



TANK TYPE	MOUNT	LOCATION	PMD DEVICE
PMD	Tabs	Prop hemi	

The propellant tank is a family of 46" diameter x various lengths long pressure vessel constructed of 6AL-4V titanium, and overwrapped at the center section. A Propellant Management Device (PMD) provides gas-free expulsion of propellant. Mounting is provided by a mounting skirt consists of mounting tabs. Connection is made to the propellant and pressurant compartments through tube stubs.

ATK Part Number 80507-5

SIZE: 45.60" ID x 60" Length
SIZE: 1,158 mm ID x 1,524 mm

See below for shorter length Tanks

ISO 9001 & AS 9100 REGISTERED

APPLICABLE DOCUMENTS

Acceptance Test Procedure	50-000683
Qualification Test Procedure	50-000684
Cleaning	CPP 4008
Qualification Test Report	56-000240

Notes:

TANK CHARACTERISTICS

Operating Pressure, psig	271	Total Volume, in ³	76,525
Proof Pressure, psig	338	Prop Volume, in ³	
Cryo Proof, psig	N/A	Prop Volume, lbs NTO	3,866
Burst Pressure, psig	410	Max Design Wt, lbs	96.60
Actual Burst, psig	503	Minimum Wall, inch	0.032

ACCEPTANCE TESTS

- Preliminary Examination of Product Weight
- Pre-Proof Volumetric Capacity Test
- Proof Pressure Test
- Post-Proof Volumetric Capacity Test
- Flow, Differential Pressure Test
- External Leak Test
- Radiograph Inspection of Welds
- Final Examination of Product
- Cleanliness Verification

TANK CHARACTERISTICS (Metrics)

Operating Pressure, bar	18.68	Total Volume, l	1,254
Proof Pressure, bar	23.30	Prop Volume, l	
Cryo Proof, bar	N/A	Prop Volume, kg NTO	1,753.61
Burst Pressure, bar	28.269	Max Design Wt, kg	43.82
Actual Burst, bar	34.681	Minimum Wall, MM	0.813

QUALIFICATION TESTS

- Preliminary Examination of Product
- Pre-Proof Volumetric Capacity Test,
- Proof Pressure Test
- Post-Proof Volumetric Capacity Test
- Proof Pressure Cycling Test
- MEOP Pressure Cycling Test
- Propellant Outflow Test
- Bubble Point Test
- Radiograph Inspection of Welds
- External Leak Test
- Vibration Test
- Bubble Point Test *
- External Leak Test *
- Collapse Pressure test
- External Leak Test
- Radiograph and Penetrant Inspection
- Final Examination of Product
- Burst Test
- Data Review

HEMISPHERE FORGINGS

HEMI P/N	QTY	SUPPLIER	Die No
80-507061-1	2	ARCTURUS	3937

RING FORGINGS (Roughed Machined) (inches)

80-507065-1, Mounting Tab Ring	46.80 OD x 44.90 ID x 4.20 Lg
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RING FORGINGS (Roughed Machined) (mm)

80-507065-1, Mounting Tab Ring	1,188.72 OD x 1,140.46 ID x 106.68 Lg
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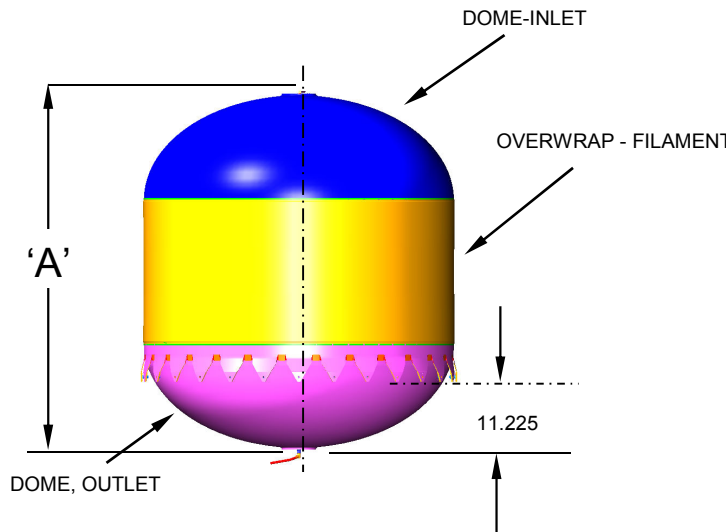
TUBE TYPE AND SIZE (inches)

