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                .TITLE INDEX AND LIMIT REGISTER TEST FOR SYSTEM EXERCISER.
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        /DIGITAL EQUIPMENT CORPORATION MAYNARD, MASS.  01754
        /PROGRAMMED BY:  EARL L. BOUSE
        /
        /
        /THIS PROGRAM IS DESIGNED TO EXERCISE THE 'INDEX' AND 'LIMIT'
        /REGISTERS OF THE PDP-15. PROVISION IS MADE BY MEANS OF
        /'PARAMETER' MODE TO TEST 'INDEXED ADDRESSING' OF ALL ADDITIONAL
        /MEMORY ABOVE '32K' UP TO '128K'.  THE LOCATIONS OF 'USERSW+1'
        /+2 AND +3 MAY BE MODIFIED TO REPRESENT THE AVAILABLE
        /'FIELDS' IN 'BLOCK1', 'BLOCK2' AND 'BLOCK3' RESPECTIVELY.
        /TO REPRESENT THAT FIELDS '0' AND '7' ARE AVAILABLE IN
        /'BLOCK1', 'USERSW+1' WOULD CONTAIN '201'.  WHERE
        /FIELD '0' IS REPRESENTED BY THE '1' (BIT 17) AND FIELD '7'
        /IS REPRESENTED BY THE '2' (BIT 10).
        /PROVISION IS ALSO MADE BY 'PARAMETER' MODE TO LOOP
        /ON ANY SPECIFIED TEST (1-12) VIA PLACING THE DESIRED
        /TEST NUMBER IN BITS '7 TO 11' OF THE 'USERSW' AND
        /SETTING BIT '2' TO A '1'.
        /FOURTEEN (14) POSSIBLE ERRORS MAY BE DETECTED BY
        /THE 'XRLR' TEST.
        /
        /
        /1);    PROCESSOR WON'T ENTER 'PAGE' MODE.
        /2);    PROCESSOR WON'T ENTER 'BANK' MODE.
        /3);    BAD DATA TRANSFER 'XR TO LR'.
        /4);    BAD DATA TRANSFER 'LR TO XR'.
        /5);    BAD DATA TRANSFER 'AC TO LR'.
        /6);    BAD DATA TRANSFER 'AC TO XR'.
        /7);    BAD DATA TRANSFER 'XR TO AC'.
        /10);   BAD DATA TRANSFER 'LR TO AC'.
        /11);   'AC' FAILURE.
        /12);   'XR' FAILURE.
        /13);   'LR' FAILURE.
        /14);   BAD DATA TRANSFER TO 'LOC.0' OF EXTENDED FIELD.
        /15);   BAD DATA TRANSFER TO 'LOC.1' OF EXTENDED FIELD.
        /16);   BAD DATA TRANSFER TO 'LOC.7777' OF EXTENDED FIELD.
                /
                .EJECT
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                        .EBREL
          707764 A    EBA=707764
          707762 A    EPA=707762
          707761 A    SBA=707761
          707741 A    SK15=707741
          730000 A    PLA=730000
          726000 A    PXL=726000
          724000 A    PXA=724000
          721000 A    PAX=721000
          722000 A    PAL=722000
          731000 A    PLX=731000
          735000 A    CLX=735000
          734000 A    CLAC=734000
          736000 A    CLR=736000
                      /
00000 R 000000 A    USERSW  0                       /SETUP AS A 'CP' TEST.
00001 R 000000 A            0                       /PARAMETER, BLOCK #1
00002 R 000000 A            0                       /PARAMETER, BLOCK #2
00003 R 000000 A            0                       /PARAMETER, BLOCK #3
00004 R 000054 R            .DSA    SERVCE
00005 R 000031 R            .DSA    INIT
00006 R 302257 A            .SIXBT  'XR/LR '
00007 R 142240 A
00010 R 004000 A            4000                    /DATA 'SW6' INHIBITS XR/LR TEST.
00011 R       A             .BLOCK 7
00020 R 000000 A    SYSERR  0                       /ERROR INDICATOR FOR MONITOR
00021 R 000000 A            0                       /W.C. FOR DATA ERROR CODES
00022 R 000000 A    ERCODE  0                       /#1, FAILING TEST NO.
00023 R 000000 A            0                       /#2, ERROR CODE
00024 R 000000 A            0                       /#3, FAILING TEST ADDRESS
00025 R 000000 A            0                       /#4, 'BLOCK' AND 'FIELD' IN WHICH TEST FAILED.
00026 R 000000 A            0                       /#5, CONTENTS OF 'AC' ON FAILING PASS.
00027 R 000000 A            0                       /#6, CONTENTS OF 'LR' ON FAILING PASS.
00030 R 000000 A            0                       /#7, CONTENTS OF 'XR' ON FAILING PASS.
                        .EJECT
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```
                        /INITIALIZE THE 'INDEX, LIMIT REGISTER' TEST.
                                /
00031 R 000000 A    INIT    0
00032 R 707764 A            EBA                     /ENABLE BANK ADDRESSING
00033 R 200031 R            LAC     INIT
00034 R 040054 R            DAC     SERVCE
00035 R 140020 R            DZM     SYSERR          /CLEAR ERROR LOCATIONS
00036 R 140021 R            DZM     SYSERR+1
00037 R 140022 R            DZM     ERCODE
00040 R 142630 R            DZM     PARMODE         /CLEAR PARAMETER INDICATOR
00041 R 142631 R            DZM     EXDMODE         /CLEAR EXTEND MODE INDICATOR
00042 R 142624 R            DZM     PAGESW          /CLEAR PAGE SW INDICATOR.
00043 R 202701 R            LAC     (TST1
00044 R 040077 R            DAC     DSTSW1          /SET DISTRIBUTION SW FOR 1ST TEST.
00045 R 102561 R            JMS     HOLDSW          /CHECK FOR THE HOLD SWITCH
00046 R 102337 R            JMS     CKPAR1          /CHECK PARAMETER FOR SELECTED TEST
00047 R 777773 A            LAW     -5
00050 R 040020 R            DAC     SYSERR
00051 R 777760 A            LAW     -20
00052 R 042617 R            DAC     RUNCTR
00053 R 620031 R            JMP*    INIT
                        /SERVICE ENTRANCE FOR INDEX, LIMIT REGISTER TEST
                                /
00054 R 000000 A    SERVCE  0
00055 R 707764 A            EBA
00056 R 042612 R            DAC     SAVEAC          /SAVE CONTENTS OF AC
00057 R 202627 R            LAC     SAVXR
00060 R 721000 A            PAX                     /RESTORE CONTENTS OF XR
00061 R 200054 R            LAC     SERVCE
00062 R 502702 R            AND     (70000          /MASK FIELD BITS.
00063 R 042635 R            DAC     FIELDA
00064 R 202626 R            LAC     SAVLR
00065 R 722000 A            PAL                     /RESTORE CONTENTS OF LR
00066 R 202624 R            LAC     PAGESW
00067 R 741200 A            SNA                     /WAS MACHINE IN PAGE MODE.
00070 R 600075 R            JMP     SERV1
00071 R 707762 A            EPA                     /YES, ENABLE PAGE ADDRESSING.
                            .DBREL
00072 R 142624 R            DZM     PAGESW
00073 R 202614 R            LAC     SAVAAC          /RESTORE AC FROM A PREVIOUS ERROR
00074 R 620077 R            JMP*    DSTSW1          /DISTRIBUTION SWITCH
                            .EBREL
00075 R 202614 R    SERV1   LAC     SAVAAC
00076 R 620077 R            JMP*    DSTSW1
00077 R 000000 A    DSTSW1  0
00100 R 102561 R    TST1    JMS     HOLDSW
00101 R 102356 R            JMS     UPDATE          /UPDATE TEST NO.
00102 R 000100 A            100                     /= TO TST1
00103 R 707762 A            EPA                     /SET TO PAGE MODE
00104 R 707761 A            SBA                     /SKIP IF IN BANK MODE
                            .DBREL
00105 R 600110 R            JMP     .+3
                            /
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                .EJECT
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00106 R 102466 R     ER5      JMS      ERRMES          /ERROR, SHOULD BE IN PAGE MODE
00107 R 000001 A              1                        /ERROR 1
                              .EBREL
00110 R 707764 A              EBA                      /ENABLE BANK MODE
00111 R 707761 A              SBA                      /ERROR, SHOULD BE IN BANK MODE
00112 R 741000 A              SKP                      /ERROR 2
00113 R 600116 R              JMP      .+3
00114 R 102466 R     ER4      JMS      ERRMES
00115 R 000002 A              2
                    /TEST BASIC DATA TRANSFERS WITH ONES AND ZEROES
00116 R 750001 A              CLC                      /ALL ONES IN AC
00117 R 722000 A              PAL                      /PLACE AC IN LR
00120 R 750000 A              CLA
00121 R 730000 A              PLA                      /PLACE LR IN AC
00122 R 542703 R              SAD      (777777         /SKIP IF AC IS NOT ALL ONES
00123 R 600126 R              JMP      .+3
00124 R 102466 R     ER13     JMS      ERRMES          /BAD (1) DATA TRANSFER
00125 R 000010 A              10                       /ERROR 8, LR TO AC
00126 R 750000 A              CLA
00127 R 722000 A              PAL                      /PLACE AC IN LR
00130 R 730000 A              PLA                      /PLACE LR IN AC
00131 R 741200 A              SNA
00132 R 600135 R              JMP      .+3
00133 R 102466 R     ER14     JMS      ERRMES          /BAD (0) DATA TRANSFER
00134 R 000010 A              10                       /ERROR 8, LR TO AC
00135 R 750001 A              CLC                      /ALL ONES IN AC
00136 R 721000 A              PAX                      /PLACE AC IN XR
00137 R 750000 A              CLA
00140 R 724000 A              PXA                      /PLACE XR IN AC
00141 R 542703 R              SAD      (777777         /SKIP IF NOT ALL ONES
00142 R 600145 R              JMP      .+3
00143 R 102466 R     ER15     JMS      ERRMES          /BAD (1) DATA TRANSFER
00144 R 000007 A              7                        /ERROR 7, XR TO AC
00145 R 750000 A              CLA
00146 R 721000 A              PAX                      /PLACE AC IN XR
00147 R 724000 A              PXA                      /PLACE XR IN AC
00150 R 741200 A              SNA
00151 R 600154 R              JMP      .+3
00152 R 102466 R     ER20     JMS      ERRMES          /BAD (0) DATA TRANSFER
00153 R 000007 A              7                        /ERROR 7, XR TO AC
00154 R 750001 A              CLC                      /ALL ONES IN THE AC
00155 R 722000 A              PAL                      /PLACE LR IN XR
00156 R 731000 A              PLX                      /PLACE AC IN XR
00157 R 750000 A              CLA
00160 R 722000 A              PAL                      /PLACE AC IN LR
00161 R 730000 A              PLA                      /PLACE LR IN AC
00162 R 741200 A              SNA
00163 R 600166 R              JMP      .+3
00164 R 102466 R              JMS      ERRMES          /BAD (0) DATA TRANSFER
00165 R 000010 A              10                       /ERROR 8, LR TO AC
00166 R 750001 A              CLC                      /ALL ONES IN AC
00167 R 721000 A              PAX                      /PLACE AC IN XR
                              .EJECT
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00170 R 750000 A            CLA
00171 R 724000 A            PXA
00172 R 542703 R            SAD     (777777
00173 R 600176 R            JMP     .+3
00174 R 102466 R            JMS     ERRMES          /BAD (1) DATA TRANSFER
00175 R 000007 A            7                       /ERROR 7, XR TO AC
00176 R 750000 A            CLA
00177 R 721000 A            PAX                     /PLACE AC IN XR
00200 R 724000 A            PXA                     /PLACE XR IN AC
00201 R 741200 A            SNA
00202 R 600205 R            JMP     .+3
00203 R 102466 R            JMS     ERRMES          /BAD (0) DATA TRANSFER
00204 R 000007 A            7                       /ERROR 7, XR TO AC
00205 R 750001 A            CLC                     /ALL ONES IN AC
00206 R 722000 A            PAL                     /PLACE AC IN LR
00207 R 731000 A            PLX                     /PLACE LR IN XR
00210 R 750000 A            CLA
00211 R 724000 A            PXA                     /PLACE XR IN AC
00212 R 542703 R            SAD     (777777
00213 R 600216 R            JMP     .+3
00214 R 102466 R    ER21    JMS     ERRMES          /BAD (1) DATA TRANSFER
00215 R 000004 A            4                       /ERROR 4, LR TO XR
00216 R 750000 A            CLA
00217 R 722000 A            PAL                     /PLACE AC IN LR
00220 R 731000 A            PLX                     /PLACE LR IN XR
00221 R 724000 A            PXA
00222 R 741200 A            SNA
00223 R 600226 R            JMP     .+3
00224 R 102466 R    ER22    JMS     ERRMES          /BAD (0) DATA TRANSFER
00225 R 000004 A            4                       /ERROR 4, LR TO XR
00226 R 750001 A            CLC                     /ALL ONES IN AC
00227 R 721000 A            PAX                     /PLACE AC IN XR
00230 R 726000 A            PXL                     /PLACE XR IN LR
00231 R 750000 A            CLA
00232 R 730000 A            PLA                     /PLACE LR IN AC
00233 R 542703 R            SAD     (777777
00234 R 600237 R            JMP     .+3
00235 R 102466 R    ER23    JMS     ERRMES          /BAD (1) DATA TRANSFER
00236 R 000003 A            3                       /ERROR 3, XR TO LR
00237 R 750000 A            CLA
00240 R 721000 A            PAX                     /PLACE AC IN XR
00241 R 726000 A            PXL                     /PLACE XR IN LR
00242 R 730000 A            PLA                     /PLACE LR IN AC
00243 R 741200 A            SNA
00244 R 600247 R            JMP     .+3
00245 R 102466 R    ER24    JMS     ERRMES          /BAD (0) DATA TRANSFER
00246 R 000003 A            3                       /ERROR 3, XR TO LR
00247 R 750001 A            CLC                     /PLACE ONES IN AC
00250 R 722000 A            PAL                     /PLACE AC IN LR
00251 R 542703 R            SAD     (777777
00252 R 600255 R            JMP     .+3
                            .EJECT
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00253 R 102466 R     ER25    JMS     ERRMES
00254 R 000005 A             5                       /ERROR 5, AC TO LR
00255 R 750001 A             CLC
00256 R 721000 A             PAX                     /PLACE AC IN XR
00257 R 724000 A             PXA
00260 R 750000 A             CLA
00261 R 724000 A             PXA
00262 R 542703 R             SAD     (777777
00263 R 600266 R             JMP     .+3
00264 R 102466 R     ER31    JMS     ERRMES          /BAD (1) DATA TRANSFER
00265 R 000010 A             10                      /ERROR 8, XR TO AC
00266 R 750001 A             CLC                     /ALL ONES IN AC
00267 R 722000 A             PAL                     /PLACE AC IN LR
00270 R 730000 A             PLA                     /PLACE LR IN AC
00271 R 750000 A             CLA
00272 R 730000 A             PLA
00273 R 542703 R             SAD     (777777
00274 R 600277 R             JMP     .+3
                             /
00275 R 102466 R     ER32    JMS     ERRMES          /BAD (1) DATA TRANSFER
00276 R 000010 A             10                      /ERROR 8, LR TO AC
00277 R 736000 A             CLR
00300 R 750001 A             CLC
00301 R 721000 A             PAX
00302 R 726000 A             PXL
00303 R 750000 A             CLA
00304 R 724000 A             PXA
00305 R 542703 R             SAD     (777777
00306 R 600311 R             JMP     .+3
00307 R 102466 R     ER33    JMS     ERRMES
00310 R 000007 A             7
00311 R 736000 A             CLR
00312 R 735000 A             CLX
00313 R 750001 A             CLC
00314 R 722000 A             PAL
00315 R 731000 A             PLX
00316 R 750000 A             CLA
00317 R 730000 A             PLA
00320 R 542703 R             SAD     (777777
00321 R 600324 R             JMP     .+3
00322 R 102466 R     ER34    JMS     ERRMES
00323 R 000010 A             10
00324 R 754003 A             CLA!CLL!CMA!CML         /SET AC, LINK TO ALL ONES
00325 R 734000 A             CLAC
00326 R 741200 A             SNA
00327 R 600332 R             JMP     .+3
00330 R 102466 R     ER35    JMS     ERRMES
00331 R 000011 A             11
00332 R 750001 A             CLC
00333 R 721000 A             PAX
00334 R 735000 A             CLX
00335 R 724000 A             PXA
00336 R 741200 A             SNA
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00337 R 600342 R            JMP     .+3
                            .EJECT
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00340 R 102466 R     ER41     JMS      ERRMES
00341 R 000012 A              12
00342 R 750001 A              CLC
00343 R 722000 A              PAL
00344 R 736000 A              CLR
00345 R 730000 A              PLA
00346 R 741200 A              SNA
00347 R 600352 R              JMP      .+3
                              /
00350 R 102466 R     ER42     JMS      ERRMES
00351 R 000013 A              13
00352 R 735000 A              CLX
00353 R 750000 A              CLA
00354 R 722000 A              PAL
00355 R 730000 A              PLA
00356 R 750001 A              CLC
00357 R 722000 A              PAL
00360 R 730000 A              PLA
00361 R 724000 A              PXA
00362 R 741200 A              SNA
00363 R 600366 R              JMP      .+3
00364 R 102466 R     ER43     JMS      ERRMES
00365 R 000013 A              13
00366 R 750001 A              CLC
00367 R 721000 A              PAX
00370 R 722000 A              PAL
00371 R 730000 A              PLA
00372 R 750000 A              CLA
00373 R 722000 A              PAL
00374 R 730000 A              PLA
00375 R 724000 A              PXA
00376 R 542703 R              SAD      (777777
00377 R 600402 R              JMP      .+3
00400 R 102466 R     ER44     JMS      ERRMES
00401 R 000012 A              12
00402 R 736000 A              CLR
00403 R 750000 A              CLA
00404 R 721000 A              PAX
00405 R 724000 A              PXA
00406 R 750001 A              CLC
00407 R 721000 A              PAX
00410 R 730000 A              PLA
00411 R 741200 A              SNA
00412 R 600415 R              JMP      .+3
00413 R 102466 R     ER45     JMS      ERRMES
00414 R 000013 A              13
00415 R 750001 A              CLC
00416 R 722000 A              PAL
00417 R 721000 A              PAX
00420 R 724000 A              PXA
00421 R 750000 A              CLA
00422 R 721000 A              PAX
                              .EJECT
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00423 R 724000 A            PXA
00424 R 730000 A            PLA
00425 R 542703 R            SAD     (777777
00426 R 600431 R            JMP     .+3
00427 R 102466 R    ER50    JMS     ERRMES
00430 R 000013 A            13
00431 R 736000 A            CLR
00432 R 735000 A            CLX
00433 R 750001 A            CLC
00434 R 722000 A            PAL
00435 R 750000 A            CLA
00436 R 731000 A            PLX
00437 R 736000 A            CLR
00440 R 726000 A            PXL
00441 R 741200 A            SNA
00442 R 600445 R            JMP     .+3
00443 R 102466 R    ER51    JMS     ERRMES
00444 R 000012 A            12
00445 R 736000 A            CLR
00446 R 735000 A            CLX
00447 R 750001 A            CLC
00450 R 721000 A            PAX
00451 R 726000 A            PXL
00452 R 735000 A            CLX
00453 R 731000 A            PLX
00454 R 542703 R            SAD     (777777
00455 R 600460 R            JMP     .+3
00456 R 102466 R    ER52    JMS     ERRMES
00457 R 000003 A            3
00460 R 102601 R            JMS     CKHOLD          /CHECK FOR PARAMETER MODE
00461 R 202704 R            LAC     (TST2
00462 R 040077 R            DAC     DSTSW1
00463 R 602554 R            JMP     EXITM5          /EXIT MINUS '5'.
                            /
                    /START 2ND PART OF TEST HERE
                            /
00464 R 102561 R    TST2    JMS     HOLDSW
00465 R 102356 R            JMS     UPDATE          /RESET 'USERSW' FOR 'TST2'
00466 R 000200 A            200                     /= TO TEST 2
00467 R 202705 R            LAC     (525252
00470 R 722000 A            PAL
00471 R 721000 A            PAX
00472 R 734000 A            CLAC
00473 R 730000 A            PLA
00474 R 542705 R            SAD     (525252
00475 R 600500 R            JMP     .+3
00476 R 102466 R    ER53    JMS     ERRMES
00477 R 000005 A            5
00500 R 724000 A            PXA
00501 R 542705 R            SAD     (525252
00502 R 600505 R            JMP     .+3
                            .EJECT
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00503 R 102466 R     ER54    JMS     ERRMES
00504 R 000006 A             6
00505 R 202705 R             LAC     (525252
00506 R 721000 A             PAX
00507 R 736000 A             CLR
00510 R 542705 R             SAD     (525252
00511 R 600514 R             JMP     .+3
00512 R 102466 R     ER55    JMS     ERRMES
00513 R 000013 A             13
00514 R 750000 A             CLA
00515 R 724000 A             PXA
00516 R 542705 R             SAD     (525252
00517 R 600522 R             JMP     .+3
00520 R 102466 R     ER56    JMS     ERRMES
00521 R 000012 A             12
00522 R 202705 R             LAC     (525252
00523 R 722000 A             PAL
00524 R 735000 A             CLX
00525 R 542705 R             SAD     (525252
00526 R 600531 R             JMP     .+3
00527 R 102466 R     ER60    JMS     ERRMES
00530 R 000011 A             11
00531 R 750000 A             CLA
00532 R 730000 A             PLA
00533 R 542705 R             SAD     (525252
00534 R 600537 R             JMP     .+3
00535 R 102466 R     ER61    JMS     ERRMES
00536 R 000013 A             13
00537 R 202706 R             LAC     (252525
00540 R 722000 A             PAL
00541 R 730000 A             PLA
00542 R 542706 R             SAD     (252525
00543 R 600546 R             JMP     .+3
00544 R 102466 R     ER62    JMS     ERRMES
00545 R 000013 A             13
00546 R 202705 R             LAC     (525252
00547 R 722000 A             PAL
00550 R 730000 A             PLA
00551 R 542705 R             SAD     (525252
00552 R 600555 R             JMP     .+3
00553 R 102466 R     ER62A   JMS     ERRMES
00554 R 000013 A             13
00555 R 202705 R             LAC     (525252
00556 R 721000 A             PAX
00557 R 724000 A             PXA
00560 R 542705 R             SAD     (525252
00561 R 600564 R             JMP     .+3
00562 R 102466 R     ER63    JMS     ERRMES
00563 R 000012 A             12
                             .EJECT
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                        /TEST ADDING MAXIMUM AND MINIMUM POSITIVE QUANTITIES TO AC.
                              /
00564 R 735000 A              CLX                       /CLEAR XR, LR, AC
00565 R 736000 A              CLR
00566 R 750000 A              CLA
00567 R 723377 A              AAC+377                   /ADD 377 TO AC
00570 R 542707 R              SAD       (377
00571 R 600574 R              JMP       .+3
00572 R 102466 R    ER64      JMS       ERRMES
00573 R 000011 A              11
00574 R 723000 A              AAC+0
00575 R 542707 R              SAD       (377
00576 R 600601 R              JMP       .+3
00577 R 102466 R    ER65      JMS       ERRMES
00600 R 000011 A              11
00601 R 724000 A              PXA
00602 R 741200 A              SNA
00603 R 600606 R              JMP       .+3
00604 R 102466 R    ER66      JMS       ERRMES
00605 R 000012 A              12
00606 R 730000 A              PLA
00607 R 741200 A              SNA
00610 R 600613 R              JMP       .+3
00611 R 102466 R    ER67      JMS       ERRMES
00612 R 000013 A              13
00613 R 735000 A              CLX
00614 R 736000 A              CLR
00615 R 750000 A              CLA
00616 R 737377 A              AXR+377
00617 R 741200 A              SNA
00620 R 600623 R              JMP       .+3
00621 R 102466 R    ER70      JMS       ERRMES
00622 R 000011 A              11
00623 R 724000 A              PXA
00624 R 542707 R              SAD       (377
00625 R 600630 R              JMP       .+3
00626 R 102466 R    ER71      JMS       ERRMES
00627 R 000012 A              12
00630 R 737000 A              AXR+0
00631 R 724000 A              PXA
00632 R 542707 R              SAD       (377
00633 R 600636 R              JMP       .+3
00634 R 102466 R    ER72      JMS       ERRMES
00635 R 000012 A              12
00636 R 730000 A              PLA
00637 R 741200 A              SNA
00640 R 600643 R              JMP       .+3
                              .EJECT
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00641 R 102466 R     ER73    JMS     ERRMES
00642 R 000013 A             13
00643 R 754000 A             CLA!CLL
00644 R 723777 A             AAC+777
00645 R 542703 R             SAD     (777777
00646 R 600651 R             JMP     .+3
00647 R 102466 R     ER74    JMS     ERRMES
00650 R 777777 A             LAW     -1
00651 R 723400 A             AAC+400
00652 R 542710 R             SAD     (777377
00653 R 600656 R             JMP     .+3
00654 R 102466 R     ER75    JMS     ERRMES
00655 R 000012 A             12
00656 R 735000 A             CLX
00657 R 737777 A             AXR+777
00660 R 724000 A             PXA
00661 R 542703 R             SAD     (777777
00662 R 600665 R             JMP     .+3
00663 R 102466 R     ER76    JMS     ERRMES
00664 R 000012 A             12
00665 R 737400 A             AXR+400
00666 R 724000 A             PXA
00667 R 542710 R             SAD     (777377
00670 R 600673 R             JMP     .+3
00671 R 102466 R     ER77    JMS     ERRMES
00672 R 000012 A             12
00673 R 102601 R             JMS     CKHOLD
00674 R 202711 R             LAC     (TST3
00675 R 040077 R             DAC     DSTSW1
00676 R 602554 R             JMP     EXITM5
                             /
00677 R 102561 R     TST3    JMS     HOLDSW
00700 R 102356 R             JMS     UPDATE
00701 R 000300 A             300
00702 R 735000 A             CLX
00703 R 142620 R             DZM     TEMP1
00704 R 777400 A             LAW     -400
00705 R 042625 R             DAC     MINCYC
00706 R 737001 A     L6.4    AXR+1
00707 R 442620 R             ISZ     TEMP1
00710 R 741000 A             SKP
00711 R 600726 R             JMP     L6.4A
00712 R 724000 A             PXA
00713 R 542620 R             SAD     TEMP1
00714 R 741000 A             SKP
00715 R 600724 R             JMP     ER100
00716 R 102561 R             JMS     HOLDSW
00717 R 442625 R             ISZ     MINCYC
00720 R 600706 R             JMP     L6.4
00721 R 202712 R             LAC     (L6.4-2
00722 R 040077 R             DAC     DSTSW1
00723 R 602554 R             JMP     EXITM5
                             .EJECT
```

