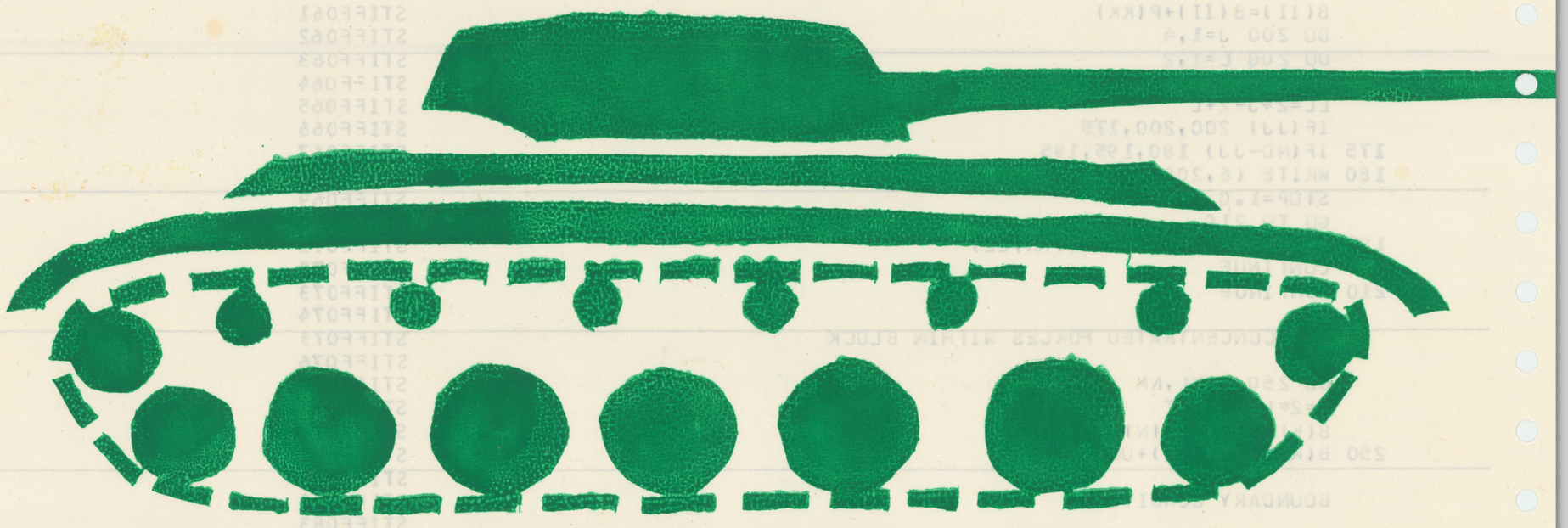
SEND THEM TRACTORS NOT TANKS



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 2000 FORMAT (1H1 12A6/                                                 PLNST124
     1 30HO NUMBER OF NODAL POINTS------ I3 /                           PLNST125
     2 30HO NUMBER OF ELEMENTS---------- I3 /                           PLNST126
     3 30HO NUMBER OF DIFF. MATERIALS--- I3 /                           PLNST127
     4 30HO NUMBER OF PRESSURE CARDS---- I3 /                           PLNST128
     5 30HO X-ACCELERATION-------------- E12.4/                        PLNST129
     6 30HO Y-ACCELERATION-------------- E12.4/                        PLNST130
     7 30HO REFERENCE TEMPERATURE------- E12.4/                        PLNST131
     8 30HO NUMBER OF APPROXIMATIONS---- I3)                            PLNST132
 2001 FORMAT (49H1ELEMENT NO.      I     J     K     L    MATERIAL  )   PLNST133
 2002 FORMAT (I12,F12.2,2F12.3,2E24.7,F12.3)                            PLNST134
 2003 FORMAT (1I13,4I6,1I12)                                            PLNST135
 2004 FORMAT (108H1NODAL POINT          TYPE  X-ORDINATE  Y-ORDINATE  X LOPLNST136
     1AD OR DISPLACEMENT  Y LOAD OR DISPLACEMENT TEMPERATURE )          PLNST137
 2005 FORMAT (29HOPRESSURE BOUNDARY CONDITIONS/ 24H     I     J    PRESSPLNST138
     1URE )                                                             PLNST139
 2006 FORMAT (12H1N.P. NUMBER 18X 2HUX 18X 2HUY / (1I12,2E20.7))        PLNST140
 2007 FORMAT (2I6,F12.3)                                                PLNST141
 2009 FORMAT (26HONODAL POINT CARD ERROR N= I5)                         PLNST142
 2010 FORMAT (15HO  TEMPERATURE 10X 5HE(C)  9X 6HNU     11X 4HE(T)      PLNST143
     1 10X 5HG/H2  10X 5HALPHA   7X 8HX-STRESS 7X 8HY-STRESS /          PLNST144
     2 (F15.3,7F15.5))                                                  PLNST145
 2011 FORMAT (17HOMATERIAL NUMBER= I3, 30H, NUMBER OF TEMPERATURE CARDS=PLNST146
     1 I3, 15H, MASS DENSITY= E12.4 )                                   PLNST147
                                                                        PLNST148
      END                                                               PLNST149
      SUBROUTINE STIFF                                                  STIFF002
                                                                        STIFF003
      COMMON NUMNP,NUMEL,NUMMAT,NUMPC,ACELZ,ANGFQ,N,VOL,TEMP,MTYPE,Q    STIFF004
      COMMON /MATARG/ E(8,8,12),RO(12),EE(7),HED(12),ANGLE(4),TT(8)     STIFF005
      COMMON /ELEARG/ IX(800,5),EPS(800),MTAG(800)                      STIFF006
      COMMON /PRSARG/ IBC(200),JBC(200),PR(200)                         STIFF007
      COMMON /CRDARG/ R(900),Z(900),UR(900),UZ(900),CODE(900),T(900)    STIFF008
      COMMON /LS4ARG/ I,J,K,S(10,10),C(3,3),D(3,3),H(3,3),P(10),LM(4)   STIFF009
      COMMON /BANARG/ MBAND,NUMBLK,B(108),A(108,54)                     STIFF010
                                                                        STIFF011
*****************************************************************************STIFF012
      INITIALIZATION                                                    STIFF013
*****************************************************************************STIFF014
      REWIND 2                                                          STIFF015
      NB=27                                                             STIFF016
      ND=2*NB                                                           STIFF017
      ND2=2*ND                                                          STIFF018
      STOP=0.0                                                          STIFF019
      NUMBLK=0                                                          STIFF020
                                                                        STIFF021
      DO 50 N=1,ND2                                                     STIFF022
      B(N)=0.0                                                          STIFF023
      DO 50 M=1,ND                                                      STIFF024
*****************************************************************************STIFF025
   50 A(N,M)=0.0                                                        STIFF026
      FORM STIFFNESS MATRIX IN BLOCKS                                   STIFF027
*****************************************************************************STIFF028
   60 NUMBLK=NUMBLK+1                                                   STIFF029
      NH=NB*(NUMBLK+1)                                                  STIFF030
