10 03 2018; 13:42:15PM DAS Application Started
10 03 2018; 13:45:11PM Opened Project C:\Users\jrw29289\Desktop\AeroCubes\AC10\
10 03 2018; 13:45:38PM Processing Requirement 4.3-1: Return Status : Passed

==========
Project Data
==========
Objects Passing Through LEO = True
Number of Objects = 1

INPUT
Quantity = 29
Final Area-To-Mass Ratio = 0.506300 (m^2/kg)
Perigee Altitude = 500.000000 (km)
Apogee Altitude = 500.000000 (km)
Inclination = 51.600000 (deg)
RAAN = -1.000000 (deg)
Argument of Perigee = -1.000000 (deg)
Mean Anomaly = -1.000000 (deg)
Released Year = 2019.000000 (yr)

OUTPUT
Perigee Altitude = -6378.136000 (km)
Apogee Altitude = -6378.136000 (km)
Inclination = 0.000000 (deg)
Lifetime = 0.739726 (yr)
Object Reentered within 25 years of Release = True
Object-Time = 20.246407 (obj-yrs)
Total Object-Time = 20.246407 (obj-yrs)
Status = Pass
Returned Error Message - Normal Processing

==========

========== End of Requirement 4.3-1 ==========
10 03 2018; 13:45:41PM Processing Requirement 4.3-2: Return Status : Passed

==========
No Project Data Available
==========

========== End of Requirement 4.3-2 ==========
10 03 2018; 13:45:43PM Requirement 4.4-3: Compliant

========== End of Requirement 4.4-3 ==========
10 03 2018; 13:45:51PM Processing Requirement 4.5-1: Return Status : Passed

==========

Run Data
==========

INPUT

Space Structure Name = AC10A
Space Structure Type = Payload
Perigee Altitude = 500.000000 (km)
Apogee Altitude = 500.000000 (km)
Inclination = 51.600000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Final Area-To-Mass Ratio = 0.025188 (m^2/kg)
Start Year = 2019.000000 (yr)
Initial Mass = 2.590000 (kg)
Final Mass = 2.117000 (kg)
Duration = 1.000000 (yr)
Station-Kept = False
Abandoned = True
PMD Perigee Altitude = -1.000000 (km)
PMD Apogee Altitude = -1.000000 (km)
PMD Inclination = 0.000000 (deg)
PMD RAAN = 0.000000 (deg)
PMD Argument of Perigee = 0.000000 (deg)
PMD Mean Anomaly = 0.000000 (deg)

OUTPUT

Collision Probability = 0.000000
Returned Error Message: Normal Processing
Date Range Error Message: Normal Date Range
Status = Pass

==========

INPUT

Space Structure Name = AC10B
Space Structure Type = Payload
Perigee Altitude = 500.000000 (km)
Apogee Altitude = 500.000000 (km)
Inclination = 51.600000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Final Area-To-Mass Ratio = 0.025119 (m^2/kg)
Start Year = 2019.000000 (yr)

Initial Mass = 2.142000 (kg)
Final Mass = 2.142000 (kg)
Duration = 1.000000 (yr)
Station-Kept = False
Abandoned = True
PMD Perigee Altitude = -1.000000 (km)
PMD Apogee Altitude = -1.000000 (km)
PMD Inclination = 0.000000 (deg)
PMD RAAN = 0.000000 (deg)
PMD Argument of Perigee = 0.000000 (deg)
PMD Mean Anomaly = 0.000000 (deg)

OUTPUT

Collision Probability = 0.000000
Returned Error Message: Normal Processing
Date Range Error Message: Normal Date Range
Status = Pass

==========

========== End of Requirement 4.5-1 ==========
10 03 2018; 13:46:32PM Processing Requirement 4.6 Return Status : Passed

==========
Project Data
==========

INPUT

Space Structure Name = AC10A
Space Structure Type = Payload

Perigee Altitude = 500.000000 (km)
Apogee Altitude = 500.000000 (km)
Inclination = 51.600000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Area-To-Mass Ratio = 0.025188 (m^2/kg)
Start Year = 2019.000000 (yr)
Initial Mass = 2.590000 (kg)
Final Mass = 2.117000 (kg)
Duration = 1.000000 (yr)
Station Kept = False
Abandoned = True
PMD Perigee Altitude = 486.678058 (km)
PMD Apogee Altitude = 508.295993 (km)

PMD Inclination = 51.599171 (deg)
PMD RAAN = 61.771525 (deg)
PMD Argument of Perigee = 111.336136 (deg)
PMD Mean Anomaly = 0.000000 (deg)

OUTPUT

Suggested Perigee Altitude = 486.678058 (km)
Suggested Apogee Altitude = 508.295993 (km)
Returned Error Message = Passes LEO reentry orbit criteria.

