC)
000063FC  FF                                      4769+          DC    X'FF'               extracted CC, if test failed
000063FD  E5C3C8D3 40404040                       4770+          DC    CL8'VCHL'           instruction name
00006408  00006480                                4771+          DC    A(RE107)            address of v1 result
0000640C  00006490                                4772+          DC    A(RE107+16)         address of v2 source
00006410  000064A0                                4773+          DC    A(RE107+32)         address of v3 source
00006414  00000010                                4774+          DC    A(16)               result length
00006418  00006480                                4775+REA107    DC    A(RE107)            result address
00006420  00000000 00000000                       4776+          DS    2FD                  gap
00006428  00000000 00000000
00006430  00000000 00000000                       4777+V1O107    DS    XL16                V1 output
00006438  00000000 00000000
00006440  00000000 00000000                       4778+          DS    2FD                  gap
00006448  00000000 00000000
                                                  4779+*
00006450                                          4780+X107      DS    0F
00006450  E310 5024 0014                 00000024 4781+          LGF   R1,V2ADDR           load v2 source
00006456  E761 0000 0806                 00000000 4782+          VL    v22,0(R1)           use v21 to test decoder
0000645C  E310 5028 0014                 00000028 4783+          LGF   R1,V3ADDR           load v3 source
00006462  E771 0000 0806                 00000000 4784+          VL    v23,0(R1)           use v22 to test decoder
00006468  E756 7010 3EF9                          4785+          VCHL  V21,V22,V23,3,1                test instruction
0000646E  B98D 0020                               4786+          EPSW  R2,R0               extract psw
00006472  5020 500C                      0000000C 4787+          ST    R2,CCPSW               to save CC
00006476  E750 5048 080E                 00006430 4788+          VST   V21,V1O107          save v1 output
0000647C  07FB                                    4789+          BR    R11                 return
00006480                                          4790+RE107     DC    0F                  V1 for this test
00006480                                          4791+          DROP  R5
00006480  00000000 00000000                       4792           DC    XL16'0000000000000000 FFFFFFFFFFFFFFFF'   result
00006488  FFFFFFFF FFFFFFFF
00006490  00000000 00000000                       4793           DC    XL16'0000000000000000 8FFF8FFF00000000'   v3
00006498  8FFF8FFF 00000000
000064A0  00000000 00000000                       4794           DC    XL16'0000000000000000 0000000000000000'   v2
000064A8  00000000 00000000
                                                  4795
                                                  4796           VRR_B VCHL,3,3
000064B0                                          4797+          DS    0FD
000064B0                  000064B0                4798+          USING *,R5                base for test data and test routine
000064B0  00006518                                4799+T108      DC    A(X108)             address of test routine
000064B4  006C                                    4800+          DC    H'108'              test number
000064B6  00                                      4801+          DC    X'00'
000064B7  03                                      4802+          DC    HL1'3'                   m4 used
000064B8  01                                      4803+          DC    HL1'1'                   m5 used
000064B9  03                                      4804+          DC    HL1'3'              CC
000064BA  0E                                      4805+          DC    HL1'14'             CC failed mask
000064BC  00000000 00000000                       4806+          DS    2F                  extracted PSW after test (has CC)
000064C4  FF                                      4807+          DC    X'FF'               extracted CC, if test failed
000064C5  E5C3C8D3 40404040                       4808+          DC    CL8'VCHL'           instruction name
000064D0  00006548                                4809+          DC    A(RE108)            address of v1 result
000064D4  00006558                                4810+          DC    A(RE108+16)         address of v2 source
000064D8  00006568                                4811+          DC    A(RE108+32)         address of v3 source
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
000064DC  00000010                                4812+          DC    A(16)               result length
000064E0  00006548                                4813+REA108    DC    A(RE108)            result address
000064E8  00000000 00000000                       4814+          DS    2FD                  gap
000064F0  00000000 00000000
000064F8  00000000 00000000                       4815+V1O108    DS    XL16                V1 output
00006500  00000000 00000000
00006508  00000000 00000000                       4816+          DS    2FD                  gap
00006510  00000000 00000000
                                                  4817+*
00006518                                          4818+X108      DS    0F
00006518  E310 5024 0014                 00000024 4819+          LGF   R1,V2ADDR           load v2 source
0000651E  E761 0000 0806                 00000000 4820+          VL    v22,0(R1)           use v21 to test decoder
00006524  E310 5028 0014                 00000028 4821+          LGF   R1,V3ADDR           load v3 source
0000652A  E771 0000 0806                 00000000 4822+          VL    v23,0(R1)           use v22 to test decoder
00006530  E756 7010 3EF9                          4823+          VCHL  V21,V22,V23,3,1               test instruction
00006536  B98D 0020                               4824+          EPSW  R2,R0               extract psw
0000653A  5020 500C                      0000000C 4825+          ST    R2,CCPSW               to save CC
0000653E  E750 5048 080E                 000064F8 4826+          VST   V21,V1O108          save v1 output
00006544  07FB                                    4827+          BR    R11                 return
00006548                                          4828+RE108     DC    0F                  V1 for this test
00006548                                          4829+          DROP  R5
00006548  00000000 00000000                       4830           DC    XL16'0000000000000000 0000000000000000'   result
00006550  00000000 00000000
00006558  00000000 00000000                       4831           DC    XL16'0000000000000000 0000000000000000'   v2
00006560  00000000 00000000
00006568  00000000 00000000                       4832           DC    XL16'0000000000000000 0000000000000000'   v3
00006570  00000000 00000000
                                                  4833
                                                  4834 *-------------------------------------------------------------------
                                                  4835 * case -  general
                                                  4836 *-------------------------------------------------------------------
                                                  4837 *Byte
                                                  4838           VRR_B VCHL,0,0
00006578                                          4839+          DS    0FD
00006578                         00006578         4840+          USING *,R5                base for test data and test routine
00006578  000065E0                                4841+T109      DC    A(X109)             address of test routine
0000657C  006D                                    4842+          DC    H'109'              test number
0000657E  00                                      4843+          DC    X'00'
0000657F  00                                      4844+          DC    HL1'0'                   m4 used
00006580  01                                      4845+          DC    HL1'1'                   m5 used
00006581  00                                      4846+          DC    HL1'0'              CC
00006582  07                                      4847+          DC    HL1'7'              CC failed mask
00006584  00000000 00000000                       4848+          DS    2F                  extracted PSW after test (has CC)
0000658C  FF                                      4849+          DC    X'FF'               extracted CC, if test failed
0000658D  E5C3C8D3 40404040                       4850+          DC    CL8'VCHL'           instruction name
00006598  00006610                                4851+          DC    A(RE109)            address of v1 result
0000659C  00006620                                4852+          DC    A(RE109+16)         address of v2 source
000065A0  00006630                                4853+          DC    A(RE109+32)         address of v3 source
000065A4  00000010                                4854+          DC    A(16)               result length
000065A8  00006610                                4855+REA109    DC    A(RE109)            result address
000065B0  00000000 00000000                       4856+          DS    2FD                  gap
000065B8  00000000 00000000
000065C0  00000000 00000000                       4857+V1O109    DS    XL16                V1 output
000065C8  00000000 00000000
000065D0  00000000 00000000                       4858+          DS    2FD                  gap
000065D8  00000000 00000000
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

