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03 29 2016; 12:33:35PM      DAS Application Started
03 29 2016; 12:33:35PM      Opened Project H:\Projects\AC9\DAS\
03 29 2016; 12:33:40PM      Processing Requirement 4.3-1:
      Return Status : Not Run

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

===== End of Requirement 4.3-1 =====
03 29 2016; 12:33:42PM      Processing Requirement 4.3-2: Return
Status : Passed

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

===== End of Requirement 4.3-2 =====
03 29 2016; 12:33:44PM      Requirement 4.4-3: Compliant

===== End of Requirement 4.4-3 =====
03 29 2016; 12:34:00PM      Processing Requirement 4.5-1:
      Return Status : Passed

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

**INPUT**

Space Structure Name = AC9 Full SC except Wings
Space Structure Type = Payload
Perigee Altitude = 550.000000 (km)
Apogee Altitude = 580.000000 (km)
Inclination = 97.655000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Final Area-To-Mass Ratio = 0.008171 (m^2/kg)
Start Year = 2016.000000 (yr)
Initial Mass = 3.822000 (kg)
Final Mass = 3.822000 (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 = 0.000001
Returned Error Message: Normal Processing
Date Range Error Message: Normal Date Range
Status = Pass

=====

****INPUT****

Space Structure Name = Full Body Only
Space Structure Type = Payload
Perigee Altitude = 550.000000 (km)
Apogee Altitude = 580.000000 (km)
Inclination = 97.655000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Final Area-To-Mass Ratio = 0.042060 (m²/kg)
Start Year = 2016.000000 (yr)
Initial Mass = 0.743000 (kg)
Final Mass = 0.743000 (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 = Frame Part 1
Space Structure Type = Payload
Perigee Altitude = 550.000000 (km)
Apogee Altitude = 580.000000 (km)
Inclination = 97.655000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)

```
Final Area-To-Mass Ratio = 0.053940 (m^2/kg)
Start Year = 2016.000000 (yr)
Initial Mass = 0.254000 (kg)
Final Mass = 0.254000 (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 = Frame Part 2
Space Structure Type = Payload
Perigee Altitude = 550.000000 (km)
Apogee Altitude = 580.000000 (km)
Inclination = 97.655000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Final Area-To-Mass Ratio = 0.044250 (m^2/kg)
Start Year = 2016.000000 (yr)
Initial Mass = 0.489000 (kg)
Final Mass = 0.489000 (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 = Wing Assembly
Space Structure Type = Payload
Perigee Altitude = 550.000000 (km)
Apogee Altitude = 580.000000 (km)
Inclination = 97.655000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Final Area-To-Mass Ratio = 0.096040 (m²/kg)
Start Year = 2016.000000 (yr)
Initial Mass = 0.168000 (kg)
Final Mass = 0.168000 (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 = Bus Electronics Assembly
Space Structure Type = Payload
Perigee Altitude = 550.000000 (km)
Apogee Altitude = 580.000000 (km)
Inclination = 97.655000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Final Area-To-Mass Ratio = 0.005270 (m²/kg)
Start Year = 2016.000000 (yr)
Initial Mass = 0.584000 (kg)
Final Mass = 0.584000 (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 = Reaction Wheel
Space Structure Type = Payload
Perigee Altitude = 550.000000 (km)
Apogee Altitude = 580.000000 (km)
Inclination = 97.655000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Final Area-To-Mass Ratio = 0.022780 (m^2/kg)
Start Year = 2016.000000 (yr)
Initial Mass = 0.047000 (kg)
Final Mass = 0.047000 (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 = Anti-Nadir Plate Assembly
 Space Structure Type = Payload
 Perigee Altitude = 550.000000 (km)
 Apogee Altitude = 580.000000 (km)
 Inclination = 97.655000 (deg)
 RAAN = 0.000000 (deg)
 Argument of Perigee = 0.000000 (deg)
 Mean Anomaly = 0.000000 (deg)
 Final Area-To-Mass Ratio = 0.035880 (m²/kg)
 Start Year = 2016.000000 (yr)
 Initial Mass = 0.155000 (kg)
 Final Mass = 0.155000 (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 = Antenna
 Space Structure Type = Payload
 Perigee Altitude = 550.000000 (km)
 Apogee Altitude = 580.000000 (km)
 Inclination = 97.655000 (deg)
 RAAN = 0.000000 (deg)
 Argument of Perigee = 0.000000 (deg)
 Mean Anomaly = 0.000000 (deg)
 Final Area-To-Mass Ratio = 0.058340 (m²/kg)
 Start Year = 2016.000000 (yr)
 Initial Mass = 0.016000 (kg)
 Final Mass = 0.016000 (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)

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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 = Star Tracker Assembly
Space Structure Type = Payload
Perigee Altitude = 550.000000 (km)
Apogee Altitude = 580.000000 (km)
Inclination = 97.655000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Final Area-To-Mass Ratio = 0.051370 (m^2/kg)
Start Year = 2016.000000 (yr)
Initial Mass = 0.055000 (kg)
Final Mass = 0.055000 (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 = Torque Rod Assembly
Space Structure Type = Payload
Perigee Altitude = 550.000000 (km)
Apogee Altitude = 580.000000 (km)

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```

Inclination = 97.655000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Final Area-To-Mass Ratio = 0.015360 (m^2/kg)
Start Year = 2016.000000 (yr)
Initial Mass = 0.070000 (kg)
Final Mass = 0.070000 (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****

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