```
00724 R 102466 R     ER100    JMS      ERRMES
00725 R 000012 A              12
00726 R 102601 R     L6.4A    JMS      CKHOLD
00727 R 202713 R              LAC      (TST4
00730 R 040077 R              DAC      DSTSW1
00731 R 602554 R              JMP      EXITM5
                              /
                    /TEST 4
                              /
00732 R 102561 R     TST4     JMS      HOLDSW
00733 R 102356 R              JMS      UPDATE
00734 R 000400 A              400
00735 R 724000 A              PXA
00736 R 741200 A              SNA
00737 R 600742 R              JMP      .+3
00740 R 102466 R     ER100A   JMS      ERRMES
00741 R 000012 A              12
00742 R 754000 A              CLA!CLL
00743 R 142620 R              DZM      TEMP1
00744 R 777400 A              LAW      -400
00745 R 042625 R              DAC      MINCYC
00746 R 202620 R              LAC      TEMP1
00747 R 723001 A     L6.5     AAC+1
00750 R 442620 R              ISZ      TEMP1
00751 R 741000 A              SKP
00752 R 600766 R              JMP      L6.6
00753 R 542620 R              SAD      TEMP1
00754 R 741000 A              SKP
00755 R 600764 R              JMP      ER101
00756 R 442625 R              ISZ      MINCYC
00757 R 600747 R              JMP      L6.5
00760 R 102561 R              JMS      HOLDSW
00761 R 202714 R              LAC      (L6.5-3
00762 R 040077 R              DAC      DSTSW1
00763 R 602554 R              JMP      EXITM5
                              /
                              .EJECT
```