Released Year = 2021 (yr)
Requirement = 61
Compliance Status = Pass

==========

INPUT

Space Structure Name = AC10B
Space Structure Type = Payload

Perigee Altitude = 500.000000 (km)
Apogee Altitude = 500.000000 (km)
Inclination = 51.600000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Area-To-Mass Ratio = 0.025119 (m^2/kg)
Start Year = 2019.000000 (yr)
Initial Mass = 2.142000 (kg)
Final Mass = 2.142000 (kg)
Duration = 1.000000 (yr)
Station Kept = False
Abandoned = True
PMD Perigee Altitude = 486.220899 (km)
PMD Apogee Altitude = 507.610843 (km)
PMD Inclination = 51.599099 (deg)
PMD RAAN = 61.508446 (deg)
PMD Argument of Perigee = 111.076696 (deg)
PMD Mean Anomaly = 0.000000 (deg)

OUTPUT

Suggested Perigee Altitude = 486.220899 (km)
Suggested Apogee Altitude = 507.610843 (km)
Returned Error Message = Passes LEO reentry orbit criteria.

Released Year = 2021 (yr)
Requirement = 61
Compliance Status = Pass

==========

========== End of Requirement 4.6 ==========
10 03 2018; 13:46:38PM Requirement 4.5-2: Compliant
10 03 2018; 13:46:43PM *********Processing Requirement 4.7-1
Return Status : Passed

**********INPUT****
Item Number = 1

name = AC10A
quantity = 1
parent = 0
materialID = 8
type = Box
Aero Mass = 2.117000
Thermal Mass = 2.117000
Diameter/Width = 0.109000
Length = 0.170000
Height = 0.104000

name = Nadir Lid Assembly-AC10A
quantity = 1
parent = 1
materialID = 8
type = Box
Aero Mass = 0.225000
Thermal Mass = 0.225000
Diameter/Width = 0.100000
Length = 0.100000
Height = 0.017000

name = Reaction Wheel-AC10A
quantity = 3
parent = 1
materialID = 54
type = Cylinder
Aero Mass = 0.004000
Thermal Mass = 0.004000
Diameter/Width = 0.012000
Length = 0.009000

name = Patch Antenna-AC10A
quantity = 3

parent = 1
materialID = 40
type = Box
Aero Mass = 0.011000
Thermal Mass = 0.011000
Diameter/Width = 0.041000
Length = 0.041000
Height = 0.006000

name = Backplate-AC10A
quantity = 1
parent = 1
materialID = 8
type = Box
Aero Mass = 0.114000
Thermal Mass = 0.114000
Diameter/Width = 0.078000
Length = 0.170000
Height = 0.010000

name = Power Module-AC10A
quantity = 1
parent = 1
materialID = 19
type = Box
Aero Mass = 0.315000
Thermal Mass = 0.315000
Diameter/Width = 0.080000
Length = 0.080000
Height = 0.028000

name = Bus Electronics-AC10A
quantity = 1
parent = 1
materialID = 23
type = Box
Aero Mass = 0.315000
Thermal Mass = 0.315000
Diameter/Width = 0.080000
Length = 0.080000
Height = 0.037000

name = Torque Rod-AC10A
quantity = 3
parent = 1
materialID = -2
type = Cylinder
Aero Mass = 0.018000