```

=====

****INPUT****

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Space Structure Name = Laser Assembly
Space Structure Type = Payload
Perigee Altitude = 550.000000 (km)
Apogee Altitude = 580.000000 (km)
Inclination = 97.655000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Final Area-To-Mass Ratio = 0.017230 (m^2/kg)
Start Year = 2016.000000 (yr)
Initial Mass = 0.315000 (kg)
Final Mass = 0.315000 (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 = STIM 210 IMU
Space Structure Type = Payload
Perigee Altitude = 550.000000 (km)
Apogee Altitude = 580.000000 (km)
Inclination = 97.655000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Final Area-To-Mass Ratio = 0.020260 (m²/kg)
Start Year = 2016.000000 (yr)
Initial Mass = 0.110000 (kg)
Final Mass = 0.110000 (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 = Payload Assembly
Space Structure Type = Payload
Perigee Altitude = 550.000000 (km)
Apogee Altitude = 580.000000 (km)
Inclination = 97.655000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Final Area-To-Mass Ratio = 0.010770 (m²/kg)

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Start Year = 2016.000000 (yr)
Initial Mass = 1.455000 (kg)
Final Mass = 1.455000 (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 = Filter Wheel Assembly
Space Structure Type = Payload
Perigee Altitude = 550.000000 (km)
Apogee Altitude = 580.000000 (km)
Inclination = 97.655000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Final Area-To-Mass Ratio = 0.178800 (m^2/kg)
Start Year = 2016.000000 (yr)
Initial Mass = 0.197000 (kg)
Final Mass = 0.197000 (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 = IDCA
Space Structure Type = Payload
Perigee Altitude = 550.000000 (km)
Apogee Altitude = 580.000000 (km)
Inclination = 97.655000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Final Area-To-Mass Ratio = 0.009290 (m²/kg)
Start Year = 2016.000000 (yr)
Initial Mass = 1.129000 (kg)
Final Mass = 1.129000 (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 =====

03 29 2016; 12:34:06PM Requirement 4.5-2: Compliant
03 29 2016; 12:34:07PM Processing Requirement 4.6 Return
Status : Passed

=====

Project Data

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****INPUT****

Space Structure Name = AC9 Full SC except Wings
Space Structure Type = Payload

Perigee Altitude = 550.000000 (km)
Apogee Altitude = 580.000000 (km)

Inclination = 97.655000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Area-To-Mass Ratio = 0.008171 (m²/kg)
Start Year = 2016.000000 (yr)
Initial Mass = 3.822000 (kg)
Final Mass = 3.822000 (kg)
Duration = 1.000000 (yr)
Station Kept = False
Abandoned = True
PMD Perigee Altitude = 546.046340 (km)
PMD Apogee Altitude = 579.421556 (km)
PMD Inclination = 97.669298 (deg)
PMD RAAN = 359.464727 (deg)
PMD Argument of Perigee = 157.792744 (deg)
PMD Mean Anomaly = 0.000000 (deg)

****OUTPUT****

Suggested Perigee Altitude = 546.046340 (km)
Suggested Apogee Altitude = 579.421556 (km)
Returned Error Message = Passes LEO reentry orbit criteria.

Released Year = 2029 (yr)
Requirement = 61
Compliance Status = Pass

=====

****INPUT****

Space Structure Name = Full Body Only
Space Structure Type = Payload

Perigee Altitude = 550.000000 (km)
Apogee Altitude = 580.000000 (km)
Inclination = 97.655000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Area-To-Mass Ratio = 0.042060 (m²/kg)
Start Year = 2016.000000 (yr)
Initial Mass = 0.743000 (kg)
Final Mass = 0.743000 (kg)
Duration = 1.000000 (yr)
Station Kept = False
Abandoned = True
PMD Perigee Altitude = 536.625131 (km)
PMD Apogee Altitude = 568.041907 (km)
PMD Inclination = 97.666491 (deg)
PMD RAAN = 0.406592 (deg)

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PMD Argument of Perigee = 152.903522 (deg)
PMD Mean Anomaly = 0.000000 (deg)

**OUTPUT**

Suggested Perigee Altitude = 536.625131 (km)
Suggested Apogee Altitude = 568.041907 (km)
Returned Error Message = Passes LEO reentry orbit criteria.