```
00764 R 102466 R     ER101   JMS     ERRMES
00765 R 000011 A             11
00766 R 102601 R     L6.6    JMS     CKHOLD
00767 R 202715 R             LAC     (TST5
00770 R 040077 R             DAC     DSTSW1
00771 R 602554 R             JMP     EXITM5
                             /
                     /TEST 5
                             /
00772 R 102561 R     TST5    JMS     HOLDSW
00773 R 102356 R             JMS     UPDATE
00774 R 000500 A             500
00775 R 777777 A             LAW     -1
00776 R 721000 A             PAX
00777 R 042620 R             DAC     TEMP1
01000 R 777400 A             LAW     -400
01001 R 042625 R             DAC     MINCYC
01002 R 737777 A     L6.6A   AXR+777
01003 R 202620 R             LAC     TEMP1
01004 R 342703 R             TAD     (-1
01005 R 042620 R             DAC     TEMP1
01006 R 741200 A             SNA
01007 R 601024 R             JMP     L6.6B
01010 R 724000 A             PXA
01011 R 542620 R             SAD     TEMP1
01012 R 741000 A             SKP
01013 R 601022 R             JMP     ER102
01014 R 102561 R             JMS     HOLDSW
01015 R 442625 R             ISZ     MINCYC
01016 R 601002 R             JMP     L6.6A
01017 R 202716 R             LAC     (L6.6A-2
01020 R 040077 R             DAC     DSTSW1
01021 R 602554 R             JMP     EXITM5
                             /
01022 R 102466 R     ER102   JMS     ERRMES
01023 R 000012 A             12
01024 R 724000 A     L6.6B   PXA
01025 R 741200 A             SNA
01026 R 601031 R             JMP     .+3
01027 R 102466 R     ER102A  JMS     ERRMES
01030 R 000012 A             12
01031 R 102601 R             JMS     CKHOLD
01032 R 202717 R             LAC     (TST6
01033 R 040077 R             DAC     DSTSW1
01034 R 602554 R             JMP     EXITM5
                             /
                             .EJECT
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                        /TEST 6
                              /
01035 R 102561 R    TST6      JMS       HOLDSW
01036 R 102356 R              JMS       UPDATE
01037 R 000600 A              600
01040 R 750001 A              CLA!CMA
01041 R 042620 R              DAC       TEMP1
01042 R 777400 A              LAW       -400
01043 R 042625 R              DAC       MINCYC
01044 R 202620 R              LAC       TEMP1
01045 R 723777 A    L6.7      AAC+777
01046 R 042621 R              DAC       TEMP2
01047 R 202620 R              LAC       TEMP1
01050 R 342703 R              TAD       (-1
01051 R 042620 R              DAC       TEMP1
01052 R 202621 R              LAC       TEMP2
01053 R 741200 A              SNA
01054 R 601070 R              JMP       L7.1
01055 R 542620 R              SAD       TEMP1
01056 R 741000 A              SKP
01057 R 601066 R              JMP       ER103
01060 R 442625 R              ISZ       MINCYC
01061 R 601045 R              JMP       L6.7
01062 R 102561 R              JMS       HOLDSW
01063 R 202720 R              LAC       (L6.7-3
01064 R 040077 R              DAC       DSTSW1
01065 R 602554 R              JMP       EXITM5
                              /
01066 R 102466 R    ER103     JMS       ERRMES
01067 R 000011 A              11
01070 R 202620 R    L7.1      LAC       TEMP1
01071 R 741200 A              SNA
01072 R 601075 R              JMP       .+3
01073 R 102466 R    ER103A    JMS       ERRMES
01074 R 000011 A              11
                              .EJECT
```