Thermal Mass = 0.018000
Diameter/Width = 0.008000
Length = 0.079000

name = Walls-AC10A
quantity = 3
parent = 1
materialID = 8
type = Box
Aero Mass = 0.095000
Thermal Mass = 0.095000
Diameter/Width = 0.078000
Length = 0.170000
Height = 0.010000

name = Wing Assembly-AC10A
quantity = 2
parent = 1
materialID = 23
type = Box
Aero Mass = 0.057000
Thermal Mass = 0.057000
Diameter/Width = 0.079000
Length = 0.138000
Height = 0.003000

name = Beacon Assembly-AC10A
quantity = 1
parent = 1
materialID = 8
type = Box
Aero Mass = 0.050000
Thermal Mass = 0.050000
Diameter/Width = 0.083000
Length = 0.083000
Height = 0.008000

name = Dispenser Assembly
quantity = 1
parent = 1
materialID = 8
type = Box
Aero Mass = 0.600000
Thermal Mass = 0.600000
Diameter/Width = 0.100000
Length = 0.100000
Height = 0.051000

**********OUTPUT****
Item Number = 1

name = AC10A
Demise Altitude = 77.994730
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

****
name = Nadir Lid Assembly-AC10A
Demise Altitude = 73.137683
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

****
name = Reaction Wheel-AC10A
Demise Altitude = 74.777738
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

****
name = Patch Antenna-AC10A
Demise Altitude = 76.728129
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

****
name = Backplate-AC10A
Demise Altitude = 76.083988
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

****
name = Power Module-AC10A
Demise Altitude = 71.974316
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

****
name = Bus Electronics-AC10A
Demise Altitude = 73.286543
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

****
name = Torque Rod-AC10A
Demise Altitude = 73.754113
Debris Casualty Area = 0.000000

Impact Kinetic Energy = 0.000000

****
name = Walls-AC10A
Demise Altitude = 76.392832
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

****
name = Wing Assembly-AC10A
Demise Altitude = 77.140918
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

****
name = Beacon Assembly-AC10A
Demise Altitude = 76.378261
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

****
name = Dispenser Assembly
Demise Altitude = 69.325949
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

****

**********INPUT****
Item Number = 2

name = AC10B
quantity = 1
parent = 0
materialID = 8
type = Box
Aero Mass = 2.142000
Thermal Mass = 2.142000
Diameter/Width = 0.109000
Length = 0.170000
Height = 0.104000

name = Nadir Lid Assembly-AC10B
quantity = 1
parent = 1
materialID = 8
type = Box
Aero Mass = 0.225000

Thermal Mass = 0.225000
Diameter/Width = 0.100000
Length = 0.100000
Height = 0.017000

name = Reaction Wheel-AC10B
quantity = 3
parent = 1
materialID = 54
type = Cylinder
Aero Mass = 0.004000
Thermal Mass = 0.004000
Diameter/Width = 0.012000
Length = 0.009000

name = Patch Antenna-AC10B
quantity = 3
parent = 1
materialID = 40
type = Box
Aero Mass = 0.011000
Thermal Mass = 0.011000
Diameter/Width = 0.041000
Length = 0.041000
Height = 0.006000

name = Backplate-AC10B
quantity = 1
parent = 1
materialID = 8
type = Box
Aero Mass = 0.114000
Thermal Mass = 0.114000
Diameter/Width = 0.078000
Length = 0.170000
Height = 0.010000

name = Power Module-AC10B
quantity = 1
parent = 1
materialID = 19
type = Box
Aero Mass = 0.315000
Thermal Mass = 0.315000
Diameter/Width = 0.080000
Length = 0.080000
Height = 0.028000

name = Bus Electronics-AC10B
quantity = 1
parent = 1
materialID = 23
type = Box
Aero Mass = 0.315000
Thermal Mass = 0.315000
Diameter/Width = 0.080000
Length = 0.080000
Height = 0.072000

name = Torque Rod-AC10B
quantity = 3
parent = 1
materialID = -2
type = Cylinder
Aero Mass = 0.018000
Thermal Mass = 0.018000
Diameter/Width = 0.008000
Length = 0.079000

name = Walls-AC10B
quantity = 3
parent = 1
materialID = 8
type = Box
Aero Mass = 0.095000
Thermal Mass = 0.095000
Diameter/Width = 0.078000
Length = 0.170000
Height = 0.010000

name = Camera 360
quantity = 1
parent = 1
materialID = 54
type = Cylinder
Aero Mass = 0.134000
Thermal Mass = 0.134000
Diameter/Width = 0.034000
Length = 0.027000

name = Flux Camera
quantity = 1
parent = 1
materialID = 8
type = Cylinder
Aero Mass = 0.037000