Released Year = 2022 (yr)
Requirement = 61
Compliance Status = Pass

=====

**INPUT**

Space Structure Name = Frame Part 1
Space Structure Type = Payload

Perigee Altitude = 550.000000 (km)
Apogee Altitude = 580.000000 (km)
Inclination = 97.655000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Area-To-Mass Ratio = 0.053940 (m^2/kg)
Start Year = 2016.000000 (yr)
Initial Mass = 0.254000 (kg)
Final Mass = 0.254000 (kg)
Duration = 1.000000 (yr)
Station Kept = False
Abandoned = True
PMD Perigee Altitude = 532.869548 (km)
PMD Apogee Altitude = 563.578720 (km)
PMD Inclination = 97.665432 (deg)
PMD RAAN = 0.766713 (deg)
PMD Argument of Perigee = 151.014886 (deg)
PMD Mean Anomaly = 0.000000 (deg)

**OUTPUT**

Suggested Perigee Altitude = 532.869548 (km)
Suggested Apogee Altitude = 563.578720 (km)
Returned Error Message = Passes LEO reentry orbit criteria.

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

=====

```

****INPUT****

Space Structure Name = Frame Part 2
Space Structure Type = Payload

Perigee Altitude = 550.000000 (km)
Apogee Altitude = 580.000000 (km)
Inclination = 97.655000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Area-To-Mass Ratio = 0.044250 (m²/kg)
Start Year = 2016.000000 (yr)
Initial Mass = 0.489000 (kg)
Final Mass = 0.489000 (kg)
Duration = 1.000000 (yr)
Station Kept = False
Abandoned = True
PMD Perigee Altitude = 535.953005 (km)
PMD Apogee Altitude = 567.240182 (km)
PMD Inclination = 97.666299 (deg)
PMD RAAN = 0.471686 (deg)
PMD Argument of Perigee = 152.563262 (deg)
PMD Mean Anomaly = 0.000000 (deg)

****OUTPUT****

Suggested Perigee Altitude = 535.953005 (km)
Suggested Apogee Altitude = 567.240182 (km)
Returned Error Message = Passes LEO reentry orbit criteria.

Released Year = 2022 (yr)
Requirement = 61
Compliance Status = Pass

=====

****INPUT****

Space Structure Name = Wing Assembly
Space Structure Type = Payload

Perigee Altitude = 550.000000 (km)
Apogee Altitude = 580.000000 (km)
Inclination = 97.655000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Area-To-Mass Ratio = 0.096040 (m²/kg)
Start Year = 2016.000000 (yr)
Initial Mass = 0.168000 (kg)
Final Mass = 0.168000 (kg)

```

Duration = 1.000000 (yr)
Station Kept = False
Abandoned = True
PMD Perigee Altitude = 516.819606 (km)
PMD Apogee Altitude = 544.900549 (km)
PMD Inclination = 97.661230 (deg)
PMD RAAN = 2.208359 (deg)
PMD Argument of Perigee = 143.384483 (deg)
PMD Mean Anomaly = 0.000000 (deg)

**OUTPUT**

Suggested Perigee Altitude = 516.819606 (km)
Suggested Apogee Altitude = 544.900549 (km)
Returned Error Message = Passes LEO reentry orbit criteria.

Released Year = 2020 (yr)
Requirement = 61
Compliance Status = Pass

=====

**INPUT**

Space Structure Name = Bus Electronics Assembly
Space Structure Type = Payload

Perigee Altitude = 550.000000 (km)
Apogee Altitude = 580.000000 (km)
Inclination = 97.655000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Area-To-Mass Ratio = 0.005270 (m^2/kg)
Start Year = 2016.000000 (yr)
Initial Mass = 0.584000 (kg)
Final Mass = 0.584000 (kg)
Duration = 1.000000 (yr)
Station Kept = False
Abandoned = True
PMD Perigee Altitude = 546.778224 (km)
PMD Apogee Altitude = 580.317719 (km)
PMD Inclination = 97.669526 (deg)
PMD RAAN = 359.389237 (deg)
PMD Argument of Perigee = 158.181318 (deg)
PMD Mean Anomaly = 0.000000 (deg)