```
01075 R 724000 A            PXA
01076 R 042620 R            DAC     TEMP1           /SAVE XR IN SUM MEMORY CELL
01077 R 102453 R            JMS     RANDOM
01100 R 502721 R            AND     (777
01101 R 042621 R            DAC     TEMP2
01102 R 342722 R            TAD     (AXR
01103 R 041114 R            DAC     X6,8
01104 R 202621 R            LAC     TEMP2
01105 R 502723 R            AND     (400
01106 R 741200 A            SNA
01107 R 601111 R            JMP     .+2
01110 R 202724 R            LAC     (777000
01111 R 342621 R            TAD     TEMP2
01112 R 342620 R            TAD     TEMP1
01113 R 042620 R            DAC     TEMP1
01114 R 740040 A    X6,8    XX
01115 R 724000 A            PXA
01116 R 542620 R            SAD     TEMP1
01117 R 601122 R            JMP     .+3
01120 R 102466 R    ER104   JMS     ERRMES
01121 R 000012 A            12
01122 R 736000 A            CLR
01123 R 754001 A            CLA!CLL!CMA
01124 R 721000 A            PAX
01125 R 750000 A            CLA
01126 R 725001 A            AXS+1
01127 R 741000 A            SKP
01130 R 601133 R            JMP     .+3
01131 R 102466 R    ER110   JMS     ERRMES
01132 R 000003 A            3
01133 R 750001 A            CLC
01134 R 722000 A            PAL
01135 R 721000 A            PAX
01136 R 725000 A            AXS+0
01137 R 741000 A            SKP
01140 R 601143 R            JMP     .+3
01141 R 102466 R    ER111   JMS     ERRMES
01142 R 000003 A            3
                            .EJECT
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```
01143 R 736000 A             CLR
01144 R 754030 A             CLA!CLL!IAC
01145 R 721000 A             PAX
01146 R 725000 A             AXS+0
01147 R 741000 A             SKP
01150 R 601153 R             JMP     .+3
01151 R 102466 R    ER112    JMS     ERRMES
01152 R 000003 A             3
01153 R 740010 A             RAL
01154 R 740100 A             SMA
01155 R 601145 R             JMP     ER112-4
01156 R 721000 A             PAX
01157 R 725000 A             AXS+0
01160 R 601163 R             JMP     .+3
01161 R 102466 R    ER113    JMS     ERRMES
01162 R 000003 A             3
01163 R 735000 A             CLX
01164 R 754030 A             CLL!CLA!IAC
01165 R 722000 A             PAL
01166 R 725000 A             AXS+0
01167 R 601172 R             JMP     .+3
01170 R 102466 R    ER114    JMS     ERRMES
01171 R 000003 A             3
01172 R 740010 A             RAL
01173 R 740100 A             SMA
01174 R 601165 R             JMP     ER114-3
01175 R 740030 A             IAC
01176 R 722000 A             PAL
01177 R 725000 A             AXS+0
01200 R 741000 A             SKP
01201 R 601204 R             JMP     .+3
01202 R 102466 R    ER115    JMS     ERRMES
01203 R 000003 A             3
01204 R 102601 R             JMS     CKHOLD
01205 R 202725 R             LAC     (TST7
01206 R 040077 R             DAC     DSTSW1
01207 R 602554 R             JMP     EXITM5
                             /
                  /TEST 7
                             /
01210 R 102561 R    TST7     JMS     HOLDSW
01211 R 102356 R             JMS     UPDATE
01212 R 000700 A             700
01213 R 736000 A             CLR
01214 R 754001 A             CLA!CLL!CMA
01215 R 721000 A             PAX
01216 R 725001 A             AXS+1
01217 R 741000 A             SKP
01220 R 601223 R             JMP     .+3
                             /
                             .EJECT
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01221 R 102466 R     ER116   JMS     ERRMES
01222 R 000003 A             3
01223 R 202705 R             LAC     (525252
01224 R 722000 A             PAL
01225 R 202706 R             LAC     (252525
01226 R 721000 A             PAX
01227 R 730000 A             PLA
01230 R 726000 A             PXL
01231 R 721000 A             PAX
01232 R 724000 A             PXA
01233 R 731000 A             PLX
01234 R 722000 A             PAL
01235 R 730000 A             PLA
01236 R 736000 A             CLR
01237 R 722000 A             PAL
01240 R 724000 A             PXA
01241 R 735000 A             CLX
01242 R 721000 A             PAX
01243 R 734000 A             CLAC
01244 R 730000 A             PLA
01245 R 542705 R             SAD     (525252
01246 R 601251 R             JMP     .+3
01247 R 102466 R     ER117   JMS     ERRMES
01250 R 000013 A             13
01251 R 724000 A             PXA
01252 R 542706 R             SAD     (252525
01253 R 601256 R             JMP     .+3
/
.EJECT
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01254 R 102466 R     ER120   JMS     ERRMES
01255 R 000012 A             12
01256 R 750001 A             CLC
01257 R 722000 A             PAL
01260 R 721000 A             PAX
01261 R 707764 A             EBA
01262 R 707762 A             EPA
01263 R 735000 A             CLX
01264 R 707764 A             EBA
                             .DBREL
01265 R 707762 A             EPA
01266 R 736000 A             CLR
01267 R 730000 A             PLA
                             .EBREL
01270 R 707764 A             EBA
                             .DBREL
01271 R 707762 A             EPA
01272 R 737100 A             AXR+100
01273 R 723100 A             AAC+100
01274 R 722000 A             PAL
01275 R 730000 A             PLA
01276 R 542726 R             SAD     (100
01277 R 601302 R             JMP     .+3
01300 R 102466 R     ER121   JMS     ERRMES
01301 R 000013 A             13
01302 R 724000 A             PXA
01303 R 542726 R             SAD     (100
01304 R 601307 R             JMP     .+3
01305 R 102466 R     ER122   JMS     ERRMES
01306 R 000013 A             13
01307 R 735000 A             CLX
01310 R 202707 R             LAC     (377
01311 R 722000 A             PAL
01312 R 734000 A             CLAC
                             .EBREL
01313 R 707764 A             EBA
                             .DBREL
01314 R 707762 A             EPA
01315 R 734000 A             CLAC
01316 R 725377 A             AXS+377
01317 R 741000 A             SKP
01320 R 601323 R             JMP     .+3
01321 R 102466 R     ER124   JMS     ERRMES
01322 R 000012 A             12
                             .EBREL
01323 R 707764 A             EBA
                             .DBREL
01324 R 707762 A             EPA
01325 R 730000 A             PLA
01326 R 542707 R             SAD     (377
01327 R 601332 R             JMP     .+3
                             /
                             .EJECT
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01330 R 102466 R     ER125   JMS     ERRMES
01331 R 000013 A             13
01332 R 777400 A     ER125A  LAW     -400
01333 R 042625 R             DAC     MINCYC
01334 R 102453 R             JMS     RANDOM
01335 R 722000 A             PAL
01336 R 730000 A             PLA
01337 R 542623 R             SAD     RANB
01340 R 601343 R             JMP     .+3
01341 R 102466 R     ER130   JMS     ERRMES
01342 R 000013 A             13
01343 R 102453 R             JMS     RANDOM
01344 R 721000 A             PAX
01345 R 724000 A             PXA
01346 R 542623 R             SAD     RANB
01347 R 601352 R             JMP     .+3
01350 R 102466 R     ER131   JMS     ERRMES
01351 R 000012 A             12
01352 R 102453 R             JMS     RANDOM
01353 R 721000 A             PAX
01354 R 726000 A             PXL
01355 R 730000 A             PLA
01356 R 542623 R             SAD     RANB
01357 R 601362 R             JMP     .+3
01360 R 102466 R     ER132   JMS     ERRMES
01361 R 000003 A             3
01362 R 102453 R             JMS     RANDOM
01363 R 722000 A             PAL
01364 R 731000 A             PLX
01365 R 724000 A             PXA
01366 R 542623 R             SAD     RANB
01367 R 601372 R             JMP     .+3
01370 R 102466 R     ER133   JMS     ERRMES
01371 R 000004 A             4
01372 R 442625 R             ISZ     MINCYC
01373 R 601334 R             JMP     ER125A+2
01374 R 102601 R             JMS     CKHOLD
01375 R 202727 R             LAC     (TST10
01376 R 040077 R             DAC     DSTSW1
01377 R 602554 R             JMP     EXITM5
                     /START TEST 10
                             /
01400 R 102561 R     TST10   JMS     HOLDSW
01401 R 102356 R             JMS     UPDATE
01402 R 001000 A             1000
01403 R 707762 A             EPA
01404 R 141754 R             DZM     PUT+2
01405 R 202730 R             LAC     (2
01406 R 721000 A             PAX
01407 R 211747 R             LAC     GET,X
01410 R 541751 R             SAD     GET+2
01411 R 601414 R             JMP     .+3
01412 R 102466 R     ER134   JMS     ERRMES
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01413 R 000012 A             12
01414 R 051752 R             DAC     PUT,X
01415 R 201754 R             LAC     PUT+2
01416 R 541751 R             SAD     GET+2
01417 R 601422 R             JMP     .+3
01420 R 102466 R     ER135   JMS     ERRMES
01421 R 000012 A             12
01422 R 141754 R             DZM     PUT+2
01423 R 202731 R             LAC     (-2
01424 R 721000 A             PAX
01425 R 211753 R             LAC     GET+4,X
01426 R 541751 R             SAD     GET+2
01427 R 601432 R             JMP     .+3
01430 R 102466 R     ER136   JMS     ERRMES
01431 R 000012 A             12
01432 R 051756 R             DAC     PUT+4,X
01433 R 201754 R             LAC     PUT+2
01434 R 541751 R             SAD     GET+2
01435 R 601440 R             JMP     .+3
01436 R 102466 R     ER137   JMS     ERRMES
01437 R 000012 A             12
01440 R 202732 R             LAC     (1
01441 R 721000 A             PAX
01442 R 750001 A             CLC
01443 R 041753 R             DAC     PUT+1
01444 R 151752 R             DZM     PUT,X
01445 R 201753 R             LAC     PUT+1
01446 R 741200 A             SNA
01447 R 601452 R             JMP     .+3
01450 R 102466 R     ER140   JMS     ERRMES
01451 R 000012 A             12
01452 R 202705 R             LAC     (525252
01453 R 251460 R             XOR     K9.1,X
01454 R 542703 R             SAD     (777777
01455 R 601462 R             JMP     .+5
01456 R 102466 R     ER141   JMS     ERRMES
01457 R 000012 A             12
01460 R 741000 A     K9.1    SKP
01461 R 252525 A             252525
01462 R 202703 R             LAC     (-1
01463 R 721000 A             PAX
01464 R 750001 A             CLC
01465 R 041753 R             DAC     PUT+1
01466 R 151754 R             DZM     PUT+2,X
01467 R 201753 R             LAC     PUT+1
01470 R 741200 A             SNA
01471 R 601474 R             JMP     .+3
01472 R 102466 R     ER142   JMS     ERRMES
01473 R 000012 A             12
01474 R 202705 R             LAC     (525252
01475 R 251504 R             XOR     K9.11+2,X
01476 R 542703 R             SAD     (777777
01477 R 601504 R             JMP     .+5
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                .EJECT
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01500 R 102466 R     ER143   JMS     ERRMES
01501 R 000012 A             12
01502 R 741000 A     K9.11   SKP
01503 R 252525 A             252525
01504 R 202730 R             LAC     (2
01505 R 721000 A             PAX
01506 R 111757 R             JMS     SUB1,X
01507 R 741000 A             SKP
01510 R 601513 R             JMP     .+3
01511 R 102466 R     ER144   JMS     ERRMES
01512 R 000012 A             12
01513 R 202732 R             LAC     (1
01514 R 721000 A             PAX
01515 R 611764 R             JMP     SUB2,X
01516 R 102466 R     ER145   JMS     ERRMES
01517 R 000012 A             12
01520 R 736000 A             CLR
01521 R 202730 R             LAC     (2
01522 R 721000 A             PAX
01523 R 201751 R             LAC     GET+2
01524 R 551747 R             SAD     GET,X
01525 R 601530 R             JMP     .+3
01526 R 102466 R     ER146   JMS     ERRMES
01527 R 000012 A             12
01530 R 202732 R             LAC     (1
01531 R 721000 A             PAX
01532 R 411766 R             XCT     SUB3,X
01533 R 102466 R     ER147   JMS     ERRMES
01534 R 000012 A             12
01535 R 141752 R             DZM     PUT
01536 R 141754 R             DZM     PUT+2
01537 R 202732 R             LAC     (1
01540 R 721000 A             PAX
01541 R 750000 A             CLA
01542 R 311770 R             ADD     TOTE,X
01543 R 541771 R             SAD     TOTE+1
01544 R 601547 R             JMP     .+3
01545 R 102466 R     ER150   JMS     ERRMES
01546 R 000012 A             12
01547 R 737001 A             AXR+1
01550 R 351770 R             TAD     TOTE,X
01551 R 542733 R             SAD     (770
01552 R 601555 R             JMP     .+3
01553 R 102466 R     ER151   JMS     ERRMES
01554 R 000012 A             12
01555 R 451752 R             ISZ     PUT,X
01556 R 201754 R             LAC     PUT+2
01557 R 542732 R             SAD     (1
01560 R 601563 R             JMP     .+3
                             /
                             .EJECT
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01561 R 102466 R     ER152   JMS     ERRMES
01562 R 000012 A             12
01563 R 511752 R             AND     PUT,X
01564 R 542732 R             SAD     (1
01565 R 601570 R             JMP     .+3
01566 R 102466 R     ER153   JMS     ERRMES
01567 R 000006 A             6
01570 R 102601 R             JMS     CKHOLD
01571 R 202734 R             LAC     (TST11
01572 R 040077 R             DAC     DSTSW1
01573 R 602554 R             JMP     EXITM5
                             /
                    /TEST 11
                             /
01574 R 102561 R     TST11   JMS     HOLDSW
01575 R 102356 R             JMS     UPDATE
01576 R 001100 A             1100
01577 R 142001 R             DZM     IGET+1
01600 R 201747 R             LAC     GET
01601 R 740031 A             CMA!IAC
01602 R 342000 R             TAD     IGET
01603 R 721000 A             PAX
01604 R 750000 A             CLA
01605 R 231747 R             LAC*    GET,X
01606 R 542000 R             SAD     IGET
01607 R 601612 R             JMP     .+3
01610 R 102466 R     ER160   JMS     ERRMES
01611 R 000006 A             6
01612 R 737001 A             AXR+1
01613 R 201747 R             LAC     GET
01614 R 071747 R             DAC*    GET,X
01615 R 202001 R             LAC     IGET+1
01616 R 541747 R             SAD     GET
01617 R 601622 R             JMP     .+3
01620 R 102466 R     ER161   JMS     ERRMES
01621 R 000006 A             6
01622 R 202735 R             LAC     (JMP ER162
01623 R 041755 R             DAC     PUT+3
01624 R 202736 R             LAC     (5
01625 R 721000 A             PAX
01626 R 132002 R             JMS*    JGET,X
01627 R 741000 A     ER162   SKP
01630 R 601633 R             JMP     .+3
01631 R 102466 R             JMS     ERRMES
01632 R 000006 A             6
01633 R 202732 R             LAC     (1
01634 R 721000 A             PAX
01635 R 632003 R             JMP*    JSUB2,X
01636 R 102466 R     ER163   JMS     ERRMES
01637 R 000006 A             6
01640 R 202730 R             LAC     (2
01641 R 721000 A             PAX
                             .EJECT
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01642 R 201751 R            LAC     GET+2
01643 R 572006 R            SAD*    SGET,X
01644 R 601647 R            JMP     .+3
01645 R 102466 R    ER164   JMS     ERRMES
01646 R 000012 A            12
01647 R 432007 R            XCT*    SGETX,X
01650 R 541747 R            SAD     GET
01651 R 601654 R            JMP     .+3
01652 R 102466 R    ER165   JMS     ERRMES
01653 R 000012 A            12
                    /TEST INDIRECT INDEX AUTO INCREMENTED ADDRESSING
                    /
01654 R 202012 R    T11.0   LAC     DATA
01655 R 062737 R            DAC*    (15             /INITIALIZE 15
01656 R 202732 R            LAC     (1
01657 R 721000 A            PAX
01660 R 230015 A            LAC*    15,X
01661 R 542014 R            SAD     DATA+2
01662 R 601665 R            JMP     .+3
01663 R 102466 R    ER170   JMS     ERRMES
01664 R 000012 A            12
01665 R 142017 R            DZM     STORE+2
01666 R 202740 R            LAC     (STORE
01667 R 062737 R            DAC*    (15
01670 R 202705 R            LAC     (525252
01671 R 070015 A            DAC*    15,X
01672 R 202017 R            LAC     STORE+2
01673 R 542705 R            SAD     (525252
01674 R 601677 R            JMP     .+3
01675 R 102466 R    ER171   JMS     ERRMES
01676 R 000012 A            12
                    /
                    /TEST SAD* 16, XCT* 16
                    /
01677 R 202732 R            LAC     (1
01700 R 721000 A            PAX
01701 R 202012 R            LAC     DATA
01702 R 062741 R            DAC*    (16
01703 R 202014 R            LAC     DATA+2
01704 R 570016 A            SAD*    16,X
01705 R 601710 R            JMP     .+3
01706 R 102466 R    ER172   JMS     ERRMES
01707 R 000012 A            12
01710 R 750000 A            CLA
01711 R 737004 A            AXR+4
01712 R 430016 A            XCT*    16,X
01713 R 542014 R            SAD     DATA+2
01714 R 601717 R            JMP     .+3
01715 R 102466 R    ER173   JMS     ERRMES
01716 R 000012 A            12
                            .EJECT
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                        /TEST JMP* 17, JMS* 17 INDEXED
                              /
01717 R 202732 R    T11.2     LAC      (1
01720 R 721000 A              PAX
01721 R 202022 R              LAC      JSUB3            /PUT ADDRESS JSUB3+1 IN 17
01722 R 062742 R              DAC*     (17
01723 R 630017 A              JMP*     17,X
01724 R 102466 R    ER174     JMS      ERRMES
01725 R 000012 A              12
01726 R 737001 A              AXR+1
01727 R 462742 R              ISZ*     (17
01730 R 130017 A              JMS*     17,X
01731 R 102466 R    ER175     JMS      ERRMES
01732 R 000012 A              12
                              /
01733 R 750000 A              CLA
01734 R 723002 A              AAC+2
01735 R 721000 A              PAX
01736 R 707764 A              EBA
01737 R 707762 A              EPA
01740 R 211747 R              LAC      GET,X
01741 R 541751 R              SAD      GET+2
01742 R 601745 R              JMP      .+3
01743 R 102466 R    ER176     JMS      ERRMES
01744 R 000007 A              7
01745 R 102601 R              JMS      CKHOLD
01746 R 602052 R              JMP      CKT12            /CHECK FOR EXTENDED MEMORY.
                              /
                        /REFERENCE AREA FOR CORRECT INDEXING TESTS
                        /USED FOR LAC,XOR,SAD
                              /
                              .DBREL
01747 R 001747 R    GET       GET
01750 R 001750 R              GET+1
01751 R 001751 R              GET+2
                              /
                        /USED FOR DAC,DZM,ISZ,AND
                              /
01752 R 000000 A    PUT       0
01753 R 000000 A              0
01754 R 000000 A              0
01755 R 000000 A              0
01756 R 000000 A              0
                              /
                        /USED FOR JMS
                              /
01757 R 000000 A    SUB1      0
01760 R 621757 R              JMP*     SUB1
01761 R 000000 A    SUB1X     0
01762 R 441761 R              ISZ      SUB1X
01763 R 621761 R              JMP*     SUB1X
                              /
                              .EJECT
```

