```
NNN        NNN    CCCCCCCCCCCC  PPPPPPPPPPPP
NNN        NNN    CCCCCCCCCCCC  PPPPPPPPPPPP
NNN        NNN    CCCCCCCCCCCC  PPPPPPPPPPPP
NNN        NNN    CCC                PPP        PPP
NNN        NNN    CCC                PPP        PPP
NNN        NNN    CCC                PPP        PPP
NNNNNN     NNN    CCC                PPP        PPP
NNNNNN     NNN    CCC                PPP        PPP
NNNNNN     NNN    CCC                PPP        PPP
NNN   NNN  NNN    CCC           PPPPPPPPPPPP
NNN   NNN  NNN    CCC           PPPPPPPPPPPP
NNN   NNN  NNN    CCC           PPPPPPPPPPPP
NNN    NNNNNN     CCC                PPP
NNN    NNNNNN     CCC                PPP
NNN    NNNNNN     CCC                PPP
NNN        NNN    CCC                PPP
NNN        NNN    CCC                PPP
NNN        NNN    CCC                PPP
NNN        NNN    CCCCCCCCCCCC       PPP
NNN        NNN    CCCCCCCCCCCC       PPP
NNN        NNN    CCCCCCCCCCCC       PPP
```

```
NN      NN   CCCCCCCC   PPPPPPPP    SSSSSSSS   TTTTTTTTTT    AAAAAA    LL          000000      AAAAAA
NN      NN   CCCCCCCC   PPPPPPPP    SSSSSSSS   TTTTTTTTTT    AAAAAA    LL          000000      AAAAAA
NN      NN   CC         PP      PP  SS             TT       AA    AA   LL         00    00   AA      AA
NN      NN   CC         PP      PP  SS             TT       AA    AA   LL         00    00   AA      AA
NNNN    NN   CC         PP      PP  SS             TT       AA    AA   LL         00    00   AA      AA
NNNN    NN   CC         PP      PP  SS             TT       AA    AA   LL         00    00   AA      AA
NN  NN  NN   CC         PPPPPPPP    SSSSSS         TT       AA    AA   LL         00    00   AA      AA
NN  NN  NN   CC         PPPPPPPP    SSSSSS         TT       AA    AA   LL         00    00   AA      AA
NN    NNNN   CC         PP               SS        TT       AAAAAAAAAA LL         00    00   AAAAAAAAAA
NN    NNNN   CC         PP               SS        TT       AAAAAAAAAA LL         00    00   AAAAAAAAAA
NN      NN   CC         PP               SS        TT       AA    AA   LL         00    00   AA      AA
NN      NN   CC         PP               SS        TT       AA    AA   LL         00    00   AA      AA
NN      NN   CCCCCCCC   PP         SSSSSSSS        TT       AA    AA   LLLLLLLLLL   000000    AA      AA
NN      NN   CCCCCCCC   PP         SSSSSSSS        TT       AA    AA   LLLLLLLLLL   000000    AA      AA

LL           IIIIII     SSSSSSSS
LL           IIIIII     SSSSSSSS
LL             II       SS
LL             II       SS
LL             II       SS
LL             II       SS
LL             II       SSSSSS
LL             II       SSSSSS
LL             II             SS
LL             II             SS
LL             II             SS
LL             II             SS
LLLLLLLLLL   IIIIII     SSSSSSSS
LLLLLLLLLL   IIIIII     SSSSSSSS
```

```
      1      0001   0 %TITLE  'Load Parse States and Data'
      2      0002   0 MODULE NCPSTALOA (IDENT = 'V04-000', LIST(NOOBJECT)) =
      3      0003   1 BEGIN
      4      0004   1
      5      0005   1 !
      6      0006   1 !*****************************************************************
      7      0007   1 !*                                                              *
      8      0008   1 !*  COPYRIGHT (c) 1978, 1980, 1982, 1984 BY                     *
      9      0009   1 !*  DIGITAL EQUIPMENT CORPORATION, MAYNARD, MASSACHUSETTS.      *
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     22      0022   1 !*                                                              *
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     24      0024   1 !*  SOFTWARE ON EQUIPMENT WHICH IS NOT SUPPLIED BY DIGITAL.      *
     25      0025   1 !*                                                              *
     26      0026   1 !*                                                              *
     27      0027   1 !*****************************************************************
     28      0028   1 !
     29      0029   1
     30      0030   1 !++
     31      0031   1 ! FACILITY:       Network Control Program (NCP)
     32      0032   1 !
     33      0033   1 ! ABSTRACT:
     34      0034   1 !
     35      0035   1 !       States and data for the parsing of NCP load commands
     36      0036   1 !