**OUTPUT**

Suggested Perigee Altitude = 546.778224 (km)
Suggested Apogee Altitude = 580.317719 (km)
Returned Error Message = Passes LEO reentry orbit criteria.

```

Released Year = 2034 (yr)
Requirement = 61
Compliance Status = Pass

=====

****INPUT****

Space Structure Name = Reaction Wheel
Space Structure Type = Payload

Perigee Altitude = 550.000000 (km)
Apogee Altitude = 580.000000 (km)
Inclination = 97.655000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Area-To-Mass Ratio = 0.022780 (m²/kg)
Start Year = 2016.000000 (yr)
Initial Mass = 0.047000 (kg)
Final Mass = 0.047000 (kg)
Duration = 1.000000 (yr)
Station Kept = False
Abandoned = True
PMD Perigee Altitude = 542.194112 (km)
PMD Apogee Altitude = 574.734019 (km)
PMD Inclination = 97.668122 (deg)
PMD RAAN = 359.856547 (deg)
PMD Argument of Perigee = 155.767201 (deg)
PMD Mean Anomaly = 0.000000 (deg)

****OUTPUT****

Suggested Perigee Altitude = 542.194112 (km)
Suggested Apogee Altitude = 574.734019 (km)
Returned Error Message = Passes LEO reentry orbit criteria.

Released Year = 2022 (yr)
Requirement = 61
Compliance Status = Pass

=====

****INPUT****

Space Structure Name = Anti-Nadir Plate Assembly
Space Structure Type = Payload

Perigee Altitude = 550.000000 (km)
Apogee Altitude = 580.000000 (km)
Inclination = 97.655000 (deg)

```

    RAAN = 0.000000 (deg)
    Argument of Perigee = 0.000000 (deg)
    Mean Anomaly = 0.000000 (deg)
    Area-To-Mass Ratio = 0.035880 (m^2/kg)
    Start Year = 2016.000000 (yr)
    Initial Mass = 0.155000 (kg)
    Final Mass = 0.155000 (kg)
    Duration = 1.000000 (yr)
    Station Kept = False
    Abandoned = True
    PMD Perigee Altitude = 538.476282 (km)
    PMD Apogee Altitude = 570.256081 (km)
    PMD Inclination = 97.667025 (deg)
    PMD RAAN = 0.225890 (deg)
    PMD Argument of Perigee = 153.846898 (deg)
    PMD Mean Anomaly = 0.000000 (deg)

**OUTPUT**

    Suggested Perigee Altitude = 538.476282 (km)
    Suggested Apogee Altitude = 570.256081 (km)
    Returned Error Message = Passes LEO reentry orbit criteria.

    Released Year = 2022 (yr)
    Requirement = 61
    Compliance Status = Pass

=====

**INPUT**

    Space Structure Name = Antenna
    Space Structure Type = Payload

    Perigee Altitude = 550.000000 (km)
    Apogee Altitude = 580.000000 (km)
    Inclination = 97.655000 (deg)
    RAAN = 0.000000 (deg)
    Argument of Perigee = 0.000000 (deg)
    Mean Anomaly = 0.000000 (deg)
    Area-To-Mass Ratio = 0.058340 (m^2/kg)
    Start Year = 2016.000000 (yr)
    Initial Mass = 0.016000 (kg)
    Final Mass = 0.016000 (kg)
    Duration = 1.000000 (yr)
    Station Kept = False
    Abandoned = True
    PMD Perigee Altitude = 531.406500 (km)
    PMD Apogee Altitude = 561.850208 (km)
    PMD Inclination = 97.665028 (deg)
    PMD RAAN = 0.904652 (deg)
    PMD Argument of Perigee = 150.289375 (deg)

```

```

PMD Mean Anomaly = 0.000000 (deg)

**OUTPUT**

Suggested Perigee Altitude = 531.406500 (km)
Suggested Apogee Altitude = 561.850208 (km)
Returned Error Message = Passes LEO reentry orbit criteria.

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

=====

**INPUT**

Space Structure Name = Star Tracker Assembly
Space Structure Type = Payload

Perigee Altitude = 550.000000 (km)
Apogee Altitude = 580.000000 (km)
Inclination = 97.655000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Area-To-Mass Ratio = 0.051370 (m^2/kg)
Start Year = 2016.000000 (yr)
Initial Mass = 0.055000 (kg)
Final Mass = 0.055000 (kg)
Duration = 1.000000 (yr)
Station Kept = False
Abandoned = True
PMD Perigee Altitude = 533.705345 (km)
PMD Apogee Altitude = 564.568708 (km)
PMD Inclination = 97.665665 (deg)
PMD RAAN = 0.687320 (deg)
PMD Argument of Perigee = 151.432288 (deg)
PMD Mean Anomaly = 0.000000 (deg)

**OUTPUT**

Suggested Perigee Altitude = 533.705345 (km)
Suggested Apogee Altitude = 564.568708 (km)
Returned Error Message = Passes LEO reentry orbit criteria.