                                                   4859+*
000065E0                                           4860+X109     DS    0F
000065E0  E310 5024 0014                 00000024  4861+         LGF   R1,V2ADDR          load v2 source
000065E6  E761 0000 0806                 00000000  4862+         VL    v22,0(R1)          use v21 to test decoder
000065EC  E310 5028 0014                 00000028  4863+         LGF   R1,V3ADDR          load v3 source
000065F2  E771 0000 0806                 00000000  4864+         VL    v23,0(R1)          use v22 to test decoder
000065F8  E756 7010 0EF9                           4865+         VCHL  V21,V22,V23,0,1             test instruction
000065FE  B98D 0020                                4866+         EPSW  R2,R0              extract psw
00006602  5020 500C                      0000000C  4867+         ST    R2,CCPSW              to save CC
00006606  E750 5048 080E                 000065C0  4868+         VST   V21,V1O109         save v1 output
0000660C  07FB                                     4869+         BR    R11                return
00006610                                           4870+RE109    DC    0F                 V1 for this test
00006610                                           4871+         DROP  R5
00006610  FFFFFFFF FFFFFFFF                        4872          DC    XL16'FFFFFFFFFFFFFFFF FFFFFFFFFFFFFFFF'   result
00006618  FFFFFFFF FFFFFFFF
00006620  01020304 05060708                        4873          DC    XL16'0102030405060708 090A0B0C0D0E0F10'   v2
00006628  090A0B0C 0D0E0F10
00006630  00010203 04050607                        4874          DC    XL16'0001020304050607 08090A0B0C0D0E0F'   v3
00006638  08090A0B 0C0D0E0F
                                                   4875
                                                   4876          VRR_B VCHL,0,0
00006640                                           4877+         DS    0FD
00006640                         00006640          4878+         USING *,R5               base for test data and test routine
00006640  000066A8                                 4879+T110     DC    A(X110)            address of test routine
00006644  006E                                     4880+         DC    H'110'             test number
00006646  00                                       4881+         DC    X'00'
00006647  00                                       4882+         DC    HL1'0'                  m4 used
00006648  01                                       4883+         DC    HL1'1'                  m5 used
00006649  00                                       4884+         DC    HL1'0'             CC
0000664A  07                                       4885+         DC    HL1'7'             CC failed mask
0000664C  00000000 00000000                        4886+         DS    2F                 extracted PSW after test (has CC)
00006654  FF                                       4887+         DC    X'FF'              extracted CC, if test failed
00006655  E5C3C8D3 40404040                        4888+         DC    CL8'VCHL'          instruction name
00006660  000066D8                                 4889+         DC    A(RE110)           address of v1 result
00006664  000066E8                                 4890+         DC    A(RE110+16)        address of v2 source
00006668  000066F8                                 4891+         DC    A(RE110+32)        address of v3 source
0000666C  00000010                                 4892+         DC    A(16)              result length
00006670  000066D8                                 4893+REA110   DC    A(RE110)           result address
00006678  00000000 00000000                        4894+         DS    2FD                 gap
00006680  00000000 00000000
00006688  00000000 00000000                        4895+V1O110   DS    XL16               V1 output
00006690  00000000 00000000
00006698  00000000 00000000                        4896+         DS    2FD                 gap
000066A0  00000000 00000000
                                                   4897+*
000066A8                                           4898+X110     DS    0F
000066A8  E310 5024 0014                 00000024  4899+         LGF   R1,V2ADDR          load v2 source
000066AE  E761 0000 0806                 00000000  4900+         VL    v22,0(R1)          use v21 to test decoder
000066B4  E310 5028 0014                 00000028  4901+         LGF   R1,V3ADDR          load v3 source
000066BA  E771 0000 0806                 00000000  4902+         VL    v23,0(R1)          use v22 to test decoder
000066C0  E756 7010 0EF9                           4903+         VCHL  V21,V22,V23,0,1             test instruction
000066C6  B98D 0020                                4904+         EPSW  R2,R0              extract psw
000066CA  5020 500C                      0000000C  4905+         ST    R2,CCPSW              to save CC
000066CE  E750 5048 080E                 00006688  4906+         VST   V21,V1O110         save v1 output
000066D4  07FB                                     4907+         BR    R11                return
000066D8                                           4908+RE110    DC    0F                 V1 for this test
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  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
000066D8                                           4909+          DROP  R5
000066D8  FFFFFFFF FFFFFFFF                        4910           DC    XL16'FFFFFFFFFFFFFFFF FFFFFFFFFFFFFFFF'   result
000066E0  FFFFFFFF FFFFFFFF
000066E8  FFFEFFFD FFFCFFFB                        4911           DC    XL16'FFFEFFFDFFFCFFFB FFFAFFF9FFF8FFF7'   v2
000066F0  FFFAFFF9 FFF8FFF7
000066F8  00010203 04050607                        4912           DC    XL16'0001020304050607 08090A0B0C0D0E0F'   v3
00006700  08090A0B 0C0D0E0F
                                                   4913
                                                   4914           VRR_B VCHL,0,1
00006708                                           4915+          DS    0FD
00006708                      00006708             4916+          USING *,R5                base for test data and test routine
00006708  00006770                                 4917+T111      DC    A(X111)             address of test routine
0000670C  006F                                     4918+          DC    H'111'              test number
0000670E  00                                       4919+          DC    X'00'
0000670F  00                                       4920+          DC    HL1'0'                   m4 used
00006710  01                                       4921+          DC    HL1'1'                   m5 used
00006711  01                                       4922+          DC    HL1'1'              CC
00006712  0B                                       4923+          DC    HL1'11'             CC failed mask
00006714  00000000 00000000                        4924+          DS    2F                  extracted PSW after test (has CC)
0000671C  FF                                       4925+          DC    X'FF'               extracted CC, if test failed
0000671D  E5C3C8D3 40404040                        4926+          DC    CL8'VCHL'           instruction name
00006728  000067A0                                 4927+          DC    A(RE111)            address of v1 result
0000672C  000067B0                                 4928+          DC    A(RE111+16)         address of v2 source
00006730  000067C0                                 4929+          DC    A(RE111+32)         address of v3 source
00006734  00000010                                 4930+          DC    A(16)               result length
00006738  000067A0                                 4931+REA111    DC    A(RE111)            result address
00006740  00000000 00000000                        4932+          DS    2FD                  gap
00006748  00000000 00000000
00006750  00000000 00000000                        4933+V1O111    DS    XL16                V1 output
00006758  00000000 00000000
00006760  00000000 00000000                        4934+          DS    2FD                  gap
00006768  00000000 00000000
                                                   4935+*
00006770                                           4936+X111      DS    0F
00006770  E310 5024 0014                 00000024  4937+          LGF   R1,V2ADDR           load v2 source
00006776  E761 0000 0806                 00000000  4938+          VL    v22,0(R1)           use v21 to test decoder
0000677C  E310 5028 0014                 00000028  4939+          LGF   R1,V3ADDR           load v3 source
00006782  E771 0000 0806                 00000000  4940+          VL    v23,0(R1)           use v22 to test decoder
00006788  E756 7010 0EF9                           4941+          VCHL  V21,V22,V23,0,1               test instruction
0000678E  B98D 0020                                4942+          EPSW  R2,R0               extract psw
00006792  5020 500C                      0000000C  4943+          ST    R2,CCPSW               to save CC
00006796  E750 5048 080E                 00006750  4944+          VST   V21,V1O111          save v1 output
0000679C  07FB                                     4945+          BR    R11                 return
000067A0                                           4946+RE111     DC    0F                  V1 for this test
000067A0                                           4947+          DROP  R5
000067A0  00FF00FF 00FF00FF                        4948           DC    XL16'00FF00FF00FF00FF 00000000000000FF'   result
000067A8  00000000 000000FF
000067B0  00110033 00550077                        4949           DC    XL16'0011003300550077 08090A0B0C0DFE1F'   v2
000067B8  08090A0B 0C0DFE1F
000067C0  00010203 04050607                        4950           DC    XL16'0001020304050607 08090A0B0C0DFE0F'   v3
000067C8  08090A0B 0C0DFE0F
                                                   4951
                                                   4952           VRR_B VCHL,0,1
000067D0                                           4953+          DS    0FD
000067D0                      000067D0             4954+          USING *,R5                base for test data and test routine
000067D0  00006838                                 4955+T112      DC    A(X112)             address of test routine
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
000067D4  0070                           4956+          DC    H'112'              test number
000067D6  00                             4957+          DC    X'00'
000067D7  00                             4958+          DC    HL1'0'                   m4 used
000067D8  01                             4959+          DC    HL1'1'                   m5 used
000067D9  01                             4960+          DC    HL1'1'              CC
000067DA  0B                             4961+          DC    HL1'11'             CC failed mask
000067DC  00000000 00000000              4962+          DS    2F                  extracted PSW after test (has CC)
000067E4  FF                             4963+          DC    X'FF'               extracted CC, if test failed
000067E5  E5C3C8D3 40404040              4964+          DC    CL8'VCHL'           instruction name
000067F0  00006868                       4965+          DC    A(RE112)            address of v1 result
000067F4  00006878                       4966+          DC    A(RE112+16)         address of v2 source
000067F8  00006888                       4967+          DC    A(RE112+32)         address of v3 source
000067FC  00000010                       4968+          DC    A(16)               result length
00006800  00006868                       4969+REA112    DC    A(RE112)            result address
00006808  00000000 00000000              4970+          DS    2FD                  gap
00006810  00000000 00000000
00006818  00000000 00000000              4971+V1O112    DS    XL16                V1 output
00006820  00000000 00000000
00006828  00000000 00000000              4972+          DS    2FD                  gap
00006830  00000000 00000000
                                         4973+*
00006838                                 4974+X112      DS    0F
00006838  E310 5024 0014         00000024  4975+          LGF   R1,V2ADDR           load v2 source
0000683E  E761 0000 0806         00000000  4976+          VL    v22,0(R1)           use v21 to test decoder
00006844  E310 5028 0014         00000028  4977+          LGF   R1,V3ADDR           load v3 source
0000684A  E771 0000 0806         00000000  4978+          VL    v23,0(R1)           use v22 to test decoder
00006850  E756 7010 0EF9                 4979+          VCHL  V21,V22,V23,0,1                test instruction
00006856  B98D 0020                      4980+          EPSW  R2,R0               extract psw
0000685A  5020 500C              0000000C  4981+          ST    R2,CCPSW               to save CC
0000685E  E750 5048 080E         00006818  4982+          VST   V21,V1O112          save v1 output
00006864  07FB                           4983+          BR    R11                 return
00006868                                 4984+RE112     DC    0F                  V1 for this test
00006868                                 4985+          DROP  R5
00006868  00000000 000000FF              4986           DC    XL16'00000000000000FF 00FF00FF00FF00FF'   result
00006870  00FF00FF 00FF00FF
00006878  08090A0B 0C0DFE1F              4987           DC    XL16'08090A0B0C0DFE1F 0011003300550077'   v2
00006880  00110033 00550077
00006888  08090A0B 0C0DFE0F              4988           DC    XL16'08090A0B0C0DFE0F 0001020304050607'   v3
00006890  00010203 04050607
                                         4989
                                         4990           VRR_B VCHL,0,3
00006898                                 4991+          DS    0FD
00006898                   00006898      4992+          USING *,R5                base for test data and test routine
00006898  00006900                       4993+T113      DC    A(X113)             address of test routine
0000689C  0071                           4994+          DC    H'113'              test number
0000689E  00                             4995+          DC    X'00'
0000689F  00                             4996+          DC    HL1'0'                   m4 used
000068A0  01                             4997+          DC    HL1'1'                   m5 used
000068A1  03                             4998+          DC    HL1'3'              CC
000068A2  0E                             4999+          DC    HL1'14'             CC failed mask
000068A4  00000000 00000000              5000+          DS    2F                  extracted PSW after test (has CC)
000068AC  FF                             5001+          DC    X'FF'               extracted CC, if test failed
000068AD  E5C3C8D3 40404040              5002+          DC    CL8'VCHL'           instruction name
000068B8  00006930                       5003+          DC    A(RE113)            address of v1 result
000068BC  00006940                       5004+          DC    A(RE113+16)         address of v2 source
000068C0  00006950                       5005+          DC    A(RE113+32)         address of v3 source
```

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  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

000068C4  00000010                                 5006+          DC    A(16)               result length
000068C8  00006930                                 5007+REA113    DC    A(RE113)            result address
000068D0  00000000 00000000                        5008+          DS    2FD                  gap
000068D8  00000000 00000000
000068E0  00000000 00000000                        5009+V1O113    DS    XL16                V1 output
000068E8  00000000 00000000
000068F0  00000000 00000000                        5010+          DS    2FD                  gap
000068F8  00000000 00000000
                                                   5011+*
00006900                                           5012+X113      DS    0F
00006900  E310 5024 0014                 00000024  5013+          LGF   R1,V2ADDR           load v2 source
00006906  E761 0000 0806                 00000000  5014+          VL    v22,0(R1)           use v21 to test decoder
0000690C  E310 5028 0014                 00000028  5015+          LGF   R1,V3ADDR           load v3 source
00006912  E771 0000 0806                 00000000  5016+          VL    v23,0(R1)           use v22 to test decoder
00006918  E756 7010 0EF9                           5017+          VCHL  V21,V22,V23,0,1               test instruction
0000691E  B98D 0020                                5018+          EPSW  R2,R0               extract psw
00006922  5020 500C                      0000000C  5019+          ST    R2,CCPSW               to save CC
00006926  E750 5048 080E                 000068E0  5020+          VST   V21,V1O113          save v1 output
0000692C  07FB                                     5021+          BR    R11                 return
00006930                                           5022+RE113     DC    0F                  V1 for this test
00006930                                           5023+          DROP  R5
00006930  00000000 00000000                        5024           DC    XL16'0000000000000000 0000000000000000'   result
00006938  00000000 00000000
00006940  00010003 04050607                        5025           DC    XL16'0001000304050607 00090A0B0C0D0E0F'   v2
00006948  00090A0B 0C0D0E0F
00006950  01110233 11550677                        5026           DC    XL16'0111023311550677 119911BBF1DD11FF'   v3
00006958  119911BB F1DD11FF
                                                   5027
                                                   5028           VRR_B VCHL,0,3
00006960                                           5029+          DS    0FD
00006960                   00006960                5030+          USING *,R5                base for test data and test routine
00006960  000069C8                                 5031+T114      DC    A(X114)             address of test routine
00006964  0072                                     5032+          DC    H'114'              test number
00006966  00                                       5033+          DC    X'00'
00006967  00                                       5034+          DC    HL1'0'                   m4 used
00006968  01                                       5035+          DC    HL1'1'                   m5 used
00006969  03                                       5036+          DC    HL1'3'              CC
0000696A  0E                                       5037+          DC    HL1'14'             CC failed mask
0000696C  00000000 00000000                        5038+          DS    2F                  extracted PSW after test (has CC)
00006974  FF                                       5039+          DC    X'FF'               extracted CC, if test failed
00006975  E5C3C8D3 40404040                        5040+          DC    CL8'VCHL'           instruction name
00006980  000069F8                                 5041+          DC    A(RE114)            address of v1 result
00006984  00006A08                                 5042+          DC    A(RE114+16)         address of v2 source
00006988  00006A18                                 5043+          DC    A(RE114+32)         address of v3 source
0000698C  00000010                                 5044+          DC    A(16)               result length
00006990  000069F8                                 5045+REA114    DC    A(RE114)            result address
00006998  00000000 00000000                        5046+          DS    2FD                  gap
000069A0  00000000 00000000
000069A8  00000000 00000000                        5047+V1O114    DS    XL16                V1 output
000069B0  00000000 00000000
000069B8  00000000 00000000                        5048+          DS    2FD                  gap
000069C0  00000000 00000000
                                                   5049+*
000069C8                                           5050+X114      DS    0F
000069C8  E310 5024 0014                 00000024  5051+          LGF   R1,V2ADDR           load v2 source
000069CE  E761 0000 0806                 00000000  5052+          VL    v22,0(R1)           use v21 to test decoder
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

000069D4  E310 5028 0014                 00000028  5053+          LGF   R1,V3ADDR           load v3 source
000069DA  E771 0000 0806                 00000000  5054+          VL    v23,0(R1)           use v22 to test decoder
000069E0  E756 7010 0EF9                           5055+          VCHL  V21,V22,V23,0,1               test instruction
000069E6  B98D 0020                                5056+          EPSW  R2,R0               extract psw
000069EA  5020 500C                      0000000C  5057+          ST    R2,CCPSW               to save CC
000069EE  E750 5048 080E                 000069A8  5058+          VST   V21,V1O114          save v1 output
000069F4  07FB                                     5059+          BR    R11                 return
000069F8                                           5060+RE114     DC    0F                  V1 for this test
000069F8                                           5061+          DROP  R5
000069F8  00000000 00000000                       5062           DC    XL16'0000000000000000 0000000000000000'   result
00006A00  00000000 00000000
00006A08  08090A0B 0C0D0E0F                        5063           DC    XL16'08090A0B0C0D0E0F 0001020304050607'   v2
00006A10  00010203 04050607
00006A18  119911BB F1DD11FF                        5064           DC    XL16'119911BBF1DD11FF 0111023311550677'   v3
00006A20  01110233 11550677
                                                   5065
                                                   5066 *Halfword
                                                   5067           VRR_B VCHL,1,0
00006A28                                           5068+          DS    0FD
00006A28                         00006A28          5069+          USING *,R5                base for test data and test routine
00006A28  00006A90                                 5070+T115      DC    A(X115)             address of test routine
00006A2C  0073                                     5071+          DC    H'115'              test number
00006A2E  00                                       5072+          DC    X'00'
00006A2F  01                                       5073+          DC    HL1'1'                   m4 used
00006A30  01                                       5074+          DC    HL1'1'                   m5 used
00006A31  00                                       5075+          DC    HL1'0'              CC
00006A32  07                                       5076+          DC    HL1'7'              CC failed mask
00006A34  00000000 00000000                        5077+          DS    2F                  extracted PSW after test (has CC)
00006A3C  FF                                       5078+          DC    X'FF'               extracted CC, if test failed
00006A3D  E5C3C8D3 40404040                        5079+          DC    CL8'VCHL'           instruction name
00006A48  00006AC0                                 5080+          DC    A(RE115)            address of v1 result
00006A4C  00006AD0                                 5081+          DC    A(RE115+16)         address of v2 source
00006A50  00006AE0                                 5082+          DC    A(RE115+32)         address of v3 source
00006A54  00000010                                 5083+          DC    A(16)               result length
00006A58  00006AC0                                 5084+REA115    DC    A(RE115)            result address
00006A60  00000000 00000000                        5085+          DS    2FD                  gap
00006A68  00000000 00000000
00006A70  00000000 00000000                        5086+V1O115    DS    XL16                V1 output
00006A78  00000000 00000000
00006A80  00000000 00000000                        5087+          DS    2FD                  gap
00006A88  00000000 00000000
                                                   5088+*
00006A90                                           5089+X115      DS    0F
00006A90  E310 5024 0014                 00000024  5090+          LGF   R1,V2ADDR           load v2 source
00006A96  E761 0000 0806                 00000000  5091+          VL    v22,0(R1)           use v21 to test decoder
00006A9C  E310 5028 0014                 00000028  5092+          LGF   R1,V3ADDR           load v3 source
00006AA2  E771 0000 0806                 00000000  5093+          VL    v23,0(R1)           use v22 to test decoder
00006AA8  E756 7010 1EF9                           5094+          VCHL  V21,V22,V23,1,1               test instruction
00006AAE  B98D 0020                                5095+          EPSW  R2,R0               extract psw
00006AB2  5020 500C                      0000000C  5096+          ST    R2,CCPSW               to save CC
00006AB6  E750 5048 080E                 00006A70  5097+          VST   V21,V1O115          save v1 output
00006ABC  07FB                                     5098+          BR    R11                 return
00006AC0                                           5099+RE115     DC    0F                  V1 for this test
00006AC0                                           5100+          DROP  R5
00006AC0  FFFFFFFF FFFFFFFF                        5101           DC    XL16'FFFFFFFFFFFFFFFF FFFFFFFFFFFFFFFF'   result
00006AC8  FFFFFFFF FFFFFFFF
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  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
00006AD0  01020304 05060708                      5102           DC    XL16'0102030405060708 090A0B0C0D0E0F10'   v2
00006AD8  090A0B0C 0D0E0F10
00006AE0  00010203 04050607                      5103           DC    XL16'0001020304050607 08090A0B0C0D0E0F'   v3
00006AE8  08090A0B 0C0D0E0F
                                                 5104
                                                 5105           VRR_B VCHL,1,0
00006AF0                                         5106+          DS    0FD
00006AF0                          00006AF0       5107+          USING *,R5                base for test data and test routine
00006AF0  00006B58                               5108+T116      DC    A(X116)             address of test routine
00006AF4  0074                                   5109+          DC    H'116'              test number
00006AF6  00                                     5110+          DC    X'00'
00006AF7  01                                     5111+          DC    HL1'1'                   m4 used
00006AF8  01                                     5112+          DC    HL1'1'                   m5 used
00006AF9  00                                     5113+          DC    HL1'0'              CC
00006AFA  07                                     5114+          DC    HL1'7'              CC failed mask
00006AFC  00000000 00000000                      5115+          DS    2F                  extracted PSW after test (has CC)
00006B04  FF                                     5116+          DC    X'FF'               extracted CC, if test failed
00006B05  E5C3C8D3 40404040                      5117+          DC    CL8'VCHL'           instruction name
00006B10  00006B88                               5118+          DC    A(RE116)            address of v1 result
00006B14  00006B98                               5119+          DC    A(RE116+16)         address of v2 source
00006B18  00006BA8                               5120+          DC    A(RE116+32)         address of v3 source
00006B1C  00000010                               5121+          DC    A(16)               result length
00006B20  00006B88                               5122+REA116    DC    A(RE116)            result address
00006B28  00000000 00000000                      5123+          DS    2FD                  gap
00006B30  00000000 00000000
00006B38  00000000 00000000                      5124+V1O116    DS    XL16                V1 output
00006B40  00000000 00000000
00006B48  00000000 00000000                      5125+          DS    2FD                  gap
00006B50  00000000 00000000
                                                 5126+*
00006B58                                         5127+X116      DS    0F
00006B58  E310 5024 0014                00000024 5128+          LGF   R1,V2ADDR           load v2 source
00006B5E  E761 0000 0806                00000000 5129+          VL    v22,0(R1)           use v21 to test decoder
00006B64  E310 5028 0014                00000028 5130+          LGF   R1,V3ADDR           load v3 source
00006B6A  E771 0000 0806                00000000 5131+          VL    v23,0(R1)           use v22 to test decoder
00006B70  E756 7010 1EF9                         5132+          VCHL  V21,V22,V23,1,1            test instruction
00006B76  B98D 0020                              5133+          EPSW  R2,R0               extract psw
00006B7A  5020 500C                     0000000C 5134+          ST    R2,CCPSW               to save CC
00006B7E  E750 5048 080E                00006B38 5135+          VST   V21,V1O116          save v1 output
00006B84  07FB                                   5136+          BR    R11                 return
00006B88                                         5137+RE116     DC    0F                  V1 for this test
00006B88                                         5138+          DROP  R5
00006B88  FFFFFFFF FFFFFFFF                      5139           DC    XL16'FFFFFFFFFFFFFFFF FFFFFFFFFFFFFFFF'   result
00006B90  FFFFFFFF FFFFFFFF
00006B98  FFFEFFFD FFFCFFFB                      5140           DC    XL16'FFFEFFFDFFFCFFFB FFFAFFF9FFF8FFF7'   v2
00006BA0  FFFAFFF9 FFF8FFF7
00006BA8  00010203 04050607                      5141           DC    XL16'0001020304050607 08090A0B0C0D0E0F'   v3
00006BB0  08090A0B 0C0D0E0F
                                                 5142
                                                 5143           VRR_B VCHL,1,1
00006BB8                                         5144+          DS    0FD
00006BB8                          00006BB8       5145+          USING *,R5                base for test data and test routine
00006BB8  00006C20                               5146+T117      DC    A(X117)             address of test routine
00006BBC  0075                                   5147+          DC    H'117'              test number
00006BBE  00                                     5148+          DC    X'00'
00006BBF  01                                     5149+          DC    HL1'1'                   m4 used
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
00006BC0  01                                      5150+          DC    HL1'1'                    m5 used
00006BC1  01                                      5151+          DC    HL1'1'                CC
00006BC2  0B                                      5152+          DC    HL1'11'               CC failed mask
00006BC4  00000000 00000000                       5153+          DS    2F                    extracted PSW after test (has CC)
00006BCC  FF                                      5154+          DC    X'FF'                 extracted CC, if test failed
00006BCD  E5C3C8D3 40404040                       5155+          DC    CL8'VCHL'             instruction name
00006BD8  00006C50                                5156+          DC    A(RE117)              address of v1 result
00006BDC  00006C60                                5157+          DC    A(RE117+16)           address of v2 source
00006BE0  00006C70                                5158+          DC    A(RE117+32)           address of v3 source
00006BE4  00000010                                5159+          DC    A(16)                 result length
00006BE8  00006C50                                5160+REA117    DC    A(RE117)              result address
00006BF0  00000000 00000000                       5161+          DS    2FD                    gap
00006BF8  00000000 00000000
00006C00  00000000 00000000                       5162+V1O117    DS    XL16                  V1 output
00006C08  00000000 00000000
00006C10  00000000 00000000                       5163+          DS    2FD                    gap
00006C18  00000000 00000000
                                                  5164+*
00006C20                                          5165+X117      DS    0F
00006C20  E310 5024 0014                 00000024 5166+          LGF   R1,V2ADDR             load v2 source
00006C26  E761 0000 0806                 00000000 5167+          VL    v22,0(R1)             use v21 to test decoder
00006C2C  E310 5028 0014                 00000028 5168+          LGF   R1,V3ADDR             load v3 source
00006C32  E771 0000 0806                 00000000 5169+          VL    v23,0(R1)             use v22 to test decoder
00006C38  E756 7010 1EF9                          5170+          VCHL  V21,V22,V23,1,1                test instruction
00006C3E  B98D 0020                               5171+          EPSW  R2,R0                 extract psw
00006C42  5020 500C                      0000000C 5172+          ST    R2,CCPSW                 to save CC
00006C46  E750 5048 080E                 00006C00 5173+          VST   V21,V1O117            save v1 output
00006C4C  07FB                                    5174+          BR    R11                   return
00006C50                                          5175+RE117     DC    0F                    V1 for this test
00006C50                                          5176+          DROP  R5
00006C50  FFFFFFFF FFFFFFFF                       5177           DC    XL16'FFFFFFFFFFFFFFFF 000000000000FFFF'   result
00006C58  00000000 0000FFFF
00006C60  00110033 00550077                       5178           DC    XL16'0011003300550077 08090A0B0C0DFE1F'   v2
00006C68  08090A0B 0C0DFE1F
00006C70  00010023 00450067                       5179           DC    XL16'0001002300450067 08090A0B0C0DFE0F'   v3
00006C78  08090A0B 0C0DFE0F
                                                  5180
                                                  5181           VRR_B VCHL,1,1
00006C80                                          5182+          DS    0FD
00006C80                  00006C80                5183+          USING *,R5                  base for test data and test routine
00006C80  00006CE8                                5184+T118      DC    A(X118)               address of test routine
00006C84  0076                                    5185+          DC    H'118'                test number
00006C86  00                                      5186+          DC    X'00'
00006C87  01                                      5187+          DC    HL1'1'                     m4 used
00006C88  01                                      5188+          DC    HL1'1'                     m5 used
00006C89  01                                      5189+          DC    HL1'1'                CC
00006C8A  0B                                      5190+          DC    HL1'11'               CC failed mask
00006C8C  00000000 00000000                       5191+          DS    2F                    extracted PSW after test (has CC)
00006C94  FF                                      5192+          DC    X'FF'                 extracted CC, if test failed
00006C95  E5C3C8D3 40404040                       5193+          DC    CL8'VCHL'             instruction name
00006CA0  00006D18                                5194+          DC    A(RE118)              address of v1 result
00006CA4  00006D28                                5195+          DC    A(RE118+16)           address of v2 source
00006CA8  00006D38                                5196+          DC    A(RE118+32)           address of v3 source
00006CAC  00000010                                5197+          DC    A(16)                 result length
00006CB0  00006D18                                5198+REA118    DC    A(RE118)              result address
00006CB8  00000000 00000000                       5199+          DS    2FD                    gap
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
00006CC0  00000000 00000000
00006CC8  00000000 00000000                        5200+V1O0118   DS    XL16                V1 output
00006CD0  00000000 00000000
00006CD8  00000000 00000000                        5201+          DS    2FD                  gap
00006CE0  00000000 00000000
                                                   5202+*
00006CE8                                           5203+X118      DS    0F
00006CE8  E310 5024 0014                 00000024  5204+          LGF   R1,V2ADDR           load v2 source
00006CEE  E761 0000 0806                 00000000  5205+          VL    v22,0(R1)           use v21 to test decoder
00006CF4  E310 5028 0014                 00000028  5206+          LGF   R1,V3ADDR           load v3 source
00006CFA  E771 0000 0806                 00000000  5207+          VL    v23,0(R1)           use v22 to test decoder
00006D00  E756 7010 1EF9                           5208+          VCHL  V21,V22,V23,1,1               test instruction
00006D06  B98D 0020                                5209+          EPSW  R2,R0               extract psw
00006D0A  5020 500C                      0000000C  5210+          ST    R2,CCPSW               to save CC
00006D0E  E750 5048 080E                 00006CC8  5211+          VST   V21,V1O0118         save v1 output
00006D14  07FB                                     5212+          BR    R11                 return
00006D18                                           5213+RE0118    DC    0F                  V1 for this test
00006D18                                           5214+          DROP  R5
00006D18  00000000 0000FFFF                        5215           DC    XL16'000000000000FFFF FFFFFFFFFFFFFFFF'   result
00006D20  FFFFFFFF FFFFFFFF
00006D28  08090A0B 0C0DFE1F                        5216           DC    XL16'08090A0B0C0DFE1F 0011003300550077'   v2
00006D30  00110033 00550077
00006D38  08090A0B 0C0DFE0F                        5217           DC    XL16'08090A0B0C0DFE0F 0010023004500670'   v3
00006D40  00010023 00450067
                                                   5218
                                                   5219           VRR_B VCHL,1,3
00006D48                                           5220+          DS    0FD
00006D48                         00006D48          5221+          USING *,R5                base for test data and test routine
00006D48  00006DB0                                 5222+T119      DC    A(X119)             address of test routine
00006D4C  0077                                     5223+          DC    H'119'              test number
00006D4E  00                                       5224+          DC    X'00'
00006D4F  01                                       5225+          DC    HL1'1'                   m4 used
00006D50  01                                       5226+          DC    HL1'1'                   m5 used
00006D51  03                                       5227+          DC    HL1'3'              CC
00006D52  0E                                       5228+          DC    HL1'14'             CC failed mask
00006D54  00000000 00000000                        5229+          DS    2F                  extracted PSW after test (has CC)
00006D5C  FF                                       5230+          DC    X'FF'               extracted CC, if test failed
00006D5D  E5C3C8D3 40404040                        5231+          DC    CL8'VCHL'           instruction name
00006D68  00006DE0                                 5232+          DC    A(RE119)            address of v1 result
00006D6C  00006DF0                                 5233+          DC    A(RE119+16)         address of v2 source
00006D70  00006E00                                 5234+          DC    A(RE119+32)         address of v3 source
00006D74  00000010                                 5235+          DC    A(16)               result length
00006D78  00006DE0                                 5236+REA119    DC    A(RE119)            result address
00006D80  00000000 00000000                        5237+          DS    2FD                  gap
00006D88  00000000 00000000
00006D90  00000000 00000000                        5238+V1O0119   DS    XL16                V1 output
00006D98  00000000 00000000
00006DA0  00000000 00000000                        5239+          DS    2FD                  gap
00006DA8  00000000 00000000
                                                   5240+*
00006DB0                                           5241+X119      DS    0F
00006DB0  E310 5024 0014                 00000024  5242+          LGF   R1,V2ADDR           load v2 source
00006DB6  E761 0000 0806                 00000000  5243+          VL    v22,0(R1)           use v21 to test decoder
00006DBC  E310 5028 0014                 00000028  5244+          LGF   R1,V3ADDR           load v3 source
00006DC2  E771 0000 0806                 00000000  5245+          VL    v23,0(R1)           use v22 to test decoder
00006DC8  E756 7010 1EF9                           5246+          VCHL  V21,V22,V23,1,1               test instruction
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
00006DCE  B98D 0020                            5247+          EPSW  R2,R0              extract psw
00006DD2  5020 500C                  0000000C  5248+          ST    R2,CCPSW             to save CC
00006DD6  E750 5048 080E             00006D90  5249+          VST   V21,V1O119          save v1 output
00006DDC  07FB                                 5250+          BR    R11                 return
00006DE0                                       5251+RE119     DC    0F                  V1 for this test
00006DE0                                       5252+          DROP  R5
00006DE0  00000000 00000000                    5253           DC    XL16'0000000000000000 0000000000000000'   result
00006DE8  00000000 00000000
00006DF0  00010003 04050607                    5254           DC    XL16'0001000304050607 00090A0B0C0D0E0F'   v2
00006DF8  00090A0B 0C0D0E0F
00006E00  01110233 11550677                    5255           DC    XL16'0111023311550677 119911BBF1DD11FF'   v3
00006E08  119911BB F1DD11FF
                                               5256
                                               5257           VRR_B VCHL,1,3
00006E10                                       5258+          DS    0FD
00006E10                       00006E10        5259+          USING *,R5                base for test data and test routine
00006E10  00006E78                             5260+T120      DC    A(X120)             address of test routine
00006E14  0078                                 5261+          DC    H'120'              test number
00006E16  00                                   5262+          DC    X'00'
00006E17  01                                   5263+          DC    HL1'1'                   m4 used
00006E18  01                                   5264+          DC    HL1'1'                   m5 used
00006E19  03                                   5265+          DC    HL1'3'              CC
00006E1A  0E                                   5266+          DC    HL1'14'             CC failed mask
00006E1C  00000000 00000000                    5267+          DS    2F                  extracted PSW after test (has CC)
00006E24  FF                                   5268+          DC    X'FF'               extracted CC, if test failed
00006E25  E5C3C8D3 40404040                    5269+          DC    CL8'VCHL'           instruction name
00006E30  00006EA8                             5270+          DC    A(RE120)            address of v1 result
00006E34  00006EB8                             5271+          DC    A(RE120+16)         address of v2 source
00006E38  00006EC8                             5272+          DC    A(RE120+32)         address of v3 source
00006E3C  00000010                             5273+          DC    A(16)               result length
00006E40  00006EA8                             5274+REA120    DC    A(RE120)            result address
00006E48  00000000 00000000                    5275+          DS    2FD                  gap
00006E50  00000000 00000000
00006E58  00000000 00000000                    5276+V1O120    DS    XL16                V1 output
00006E60  00000000 00000000
00006E68  00000000 00000000                    5277+          DS    2FD                  gap
00006E70  00000000 00000000
                                               5278+*
00006E78                                       5279+X120      DS    0F
00006E78  E310 5024 0014             00000024  5280+          LGF   R1,V2ADDR           load v2 source
00006E7E  E761 0000 0806             00000000  5281+          VL    v22,0(R1)           use v21 to test decoder
00006E84  E310 5028 0014             00000028  5282+          LGF   R1,V3ADDR           load v3 source
00006E8A  E771 0000 0806             00000000  5283+          VL    v23,0(R1)           use v22 to test decoder
00006E90  E756 7010 1EF9                       5284+          VCHL  V21,V22,V23,1,1              test instruction
00006E96  B98D 0020                            5285+          EPSW  R2,R0               extract psw
00006E9A  5020 500C                  0000000C  5286+          ST    R2,CCPSW             to save CC
00006E9E  E750 5048 080E             00006E58  5287+          VST   V21,V1O120          save v1 output
00006EA4  07FB                                 5288+          BR    R11                 return
00006EA8                                       5289+RE120     DC    0F                  V1 for this test
00006EA8                                       5290+          DROP  R5
00006EA8  00000000 00000000                    5291           DC    XL16'0000000000000000 0000000000000000'   result
00006EB0  00000000 00000000
00006EB8  08090A0B 0C0D0E0F                    5292           DC    XL16'08090A0B0C0D0E0F 0001020304050607'   v2
00006EC0  00010203 04050607
00006EC8  119911BB F1DD11FF                    5293           DC    XL16'119911BBF1DD11FF 0111023311550677'   v3
00006ED0  01110233 11550677
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
                                                    5294
                                                    5295 *Word
                                                    5296          VRR_B VCHL,2,0
00006ED8                                            5297+         DS    0FD
00006ED8                      00006ED8              5298+         USING *,R5                base for test data and test routine
00006ED8  00006F40                                  5299+T121     DC    A(X121)             address of test routine
00006EDC  0079                                      5300+         DC    H'121'              test number
00006EDE  00                                        5301+         DC    X'00'
00006EDF  02                                        5302+         DC    HL1'2'                   m4 used
00006EE0  01                                        5303+         DC    HL1'1'                   m5 used
00006EE1  00                                        5304+         DC    HL1'0'              CC
00006EE2  07                                        5305+         DC    HL1'7'              CC failed mask
00006EE4  00000000 00000000                         5306+         DS    2F                  extracted PSW after test (has CC)
00006EEC  FF                                        5307+         DC    X'FF'               extracted CC, if test failed
00006EED  E5C3C8D3 40404040                         5308+         DC    CL8'VCHL'           instruction name
00006EF8  00006F70                                  5309+         DC    A(RE121)            address of v1 result
00006EFC  00006F80                                  5310+         DC    A(RE121+16)         address of v2 source
00006F00  00006F90                                  5311+         DC    A(RE121+32)         address of v3 source
00006F04  00000010                                  5312+         DC    A(16)               result length
00006F08  00006F70                                  5313+REA121   DC    A(RE121)            result address
00006F10  00000000 00000000                         5314+         DS    2FD                  gap
00006F18  00000000 00000000
00006F20  00000000 00000000                         5315+V1O121   DS    XL16                V1 output
00006F28  00000000 00000000
00006F30  00000000 00000000                         5316+         DS    2FD                  gap
00006F38  00000000 00000000
                                                    5317+*
00006F40                                            5318+X121     DS    0F
00006F40  E310 5024 0014                  00000024  5319+         LGF   R1,V2ADDR           load v2 source
00006F46  E761 0000 0806                  00000000  5320+         VL    v22,0(R1)           use v21 to test decoder
00006F4C  E310 5028 0014                  00000028  5321+         LGF   R1,V3ADDR           load v3 source
00006F52  E771 0000 0806                  00000000  5322+         VL    v23,0(R1)           use v22 to test decoder
00006F58  E756 7010 2EF9                            5323+         VCHL  V21,V22,V23,2,1               test instruction
00006F5E  B98D 0020                                 5324+         EPSW  R2,R0               extract psw
00006F62  5020 500C                       0000000C  5325+         ST    R2,CCPSW               to save CC
00006F66  E750 5048 080E                  00006F20  5326+         VST   V21,V1O121          save v1 output
00006F6C  07FB                                      5327+         BR    R11                 return
00006F70                                            5328+RE121    DC    0F                  V1 for this test
00006F70                                            5329+         DROP  R5
00006F70  FFFFFFFF FFFFFFFF                         5330          DC    XL16'FFFFFFFFFFFFFFFF FFFFFFFFFFFFFFFF'   result
00006F78  FFFFFFFF FFFFFFFF
00006F80  01020304 05060708                         5331          DC    XL16'0102030405060708 090A0B0C0D0E0F10'   v2
00006F88  090A0B0C 0D0E0F10
00006F90  00010203 04050607                         5332          DC    XL16'0001020304050607 08090A0B0C0D0E0F'   v3
00006F98  08090A0B 0C0D0E0F
                                                    5333
                                                    5334          VRR_B VCHL,2,0
00006FA0                                            5335+         DS    0FD
00006FA0                      00006FA0              5336+         USING *,R5                base for test data and test routine
00006FA0  00007008                                  5337+T122     DC    A(X122)             address of test routine
00006FA4  007A                                      5338+         DC    H'122'              test number
00006FA6  00                                        5339+         DC    X'00'
00006FA7  02                                        5340+         DC    HL1'2'                   m4 used
00006FA8  01                                        5341+         DC    HL1'1'                   m5 used
00006FA9  00                                        5342+         DC    HL1'0'              CC
00006FAA  07                                        5343+         DC    HL1'7'              CC failed mask
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

00006FAC  00000000 00000000                        5344+          DS    2F                 extracted PSW after test (has CC)
00006FB4  FF                                       5345+          DC    X'FF'              extracted CC, if test failed
00006FB5  E5C3C8D3 40404040                        5346+          DC    CL8'VCHL'          instruction name
00006FC0  00007038                                 5347+          DC    A(RE122)           address of v1 result
00006FC4  00007048                                 5348+          DC    A(RE122+16)        address of v2 source
00006FC8  00007058                                 5349+          DC    A(RE122+32)        address of v3 source
00006FCC  00000010                                 5350+          DC    A(16)              result length
00006FD0  00007038                                 5351+REA122    DC    A(RE122)           result address
00006FD8  00000000 00000000                        5352+          DS    2FD                 gap
00006FE0  00000000 00000000
00006FE8  00000000 00000000                        5353+V1O122    DS    XL16               V1 output
00006FF0  00000000 00000000
00006FF8  00000000 00000000                        5354+          DS    2FD                 gap
00007000  00000000 00000000
                                                   5355+*
00007008                                           5356+X122      DS    0F
00007008  E310 5024 0014                 00000024  5357+          LGF   R1,V2ADDR          load v2 source
0000700E  E761 0000 0806                 00000000  5358+          VL    v22,0(R1)          use v21 to test decoder
00007014  E310 5028 0014                 00000028  5359+          LGF   R1,V3ADDR          load v3 source
0000701A  E771 0000 0806                 00000000  5360+          VL    v23,0(R1)          use v22 to test decoder
00007020  E756 7010 2EF9                           5361+          VCHL  V21,V22,V23,2,1              test instruction
00007026  B98D 0020                                5362+          EPSW  R2,R0              extract psw
0000702A  5020 500C                      0000000C  5363+          ST    R2,CCPSW             to save CC
0000702E  E750 5048 080E                 00006FE8  5364+          VST   V21,V1O122         save v1 output
00007034  07FB                                     5365+          BR    R11                return
00007038                                           5366+RE122     DC    0F                 V1 for this test
00007038                                           5367+          DROP  R5
00007038  FFFFFFFF FFFFFFFF                        5368           DC    XL16'FFFFFFFFFFFFFFFF FFFFFFFFFFFFFFFF'   result
00007040  FFFFFFFF FFFFFFFF
00007048  FFFEFFFD FFFCFFFB                        5369           DC    XL16'FFFEFFFDFFFCFFFB FFFAFFF9FFF8FFF7'   v2
00007050  FFFAFFF9 FFF8FFF7
00007058  00010203 04050607                        5370           DC    XL16'0001020304050607 08090A0B0C0D0E0F'   v3
00007060  08090A0B 0C0D0E0F
                                                   5371
                                                   5372           VRR_B VCHL,2,1
00007068                                           5373+          DS    0FD
00007068                         00007068          5374+          USING *,R5               base for test data and test routine
00007068  000070D0                                 5375+T123      DC    A(X123)            address of test routine
0000706C  007B                                     5376+          DC    H'123'             test number
0000706E  00                                       5377+          DC    X'00'
0000706F  02                                       5378+          DC    HL1'2'                  m4 used
00007070  01                                       5379+          DC    HL1'1'                  m5 used
00007071  01                                       5380+          DC    HL1'1'             CC
00007072  0B                                       5381+          DC    HL1'11'            CC failed mask
00007074  00000000 00000000                        5382+          DS    2F                 extracted PSW after test (has CC)
0000707C  FF                                       5383+          DC    X'FF'              extracted CC, if test failed
0000707D  E5C3C8D3 40404040                        5384+          DC    CL8'VCHL'          instruction name
00007088  00007100                                 5385+          DC    A(RE123)           address of v1 result
0000708C  00007110                                 5386+          DC    A(RE123+16)        address of v2 source
00007090  00007120                                 5387+          DC    A(RE123+32)        address of v3 source
00007094  00000010                                 5388+          DC    A(16)              result length
00007098  00007100                                 5389+REA123    DC    A(RE123)           result address
000070A0  00000000 00000000                        5390+          DS    2FD                 gap
000070A8  00000000 00000000
000070B0  00000000 00000000                        5391+V1O123    DS    XL16               V1 output
000070B8  00000000 00000000
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
000070C0  00000000 00000000                        5392+          DS    2FD                  gap
000070C8  00000000 00000000
                                                   5393+*
000070D0                                           5394+X123      DS    0F
000070D0  E310 5024 0014                 00000024  5395+           LGF   R1,V2ADDR           load v2 source
000070D6  E761 0000 0806                 00000000  5396+           VL    v22,0(R1)           use v21 to test decoder
000070DC  E310 5028 0014                 00000028  5397+           LGF   R1,V3ADDR           load v3 source
000070E2  E771 0000 0806                 00000000  5398+           VL    v23,0(R1)           use v22 to test decoder
000070E8  E756 7010 2EF9                           5399+           VCHL  V21,V22,V23,2,1               test instruction
000070EE  B98D 0020                                5400+           EPSW  R2,R0               extract psw
000070F2  5020 500C                      0000000C  5401+           ST    R2,CCPSW               to save CC
000070F6  E750 5048 080E                 000070B0  5402+           VST   V21,V1O123          save v1 output
000070FC  07FB                                     5403+           BR    R11                 return
00007100                                           5404+RE123     DC    0F                  V1 for this test
00007100                                           5405+          DROP  R5
00007100  FFFFFFFF FFFFFFFF                        5406           DC    XL16'FFFFFFFFFFFFFFFF 00000000FFFFFFFF'   result
00007108  00000000 FFFFFFFF
00007110  00110033 00550077                        5407           DC    XL16'0011003300550077 08090A0B0C0DFE1F'   v2
00007118  08090A0B 0C0DFE1F
00007120  00010023 00450067                        5408           DC    XL16'0001002300450067 08090A0B0C0DFE0F'   v3
00007128  08090A0B 0C0DFE0F
                                                   5409
                                                   5410           VRR_B VCHL,2,1
00007130                                           5411+          DS    0FD
00007130                         00007130          5412+          USING *,R5                base for test data and test routine
00007130  00007198                                 5413+T124      DC    A(X124)             address of test routine
00007134  007C                                     5414+          DC    H'124'              test number
00007136  00                                       5415+          DC    X'00'
00007137  02                                       5416+          DC    HL1'2'                   m4 used
00007138  01                                       5417+          DC    HL1'1'                   m5 used
00007139  01                                       5418+          DC    HL1'1'              CC
0000713A  0B                                       5419+          DC    HL1'11'             CC failed mask
0000713C  00000000 00000000                        5420+          DS    2F                  extracted PSW after test (has CC)
00007144  FF                                       5421+          DC    X'FF'               extracted CC, if test failed
00007145  E5C3C8D3 40404040                        5422+          DC    CL8'VCHL'           instruction name
00007150  000071C8                                 5423+          DC    A(RE124)            address of v1 result
00007154  000071D8                                 5424+          DC    A(RE124+16)         address of v2 source
00007158  000071E8                                 5425+          DC    A(RE124+32)         address of v3 source
0000715C  00000010                                 5426+          DC    A(16)               result length
00007160  000071C8                                 5427+REA124    DC    A(RE124)            result address
00007168  00000000 00000000                        5428+          DS    2FD                  gap
00007170  00000000 00000000
00007178  00000000 00000000                        5429+V1O124    DS    XL16                V1 output
00007180  00000000 00000000
00007188  00000000 00000000                        5430+          DS    2FD                  gap
00007190  00000000 00000000
                                                   5431+*
00007198                                           5432+X124      DS    0F
00007198  E310 5024 0014                 00000024  5433+           LGF   R1,V2ADDR           load v2 source
0000719E  E761 0000 0806                 00000000  5434+           VL    v22,0(R1)           use v21 to test decoder
000071A4  E310 5028 0014                 00000028  5435+           LGF   R1,V3ADDR           load v3 source
000071AA  E771 0000 0806                 00000000  5436+           VL    v23,0(R1)           use v22 to test decoder
000071B0  E756 7010 2EF9                           5437+           VCHL  V21,V22,V23,2,1               test instruction
000071B6  B98D 0020                                5438+           EPSW  R2,R0               extract psw
000071BA  5020 500C                      0000000C  5439+           ST    R2,CCPSW               to save CC
000071BE  E750 5048 080E                 00007178  5440+           VST   V21,V1O124          save v1 output
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

000071C4  07FB                           5441+          BR    R11                 return
000071C8                                 5442+RE124     DC    0F                  V1 for this test
000071C8                                 5443+          DROP  R5
000071C8  00000000 FFFFFFFF              5444           DC    XL16'00000000FFFFFFFF FFFFFFFFFFFFFFFF'   result
000071D0  FFFFFFFF FFFFFFFF
000071D8  08090A0B 0C0DFE1F              5445           DC    XL16'08090A0B0C0DFE1F 0011003300550077'   v2
000071E0  00110033 00550077
000071E8  08090A0B 0C0DFE0F              5446           DC    XL16'08090A0B0C0DFE0F 0001002300450067'   v3
000071F0  00010023 00450067
                                         5447
                                         5448           VRR_B VCHL,2,3
000071F8                                 5449+          DS    0FD
000071F8                      000071F8   5450+          USING *,R5                base for test data and test routine
000071F8  00007260                       5451+T125      DC    A(X125)             address of test routine
000071FC  007D                           5452+          DC    H'125'              test number
000071FE  00                             5453+          DC    X'00'
000071FF  02                             5454+          DC    HL1'2'                   m4 used
00007200  01                             5455+          DC    HL1'1'                   m5 used
00007201  03                             5456+          DC    HL1'3'              CC
00007202  0E                             5457+          DC    HL1'14'             CC failed mask
00007204  00000000 00000000              5458+          DS    2F                  extracted PSW after test (has CC)
0000720C  FF                             5459+          DC    X'FF'               extracted CC, if test failed
0000720D  E5C3C8D3 40404040              5460+          DC    CL8'VCHL'           instruction name
00007218  00007290                       5461+          DC    A(RE125)            address of v1 result
0000721C  000072A0                       5462+          DC    A(RE125+16)         address of v2 source
00007220  000072B0                       5463+          DC    A(RE125+32)         address of v3 source
00007224  00000010                       5464+          DC    A(16)               result length
00007228  00007290                       5465+REA125    DC    A(RE125)            result address
00007230  00000000 00000000              5466+          DS    2FD                  gap
00007238  00000000 00000000
00007240  00000000 00000000              5467+V1O125    DS    XL16                V1 output
00007248  00000000 00000000
00007250  00000000 00000000              5468+          DS    2FD                  gap
00007258  00000000 00000000
                                         5469+*
00007260                                 5470+X125      DS    0F
00007260  E310 5024 0014       00000024  5471+          LGF   R1,V2ADDR           load v2 source
00007266  E761 0000 0806       00000000  5472+          VL    v22,0(R1)           use v21 to test decoder
0000726C  E310 5028 0014       00000028  5473+          LGF   R1,V3ADDR           load v3 source
00007272  E771 0000 0806       00000000  5474+          VL    v23,0(R1)           use v22 to test decoder
00007278  E756 7010 2EF9                 5475+          VCHL  V21,V22,V23,2,1            test instruction
0000727E  B98D 0020                      5476+          EPSW  R2,R0               extract psw
00007282  5020 500C            0000000C  5477+          ST    R2,CCPSW               to save CC
00007286  E750 5048 080E       00007240  5478+          VST   V21,V1O125          save v1 output
0000728C  07FB                           5479+          BR    R11                 return
00007290                                 5480+RE125     DC    0F                  V1 for this test
00007290                                 5481+          DROP  R5
00007290  00000000 00000000              5482           DC    XL16'0000000000000000 0000000000000000'   result
00007298  00000000 00000000
000072A0  00010003 04050607              5483           DC    XL16'0001000304050607 00090A0B0C0D0E0F'   v2
000072A8  00090A0B 0C0D0E0F
000072B0  01110233 11550677              5484           DC    XL16'0111023311550677 119911BBF1DD11FF'   v3
000072B8  119911BB F1DD11FF
                                         5485
                                         5486           VRR_B VCHL,2,3
000072C0                                 5487+          DS    0FD
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

000072C0                     000072C0               5488+          USING *,R5              base for test data and test routine
000072C0  00007328                                  5489+T126      DC    A(X126)           address of test routine
000072C4  007E                                      5490+          DC    H'126'            test number
000072C6  00                                        5491+          DC    X'00'
000072C7  02                                        5492+          DC    HL1'2'                 m4 used
000072C8  01                                        5493+          DC    HL1'1'                 m5 used
000072C9  03                                        5494+          DC    HL1'3'            CC
000072CA  0E                                        5495+          DC    HL1'14'           CC failed mask
000072CC  00000000 00000000                         5496+          DS    2F                extracted PSW after test (has CC)
000072D4  FF                                        5497+          DC    X'FF'             extracted CC, if test failed
000072D5  E5C3C8D3 40404040                         5498+          DC    CL8'VCHL'         instruction name
000072E0  00007358                                  5499+          DC    A(RE126)          address of v1 result
000072E4  00007368                                  5500+          DC    A(RE126+16)       address of v2 source
000072E8  00007378                                  5501+          DC    A(RE126+32)       address of v3 source
000072EC  00000010                                  5502+          DC    A(16)             result length
000072F0  00007358                                  5503+REA126    DC    A(RE126)          result address
000072F8  00000000 00000000                         5504+          DS    2FD                gap
00007300  00000000 00000000
00007308  00000000 00000000                         5505+V1O126    DS    XL16              V1 output
00007310  00000000 00000000
00007318  00000000 00000000                         5506+          DS    2FD                gap
00007320  00000000 00000000
                                                    5507+*
00007328                                            5508+X126      DS    0F
00007328  E310 5024 0014                 00000024   5509+          LGF   R1,V2ADDR         load v2 source
0000732E  E761 0000 0806                 00000000   5510+          VL    v22,0(R1)         use v21 to test decoder
00007334  E310 5028 0014                 00000028   5511+          LGF   R1,V3ADDR         load v3 source
0000733A  E771 0000 0806                 00000000   5512+          VL    v23,0(R1)         use v22 to test decoder
00007340  E756 7010 2EF9                            5513+          VCHL  V21,V22,V23,2,1              test instruction
00007346  B98D 0020                                 5514+          EPSW  R2,R0             extract psw
0000734A  5020 500C                      0000000C   5515+          ST    R2,CCPSW             to save CC
0000734E  E750 5048 080E                 00007308   5516+          VST   V21,V1O126        save v1 output
00007354  07FB                                      5517+          BR    R11               return
00007358                                            5518+RE126     DC    0F                V1 for this test
00007358                                            5519+          DROP  R5
00007358  00000000 00000000                         5520           DC    XL16'0000000000000000 0000000000000000'   result
00007360  00000000 00000000
00007368  08090A0B 0C0D0E0F                         5521           DC    XL16'08090A0B0C0D0E0F 0001020304050607'   v2
00007370  00010203 04050607
00007378  119911BB F1DD11FF                         5522           DC    XL16'119911BBF1DD11FF 0111023311550677'   v3
00007380  01110233 11550677
                                                    5523
                                                    5524 *Doubleword
                                                    5525           VRR_B VCHL,3,0
00007388                                            5526+          DS    0FD
00007388                 00007388                   5527+          USING *,R5              base for test data and test routine
00007388  000073F0                                  5528+T127      DC    A(X127)           address of test routine
0000738C  007F                                      5529+          DC    H'127'            test number
0000738E  00                                        5530+          DC    X'00'
0000738F  03                                        5531+          DC    HL1'3'                 m4 used
00007390  01                                        5532+          DC    HL1'1'                 m5 used
00007391  00                                        5533+          DC    HL1'0'            CC
00007392  07                                        5534+          DC    HL1'7'            CC failed mask
00007394  00000000 00000000                         5535+          DS    2F                extracted PSW after test (has CC)
0000739C  FF                                        5536+          DC    X'FF'             extracted CC, if test failed
0000739D  E5C3C8D3 40404040                         5537+          DC    CL8'VCHL'         instruction name
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
000073A8  00007420                                5538+          DC    A(RE127)            address of v1 result
000073AC  00007430                                5539+          DC    A(RE127+16)         address of v2 source
000073B0  00007440                                5540+          DC    A(RE127+32)         address of v3 source
000073B4  00000010                                5541+          DC    A(16)               result length
000073B8  00007420                                5542+REA127    DC    A(RE127)            result address
000073C0  00000000 00000000                       5543+          DS    2FD                  gap
000073C8  00000000 00000000
000073D0  00000000 00000000                       5544+V1O127    DS    XL16                V1 output
000073D8  00000000 00000000
000073E0  00000000 00000000                       5545+          DS    2FD                  gap
000073E8  00000000 00000000
                                                  5546+*
000073F0                                          5547+X127      DS    0F
000073F0  E310 5024 0014                 00000024 5548+          LGF   R1,V2ADDR           load v2 source
000073F6  E761 0000 0806                 00000000 5549+          VL    v22,0(R1)           use v21 to test decoder
000073FC  E310 5028 0014                 00000028 5550+          LGF   R1,V3ADDR           load v3 source
00007402  E771 0000 0806                 00000000 5551+          VL    v23,0(R1)           use v22 to test decoder
00007408  E756 7010 3EF9                          5552+          VCHL  V21,V22,V23,3,1              test instruction
0000740E  B98D 0020                               5553+          EPSW  R2,R0               extract psw
00007412  5020 500C                      0000000C 5554+          ST    R2,CCPSW               to save CC
00007416  E750 5048 080E                 000073D0 5555+          VST   V21,V1O127          save v1 output
0000741C  07FB                                    5556+          BR    R11                 return
00007420                                          5557+RE127     DC    0F                  V1 for this test
00007420                                          5558+          DROP  R5
00007420  FFFFFFFF FFFFFFFF                       5559           DC    XL16'FFFFFFFFFFFFFFFF FFFFFFFFFFFFFFFF'   result
00007428  FFFFFFFF FFFFFFFF
00007430  01020304 05060708                       5560           DC    XL16'0102030405060708 090A0B0C0D0E0F10'   v2
00007438  090A0B0C 0D0E0F10
00007440  00010203 04050607                       5561           DC    XL16'0001020304050607 08090A0B0C0D0E0F'   v3
00007448  08090A0B 0C0D0E0F
                                                  5562
                                                  5563           VRR_B VCHL,3,0
00007450                                          5564+          DS    0FD
00007450                  00007450                5565+          USING *,R5                base for test data and test routine
00007450  000074B8                                5566+T128      DC    A(X128)             address of test routine
00007454  0080                                    5567+          DC    H'128'              test number
00007456  00                                      5568+          DC    X'00'
00007457  03                                      5569+          DC    HL1'3'                   m4 used
00007458  01                                      5570+          DC    HL1'1'                   m5 used
00007459  00                                      5571+          DC    HL1'0'              CC
0000745A  07                                      5572+          DC    HL1'7'              CC failed mask
0000745C  00000000 00000000                       5573+          DS    2F                  extracted PSW after test (has CC)
00007464  FF                                      5574+          DC    X'FF'               extracted CC, if test failed
00007465  E5C3C8D3 40404040                       5575+          DC    CL8'VCHL'           instruction name
00007470  000074E8                                5576+          DC    A(RE128)            address of v1 result
00007474  000074F8                                5577+          DC    A(RE128+16)         address of v2 source
00007478  00007508                                5578+          DC    A(RE128+32)         address of v3 source
0000747C  00000010                                5579+          DC    A(16)               result length
00007480  000074E8                                5580+REA128    DC    A(RE128)            result address
00007488  00000000 00000000                       5581+          DS    2FD                  gap
00007490  00000000 00000000
00007498  00000000 00000000                       5582+V1O128    DS    XL16                V1 output
000074A0  00000000 00000000
000074A8  00000000 00000000                       5583+          DS    2FD                  gap
000074B0  00000000 00000000
                                                  5584+*
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
000074B8                                           5585+X128     DS    0F
000074B8  E310 5024 0014                 00000024  5586+         LGF   R1,V2ADDR          load v2 source
000074BE  E761 0000 0806                 00000000  5587+         VL    v22,0(R1)          use v21 to test decoder
000074C4  E310 5028 0014                 00000028  5588+         LGF   R1,V3ADDR          load v3 source
000074CA  E771 0000 0806                 00000000  5589+         VL    v23,0(R1)          use v22 to test decoder
000074D0  E756 7010 3EF9                           5590+         VCHL  V21,V22,V23,3,1              test instruction
000074D6  B98D 0020                                5591+         EPSW  R2,R0              extract psw
000074DA  5020 500C                      0000000C  5592+         ST    R2,CCPSW              to save CC
000074DE  E750 5048 080E                 00007498  5593+         VST   V21,V1O128         save v1 output
000074E4  07FB                                     5594+         BR    R11                return
000074E8                                           5595+RE128    DC    0F                 V1 for this test
000074E8                                           5596+         DROP  R5
000074E8  FFFFFFFF FFFFFFFF                        5597          DC    XL16'FFFFFFFFFFFFFFFF FFFFFFFFFFFFFFFF'   result
000074F0  FFFFFFFF FFFFFFFF
000074F8  FFFEFFFD FFFCFFFB                        5598          DC    XL16'FFFEFFFDFFFCFFFB FFFAFFF9FFF8FFF7'   v2
00007500  FFFAFFF9 FFF8FFF7
00007508  00010203 04050607                        5599          DC    XL16'0001020304050607 08090A0B0C0D0E0F'   v3
00007510  08090A0B 0C0D0E0F
                                                   5600
                                                   5601          VRR_B VCHL,3,1
00007518                                           5602+         DS    0FD
00007518                         00007518          5603+         USING *,R5               base for test data and test routine
00007518  00007580                                 5604+T129     DC    A(X129)            address of test routine
0000751C  0081                                     5605+         DC    H'129'             test number
0000751E  00                                       5606+         DC    X'00'
0000751F  03                                       5607+         DC    HL1'3'                  m4 used
00007520  01                                       5608+         DC    HL1'1'                  m5 used
00007521  01                                       5609+         DC    HL1'1'             CC
00007522  0B                                       5610+         DC    HL1'11'            CC failed mask
00007524  00000000 00000000                        5611+         DS    2F                 extracted PSW after test (has CC)
0000752C  FF                                       5612+         DC    X'FF'              extracted CC, if test failed
0000752D  E5C3C8D3 40404040                        5613+         DC    CL8'VCHL'          instruction name
00007538  000075B0                                 5614+         DC    A(RE129)           address of v1 result
0000753C  000075C0                                 5615+         DC    A(RE129+16)        address of v2 source
00007540  000075D0                                 5616+         DC    A(RE129+32)        address of v3 source
00007544  00000010                                 5617+         DC    A(16)              result length
00007548  000075B0                                 5618+REA129   DC    A(RE129)           result address
00007550  00000000 00000000                        5619+         DS    2FD                 gap
00007558  00000000 00000000
00007560  00000000 00000000                        5620+V1O129   DS    XL16               V1 output
00007568  00000000 00000000
00007570  00000000 00000000                        5621+         DS    2FD                 gap
00007578  00000000 00000000
                                                   5622+*
00007580                                           5623+X129     DS    0F
00007580  E310 5024 0014                 00000024  5624+         LGF   R1,V2ADDR          load v2 source
00007586  E761 0000 0806                 00000000  5625+         VL    v22,0(R1)          use v21 to test decoder
0000758C  E310 5028 0014                 00000028  5626+         LGF   R1,V3ADDR          load v3 source
00007592  E771 0000 0806                 00000000  5627+         VL    v23,0(R1)          use v22 to test decoder
00007598  E756 7010 3EF9                           5628+         VCHL  V21,V22,V23,3,1              test instruction
0000759E  B98D 0020                                5629+         EPSW  R2,R0              extract psw
000075A2  5020 500C                      0000000C  5630+         ST    R2,CCPSW              to save CC
000075A6  E750 5048 080E                 00007560  5631+         VST   V21,V1O129         save v1 output
000075AC  07FB                                     5632+         BR    R11                return
000075B0                                           5633+RE129    DC    0F                 V1 for this test
000075B0                                           5634+         DROP  R5
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
000075B0  FFFFFFFF FFFFFFFF                        5635           DC    XL16'FFFFFFFFFFFFFFFF 0000000000000000'   result
000075B8  00000000 00000000
000075C0  00110033 00550077                        5636           DC    XL16'0011003300550077 08090A0B0C0DFE0F'   v2
000075C8  08090A0B 0C0DFE0F
000075D0  00010023 00450067                        5637           DC    XL16'0001002300450067 08090A0B0C0DFE1F'   v3
000075D8  08090A0B 0C0DFE1F
                                                   5638
                                                   5639           VRR_B VCHL,3,1
000075E0                                           5640+          DS    0FD
000075E0                     000075E0              5641+          USING *,R5                base for test data and test routine
000075E0  00007648                                 5642+T130      DC    A(X130)             address of test routine
000075E4  0082                                     5643+          DC    H'130'              test number
000075E6  00                                       5644+          DC    X'00'
000075E7  03                                       5645+          DC    HL1'3'                   m4 used
000075E8  01                                       5646+          DC    HL1'1'                   m5 used
000075E9  01                                       5647+          DC    HL1'1'              CC
000075EA  0B                                       5648+          DC    HL1'11'             CC failed mask
000075EC  00000000 00000000                        5649+          DS    2F                  extracted PSW after test (has CC)
000075F4  FF                                       5650+          DC    X'FF'               extracted CC, if test failed
000075F5  E5C3C8D3 40404040                        5651+          DC    CL8'VCHL'           instruction name
00007600  00007678                                 5652+          DC    A(RE130)            address of v1 result
00007604  00007688                                 5653+          DC    A(RE130+16)         address of v2 source
00007608  00007698                                 5654+          DC    A(RE130+32)         address of v3 source
0000760C  00000010                                 5655+          DC    A(16)               result length
00007610  00007678                                 5656+REA130    DC    A(RE130)            result address
00007618  00000000 00000000                        5657+          DS    2FD                  gap
00007620  00000000 00000000
00007628  00000000 00000000                        5658+V1O130    DS    XL16                V1 output
00007630  00000000 00000000
00007638  00000000 00000000                        5659+          DS    2FD                  gap
00007640  00000000 00000000
                                                   5660+*
00007648                                           5661+X130      DS    0F
00007648  E310 5024 0014                 00000024  5662+          LGF   R1,V2ADDR           load v2 source
0000764E  E761 0000 0806                 00000000  5663+          VL    v22,0(R1)           use v21 to test decoder
00007654  E310 5028 0014                 00000028  5664+          LGF   R1,V3ADDR           load v3 source
0000765A  E771 0000 0806                 00000000  5665+          VL    v23,0(R1)           use v22 to test decoder
00007660  E756 7010 3EF9                           5666+          VCHL  V21,V22,V23,3,1               test instruction
00007666  B98D 0020                                5667+          EPSW  R2,R0               extract psw
0000766A  5020 500C                      0000000C  5668+          ST    R2,CCPSW               to save CC
0000766E  E750 5048 080E                 00007628  5669+          VST   V21,V1O130          save v1 output
00007674  07FB                                     5670+          BR    R11                 return
00007678                                           5671+RE130     DC    0F                  V1 for this test
00007678                                           5672+          DROP  R5
00007678  00000000 00000000                        5673           DC    XL16'0000000000000000 FFFFFFFFFFFFFFFF'   result
00007680  FFFFFFFF FFFFFFFF
00007688  08090A0B 0C0DFE0F                        5674           DC    XL16'08090A0B0C0DFE0F 0011003300550077'   v2
00007690  00110033 00550077
00007698  08090A0B 0C0DFE1F                        5675           DC    XL16'08090A0B0C0DFE1F 0001002300450067'   v3
000076A0  00010023 00450067
                                                   5676
                                                   5677           VRR_B VCHL,3,3
000076A8                                           5678+          DS    0FD
000076A8                     000076A8              5679+          USING *,R5                base for test data and test routine
000076A8  00007710                                 5680+T131      DC    A(X131)             address of test routine
000076AC  0083                                     5681+          DC    H'131'              test number
```

