

```

LINE D.....#.#1.....+#.....2.....+.....3.....+.....4.....+.....5.....+.....6.....+.....7.....+.....8.....+.....9.....+.....0.....+.....1.....+
1 LBL FORTE,FORTE-BY-MI ***-----
2 TTL FORTRAN-E COMPILER MAIN MODULE '00000130
3 DEFS: MACRO '00000140
4 SYMREF #10 '00003320
5 BCI 1,#1 '00003325
6 VFD 1/#2,1/#3,3/#4,3/#5,3/#6,3/#7,3/#9,1/0,18/#10 '00003330
7 ENDM DEFS '00003340
8 XCALL: MACRO '00003350
9 TSX6 #1 '00003360
10 ENDM XCALL '00003370
11 YCALL: MACRO '00003380
12 TSX5 #1 '00003390
13 ENDM YCALL '00003400
14 FIND: MACRO '00003410
15 SYMREF CFIND '00003420
16 TSX0 CFIND '00003430
17 TRA #1 '00003440
18 ENDM FIND '00003450
19 FINDN: MACRO '00003460
20 SYMREF CFINDN '00003470
21 TSX5 CFINDN '00003480
22 TRA #1 '00003490
23 ENDM FINDN '00003500
24 ADDL: MACRO '00003510
25 LDX0 0,4 ; LOAD CURRENT TAIL TO XD '00003520
26 STX0 0,5 ; CHAIN CURRENT TAIL '00003530
27 EAX0 0,5 '00003540
28 STX0 0,4 '00003550
29 ENDM ADDL '00003560
30 GETCEL:MACRO '00003570
31 SYMREF C.GET#1 '00003580
32 TSX0 C.GET#1 '00003590
33 TRA #2 '00003600
34 ENDM GETCEL '00003610
35 ; '00003620
35 ; ----- PARAMETRIC EQUATES ----- '00001000
35 ; '00001100
35 ; FOLLOWING EQUATES ARE GENERATION DEPENDENT '00001200
35 ; '00001300
35 MAXSTK:EQU 512 '00001400
36 ; '00001500
36 ; ----- EQUATES ----- '00001600
36 ; '00001700
37 ; '00001800
37 ZERO: EQU 0 ; FOR GMAP-S IBO-IBO '00001900
38 CORLMT:EQU 31 ; OCTAL 37 '00002000
39 ; '00002100
39 ; CONSTANTS '00002200
39 ; '00002300
39 EIGHT '00002400
'00002500

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LINE D.....+...#..1.....+...#...2.....+...3.....+...4.....+...5.....+...6.....+...7.....+...8.....+...9.....+...0.....+...1.....+... ***-----
40  SSREG: BSS      8                                     '00002550
41  MINUS1:DEC     -1                                     '00002600
42  MINUS2:DEC     -2                                     '00002700
43  MINS11:DEC    -11                                    '00002750
44  MINS13:DEC    -13                                    '00002800
45  UNIT5: DEC     5                                      '00002900
46  UNIT6: DEC     6                                      '00003000
47  MEDIA: DEC    6 ; FOR CPRNT AND GETCD                '00003100
48  ASTR: OCT     044000000000                          '00003200
49  UNLGUT:OCT    000000600000                          '00003300
50  CNSL: JIS     2,0000T/                               '00003400
51  SIXDOT:OCT   333333333333                          '00003500
52  SPACE: JIS    1,                                     '00003600
53  ;                                                    '00003700
53  ; ----- PARAMETRIC CONSTANTS -----              '00003800
53  ;                                                    '00003900
53  ZZZVER:JIS    1,6.06                                  '00004000
54  PATCH: BSS    200                                    '00004005
55  GERSTW:EQU    50                                    '00004010
56  MINUS7:DEC    -7                                    '00004020
57  MINUS8:DEC    -8                                    '00004030
58  PASWRD:OCT   525252525252                          '00004040
59  SYMREF .ASCBA, .FRDDA                              '00004100
60  ;                                                    '00004200
60  ; ----- SYMDEFS -----                          '00004300
60  ;                                                    '00004400
60  SYMDEF FORTE ; ----- THIS SYMDEF MUST BE THE FIRST ----- '00004500
61  SYMDEF ROOT,VLISTL,MNAME,LLISTL,GLISTL              '00004600
62  SYMDEF NLISTL,HLISTL,KLISTL                        '00004700
63  SYMDEF ISNRTN,CREAD                                 '00004800
64  SYMDEF XA1,XA2,XAN                                  '00004900
65  SYMDEF XVA1,XVA2,XVAN                              '00005000
66  SYMDEF CSTMT,CDBUF,CDBUFN,ONCDBF,XFORTE           '00005100
67  SYMDEF CSPRNT ; PRINT A SOURCE LINE                '00005200
68  SYMDEF CPRNT,CPRNTB                                '00005300
69  SYMDEF CSYMTB                                       '00005400
70  SYMDEF CIMPL,CDISP,CRUN                             '00005500
71  SYMDEF CRELSW,CPSTMD,CGEN,CSEPR,CPAUSE            '00005600
72  SYMDEF CERRM,CCOLNO ; ERROR MONITOR AND INPUT COLONN '00005700
73  SYMDEF CPRNT,CPRNTB ; PRINT ROUTINE AND PRINT BUF  '00005800
74  SYMDEF FREE2L,FREE3L,FREE4L,FREE5L,FREE6L         '00005900
75  SYMDEF ISN                                           '00006000
76  SYMDEF FUNTBL                                        '00006100
77  SYMDEF CERCNT,CWNCNT                                '00006200
78  SYMDEF XFIN ; JUMPED HERE FROM XSTO                '00006300
79  SYMDEF CKEYS,MAXKEY                                 '00006400
80  SYMDEF CULIB,CTYPE,CMODE,CDBG                     '00006500
81  SYMDEF XSTACK,XXMSTK                               '00006600
82  SYMDEF CSPERR                                       '00006700
83  SYMDEF RESET                                       '00006800

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LINE D .....#.....1.....+#.....2.....+.....3.....+.....4.....+.....5.....+.....6.....+.....7.....+.....8.....+.....9.....+.....0.....+.....1.....+ ..... ***-----
112 ; ----- MAIN ENTRY ----- '00009800
112 ; '00009900
112 FORTE: NULL '00010000
113 XFORTE:PROC OPTIONS (MAIN) ; '00010100
115 XCALL RESET ; SYSTEM RESET '00010200
116 SZN SETU=6 '00010300
117 TNZ SBATC1 '00010400
118 ; CHECK YBATCH CARD '00010500
118 SBATCH:NULL '00010600
119 IF ONCDBF= 2 '00010700
122 ' TRA EOFEXT '00010800
123 END '00010900
124 ICALL GETCD '00011000
126 IF SUBSTR(TEMPCD,1,7)= '/BATCH' '00011100
135 ' ICALL TEMPPR '00011200
137 ' ISUBS = 8 '00011300
139 ' MAXKEY = MAXKB '00011400
141 ' XCALL OPTSCN '00011500
142 ; SET BATCH OPTION '00011600
142 ' TRA SBATCH '00011700
143 END; '00011800
144 ' IF CTYPE<>MINUS2 '00011900
147 ' ID=MINUS7 '00011920
149 END '00011940
150 SBATC1:NULL '00011960
151 ; CHECK /BATCH OPTION CONSISTENCY '00012000
151 IF FORMS < M LINES '00012010
154 ' SUBSTR(CPRNTB,5,25)='INCONSISTENT BATCH OPTION.' '00012020
167 ' SUBSTR(CPRNTB,30,30)='MAXL SHOULD GREATER THAN LINE.' '00012030
181 ' SUBSTR(CPRNTB,61,66)='CHANGED TO MAXL=66,LINE=54' '00012040
194 ' XCALL CPRNT '00012050
195 ' FORMS = 66 '00012060
197 ' M LINES = 54 '00012070
199 END ; OF IF '00012080
200 ' SUBSTR(KEYSAV,1,136)=SUBSTR(CKEYS,1,136) '00012090
204 NXTJOB:XCALL INTJOB ; JOB INITIALIZE AND GET YJOB INFO. '00012100
205 ; IN 'TEMPCD' AND CHECK CARD ETC. '00012200
205 CALL FHSQ8(CDATE,CSTART) '00012300
206 CALL CPTIME(CISTAT) '00012400
207 CALL SETIME,(MAXCPU),TIMEOV '00012500
208 ONCDBF = 1 ; SET CARD BUFFER FULL SWITCH ON. '00012550
210 XCALL INTSEG '00012600
211 SEGCP1:NULL '00012700
212 XCALL CREAD '00012800
213 TRA SCDCK '00012900
214 TRA EOFEXT '00013000
215 SEGCOMP:LOOP; '00013100
216 ' XCALL SPECS ; '00013200
217 ' XCALL SCAN ; '00013300
'00013400

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LINE  D.....#.....#.....2.....+.....3.....+.....4.....+.....5.....+.....6.....+.....7.....+.....8.....+.....9.....+.....0.....+.....1.....+
218      ' TRA      SENTRY
219      ' TRA      SJOB
220      ' TRA      SSTOP
221      ' XCALL    RELOC1 ; ALLOCATE SPACE FOR LOCALS ETC.
222      ' XCALL    DELIMT
223      ' XCALL    INTSEG ;
224      END SEGCOMP;
225  SCDCK: NULL
226      TSX5      SCDCHK
227      TSX6      CSPRNT
228      TRA      SEGCP1
229  SENTRY: NULL
230      SZN      'SETU'=-6
231      TNZ      SSTOP ; WHEN TSS
232      XCALL    RELOC1
233      SUBSTR(ENCARD,1,80)=SUBSTR(TEMPCD,1,80)
237      ONCDBF=0 ; SET NOTHING WAS READ STTUS
238  BYP1: NULL
239      XCALL    RELOC3
240      IF CTYPE < MINS13
243      ' EAQ      0,2
244      ' QRL      18
245      ' SBQ      CWORDS
246      ' STQ      COBJ
247      ' AOS      COBJ
248      ' IF COBJ >0
251      ' ' CPRNTB(0)='0 0B'
253      ' ' CPRNTB(1)='JECT'
255      ' ' CPRNTB(2)=' DUM'
257      ' ' CPRNTB(3)='PED '
259      ' ' XCALL    CPRNT
260      ' ' LDA      CWORDS
261      ' ' ALS      18
262      ' ' STA      SNAP
263      ' ' SUBSTR(SNAP,3,2)=SUBSTR(COBJ,3,2)
267      ' ' SUBST1(SNAP,19,1)=SUBST1(UNIT5,35,1)
271      ' ' SZN      'SETU'=-6
272      ' ' TZE      BYP2 ; TSS CHECK
273      ' ' DRL      7 ; ABORT IF TSS
274  BYP2: ' ' NULL
275      ' ' MME      GESNAP
276  SNAP: ' ' DEC      0
277      ' END
278      END
279  XWRAP: NULL
280      CALL      'FHS08(CDATE,CFINIS)
281      CALL      CPTIME(CIFIN)
282      XCALL    EXEC
283 ; JOB CLOSING ON EXEC=TIME
283  ACOUNT: NULL

```

'00018200

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LINE D.....#.#1.....#.....2.....+.....3.....+.....4.....+.....5.....+.....6.....+.....7.....+.....8.....+.....9.....+.....0.....+.....1.....+
284 CALL CPTIME(XIFIN)
285 CALL FHS08(CDATE,XFINIS)
286 XCALL JACUNT
287 IF SUBSTR(TEMPCD,1,6)='/ENTRY'
296 ' IF SUBSTR(TEMPCD,8,9)='GENERATED'
306 ' SUBSTR(TEMPCD,1,80)=SUBSTR(CDBUF,1,80)
310 ' GOTO NXTJOB
311 ' END
312 ' ICALL GETCD
314 END
315 : NOP
316 : NOP
317 GOTO NXTJOB ;
318 *
319 * DOLLAR CARD CHECK
320 *
321 SCDCHK=NULL
322 * CHECK FORT-E CONTROL CARD
323 IF SUBSTR(TEMPCD,1,5)='/WARN'
332 ' CWARN=0
333 ' TRA 0,5
334 END
335 IF SUBSTR(TEMPCD,1,6)='/NWARN'
344 ' CWARN=MINUS1
346 ' TRA 0,5
347 END
348 IF SUBSTR(TEMPCD,1,8)='/PRINTON'
357 ' CPRNTS=0
358 ' TRA 0,5
359 END
360 IF SUBSTR(TEMPCD,1,9)='/PRINTOFF'
370 ' CPRNTS=MINUS1
372 ' TRA 0,5
373 END
374 IF SUBSTR(TEMPCD,1,6)='/EJECT'
383 ' LINENO = MLINES - 1
386 ' TRA 0,5
387 END
388 IF SUBSTR(TEMPCD,1,6)='/UNIT'
397 * YUNIT UNN=RNN OR LNN OR SYSOUT OR TERMINAL
398 ' STZ SCDCH4
399 ' ISUBS=7
401 SCDCH2: ' NULL
402 ' IF SUBSTR(TEMPCD,ISUBS,1)=' '
407 ' AOS ISUBS
408 ' TRA SCDCH2
409 ' END
410 ' IF SUBSTR(TEMPCD,ISUBS,1)<>'U'
416 ' TRA SCDCH3
417 ' END