     37      0037   1 ! ENVIRONMENT:  VAX/VMS Operating System
     38      0038   1 !
     39      0039   1 ! AUTHOR:       Darrell Duffy    , CREATION DATE: 25-September-79
     40      0040   1 !
     41      0041   1 ! MODIFIED BY:
     42      0042   1 !
     43      0043   1 !     V03-002 RPG0002         Bob Grosso             10-Jun-1983
     44      0044   1 !             Add UNA as a service device.
     45      0045   1 !
     46      0046   1 !     V03-001 RPG0001         Bob Grosso             29-Apr-1983
     47      0047   1 !             Add Physical address.
     48      0048   1 !
     49      0049   1 !     V004    TMH0004         Tim Halvorsen   31-Dec-1981
     50      0050   1 !             Add DMF32 as a service device.
     51      0051   1 !
     52      0052   1 !     VC03    TMH0003         Tim Halvorsen   15-Aug-1981
     53      0053   1 !             Add DMP, DMV and DPV service devices.
     54      0054   1 !
     55      0055   1 !     V002    TMH0002         Tim Halvorsen   14-Jul-1981
     56      0056   1 !             Add reference to SEM_LINE_ID macro, in order for
     57      0057   1 !             SE_CIRC_ID to work.
```

```
;    58        0058  1 !
;    59        0059  1 !        V001      TMH0001        Tim Halvorsen    22-Jun-1981
;    60        0060  1 !                  Change BUILD_SDB reference to use full entity type field.
;    61        0061  1 !                  Change to load via circuit, not line.
;    62        0062  1 !--
```

```
   64        0063  1 %SBTTL  'Definitions'
   65        0064  1
   66        0065  1 !
   67        0066  1 ! INCLUDE FILES:
   68        0067  1 !
   69        0068  1
   70        0069  1       LIBRARY 'LIBS:NMALIBRY';
   71        0070  1       LIBRARY 'LIBS:NCPLIBRY';
   72        0071  1       LIBRARY 'SYS$LIBRARY:TPAMAC';
   73        0072  1
   74        0073  1 !
   75        0074  1 ! EXTERNAL REFERENCES:
   76        0075  1 !
   77        0076  1
   78        0077  1       ACT_DFN                          ! External symbols for action routines
```

```
  80        0078  1 %SBTTL   'Parameter blocks'
  81        0079  1
  82        0080  1 !
  83        0081  1 ! BIND DATA:
  84        0082  1 !
  85        0083  1
  86        0084  1 !
  87        0085  1 !     Parameter Blocks
  88        0086  1 !
  89        0087  1
  90      P 0088  1       BUILD_PCL
  91      P 0089  1
  92      P 0090  1       (LOA,
  93      P 0091  1
  94      P 0092  1       SLI, TKN,        PCNO_SLI, ,
  95      P 0093  1       SPW, HXPS,       PCNO_SPA, ,
  96      P 0094  1       SDV, NUMB,       PCNO_SDV, ,
  97      P 0095  1       CPU, NUMB,       PCNO_CPU, ,
  98      P 0096  1       LFL, TKN,        PCNO_LOA, ,
  99      P 0097  1       SLF, TKN,        PCNO_SLO, ,
 100      P 0098  1       TLF, TKN,        PCNO_TLO, ,
 101      P 0099  1       STY, NUMB,       PCNO_STY, ,
 102      P 0100  1       SID, TKNQ,       PCNO_SID, ,
 103      P 0101  1       HOS, NADR,       PCNO_IHO, ,
 104      P 0102  1       NAM, TKN,        PCNO_NNA, ,
 105      P 0103  1       ADR, NUMW,       PCNO_ADD, ,
 106      P 0104  1       PHA, NIADR,      PCNO_PHA, ,
 107      P 0105  1
 108      P 0106  1        ,END, , ,
 109      P 0107  1
 110        0108  1       )
 111        0109  1
 112      P 0110  1       BUILD_PCL
 113      P 0111  1
 114      P 0112  1       (LOV,
 115      P 0113  1
