\*Heading

\*\* Job name: BC=30 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

…

4274, 4275, 4276, 4277, 4278, 4279, 4280, 4281, 4282, 4283

\*Nset, nset=BOTTOMLOAD

23,

\*\* Section: Section-2-ADHESIVE1

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

,

\*\* Section: Section-3-ADHESIVE3

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

,

\*\* Section: Section-4-BOTTOMBEAM

\*Solid Section, elset=BOTTOMBEAM, material=ALUMINIUM

,

\*\* Section: Section-5-ADHESIVE2

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

,

\*End Part

\*\*

\*Part, name=COHESIVE-MESH-1

\*Node

1, -310., 0.

\*Nset, nset=ADHESIVE1

1, 2, 3, 4, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44

45, 46, 1017, 1018, 1019, 1020, 1021, 1022, 1023, 1024, 1025, 1026, 1027, 1028

\*Elset, elset=ADHESIVE1

1, 2, 3, 4, 5, 6, 7, 4324, 4325, 4326, 4327, 4328, 4329, 4330

\*Elset, elset=ADHESIVE2, generate

4284, 4323, 1

\*Nset, nset=ADHESIVE3

...

\*Nset, nset=TOPPARTTIE

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

…

6449, 6450, 6451, 6452

\*Nset, nset=TOPLOAD

22,

\*\* 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=BOTTOMPART-1\_BOTTOMPARTTIE\_CNS\_, internal, instance=BOTTOMPART-1

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

…

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

\*Material, name=ALUMINIUM

\*Elastic

70000., 0.3

\*Material, name=COHESIVE

\*Damage Initiation, criterion=QUADS

60.,60.,60.

\*Damage Evolution, type=ENERGY

20.,

\*Elastic, type=TRACTION

1e+06, 1e+06, 1e+06

\*\* ----------------------------------------------------------------

\*\*

\*\* STEP: Step-1

\*\*

\*Step, name=Step-1, nlgeom=YES, inc=1000000

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

0.0001, 1., 1e-08, 0.01

\*\*

\*\* BOUNDARY CONDITIONS

\*\*

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

\*Boundary, amplitude=Amp-1

Set-3, 1, 1

Set-3, 2, 2, 25.

Set-3, 6, 6

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

\*Boundary, amplitude=Amp-1

Set-4, 1, 1

Set-4, 2, 2, -25.

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-3

\*\*

\*Output, history

\*Node Output, nset=Set-4

RF1, RF2, RF3, RM1, RM2, RM3

\*\*

\*\* HISTORY OUTPUT: H-Output-1

\*\*

\*Output, history, frequency=1000

\*Node Output, nset=BOTTOMPART-1.BOTTOMLOAD

RF1, RF2, RF3, RM1, RM2, RM3, U1, U2

U3, UR1, UR2, UR3

\*\*

\*\* HISTORY OUTPUT: H-Output-2

\*\*

\*Node Output, nset=TOPPART-1.TOPLOAD

RF1, RF2, RF3, RM1, RM2, RM3, U1, U2

U3, UR1, UR2, UR3

\*End Step