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R8.1の時 LDQ PASWRD
HME GERSTW E LINES

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***-----
'00018300
'00018400
'00018500
'00018600
'00018620
'00018640
'00018660
'00018680
'00018700
'00018800
'00018830
'00018860
'00018900
'00019900
'00020000
'00020100
'00020200
'00020300
'00020400
'00020500
'00020600
'00020700
'00020800
'00020900
'00021000
'00021100
'00021200
'00021300
'00021400
'00021500
'00021600
'00021700
'00021800
'00021900
'00022000
'00022100
'00022200
'00022300
'00022400
'00022500
'00022600
'00022700
'00022800
'00022900
'00023000
'00023100
'00023200
'00023300
'00023400
'00023500

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LINE D.....#.....1.....+.....#.....2.....+.....3.....+.....4.....+.....5.....+.....6.....+.....7.....+.....8.....+.....9.....+.....0.....+.....1.....+..... ***-----
418      ' AOS      ISUBS
419      ' ICALL SETNUM
421      ' IF ISUBS>=73
424      ' ' TRA      SCDCH3
425      ' END
426      ' LDQ      IVAL
427      ' QLS      30
428      ' STCQ     SCDCH4,40 ; SET LGUN
429      ' CASE ;
430      ' (SUBSTR(TEMPCD,ISUBS,2)='S')
436      ' ' TRA      SCDCH7
437      ' (SUBSTR(TEMPCD,ISUBS,2)='T')
445      ' ' TRA      SCDCH7
446      ' (SUBSTR(TEMPCD,ISUBS,2)='R')
454      ' ' LDQ      1,DL
455      ' ' QLS      24
456      ' ' STCQ     SCDCH4,20
457      ' ' TRA      SCDCH5
458      ' (SUBSTR(TEMPCD,ISUBS,2)='L')
466 SCDCH5: ' ' NULL
467      ' ' ISUBS=ISUBS+2
469      ' ' ICALL SETNUM
471      ' ' IF ISUBS>=73
474      ' ' ' TRA      SCDCH3
475      ' END
476      ' ' LDQ      IVAL
477      ' ' STCQ     SCDCH4,17
478      ' ' LDQ      SCDCH4
479      ' ' QRL      30
480      ' ' STQ      IVAL
481      ' ' LDAQ     SCDCH9
482      ' ' CWL      IVAL
483      ' ' TNZ      SCDCH3
484      ' ' LDAQ     SCDCHA
485      ' ' CWL      IVAL
486      ' ' TZE      SCDCH6
487      ' ' STX5     SCDCH1
488      ' ' TSX5     XIOTMP
489 SCDCH4: ' ' DEC      0 ;6/UNIT,6/0 OR 1(R),24/LENGTH
490 SCDCH1: ' ' TRA      **
491      ' OTHER
493 * ERROR
494      ' ' EAA      #JJB-1
495      ' ' TSX6     CERRM
496      ' ' TRA      0,5
497 SCDCH3: ' ' NULL
498 SCDCH6: ' ' NULL
499      ' ' CCOLNO=ISUBS
501      ' ' EAA      #JIO-7
502      ' ' TSX6     CERRM

```

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LINE D.....#.#1.....#2.....#3.....#4.....#5.....#6.....#7.....#8.....#9.....#0.....#1.....# *****
503      ' TRA      0,5
504      ' END
505      SCDCH7: ' NULL
506      * SYSOUT OR TERMINAL
507      ' LDAQ      SCDCH9 ; UNIT NUM CHECK
508      ' CWL      IVAL
509      ' TNZ      SCDCH6
510      ' LDAQ      SCDCHA
511      ' CWL      IVAL
512      ' TZE      SCDCH6 ; UNIT IS 5 TO 7
513      ' LDA      21
514      ' LDQ      5,AU
515      ' ARL      18
516      ' ADA      IVAL
517      ' SBA      1,DL
518      ' STQ      0,AL
519      ' TRA      0,5
520      END
521      SUBSTR(CPRNTB,19,80)=SUBSTR(TEMPCD,1,80)
525      XCALL      CPRNT
526      EAA      #JJB=3
527      TSX6      CERRM
528      * ACOS-CONTROL CARD MIGHT BE READ
529      SUBSTR(TEMPCD,1,80) = '/END GENERATED'
539      SSTOP: NULL
540      SJOB: NULL
541      SZN      .SETU.=6
542      TNZ      SCDCHB
543      SUBSTR(CDBUF,1,80)=SUBSTR(TEMPCD,1,80)
547      SUBSTR(TEMPCD,1,80)='/ENTRY GENERATED'
557      SCDCHC:NULL
558      XCALL      RELOC1 ;
559      TRA      BYP1
560      EVEN
561      SCDCH9:DEC      1,15
562      SCDCHA:DEC      5,7
563      SCDCHB:NULL ; TSS
564      CALL      FCLOSE(UNIT5)
565      LDX1      USFCB
566      STZ      -10,1
567      STZ      -9,1
568      STZ      -8,1
569      STZ      -7,1
570      STZ      -6,1
571      STZ      -5,1
572      STZ      -4,1
573      STZ      -3,1
574      STZ      -2,1
575      STZ      -1,1
576      STZ      0,1

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LINE D.....#.....1.....+.....#.....2.....+.....3.....+.....4.....+.....5.....+.....6.....+.....7.....+.....8.....+.....9.....+.....0.....+.....1.....+..... ***-----
582 ; ; '00033300
582 ; ----- MODULE DELIMITER ----- '00033400
582 ; ; '00033500
582 DELIMT:NULL '00033600
583 SZN .SETU.=6 '00033700
584 TNZ 0,6 ; TSS '00033800
585 STX6 DELX6 '00033900
586 LDA CSEPR '00033910
587 ADA LINENO '00033920
588 CMPA MLINE5 '00033930
589 TMI DELX5 '00033940
590 * Z PAGE SKIP '00033960
591 ICALL CHEAD '00033970
593 TRA DELX6 '00033980
594 DELX5: NULL '00033990
595 LDA CSEPR '00034000
596 ARS 1 ; DIVIDE BY 2 '00034100
597 NEG '00034200
598 STA DELWK '00034300
599 TPL DEL1 '00034400
600 IF SUBST1(DELWK,35,1)='0'B '00034430
605 ' AOS DELWK '00034460
606 END '00034490
607 DELO: NULL '00034500
608 XCALL CPRNT '00034600
609 AOS DELWK '00034700
610 TZE DEL2 '00034800
611 TRA DELO '00034900
612 DEL2: NULL '00035000
613 SUBSTR(CPRNTB,2,130)= ALL('-') '00035100
617 XCALL CPRNT '00035200
618 LDA CSEPR '00035300
619 ARL 1 '00035400
620 NEG '00035500
621 STA DELWK '00035600
622 DEL3: NULL '00035700
623 XCALL CPRNT '00035800
624 AOS DELWK '00035900
625 TZE DEL4 '00036000
626 TRA DEL3 '00036100
627 DEL4: NULL '00036200
628 DELX6: TRA ** '00036300
629 DEL1: NULL '00036400
630 ICALL CHEAD '00036500
632 TRA DEL4 '00036600
633 DELWK: BSS 1 '00036700
634 EJECT '00036800

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LINE D.....+...#..1.....+...#...2.....+...3.....+...4.....+...5.....+...6.....+...7.....+...8.....+...9.....+...0.....+...1.....+... ***-----
635 ; ----- EXEC ROUTINE ----- '00036900
635 ; '00037000
635 EXEC: NULL '00037100
636 STX6 EXE,X6 '00037200
637 STX2 SAVEX2 '00037300
638 SZN CRELSW '00037310
639 TNZ 0,6 ; WHEN LIB COMP MODE '00037320
640 IF CRUN = MINS11 '00037330
643 ' TRA 0,6 ; WHEN NOGO '00037340
644 END '00037350
645 IF CERCNT <> 0 '00037400
647 ' SUBSTR(CPRNTB,1,28) = '0*** EXECUTION DELETED ***' '00037500
660 ' XCALL CPRNT '00037600
661 ' TRA XFIN '00037700
662 ELSE '00037800
664 ' SUBSTR( CPRNTB,2,80)=SUBSTR(ENCARD,1,80) '00037900
668 ' XCALL CPRNT '00038000
669 ' SUBSTR(CPRNTB,1,25)='0 *** EXECUTION ENTERED ***' '00038100
682 ' XCALL CPRNT '00038200
683 END '00038300
684 COMPSW=1 ; SET EXECUTING MODE '00038400
686 CALL SETIME,(MAXCPU),TIMEOV ; '00038500
687 EAX4 XSTACK '00038600
688 IF EDATA <> 0; '00038700
690 ; DATA STMT PRE-EXECUTER IS LINKED TO MAIN ENTRY, BY RELOC3 '00038800
690 ' TSX1 EDATA,I ; DATA STMT PRE-EXEC '00038900
691 ELSE; '00039000
693 ' TSX1 EMAIN,I ; '00039100
694 ; JUMP INTO ENTRY POINT '00039200
694 END; '00039300
695 XFIN: NULL '00039305
696 SZN .SETU.-6 '00039310
697 TNZ EXE01 '00039320
698 IF CTYPE= MINS13 '00039330
701 * DUMP IF BATCH AND TYPE=DUMP '00039335
702 ' MME GESNAP '00039340
703 ' DEC 0 '00039350
704 END '00039360
705 EXE01: NULL '00039370
706 COMPSW=0 ; SET COMPILING MODE '00039500
707 LDX6 EXE,X6 '00039600
708 TRA 0,6 ; '00039700
709 ; CPU-TIME OVER THEN NEXT '00039800
709 TIMEOV:NULL '00039900
710 LDI #010,DL ; RESET HEX MODE FOR BUG '00040000
711 CALL CPTIME(XIFIN) '00040100
712 CALL .FHS08(CDATE,XFINIS) '00040200
713 EAQ EXEK06 '00040300
714 YCALL CSPERR '00040400
715 IF COMPSW<>0 '00040410

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LINE D.....#.....1.....+.....#.....2.....+.....3.....+.....4.....+.....5.....+.....6.....+.....7.....+.....8.....+.....9.....+.....0.....+.....1.....+
798 ;                                     '00045900
798 ; ----- JOB INITIALIZE ----- '00046000
798 ;                                     '00046100
798 ; XCALL INTJOB '00046200
798 ;                                     '00046300
798 INTJOB:NULL '00046400
799     STX6     INTJX6 '00046500
800     LDX7     0,DU '00046600
801     IF ONCDBF=2 '00046700
804     ' TRA     EOFEXT '00046800
805     END '00046900
806     SUBSTR(CKEYS,1,136)=SUBSTR(KEYSAV,1,136) '00046905
810     CPRNTS=0 ; SET PRINTON MODE '00046910
811     SZN     .SETU=-6 '00047000
812     TZE     INTJB1 '00047100
813 * SET PRINT OFF MODE WHEN TSS '00047110
814     CPRNTS=MINUS1 '00047120
816 * SET FORM=NO MODE '00047130
817     CFORM=MINUS1 '00047140
819 * SET LNO=YES MODE '00047150
820     CLNO=0 ; YES '00047160
821 * TSS SETUP PARAM FROM DRL KIN '00047200
822     DRL     4 ; KIN '00047250
823     ZERO    JBCARD,CDBUFN '00047300
824     ZERO    ISTAT '00047400
825 * LBCARD IS A TEMPORARY BUFFER '00047500
826     IF CDBUFN<>0 '00047600
828     ' DO X1=1,70 '00047610
833     ' ' IF SUBSTR(JBCARD,X1,3)='RUN' '00047620
841     ' ' ' X1=X1+3 '00047630
842     ' ' ' IF SUBSTR(JBCARD,X1,3)='*:' '00047640
850     ' ' ' ' X1=X1+3 '00047650
851 * SUBSTR(TEMPCD,6,75)=SUBSTR(JBCARD,X1,CDBUFN-X1) '00047660
852     ' ' ' ' STX1     INTJB8 '00047670
853     ' ' ' ' LDQ     CDBUFN '00047680
854 INTJB8: ' ' ' ' SBQ     **,DL '00047690
855     ' ' ' ' TMOZ    INTJBA '00047700
856     ' ' ' ' STCQ    INTJB7,03 '00047720
857     ' ' ' ' MLR     (,1),040 '00047740
858 INTJB7: ' ' ' ' ADSC9   JBCARD-1,3,0 '00047760
859     ' ' ' ' ADSC9   TEMPCD+1,1,75 '00047780
860     ' ' ' ' TRA     INTJB6 '00047800
861     ' ' ' END '00047820
862     ' ' ' TRA     INTJBA '00047840
863     ' ' END '00047850
864     ' END ; DO '00047860
866     END '00047900
867 INTJBA:NULL '00047920
868     SUBSTR(TEMPCD,1,80)=' ' '00047940
872     TRA     INTJB6 '00048000

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LINE D.....#.#1.....#.....2.....+.....3.....+.....4.....+.....5.....+.....6.....+.....7.....+.....8.....+.....9.....+.....0.....+.....1.....+
992      END
993      STZ      SYSIN      ; RESET INPUT COUNT FOR EACH JOB
994      STZ      SYSOU      ; RESET OUTPUT COUNT FOR EACH JOB
995      SUBSTR(JBCARD,1,80)=SUBSTR(TEMPCD,1,80)
999      SUBSTR(ENCARD,1,80)=' '
1003     INTJB6:NULL
1004     SUBSTR(ETCCRD,1,80)=' '
1008     LXLO      CWORDS
1009     STXO      EMAIN
1010     ISUBS =6
1012     MAXKEY = MAXKJ
1014     XCALL    OPTSCN
1015     * CHECK IF FORM=YES THEN LNO SHOULD BE NO
1016     IF CFORM=0 ; YES
1018     ' CLNO=MINUS1 ; NO
1020     END
1021     COMPSW=0 ; SET COMP/EXEC SW TO COMPILING MODE
1022     CXERR = 0 ; SET NO FAULT ON EXECUTION
1023     XXXIO=0
1024     MNAME = SIXDOT
1026     LLISTL=0
1027     GLISTL=0
1028     FREE2L=0
1029     FREE3L =0
1030     FREE4L=0
1031     FREE5L=0
1032     FREE6L=0
1033     EDATA=0
1034     LDATA=0
1035     CWARN=0 ; WARNING IS YES
1036     ; CLEAR ROOTS
1036     CERSTN = 0 ; CLEAR ERROR MES COUNT FOR A JOB
1037     CERSTK(0)= 1601 ; CLEAR ERRORSTACK BY NULL VALUE
1039     CERSTK(1) = 1601
1041     CERSTK(2) = 1601
1043     CERSTK(3)= 1601
1045     CERCNT = 0
1046     CWCNT = 0
1047     * RESET CIMPLH TO 1
1048     LDQ      1,DL
1049     LDA      25,DL
1050     INTJB4:NULL
1051     STQ      CIMPLH,AL
1052     SBLA     1,DL
1053     TPL      INTJB4
1054     LXL2     CWORDS
1055     EAX2     -1,2 ; SET UP X2
1056     CSYMTB=ZSYMTB
1058     CPAGE=0
1059     LCQ      MAXSTP