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

=====

**INPUT**

```

Space Structure Name = Torque Rod Assembly
Space Structure Type = Payload

Perigee Altitude = 550.000000 (km)
Apogee Altitude = 580.000000 (km)
Inclination = 97.655000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Area-To-Mass Ratio = 0.015360 (m²/kg)
Start Year = 2016.000000 (yr)
Initial Mass = 0.070000 (kg)
Final Mass = 0.070000 (kg)
Duration = 1.000000 (yr)
Station Kept = False
Abandoned = True
PMD Perigee Altitude = 544.186658 (km)
PMD Apogee Altitude = 577.152557 (km)
PMD Inclination = 97.668725 (deg)
PMD RAAN = 359.655036 (deg)
PMD Argument of Perigee = 156.810717 (deg)
PMD Mean Anomaly = 0.000000 (deg)

****OUTPUT****

Suggested Perigee Altitude = 544.186658 (km)
Suggested Apogee Altitude = 577.152557 (km)
Returned Error Message = Passes LEO reentry orbit criteria.

Released Year = 2023 (yr)
Requirement = 61
Compliance Status = Pass

=====

****INPUT****

Space Structure Name = Laser Assembly
Space Structure Type = Payload

Perigee Altitude = 550.000000 (km)
Apogee Altitude = 580.000000 (km)
Inclination = 97.655000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Area-To-Mass Ratio = 0.017230 (m²/kg)
Start Year = 2016.000000 (yr)
Initial Mass = 0.315000 (kg)
Final Mass = 0.315000 (kg)
Duration = 1.000000 (yr)

```

Station Kept = False
Abandoned = True
PMD Perigee Altitude = 543.691700 (km)
PMD Apogee Altitude = 576.550584 (km)
PMD Inclination = 97.668574 (deg)
PMD RAAN = 359.705323 (deg)
PMD Argument of Perigee = 156.550656 (deg)
PMD Mean Anomaly = 0.000000 (deg)

**OUTPUT**

Suggested Perigee Altitude = 543.691700 (km)
Suggested Apogee Altitude = 576.550584 (km)
Returned Error Message = Passes LEO reentry orbit criteria.

Released Year = 2023 (yr)
Requirement = 61
Compliance Status = Pass

=====

**INPUT**

Space Structure Name = STIM 210 IMU
Space Structure Type = Payload

Perigee Altitude = 550.000000 (km)
Apogee Altitude = 580.000000 (km)
Inclination = 97.655000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Area-To-Mass Ratio = 0.020260 (m^2/kg)
Start Year = 2016.000000 (yr)
Initial Mass = 0.110000 (kg)
Final Mass = 0.110000 (kg)
Duration = 1.000000 (yr)
Station Kept = False
Abandoned = True
PMD Perigee Altitude = 542.879490 (km)
PMD Apogee Altitude = 575.564488 (km)
PMD Inclination = 97.668328 (deg)
PMD RAAN = 359.787512 (deg)
PMD Argument of Perigee = 156.125114 (deg)
PMD Mean Anomaly = 0.000000 (deg)

**OUTPUT**

Suggested Perigee Altitude = 542.879490 (km)
Suggested Apogee Altitude = 575.564488 (km)
Returned Error Message = Passes LEO reentry orbit criteria.

```

```

Released Year = 2023 (yr)
Requirement = 61
Compliance Status = Pass

=====

**INPUT**

Space Structure Name = Payload Assembly
Space Structure Type = Payload

Perigee Altitude = 550.000000 (km)
Apogee Altitude = 580.000000 (km)
Inclination = 97.655000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Area-To-Mass Ratio = 0.010770 (m^2/kg)
Start Year = 2016.000000 (yr)
Initial Mass = 1.455000 (kg)
Final Mass = 1.455000 (kg)
Duration = 1.000000 (yr)
Station Kept = False
Abandoned = True
PMD Perigee Altitude = 545.381767 (km)
PMD Apogee Altitude = 578.609384 (km)
PMD Inclination = 97.669092 (deg)
PMD RAAN = 359.532984 (deg)
PMD Argument of Perigee = 157.440925 (deg)
PMD Mean Anomaly = 0.000000 (deg)

**OUTPUT**

Suggested Perigee Altitude = 545.381767 (km)
Suggested Apogee Altitude = 578.609384 (km)
Returned Error Message = Passes LEO reentry orbit criteria.