 116      P 0114  1       SPW, HXPS,       PCNO_SPA, LOA_SPW,
 117      P 0115  1       SDV, NUMB,       PCNO_SDV, LOA_SDV,
 118      P 0116  1       CPU, NUMB,       PCNO_CPU, LOA_CPU,
 119      P 0117  1       LFL, TKN,        PCNO_LOA, LOA_LFL,
 120      P 0118  1       SLF, TKN,        PCNO_SLO, LOA_SLF,
 121      P 0119  1       TLF, TKN,        PCNO_TLO, LOA_TLF,
 122      P 0120  1       STY, NUMB,       PCNO_STY, LOA_STY,
 123      P 0121  1       SID, TKNQ,       PCNO_SID, LOA_SID,
 124      P 0122  1       HOS, NADR,       PCNO_IHO, LOA_HOS,
 125      P 0123  1       NAM, TKN,        PCNO_NNA, LOA_NAM,
 126      P 0124  1       ADR, NUMW,       PCNO_ADD, LOA_ADR,
 127      P 0125  1       PHA, NIADR,      PCNO_PHA, LOA_PHA,
 128      P 0126  1
 129      P 0127  1        ,END, , ,
 130      P 0128  1
 131        0129  1       )
 132        0130  1
 133      P 0131  1       BUILD_PBK
 134      P 0132  1
 135      P 0133  1       (LOA,
 136      P 0134  1
```

```
 137      P 0135   1         NOD, NADR, , VRB_ENT,
 138      P 0136   1         SLI, TKN, , ,
 139      P 0137   1         SPW, HXPS, , ,
 140      P 0138   1         LFL, TKN, , ,
 141      P 0139   1         SLF, TKN, , ,
 142      P 0140   1         TLF, TKN, , ,
 143      P 0141   1         HOS, NADR, , ,
 144      P 0142   1         NAM, TKN, , ,
 145      P 0143   1         ADR, NUMW, , ,
 146      P 0144   1         PHA, NIADR, , ,
 147      P 0145   1
 148      P 0146   1         SDVP, LITB, NMA$C_SOFD_DP, LOA_SDV,
 149      P 0147   1         SDVU, LITB, NMA$C_SOFD_DU, LOA_SDV,
 150      P 0148   1         SDVL, LITB, NMA$C_SOFD_DL, LOA_SDV,
 151      P 0149   1         SDVQ, LITB, NMA$C_SOFD_DQ, LOA_SDV,
 152      P 0150   1         SDVA, LITP, NMA$C_SOFD_DA, LOA_SDV,
 153      P 0151   1         SDVUP, LITB, NMA$C_SOFD_DUP, LOA_SDV,
 154      P 0152   1         SDVMC, LITB, NMA$C_SOFD_DMC, LOA_SDV,
 155      P 0153   1         SDVTE, LITB, NMA$C_SOFD_DTE, LOA_SDV,
 156      P 0154   1         SDVKL, LITB, NMA$C_SOFD_KL8, LOA_SDV,
 157      P 0155   1         SDVMP, LITB, NMA$C_SOFD_DMP, LOA_SDV,
 158      P 0156   1         SDVMV, LITB, NMA$C_SOFD_DMV, LOA_SDV,
 159      P 0157   1         SDVPV, LITB, NMA$C_SOFD_DPV, LOA_SDV,
 160      P 0158   1         SDVMF, LITB, NMA$C_SOFD_DMF, LOA_SDV,
 161      P 0159   1         SDVUN, LITB, NMA$C_SOFD_UNA, LOA_SDV,
 162      P 0160   1
 163      P 0161   1         CPU8,   LITB, NMA$C_CPU_8, LOA_CPU,
 164      P 0162   1         CPU11,  LITB, NMA$C_CPU_11, LOA_CPU,
 165      P 0163   1         CPU10,  LITB, NMA$C_CPU_1020, LOA_CPU,
 166      P 0164   1         VAX,    LITB, NMA$C_CPU_VAX, LOA_CPU,
 167      P 0165   1
 168      P 0166   1         STSL, LITB, NMA$C_SOFT_SECL, LOA_STY,
 169      P 0167   1         STTL, LITB, NMA$C_SOFT_TERL, LOA_STY,
 170      P 0168   1         STOS, LITB, NMA$C_SOFT_OSYS, LOA_STY,
 171      P 0169   1
 172      P 0170   1         SID, TKNQ, , ,
 173      P 0171   1
 174        0172   1         )
 175        0173   1
 176      P 0174   1         BUILD_SDB
 177      P 0175   1
 178        0176   1         (LOA, NMA$C_ENT_NOD, VRB_ENT, LOA)
 179        0177   1
 180      P 0178   1         BUILD_SDB
 181      P 0179   1
 182        0180   1         (LOV, NMA$C_ENT_NOD, LOA_SLI, LOV)
```

```
 184        0181  1 %SBTTL  'Prompt strings'
 185        0182  1
 186        0183  1 !
 187        0184  1 !       Build prompt strings
 188        0185  1 !