```



```

LINE D.....#.#1.....#.....2.....+.....3.....+.....4.....+.....5.....+.....6.....+.....7.....+.....8.....+.....9.....+.....0.....+.....1.....+
1175 INTJB3:NULL
1176 IF CDISP= 0
1178 CALL CNSLIO(CNSL,STRMS,=15)
1179 END IF
1180 YCALL SINTJB ; ---- SCAN INITIALIZE ----
1181 ; ----- OWN CODE CALL
1181 SYMREF JOBENT
1182 TSX1 JOBENT
1183 TRA *+3
1184 ZERO #E.L.,0
1185 TRA INTJB1 ; SKIP THE JOB
1186 INTJX6:TRA **
1187 INTJXX:TRA 0,1
1188 STRTMS:JIS 5,FORT-E JOB STARTED
1189 ; ADD EXTRA SPACE FOR USER
1189 JIS 10,
1190 INTJB2:JIS 1,JB-2 ; NO ID CARD
1191 INTJBE:JIS 1,JB-3 ; ILLEGAL JCL
1192 INTJBF:DEC 0
1193 EJECT

```

```

'00057200
'00057300
'00057400
'00057500
'00057600
'00057610
'00057620
'00057630
'00057640
'00057645
'00057660
'00057700
'00058000
'00058100
'00058150
'00058200
'00058300
'00058330
'00058360
'00058400

```



```

LINE D.....#1.....#2.....+.....3.....+.....4.....+.....5.....+.....6.....+.....7.....+.....8.....+.....9.....+.....0.....+.....1.....+   ***-----
1212 ; ----- EOF EXIT -----
1212 ;
1212 EOFEXT:NULL
1213     SZN     .SETU.-6
1214     TNZ     EXT003
1215     CALL    DETACH(UNIT6,EXT002)
1216 EXTEXT:NULL
1217     SYMREF  JOBSTP
1218     CALL    JOBSTP
1219     SZN     .SETU.-6 ; CHECK TSS(NONZERO)OR BATCH(ZERO)
1220     TZE     EXT001
1221 EXT003:NULL
1222     IF CXERR=0 ; NO ERROR
1224     ' DRL    5 ; DRL RETURN
1225     END
1226     DRL     7 ; DRL ABORT
1227 EXT001:NULL
1228     MME     GEFINI
1229 ;
1229 EXT002:BSS 1 ; UNIT6 CLOSING STATUS
1230     EJECT

```

```

'00068900
'00069000
'00069100
'00069110
'00069120
'00070000
'00070100
'00070130
'00070160
'00070200
'00070300
'00070350
'00070360
'00070400
'00070430
'00070440
'00070500
'00070600
'00070700
'00070800
'00071000