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  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
000076AE  00                                       5682+          DC    X'00'
000076AF  03                                       5683+          DC    HL1'3'                    m4 used
000076B0  01                                       5684+          DC    HL1'1'                    m5 used
000076B1  03                                       5685+          DC    HL1'3'              CC
000076B2  0E                                       5686+          DC    HL1'14'             CC failed mask
000076B4  00000000 00000000                        5687+          DS    2F                  extracted PSW after test (has CC)
000076BC  FF                                       5688+          DC    X'FF'               extracted CC, if test failed
000076BD  E5C3C8D3 40404040                        5689+          DC    CL8'VCHL'           instruction name
000076C8  00007740                                 5690+          DC    A(RE131)            address of v1 result
000076CC  00007750                                 5691+          DC    A(RE131+16)         address of v2 source
000076D0  00007760                                 5692+          DC    A(RE131+32)         address of v3 source
000076D4  00000010                                 5693+          DC    A(16)               result length
000076D8  00007740                                 5694+REA131    DC    A(RE131)            result address
000076E0  00000000 00000000                        5695+          DS    2FD                  gap
000076E8  00000000 00000000
000076F0  00000000 00000000                        5696+V1O131    DS    XL16                V1 output
000076F8  00000000 00000000
00007700  00000000 00000000                        5697+          DS    2FD                  gap
00007708  00000000 00000000
                                                   5698+*
00007710                                           5699+X131      DS    0F
00007710  E310 5024 0014                 00000024  5700+          LGF   R1,V2ADDR           load v2 source
00007716  E761 0000 0806                 00000000  5701+          VL    v22,0(R1)           use v21 to test decoder
0000771C  E310 5028 0014                 00000028  5702+          LGF   R1,V3ADDR           load v3 source
00007722  E771 0000 0806                 00000000  5703+          VL    v23,0(R1)           use v22 to test decoder
00007728  E756 7010 3EF9                           5704+          VCHL  V21,V22,V23,3,1               test instruction
0000772E  B98D 0020                                5705+          EPSW  R2,R0               extract psw
00007732  5020 500C                      0000000C  5706+          ST    R2,CCPSW               to save CC
00007736  E750 5048 080E                 000076F0  5707+          VST   V21,V1O131          save v1 output
0000773C  07FB                                     5708+          BR    R11                 return
00007740                                           5709+RE131     DC    0F                  V1 for this test
00007740                                           5710+          DROP  R5
00007740  00000000 00000000                        5711           DC    XL16'0000000000000000 0000000000000000'   result
00007748  00000000 00000000
00007750  00010003 04050607                        5712           DC    XL16'0001000304050607 00090A0B0C0D0E0F'   v2
00007758  00090A0B 0C0D0E0F
00007760  01110233 11550677                        5713           DC    XL16'0111023311550677 119911BBF1DD11FF'   v3
00007768  119911BB F1DD11FF
                                                   5714
                                                   5715           VRR_B VCHL,3,3
00007770                                           5716+          DS    0FD
00007770                       00007770            5717+          USING *,R5                base for test data and test routine
00007770  000077D8                                 5718+T132      DC    A(X132)             address of test routine
00007774  0084                                     5719+          DC    H'132'              test number
00007776  00                                       5720+          DC    X'00'
00007777  03                                       5721+          DC    HL1'3'                    m4 used
00007778  01                                       5722+          DC    HL1'1'                    m5 used
00007779  03                                       5723+          DC    HL1'3'              CC
0000777A  0E                                       5724+          DC    HL1'14'             CC failed mask
0000777C  00000000 00000000                        5725+          DS    2F                  extracted PSW after test (has CC)
00007784  FF                                       5726+          DC    X'FF'               extracted CC, if test failed
00007785  E5C3C8D3 40404040                        5727+          DC    CL8'VCHL'           instruction name
00007790  00007808                                 5728+          DC    A(RE132)            address of v1 result
00007794  00007818                                 5729+          DC    A(RE132+16)         address of v2 source
00007798  00007828                                 5730+          DC    A(RE132+32)         address of v3 source
0000779C  00000010                                 5731+          DC    A(16)               result length
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
000077A0  00007808                                5732+REA132   DC    A(RE132)            result address
000077A8  00000000 00000000                       5733+         DS    2FD                  gap
000077B0  00000000 00000000
000077B8  00000000 00000000                       5734+V1O132   DS    XL16                V1 output
000077C0  00000000 00000000
000077C8  00000000 00000000                       5735+         DS    2FD                  gap
000077D0  00000000 00000000
                                                  5736+*
000077D8                                          5737+X132     DS    0F
000077D8  E310 5024 0014                 00000024 5738+         LGF   R1,V2ADDR           load v2 source
000077DE  E761 0000 0806                 00000000 5739+         VL    v22,0(R1)           use v21 to test decoder
000077E4  E310 5028 0014                 00000028 5740+         LGF   R1,V3ADDR           load v3 source
000077EA  E771 0000 0806                 00000000 5741+         VL    v23,0(R1)           use v22 to test decoder
000077F0  E756 7010 3EF9                          5742+         VCHL  V21,V22,V23,3,1             test instruction
000077F6  B98D 0020                               5743+         EPSW  R2,R0               extract psw
000077FA  5020 500C                      0000000C 5744+         ST    R2,CCPSW               to save CC
000077FE  E750 5048 080E                 000077B8 5745+         VST   V21,V1O132          save v1 output
00007804  07FB                                    5746+         BR    R11                 return
00007808                                          5747+RE132    DC    0F                  V1 for this test
00007808                                          5748+         DROP  R5
00007808  00000000 00000000                       5749          DC    XL16'0000000000000000 0000000000000000'   result
00007810  00000000 00000000
00007818  08090A0B 0C0D0E0F                       5750          DC    XL16'08090A0B0C0D0E0F 0001020304050607'   v2
00007820  00010203 04050607
00007828  119911BB F1DD11FF                       5751          DC    XL16'119911BBF1DD11FF 0111023311550677'   v3
00007830  01110233 11550677
                                                  5752
                                                  5753 *-------------------------------------------------------------------
                                                  5754 * VCH    - Vector Compare High
                                                  5755 *-------------------------------------------------------------------
                                                  5756 * cc=0: All elements highl
                                                  5757 * cc=1: Some elements high
                                                  5758 * cc=3: No element high
                                                  5759 *-------------------------------------------------------------------
                                                  5760 * case -  simple cc debug
                                                  5761 *-------------------------------------------------------------------
                                                  5762 *Byte
                                                  5763          VRR_B VCH,0,0
00007838                                          5764+         DS    0FD
00007838                  00007838                5765+         USING *,R5                base for test data and test routine
00007838  000078A0                                5766+T133     DC    A(X133)             address of test routine
0000783C  0085                                    5767+         DC    H'133'              test number
0000783E  00                                      5768+         DC    X'00'
0000783F  00                                      5769+         DC    HL1'0'                   m4 used
00007840  01                                      5770+         DC    HL1'1'                   m5 used
00007841  00                                      5771+         DC    HL1'0'              CC
00007842  07                                      5772+         DC    HL1'7'              CC failed mask
00007844  00000000 00000000                       5773+         DS    2F                  extracted PSW after test (has CC)
0000784C  FF                                      5774+         DC    X'FF'               extracted CC, if test failed
0000784D  E5C3C840 40404040                       5775+         DC    CL8'VCH'            instruction name
00007858  000078D0                                5776+         DC    A(RE133)            address of v1 result
0000785C  000078E0                                5777+         DC    A(RE133+16)         address of v2 source
00007860  000078F0                                5778+         DC    A(RE133+32)         address of v3 source
00007864  00000010                                5779+         DC    A(16)               result length
00007868  000078D0                                5780+REA133   DC    A(RE133)            result address
00007870  00000000 00000000                       5781+         DS    2FD                  gap
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
00007878  00000000 00000000
00007880  00000000 00000000                        5782+V1O0133   DS    XL16                V1 output
00007888  00000000 00000000
00007890  00000000 00000000                        5783+          DS    2FD                  gap
00007898  00000000 00000000
                                                   5784+*
000078A0                                           5785+X133      DS    0F
000078A0  E310 5024 0014                 00000024  5786+          LGF   R1,V2ADDR           load v2 source
000078A6  E761 0000 0806                 00000000  5787+          VL    v22,0(R1)           use v21 to test decoder
000078AC  E310 5028 0014                 00000028  5788+          LGF   R1,V3ADDR           load v3 source
000078B2  E771 0000 0806                 00000000  5789+          VL    v23,0(R1)           use v22 to test decoder
000078B8  E756 7010 0EFB                           5790+          VCH   V21,V22,V23,0,1             test instruction
000078BE  B98D 0020                                5791+          EPSW  R2,R0               extract psw
000078C2  5020 500C                      0000000C  5792+          ST    R2,CCPSW               to save CC
000078C6  E750 5048 080E                 00007880  5793+          VST   V21,V1O0133         save v1 output
000078CC  07FB                                     5794+          BR    R11                 return
000078D0                                           5795+RE133     DC    0F                  V1 for this test
000078D0                                           5796+          DROP  R5
000078D0  FFFFFFFF FFFFFFFF                        5797           DC    XL16'FFFFFFFFFFFFFFFF FFFFFFFFFFFFFFFF'   result
000078D8  FFFFFFFF FFFFFFFF
000078E0  00000000 00000000                        5798           DC    XL16'0000000000000000 0000000000000000'   v2
000078E8  00000000 00000000
000078F0  FFFFFFFF FFFFFFFF                        5799           DC    XL16'FFFFFFFFFFFFFFFF FFFFFFFFFFFFFFFF'   v3
000078F8  FFFFFFFF FFFFFFFF
                                                   5800
                                                   5801           VRR_B VCH,0,1
00007900                                           5802+          DS    0FD
00007900                         00007900          5803+          USING *,R5                base for test data and test routine
00007900  00007968                                 5804+T134      DC    A(X134)             address of test routine
00007904  0086                                     5805+          DC    H'134'              test number
00007906  00                                       5806+          DC    X'00'
00007907  00                                       5807+          DC    HL1'0'                   m4 used
00007908  01                                       5808+          DC    HL1'1'                   m5 used
00007909  01                                       5809+          DC    HL1'1'              CC
0000790A  0B                                       5810+          DC    HL1'11'             CC failed mask
0000790C  00000000 00000000                        5811+          DS    2F                  extracted PSW after test (has CC)
00007914  FF                                       5812+          DC    X'FF'               extracted CC, if test failed
00007915  E5C3C840 40404040                        5813+          DC    CL8'VCH'            instruction name
00007920  00007998                                 5814+          DC    A(RE134)            address of v1 result
00007924  000079A8                                 5815+          DC    A(RE134+16)         address of v2 source
00007928  000079B8                                 5816+          DC    A(RE134+32)         address of v3 source
0000792C  00000010                                 5817+          DC    A(16)               result length
00007930  00007998                                 5818+REA134    DC    A(RE134)            result address
00007938  00000000 00000000                        5819+          DS    2FD                  gap
00007940  00000000 00000000
00007948  00000000 00000000                        5820+V1O0134   DS    XL16                V1 output
00007950  00000000 00000000
00007958  00000000 00000000                        5821+          DS    2FD                  gap
00007960  00000000 00000000
                                                   5822+*
00007968                                           5823+X134      DS    0F
00007968  E310 5024 0014                 00000024  5824+          LGF   R1,V2ADDR           load v2 source
0000796E  E761 0000 0806                 00000000  5825+          VL    v22,0(R1)           use v21 to test decoder
00007974  E310 5028 0014                 00000028  5826+          LGF   R1,V3ADDR           load v3 source
0000797A  E771 0000 0806                 00000000  5827+          VL    v23,0(R1)           use v22 to test decoder
00007980  E756 7010 0EFB                           5828+          VCH   V21,V22,V23,0,1             test instruction
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

00007986  B98D 0020                        5829+          EPSW  R2,R0              extract psw
0000798A  5020 500C                0000000C 5830+          ST    R2,CCPSW             to save CC
0000798E  E750 5048 080E           00007948 5831+          VST   V21,V1O0134        save v1 output
00007994  07FB                             5832+          BR    R11                return
00007998                                   5833+RE134     DC    0F                 V1 for this test
00007998                                   5834+          DROP  R5
00007998  00000000 00000000                5835           DC    XL16'0000000000000000 FFFFFFFF00000000'   result
000079A0  FFFFFFFF 00000000
000079A8  00000000 00000000                5836           DC    XL16'0000000000000000 7F017F0200000000'   v2
000079B0  7F017F02 00000000
000079B8  00000000 00000000                5837           DC    XL16'0000000000000000 0000000000000000'   v3
000079C0  00000000 00000000
                                           5838
                                           5839           VRR_B VCH,0,3
000079C8                                   5840+          DS    0FD
000079C8                   000079C8        5841+          USING *,R5               base for test data and test routine
000079C8  00007A30                         5842+T135      DC    A(X135)            address of test routine
000079CC  0087                             5843+          DC    H'135'             test number
000079CE  00                               5844+          DC    X'00'
000079CF  00                               5845+          DC    HL1'0'                  m4 used
000079D0  01                               5846+          DC    HL1'1'                  m5 used
000079D1  03                               5847+          DC    HL1'3'             CC
000079D2  0E                               5848+          DC    HL1'14'            CC failed mask
000079D4  00000000 00000000                5849+          DS    2F                 extracted PSW after test (has CC)
000079DC  FF                               5850+          DC    X'FF'              extracted CC, if test failed
000079DD  E5C3C840 40404040                5851+          DC    CL8'VCH'           instruction name
000079E8  00007A60                         5852+          DC    A(RE135)           address of v1 result
000079EC  00007A70                         5853+          DC    A(RE135+16)        address of v2 source
000079F0  00007A80                         5854+          DC    A(RE135+32)        address of v3 source
000079F4  00000010                         5855+          DC    A(16)              result length
000079F8  00007A60                         5856+REA135    DC    A(RE135)           result address
00007A00  00000000 00000000                5857+          DS    2FD                 gap
00007A08  00000000 00000000
00007A10  00000000 00000000                5858+V1O0135   DS    XL16               V1 output
00007A18  00000000 00000000
00007A20  00000000 00000000                5859+          DS    2FD                 gap
00007A28  00000000 00000000
                                           5860+*
00007A30                                   5861+X135      DS    0F
00007A30  E310 5024 0014           00000024 5862+          LGF   R1,V2ADDR          load v2 source
00007A36  E761 0000 0806           00000000 5863+          VL    v22,0(R1)          use v21 to test decoder
00007A3C  E310 5028 0014           00000028 5864+          LGF   R1,V3ADDR          load v3 source
00007A42  E771 0000 0806           00000000 5865+          VL    v23,0(R1)          use v22 to test decoder
00007A48  E756 7010 0EFB                   5866+          VCH   V21,V22,V23,0,1             test instruction
00007A4E  B98D 0020                        5867+          EPSW  R2,R0              extract psw
00007A52  5020 500C                0000000C 5868+          ST    R2,CCPSW             to save CC
00007A56  E750 5048 080E           00007A10 5869+          VST   V21,V1O0135        save v1 output
00007A5C  07FB                             5870+          BR    R11                return
00007A60                                   5871+RE135     DC    0F                 V1 for this test
00007A60                                   5872+          DROP  R5
00007A60  00000000 00000000                5873           DC    XL16'0000000000000000 0000000000000000'   result
00007A68  00000000 00000000
00007A70  00000000 00000000                5874           DC    XL16'0000000000000000 0000000000000000'   v2
00007A78  00000000 00000000
00007A80  00000000 00000000                5875           DC    XL16'0000000000000000 0000000000000000'   v3
00007A88  00000000 00000000
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
                                                    5876
                                                    5877 *Halfword
                                                    5878          VRR_B VCH,1,0
00007A90                                            5879+         DS    0FD
00007A90                      00007A90              5880+         USING *,R5                base for test data and test routine
00007A90  00007AF8                                  5881+T136     DC    A(X136)             address of test routine
00007A94  0088                                      5882+         DC    H'136'              test number
00007A96  00                                        5883+         DC    X'00'
00007A97  01                                        5884+         DC    HL1'1'                   m4 used
00007A98  01                                        5885+         DC    HL1'1'                   m5 used
00007A99  00                                        5886+         DC    HL1'0'              CC
00007A9A  07                                        5887+         DC    HL1'7'              CC failed mask
00007A9C  00000000 00000000                         5888+         DS    2F                  extracted PSW after test (has CC)
00007AA4  FF                                        5889+         DC    X'FF'               extracted CC, if test failed
00007AA5  E5C3C840 40404040                         5890+         DC    CL8'VCH'            instruction name
00007AB0  00007B28                                  5891+         DC    A(RE136)            address of v1 result
00007AB4  00007B38                                  5892+         DC    A(RE136+16)         address of v2 source
00007AB8  00007B48                                  5893+         DC    A(RE136+32)         address of v3 source
00007ABC  00000010                                  5894+         DC    A(16)               result length
00007AC0  00007B28                                  5895+REA136   DC    A(RE136)            result address
00007AC8  00000000 00000000                         5896+         DS    2FD                  gap
00007AD0  00000000 00000000
00007AD8  00000000 00000000                         5897+V1O136   DS    XL16                V1 output
00007AE0  00000000 00000000
00007AE8  00000000 00000000                         5898+         DS    2FD                  gap
00007AF0  00000000 00000000
                                                    5899+*
00007AF8                                            5900+X136     DS    0F
00007AF8  E310 5024 0014                  00000024  5901+         LGF   R1,V2ADDR           load v2 source
00007AFE  E761 0000 0806                  00000000  5902+         VL    v22,0(R1)           use v21 to test decoder
00007B04  E310 5028 0014                  00000028  5903+         LGF   R1,V3ADDR           load v3 source
00007B0A  E771 0000 0806                  00000000  5904+         VL    v23,0(R1)           use v22 to test decoder
00007B10  E756 7010 1EFB                            5905+         VCH   V21,V22,V23,1,1            test instruction
00007B16  B98D 0020                                 5906+         EPSW  R2,R0               extract psw
00007B1A  5020 500C                       0000000C  5907+         ST    R2,CCPSW               to save CC
00007B1E  E750 5048 080E                  00007AD8  5908+         VST   V21,V1O136          save v1 output
00007B24  07FB                                      5909+         BR    R11                 return
00007B28                                            5910+RE136    DC    0F                  V1 for this test
00007B28                                            5911+         DROP  R5
00007B28  FFFFFFFF FFFFFFFF                         5912          DC    XL16'FFFFFFFFFFFFFFFF FFFFFFFFFFFFFFFF'   result
00007B30  FFFFFFFF FFFFFFFF
00007B38  00000000 00000000                         5913          DC    XL16'0000000000000000 0000000000000000'   v2
00007B40  00000000 00000000
00007B48  FFFFFFFF FFFFFFFF                         5914          DC    XL16'FFFFFFFFFFFFFFFF FFFFFFFFFFFFFFFF'   v3
00007B50  FFFFFFFF FFFFFFFF
                                                    5915
                                                    5916          VRR_B VCH,1,1
00007B58                                            5917+         DS    0FD
00007B58                      00007B58              5918+         USING *,R5                base for test data and test routine
00007B58  00007BC0                                  5919+T137     DC    A(X137)             address of test routine
00007B5C  0089                                      5920+         DC    H'137'              test number
00007B5E  00                                        5921+         DC    X'00'
00007B5F  01                                        5922+         DC    HL1'1'                   m4 used
00007B60  01                                        5923+         DC    HL1'1'                   m5 used
00007B61  01                                        5924+         DC    HL1'1'              CC
00007B62  0B                                        5925+         DC    HL1'11'             CC failed mask
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
00007B64  00000000 00000000                        5926+          DS    2F                  extracted PSW after test (has CC)
00007B6C  FF                                       5927+          DC    X'FF'               extracted CC, if test failed
00007B6D  E5C3C840 40404040                        5928+          DC    CL8'VCH'            instruction name
00007B78  00007BF0                                 5929+          DC    A(RE137)            address of v1 result
00007B7C  00007C00                                 5930+          DC    A(RE137+16)         address of v2 source
00007B80  00007C10                                 5931+          DC    A(RE137+32)         address of v3 source
00007B84  00000010                                 5932+          DC    A(16)               result length
00007B88  00007BF0                                 5933+REA137    DC    A(RE137)            result address
00007B90  00000000 00000000                        5934+          DS    2FD                  gap
00007B98  00000000 00000000
00007BA0  00000000 00000000                        5935+V1O0137   DS    XL16                V1 output
00007BA8  00000000 00000000
00007BB0  00000000 00000000                        5936+          DS    2FD                  gap
00007BB8  00000000 00000000
                                                   5937+*
00007BC0                                           5938+X137      DS    0F
00007BC0  E310 5024 0014                 00000024  5939+          LGF   R1,V2ADDR           load v2 source
00007BC6  E761 0000 0806                 00000000  5940+          VL    v22,0(R1)           use v21 to test decoder
00007BCC  E310 5028 0014                 00000028  5941+          LGF   R1,V3ADDR           load v3 source
00007BD2  E771 0000 0806                 00000000  5942+          VL    v23,0(R1)           use v22 to test decoder
00007BD8  E756 7010 1EFB                           5943+          VCH   V21,V22,V23,1,1              test instruction
00007BDE  B98D 0020                                5944+          EPSW  R2,R0               extract psw
00007BE2  5020 500C                      0000000C  5945+          ST    R2,CCPSW               to save CC
00007BE6  E750 5048 080E                 00007BA0  5946+          VST   V21,V1O0137         save v1 output
00007BEC  07FB                                     5947+          BR    R11                 return
00007BF0                                           5948+RE137     DC    0F                  V1 for this test
00007BF0                                           5949+          DROP  R5
00007BF0  00000000 00000000                        5950           DC    XL16'0000000000000000 FFFFFFFF00000000'   result
00007BF8  FFFFFFFF 00000000
00007C00  00000000 00000000                        5951           DC    XL16'0000000000000000 7F017F0200000000'   v2
00007C08  7F017F02 00000000
00007C10  00000000 00000000                        5952           DC    XL16'0000000000000000 0000000000000000'   v3
00007C18  00000000 00000000
                                                   5953
                                                   5954           VRR_B VCH,1,3
00007C20                                           5955+          DS    0FD
00007C20                       00007C20            5956+          USING *,R5                base for test data and test routine
00007C20  00007C88                                 5957+T138      DC    A(X138)             address of test routine
00007C24  008A                                     5958+          DC    H'138'              test number
00007C26  00                                       5959+          DC    X'00'
00007C27  01                                       5960+          DC    HL1'1'                   m4 used
00007C28  01                                       5961+          DC    HL1'1'                   m5 used
00007C29  03                                       5962+          DC    HL1'3'              CC
00007C2A  0E                                       5963+          DC    HL1'14'             CC failed mask
00007C2C  00000000 00000000                        5964+          DS    2F                  extracted PSW after test (has CC)
00007C34  FF                                       5965+          DC    X'FF'               extracted CC, if test failed
00007C35  E5C3C840 40404040                        5966+          DC    CL8'VCH'            instruction name
00007C40  00007CB8                                 5967+          DC    A(RE138)            address of v1 result
00007C44  00007CC8                                 5968+          DC    A(RE138+16)         address of v2 source
00007C48  00007CD8                                 5969+          DC    A(RE138+32)         address of v3 source
00007C4C  00000010                                 5970+          DC    A(16)               result length
00007C50  00007CB8                                 5971+REA138    DC    A(RE138)            result address
00007C58  00000000 00000000                        5972+          DS    2FD                  gap
00007C60  00000000 00000000
00007C68  00000000 00000000                        5973+V1O0138   DS    XL16                V1 output
00007C70  00000000 00000000
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
00007C78  00000000 00000000                        5974+          DS    2FD                  gap
00007C80  00000000 00000000
                                                   5975+*
00007C88                                           5976+X138      DS    0F
00007C88  E310 5024 0014                 00000024  5977+          LGF   R1,V2ADDR           load v2 source
00007C8E  E761 0000 0806                 00000000  5978+          VL    v22,0(R1)          use v21 to test decoder
00007C94  E310 5028 0014                 00000028  5979+          LGF   R1,V3ADDR          load v3 source
00007C9A  E771 0000 0806                 00000000  5980+          VL    v23,0(R1)          use v22 to test decoder
00007CA0  E756 7010 1EFB                           5981+          VCH   V21,V22,V23,1,1              test instruction
00007CA6  B98D 0020                                5982+          EPSW  R2,R0              extract psw
00007CAA  5020 500C                      0000000C  5983+          ST    R2,CCPSW             to save CC
00007CAE  E750 5048 080E                 00007C68  5984+          VST   V21,V1O0138        save v1 output
00007CB4  07FB                                     5985+          BR    R11                return
00007CB8                                           5986+RE138     DC    0F                 V1 for this test
00007CB8                                           5987+          DROP  R5
00007CB8  00000000 00000000                        5988           DC    XL16'0000000000000000 0000000000000000'   result
00007CC0  00000000 00000000
00007CC8  00000000 00000000                        5989           DC    XL16'0000000000000000 0000000000000000'   v2
00007CD0  00000000 00000000
00007CD8  00000000 00000000                        5990           DC    XL16'0000000000000000 0000000000000000'   v3
00007CE0  00000000 00000000
                                                   5991
                                                   5992 *Word
                                                   5993           VRR_B VCH,2,0
00007CE8                                           5994+          DS    0FD
00007CE8                         00007CE8          5995+          USING *,R5               base for test data and test routine
00007CE8  00007D50                                 5996+T139      DC    A(X139)            address of test routine
00007CEC  008B                                     5997+          DC    H'139'             test number
00007CEE  00                                       5998+          DC    X'00'
00007CEF  02                                       5999+          DC    HL1'2'                  m4 used
00007CF0  01                                       6000+          DC    HL1'1'                  m5 used
00007CF1  00                                       6001+          DC    HL1'0'             CC
00007CF2  07                                       6002+          DC    HL1'7'             CC failed mask
00007CF4  00000000 00000000                        6003+          DS    2F                 extracted PSW after test (has CC)
00007CFC  FF                                       6004+          DC    X'FF'              extracted CC, if test failed
00007CFD  E5C3C840 40404040                        6005+          DC    CL8'VCH'           instruction name
00007D08  00007D80                                 6006+          DC    A(RE139)           address of v1 result
00007D0C  00007D90                                 6007+          DC    A(RE139+16)        address of v2 source
00007D10  00007DA0                                 6008+          DC    A(RE139+32)        address of v3 source
00007D14  00000010                                 6009+          DC    A(16)              result length
00007D18  00007D80                                 6010+REA139    DC    A(RE139)           result address
00007D20  00000000 00000000                        6011+          DS    2FD                 gap
00007D28  00000000 00000000
00007D30  00000000 00000000                        6012+V1O139    DS    XL16               V1 output
00007D38  00000000 00000000
00007D40  00000000 00000000                        6013+          DS    2FD                 gap
00007D48  00000000 00000000
                                                   6014+*
00007D50                                           6015+X139      DS    0F
00007D50  E310 5024 0014                 00000024  6016+          LGF   R1,V2ADDR          load v2 source
00007D56  E761 0000 0806                 00000000  6017+          VL    v22,0(R1)          use v21 to test decoder
00007D5C  E310 5028 0014                 00000028  6018+          LGF   R1,V3ADDR          load v3 source
00007D62  E771 0000 0806                 00000000  6019+          VL    v23,0(R1)          use v22 to test decoder
00007D68  E756 7010 2EFB                           6020+          VCH   V21,V22,V23,2,1              test instruction
00007D6E  B98D 0020                                6021+          EPSW  R2,R0              extract psw
00007D72  5020 500C                      0000000C  6022+          ST    R2,CCPSW             to save CC
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
00007D76  E750 5048 080E                 00007D30  6023+          VST   V21,V1O0139         save v1 output
00007D7C  07FB                                     6024+          BR    R11                 return
00007D80                                           6025+RE139     DC    0F                  V1 for this test
00007D80                                           6026+          DROP  R5
00007D80  FFFFFFFF FFFFFFFF                        6027           DC    XL16'FFFFFFFFFFFFFFFF FFFFFFFFFFFFFFFF'   result
00007D88  FFFFFFFF FFFFFFFF
00007D90  00000000 00000000                        6028           DC    XL16'0000000000000000 0000000000000000'   v2
00007D98  00000000 00000000
00007DA0  FFFFFFFF FFFFFFFF                        6029           DC    XL16'FFFFFFFFFFFFFFFF FFFFFFFFFFFFFFFF'   v3
00007DA8  FFFFFFFF FFFFFFFF
                                                   6030
                                                   6031           VRR_B VCH,2,1
00007DB0                                           6032+          DS    0FD
00007DB0                         00007DB0          6033+          USING *,R5                base for test data and test routine
00007DB0  00007E18                                 6034+T140      DC    A(X140)             address of test routine
00007DB4  008C                                     6035+          DC    H'140'              test number
00007DB6  00                                       6036+          DC    X'00'
00007DB7  02                                       6037+          DC    HL1'2'                   m4 used
00007DB8  01                                       6038+          DC    HL1'1'                   m5 used
00007DB9  01                                       6039+          DC    HL1'1'              CC
00007DBA  0B                                       6040+          DC    HL1'11'             CC failed mask
00007DBC  00000000 00000000                        6041+          DS    2F                  extracted PSW after test (has CC)
00007DC4  FF                                       6042+          DC    X'FF'               extracted CC, if test failed
00007DC5  E5C3C840 40404040                        6043+          DC    CL8'VCH'            instruction name
00007DD0  00007E48                                 6044+          DC    A(RE140)            address of v1 result
00007DD4  00007E58                                 6045+          DC    A(RE140+16)         address of v2 source
00007DD8  00007E68                                 6046+          DC    A(RE140+32)         address of v3 source
00007DDC  00000010                                 6047+          DC    A(16)               result length
00007DE0  00007E48                                 6048+REA140    DC    A(RE140)            result address
00007DE8  00000000 00000000                        6049+          DS    2FD                  gap
00007DF0  00000000 00000000
00007DF8  00000000 00000000                        6050+V1O140    DS    XL16                V1 output
00007E00  00000000 00000000
00007E08  00000000 00000000                        6051+          DS    2FD                  gap
00007E10  00000000 00000000
                                                   6052+*
00007E18                                           6053+X140      DS    0F
00007E18  E310 5024 0014                 00000024  6054+          LGF   R1,V2ADDR           load v2 source
00007E1E  E761 0000 0806                 00000000  6055+          VL    v22,0(R1)           use v21 to test decoder
00007E24  E310 5028 0014                 00000028  6056+          LGF   R1,V3ADDR           load v3 source
00007E2A  E771 0000 0806                 00000000  6057+          VL    v23,0(R1)           use v22 to test decoder
00007E30  E756 7010 2EFB                           6058+          VCH   V21,V22,V23,2,1              test instruction
00007E36  B98D 0020                                6059+          EPSW  R2,R0               extract psw
00007E3A  5020 500C                      0000000C  6060+          ST    R2,CCPSW               to save CC
00007E3E  E750 5048 080E                 00007DF8  6061+          VST   V21,V1O140          save v1 output
00007E44  07FB                                     6062+          BR    R11                 return
00007E48                                           6063+RE140     DC    0F                  V1 for this test
00007E48                                           6064+          DROP  R5
00007E48  00000000 00000000                        6065           DC    XL16'0000000000000000 FFFFFFFF00000000'   result
00007E50  FFFFFFFF 00000000
00007E58  00000000 00000000                        6066           DC    XL16'0000000000000000 7F017F0200000000'   v2
00007E60  7F017F02 00000000
00007E68  00000000 00000000                        6067           DC    XL16'0000000000000000 0000000000000000'   v3
00007E70  00000000 00000000
                                                   6068
                                                   6069           VRR_B VCH,2,3
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
00007E78                                           6070+          DS    0FD
00007E78                      00007E78             6071+          USING *,R5              base for test data and test routine
00007E78  00007EE0                                 6072+T141      DC    A(X141)           address of test routine
00007E7C  008D                                     6073+          DC    H'141'            test number
00007E7E  00                                       6074+          DC    X'00'
00007E7F  02                                       6075+          DC    HL1'2'                 m4 used
00007E80  01                                       6076+          DC    HL1'1'                 m5 used
00007E81  03                                       6077+          DC    HL1'3'            CC
00007E82  0E                                       6078+          DC    HL1'14'           CC failed mask
00007E84  00000000 00000000                        6079+          DS    2F                extracted PSW after test (has CC)
00007E8C  FF                                       6080+          DC    X'FF'             extracted CC, if test failed
00007E8D  E5C3C840 40404040                        6081+          DC    CL8'VCH'          instruction name
00007E98  00007F10                                 6082+          DC    A(RE141)          address of v1 result
00007E9C  00007F20                                 6083+          DC    A(RE141+16)       address of v2 source
00007EA0  00007F30                                 6084+          DC    A(RE141+32)       address of v3 source
00007EA4  00000010                                 6085+          DC    A(16)             result length
00007EA8  00007F10                                 6086+REA141    DC    A(RE141)          result address
00007EB0  00000000 00000000                        6087+          DS    2FD                gap
00007EB8  00000000 00000000
00007EC0  00000000 00000000                        6088+V1O141    DS    XL16              V1 output
00007EC8  00000000 00000000
00007ED0  00000000 00000000                        6089+          DS    2FD                gap
00007ED8  00000000 00000000
                                                   6090+*
00007EE0                                           6091+X141      DS    0F
00007EE0  E310 5024 0014                 00000024  6092+          LGF   R1,V2ADDR         load v2 source
00007EE6  E761 0000 0806                 00000000  6093+          VL    v22,0(R1)         use v21 to test decoder
00007EEC  E310 5028 0014                 00000028  6094+          LGF   R1,V3ADDR         load v3 source
00007EF2  E771 0000 0806                 00000000  6095+          VL    v23,0(R1)         use v22 to test decoder
00007EF8  E756 7010 2EFB                           6096+          VCH   V21,V22,V23,2,1           test instruction
00007EFE  B98D 0020                                6097+          EPSW  R2,R0             extract psw
00007F02  5020 500C                      0000000C  6098+          ST    R2,CCPSW             to save CC
00007F06  E750 5048 080E                 00007EC0  6099+          VST   V21,V1O141        save v1 output
00007F0C  07FB                                     6100+          BR    R11               return
00007F10                                           6101+RE141     DC    0F                V1 for this test
00007F10                                           6102+          DROP  R5
00007F10  00000000 00000000                        6103           DC    XL16'0000000000000000 0000000000000000'   result
00007F18  00000000 00000000
00007F20  00000000 00000000                        6104           DC    XL16'0000000000000000 0000000000000000'   v2
00007F28  00000000 00000000
00007F30  00000000 00000000                        6105           DC    XL16'0000000000000000 0000000000000000'   v3
00007F38  00000000 00000000
                                                   6106
                                                   6107 *Doubleword
                                                   6108           VRR_B VCH,3,0
00007F40                                           6109+          DS    0FD
00007F40                      00007F40             6110+          USING *,R5              base for test data and test routine
00007F40  00007FA8                                 6111+T142      DC    A(X142)           address of test routine
00007F44  008E                                     6112+          DC    H'142'            test number
00007F46  00                                       6113+          DC    X'00'
00007F47  03                                       6114+          DC    HL1'3'                 m4 used
00007F48  01                                       6115+          DC    HL1'1'                 m5 used
00007F49  00                                       6116+          DC    HL1'0'            CC
00007F4A  07                                       6117+          DC    HL1'7'            CC failed mask
00007F4C  00000000 00000000                        6118+          DS    2F                extracted PSW after test (has CC)
00007F54  FF                                       6119+          DC    X'FF'             extracted CC, if test failed
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
00007F55  E5C3C840 40404040                        6120+          DC    CL8'VCH'            instruction name
00007F60  00007FD8                                 6121+          DC    A(RE142)            address of v1 result
00007F64  00007FE8                                 6122+          DC    A(RE142+16)         address of v2 source
00007F68  00007FF8                                 6123+          DC    A(RE142+32)         address of v3 source
00007F6C  00000010                                 6124+          DC    A(16)               result length
00007F70  00007FD8                                 6125+REA142    DC    A(RE142)            result address
00007F78  00000000 00000000                        6126+          DS    2FD                  gap
00007F80  00000000 00000000
00007F88  00000000 00000000                        6127+V1O142    DS    XL16                V1 output
00007F90  00000000 00000000
00007F98  00000000 00000000                        6128+          DS    2FD                  gap
00007FA0  00000000 00000000
                                                   6129+*
00007FA8                                           6130+X142      DS    0F
00007FA8  E310 5024 0014                 00000024  6131+          LGF   R1,V2ADDR           load v2 source
00007FAE  E761 0000 0806                 00000000  6132+          VL    v22,0(R1)           use v21 to test decoder
00007FB4  E310 5028 0014                 00000028  6133+          LGF   R1,V3ADDR           load v3 source
00007FBA  E771 0000 0806                 00000000  6134+          VL    v23,0(R1)           use v22 to test decoder
00007FC0  E756 7010 3EFB                           6135+          VCH   V21,V22,V23,3,1              test instruction
00007FC6  B98D 0020                                6136+          EPSW  R2,R0               extract psw
00007FCA  5020 500C                      0000000C  6137+          ST    R2,CCPSW               to save CC
00007FCE  E750 5048 080E                 00007F88  6138+          VST   V21,V1O142          save v1 output
00007FD4  07FB                                     6139+          BR    R11                 return
00007FD8                                           6140+RE142     DC    0F                  V1 for this test
00007FD8                                           6141+          DROP  R5
00007FD8  FFFFFFFF FFFFFFFF                        6142           DC    XL16'FFFFFFFFFFFFFFFF FFFFFFFFFFFFFFFF'   result
00007FE0  FFFFFFFF FFFFFFFF
00007FE8  00000000 00000000                        6143           DC    XL16'0000000000000000 0000000000000000'   v2
00007FF0  00000000 00000000
00007FF8  FFFFFFFF FFFFFFFF                        6144           DC    XL16'FFFFFFFFFFFFFFFF FFFFFFFFFFFFFFFF'   v3
00008000  FFFFFFFF FFFFFFFF
                                                   6145
                                                   6146           VRR_B VCH,3,1
00008008                                           6147+          DS    0FD
00008008                         00008008          6148+          USING *,R5                base for test data and test routine
00008008  00008070                                 6149+T143      DC    A(X143)             address of test routine
0000800C  008F                                     6150+          DC    H'143'              test number
0000800E  00                                       6151+          DC    X'00'
0000800F  03                                       6152+          DC    HL1'3'                   m4 used
00008010  01                                       6153+          DC    HL1'1'                   m5 used
00008011  01                                       6154+          DC    HL1'1'              CC
00008012  0B                                       6155+          DC    HL1'11'             CC failed mask
00008014  00000000 00000000                        6156+          DS    2F                  extracted PSW after test (has CC)
0000801C  FF                                       6157+          DC    X'FF'               extracted CC, if test failed
0000801D  E5C3C840 40404040                        6158+          DC    CL8'VCH'            instruction name
00008028  000080A0                                 6159+          DC    A(RE143)            address of v1 result
0000802C  000080B0                                 6160+          DC    A(RE143+16)         address of v2 source
00008030  000080C0                                 6161+          DC    A(RE143+32)         address of v3 source
00008034  00000010                                 6162+          DC    A(16)               result length
00008038  000080A0                                 6163+REA143    DC    A(RE143)            result address
00008040  00000000 00000000                        6164+          DS    2FD                  gap
00008048  00000000 00000000
00008050  00000000 00000000                        6165+V1O143    DS    XL16                V1 output
00008058  00000000 00000000
00008060  00000000 00000000                        6166+          DS    2FD                  gap
00008068  00000000 00000000
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
                                                   6167+*
00008070                                           6168+X143     DS    0F
00008070  E310 5024 0014                 00000024  6169+         LGF   R1,V2ADDR          load v2 source
00008076  E761 0000 0806                 00000000  6170+         VL    v22,0(R1)          use v21 to test decoder
0000807C  E310 5028 0014                 00000028  6171+         LGF   R1,V3ADDR          load v3 source
00008082  E771 0000 0806                 00000000  6172+         VL    v23,0(R1)          use v22 to test decoder
00008088  E756 7010 3EFB                           6173+         VCH   V21,V22,V23,3,1             test instruction
0000808E  B98D 0020                                6174+         EPSW  R2,R0              extract psw
00008092  5020 500C                      0000000C  6175+         ST    R2,CCPSW              to save CC
00008096  E750 5048 080E                 00008050  6176+         VST   V21,V1O0143        save v1 output
0000809C  07FB                                     6177+         BR    R11                return
000080A0                                           6178+RE143    DC    0F                 V1 for this test
000080A0                                           6179+         DROP  R5
000080A0  00000000 00000000                        6180          DC    XL16'0000000000000000 FFFFFFFFFFFFFFFF'   result
000080A8  FFFFFFFF FFFFFFFF
000080B0  00000000 00000000                        6181          DC    XL16'0000000000000000 7F017F0200000000'   v2
000080B8  7F017F02 00000000
000080C0  00000000 00000000                        6182          DC    XL16'0000000000000000 0000000000000000'   v3
000080C8  00000000 00000000
                                                   6183
                                                   6184          VRR_B VCH,3,3
000080D0                                           6185+         DS    0FD
000080D0                         000080D0          6186+         USING *,R5               base for test data and test routine
000080D0  00008138                                 6187+T144     DC    A(X144)            address of test routine
000080D4  0090                                     6188+         DC    H'144'             test number
000080D6  00                                       6189+         DC    X'00'
000080D7  03                                       6190+         DC    HL1'3'                  m4 used
000080D8  01                                       6191+         DC    HL1'1'                  m5 used
000080D9  03                                       6192+         DC    HL1'3'             CC
000080DA  0E                                       6193+         DC    HL1'14'            CC failed mask
000080DC  00000000 00000000                        6194+         DS    2F                 extracted PSW after test (has CC)
000080E4  FF                                       6195+         DC    X'FF'              extracted CC, if test failed
000080E5  E5C3C840 40404040                        6196+         DC    CL8'VCH'           instruction name
000080F0  00008168                                 6197+         DC    A(RE144)           address of v1 result
000080F4  00008178                                 6198+         DC    A(RE144+16)        address of v2 source
000080F8  00008188                                 6199+         DC    A(RE144+32)        address of v3 source
000080FC  00000010                                 6200+         DC    A(16)              result length
00008100  00008168                                 6201+REA144   DC    A(RE144)           result address
00008108  00000000 00000000                        6202+         DS    2FD                 gap
00008110  00000000 00000000
00008118  00000000 00000000                        6203+V1O144   DS    XL16               V1 output
00008120  00000000 00000000
00008128  00000000 00000000                        6204+         DS    2FD                 gap
00008130  00000000 00000000
                                                   6205+*
00008138                                           6206+X144     DS    0F
00008138  E310 5024 0014                 00000024  6207+         LGF   R1,V2ADDR          load v2 source
0000813E  E761 0000 0806                 00000000  6208+         VL    v22,0(R1)          use v21 to test decoder
00008144  E310 5028 0014                 00000028  6209+         LGF   R1,V3ADDR          load v3 source
0000814A  E771 0000 0806                 00000000  6210+         VL    v23,0(R1)          use v22 to test decoder
00008150  E756 7010 3EFB                           6211+         VCH   V21,V22,V23,3,1             test instruction
00008156  B98D 0020                                6212+         EPSW  R2,R0              extract psw
0000815A  5020 500C                      0000000C  6213+         ST    R2,CCPSW              to save CC
0000815E  E750 5048 080E                 00008118  6214+         VST   V21,V1O0144        save v1 output
00008164  07FB                                     6215+         BR    R11                return
00008168                                           6216+RE144    DC    0F                 V1 for this test
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
00008168                                           6217+         DROP  R5
00008168  00000000 00000000                        6218          DC    XL16'0000000000000000 0000000000000000'   result
00008170  00000000 00000000
00008178  00000000 00000000                        6219          DC    XL16'0000000000000000 0000000000000000'   v2
00008180  00000000 00000000
00008188  00000000 00000000                        6220          DC    XL16'0000000000000000 0000000000000000'   v3
00008190  00000000 00000000
                                                   6221
                                                   6222 *-------------------------------------------------------------------
                                                   6223 * case -  general
                                                   6224 *-------------------------------------------------------------------
                                                   6225 *Byte
                                                   6226          VRR_B VCH,0,0
00008198                                           6227+         DS    0FD
00008198                       00008198            6228+         USING *,R5                base for test data and test routine
00008198  00008200                                 6229+T145     DC    A(X145)             address of test routine
0000819C  0091                                     6230+         DC    H'145'              test number
0000819E  00                                       6231+         DC    X'00'
0000819F  00                                       6232+         DC    HL1'0'                   m4 used
000081A0  01                                       6233+         DC    HL1'1'                   m5 used
000081A1  00                                       6234+         DC    HL1'0'              CC
000081A2  07                                       6235+         DC    HL1'7'              CC failed mask
000081A4  00000000 00000000                        6236+         DS    2F                  extracted PSW after test (has CC)
000081AC  FF                                       6237+         DC    X'FF'               extracted CC, if test failed
000081AD  E5C3C840 40404040                        6238+         DC    CL8'VCH'            instruction name
000081B8  00008230                                 6239+         DC    A(RE145)            address of v1 result
000081BC  00008240                                 6240+         DC    A(RE145+16)         address of v2 source
000081C0  00008250                                 6241+         DC    A(RE145+32)         address of v3 source
000081C4  00000010                                 6242+         DC    A(16)               result length
000081C8  00008230                                 6243+REA145   DC    A(RE145)            result address
000081D0  00000000 00000000                        6244+         DS    2FD                  gap
000081D8  00000000 00000000
000081E0  00000000 00000000                        6245+V1O145   DS    XL16                V1 output
000081E8  00000000 00000000
000081F0  00000000 00000000                        6246+         DS    2FD                  gap
000081F8  00000000 00000000
                                                   6247+*
00008200                                           6248+X145     DS    0F
00008200  E310 5024 0014              00000024     6249+         LGF   R1,V2ADDR           load v2 source
00008206  E761 0000 0806              00000000     6250+         VL    v22,0(R1)           use v21 to test decoder
0000820C  E310 5028 0014              00000028     6251+         LGF   R1,V3ADDR           load v3 source
00008212  E771 0000 0806              00000000     6252+         VL    v23,0(R1)           use v22 to test decoder
00008218  E756 7010 0EFB                           6253+         VCH   V21,V22,V23,0,1                test instruction
0000821E  B98D 0020                                6254+         EPSW  R2,R0               extract psw
00008222  5020 500C                   0000000C     6255+         ST    R2,CCPSW               to save CC
00008226  E750 5048 080E              000081E0     6256+         VST   V21,V1O145          save v1 output
0000822C  07FB                                     6257+         BR    R11                 return
00008230                                           6258+RE145    DC    0F                  V1 for this test
00008230                                           6259+         DROP  R5
00008230  FFFFFFFF FFFFFFFF                        6260          DC    XL16'FFFFFFFFFFFFFFFF FFFFFFFFFFFFFFFF'   result
00008238  FFFFFFFF FFFFFFFF
00008240  01020304 05060708                        6261          DC    XL16'0102030405060708 090A0B0C0D0E0F10'   v2
00008248  090A0B0C 0D0E0F10
00008250  00010203 04050607                        6262          DC    XL16'0001020304050607 08090A0B0C0D0E0F'   v3
00008258  08090A0B 0C0D0E0F
                                                   6263
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