 189        0186  1
 190        0187  1 BIND
 191        0188  1
 192     P  0189  1         PROMPT_STRINGS
 193     P  0190  1         (LOA,
 194     P  0191  1
 195     P  0192  1         ENT, '  (NODE node-id, VIA circuit-name): ',
 196     P  0193  1         VIA, 'Circuit to use      (circuit-name): ',
 197     P  0194  1         NOD, 'Node to load  (node-name, address): ',
 198     P  0195  1
 199        0196  2         )
 200        0197  1         ;
```

```
202      0198  1  %SBTTL  'State Table Entry'
203      0199  1
204      0200  1  $INIT_STATE (NCP$G_STTBL_LOA, NCP$G_KYTBL_LOA);
205      0201  1
206      0202  1  !
207      0203  1  !          Load Command
208      0204  1  !
209      0205  1
210      0206  1  !
211      0207  1  !          Dispatch to entity types and prompt if end of string
212      0208  1  !
213      0209  1
214    P 0210  1          COMMAND_PROMPT
215    P 0211  1          (LOA, ENT, NCP$_INVKEY,
216    P 0212  1
217    P 0213  1          ('NODE', ST_LOA_NOD),
218    P 0214  1          ('VIA',  ST_LOA_VIA)
219    P 0215  1
220      0216  1          )
221      0217  1
222      0218  1  !
223      0219  1  !          Obtain Node ID
224      0220  1  !
225      0221  1
226    P 0222  1          COMMAND_PROMPT
227    P 0223  1          (LOA, NOD, NCP$_INVVAL,
228    P 0224  1
229    P 0225  1          ( (SE_NODE_ID), , ACT$SAVPRM, , , PBK$G_LOA_NOD)
230    P 0226  1
231      0227  1          )
232      0228  1
233    P 0229  1  $STATE  (,
234    P 0230  1          ( (ST_LOA_PRM) )
235      0231  1          );
236      0232  1
237    P 0233  1  $STATE  (,
238    P 0234  1          (TPA$_EOS, TPA$_EXIT, ACT$VRB_UTILITY, , , SDB$G_LOA)
239      0235  1          );
```

NCPSTALOA   Load Parse States and Data   F 2
V04-000   State Table Entry   16-Sep-1984 00:35:01   VAX-11 Bliss-32 V4.0-742   Page 8
                                              14-Sep-1984 12:48:24   [NCP.SRC]NCPSTALOA.B32;1   (6)

```
 241    0236  1
 242    0237  1  |
 243    0238  1  |        Load over specified circuit
 244    0239  1  |
 245    0240  1
 246  P 0241  1          COMMAND_PROMPT
 247  P 0242  1          (LOA, VIA, NCPS_INVVAL,
 248  P 0243  1
 249  P 0244  1          ( (SE_CIRC_ID), , ACT$SAVPRM, NMA$C_ENT_CIR,
 250  P 0245  1                              NCP$GL_OPTION, PBK$G_LOA_SLI)
 251    0246  1          );
 252    0247  1
 253  P 0248  1  $STATE  (,
 254  P 0249  1          ( (ST_LOA_PRM) )
 255    0250  1          );
 256    0251  1
 257  P 0252  1  $STATE  (,
 258  P 0253  1          (TPA$_EOS, TPA$_EXIT, ACT$VRB_UTILITY, , , SDB$G_LOV)
 259    0254  1          );
```

```
 261        0255  1 %SBTTL  'Load Parameters'
 262        0256  1
 263        0257  1 !
 264        0258  1 !        Load Parameters
 265        0259  1 !
 266        0260  1
 267      P 0261  1 $STATE  (ST_LOA_PRM,
 268      P 0262  1         (TPAS_EOS, TPAS_EXIT, ACT$SAVPRM, , , PBK$G_VRB_ALL),
 269      P 0263  1         (TPAS_LAMBDA)
 270        0264  1         );
 271        0265  1
 272        0266  1
 273        0267  1 %SBTTL  'Dispatch States'
 274        0268  1
 275        0269  1 !
 276        0270  1 !        Dispatch states
 277        0271  1 !
 278        0272  1
 279      P 0273  1 $STATE  (ST_LOA_PRC,
 280      P 0274  1
 281      P 0275  1         DISPATCH_STATES
 282      P 0276  1         (LOA,
 283      P 0277  1
 284      P 0278  1         ADR, 'ADDRESS',
 285      P 0279  1         CPU, 'CPU',
 286      P 0280  1         LFL, 'FROM',
 287      P 0281  1         HOS, 'HOST',
 288      P 0282  1         NAM, 'NAME',
 289      P 0283  1         PSW, 'PASSWORD',
 290      P 0284  1         PHA, 'PHYSICAL',
 291      P 0285  1         SLF, 'SECONDARY',
 292      P 0286  1         SVC, 'SERVICE',
 293      P 0287  1         SOF, 'SOFTWARE',
 294      P 0288  1         TLF, 'TERTIARY',
 295      P 0289  1         SLI, 'VIA',
 296      P 0290  1
 297      P 0291  1         )
 298      P 0292  1
 299      P 0293  1         ,(TPAS_EOS, TPAS_EXIT)
 300        0294  1         );
```

```
302        0295  1 %SBTTL  'Process States'
303        0296  1
304        0297  1 !