```



```

LINE D.....#..1.....+#...2.....+.....3.....+.....4.....+.....5.....+.....6.....+.....7.....+.....8.....+.....9.....+.....0.....+.....1.....+... ***-----
1231 ;
1231 ; --- WORKING AREA FOR GLOBAL VARIABLE ---
1231 ;
1231 COBJP: NULL ; MUST BE HERE *****
1232 SAVEX2:BSS 1 ; OBJ POINTER SAVE AEA
1233 EOFSW: BSS 1 ; INPUT EOFSW
1234 COMPSW:BSS 1 ; ZERO IF COMPILING, 1 IF EXECUTING
1235 CSTART:BSS 1
1236 CFINIS:BSS 1
1237 XFINIS:BSS 1
1238 CISTAT:BSS 1
1239 CIFIN: BSS 1
1240 XIFIN: BSS 1
1241 CSTMT: BSS 1
1242 CIMPL: BSS 5 ; IMPLICIT TABLE USED BY THE PROCESSOR
1243 ZSYMTB:BSS 1
1244 COBJ: BSS 1 ; WORK
1245 CSYMTB:BSS 1 ; SYMBOL TABLE POINTER LOWER
1246 EIGHT
1247 XSTACK:BSS MAXSTK
1248 XMXSTK:ZERO 0,XSTACK+MAXSTK
1249 CMAXWD:BSS 1 ; LOWER
1250 CWORDS:BSS 1 ; LOWER
1251 CXERR: DEC 0 ; X-ERROR OCCURED
1252 ;
1252 ; GLOBAL SWITCHES AND BUFFEERS
1252 CPSTMD:BSS 1 ; STMT MODE OF PREVIOUS STMT (USED BY SCAN)
1253 CGEN: BSS 1 ; -1 IF CODE GEN, 0 IF CHECK ONLY
1254 CPRNTB:JIS 10,
1255 JIS 10,
1256 JIS 10,
1257 JIS 4,
1258 ; 1ST BYTE ASSUMED AS PRINT CONTROL CHAR
1258 CPRNTS:BSS 1 ; -1 IF PRINT OFF, 0 IF PRINT ON
1259 CWARN: BSS 1 ; -1 IF NO WARN, 0 IF WARN
1260 CPAGE: BSS 1 ; COMPILE TIME PAGE COUNTER
1261 ISN: BSS 1 ; INTERNAL SEQUENCE NUMBER
1262 CDNO: BSS 1 ; SERIAL NUMBER FOR INPUT
1263 CCDNO: BSS 1 ; CURRENT MODULE CDNO
1264 LINENO:BSS 1 ; LINE COUNT PER CURRENT PAGE
1265 XDYNAM:BSS 1 ; MAX DYNAMIC STEPS IN NEGATIVE NUMBER
1266 CDATE: BSS 2 ; JIS 8 CHAR MM/DD/YY
1267 CTIME: BSS 1 ; REAL TYPE HOUR HH.MMM
1268 CERSTK:BSS 8 ; MAX 4 ERRORS INDICATABLE FOREACH STMT
1269 CERSTN:BSS 1 ; ERROR MES COUNT FOR A JOB
1270 CERCNT:BSS 1 ; COUNT OF ERROR LEVEL ERROR
1271 CWCNT:BSS 1 ; COUNT OF WARNING LEVEL ERROR
1272 CPCDNO:BSS 1 ; PRINT OUT SURCE CARD SERIAL NUMBER
1273 IDCARD:BSS 20 ; CURRENT ID CARD IMAGE
1274 JBCARD:BSS 20 ; CURRENT JOB CARD IMA

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LINE D.....#.....1.....#.....2.....+.....3.....+.....4.....+.....5.....+.....6.....+.....7.....+.....8.....+.....9.....+.....0.....+.....1.....+
1275 ENCARD:BSS      20 ; CURRENT ENTRY CAR IMAGE
1276 ETCCRD:BSS     20 ; CURRENT ETC CARD IMAGE
1277 ;
1277 ;
1277 ; ----- CREAD -----
1277 ;
1277 ; ROUTINE FOR COMPILE TIME CARD INPUT(JIS)
1277 ;
1277 ; LINKAGE REG IS X6
1277 ;
1277 ; WORKING REG IS 5
1277 ;
1277 ; GET A STMT TO CDBUF
1277 ; 'CDBUFN' WILL CONTAIN NUMBER OF WORDS
1277 ;
1277 ; STATUS SWITCH IS 'ONCDBF'
1277 ; =0  NOTHING WAS READ
1277 ; =1  ONE CARD WAS READ IN 'TEMPCD'
1277 ;     THEN CONTINUE TO READ A STMT
1277 ; =2  CARD EOF THEN NOTHING CAN BE READ
1277 ;
1277 ; EXIT
1277 ; NORMAL      2(X6)
1277 ; ¥ CARD READ IN 'TEMPCD' 0(X6)
1277 ; EOF        1(X6)
1277 ;
1277 CREAD: NULL
1278     STX6      CRD=X6
1279     CDBUFN= 0
1280     CASE;
1281     (ONCDBF =2) ; THERE ARE NO MORE CARDS
1284     ' TRA      1,6
1285     (ONCDBF = 0) ;
1289     ' ICALL GETCD ;
1291     ' ONCDBF = 1;
1293     (ONCDBF = 1) ;
1298 ; THEN NOTHING TO DO
1298     OTHER;
1300     ' EAQ      #JKO=A
1301     ' YCALL    CSPERR
1302     ' ONCDBF = 0
1303     ' TRA      CREAD
1304     END;
1305 ; AT THIS POINT, ONCDBF = ALWAYS 1
1305 CREAD9:NULL
1306     SUBSTR(CDBUF,1,80) =SUBSTR(TEMPCD,1,80)
1310     IF CLNO=0 ; LINE NO=YES
1312     ' NNISN=MMISN
1314     END
1315     CDBUFN = CDBUFN + 20

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LINE  D.....#.....1.....#.....2.....+.....3.....+.....4.....+.....5.....+.....6.....+.....7.....+.....8.....+.....9.....+.....0.....+.....1.....+  ***-----
1317      IF SUBSTR(CDBUF,1,1) = 'C'                                     '00080700
1322      ; BYPASS COMMENT CARDS                                     '00080800
1322      CREAD7: ' NULL                                           '00080900
1323          ' XCALL  CSPRNT ;                                       '00081000
1324          ' ICALL  GETCD                                           '00081100
1326          ' IF ONCDBF=2                                           '00081200
1329          ' ' LDX6   CRD=X6                                         '00081300
1330          ' ' TRA   1,6                                           '00081400
1331          ' END                                                     '00081500
1332          ' CDBUFN = 0                                             '00081600
1333          ' TRA   CREAD9                                           '00081700
1334      END                                                         '00081800
1335      IF SUBSTR(CDBUF,1,72)=ALL(' ') ; BLANK CARD IS A COMMENT '00081900
1340          ' TRA   CREAD7                                           '00082000
1341      END                                                         '00082100
1342      IF SUBSTR(CDBUF,1,1)='/'                                     '00082200
1347          ' ONCDBF =0                                             '00082300
1348          ' LDX6   CRD=X6                                         '00082400
1349          ' TRA   0,6 ; YCARD READ EXIT                          '00082500
1350      END                                                         '00082600
1351      IF SUBSTR(CDBUF,1,1)='*'                                     '00082700
1356          ' IF CDBG = MINUS1 ; NO                                   '00082800
1359          ' ' XCALL  CSPRNT                                       '00082900
1360          ' ' ICALL  GETCD                                       '00083000
1362          ' ' CDBUFN=0                                           '00083100
1363          ' ' TRA   CREAD9                                           '00083200
1364          ' END                                                     '00083300
1365          ' TRA   CREAD1                                           '00083400
1366      END                                                         '00083500
1367      IF CFORM<>0                                               '00083600
1369      *NFORM                                                    '00083700
1370          ' IF SUBSTR(CDBUF,1,1)<>'&'                             '00083800
1375          ' ' TRA   CREAD1                                           '00083900
1376          ' END                                                     '00084000
1377      ELSE ; FORM=YES                                           '00084100
1379          ' IF SUBSTR(CDBUF,6,1) = ' '                             '00084200
1384          ' ' TRA   CREAD1                                           '00084300
1385          ' END                                                     '00084400
1386          ' IF SUBSTR(CDBUF,6,1) = '0'                             '00084500
1391          ' ' TRA   CREAD1                                           '00084600
1392          ' END                                                     '00084700
1393      END                                                         '00084800
1394      ;                                                            '00084900
1394      ; ---- ERROR CC-3 ----                                     '00085000
1394      ;                                                            '00085100
1394      ; THE FIRST CARD IS CONTINUATION CARD                       '00085200
1394      ;                                                            '00085300
1394          CCOLNO = 6                                             '00085400
1396          LDA   #JCC-3                                           '00085500
1397          XCALL  CERRM                                           '00085600

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LINE D.....#1.....#2.....+.....3.....+.....4.....+.....5.....+.....6.....+.....7.....+.....8.....+.....9.....+.....0.....+.....1.....+   ***-----
1398      XCALL   CSPRNT                                     '00085800
1399      ICALL   GETCD                                     '00085900
1401      CDBUFG=0                                         '00085950
1402      TRA     CREAD9                                    '00086000
1403      ;                                                '00088000
1403      ; THE FIRST CARD IS NOT CONTINUATION THEN BUILD A STMT '00088100
1403      ;                                                '00088200
1403      CREAD1=NULL                                       '00088300
1404      ICALL   GETCD                                     '00088400
1406      CASE;                                             '00088500
1407      (SUBSTR(TEMPCD,1,1)='/')                          '00088600
1412      ' LDX6   CRD,X6                                  '00088700
1413      ' TRA    2,6                                     '00088800
1414      (SUBSTR(TEMPCD,1,1)='C')                          '00088900
1421      ' LDX6   CRD,X6                                  '00089000
1422      ' TRA    2,6                                     '00089100
1423      (SUBSTR(TEMPCD,1,1)='*')                          '00089200
1430      ' IF CDBG = MINUS1                                '00089300
1433      ' ' LDX6   CRD,X6                                '00089400
1434      ' ' TRA    2,6                                    '00089500
1435      ' END                                             '00089600
1436      ' IF SUBSTR(TEMPCD,6,1)=' '                       '00089700
1441      ' ' LDX6   CRD,X6                                '00089800
1442      ' ' TRA    2,6                                    '00089900
1443      ' END                                             '00090000
1444      ' IF SUBSTR(TEMPCD,6,1)='0'                       '00090100
1449      ' ' LDX6   CRD,X6                                '00090200
1450      ' ' TRA    2,6                                    '00090300
1451      ' END                                             '00090400
1452      END ; CASE                                       '00090500
1454      IF CFORM<>0                                       '00090600
1456      * NFORM                                           '00090620
1457      ' DO X6 =1,72                                       '00090640
1462      ' ' IF SUBSTR(TEMPCD,X6,1)='&'                   '00090660
1467      ' ' ' TRA    CREADB                               '00090680
1468      ' ' END                                           '00090700
1469      ' ' IF SUBSTR(TEMPCD,X6,1)<>' '                   '00090720
1474      ' ' ' LDX6   CRD,X6                               '00090740
1475      ' ' ' TRA    2,6                                   '00090760
1476      ' ' END                                           '00090780
1477      ' END                                             '00090800
1479      ' LDX6   CRD,X6                                     '00090850
1480      ' TRA    2,6                                       '00090900
1481      ELSE                                             '00091100
1483      ' IF SUBSTR(TEMPCD,6,1)=' '                       '00091200
1488      ' ' LDX6   CRD,X6                                  '00091300
1489      ' ' TRA    2,6                                     '00091400
1490      ' END                                             '00091500
1491      ' IF SUBSTR(TEMPCD,6,1)='0'                       '00091600
1496      ' ' LDX6   CRD,X6                                  '00091700

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LINE D.....#.#1.....#.....2.....+.....3.....+.....4.....+.....5.....+.....6.....+.....7.....+.....8.....+.....9.....+.....0.....+.....1.....+
1497      ' TRA      2,6                                '00091800
1498      ' END                                           '00091900
1499      END;                                           '00092000
1500      ; CONTINUATION CARD FOLLOWS                      '00092100
1500      CREADB:NULL                                     '00092150
1501      LXL5      CDBUFN                                '00092200
1502      SUBSTR(CDBUF(X5),1,80) = SUBSTR(TEMPCD,1,80)    '00092300
1508      CDBUFN = CDBUFN + 20                             '00092400
1510      IF CDBUFN = 220                                 '00092500
1513      ' CCOLNO=792                                    '00092600
1515      ' CDBUFN = 200                                  '00092700
1517      ' LDA      #JCC=1                               '00092800
1518      ' XCALL   CERRM                                '00092900
1519      ' CCOLNO=0                                     '00092950
1520      ' LDX6   CRD,X6                                '00093000
1521      ' TRA      2,6                                '00093100
1522      END                                           '00093200
1523      TRA      CREAD1                                '00093300
1524      CRD,X6:BSS      1                              '00093400
1525      CREAD3:NULL                                     '00093500
1526      EAQ      #JKO=A                               '00093600
1527      YCALL   CSPERR                                '00093700
1528      TRA      GETCDD                               '00093800
1529      CREAD4:NULL                                     '00093900
1530      ONCDBF = 2 ;                                    '00094000
1532      SUBSTR(TEMPCD,1,80)=ALL(' ')                  '00094100
1536      TRA      GETCD1                                '00094200
1537      ISUBS: BSS      1                              '00094300
1538      CDBUFA:ZERO    0,CDBUF                       '00094400
1539      CDBUFN:DEC     0                              '00094600
1540      ONCDBF:DEC     0                              '00094700
1541      TEMPCD:BSS     20                             '00094900
1542      BSS      1 ; FOR GTLT BUG WHEN INPUT IS BCD   '00095000
1543      CCOLNO:DEC     0                              '00095010
1544      CDBUFN:DEC     0                              '00095020
1545      NNISN: DEC     0                              '00095030
1546      MMISN: DEC     0                              '00095040
1547      CDBUF: BSS     220                            '00095100
1548      ;                                           '00095200
1548      ;--- THIS ROUTINE GETS A CARD INTO TEMP CD    '00095300
1548      ;                                           '00095400
1548      GETCD: IPROC;                                  '00095500
1550      GETCDD: ' NULL                                '00095600
1551      ' IF ONCDBF=2                                   '00095700
1554      ' ' TRA      GETCD1                            '00095800
1555      ' END                                           '00095900
1556      ' SYMREF   GAGET                                '00096000
1557      ' TSX1     GAGET                                '00096100
1558      ' TRA      *+6                                  '00096200
1559      ' ZERO     E.L.,,111111                       '00096300

```

```

LINE D.....#.#1.....#.....2.....+.....3.....+.....4.....+.....5.....+.....6.....+.....7.....+.....8.....+.....9.....+.....0.....+.....1.....+
1560 USFCB:  ' DEC      0
1561      ' ARG      CREAD4 ; EOF
1562      ' ARG      TEMPCD
1563      ' ARG      MEDIA
1564      ' AOS      CDNO ; CDNO = CDNO+1
1565      ' SZN      .SETU.-6
1566      ' TZE      GETCD1
1567 * BLANK PADDING FOR *SRC INPUT
1568      ' LDX1     USFCB
1569      ' LDQ      0,1
1570      ' LDA      -1,QU
1571      ' CANA     #0600000,DL
1572      ' TZE      **2
1573      ' SBLA     1,DU
1574      ' ARL      16
1575 * NOW Q REG CONTAINS CHAR SIZE
1576      ' EAX1     1,AL
1577      ' SBLA     80,DL
1578      ' NEG
1579      ' TZE      GETCD1 ; NOT NECCESARY
1580      ' STCA     GETCD3,03
1581      ' MLR      ,(///1),040
1582      ' ZERO
1583 GETCD3:  ' ADSC9  TEMPCD-1,3,0
1584      ' IF CLNO=0 ; YES
1585      ' ' ISUBS=1
1586      ' ' ICALL SETNUM
1587      ' ' MMISN=IVAL
1592 * SUBSTR(TEMPCD,1,80)=SUBSTR(TEMPCD,ISUBS,81-ISUBS)
1593      ' ' LDQ      81,DL
1594      ' ' SBQ      ISUBS
1595      ' ' STCQ     CREADD,03
1596      ' ' LDA      ISUBS
1597      ' ' MLR      (///A),,040
1598 CREADD:  ' ' ADSC9  TEMPCD-1,3,0
1599      ' ' ADSC9  TEMPCD,,80
1600      ' END
1601 GETCD1:  ' NULL
1602      END GETCD;
1603 GETCD2:BSS 1 ; WORK
1604 GETCD4:OCT 015000000000
1605 ;
1605 ; -- TEMPPR -----
1605 ; THIS ROUTINE PRINT THE INFORMATION ON TEMPCD
1605 ;
1605 TEMPPR:IPROC
1607      ' TSX1     .FWRDA
1608      ' TRA      **4
1609      ' ZERO     .E.L.,,99995
1610      ' ARG      UNIT6