                                                   6264           VRR_B VCH,0,0
00008260                                           6265+          DS    0FD
00008260                     00008260              6266+          USING *,R5                base for test data and test routine
00008260  000082C8                                 6267+T146      DC    A(X146)             address of test routine
00008264  0092                                     6268+          DC    H'146'              test number
00008266  00                                       6269+          DC    X'00'
00008267  00                                       6270+          DC    HL1'0'                   m4 used
00008268  01                                       6271+          DC    HL1'1'                   m5 used
00008269  00                                       6272+          DC    HL1'0'              CC
0000826A  07                                       6273+          DC    HL1'7'              CC failed mask
0000826C  00000000 00000000                        6274+          DS    2F                  extracted PSW after test (has CC)
00008274  FF                                       6275+          DC    X'FF'               extracted CC, if test failed
00008275  E5C3C840 40404040                        6276+          DC    CL8'VCH'            instruction name
00008280  000082F8                                 6277+          DC    A(RE146)            address of v1 result
00008284  00008308                                 6278+          DC    A(RE146+16)         address of v2 source
00008288  00008318                                 6279+          DC    A(RE146+32)         address of v3 source
0000828C  00000010                                 6280+          DC    A(16)               result length
00008290  000082F8                                 6281+REA146    DC    A(RE146)            result address
00008298  00000000 00000000                        6282+          DS    2FD                  gap
000082A0  00000000 00000000
000082A8  00000000 00000000                        6283+V1O146    DS    XL16                V1 output
000082B0  00000000 00000000
000082B8  00000000 00000000                        6284+          DS    2FD                  gap
000082C0  00000000 00000000
                                                   6285+*
000082C8                                           6286+X146      DS    0F
000082C8  E310 5024 0014                 00000024  6287+          LGF   R1,V2ADDR           load v2 source
000082CE  E761 0000 0806                 00000000  6288+          VL    v22,0(R1)           use v21 to test decoder
000082D4  E310 5028 0014                 00000028  6289+          LGF   R1,V3ADDR           load v3 source
000082DA  E771 0000 0806                 00000000  6290+          VL    v23,0(R1)           use v22 to test decoder
000082E0  E756 7010 0EFB                           6291+          VCH   V21,V22,V23,0,1               test instruction
000082E6  B98D 0020                                6292+          EPSW  R2,R0               extract psw
000082EA  5020 500C                      0000000C  6293+          ST    R2,CCPSW               to save CC
000082EE  E750 5048 080E                 000082A8  6294+          VST   V21,V1O146          save v1 output
000082F4  07FB                                     6295+          BR    R11                 return
000082F8                                           6296+RE146     DC    0F                  V1 for this test
000082F8                                           6297+          DROP  R5
000082F8  FFFFFFFF FFFFFFFF                        6298           DC    XL16'FFFFFFFFFFFFFFFF FFFFFFFFFFFFFFFF'   result
00008300  FFFFFFFF FFFFFFFF
00008308  00010203 04050607                        6299           DC    XL16'0001020304050607 08090A0B0C0D0E0F'   v2
00008310  08090A0B 0C0D0E0F
00008318  FFFEFFFD FFFCFFFB                        6300           DC    XL16'FFFEFFFDFFFCFFFB FFFAFFF9FFF8FFF7'   v3
00008320  FFFAFFF9 FFF8FFF7
                                                   6301
                                                   6302           VRR_B VCH,0,1
00008328                                           6303+          DS    0FD
00008328                     00008328              6304+          USING *,R5                base for test data and test routine
00008328  00008390                                 6305+T147      DC    A(X147)             address of test routine
0000832C  0093                                     6306+          DC    H'147'              test number
0000832E  00                                       6307+          DC    X'00'
0000832F  00                                       6308+          DC    HL1'0'                   m4 used
00008330  01                                       6309+          DC    HL1'1'                   m5 used
00008331  01                                       6310+          DC    HL1'1'              CC
00008332  0B                                       6311+          DC    HL1'11'             CC failed mask
00008334  00000000 00000000                        6312+          DS    2F                  extracted PSW after test (has CC)
0000833C  FF                                       6313+          DC    X'FF'               extracted CC, if test failed
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

0000833D  E5C3C840 40404040                        6314+          DC    CL8'VCH'            instruction name
00008348  000083C0                                 6315+          DC    A(RE147)            address of v1 result
0000834C  000083D0                                 6316+          DC    A(RE147+16)         address of v2 source
00008350  000083E0                                 6317+          DC    A(RE147+32)         address of v3 source
00008354  00000010                                 6318+          DC    A(16)               result length
00008358  000083C0                                 6319+REA147    DC    A(RE147)            result address
00008360  00000000 00000000                        6320+          DS    2FD                  gap
00008368  00000000 00000000
00008370  00000000 00000000                        6321+V1O147    DS    XL16                V1 output
00008378  00000000 00000000
00008380  00000000 00000000                        6322+          DS    2FD                  gap
00008388  00000000 00000000
                                                   6323+*
00008390                                           6324+X147      DS    0F
00008390  E310 5024 0014                 00000024  6325+          LGF   R1,V2ADDR           load v2 source
00008396  E761 0000 0806                 00000000  6326+          VL    v22,0(R1)           use v21 to test decoder
0000839C  E310 5028 0014                 00000028  6327+          LGF   R1,V3ADDR           load v3 source
000083A2  E771 0000 0806                 00000000  6328+          VL    v23,0(R1)           use v22 to test decoder
000083A8  E756 7010 0EFB                           6329+          VCH   V21,V22,V23,0,1              test instruction
000083AE  B98D 0020                                6330+          EPSW  R2,R0               extract psw
000083B2  5020 500C                      0000000C  6331+          ST    R2,CCPSW               to save CC
000083B6  E750 5048 080E                 00008370  6332+          VST   V21,V1O147          save v1 output
000083BC  07FB                                     6333+          BR    R11                 return
000083C0                                           6334+RE147     DC    0F                  V1 for this test
000083C0                                           6335+          DROP  R5
000083C0  00FF00FF 00FF00FF                        6336           DC    XL16'00FF00FF00FF00FF 00000000000000FF'   result
000083C8  00000000 000000FF
000083D0  00110033 00550077                        6337           DC    XL16'0011003300550077 08090A0B0C0DFE1F'   v2
000083D8  08090A0B 0C0DFE1F
000083E0  00010203 04050607                        6338           DC    XL16'0001020304050607 08090A0B0C0DFE0F'   v3
000083E8  08090A0B 0C0DFE0F
                                                   6339
                                                   6340           VRR_B VCH,0,1
000083F0                                           6341+          DS    0FD
000083F0                         000083F0          6342+          USING *,R5                base for test data and test routine
000083F0  00008458                                 6343+T148      DC    A(X148)             address of test routine
000083F4  0094                                     6344+          DC    H'148'              test number
000083F6  00                                       6345+          DC    X'00'
000083F7  00                                       6346+          DC    HL1'0'                   m4 used
000083F8  01                                       6347+          DC    HL1'1'                   m5 used
000083F9  01                                       6348+          DC    HL1'1'              CC
000083FA  0B                                       6349+          DC    HL1'11'             CC failed mask
000083FC  00000000 00000000                        6350+          DS    2F                  extracted PSW after test (has CC)
00008404  FF                                       6351+          DC    X'FF'               extracted CC, if test failed
00008405  E5C3C840 40404040                        6352+          DC    CL8'VCH'            instruction name
00008410  00008488                                 6353+          DC    A(RE148)            address of v1 result
00008414  00008498                                 6354+          DC    A(RE148+16)         address of v2 source
00008418  000084A8                                 6355+          DC    A(RE148+32)         address of v3 source
0000841C  00000010                                 6356+          DC    A(16)               result length
00008420  00008488                                 6357+REA148    DC    A(RE148)            result address
00008428  00000000 00000000                        6358+          DS    2FD                  gap
00008430  00000000 00000000
00008438  00000000 00000000                        6359+V1O148    DS    XL16                V1 output
00008440  00000000 00000000
00008448  00000000 00000000                        6360+          DS    2FD                  gap
00008450  00000000 00000000
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
                                                   6361+*
00008458                                           6362+X148     DS    0F
00008458  E310 5024 0014                 00000024  6363+         LGF   R1,V2ADDR          load v2 source
0000845E  E761 0000 0806                 00000000  6364+         VL    v22,0(R1)          use v21 to test decoder
00008464  E310 5028 0014                 00000028  6365+         LGF   R1,V3ADDR          load v3 source
0000846A  E771 0000 0806                 00000000  6366+         VL    v23,0(R1)          use v22 to test decoder
00008470  E756 7010 0EFB                           6367+         VCH   V21,V22,V23,0,1             test instruction
00008476  B98D 0020                                6368+         EPSW  R2,R0              extract psw
0000847A  5020 500C                      0000000C  6369+         ST    R2,CCPSW              to save CC
0000847E  E750 5048 080E                 00008438  6370+         VST   V21,V1O0148        save v1 output
00008484  07FB                                     6371+         BR    R11                return
00008488                                           6372+RE148    DC    0F                 V1 for this test
00008488                                           6373+         DROP  R5
00008488  00000000 000000FF                        6374          DC    XL16'00000000000000FF 00FF00FF00FF00FF'   result
00008490  00FF00FF 00FF00FF
00008498  08090A0B 0C0DFE1F                        6375          DC    XL16'08090A0B0C0DFE1F 0011003300550077'   v2
000084A0  00110033 00550077
000084A8  08090A0B 0C0DFE0F                        6376          DC    XL16'08090A0B0C0DFE0F 0001020304050607'   v3
000084B0  00010203 04050607
                                                   6377
                                                   6378          VRR_B VCH,0,1
000084B8                                           6379+         DS    0FD
000084B8                         000084B8          6380+         USING *,R5               base for test data and test routine
000084B8  00008520                                 6381+T149     DC    A(X149)            address of test routine
000084BC  0095                                     6382+         DC    H'149'             test number
000084BE  00                                       6383+         DC    X'00'
000084BF  00                                       6384+         DC    HL1'0'                  m4 used
000084C0  01                                       6385+         DC    HL1'1'                  m5 used
000084C1  01                                       6386+         DC    HL1'1'             CC
000084C2  0B                                       6387+         DC    HL1'11'            CC failed mask
000084C4  00000000 00000000                        6388+         DS    2F                 extracted PSW after test (has CC)
000084CC  FF                                       6389+         DC    X'FF'              extracted CC, if test failed
000084CD  E5C3C840 40404040                        6390+         DC    CL8'VCH'           instruction name
000084D8  00008550                                 6391+         DC    A(RE149)           address of v1 result
000084DC  00008560                                 6392+         DC    A(RE149+16)        address of v2 source
000084E0  00008570                                 6393+         DC    A(RE149+32)        address of v3 source
000084E4  00000010                                 6394+         DC    A(16)              result length
000084E8  00008550                                 6395+REA149   DC    A(RE149)           result address
000084F0  00000000 00000000                        6396+         DS    2FD                 gap
000084F8  00000000 00000000
00008500  00000000 00000000                        6397+V1O0149  DS    XL16               V1 output
00008508  00000000 00000000
00008510  00000000 00000000                        6398+         DS    2FD                 gap
00008518  00000000 00000000
                                                   6399+*
00008520                                           6400+X149     DS    0F
00008520  E310 5024 0014                 00000024  6401+         LGF   R1,V2ADDR          load v2 source
00008526  E761 0000 0806                 00000000  6402+         VL    v22,0(R1)          use v21 to test decoder
0000852C  E310 5028 0014                 00000028  6403+         LGF   R1,V3ADDR          load v3 source
00008532  E771 0000 0806                 00000000  6404+         VL    v23,0(R1)          use v22 to test decoder
00008538  E756 7010 0EFB                           6405+         VCH   V21,V22,V23,0,1             test instruction
0000853E  B98D 0020                                6406+         EPSW  R2,R0              extract psw
00008542  5020 500C                      0000000C  6407+         ST    R2,CCPSW              to save CC
00008546  E750 5048 080E                 00008500  6408+         VST   V21,V1O0149        save v1 output
0000854C  07FB                                     6409+         BR    R11                return
00008550                                           6410+RE149    DC    0F                 V1 for this test
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