305        0298  1 !        Process States
306        0299  1 !
307        0300  1
308      P 0301  1          PROCESS_STATES
309      P 0302  1          (LOA,
310      P 0303  1
311      P 0304  1          ADR, .
312      P 0305  1          CPU, .
313      P 0306  1          LFL, .
314      P 0307  1          HOS, .
315      P 0308  1          NAM, .
316      P 0309  1          PSW, .
317      P 0310  1          PHA, 'ADDRESS',
318      P 0311  1          SLF, 'LOADER',
319      P 0312  1          SDV, .
320      P 0313  1          SID, .
321      P 0314  1          SLI, .
322      P 0315  1          SPW, .
323      P 0316  1          STY, .
324      P 0317  1          TLF, 'LOADER',
325      P 0318  1
326        0319  1          )
327        0320  1
```

```
  329        0321  1
  330        0322  1 !
  331        0323  1 !     Dispatch for service
  332        0324  1 !
  333        0325  1
  334      P 0326  1 $STATE  (ST_LOA_PRC_SVC,
  335      P 0327  1
  336      P 0328  1         DISPATCH_STATES
  337      P 0329  1         (LOA,
  338      P 0330  1
  339      P 0331  1         SDV, 'DEVICE',
  340      P 0332  1         SPW, 'PASSWORD',
  341      P 0333  1
  342      P 0334  1         )
  343        0335  1         );
  344        0336  1
  345        0337  1 !
  346        0338  1 !     Dispatch for software
  347        0339  1 !
  348        0340  1
  349      P 0341  1 $STATE  (ST_LOA_PRC_SOF,
  350      P 0342  1
  351      P 0343  1         DISPATCH_STATES
  352      P 0344  1         (LOA,
  353      P 0345  1
  354      P 0346  1         SID, 'IDENTIFICATION',
  355      P 0347  1         STY, 'TYPE',
  356      P 0348  1
  357      P 0349  1         )
  358        0350  1         );
  359        0351  1
```

```
361     0352  1  %SBTTL  'Subexpressions'
362     0353  1
363     0354  1  !
364     0355  1  !        Subexpressions
365     0356  1  !
366     0357  1
367   P 0358  1           SUB_EXPRESSIONS
368   P 0359  1           (LOA,
369   P 0360  1
370   P 0361  1           ADR, (SE_NODE_ADR),
371   P 0362  1           LFL, (SE_FILE_ID),
372   P 0363  1           HOS, (SE_NODE_ID),
373   P 0364  1           NAM, (SE_NODE_NAM),
374   P 0365  1           SID, (SE_SOFT_ID),
375   P 0366  1           SLF, (SE_FILE_ID),
376   P 0367  1           SLI, (SE_CIRC_ID),
377   P 0368  1           SPW, (SE_HEX_PSW),
378   P 0369  1           ILF, (SE_FILE_ID),
379   P 0370  1           PHA, (SE_NI_ADR),
380   F 0371  1
381     0372  1           )
382     0373  1
383   P 0374  1  $STATE  (ST_LOA_PSW,                       ! Another way to say service password
384   P 0375  1           (TPA$_LAMBDA, ST_LOA_SPW)
385     0376  1           );
```

```
 387    0377  1 %SBTTL   'Define Subexpressions from Library'
 388    0378  1
 389    0379  1 !
 390    0380  1 !          Define subexpressions from library
 391    0381  1 !
 392    0382  1
 393    0383  1          SEM_LOAD (LOA)            ! Special load parameter decoding
 394    0384  1          SEM_FILE_ID               ! File id strings
 395    0385  1          SEM_HEX_PSW               ! Hex password
 396    0386  1          SEM_CIRC_ID               ! Circuit name strings
 397    0387  1          SEM_LINE_ID               ! Line ID strings
 398    0388  1          SEM_NODE_ID               ! Node id strings
 399    0389  1          SEM_QUOT_STR              ! Quoted strings
 400    0390  1          SEM_NI_ADR                ! NI address
```

```
402     0391  1 %SBTTL   'Object Listing of Parse Table'
403     0392  1
404     0393  1 END                          !End of module
405     0394  0 ELUDOM
```