```

```

***-----
'00096400
'00096500
'00096600
'00096700
'00096800
'00096900
'00097000
'00097100
'00097200
'00097300
'00097400
'00097500
'00097600
'00097700
'00097800
'00097900
'00098000
'00098100
'00098200
'00098300
'00098400
'00098500
'00098600
'00098700
'00098705
'00098710
'00098715
'00098718
'00098720
'00098725
'00098730
'00098735
'00098740
'00098745
'00098750
'00098755
'00098760
'00098800
'00098900
'00099000
'00099100
'00099200
'00099300
'00099400
'00099500
'00099600
'00099700
'00099800
'00099900
'00100000

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LINE D.....#..1.....#...2.....+.....3.....+.....4.....+.....5.....+.....6.....+.....7.....+.....8.....+.....9.....+.....0.....+.....1.....+... ***-----
1619 ;                                     '00100900
1619 ; ----- CPRNT -----                '00101000
1619 ;                                     '00101100
1619 ; CPRNT IS CALLED VIA X6                '00101200
1619 ;                                     '00101300
1619 ; PRINT CONTROL ROUTINE                '00101400
1619 ; THIS ROUTINE PRINTS THE CONTENTS OF CPRNTB(JIS) '00101500
1619 ;                                     '00101600
1619 CPRNT: NULL                            '00101700
1620     STX6     CPRNT1                      '00101800
1621     LINENO = LINENO+1                    '00101900
1622     LDQ      U6FCB                       '00102000
1623     ADQ      1,DU                        '00102100
1624     LDX1     33,DU                       '00102200
1625     SZN      .SETU,-6                    '00102300
1626     TZE      CPRNT9                      '00102400
1627     LDX1     20,DU ; TSS                 '00102500
1628 CPRNT9:NULL                            '00102600
1629     STX1     0,QU                        '00102700
1630     SYMREF   .GAWTR                      '00102800
1631     TSX1     .GAWTR                      '00102900
1632     TRA      *+6                         '00103000
1633     ZERO     .E.L.,,9998                '00103100
1634 U6FCB: DEC 0                            '00103200
1635     ARG      CPRNTB                      '00103300
1636     ARG      MEDIA                      '00103400
1637     ARG      UNIT6                      '00103500
1638     SUBSTR(CPRNTB,1,133)= ALL(' ')      '00103600
1642 CPRNT1:TRA **                          '00103700
1643 ;                                       '00103800
1643 ;                                       '00103900
1643 HEADF: JIS 9,('1 FORTRAN-E VER ',A4,3X,A80,2X, '00104000
1644     JIS 6,A8,F7=3,4X,'PAGE',15)         '00104100
1645 ;                                       '00104200
1645 ; HEADING PRINT ROUTINE CALLED VIA X5  '00104300
1645 ;                                       '00104400
1645 CHEAD: IPROC                            '00104500
1647     ' STX6     CH,X6                      '00104600
1648     ' SZN      .SETU,-6                    '00104700
1649     ' TNZ      CH,X6 ; TSS                '00104800
1650     ' CPAGE = CPAGE+1                    '00104900
1651     ' CALL     .FHSQ8(CDATE,CTIME) ; CALL DATIM '00105000
1652     ' TSX1     .FWRDA                      '00105100
1653     ' TRA      *+4                         '00105200
1654     ' ZERO     .E.L.,,99999              '00105300
1655     ' ARG      UNIT6                      '00105400
1656     ' ARG      HEADF                      '00105500
1657     ' EAA      ZZZVER                     '00105600
1658     ' TSX1     .FCNVC                     '00105700
1659     ' NOP      4,DL                       '00105800

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```

LINE D.....#1.....#2.....+.....3.....+.....4.....+.....5.....+.....6.....+.....7.....+.....8.....+.....9.....+.....0.....+.....1.....+
1726 ;
1726 ; ----- TOPFORM -----
1726 ;
1726 ; ADVANCE TO TOP OF FORM ROUTINE
1726 TOPFORM:IPROC
1728     ! TSX1     .FWRDA
1729     ! IRA     **4
1730     ! ZERO     .E.L.,88888
1731     ! ARG     UNIT6
1732     ! ARG     TOPF1
1733     ! TSX1     .FFILA
1734     END TOPFORM ;
1735 TOPF1: JIS     2,('1')
1736     EJECT

```

'00108900
'00109000
'00109100
'00109200
'00109300
'00109400
'00109500
'00109600
'00109700
'00109800
'00109900
'00110000
'00110100
'00110200


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LINE D.....#.....1.....+.....#.....2.....+.....3.....+.....4.....+.....5.....+.....6.....+.....7.....+.....8.....+.....9.....+.....0.....+.....1.....+..... ***-----
1737 ; ----- CSPRNT ----- '00110300
1737 ; '00110400
1737 ; PRINT A SOURCE STMT '00110500
1737 ; IT MAY HAVE CONTINUATION LINES '00110600
1737 ; '00110700
1737 ; SOURCE STMT IS IN CDBUF '00110800
1737 ; ERROR MESSAGE WITH COLUMN INDICATION MIXED '00110900
1737 ; '00111000
1737 ; ENTRY VIA XCALL CSPRNT '00111100
1737 ; '00111200
1737 ; '00111300
1738 ; CSPRNT=NULL '00111400
1738 ; STX6 CS,X6 '00111500
1739 ; CDBUF=CDBUFN+CDBUFA '00111600
1742 ; CDBUF=CDBUF-1 '00111700
1744 ; DO X5 = CDBUFA,CDBUF,20 '00111800
1751 ; ' IF LINENO >= MLINES '00111900
1754 ; ' ICALL CHEAD ; '0012000
1756 ; ' END '0012100
1757 ; ' AOS CCDNO ; COUNT UP CARD NUMBER '0012200
1758 ; ' AOS CPCDNO ; COUNT UP CURRENT MODULE CARD NUMBER '0012300
1759 ; ' CALL BINJIS(ISN,CSPWK3) '0012400
1760 ; ' SUBSTR(CPRNTB,2,7)=SUBSTR(CSPWK3,6,7) '0012500
1764 ; ' CALL BINJIS(CPCDNO,CSPWK3) '0012600
1765 ; ' SUBSTR(CPRNTB,9,8)=SUBSTR(CSPWK3,5,8) '0012700
1769 ; ' SUBSTR(CPRNTB,19,80)=SUBSTR(ZERO(X5),1,80) '0012800
1775 ; ' IF CPRNTS=0 '0012900
1777 ; ' ICALL CPRNT '0013000
1778 ; ' END ; PRINT ON '0013100
1779 ; ' EAQ 20,5 '0013200
1780 ; ' QRL 18 '0013300
1781 ; ' SBQ CDBUFA '0013400
1782 ; ' QLS 2 ; *4 '0013500
1783 ; ' ADQ 1,DL '0013600
1784 ; ' STQ CSRQ '0013700
1785 ; ' IF CSRQ > CERSTK '0013800
1788 ; ' LDQ CERSTK '0013900
1789 ; ' ICALL CSPO1 '0014000
1791 ; ' END '0014100
1792 ; ' IF CSRQ > CERSTK(1) '0014200
1795 ; ' LDQ CERSTK+1 '0014300
1796 ; ' ICALL CSPO1 '0014400
1798 ; ' END '0014500
1799 ; ' IF CSRQ > CERSTK(2) '0014600
1802 ; ' LDQ CERSTK+2 '0014700
1803 ; ' ICALL CSPO1 '0014800
1805 ; ' END '0014900
1806 ; ' IF CSRQ > CERSTK(3) '0015000
1809 ; ' LDQ CERSTK+3 '0015100
1810 ; ' ICALL CSPO1 '0015200

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LINE D.....#.#1.....+##...2.....+.....3.....+.....4.....+.....5.....+.....6.....+.....7.....+.....8.....+.....9.....+.....0.....+.....1.....+... ***-----
1812      | END                                         |'00115300
1813      | IF SUBSTR(CERIND,1,80) = ' '              |'00115400
1818      | ' TRA      CSP17                          |'00115500
1819      | END                                         |'00115600
1820      | SUBSTR(CPRNTB,19,80)=SUBSTR(CERIND,1,80)  |'00115700
1824      | SZN      SETU,-6                          |'00115800
1825      | TNZ      CSP24                            |'00115900
1826      | XCALL    CPRNT                            |'00116000
1827      | TRA      CSP25                            |'00116100
1828      | CSP24:  | NULL                            |'00116200
1829      | * TSS LINE                                |'00116300
1830      | SUBSTR(CPRNTB,2,80)=SUBSTR(ZERO(X5),1,80) |'00116400
1836      | XCALL    CPRNT                            |'00116500
1837      | SUBSTR(CPRNTB,2,80)=SUBSTR(CERIND,1,80)  |'00116600
1841      | XCALL    CPRNT                            |'00116700
1842      | CSP25:  | NULL                            |'00116800
1843      | SUBSTR(CERIND,1,80) = ' ' ; CLEAR         |'00116900
1847      | EAQ      21,5                             |'00117000
1848      | QRL      18                              |'00117100
1849      | SBQ      CDBUFA                          |'00117200
1850      | QLS      2 ; *4                          |'00117300
1851      | STQ      CSRQ                             |'00117400
1852      | STX5     SAVEDO                           |'00117500
1853      | IF CSRQ > CERSTK                          |'00117600
1856      | ' EAQ      CERSTK+4                       |'00117700
1857      | ' YCALL    CSPERR                         |'00117800
1858      | ' CERSTK= 1601                           |'00117900
1860      | END                                         |'00118000
1861      | IF CSRQ > CERSTK(1)                       |'00118100
1864      | ' EAQ      CERSTK+5                       |'00118200
1865      | ' YCALL    CSPERR                         |'00118300
1866      | ' CERSTK(1)=1601                          |'00118400
1868      | END                                         |'00118500
1869      | IF CSRQ > CERSTK(2)                       |'00118600
1872      | ' EAQ      CERSTK+6                       |'00118700
1873      | ' YCALL    CSPERR                         |'00118800
1874      | ' CERSTK(2)=1601                          |'00118900
1876      | END                                         |'00119000
1877      | IF CSRQ > CERSTK(3)                       |'00119100
1880      | ' EAQ      CERSTK+7                       |'00119200
1881      | ' YCALL    CSPERR                         |'00119300
1882      | ' CERSTK(3)=1601                          |'00119400
1884      | END                                         |'00119500
1885      | IF LINENO >= MLINES                       |'00119600
1888      | ' ICALL    CHEAD                           |'00119700
1890      | END                                         |'00119800
1891      | LDX5     SAVEDO                           |'00119900
1892      | CSP17:  | NULL                            |'00120000
1893      | END                                         |'00120100
1895      | LDX6     CS,X6                            |'00120200

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LINE D.....#..1.....+.....#..2.....+.....3.....+.....4.....+.....5.....+.....6.....+.....7.....+.....8.....+.....9.....+.....0.....+.....1.....+   ***-----
1896      TRA      0,6                                     '00120300
1897  CSRA:  BSS      1 ; SAVE AREA FOR R-A                '00120400
1898  ELEVEL: BSS     2 ; ERROR LEVEL                      '00120500
1899  CSRQ:  BSS      1 ; SAVE AREA FOR REG Q             '00120600
1900  SAVED0: BSS     1                                     '00120700
1901  CS,X6: BSS      1 ; X6 SAV AREA                     '00120800
1902  CS,X5: BSS      1 ; X5 SAVE AREA                     '00120900
1903  CSPWK3: BSS     3                                     '00121000
1904  CERIND: BSS    20                                     '00121100
1905  ;                                                    '00121200
1905  ; SET INDICATION                                    '00121300
1905  ;                                                    '00121400
1905  ; ASSUME REG Q CONTAINS ERROR_CODE TO BE STORED    '00121500
1905  CSPO1: IPROC                                         '00121600
1907  ;                                                    '00121700
1907      ' SBQ      1,DL                                     '00121800
1908      ' DIV      80,DL                                    '00121900
1909      ' ADA      1,DL                                     '00122000
1910      ' TMOZ     CSP02 ; BYPASS IF MINUS OR ZERO       '00122100
1911      ' MLR      (,A),040                                '00122200
1912      ' ADSC9    ASTR,,1                                  '00122300
1913      ' ADSC9    CERIND-1,3,1                            '00122400
1914      END CSP01                                         '00122500
1915  CSPO2: NULL                                          '00122600
1916      DEC      0 ; ABORT HERE  COMPILER ERROR          '00122700
1917  ;                                                    '00122800
1917  ; PRINT A MESSAGE                                    '00122900
1917  ; ASSUME REG Q CONTAINS CODE ADDRESS IN UPPER      '00123000
1917  CSPERR: NULL                                        '00123100
1918      STQ      CSP12                                     '00123200
1919      STX5     CS,X5                                     '00123300
1920      SREG     SSREG                                    '00123350
1921      LDA      CSP12,I                                  '00123400
1922      STA      CSP15                                    '00123500
1923      YCALL   CERRMS ; ADDR INTO REG A                 '00123700
1924      STA      CSRA                                     '00123800
1925      LDX5     1,AU                                     '00123900
1926      STX5     CSP30 ; STORE LEVEL CODE                 '00123950
1927      CMPX5   #0105040,DU ; 'E'                       '00124000
1928      TNZ     CSP11                                     '00124100
1929  CSP18: NULL                                        '00124150
1930      AOS     CERCNT                                    '00124200
1931      SUBSTR(ELEVEL,1,8)=' ERROR'                       '00124300
1939      TRA     CSP20                                     '00124400
1940  CSP11: NULL                                        '00124500
1941      CMPX5   #0127040,DU ; 'W'                         '00124600
1942      TNZ     CSP13                                     '00124700
1943      AOS     CWNCNT                                    '00124800
1944      IF CWARN = 0                                       '00124900
1946      ' SUBSTR(ELEVEL,1,8)='WARNING'                    '00125000