Released Year = 2025 (yr)
Requirement = 61
Compliance Status = Pass

=====

**INPUT**

Space Structure Name = Filter Wheel Assembly
Space Structure Type = Payload

Perigee Altitude = 550.000000 (km)
Apogee Altitude = 580.000000 (km)
Inclination = 97.655000 (deg)
RAAN = 0.000000 (deg)

```

Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Area-To-Mass Ratio = 0.178800 (m²/kg)
Start Year = 2016.000000 (yr)
Initial Mass = 0.197000 (kg)
Final Mass = 0.197000 (kg)
Duration = 1.000000 (yr)
Station Kept = False
Abandoned = True
PMD Perigee Altitude = 451.938132 (km)
PMD Apogee Altitude = 473.624962 (km)
PMD Inclination = 97.647636 (deg)
PMD RAAN = 6.513762 (deg)
PMD Argument of Perigee = 121.016240 (deg)
PMD Mean Anomaly = 0.000000 (deg)

****OUTPUT****

Suggested Perigee Altitude = 451.938132 (km)
Suggested Apogee Altitude = 473.624962 (km)
Returned Error Message = Passes LEO reentry orbit criteria.

Released Year = 2017 (yr)
Requirement = 61
Compliance Status = Pass

=====

****INPUT****

Space Structure Name = IDCA
Space Structure Type = Payload

Perigee Altitude = 550.000000 (km)
Apogee Altitude = 580.000000 (km)
Inclination = 97.655000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Area-To-Mass Ratio = 0.009290 (m²/kg)
Start Year = 2016.000000 (yr)
Initial Mass = 1.129000 (kg)
Final Mass = 1.129000 (kg)
Duration = 1.000000 (yr)
Station Kept = False
Abandoned = True
PMD Perigee Altitude = 545.761280 (km)
PMD Apogee Altitude = 579.073003 (km)
PMD Inclination = 97.669210 (deg)
PMD RAAN = 359.494039 (deg)
PMD Argument of Perigee = 157.641716 (deg)
PMD Mean Anomaly = 0.000000 (deg)

****OUTPUT****

Suggested Perigee Altitude = 545.761280 (km)
Suggested Apogee Altitude = 579.073003 (km)
Returned Error Message = Passes LEO reentry orbit criteria.

Released Year = 2026 (yr)
Requirement = 61
Compliance Status = Pass

=====

===== End of Requirement 4.6 =====

03 29 2016; 12:34:13PM

*****Processing Requirement 4.7-1

Return Status : Passed

*****INPUT*****

Item Number = 1

name = AC9 Full SC except Wings
quantity = 1
parent = 0
materialID = 8
type = Box
Aero Mass = 3.822000
Thermal Mass = 3.822000
Diameter/Width = 0.110720
Length = 0.367800
Height = 0.110720

name = AC9 Full SC except Wings
quantity = 1
parent = 1
materialID = 8
type = Box
Aero Mass = 3.822000
Thermal Mass = 3.822000
Diameter/Width = 0.110720
Length = 0.367800
Height = 0.110720

*****OUTPUT*****

Item Number = 1

name = AC9 Full SC except Wings
Demise Altitude = 77.992894
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = AC9 Full SC except Wings

Demise Altitude = 67.378472
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

*****INPUT*****

Item Number = 2

name = Full Body Only
quantity = 1
parent = 0
materialID = 8
type = Box
Aero Mass = 0.743000
Thermal Mass = 0.743000
Diameter/Width = 0.110720
Length = 0.367800
Height = 0.110720

name = Full Body Only
quantity = 1
parent = 1
materialID = 8
type = Box
Aero Mass = 0.743000
Thermal Mass = 0.743000
Diameter/Width = 0.110720
Length = 0.367800
Height = 0.110720

*****OUTPUT*****

Item Number = 2

name = Full Body Only
Demise Altitude = 77.994137
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Full Body Only
Demise Altitude = 72.118160
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

*****INPUT*****

Item Number = 3

name = Frame Part 1
quantity = 1

parent = 0
materialID = 8
type = Box
Aero Mass = 0.254000
Thermal Mass = 0.254000
Diameter/Width = 0.110720
Length = 0.130000
Height = 0.110720

name = Frame Part 1
quantity = 1
parent = 1
materialID = 8
type = Box
Aero Mass = 0.254000
Thermal Mass = 0.254000
Diameter/Width = 0.110720
Length = 0.130000
Height = 0.110720

*****OUTPUT*****

Item Number = 3

name = Frame Part 1
Demise Altitude = 77.988105
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Frame Part 1
Demise Altitude = 71.614839
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

*****INPUT*****

Item Number = 4

name = Frame Part 2
quantity = 1
parent = 0
materialID = 8
type = Box
Aero Mass = 0.489000
Thermal Mass = 0.489000
Diameter/Width = 0.110720
Length = 0.237800
Height = 0.110720

name = Frame Part 2
quantity = 1