00008550                                           6411+          DROP  R5
00008550  FFFFFFFF FFFFFFFF                        6412           DC    XL16'FFFFFFFFFFFFFFFF 0000000000000000'   result
00008558  00000000 00000000
00008560  00010203 04050607                        6413           DC    XL16'0001020304050607 FFFAFFF9FFF8FFF7'   v2
00008568  FFFAFFF9 FFF8FFF7
00008570  FFFEFFFD FFFCFFFB                        6414           DC    XL16'FFFEFFFDFFFCFFFB 08090A0B0C0D0E0F'   v3
00008578  08090A0B 0C0D0E0F
                                                   6415
                                                   6416           VRR_B VCH,0,3
00008580                                           6417+          DS    0FD
00008580                          00008580         6418+          USING *,R5                base for test data and test routine
00008580  000085E8                                 6419+T150      DC    A(X150)             address of test routine
00008584  0096                                     6420+          DC    H'150'              test number
00008586  00                                       6421+          DC    X'00'
00008587  00                                       6422+          DC    HL1'0'                   m4 used
00008588  01                                       6423+          DC    HL1'1'                   m5 used
00008589  03                                       6424+          DC    HL1'3'              CC
0000858A  0E                                       6425+          DC    HL1'14'             CC failed mask
0000858C  00000000 00000000                        6426+          DS    2F                  extracted PSW after test (has CC)
00008594  FF                                       6427+          DC    X'FF'               extracted CC, if test failed
00008595  E5C3C840 40404040                        6428+          DC    CL8'VCH'            instruction name
000085A0  00008618                                 6429+          DC    A(RE150)            address of v1 result
000085A4  00008628                                 6430+          DC    A(RE150+16)         address of v2 source
000085A8  00008638                                 6431+          DC    A(RE150+32)         address of v3 source
000085AC  00000010                                 6432+          DC    A(16)               result length
000085B0  00008618                                 6433+REA150    DC    A(RE150)            result address
000085B8  00000000 00000000                        6434+          DS    2FD                  gap
000085C0  00000000 00000000
000085C8  00000000 00000000                        6435+V1O150    DS    XL16                V1 output
000085D0  00000000 00000000
000085D8  00000000 00000000                        6436+          DS    2FD                  gap
000085E0  00000000 00000000
                                                   6437+*
000085E8                                           6438+X150      DS    0F
000085E8  E310 5024 0014                 00000024  6439+          LGF   R1,V2ADDR           load v2 source
000085EE  E761 0000 0806                 00000000  6440+          VL    v22,0(R1)           use v21 to test decoder
000085F4  E310 5028 0014                 00000028  6441+          LGF   R1,V3ADDR           load v3 source
000085FA  E771 0000 0806                 00000000  6442+          VL    v23,0(R1)           use v22 to test decoder
00008600  E756 7010 0EFB                           6443+          VCH   V21,V22,V23,0,1                test instruction
00008606  B98D 0020                                6444+          EPSW  R2,R0               extract psw
0000860A  5020 500C                      0000000C  6445+          ST    R2,CCPSW               to save CC
0000860E  E750 5048 080E                 000085C8  6446+          VST   V21,V1O150          save v1 output
00008614  07FB                                     6447+          BR    R11                 return
00008618                                           6448+RE150     DC    0F                  V1 for this test
00008618                                           6449+          DROP  R5
00008618  00000000 00000000                        6450           DC    XL16'0000000000000000 0000000000000000'   result
00008620  00000000 00000000
00008628  00010003 04050607                        6451           DC    XL16'0001000304050607 00090A0B0C0D0E0F'   v2
00008630  00090A0B 0C0D0E0F
00008638  01110233 11550677                        6452           DC    XL16'0111023311550677 1179116B514D312F'   v3
00008640  1179116B 514D312F
                                                   6453
                                                   6454           VRR_B VCHL,0,3
00008648                                           6455+          DS    0FD
00008648                          00008648         6456+          USING *,R5                base for test data and test routine
00008648  000086B0                                 6457+T151      DC    A(X151)             address of test routine
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
0000864C  0097                                    6458+          DC    H'151'              test number
0000864E  00                                      6459+          DC    X'00'
0000864F  00                                      6460+          DC    HL1'0'                   m4 used
00008650  01                                      6461+          DC    HL1'1'                   m5 used
00008651  03                                      6462+          DC    HL1'3'              CC
00008652  0E                                      6463+          DC    HL1'14'             CC failed mask
00008654  00000000 00000000                       6464+          DS    2F                  extracted PSW after test (has CC)
0000865C  FF                                      6465+          DC    X'FF'               extracted CC, if test failed
0000865D  E5C3C8D3 40404040                       6466+          DC    CL8'VCHL'           instruction name
00008668  000086E0                                6467+          DC    A(RE151)            address of v1 result
0000866C  000086F0                                6468+          DC    A(RE151+16)         address of v2 source
00008670  00008700                                6469+          DC    A(RE151+32)         address of v3 source
00008674  00000010                                6470+          DC    A(16)               result length
00008678  000086E0                                6471+REA151    DC    A(RE151)            result address
00008680  00000000 00000000                       6472+          DS    2FD                  gap
00008688  00000000 00000000
00008690  00000000 00000000                       6473+V1O151    DS    XL16                V1 output
00008698  00000000 00000000
000086A0  00000000 00000000                       6474+          DS    2FD                  gap
000086A8  00000000 00000000
                                                  6475+*
000086B0                                          6476+X151      DS    0F
000086B0  E310 5024 0014                 00000024 6477+          LGF   R1,V2ADDR           load v2 source
000086B6  E761 0000 0806                 00000000 6478+          VL    v22,0(R1)           use v21 to test decoder
000086BC  E310 5028 0014                 00000028 6479+          LGF   R1,V3ADDR           load v3 source
000086C2  E771 0000 0806                 00000000 6480+          VL    v23,0(R1)           use v22 to test decoder
000086C8  E756 7010 0EF9                          6481+          VCHL  V21,V22,V23,0,1                test instruction
000086CE  B98D 0020                               6482+          EPSW  R2,R0               extract psw
000086D2  5020 500C                      0000000C 6483+          ST    R2,CCPSW               to save CC
000086D6  E750 5048 080E                 00008690 6484+          VST   V21,V1O151          save v1 output
000086DC  07FB                                    6485+          BR    R11                 return
000086E0                                          6486+RE151     DC    0F                  V1 for this test
000086E0                                          6487+          DROP  R5
000086E0  00000000 00000000                       6488           DC    XL16'0000000000000000 0000000000000000'   result
000086E8  00000000 00000000
000086F0  08090A0B 0C0D0E0F                       6489           DC    XL16'08090A0B0C0D0E0F 0001020304050607'   v2
000086F8  00010203 04050607
00008700  1179116B 514D312F                       6490           DC    XL16'1179116B514D312F 0111023311550677'   v3
00008708  01110233 11550677
                                                  6491
                                                  6492           VRR_B VCH,0,3
00008710                                          6493+          DS    0FD
00008710                 00008710                 6494+          USING *,R5                base for test data and test routine
00008710  00008778                                6495+T152      DC    A(X152)             address of test routine
00008714  0098                                    6496+          DC    H'152'              test number
00008716  00                                      6497+          DC    X'00'
00008717  00                                      6498+          DC    HL1'0'                   m4 used
00008718  01                                      6499+          DC    HL1'1'                   m5 used
00008719  03                                      6500+          DC    HL1'3'              CC
0000871A  0E                                      6501+          DC    HL1'14'             CC failed mask
0000871C  00000000 00000000                       6502+          DS    2F                  extracted PSW after test (has CC)
00008724  FF                                      6503+          DC    X'FF'               extracted CC, if test failed
00008725  E5C3C840 40404040                       6504+          DC    CL8'VCH'            instruction name
00008730  000087A8                                6505+          DC    A(RE152)            address of v1 result
00008734  000087B8                                6506+          DC    A(RE152+16)         address of v2 source
00008738  000087C8                                6507+          DC    A(RE152+32)         address of v3 source
```

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  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
0000873C  00000010                                6508+          DC    A(16)               result length
00008740  000087A8                                6509+REA152    DC    A(RE152)            result address
00008748  00000000 00000000                       6510+          DS    2FD                  gap
00008750  00000000 00000000
00008758  00000000 00000000                       6511+V1O152    DS    XL16                V1 output
00008760  00000000 00000000
00008768  00000000 00000000                       6512+          DS    2FD                  gap
00008770  00000000 00000000
                                                  6513+*
00008778                                          6514+X152      DS    0F
00008778  E310 5024 0014                00000024  6515+          LGF   R1,V2ADDR           load v2 source
0000877E  E761 0000 0806                00000000  6516+          VL    v22,0(R1)           use v21 to test decoder
00008784  E310 5028 0014                00000028  6517+          LGF   R1,V3ADDR           load v3 source
0000878A  E771 0000 0806                00000000  6518+          VL    v23,0(R1)           use v22 to test decoder
00008790  E756 7010 0EFB                          6519+          VCH   V21,V22,V23,0,1              test instruction
00008796  B98D 0020                               6520+          EPSW  R2,R0               extract psw
0000879A  5020 500C                     0000000C  6521+          ST    R2,CCPSW               to save CC
0000879E  E750 5048 080E                00008758  6522+          VST   V21,V1O152          save v1 output
000087A4  07FB                                    6523+          BR    R11                 return
000087A8                                          6524+RE152     DC    0F                  V1 for this test
000087A8                                          6525+          DROP  R5
000087A8  00000000 00000000                       6526           DC    XL16'0000000000000000 0000000000000000'   result
000087B0  00000000 00000000
000087B8  FFFEFFFD FFFCFFFB                       6527           DC    XL16'FFFEFFFDFFFCFFFB FFFAFFF9FFF8FFF7'   v2
000087C0  FFFAFFF9 FFF8FFF7
000087C8  01110233 11550677                       6528           DC    XL16'0111023311550677 08090A0B0C0D0E0F'   v3
000087D0  08090A0B 0C0D0E0F
                                                  6529
                                                  6530 *Halfword
                                                  6531           VRR_B VCH,1,0
000087D8                                          6532+          DS    0FD
000087D8                        000087D8          6533+          USING *,R5                base for test data and test routine
000087D8  00008840                                6534+T153      DC    A(X153)             address of test routine
000087DC  0099                                    6535+          DC    H'153'              test number
000087DE  00                                      6536+          DC    X'00'
000087DF  01                                      6537+          DC    HL1'1'                   m4 used
000087E0  01                                      6538+          DC    HL1'1'                   m5 used
000087E1  00                                      6539+          DC    HL1'0'              CC
000087E2  07                                      6540+          DC    HL1'7'              CC failed mask
000087E4  00000000 00000000                       6541+          DS    2F                  extracted PSW after test (has CC)
000087EC  FF                                      6542+          DC    X'FF'               extracted CC, if test failed
000087ED  E5C3C840 40404040                       6543+          DC    CL8'VCH'            instruction name
000087F8  00008870                                6544+          DC    A(RE153)            address of v1 result
000087FC  00008880                                6545+          DC    A(RE153+16)         address of v2 source
00008800  00008890                                6546+          DC    A(RE153+32)         address of v3 source
00008804  00000010                                6547+          DC    A(16)               result length
00008808  00008870                                6548+REA153    DC    A(RE153)            result address
00008810  00000000 00000000                       6549+          DS    2FD                  gap
00008818  00000000 00000000
00008820  00000000 00000000                       6550+V1O153    DS    XL16                V1 output
00008828  00000000 00000000
00008830  00000000 00000000                       6551+          DS    2FD                  gap
00008838  00000000 00000000
                                                  6552+*
00008840                                          6553+X153      DS    0F
00008840  E310 5024 0014                00000024  6554+          LGF   R1,V2ADDR           load v2 source
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

00008846  E761 0000 0806                 00000000  6555+         VL    v22,0(R1)           use v21 to test decoder
0000884C  E310 5028 0014                 00000028  6556+         LGF   R1,V3ADDR           load v3 source
00008852  E771 0000 0806                 00000000  6557+         VL    v23,0(R1)           use v22 to test decoder
00008858  E756 7010 1EFB                           6558+         VCH   V21,V22,V23,1,1             test instruction
0000885E  B98D 0020                                6559+         EPSW  R2,R0               extract psw
00008862  5020 500C                      0000000C  6560+         ST    R2,CCPSW               to save CC
00008866  E750 5048 080E                 00008820  6561+         VST   V21,V1O153          save v1 output
0000886C  07FB                                     6562+         BR    R11                 return
00008870                                           6563+RE153    DC    0F                  V1 for this test
00008870                                           6564+         DROP  R5
00008870  FFFFFFFF FFFFFFFF                        6565          DC    XL16'FFFFFFFFFFFFFFFF FFFFFFFFFFFFFFFF'   result
00008878  FFFFFFFF FFFFFFFF
00008880  01020304 05060708                        6566          DC    XL16'0102030405060708 090A0B0C0D0E0F10'   v2
00008888  090A0B0C 0D0E0F10
00008890  00010203 04050607                        6567          DC    XL16'0001020304050607 08090A0B0C0D0E0F'   v3
00008898  08090A0B 0C0D0E0F
                                                   6568
                                                   6569          VRR_B VCH,1,0
000088A0                                           6570+         DS    0FD
000088A0                           000088A0        6571+         USING *,R5                base for test data and test routine
000088A0  00008908                                 6572+T154     DC    A(X154)             address of test routine
000088A4  009A                                     6573+         DC    H'154'              test number
000088A6  00                                       6574+         DC    X'00'
000088A7  01                                       6575+         DC    HL1'1'                   m4 used
000088A8  01                                       6576+         DC    HL1'1'                   m5 used
000088A9  00                                       6577+         DC    HL1'0'              CC
000088AA  07                                       6578+         DC    HL1'7'              CC failed mask
000088AC  00000000 00000000                        6579+         DS    2F                  extracted PSW after test (has CC)
000088B4  FF                                       6580+         DC    X'FF'               extracted CC, if test failed
000088B5  E5C3C840 40404040                        6581+         DC    CL8'VCH'            instruction name
000088C0  00008938                                 6582+         DC    A(RE154)            address of v1 result
000088C4  00008948                                 6583+         DC    A(RE154+16)         address of v2 source
000088C8  00008958                                 6584+         DC    A(RE154+32)         address of v3 source
000088CC  00000010                                 6585+         DC    A(16)               result length
000088D0  00008938                                 6586+REA154   DC    A(RE154)            result address
000088D8  00000000 00000000                        6587+         DS    2FD                  gap
000088E0  00000000 00000000
000088E8  00000000 00000000                        6588+V1O154   DS    XL16                V1 output
000088F0  00000000 00000000
000088F8  00000000 00000000                        6589+         DS    2FD                  gap
00008900  00000000 00000000
                                                   6590+*
00008908                                           6591+X154     DS    0F
00008908  E310 5024 0014                 00000024  6592+         LGF   R1,V2ADDR           load v2 source
0000890E  E761 0000 0806                 00000000  6593+         VL    v22,0(R1)           use v21 to test decoder
00008914  E310 5028 0014                 00000028  6594+         LGF   R1,V3ADDR           load v3 source
0000891A  E771 0000 0806                 00000000  6595+         VL    v23,0(R1)           use v22 to test decoder
00008920  E756 7010 1EFB                           6596+         VCH   V21,V22,V23,1,1             test instruction
00008926  B98D 0020                                6597+         EPSW  R2,R0               extract psw
0000892A  5020 500C                      0000000C  6598+         ST    R2,CCPSW               to save CC
0000892E  E750 5048 080E                 000088E8  6599+         VST   V21,V1O154          save v1 output
00008934  07FB                                     6600+         BR    R11                 return
00008938                                           6601+RE154    DC    0F                  V1 for this test
00008938                                           6602+         DROP  R5
00008938  FFFFFFFF FFFFFFFF                        6603          DC    XL16'FFFFFFFFFFFFFFFF FFFFFFFFFFFFFFFF'   result
00008940  FFFFFFFF FFFFFFFF
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
00008948  00010203 04050607                        6604           DC    XL16'0001020304050607 08090A0B0C0D0E0F'   v2
00008950  08090A0B 0C0D0E0F
00008958  FFFEFFFD FFFCFFFB                        6605           DC    XL16'FFFEFFFDFFFCFFFB FFFAFFF9FFF8FFF7'   v3
00008960  FFFAFFF9 FFF8FFF7
                                                   6606
                                                   6607           VRR_B VCH,1,1
00008968                                           6608+          DS    0FD
00008968                     00008968              6609+          USING *,R5                base for test data and test routine
00008968  000089D0                                 6610+T155      DC    A(X155)             address of test routine
0000896C  009B                                     6611+          DC    H'155'              test number
0000896E  00                                       6612+          DC    X'00'
0000896F  01                                       6613+          DC    HL1'1'                   m4 used
00008970  01                                       6614+          DC    HL1'1'                   m5 used
00008971  01                                       6615+          DC    HL1'1'              CC
00008972  0B                                       6616+          DC    HL1'11'             CC failed mask
00008974  00000000 00000000                        6617+          DS    2F                  extracted PSW after test (has CC)
0000897C  FF                                       6618+          DC    X'FF'               extracted CC, if test failed
0000897D  E5C3C840 40404040                        6619+          DC    CL8'VCH'            instruction name
00008988  00008A00                                 6620+          DC    A(RE155)            address of v1 result
0000898C  00008A10                                 6621+          DC    A(RE155+16)         address of v2 source
00008990  00008A20                                 6622+          DC    A(RE155+32)         address of v3 source
00008994  00000010                                 6623+          DC    A(16)               result length
00008998  00008A00                                 6624+REA155    DC    A(RE155)            result address
000089A0  00000000 00000000                        6625+          DS    2FD                  gap
000089A8  00000000 00000000
000089B0  00000000 00000000                        6626+V1O155    DS    XL16                V1 output
000089B8  00000000 00000000
000089C0  00000000 00000000                        6627+          DS    2FD                  gap
000089C8  00000000 00000000
                                                   6628+*
000089D0                                           6629+X155      DS    0F
000089D0  E310 5024 0014                 00000024  6630+          LGF   R1,V2ADDR           load v2 source
000089D6  E761 0000 0806                 00000000  6631+          VL    v22,0(R1)           use v21 to test decoder
000089DC  E310 5028 0014                 00000028  6632+          LGF   R1,V3ADDR           load v3 source
000089E2  E771 0000 0806                 00000000  6633+          VL    v23,0(R1)           use v22 to test decoder
000089E8  E756 7010 1EFB                           6634+          VCH   V21,V22,V23,1,1           test instruction
000089EE  B98D 0020                                6635+          EPSW  R2,R0               extract psw
000089F2  5020 500C                      0000000C  6636+          ST    R2,CCPSW               to save CC
000089F6  E750 5048 080E                 000089B0  6637+          VST   V21,V1O155          save v1 output
000089FC  07FB                                     6638+          BR    R11                 return
00008A00                                           6639+RE155     DC    0F                  V1 for this test
00008A00                                           6640+          DROP  R5
00008A00  FFFF0000 0000FFFF                        6641           DC    XL16'FFFF00000000FFFF 000000000000FFFF'   result
00008A08  00000000 0000FFFF
00008A10  00110033 00550077                        6642           DC    XL16'0011003300550077 08090A0B0C0DFE1F'   v2
00008A18  08090A0B 0C0DFE1F
00008A20  00010203 04050067                        6643           DC    XL16'0001020304050067 08090A0B0C0DFE0F'   v3
00008A28  08090A0B 0C0DFE0F
                                                   6644
                                                   6645           VRR_B VCH,1,1
00008A30                                           6646+          DS    0FD
00008A30                     00008A30              6647+          USING *,R5                base for test data and test routine
00008A30  00008A98                                 6648+T156      DC    A(X156)             address of test routine
00008A34  009C                                     6649+          DC    H'156'              test number
00008A36  00                                       6650+          DC    X'00'
00008A37  01                                       6651+          DC    HL1'1'                   m4 used
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
00008A38  01                                      6652+          DC    HL1'1'                m5 used
00008A39  01                                      6653+          DC    HL1'1'              CC
00008A3A  0B                                      6654+          DC    HL1'11'             CC failed mask
00008A3C  00000000 00000000                       6655+          DS    2F                  extracted PSW after test (has CC)
00008A44  FF                                      6656+          DC    X'FF'               extracted CC, if test failed
00008A45  E5C3C840 40404040                       6657+          DC    CL8'VCH'            instruction name
00008A50  00008AC8                                6658+          DC    A(RE156)            address of v1 result
00008A54  00008AD8                                6659+          DC    A(RE156+16)         address of v2 source
00008A58  00008AE8                                6660+          DC    A(RE156+32)         address of v3 source
00008A5C  00000010                                6661+          DC    A(16)               result length
00008A60  00008AC8                                6662+REA156    DC    A(RE156)            result address
00008A68  00000000 00000000                       6663+          DS    2FD                  gap
00008A70  00000000 00000000
00008A78  00000000 00000000                       6664+V1O156    DS    XL16                V1 output
00008A80  00000000 00000000
00008A88  00000000 00000000                       6665+          DS    2FD                  gap
00008A90  00000000 00000000
                                                  6666+*
00008A98                                          6667+X156      DS    0F
00008A98  E310 5024 0014                 00000024 6668+          LGF   R1,V2ADDR           load v2 source
00008A9E  E761 0000 0806                 00000000 6669+          VL    v22,0(R1)           use v21 to test decoder
00008AA4  E310 5028 0014                 00000028 6670+          LGF   R1,V3ADDR           load v3 source
00008AAA  E771 0000 0806                 00000000 6671+          VL    v23,0(R1)           use v22 to test decoder
00008AB0  E756 7010 1EFB                          6672+          VCH   V21,V22,V23,1,1             test instruction
00008AB6  B98D 0020                               6673+          EPSW  R2,R0               extract psw
00008ABA  5020 500C                      0000000C 6674+          ST    R2,CCPSW               to save CC
00008ABE  E750 5048 080E                 00008A78 6675+          VST   V21,V1O156          save v1 output
00008AC4  07FB                                    6676+          BR    R11                 return
00008AC8                                          6677+RE156     DC    0F                  V1 for this test
00008AC8                                          6678+          DROP  R5
00008AC8  00000000 0000FFFF                       6679           DC    XL16'000000000000FFFF FFFF00000000FFFF'   result
00008AD0  FFFF0000 0000FFFF
00008AD8  08090A0B 0C0DFE1F                       6680           DC    XL16'08090A0B0C0DFE1F 0011003300550077'   v2
00008AE0  00110033 00550077
00008AE8  08090A0B 0C0DFE0F                       6681           DC    XL16'08090A0B0C0DFE0F 0001020304050067'   v3
00008AF0  00010203 04050067
                                                  6682
                                                  6683           VRR_B VCH,1,1
00008AF8                                          6684+          DS    0FD
00008AF8                         00008AF8         6685+          USING *,R5                base for test data and test routine
00008AF8  00008B60                                6686+T157      DC    A(X157)             address of test routine
00008AFC  009D                                    6687+          DC    H'157'              test number
00008AFE  00                                      6688+          DC    X'00'
00008AFF  01                                      6689+          DC    HL1'1'                m4 used
00008B00  01                                      6690+          DC    HL1'1'                m5 used
00008B01  01                                      6691+          DC    HL1'1'              CC
00008B02  0B                                      6692+          DC    HL1'11'             CC failed mask
00008B04  00000000 00000000                       6693+          DS    2F                  extracted PSW after test (has CC)
00008B0C  FF                                      6694+          DC    X'FF'               extracted CC, if test failed
00008B0D  E5C3C840 40404040                       6695+          DC    CL8'VCH'            instruction name
00008B18  00008B90                                6696+          DC    A(RE157)            address of v1 result
00008B1C  00008BA0                                6697+          DC    A(RE157+16)         address of v2 source
00008B20  00008BB0                                6698+          DC    A(RE157+32)         address of v3 source
00008B24  00000010                                6699+          DC    A(16)               result length
00008B28  00008B90                                6700+REA157    DC    A(RE157)            result address
00008B30  00000000 00000000                       6701+          DS    2FD                  gap
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
00008B38  00000000 00000000
00008B40  00000000 00000000                        6702+V1O157   DS    XL16                V1 output
00008B48  00000000 00000000
00008B50  00000000 00000000                        6703+         DS    2FD                  gap
00008B58  00000000 00000000
                                                   6704+*
00008B60                                           6705+X157     DS    0F
00008B60  E310 5024 0014                 00000024  6706+         LGF   R1,V2ADDR           load v2 source
00008B66  E761 0000 0806                 00000000  6707+         VL    v22,0(R1)           use v21 to test decoder
00008B6C  E310 5028 0014                 00000028  6708+         LGF   R1,V3ADDR           load v3 source
00008B72  E771 0000 0806                 00000000  6709+         VL    v23,0(R1)           use v22 to test decoder
00008B78  E756 7010 1EFB                           6710+         VCH   V21,V22,V23,1,1             test instruction
00008B7E  B98D 0020                                6711+         EPSW  R2,R0               extract psw
00008B82  5020 500C                      0000000C  6712+         ST    R2,CCPSW               to save CC
00008B86  E750 5048 080E                 00008B40  6713+         VST   V21,V1O157          save v1 output
00008B8C  07FB                                     6714+         BR    R11                 return
00008B90                                           6715+RE157    DC    0F                  V1 for this test
00008B90                                           6716+         DROP  R5
00008B90  FFFFFFFF FFFFFFFF                        6717          DC    XL16'FFFFFFFFFFFFFFFF 0000000000000000'   result
00008B98  00000000 00000000
00008BA0  00010203 04050607                        6718          DC    XL16'0001020304050607 FFFAFFF9FFF8FFF7'   v2
00008BA8  FFFAFFF9 FFF8FFF7
00008BB0  FFFEFFFD FFFCFFFB                        6719          DC    XL16'FFFEFFFDFFFCFFFB 08090A0B0C0D0E0F'   v3
00008BB8  08090A0B 0C0D0E0F
                                                   6720
                                                   6721          VRR_B VCH,1,3
00008BC0                                           6722+         DS    0FD
00008BC0                         00008BC0          6723+         USING *,R5                base for test data and test routine
00008BC0  00008C28                                 6724+T158     DC    A(X158)             address of test routine
00008BC4  009E                                     6725+         DC    H'158'              test number
00008BC6  00                                       6726+         DC    X'00'
00008BC7  01                                       6727+         DC    HL1'1'                   m4 used
00008BC8  01                                       6728+         DC    HL1'1'                   m5 used
00008BC9  03                                       6729+         DC    HL1'3'              CC
00008BCA  0E                                       6730+         DC    HL1'14'             CC failed mask
00008BCC  00000000 00000000                        6731+         DS    2F                  extracted PSW after test (has CC)
00008BD4  FF                                       6732+         DC    X'FF'               extracted CC, if test failed
00008BD5  E5C3C840 40404040                        6733+         DC    CL8'VCH'            instruction name
00008BE0  00008C58                                 6734+         DC    A(RE158)            address of v1 result
00008BE4  00008C68                                 6735+         DC    A(RE158+16)         address of v2 source
00008BE8  00008C78                                 6736+         DC    A(RE158+32)         address of v3 source
00008BEC  00000010                                 6737+         DC    A(16)               result length
00008BF0  00008C58                                 6738+REA158   DC    A(RE158)            result address
00008BF8  00000000 00000000                        6739+         DS    2FD                  gap
00008C00  00000000 00000000
00008C08  00000000 00000000                        6740+V1O158   DS    XL16                V1 output
00008C10  00000000 00000000
00008C18  00000000 00000000                        6741+         DS    2FD                  gap
00008C20  00000000 00000000
                                                   6742+*
00008C28                                           6743+X158     DS    0F
00008C28  E310 5024 0014                 00000024  6744+         LGF   R1,V2ADDR           load v2 source
00008C2E  E761 0000 0806                 00000000  6745+         VL    v22,0(R1)           use v21 to test decoder
00008C34  E310 5028 0014                 00000028  6746+         LGF   R1,V3ADDR           load v3 source
00008C3A  E771 0000 0806                 00000000  6747+         VL    v23,0(R1)           use v22 to test decoder
00008C40  E756 7010 1EFB                           6748+         VCH   V21,V22,V23,1,1             test instruction
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
00008C46  B98D 0020                             6749+          EPSW  R2,R0               extract psw
00008C4A  5020 500C                 0000000C    6750+          ST    R2,CCPSW                 to save CC
00008C4E  E750 5048 080E            00008C08    6751+          VST   V21,V1O0158          save v1 output
00008C54  07FB                                  6752+          BR    R11                  return
00008C58                                        6753+RE158     DC    0F                   V1 for this test
00008C58                                        6754+          DROP  R5
00008C58  00000000 00000000                     6755           DC    XL16'0000000000000000 0000000000000000'   result
00008C60  00000000 00000000
00008C68  00010003 04050607                     6756           DC    XL16'0001000304050607 00090A0B0C0D0E0F'   v2
00008C70  00090A0B 0C0D0E0F
00008C78  01110233 11550677                     6757           DC    XL16'0111023311550677 1179116B514D312F'   v3
00008C80  1179116B 514D312F
                                                6758
                                                6759           VRR_B VCHL,1,3
00008C88                                        6760+          DS    0FD
00008C88                    00008C88            6761+          USING *,R5                 base for test data and test routine
00008C88  00008CF0                              6762+T159      DC    A(X159)              address of test routine
00008C8C  009F                                  6763+          DC    H'159'               test number
00008C8E  00                                    6764+          DC    X'00'
00008C8F  01                                    6765+          DC    HL1'1'                    m4 used
00008C90  01                                    6766+          DC    HL1'1'                    m5 used
00008C91  03                                    6767+          DC    HL1'3'               CC
00008C92  0E                                    6768+          DC    HL1'14'              CC failed mask
00008C94  00000000 00000000                     6769+          DS    2F                   extracted PSW after test (has CC)
00008C9C  FF                                    6770+          DC    X'FF'                extracted CC, if test failed
00008C9D  E5C3C8D3 40404040                     6771+          DC    CL8'VCHL'            instruction name
00008CA8  00008D20                              6772+          DC    A(RE159)             address of v1 result
00008CAC  00008D30                              6773+          DC    A(RE159+16)          address of v2 source
00008CB0  00008D40                              6774+          DC    A(RE159+32)          address of v3 source
00008CB4  00000010                              6775+          DC    A(16)                result length
00008CB8  00008D20                              6776+REA159    DC    A(RE159)             result address
00008CC0  00000000 00000000                     6777+          DS    2FD                   gap
00008CC8  00000000 00000000
00008CD0  00000000 00000000                     6778+V1O159    DS    XL16                 V1 output
00008CD8  00000000 00000000
00008CE0  00000000 00000000                     6779+          DS    2FD                   gap
00008CE8  00000000 00000000
                                                6780+*
00008CF0                                        6781+X159      DS    0F
00008CF0  E310 5024 0014            00000024    6782+          LGF   R1,V2ADDR            load v2 source
00008CF6  E761 0000 0806            00000000    6783+          VL    v22,0(R1)            use v21 to test decoder
00008CFC  E310 5028 0014            00000028    6784+          LGF   R1,V3ADDR            load v3 source
00008D02  E771 0000 0806            00000000    6785+          VL    v23,0(R1)            use v22 to test decoder
00008D08  E756 7010 1EF9                        6786+          VCHL  V21,V22,V23,1,1                test instruction
00008D0E  B98D 0020                             6787+          EPSW  R2,R0                extract psw
00008D12  5020 500C                 0000000C    6788+          ST    R2,CCPSW                 to save CC
00008D16  E750 5048 080E            00008CD0    6789+          VST   V21,V1O0159          save v1 output
00008D1C  07FB                                  6790+          BR    R11                  return
00008D20                                        6791+RE159     DC    0F                   V1 for this test
00008D20                                        6792+          DROP  R5
00008D20  00000000 00000000                     6793           DC    XL16'0000000000000000 0000000000000000'   result
00008D28  00000000 00000000
00008D30  08090A0B 0C0D0E0F                     6794           DC    XL16'08090A0B0C0D0E0F 0001020304050607'   v2
00008D38  00010203 04050607
00008D40  1179116B 514D312F                     6795           DC    XL16'1179116B514D312F 0111023311550677'   v3
00008D48  01110233 11550677
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  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
                                                    6796
                                                    6797          VRR_B VCH,1,3
00008D50                                            6798+         DS    0FD
00008D50                      00008D50              6799+         USING *,R5              base for test data and test routine
00008D50  00008DB8                                  6800+T160     DC    A(X160)           address of test routine
00008D54  00A0                                      6801+         DC    H'160'            test number
00008D56  00                                        6802+         DC    X'00'
00008D57  01                                        6803+         DC    HL1'1'                 m4 used
00008D58  01                                        6804+         DC    HL1'1'                 m5 used
00008D59  03                                        6805+         DC    HL1'3'            CC
00008D5A  0E                                        6806+         DC    HL1'14'           CC failed mask
00008D5C  00000000 00000000                         6807+         DS    2F                extracted PSW after test (has CC)
00008D64  FF                                        6808+         DC    X'FF'             extracted CC, if test failed
00008D65  E5C3C840 40404040                         6809+         DC    CL8'VCH'          instruction name
00008D70  00008DE8                                  6810+         DC    A(RE160)          address of v1 result
00008D74  00008DF8                                  6811+         DC    A(RE160+16)       address of v2 source
00008D78  00008E08                                  6812+         DC    A(RE160+32)       address of v3 source
00008D7C  00000010                                  6813+         DC    A(16)             result length
00008D80  00008DE8                                  6814+REA160   DC    A(RE160)          result address
00008D88  00000000 00000000                         6815+         DS    2FD                gap
00008D90  00000000 00000000
00008D98  00000000 00000000                         6816+V1O160   DS    XL16              V1 output
00008DA0  00000000 00000000
00008DA8  00000000 00000000                         6817+         DS    2FD                gap
00008DB0  00000000 00000000
                                                    6818+*
00008DB8                                            6819+X160     DS    0F
00008DB8  E310 5024 0014                  00000024  6820+         LGF   R1,V2ADDR         load v2 source
00008DBE  E761 0000 0806                  00000000  6821+         VL    v22,0(R1)         use v21 to test decoder
00008DC4  E310 5028 0014                  00000028  6822+         LGF   R1,V3ADDR         load v3 source
00008DCA  E771 0000 0806                  00000000  6823+         VL    v23,0(R1)         use v22 to test decoder
00008DD0  E756 7010 1EFB                            6824+         VCH   V21,V22,V23,1,1           test instruction
00008DD6  B98D 0020                                 6825+         EPSW  R2,R0             extract psw
00008DDA  5020 500C                       0000000C  6826+         ST    R2,CCPSW             to save CC
00008DDE  E750 5048 080E                  00008D98  6827+         VST   V21,V1O160        save v1 output
00008DE4  07FB                                      6828+         BR    R11               return
00008DE8                                            6829+RE160    DC    0F                V1 for this test
00008DE8                                            6830+         DROP  R5
00008DE8  00000000 00000000                         6831          DC    XL16'0000000000000000 0000000000000000'   result
00008DF0  00000000 00000000
00008DF8  FFFEFFFD FFFCFFFB                         6832          DC    XL16'FFFEFFFDFFFCFFFB FFFAFFF9FFF8FFF7'   v2
00008E00  FFFAFFF9 FFF8FFF7
00008E08  01110233 11550677                         6833          DC    XL16'0111023311550677 08090A0B0C0D0E0F'   v3
00008E10  08090A0B 0C0D0E0F
                                                    6834
                                                    6835 *Word
                                                    6836          VRR_B VCH,2,0
00008E18                                            6837+         DS    0FD
00008E18                      00008E18              6838+         USING *,R5              base for test data and test routine
00008E18  00008E80                                  6839+T161     DC    A(X161)           address of test routine
00008E1C  00A1                                      6840+         DC    H'161'            test number
00008E1E  00                                        6841+         DC    X'00'
00008E1F  02                                        6842+         DC    HL1'2'                 m4 used
00008E20  01                                        6843+         DC    HL1'1'                 m5 used
00008E21  00                                        6844+         DC    HL1'0'            CC
00008E22  07                                        6845+         DC    HL1'7'            CC failed mask
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
00008E24  00000000 00000000                        6846+          DS    2F                extracted PSW after test (has CC)
00008E2C  FF                                       6847+          DC    X'FF'             extracted CC, if test failed
00008E2D  E5C3C840 40404040                        6848+          DC    CL8'VCH'          instruction name
00008E38  00008EB0                                 6849+          DC    A(RE161)          address of v1 result
00008E3C  00008EC0                                 6850+          DC    A(RE161+16)       address of v2 source
00008E40  00008ED0                                 6851+          DC    A(RE161+32)       address of v3 source
00008E44  00000010                                 6852+          DC    A(16)             result length
00008E48  00008EB0                                 6853+REA161    DC    A(RE161)          result address
00008E50  00000000 00000000                        6854+          DS    2FD                gap
00008E58  00000000 00000000
00008E60  00000000 00000000                        6855+V1O161    DS    XL16              V1 output
00008E68  00000000 00000000
00008E70  00000000 00000000                        6856+          DS    2FD                gap
00008E78  00000000 00000000
                                                   6857+*
00008E80                                           6858+X161      DS    0F
00008E80  E310 5024 0014                 00000024  6859+          LGF   R1,V2ADDR         load v2 source
00008E86  E761 0000 0806                 00000000  6860+          VL    v22,0(R1)         use v21 to test decoder
00008E8C  E310 5028 0014                 00000028  6861+          LGF   R1,V3ADDR         load v3 source
00008E92  E771 0000 0806                 00000000  6862+          VL    v23,0(R1)         use v22 to test decoder
00008E98  E756 7010 2EFB                           6863+          VCH   V21,V22,V23,2,1           test instruction
00008E9E  B98D 0020                                6864+          EPSW  R2,R0             extract psw
00008EA2  5020 500C                      0000000C  6865+          ST    R2,CCPSW             to save CC
00008EA6  E750 5048 080E                 00008E60  6866+          VST   V21,V1O161        save v1 output
00008EAC  07FB                                     6867+          BR    R11               return
00008EB0                                           6868+RE161     DC    0F                V1 for this test
00008EB0                                           6869+          DROP  R5
00008EB0  FFFFFFFF FFFFFFFF                        6870           DC    XL16'FFFFFFFFFFFFFFFF FFFFFFFFFFFFFFFF'   result
00008EB8  FFFFFFFF FFFFFFFF
00008EC0  01020304 05060708                        6871           DC    XL16'0102030405060708 090A0B0C0D0E0F10'   v2
00008EC8  090A0B0C 0D0E0F10
00008ED0  00010203 04050607                        6872           DC    XL16'0001020304050607 08090A0B0C0D0E0F'   v3
00008ED8  08090A0B 0C0D0E0F
                                                   6873
                                                   6874           VRR_B VCH,2,0
00008EE0                                           6875+          DS    0FD
00008EE0                       00008EE0            6876+          USING *,R5              base for test data and test routine
00008EE0  00008F48                                 6877+T162      DC    A(X162)           address of test routine
00008EE4  00A2                                     6878+          DC    H'162'            test number
00008EE6  00                                       6879+          DC    X'00'
00008EE7  02                                       6880+          DC    HL1'2'                 m4 used
00008EE8  01                                       6881+          DC    HL1'1'                 m5 used
00008EE9  00                                       6882+          DC    HL1'0'            CC
00008EEA  07                                       6883+          DC    HL1'7'            CC failed mask
00008EEC  00000000 00000000                        6884+          DS    2F                extracted PSW after test (has CC)
00008EF4  FF                                       6885+          DC    X'FF'             extracted CC, if test failed
00008EF5  E5C3C840 40404040                        6886+          DC    CL8'VCH'          instruction name
00008F00  00008F78                                 6887+          DC    A(RE162)          address of v1 result
00008F04  00008F88                                 6888+          DC    A(RE162+16)       address of v2 source
00008F08  00008F98                                 6889+          DC    A(RE162+32)       address of v3 source
00008F0C  00000010                                 6890+          DC    A(16)             result length
00008F10  00008F78                                 6891+REA162    DC    A(RE162)          result address
00008F18  00000000 00000000                        6892+          DS    2FD                gap
00008F20  00000000 00000000
00008F28  00000000 00000000                        6893+V1O162    DS    XL16              V1 output
00008F30  00000000 00000000
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
00008F38  00000000 00000000                        6894+         DS    2FD                  gap
00008F40  00000000 00000000
                                                   6895+*
00008F48                                           6896+X162     DS    0F
00008F48  E310 5024 0014                 00000024  6897+         LGF   R1,V2ADDR          load v2 source
00008F4E  E761 0000 0806                 00000000  6898+         VL    v22,0(R1)          use v21 to test decoder
00008F54  E310 5028 0014                 00000028  6899+         LGF   R1,V3ADDR          load v3 source
00008F5A  E771 0000 0806                 00000000  6900+         VL    v23,0(R1)          use v22 to test decoder
00008F60  E756 7010 2EFB                           6901+         VCH   V21,V22,V23,2,1              test instruction
00008F66  B98D 0020                                6902+         EPSW  R2,R0              extract psw
00008F6A  5020 500C                      0000000C  6903+         ST    R2,CCPSW              to save CC
00008F6E  E750 5048 080E                 00008F28  6904+         VST   V21,V1O162         save v1 output
00008F74  07FB                                     6905+         BR    R11                return
00008F78                                           6906+RE162    DC    0F                 V1 for this test
00008F78                                           6907+         DROP  R5
00008F78  FFFFFFFF FFFFFFFF                        6908          DC    XL16'FFFFFFFFFFFFFFFF FFFFFFFFFFFFFFFF'   result
00008F80  FFFFFFFF FFFFFFFF
00008F88  00010203 04050607                        6909          DC    XL16'0001020304050607 08090A0B0C0D0E0F'   v2
00008F90  08090A0B 0C0D0E0F
00008F98  FFFEFFFD FFFCFFFB                        6910          DC    XL16'FFFEFFFDFFFCFFFB FFFAFFF9FFF8FFF7'   v3
00008FA0  FFFAFFF9 FFF8FFF7
                                                   6911
                                                   6912          VRR_B VCH,2,1
00008FA8                                           6913+         DS    0FD
00008FA8                         00008FA8          6914+         USING *,R5               base for test data and test routine
00008FA8  00009010                                 6915+T163     DC    A(X163)            address of test routine
00008FAC  00A3                                     6916+         DC    H'163'             test number
00008FAE  00                                       6917+         DC    X'00'
00008FAF  02                                       6918+         DC    HL1'2'                  m4 used
00008FB0  01                                       6919+         DC    HL1'1'                  m5 used
00008FB1  01                                       6920+         DC    HL1'1'             CC
00008FB2  0B                                       6921+         DC    HL1'11'            CC failed mask
00008FB4  00000000 00000000                        6922+         DS    2F                 extracted PSW after test (has CC)
00008FBC  FF                                       6923+         DC    X'FF'              extracted CC, if test failed
00008FBD  E5C3C840 40404040                        6924+         DC    CL8'VCH'           instruction name
00008FC8  00009040                                 6925+         DC    A(RE163)           address of v1 result
00008FCC  00009050                                 6926+         DC    A(RE163+16)        address of v2 source
00008FD0  00009060                                 6927+         DC    A(RE163+32)        address of v3 source
00008FD4  00000010                                 6928+         DC    A(16)              result length
00008FD8  00009040                                 6929+REA163   DC    A(RE163)           result address
00008FE0  00000000 00000000                        6930+         DS    2FD                 gap
00008FE8  00000000 00000000
00008FF0  00000000 00000000                        6931+V1O163   DS    XL16               V1 output
00008FF8  00000000 00000000
00009000  00000000 00000000                        6932+         DS    2FD                 gap
00009008  00000000 00000000
                                                   6933+*
00009010                                           6934+X163     DS    0F
00009010  E310 5024 0014                 00000024  6935+         LGF   R1,V2ADDR          load v2 source
00009016  E761 0000 0806                 00000000  6936+         VL    v22,0(R1)          use v21 to test decoder
0000901C  E310 5028 0014                 00000028  6937+         LGF   R1,V3ADDR          load v3 source
00009022  E771 0000 0806                 00000000  6938+         VL    v23,0(R1)          use v22 to test decoder
00009028  E756 7010 2EFB                           6939+         VCH   V21,V22,V23,2,1              test instruction
0000902E  B98D 0020                                6940+         EPSW  R2,R0              extract psw
00009032  5020 500C                      0000000C  6941+         ST    R2,CCPSW              to save CC
00009036  E750 5048 080E                 00008FF0  6942+         VST   V21,V1O163         save v1 output
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

0000903C  07FB                                    6943+          BR    R11                 return
00009040                                          6944+RE163     DC    0F                  V1 for this test
00009040                                          6945+          DROP  R5
00009040  FFFFFFFF 00000000                       6946           DC    XL16'FFFFFFFF00000000 00000000FFFFFFFF'   result
00009048  00000000 FFFFFFFF
00009050  00110033 00550077                       6947           DC    XL16'0011003300550077 08090A0B0C0DFE1F'   v2
00009058  08090A0B 0C0DFE1F
00009060  00010203 04050067                       6948           DC    XL16'0001020304050067 08090A0B0C0DFE0F'   v3
00009068  08090A0B 0C0DFE0F
                                                  6949
                                                  6950           VRR_B VCH,2,1
00009070                                          6951+          DS    0FD
00009070                    00009070              6952+          USING *,R5                base for test data and test routine
00009070  000090D8                                6953+T164      DC    A(X164)             address of test routine
00009074  00A4                                    6954+          DC    H'164'              test number
00009076  00                                      6955+          DC    X'00'
00009077  02                                      6956+          DC    HL1'2'                   m4 used
00009078  01                                      6957+          DC    HL1'1'                   m5 used
00009079  01                                      6958+          DC    HL1'1'              CC
0000907A  0B                                      6959+          DC    HL1'11'             CC failed mask
0000907C  00000000 00000000                       6960+          DS    2F                  extracted PSW after test (has CC)
00009084  FF                                      6961+          DC    X'FF'               extracted CC, if test failed
00009085  E5C3C840 40404040                       6962+          DC    CL8'VCH'            instruction name
00009090  00009108                                6963+          DC    A(RE164)            address of v1 result
00009094  00009118                                6964+          DC    A(RE164+16)         address of v2 source
00009098  00009128                                6965+          DC    A(RE164+32)         address of v3 source
0000909C  00000010                                6966+          DC    A(16)               result length
000090A0  00009108                                6967+REA164    DC    A(RE164)            result address
000090A8  00000000 00000000                       6968+          DS    2FD                  gap
000090B0  00000000 00000000
000090B8  00000000 00000000                       6969+V1O164    DS    XL16                V1 output
000090C0  00000000 00000000
000090C8  00000000 00000000                       6970+          DS    2FD                  gap
000090D0  00000000 00000000
                                                  6971+*
000090D8                                          6972+X164      DS    0F
000090D8  E310 5024 0014                  00000024 6973+          LGF   R1,V2ADDR           load v2 source
000090DE  E761 0000 0806                  00000000 6974+          VL    v22,0(R1)           use v21 to test decoder
000090E4  E310 5028 0014                  00000028 6975+          LGF   R1,V3ADDR           load v3 source
000090EA  E771 0000 0806                  00000000 6976+          VL    v23,0(R1)           use v22 to test decoder
000090F0  E756 7010 2EFB                           6977+          VCH   V21,V22,V23,2,1            test instruction
000090F6  B98D 0020                                6978+          EPSW  R2,R0               extract psw
000090FA  5020 500C                       0000000C 6979+          ST    R2,CCPSW               to save CC
000090FE  E750 5048 080E                  000090B8 6980+          VST   V21,V1O164          save v1 output
00009104  07FB                                    6981+          BR    R11                 return
00009108                                          6982+RE164     DC    0F                  V1 for this test
00009108                                          6983+          DROP  R5
00009108  00000000 FFFFFFFF                       6984           DC    XL16'00000000FFFFFFFF FFFFFFFF00000000'   result
00009110  FFFFFFFF 00000000
00009118  08090A0B 0C0DFE1F                       6985           DC    XL16'08090A0B0C0DFE1F 0011003300550077'   v2
00009120  00110033 00550077
00009128  08090A0B 0C0DFE0F                       6986           DC    XL16'08090A0B0C0DFE0F 0001020304050067'   v3
00009130  00010203 04050067
                                                  6987
                                                  6988           VRR_B VCH,2,1
00009138                                          6989+          DS    0FD
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

00009138                     00009138              6990+          USING *,R5              base for test data and test routine
00009138  000091A0                                 6991+T165      DC    A(X165)           address of test routine
0000913C  00A5                                     6992+          DC    H'165'            test number
0000913E  00                                       6993+          DC    X'00'
0000913F  02                                       6994+          DC    HL1'2'                 m4 used
00009140  01                                       6995+          DC    HL1'1'                 m5 used
00009141  01                                       6996+          DC    HL1'1'            CC
00009142  0B                                       6997+          DC    HL1'11'           CC failed mask
00009144  00000000 00000000                        6998+          DS    2F                extracted PSW after test (has CC)
0000914C  FF                                       6999+          DC    X'FF'             extracted CC, if test failed
0000914D  E5C3C840 40404040                        7000+          DC    CL8'VCH'          instruction name
00009158  000091D0                                 7001+          DC    A(RE165)          address of v1 result
0000915C  000091E0                                 7002+          DC    A(RE165+16)       address of v2 source
00009160  000091F0                                 7003+          DC    A(RE165+32)       address of v3 source
00009164  00000010                                 7004+          DC    A(16)             result length
00009168  000091D0                                 7005+REA165    DC    A(RE165)          result address
00009170  00000000 00000000                        7006+          DS    2FD                gap
00009178  00000000 00000000
00009180  00000000 00000000                        7007+V1O165    DS    XL16              V1 output
00009188  00000000 00000000
00009190  00000000 00000000                        7008+          DS    2FD                gap
00009198  00000000 00000000
                                                   7009+*
000091A0                                           7010+X165      DS    0F
000091A0  E310 5024 0014                 00000024  7011+           LGF   R1,V2ADDR         load v2 source
000091A6  E761 0000 0806                 00000000  7012+           VL    v22,0(R1)         use v21 to test decoder
000091AC  E310 5028 0014                 00000028  7013+           LGF   R1,V3ADDR         load v3 source
000091B2  E771 0000 0806                 00000000  7014+           VL    v23,0(R1)         use v22 to test decoder
000091B8  E756 7010 2EFB                           7015+          VCH   V21,V22,V23,2,1           test instruction
000091BE  B98D 0020                                7016+          EPSW  R2,R0             extract psw
000091C2  5020 500C                      0000000C  7017+          ST    R2,CCPSW             to save CC
000091C6  E750 5048 080E                 00009180  7018+          VST   V21,V1O165        save v1 output
000091CC  07FB                                     7019+          BR    R11               return
000091D0                                           7020+RE165     DC    0F                V1 for this test
000091D0                                           7021+          DROP  R5
000091D0  FFFFFFFF FFFFFFFF                        7022           DC    XL16'FFFFFFFFFFFFFFFF 0000000000000000'   result
000091D8  00000000 00000000
000091E0  00010203 04050607                        7023           DC    XL16'0001020304050607 FFFAFFF9FFF8FFF7'   v2
000091E8  FFFAFFF9 FFF8FFF7
000091F0  FFFEFFFD FFFCFFFB                        7024           DC    XL16'FFFEFFFDFFFCFFFB 08090A0B0C0D0E0F'   v3
000091F8  08090A0B 0C0D0E0F
                                                   7025
                                                   7026           VRR_B VCH,2,3
00009200                                           7027+          DS    0FD
00009200                         00009200          7028+          USING *,R5              base for test data and test routine
00009200  00009268                                 7029+T166      DC    A(X166)           address of test routine
00009204  00A6                                     7030+          DC    H'166'            test number
00009206  00                                       7031+          DC    X'00'
00009207  02                                       7032+          DC    HL1'2'                 m4 used
00009208  01                                       7033+          DC    HL1'1'                 m5 used
00009209  03                                       7034+          DC    HL1'3'            CC
0000920A  0E                                       7035+          DC    HL1'14'           CC failed mask
0000920C  00000000 00000000                        7036+          DS    2F                extracted PSW after test (has CC)
00009214  FF                                       7037+          DC    X'FF'             extracted CC, if test failed
00009215  E5C3C840 40404040                        7038+          DC    CL8'VCH'          instruction name
00009220  00009298                                 7039+          DC    A(RE166)          address of v1 result
```

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  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