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LINE D.....#.....1.....+.....#.....2.....+.....3.....+.....4.....+.....5.....+.....6.....+.....7.....+.....8.....+.....9.....+.....0.....+.....1.....+..... ***-----
2081 ; '00129700
2081 ; '00129800
2081 ; ----- CERRM ----- '00129900
2081 ; '00130000
2081 ; COMPILE TIME ERROR MESSAGE MONITOR '00130100
2081 ; '00130200
2081 ; THIS ROUTINE GETS ERROR CODE FROM REG A '00130300
2081 ; THEN SET IT TO CERSTK(I+4) AND CCOLNO TO (I9) '00130400
2081 ; '00130500
2081 ; ENTRY VIA X6 '00130600
2081 ; '00130700
2081 CERRM: NULL '00130800
2082 STX5 CERRX5 '00130900
2083 AOS CERSTN ; COUNT UP ERROR ST.CNT '00131000
2084 LDX5 CERSTK,DU '00131100
2085 LDQ 0,5 '00131200
2086 CMPQ 1601,DL '00131300
2087 TZE CERRM1 '00131400
2088 ADX5 1,DU '00131500
2089 LDQ 0,5 '00131600
2090 CMPQ 1601,DL '00131700
2091 TZE CERRM1 '00131800
2092 ADX5 1,DU '00131900
2093 LDQ 0,5 '00132000
2094 CMPQ 1601,DL '00132100
2095 TZE CERRM1 '00132200
2096 ADX5 1,DU '00132300
2097 LDQ 0,5 '00132400
2098 CMPQ 1601,DL '00132500
2099 TZE CERRM1 '00132600
2100 LDX5 CERRX5 '00132650
2101 TRA 0,6 '00132700
2102 CERRM1:STA 4,5 '00132800
2103 ; STORE ERROR CODE '00132900
2103 LDQ CCOLNO '00133000
2104 STQ 0,5 '00133100
2105 LDX5 CERRX5 '00133200
2106 TRA 0,6 '00133300
2107 CERRX5:BSS 1 '00133400
2108 EJECT '00133500