```

parent = 1
materialID = 8
type = Box
Aero Mass = 0.489000
Thermal Mass = 0.489000
Diameter/Width = 0.110720
Length = 0.237800
Height = 0.110720

*****OUTPUT****
Item Number = 4

name = Frame Part 2
Demise Altitude = 77.994254
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

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*****
name = Frame Part 2
Demise Altitude = 72.311785
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

```

```

*****INPUT****
Item Number = 5

name = Wing Assembly
quantity = 2
parent = 0
materialID = 23
type = Flat Plate
Aero Mass = 0.168000
Thermal Mass = 0.168000
Diameter/Width = 0.151260
Length = 0.313500

name = Wing Assembly
quantity = 2
parent = 1
materialID = 23
type = Flat Plate
Aero Mass = 0.168000
Thermal Mass = 0.168000
Diameter/Width = 0.151260
Length = 0.313500

```

```

*****OUTPUT****
Item Number = 5

name = Wing Assembly

```

Demise Altitude = 77.997269
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Wing Assembly
Demise Altitude = 0.000000
Debris Casualty Area = 1.337467
Impact Kinetic Energy = 9.710998

*****INPUT****

Item Number = 6

name = Bus Electronics Assembly
quantity = 1
parent = 0
materialID = 23
type = Box
Aero Mass = 0.584000
Thermal Mass = 0.584000
Diameter/Width = 0.084780
Length = 0.093660
Height = 0.082550

name = Bus Electronics Assembly
quantity = 1
parent = 1
materialID = 23
type = Box
Aero Mass = 0.584000
Thermal Mass = 0.584000
Diameter/Width = 0.084780
Length = 0.093660
Height = 0.082550

*****OUTPUT****

Item Number = 6

name = Bus Electronics Assembly
Demise Altitude = 77.991394
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Bus Electronics Assembly
Demise Altitude = 72.158222
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

*****INPUT*****

Item Number = 7

name = Reaction Wheel
quantity = 3
parent = 0
materialID = 54
type = Cylinder
Aero Mass = 0.047000
Thermal Mass = 0.047000
Diameter/Width = 0.027950

name = Reaction Wheel
quantity = 3
parent = 1
materialID = 54
type = Cylinder
Aero Mass = 0.047000
Thermal Mass = 0.047000
Diameter/Width = 0.027950
Length = 0.042930

*****OUTPUT*****

Item Number = 7

name = Reaction Wheel
Demise Altitude = 77.997637
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Reaction Wheel
Demise Altitude = 67.889394
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

*****INPUT*****

Item Number = 8

name = Anti-Nadir Plate Assembly
quantity = 1
parent = 0
materialID = 8
type = Box
Aero Mass = 0.155000
Thermal Mass = 0.155000
Diameter/Width = 0.110720
Length = 0.110720
Height = 0.020040

name = Anti-Nadir Plate Assembly
quantity = 1
parent = 1
materialID = 8
type = Box
Aero Mass = 0.155000
Thermal Mass = 0.155000
Diameter/Width = 0.110720
Length = 0.110720
Height = 0.020040

*****OUTPUT****

Item Number = 8

name = Anti-Nadir Plate Assembly
Demise Altitude = 77.997449
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Anti-Nadir Plate Assembly
Demise Altitude = 70.191636
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

*****INPUT****

Item Number = 9

name = Antenna
quantity = 2
parent = 0
materialID = 1
type = Flat Plate
Aero Mass = 0.016000
Thermal Mass = 0.016000
Diameter/Width = 0.039880
Length = 0.050800

name = Antenna
quantity = 2
parent = 1
materialID = 1
type = Flat Plate
Aero Mass = 0.016000
Thermal Mass = 0.016000
Diameter/Width = 0.039880
Length = 0.050800

*****OUTPUT****

Item Number = 9

name = Antenna
Demise Altitude = 77.996769
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Antenna
Demise Altitude = 0.000000
Debris Casualty Area = 0.832076
Impact Kinetic Energy = 2.062709

*****INPUT****

Item Number = 10

name = Star Tracker Assembly
quantity = 2
parent = 0
materialID = 71
type = Box
Aero Mass = 0.055000
Thermal Mass = 0.055000
Diameter/Width = 0.049020
Length = 0.062780
Height = 0.048580

name = Star Tracker Assembly
quantity = 2
parent = 1
materialID = 71
type = Box
Aero Mass = 0.055000
Thermal Mass = 0.055000
Diameter/Width = 0.049020
Length = 0.062780
Height = 0.048580