00009224  000092A8                          7040+          DC    A(RE166+16)         address of v2 source
00009228  000092B8                          7041+          DC    A(RE166+32)         address of v3 source
0000922C  00000010                          7042+          DC    A(16)               result length
00009230  00009298                          7043+REA166    DC    A(RE166)            result address
00009238  00000000 00000000                 7044+          DS    2FD                  gap
00009240  00000000 00000000
00009248  00000000 00000000                 7045+V1O166    DS    XL16                V1 output
00009250  00000000 00000000
00009258  00000000 00000000                 7046+          DS    2FD                  gap
00009260  00000000 00000000
                                            7047+*
00009268                                    7048+X166      DS    0F
00009268  E310 5024 0014          00000024  7049+          LGF   R1,V2ADDR           load v2 source
0000926E  E761 0000 0806          00000000  7050+          VL    v22,0(R1)           use v21 to test decoder
00009274  E310 5028 0014          00000028  7051+          LGF   R1,V3ADDR           load v3 source
0000927A  E771 0000 0806          00000000  7052+          VL    v23,0(R1)           use v22 to test decoder
00009280  E756 7010 2EFB                    7053+          VCH   V21,V22,V23,2,1              test instruction
00009286  B98D 0020                         7054+          EPSW  R2,R0               extract psw
0000928A  5020 500C               0000000C  7055+          ST    R2,CCPSW               to save CC
0000928E  E750 5048 080E          00009248  7056+          VST   V21,V1O166          save v1 output
00009294  07FB                              7057+          BR    R11                 return
00009298                                    7058+RE166     DC    0F                  V1 for this test
00009298                                    7059+          DROP  R5
00009298  00000000 00000000                 7060           DC    XL16'0000000000000000 0000000000000000'   result
000092A0  00000000 00000000
000092A8  00010003 04050607                 7061           DC    XL16'0001000304050607 00090A0B0C0D0E0F'   v2
000092B0  00090A0B 0C0D0E0F
000092B8  01110233 11550677                 7062           DC    XL16'0111023311550677 1179116B514D312F'   v3
000092C0  1179116B 514D312F
                                            7063
                                            7064           VRR_B VCHL,2,3
000092C8                                    7065+          DS    0FD
000092C8                    000092C8        7066+          USING *,R5                base for test data and test routine
000092C8  00009330                          7067+T167      DC    A(X167)             address of test routine
000092CC  00A7                              7068+          DC    H'167'              test number
000092CE  00                                7069+          DC    X'00'
000092CF  02                                7070+          DC    HL1'2'                   m4 used
000092D0  01                                7071+          DC    HL1'1'                   m5 used
000092D1  03                                7072+          DC    HL1'3'              CC
000092D2  0E                                7073+          DC    HL1'14'             CC failed mask
000092D4  00000000 00000000                 7074+          DS    2F                  extracted PSW after test (has CC)
000092DC  FF                                7075+          DC    X'FF'               extracted CC, if test failed
000092DD  E5C3C8D3 40404040                 7076+          DC    CL8'VCHL'           instruction name
000092E8  00009360                          7077+          DC    A(RE167)            address of v1 result
000092EC  00009370                          7078+          DC    A(RE167+16)         address of v2 source
000092F0  00009380                          7079+          DC    A(RE167+32)         address of v3 source
000092F4  00000010                          7080+          DC    A(16)               result length
000092F8  00009360                          7081+REA167    DC    A(RE167)            result address
00009300  00000000 00000000                 7082+          DS    2FD                  gap
00009308  00000000 00000000
00009310  00000000 00000000                 7083+V1O167    DS    XL16                V1 output
00009318  00000000 00000000
00009320  00000000 00000000                 7084+          DS    2FD                  gap
00009328  00000000 00000000
                                            7085+*
00009330                                    7086+X167      DS    0F
```

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  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

00009330  E310 5024 0014                 00000024  7087+          LGF    R1,V2ADDR           load v2 source
00009336  E761 0000 0806                 00000000  7088+          VL     v22,0(R1)           use v21 to test decoder
0000933C  E310 5028 0014                 00000028  7089+          LGF    R1,V3ADDR           load v3 source
00009342  E771 0000 0806                 00000000  7090+          VL     v23,0(R1)           use v22 to test decoder
00009348  E756 7010 2EF9                           7091+          VCHL   V21,V22,V23,2,1               test instruction
0000934E  B98D 0020                                7092+          EPSW   R2,R0               extract psw
00009352  5020 500C                       0000000C 7093+          ST     R2,CCPSW               to save CC
00009356  E750 5048 080E                 00009310  7094+          VST    V21,V1O167          save v1 output
0000935C  07FB                                     7095+          BR     R11                 return
00009360                                           7096+RE167     DC     0F                  V1 for this test
00009360                                           7097+          DROP   R5
00009360  00000000 00000000                        7098           DC     XL16'0000000000000000 0000000000000000'   result
00009368  00000000 00000000
00009370  08090A0B 0C0D0E0F                        7099           DC     XL16'08090A0B0C0D0E0F 0001020304050607'   v2
00009378  00010203 04050607
00009380  1179116B 514D312F                        7100           DC     XL16'1179116B514D312F 0111023311550677'   v3
00009388  01110233 11550677
                                                   7101
                                                   7102           VRR_B  VCH,2,3
00009390                                           7103+          DS     0FD
00009390                  00009390                 7104+          USING  *,R5                base for test data and test routine
00009390  000093F8                                 7105+T168      DC     A(X168)             address of test routine
00009394  00A8                                     7106+          DC     H'168'              test number
00009396  00                                       7107+          DC     X'00'
00009397  02                                       7108+          DC     HL1'2'                  m4 used
00009398  01                                       7109+          DC     HL1'1'                  m5 used
00009399  03                                       7110+          DC     HL1'3'              CC
0000939A  0E                                       7111+          DC     HL1'14'             CC failed mask
0000939C  00000000 00000000                        7112+          DS     2F                  extracted PSW after test (has CC)
000093A4  FF                                       7113+          DC     X'FF'               extracted CC, if test failed
000093A5  E5C3C840 40404040                        7114+          DC     CL8'VCH'            instruction name
000093B0  00009428                                 7115+          DC     A(RE168)            address of v1 result
000093B4  00009438                                 7116+          DC     A(RE168+16)         address of v2 source
000093B8  00009448                                 7117+          DC     A(RE168+32)         address of v3 source
000093BC  00000010                                 7118+          DC     A(16)               result length
000093C0  00009428                                 7119+REA168    DC     A(RE168)            result address
000093C8  00000000 00000000                        7120+          DS     2FD                  gap
000093D0  00000000 00000000
000093D8  00000000 00000000                        7121+V1O168    DS     XL16                V1 output
000093E0  00000000 00000000
000093E8  00000000 00000000                        7122+          DS     2FD                  gap
000093F0  00000000 00000000
                                                   7123+*
000093F8                                           7124+X168      DS     0F
000093F8  E310 5024 0014                 00000024  7125+          LGF    R1,V2ADDR           load v2 source
000093FE  E761 0000 0806                 00000000  7126+          VL     v22,0(R1)           use v21 to test decoder
00009404  E310 5028 0014                 00000028  7127+          LGF    R1,V3ADDR           load v3 source
0000940A  E771 0000 0806                 00000000  7128+          VL     v23,0(R1)           use v22 to test decoder
00009410  E756 7010 2EFB                           7129+          VCH    V21,V22,V23,2,1              test instruction
00009416  B98D 0020                                7130+          EPSW   R2,R0               extract psw
0000941A  5020 500C                       0000000C 7131+          ST     R2,CCPSW               to save CC
0000941E  E750 5048 080E                 000093D8  7132+          VST    V21,V1O168          save v1 output
00009424  07FB                                     7133+          BR     R11                 return
00009428                                           7134+RE168     DC     0F                  V1 for this test
00009428                                           7135+          DROP   R5
00009428  00000000 00000000                        7136           DC     XL16'0000000000000000 0000000000000000'   result
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
00009430  00000000 00000000
00009438  FFFEFFFD FFFCFFFB                       7137           DC    XL16'FFFEFFFDFFFCFFFB FFFAFFF9FFF8FFF7'   v2
00009440  FFFAFFF9 FFF8FFF7
00009448  01110233 11550677                       7138           DC    XL16'0111023311550677 08090A0B0C0D0E0F'   v3
00009450  08090A0B 0C0D0E0F
                                                  7139
                                                  7140 *Doubleword
                                                  7141           VRR_B VCH,3,0
00009458                                          7142+          DS    0FD
00009458                    00009458              7143+          USING *,R5                base for test data and test routine
00009458  000094C0                                7144+T169      DC    A(X169)             address of test routine
0000945C  00A9                                    7145+          DC    H'169'              test number
0000945E  00                                      7146+          DC    X'00'
0000945F  03                                      7147+          DC    HL1'3'                   m4 used
00009460  01                                      7148+          DC    HL1'1'                   m5 used
00009461  00                                      7149+          DC    HL1'0'              CC
00009462  07                                      7150+          DC    HL1'7'              CC failed mask
00009464  00000000 00000000                       7151+          DS    2F                  extracted PSW after test (has CC)
0000946C  FF                                      7152+          DC    X'FF'               extracted CC, if test failed
0000946D  E5C3C840 40404040                       7153+          DC    CL8'VCH'            instruction name
00009478  000094F0                                7154+          DC    A(RE169)            address of v1 result
0000947C  00009500                                7155+          DC    A(RE169+16)         address of v2 source
00009480  00009510                                7156+          DC    A(RE169+32)         address of v3 source
00009484  00000010                                7157+          DC    A(16)               result length
00009488  000094F0                                7158+REA169    DC    A(RE169)            result address
00009490  00000000 00000000                       7159+          DS    2FD                  gap
00009498  00000000 00000000
000094A0  00000000 00000000                       7160+V1O169    DS    XL16                V1 output
000094A8  00000000 00000000
000094B0  00000000 00000000                       7161+          DS    2FD                  gap
000094B8  00000000 00000000
                                                  7162+*
000094C0                                          7163+X169      DS    0F
000094C0  E310 5024 0014                00000024  7164+          LGF   R1,V2ADDR           load v2 source
000094C6  E761 0000 0806                00000000  7165+          VL    v22,0(R1)           use v21 to test decoder
000094CC  E310 5028 0014                00000028  7166+          LGF   R1,V3ADDR           load v3 source
000094D2  E771 0000 0806                00000000  7167+          VL    v23,0(R1)           use v22 to test decoder
000094D8  E756 7010 3EFB                          7168+          VCH   V21,V22,V23,3,1             test instruction
000094DE  B98D 0020                               7169+          EPSW  R2,R0               extract psw
000094E2  5020 500C                     0000000C  7170+          ST    R2,CCPSW               to save CC
000094E6  E750 5048 080E                000094A0  7171+          VST   V21,V1O169          save v1 output
000094EC  07FB                                    7172+          BR    R11                 return
000094F0                                          7173+RE169     DC    0F                  V1 for this test
000094F0                                          7174+          DROP  R5
000094F0  FFFFFFFF FFFFFFFF                       7175           DC    XL16'FFFFFFFFFFFFFFFF FFFFFFFFFFFFFFFF'   result
000094F8  FFFFFFFF FFFFFFFF
00009500  01020304 05060708                       7176           DC    XL16'0102030405060708 090A0B0C0D0E0F10'   v2
00009508  090A0B0C 0D0E0F10
00009510  00010203 04050607                       7177           DC    XL16'0001020304050607 08090A0B0C0D0E0F'   v3
00009518  08090A0B 0C0D0E0F
                                                  7178
                                                  7179           VRR_B VCH,3,0
00009520                                          7180+          DS    0FD
00009520                    00009520              7181+          USING *,R5                base for test data and test routine
00009520  00009588                                7182+T170      DC    A(X170)             address of test routine
00009524  00AA                                    7183+          DC    H'170'              test number
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
00009526  00                                       7184+          DC    X'00'
00009527  03                                       7185+          DC    HL1'3'                    m4 used
00009528  01                                       7186+          DC    HL1'1'                    m5 used
00009529  00                                       7187+          DC    HL1'0'              CC
0000952A  07                                       7188+          DC    HL1'7'              CC failed mask
0000952C  00000000 00000000                        7189+          DS    2F                  extracted PSW after test (has CC)
00009534  FF                                       7190+          DC    X'FF'               extracted CC, if test failed
00009535  E5C3C840 40404040                        7191+          DC    CL8'VCH'            instruction name
00009540  000095B8                                 7192+          DC    A(RE170)            address of v1 result
00009544  000095C8                                 7193+          DC    A(RE170+16)         address of v2 source
00009548  000095D8                                 7194+          DC    A(RE170+32)         address of v3 source
0000954C  00000010                                 7195+          DC    A(16)               result length
00009550  000095B8                                 7196+REA170    DC    A(RE170)            result address
00009558  00000000 00000000                        7197+          DS    2FD                  gap
00009560  00000000 00000000
00009568  00000000 00000000                        7198+V1O170    DS    XL16                V1 output
00009570  00000000 00000000
00009578  00000000 00000000                        7199+          DS    2FD                  gap
00009580  00000000 00000000
                                                   7200+*
00009588                                           7201+X170      DS    0F
00009588  E310 5024 0014                 00000024  7202+          LGF   R1,V2ADDR           load v2 source
0000958E  E761 0000 0806                 00000000  7203+          VL    v22,0(R1)           use v21 to test decoder
00009594  E310 5028 0014                 00000028  7204+          LGF   R1,V3ADDR           load v3 source
0000959A  E771 0000 0806                 00000000  7205+          VL    v23,0(R1)           use v22 to test decoder
000095A0  E756 7010 3EFB                           7206+          VCH   V21,V22,V23,3,1               test instruction
000095A6  B98D 0020                                7207+          EPSW  R2,R0               extract psw
000095AA  5020 500C                      0000000C  7208+          ST    R2,CCPSW                 to save CC
000095AE  E750 5048 080E                 00009568  7209+          VST   V21,V1O170          save v1 output
000095B4  07FB                                     7210+          BR    R11                 return
000095B8                                           7211+RE170     DC    0F                  V1 for this test
000095B8                                           7212+          DROP  R5
000095B8  FFFFFFFF FFFFFFFF                        7213           DC    XL16'FFFFFFFFFFFFFFFF FFFFFFFFFFFFFFFF'   result
000095C0  FFFFFFFF FFFFFFFF
000095C8  00010203 04050607                        7214           DC    XL16'0001020304050607 08090A0B0C0D0E0F'   v2
000095D0  08090A0B 0C0D0E0F
000095D8  FFFEFFFD FFFCFFFB                        7215           DC    XL16'FFFEFFFDFFFCFFFB FFFAFFF9FFF8FFF7'   v3
000095E0  FFFAFFF9 FFF8FFF7
                                                   7216
                                                   7217           VRR_B VCH,3,1
000095E8                                           7218+          DS    0FD
000095E8                         000095E8          7219+          USING *,R5                base for test data and test routine
000095E8  00009650                                 7220+T171      DC    A(X171)             address of test routine
000095EC  00AB                                     7221+          DC    H'171'              test number
000095EE  00                                       7222+          DC    X'00'
000095EF  03                                       7223+          DC    HL1'3'                    m4 used
000095F0  01                                       7224+          DC    HL1'1'                    m5 used
000095F1  01                                       7225+          DC    HL1'1'              CC
000095F2  0B                                       7226+          DC    HL1'11'             CC failed mask
000095F4  00000000 00000000                        7227+          DS    2F                  extracted PSW after test (has CC)
000095FC  FF                                       7228+          DC    X'FF'               extracted CC, if test failed
000095FD  E5C3C840 40404040                        7229+          DC    CL8'VCH'            instruction name
00009608  00009680                                 7230+          DC    A(RE171)            address of v1 result
0000960C  00009690                                 7231+          DC    A(RE171+16)         address of v2 source
00009610  000096A0                                 7232+          DC    A(RE171+32)         address of v3 source
00009614  00000010                                 7233+          DC    A(16)               result length
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
00009618  00009680                          7234+REA171   DC    A(RE171)            result address
00009620  00000000 00000000                 7235+         DS    2FD                  gap
00009628  00000000 00000000
00009630  00000000 00000000                 7236+V1O171   DS    XL16                V1 output
00009638  00000000 00000000
00009640  00000000 00000000                 7237+         DS    2FD                  gap
00009648  00000000 00000000
                                            7238+*
00009650                                    7239+X171     DS    0F
00009650  E310 5024 0014          00000024  7240+         LGF   R1,V2ADDR           load v2 source
00009656  E761 0000 0806          00000000  7241+         VL    v22,0(R1)           use v21 to test decoder
0000965C  E310 5028 0014          00000028  7242+         LGF   R1,V3ADDR           load v3 source
00009662  E771 0000 0806          00000000  7243+         VL    v23,0(R1)           use v22 to test decoder
00009668  E756 7010 3EFB                    7244+         VCH   V21,V22,V23,3,1              test instruction
0000966E  B98D 0020                         7245+         EPSW  R2,R0               extract psw
00009672  5020 500C               0000000C  7246+         ST    R2,CCPSW               to save CC
00009676  E750 5048 080E          00009630  7247+         VST   V21,V1O171          save v1 output
0000967C  07FB                              7248+         BR    R11                 return
00009680                                    7249+RE171    DC    0F                  V1 for this test
00009680                                    7250+         DROP  R5
00009680  FFFFFFFF FFFFFFFF                 7251          DC    XL16'FFFFFFFFFFFFFFFF 0000000000000000'   result
00009688  00000000 00000000
00009690  00110033 00550077                 7252          DC    XL16'0011003300550077 08090A0B0C0DFE0F'   v2
00009698  08090A0B 0C0DFE0F
000096A0  00010203 04050067                 7253          DC    XL16'0001020304050067 08090A0B0C0DFE1F'   v3
000096A8  08090A0B 0C0DFE1F
                                            7254
                                            7255          VRR_B VCH,3,1
000096B0                                    7256+         DS    0FD
000096B0                    000096B0        7257+         USING *,R5                base for test data and test routine
000096B0  00009718                          7258+T172     DC    A(X172)             address of test routine
000096B4  00AC                              7259+         DC    H'172'              test number
000096B6  00                                7260+         DC    X'00'
000096B7  03                                7261+         DC    HL1'3'                   m4 used
000096B8  01                                7262+         DC    HL1'1'                   m5 used
000096B9  01                                7263+         DC    HL1'1'              CC
000096BA  0B                                7264+         DC    HL1'11'             CC failed mask
000096BC  00000000 00000000                 7265+         DS    2F                  extracted PSW after test (has CC)
000096C4  FF                                7266+         DC    X'FF'               extracted CC, if test failed
000096C5  E5C3C840 40404040                 7267+         DC    CL8'VCH'            instruction name
000096D0  00009748                          7268+         DC    A(RE172)            address of v1 result
000096D4  00009758                          7269+         DC    A(RE172+16)         address of v2 source
000096D8  00009768                          7270+         DC    A(RE172+32)         address of v3 source
000096DC  00000010                          7271+         DC    A(16)               result length
000096E0  00009748                          7272+REA172   DC    A(RE172)            result address
000096E8  00000000 00000000                 7273+         DS    2FD                  gap
000096F0  00000000 00000000
000096F8  00000000 00000000                 7274+V1O172   DS    XL16                V1 output
00009700  00000000 00000000
00009708  00000000 00000000                 7275+         DS    2FD                  gap
00009710  00000000 00000000
                                            7276+*
00009718                                    7277+X172     DS    0F
00009718  E310 5024 0014          00000024  7278+         LGF   R1,V2ADDR           load v2 source
0000971E  E761 0000 0806          00000000  7279+         VL    v22,0(R1)           use v21 to test decoder
00009724  E310 5028 0014          00000028  7280+         LGF   R1,V3ADDR           load v3 source
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

0000972A  E771 0000 0806                 00000000  7281+         VL    v23,0(R1)           use v22 to test decoder
00009730  E756 7010 3EFB                           7282+         VCH   V21,V22,V23,3,1             test instruction
00009736  B98D 0020                                7283+         EPSW  R2,R0               extract psw
0000973A  5020 500C                      0000000C  7284+         ST    R2,CCPSW               to save CC
0000973E  E750 5048 080E                 000096F8  7285+         VST   V21,V1O172          save v1 output
00009744  07FB                                     7286+         BR    R11                 return
00009748                                           7287+RE172    DC    0F                  V1 for this test
00009748                                           7288+         DROP  R5
00009748  00000000 00000000                        7289          DC    XL16'0000000000000000 FFFFFFFFFFFFFFFF'   result
00009750  FFFFFFFF FFFFFFFF
00009758  08090A0B 0C0DFE0F                        7290          DC    XL16'08090A0B0C0DFE0F 0011003300550077'   v2
00009760  00110033 00550077
00009768  08090A0B 0C0DFE1F                        7291          DC    XL16'08090A0B0C0DFE1F 0001020304050067'   v3
00009770  00010203 04050067
                                                   7292
                                                   7293          VRR_B VCH,3,1
00009778                                           7294+         DS    0FD
00009778                         00009778          7295+         USING *,R5                base for test data and test routine
00009778  000097E0                                 7296+T173     DC    A(X173)             address of test routine
0000977C  00AD                                     7297+         DC    H'173'              test number
0000977E  00                                       7298+         DC    X'00'
0000977F  03                                       7299+         DC    HL1'3'                   m4 used
00009780  01                                       7300+         DC    HL1'1'                   m5 used
00009781  01                                       7301+         DC    HL1'1'              CC
00009782  0B                                       7302+         DC    HL1'11'             CC failed mask
00009784  00000000 00000000                        7303+         DS    2F                  extracted PSW after test (has CC)
0000978C  FF                                       7304+         DC    X'FF'               extracted CC, if test failed
0000978D  E5C3C840 40404040                        7305+         DC    CL8'VCH'            instruction name
00009798  00009810                                 7306+         DC    A(RE173)            address of v1 result
0000979C  00009820                                 7307+         DC    A(RE173+16)         address of v2 source
000097A0  00009830                                 7308+         DC    A(RE173+32)         address of v3 source
000097A4  00000010                                 7309+         DC    A(16)               result length
000097A8  00009810                                 7310+REA173   DC    A(RE173)            result address
000097B0  00000000 00000000                        7311+         DS    2FD                  gap
000097B8  00000000 00000000
000097C0  00000000 00000000                        7312+V1O173   DS    XL16                V1 output
000097C8  00000000 00000000
000097D0  00000000 00000000                        7313+         DS    2FD                  gap
000097D8  00000000 00000000
                                                   7314+*
000097E0                                           7315+X173     DS    0F
000097E0  E310 5024 0014                 00000024  7316+         LGF   R1,V2ADDR           load v2 source
000097E6  E761 0000 0806                 00000000  7317+         VL    v22,0(R1)           use v21 to test decoder
000097EC  E310 5028 0014                 00000028  7318+         LGF   R1,V3ADDR           load v3 source
000097F2  E771 0000 0806                 00000000  7319+         VL    v23,0(R1)           use v22 to test decoder
000097F8  E756 7010 3EFB                           7320+         VCH   V21,V22,V23,3,1             test instruction
000097FE  B98D 0020                                7321+         EPSW  R2,R0               extract psw
00009802  5020 500C                      0000000C  7322+         ST    R2,CCPSW               to save CC
00009806  E750 5048 080E                 000097C0  7323+         VST   V21,V1O173          save v1 output
0000980C  07FB                                     7324+         BR    R11                 return
00009810                                           7325+RE173    DC    0F                  V1 for this test
00009810                                           7326+         DROP  R5
00009810  FFFFFFFF FFFFFFFF                        7327          DC    XL16'FFFFFFFFFFFFFFFF 0000000000000000'   result
00009818  00000000 00000000
00009820  00010203 04050607                        7328          DC    XL16'0001020304050607 FFFAFFF9FFF8FFF7'   v2
00009828  FFFAFFF9 FFF8FFF7
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

00009830  FFFEFFFD FFFCFFFB                        7329           DC    XL16'FFFEFFFDFFFCFFFB 08090A0B0C0D0E0F'   v3
00009838  08090A0B 0C0D0E0F
                                                   7330
                                                   7331           VRR_B VCH,3,3
00009840                                           7332+          DS    0FD
00009840                      00009840             7333+          USING *,R5              base for test data and test routine
00009840  000098A8                                 7334+T174      DC    A(X174)           address of test routine
00009844  00AE                                     7335+          DC    H'174'            test number
00009846  00                                       7336+          DC    X'00'
00009847  03                                       7337+          DC    HL1'3'                 m4 used
00009848  01                                       7338+          DC    HL1'1'                 m5 used
00009849  03                                       7339+          DC    HL1'3'            CC
0000984A  0E                                       7340+          DC    HL1'14'           CC failed mask
0000984C  00000000 00000000                        7341+          DS    2F                extracted PSW after test (has CC)
00009854  FF                                       7342+          DC    X'FF'             extracted CC, if test failed
00009855  E5C3C840 40404040                       7343+          DC    CL8'VCH'          instruction name
00009860  000098D8                                 7344+          DC    A(RE174)          address of v1 result
00009864  000098E8                                 7345+          DC    A(RE174+16)       address of v2 source
00009868  000098F8                                 7346+          DC    A(RE174+32)       address of v3 source
0000986C  00000010                                 7347+          DC    A(16)             result length
00009870  000098D8                                 7348+REA174    DC    A(RE174)          result address
00009878  00000000 00000000                        7349+          DS    2FD                gap
00009880  00000000 00000000
00009888  00000000 00000000                        7350+V1O174    DS    XL16              V1 output
00009890  00000000 00000000
00009898  00000000 00000000                        7351+          DS    2FD                gap
000098A0  00000000 00000000
                                                   7352+*
000098A8                                           7353+X174      DS    0F
000098A8  E310 5024 0014                 00000024  7354+          LGF   R1,V2ADDR         load v2 source
000098AE  E761 0000 0806                 00000000  7355+          VL    v22,0(R1)         use v21 to test decoder
000098B4  E310 5028 0014                 00000028  7356+          LGF   R1,V3ADDR         load v3 source
000098BA  E771 0000 0806                 00000000  7357+          VL    v23,0(R1)         use v22 to test decoder
000098C0  E756 7010 3EFB                           7358+          VCH   V21,V22,V23,3,1           test instruction
000098C6  B98D 0020                                7359+          EPSW  R2,R0             extract psw
000098CA  5020 500C                      0000000C  7360+          ST    R2,CCPSW             to save CC
000098CE  E750 5048 080E                 00009888  7361+          VST   V21,V1O174        save v1 output
000098D4  07FB                                     7362+          BR    R11               return
000098D8                                           7363+RE174     DC    0F                V1 for this test
000098D8                                           7364+          DROP  R5
000098D8  00000000 00000000                        7365           DC    XL16'0000000000000000 0000000000000000'   result
000098E0  00000000 00000000
000098E8  00010003 04050607                        7366           DC    XL16'0001000304050607 00090A0B0C0D0E0F'   v2
000098F0  00090A0B 0C0D0E0F
000098F8  01110233 11550677                        7367           DC    XL16'0111023311550677 1179116B514D312F'   v3
00009900  1179116B 514D312F
                                                   7368
                                                   7369           VRR_B VCHL,3,3
00009908                                           7370+          DS    0FD
00009908                      00009908             7371+          USING *,R5              base for test data and test routine
00009908  00009970                                 7372+T175      DC    A(X175)           address of test routine
0000990C  00AF                                     7373+          DC    H'175'            test number
0000990E  00                                       7374+          DC    X'00'
0000990F  03                                       7375+          DC    HL1'3'                 m4 used
00009910  01                                       7376+          DC    HL1'1'                 m5 used
00009911  03                                       7377+          DC    HL1'3'            CC
```

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  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
00009912  0E                                       7378+          DC    HL1'14'             CC failed mask
00009914  00000000 00000000                        7379+          DS    2F                  extracted PSW after test (has CC)
0000991C  FF                                       7380+          DC    X'FF'               extracted CC, if test failed
0000991D  E5C3C8D3 40404040                        7381+          DC    CL8'VCHL'           instruction name
00009928  000099A0                                 7382+          DC    A(RE175)            address of v1 result
0000992C  000099B0                                 7383+          DC    A(RE175+16)         address of v2 source
00009930  000099C0                                 7384+          DC    A(RE175+32)         address of v3 source
00009934  00000010                                 7385+          DC    A(16)               result length
00009938  000099A0                                 7386+REA175    DC    A(RE175)            result address
00009940  00000000 00000000                        7387+          DS    2FD                  gap
00009948  00000000 00000000
00009950  00000000 00000000                        7388+V1O175    DS    XL16                V1 output
00009958  00000000 00000000
00009960  00000000 00000000                        7389+          DS    2FD                  gap
00009968  00000000 00000000
                                                   7390+*
00009970                                           7391+X175      DS    0F
00009970  E310 5024 0014                 00000024  7392+          LGF   R1,V2ADDR           load v2 source
00009976  E761 0000 0806                 00000000  7393+          VL    v22,0(R1)           use v21 to test decoder
0000997C  E310 5028 0014                 00000028  7394+          LGF   R1,V3ADDR           load v3 source
00009982  E771 0000 0806                 00000000  7395+          VL    v23,0(R1)           use v22 to test decoder
00009988  E756 7010 3EF9                           7396+          VCHL  V21,V22,V23,3,1              test instruction
0000998E  B98D 0020                                7397+          EPSW  R2,R0               extract psw
00009992  5020 500C                      0000000C  7398+          ST    R2,CCPSW               to save CC
00009996  E750 5048 080E                 00009950  7399+          VST   V21,V1O175          save v1 output
0000999C  07FB                                     7400+          BR    R11                 return
000099A0                                           7401+RE175     DC    0F                  V1 for this test
000099A0                                           7402+          DROP  R5
000099A0  00000000 00000000                        7403           DC    XL16'00000000000000000 0000000000000000'   result
000099A8  00000000 00000000
000099B0  08090A0B 0C0D0E0F                        7404           DC    XL16'08090A0B0C0D0E0F 0001020304050607'   v2
000099B8  00010203 04050607
000099C0  1179116B 514D312F                        7405           DC    XL16'1179116B514D312F 0111023311550677'   v3
000099C8  01110233 11550677
                                                   7406
                                                   7407           VRR_B VCH,3,3
000099D0                                           7408+          DS    0FD
000099D0                         000099D0          7409+          USING *,R5                base for test data and test routine
000099D0  00009A38                                 7410+T176      DC    A(X176)             address of test routine
000099D4  00B0                                     7411+          DC    H'176'              test number
000099D6  00                                       7412+          DC    X'00'
000099D7  03                                       7413+          DC    HL1'3'                   m4 used
000099D8  01                                       7414+          DC    HL1'1'                   m5 used
000099D9  03                                       7415+          DC    HL1'3'              CC
000099DA  0E                                       7416+          DC    HL1'14'             CC failed mask
000099DC  00000000 00000000                        7417+          DS    2F                  extracted PSW after test (has CC)
000099E4  FF                                       7418+          DC    X'FF'               extracted CC, if test failed
000099E5  E5C3C840 40404040                        7419+          DC    CL8'VCH'            instruction name
000099F0  00009A68                                 7420+          DC    A(RE176)            address of v1 result
000099F4  00009A78                                 7421+          DC    A(RE176+16)         address of v2 source
000099F8  00009A88                                 7422+          DC    A(RE176+32)         address of v3 source
000099FC  00000010                                 7423+          DC    A(16)               result length
00009A00  00009A68                                 7424+REA176    DC    A(RE176)            result address
00009A08  00000000 00000000                        7425+          DS    2FD                  gap
00009A10  00000000 00000000
00009A18  00000000 00000000                        7426+V1O176    DS    XL16                V1 output
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT

00009A20  00000000 00000000
00009A28  00000000 00000000                        7427+          DS    2FD                  gap
00009A30  00000000 00000000
                                                   7428+*
00009A38                                           7429+X176      DS    0F
00009A38  E310 5024 0014                 00000024  7430+          LGF   R1,V2ADDR           load v2 source
00009A3E  E761 0000 0806                 00000000  7431+          VL    v22,0(R1)            use v21 to test decoder
00009A44  E310 5028 0014                 00000028  7432+          LGF   R1,V3ADDR           load v3 source
00009A4A  E771 0000 0806                 00000000  7433+          VL    v23,0(R1)            use v22 to test decoder
00009A50  E756 7010 3EFB                           7434+          VCH   V21,V22,V23,3,1              test instruction
00009A56  B98D 0020                                7435+          EPSW  R2,R0                extract psw
00009A5A  5020 500C                      0000000C  7436+          ST    R2,CCPSW                to save CC
00009A5E  E750 5048 080E                 00009A18  7437+          VST   V21,V1O176           save v1 output
00009A64  07FB                                     7438+          BR    R11                  return
00009A68                                           7439+RE176     DC    0F                   V1 for this test
00009A68                                           7440+          DROP  R5
00009A68  00000000 00000000                        7441           DC    XL16'0000000000000000 0000000000000000'   result
00009A70  00000000 00000000
00009A78  FFFEFFFD FFFCFFFB                        7442           DC    XL16'FFFEFFFDFFFCFFFB FFFAFFF9FFF8FFF7'   v2
00009A80  FFFAFFF9 FFF8FFF7
00009A88  01110233 11550677                        7443           DC    XL16'0111023311550677 08090A0B0C0D0E0F'   v3
00009A90  08090A0B 0C0D0E0F
                                                   7444
                                                   7445
00009A98  00000000                                 7446           DC    F'0'     END OF TABLE
00009A9C  00000000                                 7447           DC    F'0'
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
                                                   7449 *
                                                   7450 * table of pointers to individual tests
                                                   7451 *
00009AA0                                           7452 E7TESTS  DS    0F
                                                   7453          PTTABLE
00009AA0                                           7454+TTABLE   DS    0F
00009AA0  00001118                                 7455+         DC    A(T1)                    test address
00009AA4  000011E0                                 7456+         DC    A(T2)                    test address
00009AA8  000012A8                                 7457+         DC    A(T3)                    test address
00009AAC  00001370                                 7458+         DC    A(T4)                    test address
00009AB0  00001438                                 7459+         DC    A(T5)                    test address
00009AB4  00001500                                 7460+         DC    A(T6)                    test address
00009AB8  000015C8                                 7461+         DC    A(T7)                    test address
00009ABC  00001690                                 7462+         DC    A(T8)                    test address
00009AC0  00001758                                 7463+         DC    A(T9)                    test address
00009AC4  00001820                                 7464+         DC    A(T10)                   test address
00009AC8  000018E8                                 7465+         DC    A(T11)                   test address
00009ACC  000019B0                                 7466+         DC    A(T12)                   test address
00009AD0  00001A78                                 7467+         DC    A(T13)                   test address
00009AD4  00001B40                                 7468+         DC    A(T14)                   test address
00009AD8  00001C08                                 7469+         DC    A(T15)                   test address
00009ADC  00001CD0                                 7470+         DC    A(T16)                   test address
00009AE0  00001D98                                 7471+         DC    A(T17)                   test address
00009AE4  00001E60                                 7472+         DC    A(T18)                   test address
00009AE8  00001F28                                 7473+         DC    A(T19)                   test address
00009AEC  00001FF0                                 7474+         DC    A(T20)                   test address
00009AF0  000020B8                                 7475+         DC    A(T21)                   test address
00009AF4  00002180                                 7476+         DC    A(T22)                   test address
00009AF8  00002248                                 7477+         DC    A(T23)                   test address
00009AFC  00002310                                 7478+         DC    A(T24)                   test address
00009B00  000023D8                                 7479+         DC    A(T25)                   test address
00009B04  000024A0                                 7480+         DC    A(T26)                   test address
00009B08  00002568                                 7481+         DC    A(T27)                   test address
00009B0C  00002630                                 7482+         DC    A(T28)                   test address
00009B10  000026F8                                 7483+         DC    A(T29)                   test address
00009B14  000027C0                                 7484+         DC    A(T30)                   test address
00009B18  00002888                                 7485+         DC    A(T31)                   test address
00009B1C  00002950                                 7486+         DC    A(T32)                   test address
00009B20  00002A18                                 7487+         DC    A(T33)                   test address
00009B24  00002AE0                                 7488+         DC    A(T34)                   test address
00009B28  00002BA8                                 7489+         DC    A(T35)                   test address
00009B2C  00002C70                                 7490+         DC    A(T36)                   test address
00009B30  00002D38                                 7491+         DC    A(T37)                   test address
00009B34  00002E00                                 7492+         DC    A(T38)                   test address
00009B38  00002EC8                                 7493+         DC    A(T39)                   test address
00009B3C  00002F90                                 7494+         DC    A(T40)                   test address
00009B40  00003058                                 7495+         DC    A(T41)                   test address
00009B44  00003120                                 7496+         DC    A(T42)                   test address
00009B48  000031E8                                 7497+         DC    A(T43)                   test address
00009B4C  000032B0                                 7498+         DC    A(T44)                   test address
00009B50  00003378                                 7499+         DC    A(T45)                   test address
00009B54  00003440                                 7500+         DC    A(T46)                   test address
00009B58  00003508                                 7501+         DC    A(T47)                   test address
00009B5C  000035D0                                 7502+         DC    A(T48)                   test address
00009B60  00003698                                 7503+         DC    A(T49)                   test address
00009B64  00003760                                 7504+         DC    A(T50)                   test address
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
00009B68  00003828                          7505+         DC    A(T51)                  test address
00009B6C  000038F0                          7506+         DC    A(T52)                  test address
00009B70  000039B8                          7507+         DC    A(T53)                  test address
00009B74  00003A80                          7508+         DC    A(T54)                  test address
00009B78  00003B48                          7509+         DC    A(T55)                  test address
00009B7C  00003C10                          7510+         DC    A(T56)                  test address
00009B80  00003CD8                          7511+         DC    A(T57)                  test address
00009B84  00003DA0                          7512+         DC    A(T58)                  test address
00009B88  00003E68                          7513+         DC    A(T59)                  test address
00009B8C  00003F30                          7514+         DC    A(T60)                  test address
00009B90  00003FF8                          7515+         DC    A(T61)                  test address
00009B94  000040C0                          7516+         DC    A(T62)                  test address
00009B98  00004188                          7517+         DC    A(T63)                  test address
00009B9C  00004250                          7518+         DC    A(T64)                  test address
00009BA0  00004318                          7519+         DC    A(T65)                  test address
00009BA4  000043E0                          7520+         DC    A(T66)                  test address
00009BA8  000044A8                          7521+         DC    A(T67)                  test address
00009BAC  00004570                          7522+         DC    A(T68)                  test address
00009BB0  00004638                          7523+         DC    A(T69)                  test address
00009BB4  00004700                          7524+         DC    A(T70)                  test address
00009BB8  000047C8                          7525+         DC    A(T71)                  test address
00009BBC  00004890                          7526+         DC    A(T72)                  test address
00009BC0  00004958                          7527+         DC    A(T73)                  test address
00009BC4  00004A20                          7528+         DC    A(T74)                  test address
00009BC8  00004AE8                          7529+         DC    A(T75)                  test address
00009BCC  00004BB0                          7530+         DC    A(T76)                  test address
00009BD0  00004C78                          7531+         DC    A(T77)                  test address
00009BD4  00004D40                          7532+         DC    A(T78)                  test address
00009BD8  00004E08                          7533+         DC    A(T79)                  test address
00009BDC  00004ED0                          7534+         DC    A(T80)                  test address
00009BE0  00004F98                          7535+         DC    A(T81)                  test address
00009BE4  00005060                          7536+         DC    A(T82)                  test address
00009BE8  00005128                          7537+         DC    A(T83)                  test address
00009BEC  000051F0                          7538+         DC    A(T84)                  test address
00009BF0  000052B8                          7539+         DC    A(T85)                  test address
00009BF4  00005380                          7540+         DC    A(T86)                  test address
00009BF8  00005448                          7541+         DC    A(T87)                  test address
00009BFC  00005510                          7542+         DC    A(T88)                  test address
00009C00  000055D8                          7543+         DC    A(T89)                  test address
00009C04  000056A0                          7544+         DC    A(T90)                  test address
00009C08  00005768                          7545+         DC    A(T91)                  test address
00009C0C  00005830                          7546+         DC    A(T92)                  test address
00009C10  000058F8                          7547+         DC    A(T93)                  test address
00009C14  000059C0                          7548+         DC    A(T94)                  test address
00009C18  00005A88                          7549+         DC    A(T95)                  test address
00009C1C  00005B50                          7550+         DC    A(T96)                  test address
00009C20  00005C18                          7551+         DC    A(T97)                  test address
00009C24  00005CE0                          7552+         DC    A(T98)                  test address
00009C28  00005DA8                          7553+         DC    A(T99)                  test address
00009C2C  00005E70                          7554+         DC    A(T100)                 test address
00009C30  00005F38                          7555+         DC    A(T101)                 test address
00009C34  00006000                          7556+         DC    A(T102)                 test address
00009C38  000060C8                          7557+         DC    A(T103)                 test address
00009C3C  00006190                          7558+         DC    A(T104)                 test address
00009C40  00006258                          7559+         DC    A(T105)                 test address
00009C44  00006320                          7560+         DC    A(T106)                 test address
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
00009C48  000063E8                          7561+          DC    A(T107)                test address
00009C4C  000064B0                          7562+          DC    A(T108)                test address
00009C50  00006578                          7563+          DC    A(T109)                test address
00009C54  00006640                          7564+          DC    A(T110)                test address
00009C58  00006708                          7565+          DC    A(T111)                test address
00009C5C  000067D0                          7566+          DC    A(T112)                test address
00009C60  00006898                          7567+          DC    A(T113)                test address
00009C64  00006960                          7568+          DC    A(T114)                test address
00009C68  00006A28                          7569+          DC    A(T115)                test address
00009C6C  00006AF0                          7570+          DC    A(T116)                test address
00009C70  00006BB8                          7571+          DC    A(T117)                test address
00009C74  00006C80                          7572+          DC    A(T118)                test address
00009C78  00006D48                          7573+          DC    A(T119)                test address
00009C7C  00006E10                          7574+          DC    A(T120)                test address
00009C80  00006ED8                          7575+          DC    A(T121)                test address
00009C84  00006FA0                          7576+          DC    A(T122)                test address
00009C88  00007068                          7577+          DC    A(T123)                test address
00009C8C  00007130                          7578+          DC    A(T124)                test address
00009C90  000071F8                          7579+          DC    A(T125)                test address
00009C94  000072C0                          7580+          DC    A(T126)                test address
00009C98  00007388                          7581+          DC    A(T127)                test address
00009C9C  00007450                          7582+          DC    A(T128)                test address
00009CA0  00007518                          7583+          DC    A(T129)                test address
00009CA4  000075E0                          7584+          DC    A(T130)                test address
00009CA8  000076A8                          7585+          DC    A(T131)                test address
00009CAC  00007770                          7586+          DC    A(T132)                test address
00009CB0  00007838                          7587+          DC    A(T133)                test address
00009CB4  00007900                          7588+          DC    A(T134)                test address
00009CB8  000079C8                          7589+          DC    A(T135)                test address
00009CBC  00007A90                          7590+          DC    A(T136)                test address
00009CC0  00007B58                          7591+          DC    A(T137)                test address
00009CC4  00007C20                          7592+          DC    A(T138)                test address
00009CC8  00007CE8                          7593+          DC    A(T139)                test address
00009CCC  00007DB0                          7594+          DC    A(T140)                test address
00009CD0  00007E78                          7595+          DC    A(T141)                test address
00009CD4  00007F40                          7596+          DC    A(T142)                test address
00009CD8  00008008                          7597+          DC    A(T143)                test address
00009CDC  000080D0                          7598+          DC    A(T144)                test address
00009CE0  00008198                          7599+          DC    A(T145)                test address
00009CE4  00008260                          7600+          DC    A(T146)                test address
00009CE8  00008328                          7601+          DC    A(T147)                test address
00009CEC  000083F0                          7602+          DC    A(T148)                test address
00009CF0  000084B8                          7603+          DC    A(T149)                test address
00009CF4  00008580                          7604+          DC    A(T150)                test address
00009CF8  00008648                          7605+          DC    A(T151)                test address
00009CFC  00008710                          7606+          DC    A(T152)                test address
00009D00  000087D8                          7607+          DC    A(T153)                test address
00009D04  000088A0                          7608+          DC    A(T154)                test address
00009D08  00008968                          7609+          DC    A(T155)                test address
00009D0C  00008A30                          7610+          DC    A(T156)                test address
00009D10  00008AF8                          7611+          DC    A(T157)                test address
00009D14  00008BC0                          7612+          DC    A(T158)                test address
00009D18  00008C88                          7613+          DC    A(T159)                test address
00009D1C  00008D50                          7614+          DC    A(T160)                test address
00009D20  00008E18                          7615+          DC    A(T161)                test address
00009D24  00008EE0                          7616+          DC    A(T162)                test address
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
00009D28  00008FA8                                7617+          DC    A(T163)                 test address
00009D2C  00009070                                7618+          DC    A(T164)                 test address
00009D30  00009138                                7619+          DC    A(T165)                 test address
00009D34  00009200                                7620+          DC    A(T166)                 test address
00009D38  000092C8                                7621+          DC    A(T167)                 test address
00009D3C  00009390                                7622+          DC    A(T168)                 test address
00009D40  00009458                                7623+          DC    A(T169)                 test address
00009D44  00009520                                7624+          DC    A(T170)                 test address
00009D48  000095E8                                7625+          DC    A(T171)                 test address
00009D4C  000096B0                                7626+          DC    A(T172)                 test address
00009D50  00009778                                7627+          DC    A(T173)                 test address
00009D54  00009840                                7628+          DC    A(T174)                 test address
00009D58  00009908                                7629+          DC    A(T175)                 test address
00009D5C  000099D0                                7630+          DC    A(T176)                 test address
                                                  7631+*
00009D60  00000000                                7632+          DC    A(0)                    end of table
00009D64  00000000                                7633+          DC    A(0)                    end of table
                                                  7634
00009D68  00000000                                7635           DC    F'0'     END OF TABLE
00009D6C  00000000                                7636           DC    F'0'
```

```
 LOC        OBJECT CODE       ADDR1     ADDR2     STMT
                                                  7638 ********************************************************************************
                                                  7639 *        Register equates
                                                  7640 ********************************************************************************

                                00000000  00000001  7642 R0       EQU   0
                                00000001  00000001  7643 R1       EQU   1
                                00000002  00000001  7644 R2       EQU   2
                                00000003  00000001  7645 R3       EQU   3
                                00000004  00000001  7646 R4       EQU   4
                                00000005  00000001  7647 R5       EQU   5
                                00000006  00000001  7648 R6       EQU   6
                                00000007  00000001  7649 R7       EQU   7
                                00000008  00000001  7650 R8       EQU   8
                                00000009  00000001  7651 R9       EQU   9
                                0000000A  00000001  7652 R10      EQU   10
                                0000000B  00000001  7653 R11      EQU   11
                                0000000C  00000001  7654 R12      EQU   12
                                0000000D  00000001  7655 R13      EQU   13
                                0000000E  00000001  7656 R14      EQU   14
                                0000000F  00000001  7657 R15      EQU   15


                                                  7659 ********************************************************************************
                                                  7660 *        Register equates
                                                  7661 ********************************************************************************


                             00000000  00000001  7663 V0       EQU   0
                             00000001  00000001  7664 V1       EQU   1
                             00000002  00000001  7665 V2       EQU   2
                             00000003  00000001  7666 V3       EQU   3
                             00000004  00000001  7667 V4       EQU   4
                             00000005  00000001  7668 V5       EQU   5
                             00000006  00000001  7669 V6       EQU   6
                             00000007  00000001  7670 V7       EQU   7
                             00000008  00000001  7671 V8       EQU   8
                             00000009  00000001  7672 V9       EQU   9
                             0000000A  00000001  7673 V10      EQU   10
                             0000000B  00000001  7674 V11      EQU   11
                             0000000C  00000001  7675 V12      EQU   12
                             0000000D  00000001  7676 V13      EQU   13
                             0000000E  00000001  7677 V14      EQU   14
                             0000000F  00000001  7678 V15      EQU   15
                             00000010  00000001  7679 V16      EQU   16
                             00000011  00000001  7680 V17      EQU   17
                             00000012  00000001  7681 V18      EQU   18
                             00000013  00000001  7682 V19      EQU   19
                             00000014  00000001  7683 V20      EQU   20
                             00000015  00000001  7684 V21      EQU   21
```

