*Heading

** Job name: TDCB_391 Model name: CopyOfload=600X

** Generated by: Abaqus/CAE 6.13-2

*Preprint, echo=NO, model=NO, history=NO, contact=NO

**

** PARTS

**

*Part, name=BOTTOMPART

*Node

1, 10.019454, 0.

2, 10., -0.400000006

3, 20.038908, -0.400000006

4, 20.038908, 0.

5, 259.699158, 0.

6, 259.699158, -0.400000006

7, 310., -0.400000006

8, 310., 0.

9, 131.189209, -0.400000006

…

6433, 6434, 6435, 6436, 6437, 6438, 6439, 6440, 6441, 6442, 6443, 6444, 6445, 6446, 6447, 6448

6449, 6450, 6451, 6452

*Elset, elset=Top_load

3919, 3925, 3931, 3937, 3943, 3949, 3955, 3956, 3962, 3968, 3974, 3980, 3986, 3992, 3998, 4004

4010, 4016, 4022, 4028, 4034, 4040, 4046, 4052, 4058, 4064, 4070, 4076, 4082, 4088, 4094, 4100

4106, 4112, 4118, 4124, 4130, 4136, 4142, 4148, 4154, 4160, 4166, 4172, 4178, 4184, 4190, 4196

4202, 4208, 4214, 4336, 4342, 4348, 4354, 4360, 4366, 4372

** Section: Section-6-ADHESIVE1

*Solid Section, elset=ADHESIVE1, material=ADHESIVE(STANDARD)

,

** Section: Section-7-ADHESIVE3

*Solid Section, elset=ADHESIVE3, material=ADHESIVE(STANDARD)

,

** Section: Section-8-TOPBEAM

*Solid Section, elset=TOPBEAM, material=ALUMINIUM

,

** Section: Section-9-ADHESIVE2

*Solid Section, elset=ADHESIVE2, material=ADHESIVE(STANDARD)

,

*End Part

**

**

** ASSEMBLY

**

*Assembly, name=Assembly

**

*Instance, name=COHESIVE-MESH-1-1, part=COHESIVE-MESH-1

      370.,   0.,   0.

*End Instance

**

*Instance, name=BOTTOMPART-1, part=BOTTOMPART

*End Instance

**

*Instance, name=TOPPART-1, part=TOPPART

*End Instance

**

*Nset, nset=Set-3, instance=TOPPART-1

  21, 22, 25, 26, 28, 29, 31, 32, 696, 697, 698, 699, 700, 701, 722, 723

 724, 725, 737, 738, 739, 740, 741, 742, 752, 753, 754, 755, 770, 771, 772, 773

 774, 775, 776, 777, 778, 784, 785, 786, 787, 788, 789, 804, 805, 806, 807, 808

 809, 810, 811, 812, 1029, 1030, 1031, 1032, 1033, 1034

*Nset, nset=Set-4, instance=BOTTOMPART-1

  20, 23, 24, 27, 28, 31, 32, 33, 770, 771, 772, 773, 774, 775, 776, 777

778, 779, 794, 795, 796, 797, 798, 799, 806, 807, 808, 809, 824, 825, 826, 827

828, 829, 830, 831, 832, 842, 843, 844, 845, 846, 847, 864, 865, 866, 867, 868

869, 870, 871, 872, 1029, 1030, 1031, 1032, 1033, 1034

*Nset, nset=top_load, instance=TOPPART-1

21, 22, 25, 26, 28, 29, 31, 32, 696, 697, 698, 699, 700, 701, 722, 723

724, 725, 737, 738, 739, 740, 741, 742, 752, 753, 754, 755, 770, 771, 772, 774

775, 776, 777, 778, 784, 785, 786, 787, 788, 789, 804, 805, 806, 807, 808, 809

810, 812, 1029, 1030, 1031, 1032, 1033, 1034

*Nset, nset=BOTTOMPART-1_BOTTOMPARTTIE_CNS_, internal, instance=BOTTOMPART-1

5, 8, 10, 11, 13, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107

108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123

…

918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933

934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944

*Nset, nset=TOPPART-1_TOPPARTTIE_CNS_, internal, instance=TOPPART-1

5, 8, 10, 11, 13, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127

…

849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864

865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875

*Surface, type=NODE, name=BOTTOMPART-1_BOTTOMPARTTIE_CNS__CNS_, internal

BOTTOMPART-1_BOTTOMPARTTIE_CNS_, 1.

*Surface, type=NODE, name=TOPPART-1_TOPPARTTIE_CNS__CNS_, internal

TOPPART-1_TOPPARTTIE_CNS_, 1.

** Constraint: BOTTOMCOHESIVE-1

*Tie, name=BOTTOMCOHESIVE-1, adjust=yes

COHESIVE-MESH-1-1.Surf-2, BOTTOMPART-1_BOTTOMPARTTIE_CNS__CNS_

** Constraint: TOPCOHESIVE-1

*Tie, name=TOPCOHESIVE-1, adjust=yes

COHESIVE-MESH-1-1.Surf-1, TOPPART-1_TOPPARTTIE_CNS__CNS_

*End Assembly

**

```
** ELEMENT CONTROLS
**
*Section Controls, name=EC-1, ELEMENT DELETION=YES
1., 1., 1.
*Amplitude, name=Amp-1
        0.,          0.,          1.,          1.
**
** MATERIALS
**
*Material, name=ADHESIVE(STANDARD)
*Elastic
2900., 0.35
*Plastic
80.,  0.
81., 0.1
82.,  1.
*Material, name=ALUMINIUM
*Elastic
70000., 0.3
*Material, name=COHESIVE
*Damage Initiation, criterion=QUADS
60.,60.,60.
*Damage Evolution, type=ENERGY
391.,
*Elastic, type=TRACTION
1000.,1000.,1000.
** ----------------------------------------------------------------
**
** STEP: Step-1
**
*Step, name=Step-1, nlgeom=YES, inc=1000000
```

*Static, stabilize=0.0002, allsdtol=0.05, continue=NO

0.0001, 1., 1e-12, 0.001

**

** BOUNDARY CONDITIONS

**

** Name: BC-1 Type: Displacement/Rotation

*Boundary, amplitude=Amp-1

Set-3, 1, 1

Set-3, 2, 2, 40.

Set-3, 6, 6

** Name: BC-2 Type: Displacement/Rotation

*Boundary, amplitude=Amp-1

Set-4, 1, 1

Set-4, 2, 2, -40.

Set-4, 6, 6

**

** OUTPUT REQUESTS

**

*Restart, write, frequency=0

**

** FIELD OUTPUT: F-Output-1

**

*Output, field

*Node Output

CF, RF, U

*Element Output, directions=YES

LE, PE, PEEQ, PEMAG, S, STATUS

*Contact Output

CDISP, CSTRESS

**

** HISTORY OUTPUT: H-Output-2

```
**
*Output, history, frequency=1000
*Node Output, nset=Set-3
RF1, RF2, RF3, RM1, RM2, RM3, U1, U2
U3, UR1, UR2, UR3
**
** HISTORY OUTPUT: H-Output-1
**
*Node Output, nset=Set-4
RF1, RF2, RF3, RM1, RM2, RM3, U1, U2
U3, UR1, UR2, UR3
*End Step
```