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LINE D.....#.#1.....#.#2.....#.#3.....#.#4.....#.#5.....#.#6.....#.#7.....#.#8.....#.#9.....#.#0.....#.#1.....#.# ***-----
2109 ;
2109 ; ----- ISNRTN ----- THIS ROUTINE HANDLES TRACE AND
2109 ; ISN-LOADING INTO X7
2109 ISNRTN:NULL
2110 AOS XDYNAM ; XDYNAM =XDYNAM+1
2111 TZE ISNERO
2112 IF CISNT= 0 ; YES
2114 ' LDQ 0,7
2115 ' STQ SV,X7
2116 ' CALL BINJIS(SV,X7,ISN3)
2117 ' SUBSTR(CPRNTB,2,21)='STATEMENT TRACE ISN ='
2129 ' SUBSTR(CPRNTB,23,5)=SUBSTR(ISN3,8,5)
2133 ' XCALL CPRNT
2134 END;
2135 TRA 1,7 ;
2136 ISN3: BSS 3
2137 SV,X7: BSS 1
2138 ISNERO:NULL
2139 LDQ XDYNAM
2140 SBLQ 1,DL
2141 STQ XDYNAM
2142 EAQ ISNKOB
2143 YCALL CSPERR
2144 TRA XSTOP
2145 ISNKOB:JIS 1,KO=B
2146 ;
2146 ; ----- TRACE AND HTRACE
2146 ;
2146 TRACE: NULL
2147 STZ CISNT
2148 TRA 0,1
2149 HTRACE:NULL
2150 STX7 CISNT
2151 TRA 0,1
2152 ;
2152 ; ----- NXTISN -----
2152 ; THIS ROUTINE COUNT UP ISN
2152 NXTISN:NULL
2153 SZN .SETU.-6
2154 TNZ NXTIS1
2155 AOS ISN
2156 TRA 0,6
2157 NXTIS1:NULL
2158 IF CLNO <> 0
2160 * WHEN LNO=NO
2161 ' LDQ CCDNO
2162 ' ADQ 1,DL
2163 ' STQ ISN
2164 ' TRA 0,6
2165 ELSE

```

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'00133600
'00133700
'00133800
'00133900
'00134000
'00134100
'00134200
'00134300
'00134400
'00134500
'00134600
'00134700
'00134800
'00134900
'00135000
'00135100
'00135200
'00135300
'00135400
'00135500
'00135600
'00135700
'00135800
'00135900
'00136000
'00136010
'00136015
'00136017
'00136020
'00136030
'00136033
'00136040
'00136050
'00136060
'00136100
'00136200
'00136300
'00136400
'00136410
'00136430
'00136500
'00136600
'00136620
'00136630
'00136640
'00136660
'00136680
'00136690
'00136695
'00136700

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LINE D.....#.....1.....+#.....2.....+.....3.....+.....4.....+.....5.....+.....6.....+.....7.....+.....8.....+.....9.....+.....0.....+.....1.....+
2172D 0      00
2172 ;
2172 ; ----- XA1 -----
2172 ;
2172 ; SUBSCRIBING ROUTINE FOR SINGLY SUBSCRIPTED VARIABLES
2172 ;
2172 ; ENTRY
2172 ; 0,4 = ACTUAL SUBSCRIPT, ASSUMED AS INTEGER*4
2172 ; -2,5 = PROCESSING ARRAY NAME IN BCD
2172 ; 0,5 = CAR: TOP ADDRESS OF THE DATA AREA
2172 ; CDR: TOTAL LENGTH
2172 ; 1,5 = 9/1(FOR 1 DIMENSION),9/S,2/ID,6*2/0,3/0,1/C
2172 ; 2,5 = CAR: VARIABLE DIMENSION
2172 ; CDR: SIZE
2172 ; 0,6 = RETURN ADDRESS
2172 ;
2172 ; EXIT
2172 ; OBTAINED ADDRESS IN X2
2172 ; ON ERROR SPECIAL EXIT
2172 ;
2172 ; WORK REGISTERS --- XD,X2
2172 ; WORK STORAGE IS 1(X4)
2172 ;
2172 ; PROCESS:
2172 ; 1. CHECK SINGLE DIM.
2172 ; 2. CHECK ACTUAL SUBSCRIPT IS IN THE RANGE
2172 ; 3. CALCULATE ACTUAL ADDRESS IN X2
2172 XA1: NULL
2173 LDQ 1,5 ; CHECK NO. OF DIM IS ONE
2174 QRL 27
2175 CMPQ 1,DL ; IF SUBSTR(1(X5),1,1)<>1 THEN ERROR
2176 TNZ XA1ER0
2177 LDA 1,DL ; SET LOWER LIMIT
2178 LDQ 2,5 ; GET THE SIZE IN REG Q
2179 ANQ -1,DL
2180 TZE XA1ER2
2181 CWL 0,4 ; CHECK ACTUAL SUBS. IS IN THE RANGE
2182 TNZ XA1ER1 ; OUT OF RANGE
2183 LDQ 0,4
2184 SBQ 1,DL
2185 STQ 1,4 ; 1(X4) = 0(X4) -1
2186 LDQ 1,5
2187 QLS 9
2188 QRL 27
2189 MPY 1,4
2190 STQ 1,4
2191 LXL2 1,4 ; X2=SUBSTR(1(X5),2,1) * 1(X4) +0(X5)
2192 ADLX2 0,5 ; ADD BASE
2193 TRA 0,6
2194 ;

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LINE D.....#1.....+.....#2.....+.....3.....+.....4.....+.....5.....+.....6.....+.....7.....+.....8.....+.....9.....+.....0.....+.....1.....+
2194 ; ----- XA2 ----- *-----
2194 ; '00005000
2194 ; SUBSCRIBING ROUTINE FOR DOUBLY SUBSCRIBED VARIABLES '00005100
2194 ; '00005200
2194 ; TO GET (I,J) ELEMENT'S ADDRESS IN (N,M) MATRIX, '00005300
2194 ; CALCULATE '00005400
2194 ; (N * (J-1) + I - 1) * WORD SIZE + BASE '00005500
2194 ; '00005600
2194 ; ENTRY '00005700
2194 ; 0,4 = I '00005800
2194 ; 2,4 = J '00005900
2194 ; WORK STORAGE IS 1(X4) '00006000
2194 ; '00006100
2194 ; '00006200
2194 XA2: NULL '00006300
2195 LDQ 1,5 '00006400
2196 QRL 27 '00006500
2197 CMPQ 2,DL '00006600
2198 TNZ XAZERO ; IF SUBSTR(1(X5),1,1)<> 2 THEN ERROR '00006700
2199 LDA 1,DL ; SET LOWER BOUND TO 1 '00006800
2200 LDQ 2,5 ; SET N '00006900
2201 ANQ -1,DL '00007000
2202 TZE XAZER2 ; UNSETUPED ARAY '00007100
2203 CWL 0,4 '00007200
2204 TNZ XA1ER1 ; OUT OF RANGE FOR 1ST INDEX '00007300
2205 ; 1ST SUBS. IS VALID '00007400
2205 ; THEN CHECK 2ND SUBS. '00007500
2205 ; '00007600
2205 LDA 1,DL ; SET LOWER BOUND TO 1 '00007700
2206 LDQ 3,5 ; SET M '00007800
2207 ANQ -1,DL '00007900
2208 TZE XAZER2 ; UNSETUPED ARRAY '00008000
2209 CWL 2,4 ; CHECK J '00008100
2210 TNZ XAZER1 '00008140
2211 LDQ 2,4 ; J '00008200
2212 SBQ 1,DL '00008300
2213 MPY 2,5 ; N*(J-1) '00008400
2214 ADQ 0,4 ; +I '00008500
2215 SBQ 1,DL ; -1 '00008600
2216 STQ 1,4 ; WORK '00008700
2217 LDQ 1,5 '00008800
2218 QLS 9 '00008900
2219 QRL 27 ; GET WORD SIZE '00009000
2220 MPY 1,4 ; GET OFFSET ADDR '00009100
2221 STQ 1,4 '00009300
2222 LXL2 1,4 '00009400
2223 ADLX2 0,5 ; ADD BASE '00009450
2224 TRA 0,6 '00009500
2225 ; '00009600
2225 ; ----- XAN ----- '00009700
2225 ; '00009800

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LINE D.....+...#...1.....+...#...2.....+...3.....+...4.....+...5.....+...6.....+...7.....+...8.....+...9.....+...0.....+...1.....+... ***-----
2267      TRA      XANLOP ;                                '00014200
2268      ; END OF LOOP                                '00014300
2268      XANN:  NULL                                '00014400
2269      X2 = X2 -1 ;                                '00014500
2270      LDQ      1,5                                '00014600
2271      QLS      9                                  '00014700
2272      QRL      27                                '00014800
2273      SXL2     1,4                                '00014900
2274      MPY      1,4 ; WORD-SIZE OFFSET              '00015000
2275      STQ      1,4                                '00015200
2276      LXL2     1,4                                '00015300
2277      ADLX2    0,5 ; ADD BASE                      '00015350
2278      TRA      0,6 ; RETURN                       '00015400
2279      ;                                           '00015500
2279      ;                                           '00015600
2279      XA1ER0:NULL                                '00015700
2280      XA2ER0:NULL                                '00015800
2281      DEC      0 ; ABORT HERE                    '00015900
2282      XA1ER1:NULL                                '00016000
2283      LDQ      0,4                                '00016010
2284      XA1ER4:NULL                                '00016020
2285      STQ      XANVV                              '00016030
2286      CALL     BINJIS(XANVV,CPRNTB+27)            '00016040
2287      SUBSTR(CPRNTB,108,6)='VALUE=' ;            '00016060
2295      TRA      XANERR                              '00016080
2296      XA2ER1:NULL                                '00016100
2297      LDQ      2,4                                '00016200
2298      TRA      XA1ER4                              '00016210
2299      XANER1:NULL                                '00016230
2300      LDQ      0,0                                '00016240
2301      TRA      XA1ER4                              '00016250
2302      XANERR:NULL                                '00016260
2303      EAQ      XANSS3                              '00016270
2304      YCALL    CSPERR                              '00016300
2305      TRA      XSTOP                               '00016400
2306      XANSS3:JIS 1,SS-3                          '00016500
2307      XA1ER2:NULL                                '00016600
2308      XA2ER2:NULL                                '00016700
2309      XANER2:EAQ  XANSS0                          '00016800
2310      YCALL    CSPERR                              '00016900
2311      TRA      XSTOP                               '00017000
2312      XANSS0:JIS 1,SS-0                          '00017100
2313      *                                           '00017200
2314      XANVV:  DEC  0                                '00017250
2315      XVA1:  NULL                                '00017300
2316      XVA2:  NULL                                '00017400
2317      XVAN:  NULL                                '00017500
2318      DEC      0 ; ABORT HERE                    '00017600
2319      EJECT                                       '00000100

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LINE D.....+...#..1.....+...#...2.....+...3.....+...4.....+...5.....+...6.....+...7.....+...8.....+...9.....+...0.....+...1.....+... ***-----
2350      ' END                                '00000610
2351      ' TRA      OPTS00                    '00000620
2352      END                                '00000630
2353      ;                                  '00000640
2353      ; SET KEY CHAR                      '00000650
2353      ;                                  '00000660
2353      DO XO=1,4                            '00000670
2358      ' SUBSTR(KEY,XO,1)=SUBSTR(TEMPCD,ISUBS,1) '00000680
2362      ' AOS      ISUBS ; ISUBS++          '00000690
2363      ' IF SUBSTR(TEMPCD,ISUBS,1)='='      '00000700
2369      ' ' TRA      OPTS02                 '00000710
2370      ' END                                '00000720
2371      END                                '00000730
2373      ; BASS REMAINING CHARS                '00000740
2373      OPTS03=NULL                          '00000750
2374      IF ISUBS >= 73                      '00000760
2377      ' TRA      OPTS01                    '00000770
2378      END                                '00000780
2379      AOS      ISUBS ; ISUBS++            '00000790
2380      IF SUBSTR(TEMPCD,ISUBS,1)='='      '00000800
2386      ' TRA      OPTS02                    '00000810
2387      END                                '00000820
2388      TRA      OPTS03                      '00000830
2389      OPTS02=NULL                          '00000840
2390      AOS      ISUBS ; ISUBS++            '00000850
2391      ;                                  '00000860
2391      ; THEN KEY CONTAINS THE KEY          '00000870
2391      ;                                  '00000880
2391      ; FIND KEY ON CKEYS                  '00000890
2391      ;                                  '00000900
2391      XO= 0                                '00000910
2392      OPTS80:LOOP                          '00000920
2393      ' IF CKEYS(XO)=KEY                    '00000930
2396      ' ' TRA      OPTS04                  '00000940
2397      ' END                                '00000950
2398      ' XO=XO+2                             '00000960
2399      ' IF XO= MAXKEY ;                     '00000970
2403      + + LEAVE OPTS80                     '00000980
2404      ' END                                '00000990
2405      END                                '00001000
2407      ; KEY NOT FOUND IN CKEYS             '00001010
2407      XCALL  OPTER                          '00001020
2408      JIS    4,ILLEGAL NAME                 '00001030
2409      ;                                  '00001040
2409      ; BYPASS TO COMMA                     '00001050
2409      ;                                  '00001060
2409      LOOP                                  '00001070
2410      ' AOS      ISUBS ; ISUBS++            '00001080
2411      ' IF SUBSTR(TEMPCD,ISUBS,1)=','      '00001090
2417      ' ' AOS      ISUBS                    '00001100

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LINE 0.....+...#...1.....+...#...2.....+...3.....+...4.....+...5.....+...6.....+...7.....+...8.....+...9.....+...0.....+...1.....+... ***-----
2418      ' ' TRA      OPTS99                                '00001110
2419      ' END                                              '00001120
2420      ' IF ISUBS = 73                                       '00001130
2423      ' ' TRA      OPTS01                                '00001140
2424      ' END                                              '00001150
2425      END                                                '00001160
2426      ;                                                  '00001170
2426      ; KEY FOUND THEN SEARCH VALUE                        '00001180
2426      ;                                                  '00001190
2426      OPTS04:NULL                                         '00001200
2427      X0=X0+1                                             '00001210
2428      STX0 OPT,X0                                         '00001220
2429      IVAL=' '                                           '00001230
2431      OPTS05:NULL                                         '00001240
2432      IF SUBSTR(TEMPCD,ISUBS,1)=' ' ;                      '00001250
2437      ' AOS      ISUBS ; ISUBS++                          '00001260
2438      ' IF ISUBS >=73                                       '00001270
2441      OPTS08: ' ' NULL                                     '00001280
2442      ' ' XCALL  OPTER                                     '00001290
2443      ' ' JIS    4, MISSING VALUE                        '00001300
2444      ' ' TRA    OPTS01                                   '00001310
2445      ' END                                              '00001320
2446      ' TRA      OPTS05                                   '00001330
2447      END                                                '00001340
2448      IF SUBSTR(TEMPCD,ISUBS,1) >= '0'                    '00001350
2454      ' IF SUBSTR(TEMPCD,ISUBS,1) <= '9'                '00001360
2461      ' ' ICALL SETNUM                                       '00001370
2463      ' ' IF ISUBS >=73                                       '00001380
2466      ' ' ' TRA      OPTS82                                '00001390
2467      ' ' END                                              '00001400
2468      ' ' LDQ      IVAL                                       '00001410
2469      ' ' LDX0    OPT,X0                                       '00001420
2470      ' ' STQ     CKEYS,0                                       '00001430