```
                        /USED FOR 'JMP'
                        /
01764 R 601516 R    SUB2    JMP     ER145
01765 R 601520 R            JMP     ER145+2
                        /
                        /USED FOR 'XCT'
                        /
01766 R 601533 R    SUB3    JMP     ER147
01767 R 601535 R            JMP     ER147+2
                        /
                        /USED FOR ADD,TAD
                        /
01770 R 000007 A    TOTE    7
01771 R 000070 A            70
01772 R 000700 A            700
                        /
                        /USED FOR CAL*
                        /
01773 R 000000 A    SUB4    0
01774 R 441773 R            ISZ     SUB4            /CAL HERE IF GOOD
01775 R 621773 R            JMP*    SUB4
01776 R 000000 A    SUB4X   0                       /CAL HERE IF BAD
01777 R 621776 R            JMP*    SUB4X
                        /
02000 R 002000 R    IGET    IGET
02001 R 000000 A            0
                        /
                        /USED FOR JMS*, JMP*
                        /
02002 R 001754 R    JGET    SUB1-3
02003 R 002004 R    JSUB2   JSUB2+1
02004 R 601636 R            JMP     ER163
02005 R 601640 R            JMP     ER163+2
                        /
                        .EJECT
```

```
                        /USED FOR SAD*, XCT*
                        /
02006 R 001747 R    SGET    GET
02007 R 002007 R    SGETX   SGETX
02010 R 001751 R            GET+2
02011 R 201747 R            LAC     GET
                        /
                        /USED FOR SAD*, XCT*,
                        /
02012 R 002012 R    DATA    DATA
02013 R 002013 R            DATA+1
02014 R 002014 R            DATA+2
02015 R 000000 A    STORE   0
02016 R 000000 A            0
02017 R 000000 A            0
02020 R 000000 A            0
02021 R 202014 R    JXCT    LAC     DATA+2
                        /
                        /USED FOR JMP*, JMS*
                        /
02022 R 002023 R    JSUB3   JSUB3+1
02023 R 601724 R            JMP     ER174
02024 R 601724 R            JMP     ER174
02025 R 601726 R            JMP     ER174+2
02026 R 000000 A            0
02027 R 622026 R            JMP*    .-1
02030 R 000000 A            0
02031 R 601733 R            JMP     ER175+2
                        /
                        .EJECT
```