      NM=NH-NB                                                          STIFF031
      NL=NM-NB+1                                                        STIFF032
      KSHIFT=2*NL-2                                                     STIFF033
                                                                        STIFF034
      DO 210 N=1,NUMEL                                                  STIFF035
                                                                        STIFF036
      IF (IX(N,5)) 210,210,65                                           STIFF037
   65 DO 80 I=1,4                                                       STIFF038
      IF (IX(N,I)-NL) 80,70,70                                          STIFF039
   70 IF (IX(N,I)-NM) 90,90,80                                          STIFF040
   80 CONTINUE                                                          STIFF041
      GO TO 210                                                         STIFF042
                                                                        STIFF043
   90 IF (IX(N,3)-IX(N,2)) 92,91,92                                     STIFF044
   91 CALL QNED                                                         STIFF045
      GO TO 165                                                         STIFF046
   92 CALL QUAD                                                         STIFF047
      IF (VOL) 164,164,165                                              STIFF048
  164 WRITE (6,2003) N                                                  STIFF049
                                                                        STIFF050
          ADD ELEMENT STIFFNESS TO TOTAL STIFFNESS                      STIFF051
                                                                        STIFF052
  165 IX(N,5)=-IX(N,5)                                                  STIFF053
      DO 166 I=1,4                                                      STIFF054
  166 LM(I)=2*IX(N,I)-2                                                 STIFF055
                                                                        STIFF056
      DO 200 I=1,4                                                      STIFF057
      DO 200 K=1,2                                                      STIFF058
      II=LM(I)+K-KSHIFT                                                 STIFF059
      KK=2*I-2+K                                                        STIFF060
      B(II)=B(II)+P(KK)                                                 STIFF061
      DO 200 J=1,4                                                      STIFF062
      DO 200 L=1,2                                                      STIFF063
      JJ=LM(J)+L-II+1-KSHIFT                                            STIFF064
      LL=2*J-2+L                                                        STIFF065
      IF(JJ) 200,200,175                                                STIFF066
  175 IF(ND-JJ) 180,195,195                                             STIFF067
  180 WRITE (6,2004) N                                                  STIFF068
      STOP=1.0                                                          STIFF069
      GO TO 210                                                         STIFF070
  195 A(II,JJ)=A(II,JJ)+S(KK,LL)                                        STIFF071
  200 CONTINUE                                                          STIFF072
  210 CONTINUE                                                          STIFF073
                                                                        STIFF074
      ADD CONCENTRATED FORCES WITHIN BLOCK                              STIFF075
                                                                        STIFF076
      DO 250 N=NL,NM                                                    STIFF077
      K=2*N-KSHIFT                                                      STIFF078
      B(K)=B(K)+UZ(N)                                                   STIFF079
  250 B(K-1)=B(K-1)+UR(N)                                               STIFF080
                                                                        STIFF081
      BOUNDARY CONDITIONS                                               STIFF082
                                                                        STIFF083
        1. PRESSURE B.C.                                                STIFF084
                                                                        STIFF085
      IF (NUMPC) 260,310,260                                            STIFF086
  260 DO 300 L=1,NUMPC                                                  STIFF087
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