*****OUTPUT****

Item Number = 10

name = Star Tracker Assembly
Demise Altitude = 77.997847
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Star Tracker Assembly
Demise Altitude = 69.919378
Debris Casualty Area = 0.000000

Impact Kinetic Energy = 0.000000

*****INPUT*****

Item Number = 11

name = Torque Rod Assembly
quantity = 3
parent = 0
materialID = -1
type = Cylinder
Aero Mass = 0.070000
Thermal Mass = 0.070000
Diameter/Width = 0.029850

name = Torque Rod Assembly
quantity = 3
parent = 1
materialID = -1
type = Cylinder
Aero Mass = 0.070000
Thermal Mass = 0.070000
Diameter/Width = 0.029850
Length = 0.078740

*****OUTPUT*****

Item Number = 11

name = Torque Rod Assembly
Demise Altitude = 77.989933
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Torque Rod Assembly
Demise Altitude = 0.000000
Debris Casualty Area = 1.261582
Impact Kinetic Energy = 21.474632

*****INPUT*****

Item Number = 12

name = Laser Assembly
quantity = 1
parent = 0
materialID = 8
type = Box
Aero Mass = 0.315000
Thermal Mass = 0.315000

Diameter/Width = 0.082250
Length = 0.123520
Height = 0.029720

name = Laser Assembly
quantity = 1
parent = 1
materialID = 8
type = Box
Aero Mass = 0.315000
Thermal Mass = 0.315000
Diameter/Width = 0.082250
Length = 0.123520
Height = 0.029720

*****OUTPUT****

Item Number = 12

name = Laser Assembly
Demise Altitude = 77.998926
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Laser Assembly
Demise Altitude = 70.697636
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

*****INPUT****

Item Number = 13

name = STIM 210 IMU
quantity = 1
parent = 0
materialID = 8
type = Box
Aero Mass = 0.110000
Thermal Mass = 0.110000
Diameter/Width = 0.055880
Length = 0.064770
Height = 0.025400

name = STIM 210 IMU
quantity = 1
parent = 1
materialID = 8
type = Box
Aero Mass = 0.110000
Thermal Mass = 0.110000

Diameter/Width = 0.055880
Length = 0.064770
Height = 0.025400

*****OUTPUT****

Item Number = 13

name = STIM 210 IMU
Demise Altitude = 77.989340
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = STIM 210 IMU
Demise Altitude = 71.703652
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

*****INPUT****

Item Number = 14

name = Payload Assembly
quantity = 1
parent = 0
materialID = 8
type = Box
Aero Mass = 1.455000
Thermal Mass = 1.455000
Diameter/Width = 0.083820
Length = 0.251320
Height = 0.077440

name = Payload Assembly
quantity = 1
parent = 1
materialID = 8
type = Box
Aero Mass = 1.455000
Thermal Mass = 1.455000
Diameter/Width = 0.083820
Length = 0.251320
Height = 0.077440

*****OUTPUT****

Item Number = 14

name = Payload Assembly
Demise Altitude = 77.999324
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Payload Assembly
Demise Altitude = 69.739535
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

*****INPUT****

Item Number = 15

name = Filter Wheel Assembly
quantity = 1
parent = 0
materialID = 8
type = Cylinder
Aero Mass = 0.197000
Thermal Mass = 0.197000
Diameter/Width = 0.064000

name = Filter Wheel Assembly
quantity = 1
parent = 1
materialID = 8
type = Cylinder
Aero Mass = 0.197000
Thermal Mass = 0.197000
Diameter/Width = 0.064000
Length = 0.064000

*****OUTPUT****

Item Number = 15

name = Filter Wheel Assembly
Demise Altitude = 77.990863
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Filter Wheel Assembly
Demise Altitude = 71.945683
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

*****INPUT****

Item Number = 16

name = IDCA
quantity = 1

parent = 0
materialID = 8
type = Box
Aero Mass = 1.129000
Thermal Mass = 1.129000
Diameter/Width = 0.067780
Length = 0.211350
Height = 0.061460

name = IDCA
quantity = 1
parent = 1
materialID = 8
type = Box
Aero Mass = 1.129000
Thermal Mass = 1.129000
Diameter/Width = 0.067780
Length = 0.211350
Height = 0.061460

*****OUTPUT*****
Item Number = 16

name = IDCA
Demise Altitude = 77.995902
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = IDCA
Demise Altitude = 69.787574
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

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