```
                        .EBREL
                    /DETERMINE AMOUNT OF EXTENDED MEMORY AVAILABLE VIA
                    /EXAMINING 'USERSW+1,+2 AND +3'.
                        /
02032 R 707764 A    CKT12   EBA
02033 R 102561 R            JMS     HOLDSW          /CHECK FOR THE HOLD SWITCH.
02034 R 102035 R            JMS     TST12
02035 R 000000 A    TST12   0
02036 R 200001 R            LAC     USERSW+1        /EXTENDED MEMORY AVAILABLE?
02037 R 340002 R            TAD     USERSW+2
02040 R 340003 R            TAD     USERSW+3
02041 R 741200 A            SNA
02042 R 602440 R            JMP     EXTTST          /NO, EXIT TEST
02043 R 102356 R            JMS     UPDATE          /SET UP TEST #12.
02044 R 001200 A            1200
02045 R 202035 R            LAC     TST12
02046 R 502702 R            AND     (70000          /MASK OUT 'P.C.' BITS
02047 R 740031 A            TCA
02050 R 042632 R            DAC     LOCPC           /SAVE COMPLIMENT OF 'P.C.' LOCATION.
02051 R 200001 R            LAC     USERSW+1
02052 R 740200 A            SZA                     /IS BLOCK #1 AVAILABLE?
02053 R 102065 R            JMS     BLOCK1          /YES, TEST BLOCK #1
02054 R 200002 R            LAC     USERSW+2
02055 R 740200 A            SZA                     /IS BLOCK #2 AVAILABLE?
02056 R 102112 R            JMS     BLOCK2          /YES, TEST BLOCK #2
02057 R 200003 R            LAC     USERSW+3
02060 R 740200 A            SZA                     /IS BLOCK #3 AVAILABLE?
02061 R 102137 R            JMS     BLOCK3          /YES, TEST BLOCK #3
02062 R 202743 R            LAC     (TST12A         /SETUP TO CHECK LOADED DATA.
02063 R 040077 R            DAC     DSTSW1          /RESET DISTRIBUTION SWITCH
02064 R 602554 R            JMP     EXITM5
                    /DETERMINE THE NO. OF 'FIELDS' AVAILABLE IN BLOCK #1 AND
                    /LOAD EACH FIELD WITH TEST DATA.
                        /
02065 R 000000 A    BLOCK1  0
02066 R 202744 R            LAC     (100000         /= TO BANK #1.
02067 R 042633 R            DAC     BLOCK
02070 R 202745 R            LAC     (BKSTR1
02071 R 042620 R            DAC     TEMP1
02072 R 202746 R            LAC     (FLDTAB
02073 R 042634 R            DAC     FIELD           /ADDRESS OF 'FIELD' CONSTANT TABLE.
02074 R 200001 R            LAC     USERSW+1        /CONTAINS AVAILABLE 'FIELDS' IN BLOCK #1.
02075 R 102164 R            JMS     STEXTD
02076 R 202637 R    BLK1A   LAC     KSTOR2          /CONSTANT STORAGE
02077 R 740020 A            RAR
02100 R 042637 R            DAC     KSTOR2
02101 R 741400 A            SZL                     /CURRENT FIELD AVAILABLE?
02102 R 102201 R            JMS     LOADM           /YES, LOAD MEMORY
02103 R 062620 R            DAC*    TEMP1           /SAVE CONSTANT LOADED IN LAST ADDRESS
02104 R 442620 R            ISZ     TEMP1           /INCREMENT STORE BUFFER ADDRESS.
02105 R 442634 R            ISZ     FIELD           /INCREMENT 'FIELD' BITS
02106 R 740000 A            NOP
02107 R 442621 R            ISZ     TEMP2           /ALL FIELDS CHECKED?
```

```
02110 R 602076 R            JMP     BLK1A           /NO, CHECK THE NEXT FIELD
02111 R 622065 R            JMP*    BLOCK1
                    /DETERMINE THE NO. OF 'FIELDS' AVAILABLE IN BLOCK #2 AND
                    /LOAD EACH 'FIELD' WITH TEST DATA.
                    /
02112 R 000000 A    BLOCK2  0
02113 R 202747 R            LAC     (200000
02114 R 042633 R            DAC     BLOCK           /= TO BLOCK #2
02115 R 202746 R            LAC     (FLDTAB
02116 R 042634 R            DAC     FIELD           /ADDRESS OF 'FIELD' CONSTANT TABLE
02117 R 202750 R            LAC     (BKSTR2
02120 R 042620 R            DAC     TEMP1
02121 R 200002 R            LAC     USERSW+2        /= TO AVAILABLE 'FIELDS' IN BLOCK #2
02122 R 102164 R            JMS     STEXTD
02123 R 202637 R    BLK2A   LAC     KSTOR2
02124 R 740020 A            RAR
02125 R 042637 R            DAC     KSTOR2
02126 R 741400 A            SZL                     /CURRENT FIELD AVAILABLE?
02127 R 102201 R            JMS     LOADM           /YES, LOAD MEMORY FIELD
02130 R 062620 R            DAC*    TEMP1           /SAVE NO. LOADED IN LAST FIELD ADDR.
02131 R 442620 R            ISZ     TEMP1           /INCREMENT STORE BUFFER ADDRESS.
02132 R 442634 R            ISZ     FIELD           /INCREMENT 'FIELD' BITS
02133 R 740000 A            NOP
02134 R 442621 R            ISZ     TEMP2           /ALL FIELDS CHECKED?
02135 R 602123 R            JMP     BLK2A           /NO, CHECK THE NEXT FIELD
02136 R 622112 R            JMP*    BLOCK2
                    /DETERMINE THE NO. OF 'FIELDS' AVAILABLE IN BLOCK #3 AND
                    /LOAD EACH 'FIELD' WITH TEST DATA.
                    /
02137 R 000000 A    BLOCK3  0
02140 R 202751 R            LAC     (300000
02141 R 042633 R            DAC     BLOCK
02142 R 202746 R            LAC     (FLDTAB
02143 R 042634 R            DAC     FIELD           /= TO 'FIELD' CONSTANT TABLE
02144 R 202752 R            LAC     (BKSTR3
02145 R 042620 R            DAC     TEMP1
02146 R 200003 R            LAC     USERSW+3        /= TO AVAILABLE 'FIELDS' IN BLOCK #3
02147 R 102164 R            JMS     STEXTD
02150 R 202637 R    BLK3A   LAC     KSTOR2
02151 R 740020 A            RAR
02152 R 042637 R            DAC     KSTOR2
02153 R 741400 A            SZL                     /CURRENT FIELD AVAILABLE?
02154 R 102201 R            JMS     LOADM           /YES, LOAD MEMORY 'FIELD'.
02155 R 062620 R            DAC*    TEMP1           /SAVE NO. LOADED IN LAST FIELD ADDR.
02156 R 442620 R            ISZ     TEMP1           /INCREMENT STORE BUFFER ADDRESS.
02157 R 442634 R            ISZ     FIELD           /INCREMENT 'FIELD' BITS
02160 R 740000 A            NOP
02161 R 442621 R            ISZ     TEMP2           /ALL FIELDS CHECKED?
02162 R 602150 R            JMP     BLK3A           /NO, CHECK THE NEXT FIELD
02163 R 622137 R            JMP*    BLOCK3
02164 R 000000 A    STEXTD  0
02165 R 042637 R            DAC     KSTOR2
02166 R 777770 A            LAW     -10
```

```
02167 R 042621 R            DAC     TEMP2
02170 R 622164 R            JMP*    STEXTD
                            .EJECT
```

```
                        /SET UP 'FIELD' BITS "0-7"
                        /
02171 R 000000 A    FLDTAB  0                       /= TO FIELD #0
02172 R 010000 A            10000                   /#1
02173 R 020000 A            20000                   /#2
02174 R 030000 A            30000                   /#3
02175 R 040000 A            40000                   /#4
02176 R 050000 A            50000                   /#5
02177 R 060000 A            60000                   /#6
02200 R 070000 A            70000                   /#7
                        /
                        /DEPOSIT THE CONTENTS OF THE 'XR' IN ADDRESS '0' AND THE
                        /COMPLIMENT OF THE 'XR' IN ADDRESS '1' OF ALL EXTENDED '4K'
                        /FIELDS. ALSO DEPOSIT THE COMPLIMENT OF THE 'XR' + A 'RANDOM'
                        /NUMBER IN ADDRESS '7777' OF ALL FIELDS.
                        /
02201 R 000000 A    LOADM   0
                            .DBREL
02202 R 707762 A            EPA
02203 R 202633 R            LAC     BLOCK           /= TO SELECTED 'BLOCK'
02204 R 362634 R            TAD*    FIELD           /ADD SELECTED 'FIELD'
02205 R 342632 R            TAD     LOCPC           /MINUS CURRENT 'P.C.' LOCATION.
02206 R 721000 A            PAX                     /SAVE IN 'XR'
02207 R 150000 A            DZM     0,X             /CLEAR EXTENDED LOCATIONS.
02210 R 150001 A            DZM     1,X
02211 R 157777 A            DZM     7777,X
02212 R 724000 A            PXA                     /RESTORE THE 'AC'.
02213 R 050000 A            DAC     0,X             /PLACE RESULT IN SELECTED 'LOC'.
02214 R 740001 A            CMA
02215 R 050001 A            DAC     1,X             /SAVE COMPLIMENT IN NEXT 'LOC.'
02216 R 102453 R            JMS     RANDOM          /ADD A RANDOM N0.
02217 R 057777 A            DAC     7777,X          /SAVE RESULT IN LAST FIELD ADDRESS.
02220 R 703344 A            DBR
02221 R 622201 R            JMP*    LOADM           /EXIT WITH N0. IN 'AC'.
                    /SET UP TO EXAMINE DATA STORED IN EXTENDED 'FIELDS'.
                            .EBREL
02222 R 707764 A    TST12A  EBA
02223 R 200001 R            LAC     USERSW+1
02224 R 740200 A            SZA                     /WAS BLOCK #1 AVAILABLE?
02225 R 102246 R            JMS     CKBLK1          /YES, CHECK STORED DATA.
02226 R 200002 R            LAC     USERSW+2
02227 R 740200 A            SZA                     /WAS BLOCK #2 AVAILABLE?
02230 R 102271 R            JMS     CKBLK2          /YES, CHECK STORED DATA.
02231 R 200003 R            LAC     USERSW+3
02232 R 740200 A            SZA                     /WAS BLOCK #3 AVAILABLE?
02233 R 102314 R            JMS     CKBLK3          /YES, CHECK STORED DATA
02234 R 202631 R            LAC     EXDMODE
02235 R 741200 A            SNA                     /RUNNING PARAMETER MODE?
02236 R 602440 R            JMP     EXTTST          /NO, SET UP 'TST1'
02237 R 202753 R    TST12B  LAC     (CKT12          /YES, RUN 'TST12' ONLY
02240 R 040077 R            DAC     DSTSW1
02241 R 602554 R            JMP     EXITM5
                            .EJECT
```