Thermal Mass = 0.037000
Diameter/Width = 0.031000
Length = 0.022000

name = Wing Assembly-AC10B
quantity = 2
parent = 1
materialID = 23
type = Box
Aero Mass = 0.057000
Thermal Mass = 0.057000
Diameter/Width = 0.079000
Length = 0.138000
Height = 0.003000

name = Zenith Lid
quantity = 1
parent = 1
materialID = 8
type = Box
Aero Mass = 0.025000
Thermal Mass = 0.025000
Diameter/Width = 0.104000
Length = 0.111000
Height = 0.010000

name = uCPT Box
quantity = 1
parent = 1
materialID = 8
type = Box
Aero Mass = 0.130000
Thermal Mass = 0.130000
Diameter/Width = 0.041000
Length = 0.041000
Height = 0.031000

name = uCPT Vault
quantity = 1
parent = 1
materialID = 54
type = Box
Aero Mass = 0.024000
Thermal Mass = 0.024000
Diameter/Width = 0.024000
Length = 0.024000
Height = 0.008000

name = uCPT Cover
quantity = 1
parent = 1
materialID = 54
type = Box
Aero Mass = 0.115000
Thermal Mass = 0.115000
Diameter/Width = 0.041000
Length = 0.041000
Height = 0.024000

name = uCPT Baffles
quantity = 8
parent = 1
materialID = -1
type = Cylinder
Aero Mass = 0.000200
Thermal Mass = 0.000200
Diameter/Width = 0.028000
Length = 0.040000

name = Propulsion Assembly
quantity = 1
parent = 1
materialID = 8
type = Box
Aero Mass = 0.163000
Thermal Mass = 0.163000
Diameter/Width = 0.044000
Length = 0.054000
Height = 0.041400

name = uCPT Vault Shield
quantity = 1
parent = 1
materialID = -1
type = Box
Aero Mass = 0.015000
Thermal Mass = 0.015000
Diameter/Width = 0.024000
Length = 0.024000
Height = 0.002000

**********OUTPUT****
Item Number = 2

name = AC10B
Demise Altitude = 77.994871

Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

****

name = Nadir Lid Assembly-AC10B
Demise Altitude = 73.165730
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

****

name = Reaction Wheel-AC10B
Demise Altitude = 74.798722
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

****

name = Patch Antenna-AC10B
Demise Altitude = 76.733019
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

****

name = Backplate-AC10B
Demise Altitude = 76.091324
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

****

name = Power Module-AC10B
Demise Altitude = 71.998050
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

****

name = Bus Electronics-AC10B
Demise Altitude = 74.463964
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

****

name = Torque Rod-AC10B
Demise Altitude = 73.779441
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

****

name = Walls-AC10B
Demise Altitude = 76.398988

Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

****

name = Camera 360
Demise Altitude = 64.160925
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

****

name = Flux Camera
Demise Altitude = 74.168269
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

****

name = Wing Assembly-AC10B
Demise Altitude = 77.144269
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

****

name = Zenith Lid
Demise Altitude = 77.459644
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

****

name = uCPT Box
Demise Altitude = 71.597011
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

****

name = uCPT Vault
Demise Altitude = 68.511394
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

****

name = uCPT Cover
Demise Altitude = 0.000000
Debris Casualty Area = 0.405137
Impact Kinetic Energy = 82.141708

****

name = uCPT Baffles
Demise Altitude = 0.000000

Debris Casualty Area = 3.210238
Impact Kinetic Energy = 0.000345

****
name = Propulsion Assembly
Demise Altitude = 72.592253
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

****
name = uCPT Vault Shield
Demise Altitude = 0.000000
Debris Casualty Area = 0.381508
Impact Kinetic Energy = 7.576210

****

**********INPUT****
Item Number = 3

name = Probe
quantity = 29
parent = 0
materialID = 8
type = Box
Aero Mass = 0.016000
Thermal Mass = 0.016000
Diameter/Width = 0.090000
Length = 0.090000
Height = 0.090000

**********OUTPUT****
Item Number = 3

name = Probe
Demise Altitude = 77.991879
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

****

========== End of Requirement 4.7-1 ==========