```
 LOC         OBJECT CODE       ADDR1     ADDR2     STMT
                             00000016  00000001  7685 V22       EQU   22
                             00000017  00000001  7686 V23       EQU   23
                             00000018  00000001  7687 V24       EQU   24
                             00000019  00000001  7688 V25       EQU   25
                             0000001A  00000001  7689 V26       EQU   26
                             0000001B  00000001  7690 V27       EQU   27
                             0000001C  00000001  7691 V28       EQU   28
                             0000001D  00000001  7692 V29       EQU   29
                             0000001E  00000001  7693 V30       EQU   30
                             0000001F  00000001  7694 V31       EQU   31
                                                 7695
                                                 7696           END
```

SYMBOL	TYPE	VALUE	LENGTH	DEFN	REFERENCES
BEGIN	I	00000200	2	161	127 157 158 159
CC	U	00000009	1	522	272
CCFOUND	X	00000014	1	528	259 279
CCMASK	U	0000000A	1	523	229
CCMSG	U	0000031C	1	246	241
CCPRTEXP	C	00001098	1	487	276
CCPRTGOT	C	000010A8	1	490	283
CCPRTLINE	C	00001055	16	482	492 286
CCPRTLNG	U	00000055	1	492	285
CCPRTNAME	C	00001082	8	485	269
CCPRTNUM	C	00001065	3	483	267
CCPSW	F	0000000C	4	527	256 700 738 776 815 853 891 930 968 1006 1048 1086 1124 1162 1200 1238 1277 1315 1353 1391 1429 1467 1506 1544 1582 1620 1658 1696 1744 1782 1820 1859 1897 1935 1974 2012 2050 2092 2130 2168 2206 2244 2282 2320 2358 2397 2435 2473 2511 2549 2587 2625 2663 2702 2740 2778 2816 2854 2892 2930 2968 3016 3054 3092 3131 3169 3207 3246 3284 3322 3361 3399 3437 3479 3517 3555 3593 3631 3669 3708 3746 3784 3822 3860 3898 3937 3975 4013 4051 4089 4127 4166 4204 4242 4280 4318 4356 4404 4442 4480 4519 4557 4595 4634 4672 4710 4749 4787 4825 4867 4905 4943 4981 5019 5057 5096 5134 5172 5210 5248 5286 5325 5363 5401 5439 5477 5515 5554 5592 5630 5668 5706 5744 5792 5830 5868 5907 5945 5983 6022 6060 6098 6137 6175 6213 6255 6293 6331 6369 6407 6445 6483 6521 6560 6598 6636 6674 6712 6750 6788 6826 6865 6903 6941 6979 7017 7055 7093 7131 7170 7208 7246 7284 7322 7360 7398 7436
CTLR0	F	00000554	4	425	171 172 173 174
DECNUM	C	000010D6	16	502	264 266 273 275 280 282 302 304 311 313 318 320
E7TEST	4	00000000	104	516	220
E7TESTS	F	00009AA0	4	7452	213
EDIT	X	000010AA	18	497	265 274 281 303 312 319
ENDTEST	U	00000428	1	340	218
EOJ	I	00000538	4	415	206 343
EOJPSW	D	00000528	8	413	415
FAILCONT	U	00000418	1	330	
FAILED	F	00001000	4	455	290 332 341
FAILMSG	U	000003B0	1	300	236
FAILPSW	D	00000540	8	417	419
FAILTEST	I	00000550	4	419	344
FB0001	F	00000280	8	190	194 195 197
IMAGE	1	00000000	40304	0	
K	U	00000400	1	439	440 441 442
K64	U	00010000	1	441	
M4	U	00000007	1	520	310
M5	U	00000008	1	521	250 317
MB	U	00100000	1	442	
MSG	I	00000470	4	375	205 358
MSGCMD	C	000004BE	9	405	388 389
MSGMSG	C	000004C7	95	406	382 403 380
MSGMVC	I	000004B8	6	403	386
MSGOK	I	00000486	2	384	381
MSGRET	I	000004A6	4	399	392 395
MSGSAVE	F	000004AC	4	402	378 399
NEXTE7	U	000002D4	1	215	239 335
OPNAME	C	00000015	8	530	269 307
PAGE	U	00001000	1	440	
PRT3	C	000010C0	18	500	265 266 267 274 275 276 281 282 283 303 304 305 312

SYMBOL	TYPE	VALUE	LENGTH	DEFN	REFERENCES
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PRTLINE	C	00001008	16	464	474 324
PRTLNG	U	0000004D	1	474	323
PRTM4	C	00001044	3	469	314
PRTM5	C	00001051	3	472	321
PRTNAME	C	00001033	8	467	307
PRTNUM	C	00001018	3	465	305
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					6787 6825 6864 6902 6940 6978 7016 7054 7092 7130 7169 7207 7245
					7283 7321 7359 7397 7435
R1	U	00000001	1	7643	204 229 230 231 234 235 250 251 256 257 258 259 286
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					770 771 772 773 809 810 811 812 847 848 849 850 885
					886 887 888 924 925 926 927 962 963 964 965 1000 1001
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SYMBOL	TYPE	VALUE	LENGTH	DEFN	REFERENCES												
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					5131	5166	5167	5168	5169	5204	5205	5206	5207	5242	5243	5244	5245
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					6134	6169	6170	6171	6172	6207	6208	6209	6210	6249	6250	6251	6252
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R11	U	0000000B	1	7653	226	227	702	740	778	817	855	893	932	970	1008	1050	1088
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					3133	3171	3209	3248	3286	3324	3363	3401	3439	3481	3519	3557	3595
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					4636	4674	4712	4751	4789	4827	4869	4907	4945	4983	5021	5059	5098
					5136	5174	5212	5250	5288	5327	5365	5403	5441	5479	5517	5556	5594
					5632	5670	5708	5746	5794	5832	5870	5909	5947	5985	6024	6062	6100
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R12	U	0000000C	1	7654	213	216	238	334									
R13	U	0000000D	1	7655													
R14	U	0000000E	1	7656													
R15	U	0000000F	1	7657	287	325	352	362	363								
R2	U	00000002	1	7644	205	263	264	271	272	273	278	279	280	301	302	309	310
					311	316	317	318	357	358	359	376	378	384	385	386	388
					394	399	400	699	700	737	738	775	776	814	815	852	853
					890	891	929	930	967	968	1005	1006	1047	1048	1085	1086	1123
					1124	1161	1162	1199	1200	1237	1238	1276	1277	1314	1315	1352	1353
					1390	1391	1428	1429	1466	1467	1505	1506	1543	1544	1581	1582	1619
					1620	1657	1658	1695	1696	1743	1744	1781	1782	1819	1820	1858	1859
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					2396	2397	2434	2435	2472	2473	2510	2511	2548	2549	2586	2587	2624
					2625	2662	2663	2701	2702	2739	2740	2777	2778	2815	2816	2853	2854
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					3131	3168	3169	3206	3207	3245	3246	3283	3284	3321	3322	3360	3361
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SYMBOL	TYPE	VALUE	LENGTH	DEFN	REFERENCES
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					4634 4671 4672 4709 4710 4748 4749 4786 4787 4824 4825 4866 4867
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R4	U	00000004	1	7646	
R5	U	00000005	1	7647	216 217 220 353 361 673 704 711 742 749 780 788 819
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					7333 7364 7371 7402 7409 7440
R6	U	00000006	1	7648	
R7	U	00000007	1	7649	
R8	U	00000008	1	7650	157 161 162 163 165
R9	U	00000009	1	7651	158 165 166 168
RE1	F	000011B0	4	703	684 685 686 688
RE10	F	000018B8	4	1051	1032 1033 1034 1036
RE100	F	00005F08	4	4522	4503 4504 4505 4507
RE101	F	00005FD0	4	4560	4541 4542 4543 4545
RE102	F	00006098	4	4598	4579 4580 4581 4583
RE103	F	00006160	4	4637	4618 4619 4620 4622

SYMBOL	TYPE	VALUE	LENGTH	DEFN	REFERENCES			
RE104	F	00006228	4	4675	4656	4657	4658	4660
RE105	F	000062F0	4	4713	4694	4695	4696	4698
RE106	F	000063B8	4	4752	4733	4734	4735	4737
RE107	F	00006480	4	4790	4771	4772	4773	4775
RE108	F	00006548	4	4828	4809	4810	4811	4813
RE109	F	00006610	4	4870	4851	4852	4853	4855
RE11	F	00001980	4	1089	1070	1071	1072	1074
RE110	F	000066D8	4	4908	4889	4890	4891	4893
RE111	F	000067A0	4	4946	4927	4928	4929	4931
RE112	F	00006868	4	4984	4965	4966	4967	4969
RE113	F	00006930	4	5022	5003	5004	5005	5007
RE114	F	000069F8	4	5060	5041	5042	5043	5045
RE115	F	00006AC0	4	5099	5080	5081	5082	5084
RE116	F	00006B88	4	5137	5118	5119	5120	5122
RE117	F	00006C50	4	5175	5156	5157	5158	5160
RE118	F	00006D18	4	5213	5194	5195	5196	5198
RE119	F	00006DE0	4	5251	5232	5233	5234	5236
RE12	F	00001A48	4	1127	1108	1109	1110	1112
RE120	F	00006EA8	4	5289	5270	5271	5272	5274
RE121	F	00006F70	4	5328	5309	5310	5311	5313
RE122	F	00007038	4	5366	5347	5348	5349	5351
RE123	F	00007100	4	5404	5385	5386	5387	5389
RE124	F	000071C8	4	5442	5423	5424	5425	5427
RE125	F	00007290	4	5480	5461	5462	5463	5465
RE126	F	00007358	4	5518	5499	5500	5501	5503
RE127	F	00007420	4	5557	5538	5539	5540	5542
RE128	F	000074E8	4	5595	5576	5577	5578	5580
RE129	F	000075B0	4	5633	5614	5615	5616	5618
RE13	F	00001B10	4	1165	1146	1147	1148	1150
RE130	F	00007678	4	5671	5652	5653	5654	5656
RE131	F	00007740	4	5709	5690	5691	5692	5694
RE132	F	00007808	4	5747	5728	5729	5730	5732
RE133	F	000078D0	4	5795	5776	5777	5778	5780
RE134	F	00007998	4	5833	5814	5815	5816	5818
RE135	F	00007A60	4	5871	5852	5853	5854	5856
RE136	F	00007B28	4	5910	5891	5892	5893	5895
RE137	F	00007BF0	4	5948	5929	5930	5931	5933
RE138	F	00007CB8	4	5986	5967	5968	5969	5971
RE139	F	00007D80	4	6025	6006	6007	6008	6010
RE14	F	00001BD8	4	1203	1184	1185	1186	1188
RE140	F	00007E48	4	6063	6044	6045	6046	6048
RE141	F	00007F10	4	6101	6082	6083	6084	6086
RE142	F	00007FD8	4	6140	6121	6122	6123	6125
RE143	F	000080A0	4	6178	6159	6160	6161	6163
RE144	F	00008168	4	6216	6197	6198	6199	6201
RE145	F	00008230	4	6258	6239	6240	6241	6243
RE146	F	000082F8	4	6296	6277	6278	6279	6281
RE147	F	000083C0	4	6334	6315	6316	6317	6319
RE148	F	00008488	4	6372	6353	6354	6355	6357
RE149	F	00008550	4	6410	6391	6392	6393	6395
RE15	F	00001CA0	4	1241	1222	1223	1224	1226
RE150	F	00008618	4	6448	6429	6430	6431	6433
RE151	F	000086E0	4	6486	6467	6468	6469	6471
RE152	F	000087A8	4	6524	6505	6506	6507	6509
RE153	F	00008870	4	6563	6544	6545	6546	6548
RE154	F	00008938	4	6601	6582	6583	6584	6586

SYMBOL	TYPE	VALUE	LENGTH	DEFN	REFERENCES			
RE155	F	00008A00	4	6639	6620	6621	6622	6624
RE156	F	00008AC8	4	6677	6658	6659	6660	6662
RE157	F	00008B90	4	6715	6696	6697	6698	6700
RE158	F	00008C58	4	6753	6734	6735	6736	6738
RE159	F	00008D20	4	6791	6772	6773	6774	6776
RE16	F	00001D68	4	1280	1261	1262	1263	1265
RE160	F	00008DE8	4	6829	6810	6811	6812	6814
RE161	F	00008EB0	4	6868	6849	6850	6851	6853
RE162	F	00008F78	4	6906	6887	6888	6889	6891
RE163	F	00009040	4	6944	6925	6926	6927	6929
RE164	F	00009108	4	6982	6963	6964	6965	6967
RE165	F	000091D0	4	7020	7001	7002	7003	7005
RE166	F	00009298	4	7058	7039	7040	7041	7043
RE167	F	00009360	4	7096	7077	7078	7079	7081
RE168	F	00009428	4	7134	7115	7116	7117	7119
RE169	F	000094F0	4	7173	7154	7155	7156	7158
RE17	F	00001E30	4	1318	1299	1300	1301	1303
RE170	F	000095B8	4	7211	7192	7193	7194	7196
RE171	F	00009680	4	7249	7230	7231	7232	7234
RE172	F	00009748	4	7287	7268	7269	7270	7272
RE173	F	00009810	4	7325	7306	7307	7308	7310
RE174	F	000098D8	4	7363	7344	7345	7346	7348
RE175	F	000099A0	4	7401	7382	7383	7384	7386
RE176	F	00009A68	4	7439	7420	7421	7422	7424
RE18	F	00001EF8	4	1356	1337	1338	1339	1341
RE19	F	00001FC0	4	1394	1375	1376	1377	1379
RE2	F	00001278	4	741	722	723	724	726
RE20	F	00002088	4	1432	1413	1414	1415	1417
RE21	F	00002150	4	1470	1451	1452	1453	1455
RE22	F	00002218	4	1509	1490	1491	1492	1494
RE23	F	000022E0	4	1547	1528	1529	1530	1532
RE24	F	000023A8	4	1585	1566	1567	1568	1570
RE25	F	00002470	4	1623	1604	1605	1606	1608
RE26	F	00002538	4	1661	1642	1643	1644	1646
RE27	F	00002600	4	1699	1680	1681	1682	1684
RE28	F	000026C8	4	1747	1728	1729	1730	1732
RE29	F	00002790	4	1785	1766	1767	1768	1770
RE3	F	00001340	4	779	760	761	762	764
RE30	F	00002858	4	1823	1804	1805	1806	1808
RE31	F	00002920	4	1862	1843	1844	1845	1847
RE32	F	000029E8	4	1900	1881	1882	1883	1885
RE33	F	00002AB0	4	1938	1919	1920	1921	1923
RE34	F	00002B78	4	1977	1958	1959	1960	1962
RE35	F	00002C40	4	2015	1996	1997	1998	2000
RE36	F	00002D08	4	2053	2034	2035	2036	2038
RE37	F	00002DD0	4	2095	2076	2077	2078	2080
RE38	F	00002E98	4	2133	2114	2115	2116	2118
RE39	F	00002F60	4	2171	2152	2153	2154	2156
RE4	F	00001408	4	818	799	800	801	803
RE40	F	00003028	4	2209	2190	2191	2192	2194
RE41	F	000030F0	4	2247	2228	2229	2230	2232
RE42	F	000031B8	4	2285	2266	2267	2268	2270
RE43	F	00003280	4	2323	2304	2305	2306	2308
RE44	F	00003348	4	2361	2342	2343	2344	2346
RE45	F	00003410	4	2400	2381	2382	2383	2385
RE46	F	000034D8	4	2438	2419	2420	2421	2423

SYMBOL	TYPE	VALUE	LENGTH	DEFN	REFERENCES			
RE47	F	000035A0	4	2476	2457	2458	2459	2461
RE48	F	00003668	4	2514	2495	2496	2497	2499
RE49	F	00003730	4	2552	2533	2534	2535	2537
RE5	F	000014D0	4	856	837	838	839	841
RE50	F	000037F8	4	2590	2571	2572	2573	2575
RE51	F	000038C0	4	2628	2609	2610	2611	2613
RE52	F	00003988	4	2666	2647	2648	2649	2651
RE53	F	00003A50	4	2705	2686	2687	2688	2690
RE54	F	00003B18	4	2743	2724	2725	2726	2728
RE55	F	00003BE0	4	2781	2762	2763	2764	2766
RE56	F	00003CA8	4	2819	2800	2801	2802	2804
RE57	F	00003D70	4	2857	2838	2839	2840	2842
RE58	F	00003E38	4	2895	2876	2877	2878	2880
RE59	F	00003F00	4	2933	2914	2915	2916	2918
RE6	F	00001598	4	894	875	876	877	879
RE60	F	00003FC8	4	2971	2952	2953	2954	2956
RE61	F	00004090	4	3019	3000	3001	3002	3004
RE62	F	00004158	4	3057	3038	3039	3040	3042
RE63	F	00004220	4	3095	3076	3077	3078	3080
RE64	F	000042E8	4	3134	3115	3116	3117	3119
RE65	F	000043B0	4	3172	3153	3154	3155	3157
RE66	F	00004478	4	3210	3191	3192	3193	3195
RE67	F	00004540	4	3249	3230	3231	3232	3234
RE68	F	00004608	4	3287	3268	3269	3270	3272
RE69	F	000046D0	4	3325	3306	3307	3308	3310
RE7	F	00001660	4	933	914	915	916	918
RE70	F	00004798	4	3364	3345	3346	3347	3349
RE71	F	00004860	4	3402	3383	3384	3385	3387
RE72	F	00004928	4	3440	3421	3422	3423	3425
RE73	F	000049F0	4	3482	3463	3464	3465	3467
RE74	F	00004AB8	4	3520	3501	3502	3503	3505
RE75	F	00004B80	4	3558	3539	3540	3541	3543
RE76	F	00004C48	4	3596	3577	3578	3579	3581
RE77	F	00004D10	4	3634	3615	3616	3617	3619
RE78	F	00004DD8	4	3672	3653	3654	3655	3657
RE79	F	00004EA0	4	3711	3692	3693	3694	3696
RE8	F	00001728	4	971	952	953	954	956
RE80	F	00004F68	4	3749	3730	3731	3732	3734
RE81	F	00005030	4	3787	3768	3769	3770	3772
RE82	F	000050F8	4	3825	3806	3807	3808	3810
RE83	F	000051C0	4	3863	3844	3845	3846	3848
RE84	F	00005288	4	3901	3882	3883	3884	3886
RE85	F	00005350	4	3940	3921	3922	3923	3925
RE86	F	00005418	4	3978	3959	3960	3961	3963
RE87	F	000054E0	4	4016	3997	3998	3999	4001
RE88	F	000055A8	4	4054	4035	4036	4037	4039
RE89	F	00005670	4	4092	4073	4074	4075	4077
RE9	F	000017F0	4	1009	990	991	992	994
RE90	F	00005738	4	4130	4111	4112	4113	4115
RE91	F	00005800	4	4169	4150	4151	4152	4154
RE92	F	000058C8	4	4207	4188	4189	4190	4192
RE93	F	00005990	4	4245	4226	4227	4228	4230
RE94	F	00005A58	4	4283	4264	4265	4266	4268
RE95	F	00005B20	4	4321	4302	4303	4304	4306
RE96	F	00005BE8	4	4359	4340	4341	4342	4344
RE97	F	00005CB0	4	4407	4388	4389	4390	4392

SYMBOL	TYPE	VALUE	LENGTH	DEFN	REFERENCES
RE98	F	00005D78	4	4445	4426 4427 4428 4430
RE99	F	00005E40	4	4483	4464 4465 4466 4468
REA1	A	00001148	4	688	
REA10	A	00001850	4	1036	
REA100	A	00005EA0	4	4507	
REA101	A	00005F68	4	4545	
REA102	A	00006030	4	4583	
REA103	A	000060F8	4	4622	
REA104	A	000061C0	4	4660	
REA105	A	00006288	4	4698	
REA106	A	00006350	4	4737	
REA107	A	00006418	4	4775	
REA108	A	000064E0	4	4813	
REA109	A	000065A8	4	4855	
REA11	A	00001918	4	1074	
REA110	A	00006670	4	4893	
REA111	A	00006738	4	4931	
REA112	A	00006800	4	4969	
REA113	A	000068C8	4	5007	
REA114	A	00006990	4	5045	
REA115	A	00006A58	4	5084	
REA116	A	00006B20	4	5122	
REA117	A	00006BE8	4	5160	
REA118	A	00006CB0	4	5198	
REA119	A	00006D78	4	5236	
REA12	A	000019E0	4	1112	
REA120	A	00006E40	4	5274	
REA121	A	00006F08	4	5313	
REA122	A	00006FD0	4	5351	
REA123	A	00007098	4	5389	
REA124	A	00007160	4	5427	
REA125	A	00007228	4	5465	
REA126	A	000072F0	4	5503	
REA127	A	000073B8	4	5542	
REA128	A	00007480	4	5580	
REA129	A	00007548	4	5618	
REA13	A	00001AA8	4	1150	
REA130	A	00007610	4	5656	
REA131	A	000076D8	4	5694	
REA132	A	000077A0	4	5732	
REA133	A	00007868	4	5780	
REA134	A	00007930	4	5818	
REA135	A	000079F8	4	5856	
REA136	A	00007AC0	4	5895	
REA137	A	00007B88	4	5933	
REA138	A	00007C50	4	5971	
REA139	A	00007D18	4	6010	
REA14	A	00001B70	4	1188	
REA140	A	00007DE0	4	6048	
REA141	A	00007EA8	4	6086	
REA142	A	00007F70	4	6125	
REA143	A	00008038	4	6163	
REA144	A	00008100	4	6201	
REA145	A	000081C8	4	6243	
REA146	A	00008290	4	6281	
REA147	A	00008358	4	6319	

SYMBOL	TYPE	VALUE	LENGTH	DEFN	REFERENCES
REA148	A	00008420	4	6357	
REA149	A	000084E8	4	6395	
REA15	A	00001C38	4	1226	
REA150	A	000085B0	4	6433	
REA151	A	00008678	4	6471	
REA152	A	00008740	4	6509	
REA153	A	00008808	4	6548	
REA154	A	000088D0	4	6586	
REA155	A	00008998	4	6624	
REA156	A	00008A60	4	6662	
REA157	A	00008B28	4	6700	
REA158	A	00008BF0	4	6738	
REA159	A	00008CB8	4	6776	
REA16	A	00001D00	4	1265	
REA160	A	00008D80	4	6814	
REA161	A	00008E48	4	6853	
REA162	A	00008F10	4	6891	
REA163	A	00008FD8	4	6929	
REA164	A	000090A0	4	6967	
REA165	A	00009168	4	7005	
REA166	A	00009230	4	7043	
REA167	A	000092F8	4	7081	
REA168	A	000093C0	4	7119	
REA169	A	00009488	4	7158	
REA17	A	00001DC8	4	1303	
REA170	A	00009550	4	7196	
REA171	A	00009618	4	7234	
REA172	A	000096E0	4	7272	
REA173	A	000097A8	4	7310	
REA174	A	00009870	4	7348	
REA175	A	00009938	4	7386	
REA176	A	00009A00	4	7424	
REA18	A	00001E90	4	1341	
REA19	A	00001F58	4	1379	
REA2	A	00001210	4	726	
REA20	A	00002020	4	1417	
REA21	A	000020E8	4	1455	
REA22	A	000021B0	4	1494	
REA23	A	00002278	4	1532	
REA24	A	00002340	4	1570	
REA25	A	00002408	4	1608	
REA26	A	000024D0	4	1646	
REA27	A	00002598	4	1684	
REA28	A	00002660	4	1732	
REA29	A	00002728	4	1770	
REA3	A	000012D8	4	764	
REA30	A	000027F0	4	1808	
REA31	A	000028B8	4	1847	
REA32	A	00002980	4	1885	
REA33	A	00002A48	4	1923	
REA34	A	00002B10	4	1962	
REA35	A	00002BD8	4	2000	
REA36	A	00002CA0	4	2038	
REA37	A	00002D68	4	2080	
REA38	A	00002E30	4	2118	
REA39	A	00002EF8	4	2156	

SYMBOL	TYPE	VALUE	LENGTH	DEFN	REFERENCES
REA4	A	000013A0	4	803	
REA40	A	00002FC0	4	2194	
REA41	A	00003088	4	2232	
REA42	A	00003150	4	2270	
REA43	A	00003218	4	2308	
REA44	A	000032E0	4	2346	
REA45	A	000033A8	4	2385	
REA46	A	00003470	4	2423	
REA47	A	00003538	4	2461	
REA48	A	00003600	4	2499	
REA49	A	000036C8	4	2537	
REA5	A	00001468	4	841	
REA50	A	00003790	4	2575	
REA51	A	00003858	4	2613	
REA52	A	00003920	4	2651	
REA53	A	000039E8	4	2690	
REA54	A	00003AB0	4	2728	
REA55	A	00003B78	4	2766	
REA56	A	00003C40	4	2804	
REA57	A	00003D08	4	2842	
REA58	A	00003DD0	4	2880	
REA59	A	00003E98	4	2918	
REA6	A	00001530	4	879	
REA60	A	00003F60	4	2956	
REA61	A	00004028	4	3004	
REA62	A	000040F0	4	3042	
REA63	A	000041B8	4	3080	
REA64	A	00004280	4	3119	
REA65	A	00004348	4	3157	
REA66	A	00004410	4	3195	
REA67	A	000044D8	4	3234	
REA68	A	000045A0	4	3272	
REA69	A	00004668	4	3310	
REA7	A	000015F8	4	918	
REA70	A	00004730	4	3349	
REA71	A	000047F8	4	3387	
REA72	A	000048C0	4	3425	
REA73	A	00004988	4	3467	
REA74	A	00004A50	4	3505	
REA75	A	00004B18	4	3543	
REA76	A	00004BE0	4	3581	
REA77	A	00004CA8	4	3619	
REA78	A	00004D70	4	3657	
REA79	A	00004E38	4	3696	
REA8	A	000016C0	4	956	
REA80	A	00004F00	4	3734	
REA81	A	00004FC8	4	3772	
REA82	A	00005090	4	3810	
REA83	A	00005158	4	3848	
REA84	A	00005220	4	3886	
REA85	A	000052E8	4	3925	
REA86	A	000053B0	4	3963	
REA87	A	00005478	4	4001	
REA88	A	00005540	4	4039	
REA89	A	00005608	4	4077	
REA9	A	00001788	4	994	

SYMBOL	TYPE	VALUE	LENGTH	DEFN	REFERENCES		
REA90	A	000056D0	4	4115			
REA91	A	00005798	4	4154			
REA92	A	00005860	4	4192			
REA93	A	00005928	4	4230			
REA94	A	000059F0	4	4268			
REA95	A	00005AB8	4	4306			
REA96	A	00005B80	4	4344			
REA97	A	00005C48	4	4392			
REA98	A	00005D10	4	4430			
REA99	A	00005DD8	4	4468			
READDR	A	00000030	4	535	234		
REG2LOW	U	000000DD	1	445			
REG2PATT	U	AABBCCDD	1	444			
RELEN	A	0000002C	4	534			
RPTDWSAV	D	00000460	8	368	357	359	
RPTERROR	I	00000436	4	352	287	325	
RPTSAVE	F	00000454	4	365	352	362	
RPTSVR5	F	00000458	4	366	353	361	
SKL0001	U	0000004E	1	187	203		
SKT0001	C	0000022A	20	184	187	204	
SVOLDPSW	U	00000140	0	123			
T1	A	00001118	4	674	7455		
T10	A	00001820	4	1022	7464		
T100	A	00005E70	4	4493	7554		
T101	A	00005F38	4	4531	7555		
T102	A	00006000	4	4569	7556		
T103	A	000060C8	4	4608	7557		
T104	A	00006190	4	4646	7558		
T105	A	00006258	4	4684	7559		
T106	A	00006320	4	4723	7560		
T107	A	000063E8	4	4761	7561		
T108	A	000064B0	4	4799	7562		
T109	A	00006578	4	4841	7563		
T11	A	000018E8	4	1060	7465		
T110	A	00006640	4	4879	7564		
T111	A	00006708	4	4917	7565		
T112	A	000067D0	4	4955	7566		
T113	A	00006898	4	4993	7567		
T114	A	00006960	4	5031	7568		
T115	A	00006A28	4	5070	7569		
T116	A	00006AF0	4	5108	7570		
T117	A	00006BB8	4	5146	7571		
T118	A	00006C80	4	5184	7572		
T119	A	00006D48	4	5222	7573		
T12	A	000019B0	4	1098	7466		
T120	A	00006E10	4	5260	7574		
T121	A	00006ED8	4	5299	7575		
T122	A	00006FA0	4	5337	7576		
T123	A	00007068	4	5375	7577		
T124	A	00007130	4	5413	7578		
T125	A	000071F8	4	5451	7579		
T126	A	000072C0	4	5489	7580		
T127	A	00007388	4	5528	7581		
T128	A	00007450	4	5566	7582		
T129	A	00007518	4	5604	7583		
T13	A	00001A78	4	1136	7467		

SYMBOL	TYPE	VALUE	LENGTH	DEFN	REFERENCES
T130	A	000075E0	4	5642	7584
T131	A	000076A8	4	5680	7585
T132	A	00007770	4	5718	7586
T133	A	00007838	4	5766	7587
T134	A	00007900	4	5804	7588
T135	A	000079C8	4	5842	7589
T136	A	00007A90	4	5881	7590
T137	A	00007B58	4	5919	7591
T138	A	00007C20	4	5957	7592
T139	A	00007CE8	4	5996	7593
T14	A	00001B40	4	1174	7468
T140	A	00007DB0	4	6034	7594
T141	A	00007E78	4	6072	7595
T142	A	00007F40	4	6111	7596
T143	A	00008008	4	6149	7597
T144	A	000080D0	4	6187	7598
T145	A	00008198	4	6229	7599
T146	A	00008260	4	6267	7600
T147	A	00008328	4	6305	7601
T148	A	000083F0	4	6343	7602
T149	A	000084B8	4	6381	7603
T15	A	00001C08	4	1212	7469
T150	A	00008580	4	6419	7604
T151	A	00008648	4	6457	7605
T152	A	00008710	4	6495	7606
T153	A	000087D8	4	6534	7607
T154	A	000088A0	4	6572	7608
T155	A	00008968	4	6610	7609
T156	A	00008A30	4	6648	7610
T157	A	00008AF8	4	6686	7611
T158	A	00008BC0	4	6724	7612
T159	A	00008C88	4	6762	7613
T16	A	00001CD0	4	1251	7470
T160	A	00008D50	4	6800	7614
T161	A	00008E18	4	6839	7615
T162	A	00008EE0	4	6877	7616
T163	A	00008FA8	4	6915	7617
T164	A	00009070	4	6953	7618
T165	A	00009138	4	6991	7619
T166	A	00009200	4	7029	7620
T167	A	000092C8	4	7067	7621
T168	A	00009390	4	7105	7622
T169	A	00009458	4	7144	7623
T17	A	00001D98	4	1289	7471
T170	A	00009520	4	7182	7624
T171	A	000095E8	4	7220	7625
T172	A	000096B0	4	7258	7626
T173	A	00009778	4	7296	7627
T174	A	00009840	4	7334	7628
T175	A	00009908	4	7372	7629
T176	A	000099D0	4	7410	7630
T18	A	00001E60	4	1327	7472
T19	A	00001F28	4	1365	7473
T2	A	000011E0	4	712	7456
T20	A	00001FF0	4	1403	7474
T21	A	000020B8	4	1441	7475

SYMBOL	TYPE	VALUE	LENGTH	DEFN	REFERENCES
T22	A	00002180	4	1480	7476
T23	A	00002248	4	1518	7477
T24	A	00002310	4	1556	7478
T25	A	000023D8	4	1594	7479
T26	A	000024A0	4	1632	7480
T27	A	00002568	4	1670	7481
T28	A	00002630	4	1718	7482
T29	A	000026F8	4	1756	7483
T3	A	000012A8	4	750	7457
T30	A	000027C0	4	1794	7484
T31	A	00002888	4	1833	7485
T32	A	00002950	4	1871	7486
T33	A	00002A18	4	1909	7487
T34	A	00002AE0	4	1948	7488
T35	A	00002BA8	4	1986	7489
T36	A	00002C70	4	2024	7490
T37	A	00002D38	4	2066	7491
T38	A	00002E00	4	2104	7492
T39	A	00002EC8	4	2142	7493
T4	A	00001370	4	789	7458
T40	A	00002F90	4	2180	7494
T41	A	00003058	4	2218	7495
T42	A	00003120	4	2256	7496
T43	A	000031E8	4	2294	7497
T44	A	000032B0	4	2332	7498
T45	A	00003378	4	2371	7499
T46	A	00003440	4	2409	7500
T47	A	00003508	4	2447	7501
T48	A	000035D0	4	2485	7502
T49	A	00003698	4	2523	7503
T5	A	00001438	4	827	7459
T50	A	00003760	4	2561	7504
T51	A	00003828	4	2599	7505
T52	A	000038F0	4	2637	7506
T53	A	000039B8	4	2676	7507
T54	A	00003A80	4	2714	7508
T55	A	00003B48	4	2752	7509
T56	A	00003C10	4	2790	7510
T57	A	00003CD8	4	2828	7511
T58	A	00003DA0	4	2866	7512
T59	A	00003E68	4	2904	7513
T6	A	00001500	4	865	7460
T60	A	00003F30	4	2942	7514
T61	A	00003FF8	4	2990	7515
T62	A	000040C0	4	3028	7516
T63	A	00004188	4	3066	7517
T64	A	00004250	4	3105	7518
T65	A	00004318	4	3143	7519
T66	A	000043E0	4	3181	7520
T67	A	000044A8	4	3220	7521
T68	A	00004570	4	3258	7522
T69	A	00004638	4	3296	7523
T7	A	000015C8	4	904	7461
T70	A	00004700	4	3335	7524
T71	A	000047C8	4	3373	7525
T72	A	00004890	4	3411	7526

SYMBOL	TYPE	VALUE	LENGTH	DEFN	REFERENCES
T73	A	00004958	4	3453	7527
T74	A	00004A20	4	3491	7528
T75	A	00004AE8	4	3529	7529
T76	A	00004BB0	4	3567	7530
T77	A	00004C78	4	3605	7531
T78	A	00004D40	4	3643	7532
T79	A	00004E08	4	3682	7533
T8	A	00001690	4	942	7462
T80	A	00004ED0	4	3720	7534
T81	A	00004F98	4	3758	7535
T82	A	00005060	4	3796	7536
T83	A	00005128	4	3834	7537
T84	A	000051F0	4	3872	7538
T85	A	000052B8	4	3911	7539
T86	A	00005380	4	3949	7540
T87	A	00005448	4	3987	7541
T88	A	00005510	4	4025	7542
T89	A	000055D8	4	4063	7543
T9	A	00001758	4	980	7463
T90	A	000056A0	4	4101	7544
T91	A	00005768	4	4140	7545
T92	A	00005830	4	4178	7546
T93	A	000058F8	4	4216	7547
T94	A	000059C0	4	4254	7548
T95	A	00005A88	4	4292	7549
T96	A	00005B50	4	4330	7550
T97	A	00005C18	4	4378	7551
T98	A	00005CE0	4	4416	7552
T99	A	00005DA8	4	4454	7553
TESTCC	I	00000318	4	241	231
TESTING	F	00001004	4	456	223
TESTREST	U	00000300	1	233	252 292
TNUM	H	00000004	2	518	222 263 301
TSUB	A	00000000	4	517	226
TTABLE	F	00009AA0	4	7454	
V0	U	00000000	1	7663	
V1	U	00000001	1	7664	
V10	U	0000000A	1	7673	
V11	U	0000000B	1	7674	
V12	U	0000000C	1	7675	
V13	U	0000000D	1	7676	
V14	U	0000000E	1	7677	
V15	U	0000000F	1	7678	
V16	U	00000010	1	7679	
V17	U	00000011	1	7680	
V18	U	00000012	1	7681	
V19	U	00000013	1	7682	
V1ADDR	A	00000020	4	531	
V1FUDGE	X	000010F8	16	509	225
V1O1	X	00001160	16	690	701
V1O10	X	00001868	16	1038	1049
V1O100	X	00005EB8	16	4509	4520
V1O101	X	00005F80	16	4547	4558
V1O102	X	00006048	16	4585	4596
V1O103	X	00006110	16	4624	4635
V1O104	X	000061D8	16	4662	4673

SYMBOL	TYPE	VALUE	LENGTH	DEFN	REFERENCES
V1O105	X	000062A0	16	4700	4711
V1O106	X	00006368	16	4739	4750
V1O107	X	00006430	16	4777	4788
V1O108	X	000064F8	16	4815	4826
V1O109	X	000065C0	16	4857	4868
V1O11	X	00001930	16	1076	1087
V1O110	X	00006688	16	4895	4906
V1O111	X	00006750	16	4933	4944
V1O112	X	00006818	16	4971	4982
V1O113	X	000068E0	16	5009	5020
V1O114	X	000069A8	16	5047	5058
V1O115	X	00006A70	16	5086	5097
V1O116	X	00006B38	16	5124	5135
V1O117	X	00006C00	16	5162	5173
V1O118	X	00006CC8	16	5200	5211
V1O119	X	00006D90	16	5238	5249
V1O12	X	000019F8	16	1114	1125
V1O120	X	00006E58	16	5276	5287
V1O121	X	00006F20	16	5315	5326
V1O122	X	00006FE8	16	5353	5364
V1O123	X	000070B0	16	5391	5402
V1O124	X	00007178	16	5429	5440
V1O125	X	00007240	16	5467	5478
V1O126	X	00007308	16	5505	5516
V1O127	X	000073D0	16	5544	5555
V1O128	X	00007498	16	5582	5593
V1O129	X	00007560	16	5620	5631
V1O13	X	00001AC0	16	1152	1163
V1O130	X	00007628	16	5658	5669
V1O131	X	000076F0	16	5696	5707
V1O132	X	000077B8	16	5734	5745
V1O133	X	00007880	16	5782	5793
V1O134	X	00007948	16	5820	5831
V1O135	X	00007A10	16	5858	5869
V1O136	X	00007AD8	16	5897	5908
V1O137	X	00007BA0	16	5935	5946
V1O138	X	00007C68	16	5973	5984
V1O139	X	00007D30	16	6012	6023
V1O14	X	00001B88	16	1190	1201
V1O140	X	00007DF8	16	6050	6061
V1O141	X	00007EC0	16	6088	6099
V1O142	X	00007F88	16	6127	6138
V1O143	X	00008050	16	6165	6176
V1O144	X	00008118	16	6203	6214
V1O145	X	000081E0	16	6245	6256
V1O146	X	000082A8	16	6283	6294
V1O147	X	00008370	16	6321	6332
V1O148	X	00008438	16	6359	6370
V1O149	X	00008500	16	6397	6408
V1O15	X	00001C50	16	1228	1239
V1O150	X	000085C8	16	6435	6446
V1O151	X	00008690	16	6473	6484
V1O152	X	00008758	16	6511	6522
V1O153	X	00008820	16	6550	6561
V1O154	X	000088E8	16	6588	6599
V1O155	X	000089B0	16	6626	6637

SYMBOL	TYPE	VALUE	LENGTH	DEFN	REFERENCES
V1O156	X	00008A78	16	6664	6675
V1O157	X	00008B40	16	6702	6713
V1O158	X	00008C08	16	6740	6751
V1O159	X	00008CD0	16	6778	6789
V1O16	X	00001D18	16	1267	1278
V1O160	X	00008D98	16	6816	6827
V1O161	X	00008E60	16	6855	6866
V1O162	X	00008F28	16	6893	6904
V1O163	X	00008FF0	16	6931	6942
V1O164	X	000090B8	16	6969	6980
V1O165	X	00009180	16	7007	7018
V1O166	X	00009248	16	7045	7056
V1O167	X	00009310	16	7083	7094
V1O168	X	000093D8	16	7121	7132
V1O169	X	000094A0	16	7160	7171
V1O17	X	00001DE0	16	1305	1316
V1O170	X	00009568	16	7198	7209
V1O171	X	00009630	16	7236	7247
V1O172	X	000096F8	16	7274	7285
V1O173	X	000097C0	16	7312	7323
V1O174	X	00009888	16	7350	7361
V1O175	X	00009950	16	7388	7399
V1O176	X	00009A18	16	7426	7437
V1O18	X	00001EA8	16	1343	1354
V1O19	X	00001F70	16	1381	1392
V1O2	X	00001228	16	728	739
V1O20	X	00002038	16	1419	1430
V1O21	X	00002100	16	1457	1468
V1O22	X	000021C8	16	1496	1507
V1O23	X	00002290	16	1534	1545
V1O24	X	00002358	16	1572	1583
V1O25	X	00002420	16	1610	1621
V1O26	X	000024E8	16	1648	1659
V1O27	X	000025B0	16	1686	1697
V1O28	X	00002678	16	1734	1745
V1O29	X	00002740	16	1772	1783
V1O3	X	000012F0	16	766	777
V1O30	X	00002808	16	1810	1821
V1O31	X	000028D0	16	1849	1860
V1O32	X	00002998	16	1887	1898
V1O33	X	00002A60	16	1925	1936
V1O34	X	00002B28	16	1964	1975
V1O35	X	00002BF0	16	2002	2013
V1O36	X	00002CB8	16	2040	2051
V1O37	X	00002D80	16	2082	2093
V1O38	X	00002E48	16	2120	2131
V1O39	X	00002F10	16	2158	2169
V1O4	X	000013B8	16	805	816
V1O40	X	00002FD8	16	2196	2207
V1O41	X	000030A0	16	2234	2245
V1O42	X	00003168	16	2272	2283
V1O43	X	00003230	16	2310	2321
V1O44	X	000032F8	16	2348	2359
V1O45	X	000033C0	16	2387	2398
V1O46	X	00003488	16	2425	2436
V1O47	X	00003550	16	2463	2474

SYMBOL	TYPE	VALUE	LENGTH	DEFN	REFERENCES
V1048	X	00003618	16	2501	2512
V1049	X	000036E0	16	2539	2550
V105	X	00001480	16	843	854
V1050	X	000037A8	16	2577	2588
V1051	X	00003870	16	2615	2626
V1052	X	00003938	16	2653	2664
V1053	X	00003A00	16	2692	2703
V1054	X	00003AC8	16	2730	2741
V1055	X	00003B90	16	2768	2779
V1056	X	00003C58	16	2806	2817
V1057	X	00003D20	16	2844	2855
V1058	X	00003DE8	16	2882	2893
V1059	X	00003EB0	16	2920	2931
V106	X	00001548	16	881	892
V1060	X	00003F78	16	2958	2969
V1061	X	00004040	16	3006	3017
V1062	X	00004108	16	3044	3055
V1063	X	000041D0	16	3082	3093
V1064	X	00004298	16	3121	3132
V1065	X	00004360	16	3159	3170
V1066	X	00004428	16	3197	3208
V1067	X	000044F0	16	3236	3247
V1068	X	000045B8	16	3274	3285
V1069	X	00004680	16	3312	3323
V107	X	00001610	16	920	931
V1070	X	00004748	16	3351	3362
V1071	X	00004810	16	3389	3400
V1072	X	000048D8	16	3427	3438
V1073	X	000049A0	16	3469	3480
V1074	X	00004A68	16	3507	3518
V1075	X	00004B30	16	3545	3556
V1076	X	00004BF8	16	3583	3594
V1077	X	00004CC0	16	3621	3632
V1078	X	00004D88	16	3659	3670
V1079	X	00004E50	16	3698	3709
V108	X	000016D8	16	958	969
V1080	X	00004F18	16	3736	3747
V1081	X	00004FE0	16	3774	3785
V1082	X	000050A8	16	3812	3823
V1083	X	00005170	16	3850	3861
V1084	X	00005238	16	3888	3899
V1085	X	00005300	16	3927	3938
V1086	X	000053C8	16	3965	3976
V1087	X	00005490	16	4003	4014
V1088	X	00005558	16	4041	4052
V1089	X	00005620	16	4079	4090
V109	X	000017A0	16	996	1007
V1090	X	000056E8	16	4117	4128
V1091	X	000057B0	16	4156	4167
V1092	X	00005878	16	4194	4205
V1093	X	00005940	16	4232	4243
V1094	X	00005A08	16	4270	4281
V1095	X	00005AD0	16	4308	4319
V1096	X	00005B98	16	4346	4357
V1097	X	00005C60	16	4394	4405
V1098	X	00005D28	16	4432	4443

SYMBOL	TYPE	VALUE	LENGTH	DEFN	REFERENCES
V1O99	X	00005DF0	16	4470	4481
V1OUTPUT	X	00000048	16	537	235
V2	U	00000002	1	7665	
V20	U	00000014	1	7683	
V21	U	00000015	1	7684	698 701 736 739 774 777 813 816 851 854 889 892 928 931 966 969 1004 1007 1046 1049 1084 1087 1122 1125 1160 1163 1198 1201 1236 1239 1275 1278 1313 1316 1351 1354 1389 1392 1427 1430 1465 1468 1504 1507 1542 1545 1580 1583 1618 1621 1656 1659 1694 1697 1742 1745 1780 1783 1818 1821 1857 1860 1895 1898 1933 1936 1972 1975 2010 2013 2048 2051 2090 2093 2128 2131 2166 2169 2204 2207 2242 2245 2280 2283 2318 2321 2356 2359 2395 2398 2433 2436 2471 2474 2509 2512 2547 2550 2585 2588 2623 2626 2661 2664 2700 2703 2738 2741 2776 2779 2814 2817 2852 2855 2890 2893 2928 2931 2966 2969 3014 3017 3052 3055 3090 3093 3129 3132 3167 3170 3205 3208 3244 3247 3282 3285 3320 3323 3359 3362 3397 3400 3435 3438 3477 3480 3515 3518 3553 3556 3591 3594 3629 3632 3667 3670 3706 3709 3744 3747 3782 3785 3820 3823 3858 3861 3896 3899 3935 3938 3973 3976 4011 4014 4049 4052 4087 4090 4125 4128 4164 4167 4202 4205 4240 4243 4278 4281 4316 4319 4354 4357 4402 4405 4440 4443 4478 4481 4517 4520 4555 4558 4593 4596 4632 4635 4670 4673 4708 4711 4747 4750 4785 4788 4823 4826 4865 4868 4903 4906 4941 4944 4979 4982 5017 5020 5055 5058 5094 5097 5132 5135 5170 5173 5208 5211 5246 5249 5284 5287 5323 5326 5361 5364 5399 5402 5437 5440 5475 5478 5513 5516 5552 5555 5590 5593 5628 5631 5666 5669 5704 5707 5742 5745 5790 5793 5828 5831 5866 5869 5905 5908 5943 5946 5981 5984 6020 6023 6058 6061 6096 6099 6135 6138 6173 6176 6211 6214 6253 6256 6291 6294 6329 6332 6367 6370 6405 6408 6443 6446 6481 6484 6519 6522 6558 6561 6596 6599 6634 6637 6672 6675 6710 6713 6748 6751 6786 6789 6824 6827 6863 6866 6901 6904 6939 6942 6977 6980 7015 7018 7053 7056 7091 7094 7129 7132 7168 7171 7206 7209 7244 7247 7282 7285 7320 7323 7358 7361 7396 7399 7434 7437
V22	U	00000016	1	7685	225 695 698 733 736 771 774 810 813 848 851 886 889 925 928 963 966 1001 1004 1043 1046 1081 1084 1119 1122 1157 1160 1195 1198 1233 1236 1272 1275 1310 1313 1348 1351 1386 1389 1424 1427 1462 1465 1501 1504 1539 1542 1577 1580 1615 1618 1653 1656 1691 1694 1739 1742 1777 1780 1815 1818 1854 1857 1892 1895 1930 1933 1969 1972 2007 2010 2045 2048 2087 2090 2125 2128 2163 2166 2201 2204 2239 2242 2277 2280 2315 2318 2353 2356 2392 2395 2430 2433 2468 2471 2506 2509 2544 2547 2582 2585 2620 2623 2658 2661 2697 2700 2735 2738 2773 2776 2811 2814 2849 2852 2887 2890 2925 2928 2963 2966 3011 3014 3049 3052 3087 3090 3126 3129 3164 3167 3202 3205 3241 3244 3279 3282 3317 3320 3356 3359 3394 3397 3432 3435 3474 3477 3512 3515 3550 3553 3588 3591 3626 3629 3664 3667 3703 3706 3741 3744 3779 3782 3817 3820 3855 3858 3893 3896 3932 3935 3970 3973 4008 4011 4046 4049 4084 4087 4122 4125 4161 4164 4199 4202 4237 4240 4275 4278 4313 4316 4351 4354 4399 4402 4437 4440 4475 4478 4514 4517 4552 4555 4590 4593 4629 4632 4667 4670 4705 4708 4744 4747 4782 4785 4820 4823 4862 4865 4900 4903 4938 4941 4976 4979 5014 5017 5052 5055 5091 5094 5129 5132 5167 5170 5205 5208 5243 5246 5281 5284 5320 5323 5358 5361 5396 5399 5434 5437 5472 5475 5510 5513 5549 5552 5587 5590 5625 5628 5663 5666 5701 5704 5739 5742 5787 5790 5825 5828 5863 5866 5902 5905 5940 5943 5978 5981 6017 6020 6055 6058 6093 6096 6132 6135 6170 6173 6208 6211 6250 6253 6288 6291 6326 6329 6364 6367 6402 6405 6440 6443 6478 6481 6516 6519 6555 6558 6593 6596 6631 6634 6669

SYMBOL	TYPE	VALUE	LENGTH	DEFN	REFERENCES												
					6672	6707	6710	6745	6748	6783	6786	6821	6824	6860	6863	6898	6901
					6936	6939	6974	6977	7012	7015	7050	7053	7088	7091	7126	7129	7165
					7168	7203	7206	7241	7244	7279	7282	7317	7320	7355	7358	7393	7396
					7431	7434											
V23	U	00000017	1	7686	697	698	735	736	773	774	812	813	850	851	888	889	927
					928	965	966	1003	1004	1045	1046	1083	1084	1121	1122	1159	1160
					1197	1198	1235	1236	1274	1275	1312	1313	1350	1351	1388	1389	1426
					1427	1464	1465	1503	1504	1541	1542	1579	1580	1617	1618	1655	1656
					1693	1694	1741	1742	1779	1780	1817	1818	1856	1857	1894	1895	1932
					1933	1971	1972	2009	2010	2047	2048	2089	2090	2127	2128	2165	2166
					2203	2204	2241	2242	2279	2280	2317	2318	2355	2356	2394	2395	2432
					2433	2470	2471	2508	2509	2546	2547	2584	2585	2622	2623	2660	2661
					2699	2700	2737	2738	2775	2776	2813	2814	2851	2852	2889	2890	2927
					2928	2965	2966	3013	3014	3051	3052	3089	3090	3128	3129	3166	3167
					3204	3205	3243	3244	3281	3282	3319	3320	3358	3359	3396	3397	3434
					3435	3476	3477	3514	3515	3552	3553	3590	3591	3628	3629	3666	3667
					3705	3706	3743	3744	3781	3782	3819	3820	3857	3858	3895	3896	3934
					3935	3972	3973	4010	4011	4048	4049	4086	4087	4124	4125	4163	4164
					4201	4202	4239	4240	4277	4278	4315	4316	4353	4354	4401	4402	4439
					4440	4477	4478	4516	4517	4554	4555	4592	4593	4631	4632	4669	4670
					4707	4708	4746	4747	4784	4785	4822	4823	4864	4865	4902	4903	4940
					4941	4978	4979	5016	5017	5054	5055	5093	5094	5131	5132	5169	5170
					5207	5208	5245	5246	5283	5284	5322	5323	5360	5361	5398	5399	5436
					5437	5474	5475	5512	5513	5551	5552	5589	5590	5627	5628	5665	5666
					5703	5704	5741	5742	5789	5790	5827	5828	5865	5866	5904	5905	5942
					5943	5980	5981	6019	6020	6057	6058	6095	6096	6134	6135	6172	6173
					6210	6211	6252	6253	6290	6291	6328	6329	6366	6367	6404	6405	6442
					6443	6480	6481	6518	6519	6557	6558	6595	6596	6633	6634	6671	6672
					6709	6710	6747	6748	6785	6786	6823	6824	6862	6863	6900	6901	6938
					6939	6976	6977	7014	7015	7052	7053	7090	7091	7128	7129	7167	7168
					7205	7206	7243	7244	7281	7282	7319	7320	7357	7358	7395	7396	7433
					7434												
V24	U	00000018	1	7687													
V25	U	00000019	1	7688													
V26	U	0000001A	1	7689													
V27	U	0000001B	1	7690													
V28	U	0000001C	1	7691													
V29	U	0000001D	1	7692													
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					2200	2238	2276	2314	2352	2391	2429	2467	2505	2543	2581	2619	2657
					2696	2734	2772	2810	2848	2886	2924	2962	3010	3048	3086	3125	3163
					3201	3240	3278	3316	3355	3393	3431	3473	3511	3549	3587	3625	3663
					3702	3740	3778	3816	3854	3892	3931	3969	4007	4045	4083	4121	4160
					4198	4236	4274	4312	4350	4398	4436	4474	4513	4551	4589	4628	4666
					4704	4743	4781	4819	4861	4899	4937	4975	5013	5051	5090	5128	5166
					5204	5242	5280	5319	5357	5395	5433	5471	5509	5548	5586	5624	5662
					5700	5738	5786	5824	5862	5901	5939	5977	6016	6054	6092	6131	6169
					6207	6249	6287	6325	6363	6401	6439	6477	6515	6554	6592	6630	6668
					6706	6744	6782	6820	6859	6897	6935	6973	7011	7049	7087	7125	7164
					7202	7240	7278	7316	7354	7392	7430						
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V30	U	0000001E	1	7693													
V31	U	0000001F	1	7694													
V3ADDR	A	00000028	4	533	696	734	772	811	849	887	926	964	1002	1044	1082	1120	1158

SYMBOL	TYPE	VALUE	LENGTH	DEFN	REFERENCES
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					2202 2240 2278 2316 2354 2393 2431 2469 2507 2545 2583 2621 2659
					2698 2736 2774 2812 2850 2888 2926 2964 3012 3050 3088 3127 3165
					3203 3242 3280 3318 3357 3395 3433 3475 3513 3551 3589 3627 3665
					3704 3742 3780 3818 3856 3894 3933 3971 4009 4047 4085 4123 4162
					4200 4238 4276 4314 4352 4400 4438 4476 4515 4553 4591 4630 4668
					4706 4745 4783 4821 4863 4901 4939 4977 5015 5053 5092 5130 5168
					5206 5244 5282 5321 5359 5397 5435 5473 5511 5550 5588 5626 5664
					5702 5740 5788 5826 5864 5903 5941 5979 6018 6056 6094 6133 6171
					6209 6251 6289 6327 6365 6403 6441 6479 6517 6556 6594 6632 6670
					6708 6746 6784 6822 6861 6899 6937 6975 7013 7051 7089 7127 7166
					7204 7242 7280 7318 7356 7394 7432
V4	U	00000004	1	7667	
V5	U	00000005	1	7668	
V6	U	00000006	1	7669	
V7	U	00000007	1	7670	
V8	U	00000008	1	7671	
V9	U	00000009	1	7672	
X0001	U	000002A8	1	193	181 194
X1	F	00001180	4	693	674
X10	F	00001888	4	1041	1022
X100	F	00005ED8	4	4512	4493
X101	F	00005FA0	4	4550	4531
X102	F	00006068	4	4588	4569
X103	F	00006130	4	4627	4608
X104	F	000061F8	4	4665	4646
X105	F	000062C0	4	4703	4684
X106	F	00006388	4	4742	4723
X107	F	00006450	4	4780	4761
X108	F	00006518	4	4818	4799
X109	F	000065E0	4	4860	4841
X11	F	00001950	4	1079	1060
X110	F	000066A8	4	4898	4879
X111	F	00006770	4	4936	4917
X112	F	00006838	4	4974	4955
X113	F	00006900	4	5012	4993
X114	F	000069C8	4	5050	5031
X115	F	00006A90	4	5089	5070
X116	F	00006B58	4	5127	5108
X117	F	00006C20	4	5165	5146
X118	F	00006CE8	4	5203	5184
X119	F	00006DB0	4	5241	5222
X12	F	00001A18	4	1117	1098
X120	F	00006E78	4	5279	5260
X121	F	00006F40	4	5318	5299
X122	F	00007008	4	5356	5337
X123	F	000070D0	4	5394	5375
X124	F	00007198	4	5432	5413
X125	F	00007260	4	5470	5451
X126	F	00007328	4	5508	5489
X127	F	000073F0	4	5547	5528
X128	F	000074B8	4	5585	5566
X129	F	00007580	4	5623	5604
X13	F	00001AE0	4	1155	1136
X130	F	00007648	4	5661	5642

SYMBOL	TYPE	VALUE	LENGTH	DEFN	REFERENCES
X131	F	00007710	4	5699	5680
X132	F	000077D8	4	5737	5718
X133	F	000078A0	4	5785	5766
X134	F	00007968	4	5823	5804
X135	F	00007A30	4	5861	5842
X136	F	00007AF8	4	5900	5881
X137	F	00007BC0	4	5938	5919
X138	F	00007C88	4	5976	5957
X139	F	00007D50	4	6015	5996
X14	F	00001BA8	4	1193	1174
X140	F	00007E18	4	6053	6034
X141	F	00007EE0	4	6091	6072
X142	F	00007FA8	4	6130	6111
X143	F	00008070	4	6168	6149
X144	F	00008138	4	6206	6187
X145	F	00008200	4	6248	6229
X146	F	000082C8	4	6286	6267
X147	F	00008390	4	6324	6305
X148	F	00008458	4	6362	6343
X149	F	00008520	4	6400	6381
X15	F	00001C70	4	1231	1212
X150	F	000085E8	4	6438	6419
X151	F	000086B0	4	6476	6457
X152	F	00008778	4	6514	6495
X153	F	00008840	4	6553	6534
X154	F	00008908	4	6591	6572
X155	F	000089D0	4	6629	6610
X156	F	00008A98	4	6667	6648
X157	F	00008B60	4	6705	6686
X158	F	00008C28	4	6743	6724
X159	F	00008CF0	4	6781	6762
X16	F	00001D38	4	1270	1251
X160	F	00008DB8	4	6819	6800
X161	F	00008E80	4	6858	6839
X162	F	00008F48	4	6896	6877
X163	F	00009010	4	6934	6915
X164	F	000090D8	4	6972	6953
X165	F	000091A0	4	7010	6991
X166	F	00009268	4	7048	7029
X167	F	00009330	4	7086	7067
X168	F	000093F8	4	7124	7105
X169	F	000094C0	4	7163	7144
X17	F	00001E00	4	1308	1289
X170	F	00009588	4	7201	7182
X171	F	00009650	4	7239	7220
X172	F	00009718	4	7277	7258
X173	F	000097E0	4	7315	7296
X174	F	000098A8	4	7353	7334
X175	F	00009970	4	7391	7372
X176	F	00009A38	4	7429	7410
X18	F	00001EC8	4	1346	1327
X19	F	00001F90	4	1384	1365
X2	F	00001248	4	731	712
X20	F	00002058	4	1422	1403
X21	F	00002120	4	1460	1441
X22	F	000021E8	4	1499	1480

SYMBOL	TYPE	VALUE	LENGTH	DEFN	REFERENCES
X23	F	000022B0	4	1537	1518
X24	F	00002378	4	1575	1556
X25	F	00002440	4	1613	1594
X26	F	00002508	4	1651	1632
X27	F	000025D0	4	1689	1670
X28	F	00002698	4	1737	1718
X29	F	00002760	4	1775	1756
X3	F	00001310	4	769	750
X30	F	00002828	4	1813	1794
X31	F	000028F0	4	1852	1833
X32	F	000029B8	4	1890	1871
X33	F	00002A80	4	1928	1909
X34	F	00002B48	4	1967	1948
X35	F	00002C10	4	2005	1986
X36	F	00002CD8	4	2043	2024
X37	F	00002DA0	4	2085	2066
X38	F	00002E68	4	2123	2104
X39	F	00002F30	4	2161	2142
X4	F	000013D8	4	808	789
X40	F	00002FF8	4	2199	2180
X41	F	000030C0	4	2237	2218
X42	F	00003188	4	2275	2256
X43	F	00003250	4	2313	2294
X44	F	00003318	4	2351	2332
X45	F	000033E0	4	2390	2371
X46	F	000034A8	4	2428	2409
X47	F	00003570	4	2466	2447
X48	F	00003638	4	2504	2485
X49	F	00003700	4	2542	2523
X5	F	000014A0	4	846	827
X50	F	000037C8	4	2580	2561
X51	F	00003890	4	2618	2599
X52	F	00003958	4	2656	2637
X53	F	00003A20	4	2695	2676
X54	F	00003AE8	4	2733	2714
X55	F	00003BB0	4	2771	2752
X56	F	00003C78	4	2809	2790
X57	F	00003D40	4	2847	2828
X58	F	00003E08	4	2885	2866
X59	F	00003ED0	4	2923	2904
X6	F	00001568	4	884	865
X60	F	00003F98	4	2961	2942
X61	F	00004060	4	3009	2990
X62	F	00004128	4	3047	3028
X63	F	000041F0	4	3085	3066
X64	F	000042B8	4	3124	3105
X65	F	00004380	4	3162	3143
X66	F	00004448	4	3200	3181
X67	F	00004510	4	3239	3220
X68	F	000045D8	4	3277	3258
X69	F	000046A0	4	3315	3296
X7	F	00001630	4	923	904
X70	F	00004768	4	3354	3335
X71	F	00004830	4	3392	3373
X72	F	000048F8	4	3430	3411
X73	F	000049C0	4	3472	3453

SYMBOL	TYPE	VALUE	LENGTH	DEFN	REFERENCES
X74	F	00004A88	4	3510	3491
X75	F	00004B50	4	3548	3529
X76	F	00004C18	4	3586	3567
X77	F	00004CE0	4	3624	3605
X78	F	00004DA8	4	3662	3643
X79	F	00004E70	4	3701	3682
X8	F	000016F8	4	961	942
X80	F	00004F38	4	3739	3720
X81	F	00005000	4	3777	3758
X82	F	000050C8	4	3815	3796
X83	F	00005190	4	3853	3834
X84	F	00005258	4	3891	3872
X85	F	00005320	4	3930	3911
X86	F	000053E8	4	3968	3949
X87	F	000054B0	4	4006	3987
X88	F	00005578	4	4044	4025
X89	F	00005640	4	4082	4063
X9	F	000017C0	4	999	980
X90	F	00005708	4	4120	4101
X91	F	000057D0	4	4159	4140
X92	F	00005898	4	4197	4178
X93	F	00005960	4	4235	4216
X94	F	00005A28	4	4273	4254
X95	F	00005AF0	4	4311	4292
X96	F	00005BB8	4	4349	4330
X97	F	00005C80	4	4397	4378
X98	F	00005D48	4	4435	4416
X99	F	00005E10	4	4473	4454
XC0001	U	000002D0	1	207	199
ZVE7TST	J	00000000	40304	120	123 125 129 133 454 121
=A(E7TESTS)	A	0000056C	4	431	213
=AL2(L'MSGMSG)	R	0000057A	2	435	380
=D'1'	D	00000560	8	429	251
=F'1'	F	00000574	4	433	289 331
=F'64'	F	00000568	4	430	198
=H'0'	H	00000578	2	434	375
=XL4'3'	X	00000570	4	432	258

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 MACRO    DEFN   REFERENCES

FCHECK     73    180
PTTABLE   619   7453
VRR_B     556    671    709    747    786    824    862    901    939    977   1019   1057   1095   1133   1171   1209   1248   1286
               1324   1362   1400   1438   1477   1515   1553   1591   1629   1667   1715   1753   1791   1830   1868   1906   1945
               1983   2021   2063   2101   2139   2177   2215   2253   2291   2329   2368   2406   2444   2482   2520   2558   2596
               2634   2673   2711   2749   2787   2825   2863   2901   2939   2987   3025   3063   3102   3140   3178   3217   3255
               3293   3332   3370   3408   3450   3488   3526   3564   3602   3640   3679   3717   3755   3793   3831   3869   3908
               3946   3984   4022   4060   4098   4137   4175   4213   4251   4289   4327   4375   4413   4451   4490   4528   4566
               4605   4643   4681   4720   4758   4796   4838   4876   4914   4952   4990   5028   5067   5105   5143   5181   5219
               5257   5296   5334   5372   5410   5448   5486   5525   5563   5601   5639   5677   5715   5763   5801   5839   5878
               5916   5954   5993   6031   6069   6108   6146   6184   6226   6264   6302   6340   6378   6416   6454   6492   6531
               6569   6607   6645   6683   6721   6759   6797   6836   6874   6912   6950   6988   7026   7064   7102   7141   7179
               7217   7255   7293   7331   7369   7407
```

```
   DESC      SYMBOL    SIZE      POS         ADDR

Entry: 0

Image       IMAGE     40304  0000-9D6F  0000-9D6F
  Region              40304  0000-9D6F  0000-9D6F
    CSECT   ZVE7TST   40304  0000-9D6F  0000-9D6F
```

```
   STMT                          FILE NAME
1     /home/tn529/sharedvfp/tests/zvector-e7-16-PackCompare.asm

** NO ERRORS FOUND **
```