```
                        /ERRO EXIT FOR PARAMETER MODE TEST #12
                        /
02242 R 202753 R    TST12C  LAC     (CKT12
02243 R 040077 R            DAC     DSTSW1
02244 R 142524 R            DZM     PAGESW
02245 R 602543 R            JMP     EXIT
                        /
                        /
                        /SETUP TO CHECK DATA STORED IN 'FIELDS' OF BLOCK #1.
                        /
02246 R 000000 A    CKBLK1  0
02247 R 102164 R            JMS     STEXTD
02250 R 202744 R            LAC     (100000
02251 R 042633 R            DAC     BLOCK           /= TO BLOCK #1
02252 R 202746 R            LAC     (FLDTAB
02253 R 042634 R            DAC     FIELD           /= TO FIELD CONSTANT TABLE
02254 R 202745 R            LAC     (BKSTR1
02255 R 042620 R            DAC     TEMP1
02256 R 202637 R    CK1A    LAC     KSTOR2
02257 R 740020 A            RAR
02260 R 042637 R            DAC     KSTOR2
02261 R 741400 A            SZL                     /CURRENT FIELD AVAILABLE?
02262 R 102405 R            JMS     CKDATA          /YES, CHECK 'FIELD' DATA
02263 R 442620 R            ISZ     TEMP1           /INCREMENT BUFFER STORAGE ADDRESS
02264 R 442634 R            ISZ     FIELD           /INCREMENT 'FIELD' BITS.
02265 R 740000 A            NOP
02266 R 442621 R            ISZ     TEMP2
02267 R 602256 R            JMP     CK1A
02270 R 622246 R            JMP*    CKBLK1
                        /SETUP TO CHECK DATA STORED IN ALL FIELDS OF BLOCK #2.
                        /
02271 R 000000 A    CKBLK2  0
02272 R 102164 R            JMS     STEXTD
02273 R 202747 R            LAC     (200000
02274 R 042633 R            DAC     BLOCK           /= TO BLOCK #2
02275 R 202746 R            LAC     (FLDTAB
02276 R 042634 R            DAC     FIELD           /= TO FIELD BITS
02277 R 202750 R            LAC     (BKSTR2
02300 R 042620 R            DAC     TEMP1
02301 R 202637 R    CK2A    LAC     KSTOR2
02302 R 740020 A            RAR
02303 R 042637 R            DAC     KSTOR2
02304 R 741400 A            SZL                     /CURRENT FIELD AVAILABLE?
02305 R 102405 R            JMS     CKDATA          /YES, CHECK !FIELD!DATA.
02306 R 442620 R            ISZ     TEMP1           /INCREMENT BUFFER STORAGE AREA
02307 R 442634 R            ISZ     FIELD
02310 R 740000 A            NOP
02311 R 442621 R            ISZ     TEMP2           /ALL 'FIELDS' CHECKED?
02312 R 602301 R            JMP     CK2A            /NO, CHECK NEXT FIELD
02313 R 622271 R            JMP*    CKBLK2
                            .EJECT
```

```
                        /SETUP TO CHECK DATA STORED IN 'FIELDS' OF BLOCK #3
                        /
02314 R 000000 A    CKBLK3  0
02315 R 102164 R            JMS     STEXTD
02316 R 202751 R            LAC     (300000
02317 R 042633 R            DAC     BLOCK           /= TO BLOCK #3
02320 R 202746 R            LAC     (FLDTAB
02321 R 042634 R            DAC     FIELD           /= TO FIELD CONSTANT TABLE
02322 R 202752 R            LAC     (6KSTR3
02323 R 042620 R            DAC     TEMP1
02324 R 202637 R    CK3A    LAC     KSTOR2
02325 R 740020 A            RAR
02326 R 042637 R            DAC     KSTOR2
02327 R 741400 A            SZL                     /CURRENT 'FIELD' AVAILABLE?
02330 R 102405 R            JMS     CKDATA          /YES, CHECK 'FIELD' DATA.
02331 R 442620 R            ISZ     TEMP1
02332 R 442634 R            ISZ     FIELD
02333 R 740000 A            NOP
02334 R 442621 R            ISZ     TEMP2
02335 R 602324 R            JMP     CK3A
02336 R 622314 R            JMP*    CKBLK3
                        /CHECK FOR A SELECTED TEST SET UP VIA PARAMETER MODE
                        .EBREL
02337 R 000000 A    CKPAR1  0
02340 R 707764 A            EBA
02341 R 200000 R            LAC     USERSW
02342 R 502744 R            AND     (100000         /MASK BIT '2'
02343 R 741200 A            SNA                     /IS PARAMETER MODE SELECTED?
02344 R 622337 R            JMP*    CKPAR1          /NO, EXIT
02345 R 200000 R            LAC     USERSW
02346 R 502754 R            AND     (1700           /MASK 'TEST' BITS
02347 R 042641 R            DAC     KSTOR4          /SAVE N0.
02350 R 542755 R            SAD     (1200           /WAS TEST N0. 12 SELECTED?
02351 R 741000 A            SKP                     /YES, SET EXTEND SWITCH.
02352 R 622337 R            JMP*    CKPAR1          /NO, EXIT
02353 R 777777 A            LAW     -1
02354 R 042631 R            DAC     EXDMODE
02355 R 622337 R            JMP*    CKPAR1
                    /UPDATE THE USERSW TO INCLUDE THE CURRENT TEST N0. AND
                    /CHECK FOR PARAMETER MODE.
                    /
02356 R 000000 A    UPDATE  0
                            .EBREL
02357 R 707764 A            EBA
02360 R 200000 R            LAC     USERSW
02361 R 502756 R            AND     (770000         /MASK OUT OLD TEST N0.
02362 R 362356 R            TAD*    UPDATE          /ADD CURRENT TEST N0.
02363 R 040000 R            DAC     USERSW
02364 R 742010 A            RTL
02365 R 740100 A            SMA                     /PARAMETER BIT '2' SET?
02366 R 602402 R            JMP     EXDATE          /NO EXIT
                            .EJECT
```

```
02367 R 222356 R            LAC*    UPDATE
02370 R 542641 R            SAD     KSTOR4          /=TO THE SELECTED TEST?
02371 R 741000 A            SKP                     /YES, SET UP LOOP
02372 R 602402 R            JMP     EXDATE          /NO, EXIT
02373 R 542755 R            SAD     (1200           /IS EXTEND MODE SELECTED?
02374 R 602402 R            JMP     EXDATE          /YES,EXIT
02375 R 777777 A            LAW     -1
02376 R 042630 R            DAC     PARMODE
02377 R 202356 R            LAC     UPDATE
02400 R 342731 R            TAD     (-2
02401 R 042642 R            DAC     KSTOR5
02402 R 442356 R    EXDATE  ISZ     UPDATE
02403 R 703344 A            DBR
02404 R 622356 R            JMP*    UPDATE
                    /CHECK DATA STORED IN EXTENDED 'FIELDS'.
                    /
02405 R 000000 A    CKDATA  0
                            .DBREL
02406 R 707762 A            EPA
02407 R 202633 R            LAC     BLOCK           /= TO SELECTED BLOCK
02410 R 362634 R            TAD*    FIELD           /ADD SELECTED 'FIELD' BITS.
02411 R 042635 R            DAC     FIELDA
02412 R 342632 R            TAD     LOCPC           /MINUS CURRENT 'P.C.' LOCATION.
02413 R 721000 A            PAX                     /SAVE RESULT IN 'XR'.
02414 R 042640 R            DAC     KSTOR3
02415 R 754000 A            CLL!CLA
02416 R 210000 A            LAC     0,X
02417 R 542640 R            SAD     KSTOR3          /IS 'XR' SAME AS STORED DATA?
02420 R 602423 R            JMP     .+3             /YES, CONTINUE
02421 R 102466 R            JMS     ERRMES          /NO, BAD DATA IN ADDRESS '0' OF CURRENT FIELD.
02422 R 000014 A            14                      /ERROR CODE #14
02423 R 724000 A            PXA                     /PLACE 'XR' IN 'AC'.
02424 R 740001 A            CMA
02425 R 550001 A            SAD     1,X
02426 R 602431 R            JMP     .+3
02427 R 102466 R            JMS     ERRMES
02430 R 000015 A            15                      /ERROR CODE #15
02431 R 222620 R            LAC*    TEMP1           /= TO STORED CONSTANT
02432 R 557777 A            SAD     7777,X
02433 R 602436 R            JMP     .+3
02434 R 102466 R            JMS     ERRMES
02435 R 000016 A            16                      /ERROR CODE #16
02436 R 703344 A            DBR
02437 R 622405 R            JMP*    CKDATA
                            /
02440 R 740000 A    EXTTST  NOP
                            .EBREL
02441 R 707764 A            EBA
02442 R 202701 R            LAC     (TST1
02443 R 040077 R            DAC     DSTSW1          /SET DISTRIBUTION SW TO RE-CYCLE TEST.
02444 R 442617 R            ISZ     RUNCTR          /FINISHED TEST?
02445 R 602554 R            JMP     EXITM5          /NO, LOOP AGAIN
02446 R 602447 R            JMP     EXITM4          /YES, TYPE DONE
```

```
                .EJECT
```

```
                                /
02447 R 777774 A    EXITM4  LAW     -4
02450 R 040020 R            DAC     SYSERR          /SET UP TO TYPE 'DONE'
02451 R 140021 R            DZM     SYSERR+1
02452 R 602543 R            JMP     EXIT
                        /RANDOM NUMBER GENERATOR
                                /
02453 R 000000 A    RANDOM  0
                            .EBREL
02454 R 707764 A            EBA
02455 R 342622 R            TAD     RANA
02456 R 342623 R            TAD     RANB
02457 R 042622 R            DAC     RANA
02460 R 750010 A            GLK
02461 R 342622 R            TAD     RANA
02462 R 342623 R            TAD     RANB
02463 R 042623 R            DAC     RANB
02464 R 707742 A            RES
02465 R 622453 R            JMP*    RANDOM
                                /
                        /ERROR EXITS FOR ALL ERRORS
                                /
02466 R 000000 A    ERRMES  0
                            .EBREL
02467 R 707765 A            SBA!EBA
02470 R 442624 R            ISZ     PAGESW
02471 R 042614 R            DAC     SAVAAC          /SAVE CONTENTS OF AC.
02472 R 202466 R            LAC     ERRMES
02473 R 502757 R            AND     (77777
02474 R 042615 R            DAC     SAVEPC
02475 R 222466 R            LAC*    ERRMES
02476 R 040023 R            DAC     ERCODE+1        /#2, ERROR CODE
02477 R 777776 A            LAW     -2
02500 R 040020 R            DAC     SYSERR          /SET ERROR INDICATOR
02501 R 777771 A            LAW     -7
02502 R 040021 R            DAC     ERCODE-1        /7 DATA WORDS
02503 R 200000 R            LAC     USERSW
02504 R 502760 R            AND     (3700           /MASK TST.N0.
02505 R 746020 A            RTR!CLL
02506 R 742020 A            RTR
02507 R 742020 A            RTR
02510 R 040022 R            DAC     ERCODE          /#1,TST.N0.
02511 R 202635 R            LAC     FIELDA
02512 R 040025 R            DAC     ERCODE+3        /#4,BANK AND FIELD BITS
02513 R 202614 R            LAC     SAVAAC
02514 R 040026 R            DAC     ERCODE+4        /#5, CONTENTS OF AC
02515 R 730000 A            PLA                     /PLACE LIMIT REG. IN AC
02516 R 040030 R            DAC     ERCODE+6        /#7, CONTENTS OF 'LR'
02517 R 724000 A            PXA
02520 R 040027 R            DAC     ERCODE+5        /#6, CONTENTS OF 'XR'
                            /
                            .EJECT
```