2471      ' ' TRA     OPTS99                                       '00001440
2472      ' END IF                                           '00001450
2473      END IF                                           '00001460
2474      TRA      OPTS10                                       '00001470
2475      SETNUM:IPROC                                       '00001480
2477      * INNER SUB FOR CHAR-NUM CONVERSION                '00001490
2478      * VALUE IS IN'IVAL'                                  '00001500
2479      ' IVAL=0                                           '00001510
2480      ' LOOP                                             '00001520
2481      ' ' IVAL=IVAL*10                                       '00001530
2484      ' ' CASE;                                           '00001540
2485      ' ' (SUBSTR(TEMPCD,ISUBS,1)='1')                    '00001550
2491      ' ' ' IVAL=IVAL+1                                       '00001560
2492      ' ' (SUBSTR(TEMPCD,ISUBS,1)='2')                    '00001570
2500      ' ' ' IVAL=IVAL+2                                       '00001580
2502      ' ' (SUBSTR(TEMPCD,ISUBS,1)='3')                    '00001590
2510      ' ' ' IVAL=IVAL+3                                       '00001600

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LINE D.....#...1.....#...2.....+.....3.....+.....4.....+.....5.....+.....6.....+.....7.....+.....8.....+.....9.....+.....0.....+.....1.....+ ***-----
2646      TRA      OPTS07                                '00002110
2647  OPTS06:NULL                                '00002120
2648      AOS      ISUBS ; ISUBS++                      '00002130
2649      ;                                           '00002140
2649      ; IVAL CONTAINS THE SYMBOLIC VALUE           '00002150
2649      ;                                           '00002160
2649      X0=0                                          '00002170
2650  OPTS81:LOOP                                '00002180
2651      ' IF CIANS(X0) =IVAL                          '00002190
2654      ' ' TRA      OPTS09                          '00002200
2655      ' END                                          '00002210
2656      ' X0=X0+2                                       '00002220
2657      ' IF X0 = MAXANS ;                             '00002230
2661      + + LEAVE OPTS81                              '00002240
2662      ' END                                          '00002250
2663      END                                          '00002260
2665  OPTS82:NULL                                '00002270
2666      XCALL   OPTER                                '00002280
2667      JIS     4,ILLEGAL VALUE                      '00002290
2668      TRA     OPTS99                                '00002300
2669      ;                                           '00002310
2669      ; SET VALUE                                  '00002320
2669      ;                                           '00002330
2669  OPTS09:NULL                                '00002340
2670      X0=X0+1                                       '00002350
2671      LDQ     CIANS,0                                '00002360
2672      LDX0    OPT,X0                                '00002370
2673      STQ     CKEYS,0                              '00002380
2674      TRA     OPTS99                                '00002390
2675  IVAL: BSS 1                                  '00002400
2676  KEY: BSS 1                                   '00002410
2677  OPT,X6:BSS 1                                '00002420
2678  OPT,X0:BSS 1                                '00002430
2679      ;                                           '00002440
2679      ; RETURN                                       '00002450
2679      ;                                           '00002460
2679  OPTS01:NULL                                '00002470
2680      LDX6    OPT,X6                                '00002480
2681      TRA     0,6                                    '00002490
2682      ;                                           '00002500
2682      * ----- OPTERR -----                    '00002510
2683      ;                                           '00002520
2683  OPTER: NULL                                  '00002530
2684      STX6    OPTEX6                                '00002540
2685      ICALL   TOPFRM                                '00002550
2687      EAQ     OPTER1                                '00002560
2688      YCALL   CSPERR                                '00002570
2689      LDX6    OPTEX6                                '00002580
2690      SUBSTR(CPRNTB,14,16)=SUBSTR(ZERO(X6),1,16)    '00002590
2696      SUBSTR(CPRNTB,30,27)='* THE SPECIFIED FOR OPTION ' '00002600

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LINE D.....#.....1.....#.....2.....+.....3.....+.....4.....+.....5.....+.....6.....+.....7.....+.....8.....+.....9.....+.....0.....+.....1.....+
2766 CKEYS: JIS 1,LINE ; COMPILE LIST LINES/PAGE '00003110
2767 MLINE: DEC 54 ; MAX LINES/PAGE '00003120
2768 JIS 1,PAGE ; PAGE LIMMIT '00003130
2769 MPAGE: DEC 30 '00003140
2770 JIS 1,TIME '00003150
2771 MAXCPU: DEC 10 ; MAX CPU TIME IN SECONDS '00003160
2772 JIS 1,RUN '00003170
2773 CRUN: NULL '00003180
2774 DEC -6 ; GO '00003190
2775 JIS 1,DYNA '00003200
2776 MAXSTP: DEC 1000000000 '00003210
2777 JIS 1,ISNT '00003220
2778 CISNT: NULL '00003230
2779 DEC -1 ; ISNTRACE = NO '00003240
2780 JIS 1,DEBU ; DEBUG LINE '00003250
2781 CDBG: DEC -1 ; DEBUG = NO '00003260
2782 JIS 1,FORM '00003262
2783 CFORM: DEC 0 ; YES '00003263
2784 JIS 1,LNO '00003264
2785 CLNO: DEC -1 ; NO '00003265
2786 ; ----- ABOVE ARE THE JOB OPTIONS ----- '00003270
2786 JIS 1,ULIB '00003280
2787 CULIB: NULL '00003290
2788 DEC -1 ; ULIB = NO '00003300
2789 JIS 1,TYPE ; USER OR PASSWD '00003310
2790 CTYPE: NULL '00003320
2791 DEC -2 ; USER '00003330
2792 JIS 1,MODE ; CANDG OR LOAD '00003340
2793 CMODE: NULL '00003350
2794 CRELSW: DEC 0 '00003360
2795 JIS 1,DISP '00003370
2796 CDISP: DEC -1 ; NO '00003380
2797 JIS 1,PAUS '00003390
2798 CPAUSE: NULL '00003400
2799 DEC -1 ; NO '00003410
2800 JIS 1,SEPR '00003420
2801 CSEPR: NULL '00003430
2802 DEC 3 ; SEPARATOR IS 3 LINES '00003440
2803 JIS 1,MAXL ; MAXLINE '00003450
2804 FORMS: DEC 66 ; PHYSICAL PAGE SIZE '00003460
2805 JIS 1,ID ; FOR ID LOCAL/GLOBAL '00003463
2806 ID: DEC -7 '00003466
2807 ; ----- END OF KEY TABLE ----- '00003470
2807 ; '00000010
2807 ; BUILT-IN FUNCTION AND SUBROUTINE TABLE '00000020
2807 ; '00000030
2807 ; DEFS NAME,(F OR S),(GENERIC OR K),NUMBER OF ARGS,TARGI,,,, '00000040
2807 ; TVAL,ENTRY '00000050
2807 F: EQU 0 '00000060
2808 S: EQU 1 '00000070

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LINE	D	#	1	2	3	4	5	6	7	8	9	0	1	***----
2809	G:	EQU	0											'00000080
2810	K:	EQU	1											'00000090
2811	I:	EQU	1											'00000100
2812	R:	EQU	2											'00000110
2813	D:	EQU	3											'00000120
2814	C:	EQU	4											'00000130
2815	CD:	EQU	5											'00000140
2816	CH:	EQU	6											'00000150
2817	FUNTBL:NULL													'00000160
2818	DEC	105 ; TABLE ELEMENT COUNT												'00000170
2819	DEFS	ABS,F,G,1,D,0,0,0,R,DABS												'00000180
2820	DEFS	IABS,F,K,1,I,0,0,0,I,IABS												'00000190
2821	DEFS	DABS,F,K,1,D,0,0,0,D,DABS												'00000200
2822	DEFS	CABS,F,K,1,CD,0,0,0,D,CDABS												'00000210
2823	DEFS	CDABS,F,K,1,CD,0,0,0,D,CDABS												'00000220
2824	DEFS	AIMAG,F,G,1,CD,0,0,0,R,AIMAG												'00000230
2825	DEFS	DIMAG,F,K,1,CD,0,0,0,D,AIMAG												'00000240
2826	DEFS	AINT,F,G,1,D,0,0,0,R,DINT												'00000250
2827	DEFS	DINT,F,K,1,D,0,0,0,D,DINT												'00000260
2828	DEFS	INT,F,G,1,D,0,0,0,I,IDINT												'00000270
2829	DEFS	IDINT,F,K,1,D,0,0,0,I,IDINT												'00000280
2830	DEFS	IFIX,F,K,1,D,0,0,0,I,IDINT												'00000290
2831	DEFS	.CINT,F,K,1,C,0,0,0,I,IDINT												'00000300
2832	DEFS	.XINT,F,K,1,CD,0,0,0,I,IDINT												'00000310
2833	DEFS	.IINT,F,K,1,I,0,0,0,I,SNGL												'00000320
2834	DEFS	ANINT,F,G,1,D,0,0,0,R,DNINT												'00000330
2835	DEFS	DNINT,F,K,1,D,0,0,0,D,DNINT												'00000340
2836	DEFS	NINT,F,G,1,D,0,0,0,I,IDNINT												'00000350
2837	DEFS	IDNINT,F,K,1,D,0,0,0,I,IDNINT												'00000360
2838	DEFS	MOD,F,G,2,I,I,0,0,I,MOD												'00000370
2839	DEFS	AMOD,F,K,2,D,D,0,0,R,DMOD												'00000380
2840	DEFS	DMOD,F,K,2,D,D,0,0,D,DMOD												'00000390
2841	DEFS	MAX,F,G,7,I,0,0,0,I,MAX0												'00000400
2842	DEFS	MAX0,F,K,7,I,0,0,0,I,MAX0												'00000410
2843	DEFS	AMAX1,F,K,7,D,0,0,0,R,DMAX1												'00000420
2844	DEFS	DMAX1,F,K,7,D,0,0,0,D,DMAX1												'00000430
2845	DEFS	AMAX0,F,G,7,I,0,0,0,R,DMAX0												'00000440
2846	DEFS	MAX1,F,G,7,D,0,0,0,I,MAX1												'00000450
2847	DEFS	DPROD,F,G,2,D,D,0,0,D,DPROD												'00000460
2848	DEFS	MIN,F,G,7,I,0,0,0,I,MIN0												'00000470
2849	DEFS	MIN0,F,K,7,I,0,0,0,I,MIN0												'00000480
2850	DEFS	AMIN1,F,K,7,D,0,0,0,R,AMIN1												'00000490
2851	DEFS	DMIN1,F,K,7,D,0,0,0,D,DMIN1												'00000500
2852	DEFS	AMIN0,F,G,7,I,0,0,0,R,AMIN0												'00000510
2853	DEFS	MIN1,F,G,7,D,0,0,0,I,MIN1												'00000520
2854	DEFS	EXP,F,G,1,D,0,0,0,R,DEXP												'00000530
2855	DEFS	DEXP,F,K,1,D,0,0,0,D,DEXP												'00000540
2856	DEFS	CEXP,F,K,1,CD,0,0,0,CD,CDEXP												'00000550
2857	DEFS	CDEXP,F,K,1,CD,0,0,0,CD,CDEXP												'00000560
2858	DEFS	LOG,F,G,1,D,0,0,0,R,DLOG												'00000570

LINE	D	#	1	2	3	4	5	6	7	8	9	0	1	***
2859	DEFS	ALOG	F	K	1	D	0	0	0	R	DLOG			'00000580
2860	DEFS	DLOG	F	K	1	D	0	0	0	D	DLOG			'00000590
2861	DEFS	CLOG	F	K	1	C	D	0	0	0	C	D		'00000600
2862	DEFS	CDLOG	F	K	1	C	D	0	0	0	C	D		'00000610
2863	DEFS	LOG10	F	G	1	D	0	0	0	R	DLOG10			'00000620
2864	DEFS	ALOG10	F	K	1	D	0	0	0	R	DLOG10			'00000630
2865	DEFS	DLOG10	F	K	1	D	0	0	0	D	DLOG10			'00000640
2866	DEFS	SIN	F	G	1	D	0	0	0	R	DSIN			'00000650
2867	DEFS	DSIN	F	K	1	D	0	0	0	D	DSIN			'00000660
2868	DEFS	CSIN	F	K	1	C	D	0	0	0	C	D		'00000670
2869	DEFS	CDSIN	F	K	1	C	D	0	0	0	C	D		'00000680
2870	DEFS	COS	F	G	1	D	0	0	0	R	DCOS			'00000690
2871	DEFS	DCOS	F	K	1	D	0	0	0	D	DCOS			'00000700
2872	DEFS	CCOS	F	K	1	C	D	0	0	0	C	D		'00000710
2873	DEFS	CDCOS	F	K	1	C	D	0	0	0	C	D		'00000720
2874	DEFS	TAN	F	G	1	D	0	0	0	R	DTAN			'00000730
2875	DEFS	DTAN	F	K	1	D	0	0	0	D	DTAN			'00000740
2876	DEFS	COTAN	F	G	1	D	0	0	0	R	DCOTAN			'00000750
2877	DEFS	DCOTAN	F	K	1	D	0	0	0	D	DCOTAN			'00000760
2878	DEFS	ATAN	F	G	1	D	0	0	0	R	DATAN			'00000770
2879	DEFS	DATAN	F	K	1	D	0	0	0	D	DATAN			'00000780
2880	DEFS	ATAN2	F	G	2	D	0	0	0	R	DATAN2			'00000790
2881	DEFS	DATAN2	F	K	2	D	0	0	0	D	DATAN2			'00000800
2882	DEFS	ASIN	F	G	1	D	0	0	0	R	DASIN			'00000810
2883	DEFS	DASIN	F	K	1	D	0	0	0	D	DASIN			'00000820
2884	DEFS	ACOS	F	G	1	D	0	0	0	R	DACOS			'00000830
2885	DEFS	DACOS	F	K	1	D	0	0	0	D	DACOS			'00000840
2886	DEFS	SINH	F	G	1	D	0	0	0	R	DSINH			'00000850
2887	DEFS	DSINH	F	K	1	D	0	0	0	D	DSINH			'00000860
2888	DEFS	COSH	F	G	1	D	0	0	0	R	DCOSH			'00000870
2889	DEFS	DCOSH	F	K	1	D	0	0	0	D	DCOSH			'00000880
2890	DEFS	TANH	F	G	1	D	0	0	0	R	DTANH			'00000890
2891	DEFS	DTANH	F	K	1	D	0	0	0	D	DTANH			'00000900
2892	DEFS	SQRT	F	G	1	D	0	0	0	R	DSQRT			'00000910
2893	DEFS	DSQRT	F	K	1	D	0	0	0	D	DSQRT			'00000920
2894	DEFS	CSQRT	F	K	1	C	D	0	0	0	C	D		'00000930
2895	DEFS	CDSQRT	F	K	1	C	D	0	0	0	C	D		'00000940
2896	DEFS	REAL	F	G	1	C	D	0	0	0	R	REAL		'00000950
2897	DEFS	FLOAT	F	K	1	I	0	0	0	R	FLOAT			'00000960
2898	DEFS	SNGL	F	K	1	D	0	0	0	R	SNGL			'00000970
2899	DEFS	DBLE	F	G	1	D	0	0	0	D	DBLE		; NOP	'00000980
2900	DEFS	#FLOAT	F	K	1	I	0	0	0	D	FLOAT			'00000990
2901	DEFS	#REAL	F	K	1	C	D	0	0	0	D	DBLE		'00001000
2902	DEFS	CMPLEX	F	G	6	D	0	0	0	C	D			'00001010
2903	DEFS	DCMPLEX	F	K	6	D	0	0	0	C	D			'00001020
2904	DEFS	#MPLX0	F	K	6	I	I	0	0	C	D			'00001030
2905	DEFS	#MPLX	F	K	1	C	D	0	0	0	C	D		'00001040
2906	DEFS	ICHAR	F	G	1	C	H	0	0	0	I			'00001050
2907	DEFS	CHAR	F	G	1	I	0	0	0	C	H			'00001060
2908	DEFS	DIM	F	G	2	D	0	0	0	R	DDIM			'00001070


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LINE D.....#.....1.....+.....#.....2.....+.....3.....+.....4.....+.....5.....+.....6.....+.....7.....+.....8.....+.....9.....+.....0.....+.....1.....+..... ***-----
2909 DEFS IDIM,F,K,2,I,I,0,0,I, IDIM '00001080
2910 DEFS DDIM,F,K,2,D,D,0,0,D, DDIM '00001090
2911 DEFS CONJG,F,G,1,CD,0,0,0,CD, DCONJG '00001100
2912 DEFS DCONJG,F,K,1,CD,0,0,0,CD, DCONJG '00001110
2913 DEFS SIGN,F,G,2,D,D,0,0,R, DSIGN '00001120
2914 DEFS DSIGN,F,K,2,D,D,0,0,D, DSIGN '00001130
2915 DEFS ISIGN,F,K,2,I,I,0,0,I, ISIGN '00001140
2916 DEFS OVERFL,S,G,1,I,0,0,0,0, OVERFL '00001150
2917 DEFS DVCHK,S,G,1,I,0,0,0,0, DVCHK '00001160
2918 DEFS SLITE,S,G,1,I,0,0,0,0, SLITE '00001170
2919 DEFS SLITET,S,G,2,I,I,0,0,0, SLITET '00001180
2920 DEFS CPTIME,S,G,1,I,0,0,0,0, CPTIME '00001190
2921 DEFS DATIM,S,G,2,CH,D,0,0,0, DATIM '00001200
2922 DEFS TRACE,S,G,0,0,0,0,0,0, TRACE '00001210
2923 DEFS HTRACE,S,G,0,0,0,0,0,0, HTRACE '00001220
2924 FUNTBZ:NULL ; LAST ADDRESS '00001230
2925 * ----- FOLLOWINGS ARE IN THE 'BLOCKS' MODULE ----- '00002300
2926 ROOT: NULL '00002305
2927 MNAME: BSS 1 ; CURRENT MODULE NAME '00002310
2928 LLISTL: BSS 1 ; UPPER HALF CONTAINS THE POINTER '00002320
2929 GLISTL: BSS 1 '00002330
2930 VLISTL: BSS 1 '00002340
2931 NLISTL: BSS 1 '00002350
2932 HLISTL: BSS 1 '00002360
2933 KLISTL: BSS 1 '00002370
2934 FREE2L: BSS 1 '00002380
2935 FREE3L: BSS 1 '00002390
2936 FREE4L: BSS 1 '00002400
2937 FREE5L: BSS 1 '00002410
2938 FREE6L: BSS 1 '00002420
2939 EDATA: BSS 1 ; INITIALLY ZERO ,DATA PROC ENTRY '00002430
2940 LDATA: BSS 1 '00002440
2941 EMAIN: BSS 1 ; MAIN PROGRAM ENTRY POINT IN UPPER '00002450
2942 IMPLTB: NULL ; IMPLICIT TABLE '00002460
2943 OCT 020202020202 ; A-F '00002470
2944 OCT 020201010101 ; G-L '00002480
2945 OCT 010102020202 ; M-R '00002490
2946 OCT 020202020202 ; S-X '00002500
2947 OCT 020200000000 ; Y-Z '00002510
2948 SYMDEF CIMPLH ; IMPLICIT TABLE FOR CHARACTER '00002520
2949 CIMPLH: NULL '00002530
2950 BSS 26 '00002540
2951 END XFORTE '00000220

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