```
02521 R 202615 R            LAC     SAVEPC
02522 R 342703 R            TAD     (-1
02523 R 042616 R            DAC     TEMP3
02524 R 202761 R            LAC     (USERSW
02525 R 740031 A            TCA
02526 R 342616 R            TAD     TEMP3
02527 R 040024 R            DAC     ERCODE+2        /#3, M.O. ADDRESS
02530 R 202642 R            LAC     KSTOR5
02531 R 040077 R            DAC     DSTSW1
02532 R 202630 R            LAC     PARMODE
02533 R 740200 A            SZA
02534 R 602543 R            JMP     EXIT
02535 R 202631 R            LAC     EXDMODE
02536 R 740200 A            SZA
02537 R 602242 R            JMP     TST12C
02540 R 442466 R            ISZ     ERRMES
02541 R 202466 R            LAC     ERRMES
02542 R 040077 R            DAC     DSTSW1
02543 R 724000 A    EXIT    PXA
02544 R 042627 R            DAC     SAVXR           /SAVE CONTENTS OF XR
02545 R 730000 A            PLA
02546 R 042626 R            DAC     SAVLR           /SAVE CONTENTS OF LR
02547 R 705512 A            RPL
02550 R 751100 A            SPA!CLA                 /IS 'API' ON?
02551 R 202612 R            LAC     SAVEAC          /YES, RESTORE THE AC
02552 R 703344 A            DBR                     /NO, EXIT
02553 R 620054 R            JMP*    SERVCE
                            /
                    /SETUP FOR A "-5" EXIT
                            .EBREL
02554 R 707765 A    EXITM5  SBA!EBA
02555 R 442624 R            ISZ     PAGESW
02556 R 777773 A            LAW     -5
02557 R 040020 R            DAC     SYSERR
02560 R 602543 R            JMP     EXIT
                    /TEST FOR DATA SW5 WHICH INHIBITS THE 'XR/LR' TESTS
                            /
02561 R 000000 A    HOLDSW  0
02562 R 707764 A            EBA
02563 R 750004 A            LAS
02564 R 502762 R            AND     (10000          /DATA SW5
02565 R 741200 A            SNA                     /IS SWITCH SET?
02566 R 602577 R            JMP     HOLD.2          /NO, CONTINUE
02567 R 200077 R            LAC     DSTSW1          /YES
02570 R 042613 R            DAC     SAVDST          /SAVE RETURN ADDRESS
02571 R 202763 R            LAC     (HOLD.1
02572 R 040077 R            DAC     DSTSW1
02573 R 602554 R            JMP     EXITM5          /EXIT '-5'
02574 R 202613 R    HOLD.1  LAC     SAVDST
02575 R 040077 R            DAC     DSTSW1          /RESTORE RETURN ADDRESS
02576 R 602562 R            JMP     HOLDSW+1        /RE-TEST SWITCH
02577 R 703344 A    HOLD.2  DBR
02600 R 622561 R            JMP*    HOLDSW
```

```
                .EJECT
```

```
02601 R 000000 A    CKHOLD  0
                            .EBREL
02602 R 707765 A            SBA!EBA
02603 R 442624 R            ISZ     PAGESW
02604 R 202630 R            LAC     PARMODE
02605 R 740200 A            SZA                     /RUNNING PARAMETER MODE?
02606 R 602554 R            JMP     EXITM5          /YES, EXIT MINUS '5'
02607 R 142624 R            DZM     PAGESW          /CLEAR THE PAGE SWITCH.
02610 R 703344 A            DBR                     /NO, SET UP FOR NEXT TEST.
02611 R 622601 R            JMP*    CKHOLD
02612 R 000000 A    SAVEAC  0
02613 R 000000 A    SAVDST  0
02614 R 000000 A    SAVAAC  0
02615 R 000000 A    SAVEPC  0
02616 R 000000 A    TEMP3   0
02617 R 000000 A    RUNCTR  0
02620 R 000000 A    TEMP1   0
02621 R 000000 A    TEMP2   0
02622 R 746321 A    RANA    746321
02623 R 654120 A    RANB    654120
02624 R 000000 A    PAGESW  0
02625 R 000000 A    MINCYC  0
02626 R 000000 A    SAVLR   0
02627 R 000000 A    SAVXR   0
02630 R 000000 A    PARMODE 0
02631 R 000000 A    EXDMODE 0
02632 R 000000 A    LOCPC   0
02633 R 000000 A    BLOCK   0
02634 R 000000 A    FIELD   0
02635 R 000000 A    FIELDA  0
02636 R 000000 A    KSTOR1  0
02637 R 000000 A    KSTOR2  0
02640 R 000000 A    KSTOR3  0
02641 R 000000 A    KSTOR4  0
02642 R 000000 A    KSTOR5  0
                            /
                    /DATA STORAGE FOR EXTENDED MEMORY CONSTANTS.
                            /
02643 R         A   BKSTR1  .BLOCK 12
02655 R         A   BKSTR2  .BLOCK 12
02667 R         A   BKSTR3  .BLOCK 12
                            .EJECT
```

```
                000000 R            .END    USERSW
    02701 R 000100 R *L
    02702 R 070000 A *L
    02703 R 777777 A *L
    02704 R 000464 R *L
    02705 R 525252 A *L
    02706 R 252525 A *L
    02707 R 000377 A *L
    02710 R 777377 A *L
    02711 R 000677 R *L
    02712 R 000704 R *L
    02713 R 000732 R *L
    02714 R 000744 R *L
    02715 R 000772 R *L
    02716 R 001000 R *L
    02717 R 001035 R *L
    02720 R 001042 R *L
    02721 R 000777 A *L
    02722 R 737000 A *L
    02723 R 000400 A *L
    02724 R 777000 A *L
    02725 R 001210 R *L
    02726 R 000100 A *L
    02727 R 001400 R *L
    02730 R 000002 A *L
    02731 R 777776 A *L
    02732 R 000001 A *L
    02733 R 000770 A *L
    02734 R 001574 R *L
    02735 R 601627 R *L
    02736 R 000005 A *L
    02737 R 000015 A *L
    02740 R 002015 R *L
    02741 R 000016 A *L
    02742 R 000017 A *L
    02743 R 002222 R *L
    02744 R 100000 A *L
    02745 R 002643 R *L
    02746 R 002171 R *L
    02747 R 200000 A *L
    02750 R 002655 R *L
    02751 R 300000 A *L
    02752 R 002667 R *L
    02753 R 002032 R *L
    02754 R 001700 A *L
    02755 R 001200 A *L
    02756 R 770000 A *L
    02757 R 077777 A *L
    02760 R 003700 A *L
    02761 R 000000 R *L
    02762 R 010000 A *L
    02763 R 002574 R *L
          SIZE=02773     NO ERROR LINES
```

USERSW	00000	R	SYSERR	00020	R	ERCODE	00022	R	INIT	00031	R
SERVCE	00054	R	SERV1	00075	R	DSTSW1	00077	R	TST1	00100	R
ER5	00106	R	ER4	00114	R	ER13	00124	R	ER14	00133	R
ER15	00143	R	ER20	00152	R	ER21	00214	R	ER22	00224	R
ER23	00235	R	ER24	00245	R	ER25	00253	R	ER31	00264	R
ER32	00275	R	ER33	00307	R	ER34	00322	R	ER35	00330	R
ER41	00340	R	ER42	00350	R	ER43	00364	R	ER44	00400	R
ER45	00413	R	ER50	00427	R	ER51	00443	R	ER52	00456	R
TST2	00464	R	ER53	00476	R	ER54	00503	R	ER55	00512	R
ER56	00520	R	ER60	00527	R	ER61	00535	R	ER62	00544	R
ER62A	00553	R	ER63	00562	R	ER64	00572	R	ER65	00577	R
ER66	00604	R	ER67	00611	R	ER70	00621	R	ER71	00626	R
ER72	00634	R	ER73	00641	R	ER74	00647	R	ER75	00654	R
ER76	00663	R	ER77	00671	R	TST3	00677	R	L6.4	00706	R
ER100	00724	R	L6.4A	00726	R	TST4	00732	R	ER100A	00740	R
L6.5	00747	R	ER101	00764	R	L6.6	00766	R	TST5	00772	R
L6.6A	01002	R	ER102	01022	R	L6.6B	01024	R	ER102A	01027	R
TST6	01035	R	L6.7	01045	R	ER103	01066	R	L7.1	01070	R
ER103A	01073	R	X6.8	01114	R	ER104	01120	R	ER110	01131	R
ER111	01141	R	ER112	01151	R	ER113	01161	R	ER114	01170	R
ER115	01202	R	TST7	01210	R	ER116	01221	R	ER117	01247	R
ER120	01254	R	ER121	01300	R	ER122	01305	R	ER124	01321	R
ER125	01330	R	ER125A	01332	R	ER130	01341	R	ER131	01350	R
ER132	01360	R	ER133	01370	R	TST10	01400	R	ER134	01412	R
ER135	01420	R	ER136	01430	R	ER137	01436	R	ER140	01450	R
ER141	01456	R	K9.1	01460	R	ER142	01472	R	ER143	01500	R
K9.11	01502	R	ER144	01511	R	ER145	01516	R	ER146	01526	R
ER147	01533	R	ER150	01545	R	ER151	01553	R	ER152	01561	R
ER153	01566	R	TST11	01574	R	ER160	01610	R	ER161	01620	R
ER162	01627	R	ER163	01636	R	ER164	01645	R	ER165	01652	R
T11.0	01654	R	ER170	01663	R	ER171	01675	R	ER172	01706	R
ER173	01715	R	T11.2	01717	R	ER174	01724	R	ER175	01731	R
ER176	01743	R	GET	01747	R	PUT	01752	R	SUB1	01757	R
SUB1X	01761	R	SUB2	01764	R	SUB3	01766	R	TOTE	01770	R
SUB4	01773	R	SUB4X	01776	R	IGET	02000	R	JGET	02002	R
JSUB2	02003	R	SGET	02006	R	SGETX	02007	R	DATA	02012	R
STORE	02015	R	JXCT	02021	R	JSUB3	02022	R	CKT12	02032	R
TST12	02035	R	BLOCK1	02065	R	BLK1A	02076	R	BLOCK2	02112	R
BLK2A	02123	R	BLOCK3	02137	R	BLK3A	02150	R	STEXTD	02164	R
FLDTAB	02171	R	LOADM	02201	R	TST12A	02222	R	TST12B	02237	R
TST12C	02242	R	CKBLK1	02246	R	CK1A	02256	R	CKBLK2	02271	R
CK2A	02301	R	CKBLK3	02314	R	CK3A	02324	R	CKPAR1	02337	R
UPDATE	02356	R	EXDATE	02402	R	CKDATA	02405	R	EXTTST	02440	R
EXITM4	02447	R	RANDOM	02453	R	ERRMES	02466	R	EXIT	02543	R
EXITM5	02554	R	HOLDSW	02561	R	HOLD.1	02574	R	HOLD.2	02577	R
CKHOLD	02601	R	SAVEAC	02612	R	SAVDST	02613	R	SAVAAC	02614	R
SAVEPC	02615	R	TEMP3	02616	R	RUNCTR	02617	R	TEMP1	02620	R
TEMP2	02621	R	RANA	02622	R	RANB	02623	R	PAGESW	02624	R
MINCYC	02625	R	SAVLR	02626	R	SAVXR	02627	R	PARMOD	02630	R
EXDMOD	02631	R	LOCPC	02632	R	BLOCK	02633	R	FIELD	02634	R
FIELDA	02635	R	KSTOR1	02636	R	KSTOR2	02637	R	KSTOR3	02640	R
KSTOR4	02641	R	KSTOR5	02642	R	BKSTR1	02643	R	BKSTR2	02655	R
BKSTR3	02667	R	SK15	707741	A	SBA	707761	A	EPA	707762	A

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EBA     707764 A    PAX     721000 A    PAL     722000 A    PXA     724000 A
PXL     726000 A    PLA     730000 A    PLX     731000 A    CLAC    734000 A
CLX     735000 A    CLR     736000 A
```