Titanium		SIZE
80-507005-5	Pressurant	0.250 OD x 0.020 Wall
80-507215-3	Outlet	.3750 OD x 0.020 Wall

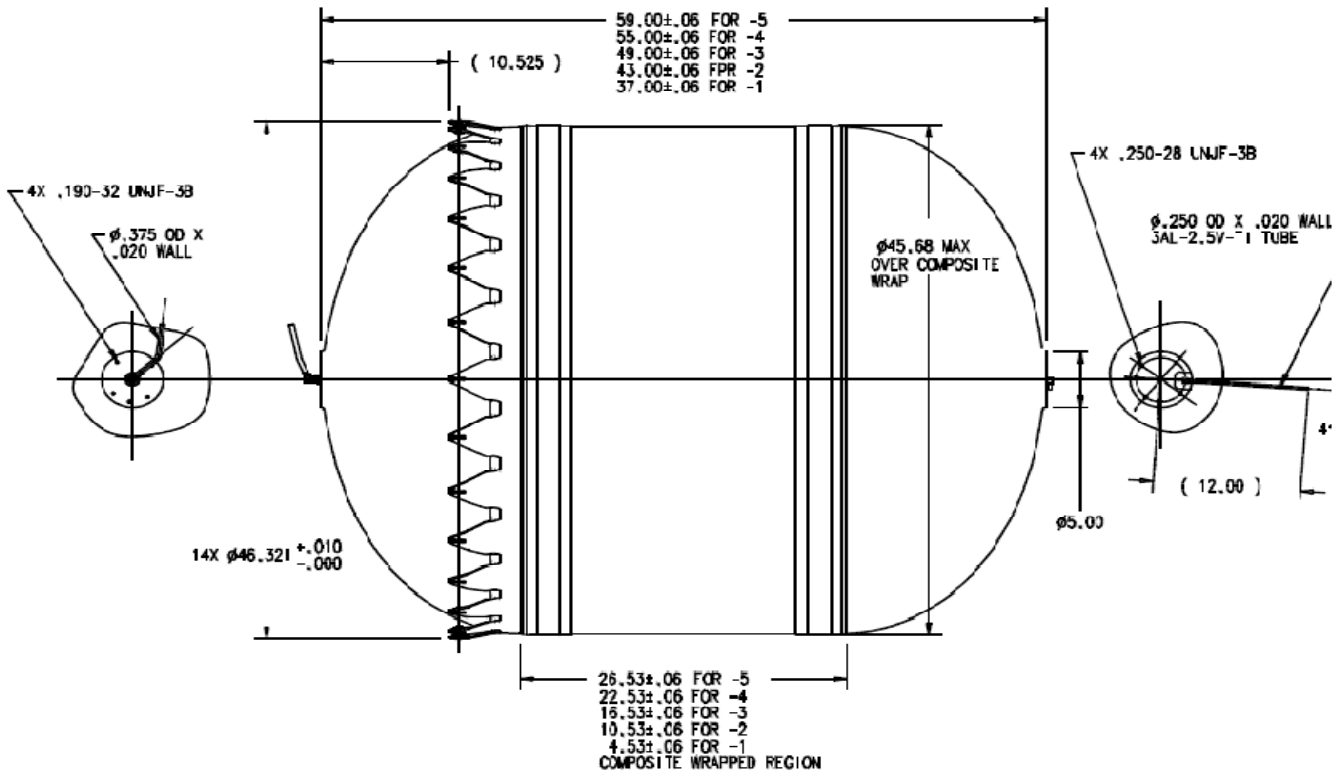
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Titanium		SIZE
80-507005-5	Pressurant	6.350 mm x 0.508 Wall
80-507215-3	Outlet	9.525 mm x 0.508 Wall

ATK P/N	CAPACITY	MASS PROP. (Max.)
80507-1	673.39L (41,093 in ³)	66.82 lbs.
80507-2	831.74L (50,756 in ³)	76.75 lbs.
80507-3	990.11L (60,420 in ³)	83.92 lbs.
80507-4	1148.45L (70,083 in ³)	91.53 lbs.
80507-5	1254.02L (76,525 in ³)	96.60 lbs.



NOTE: DASH -5 SHOWN





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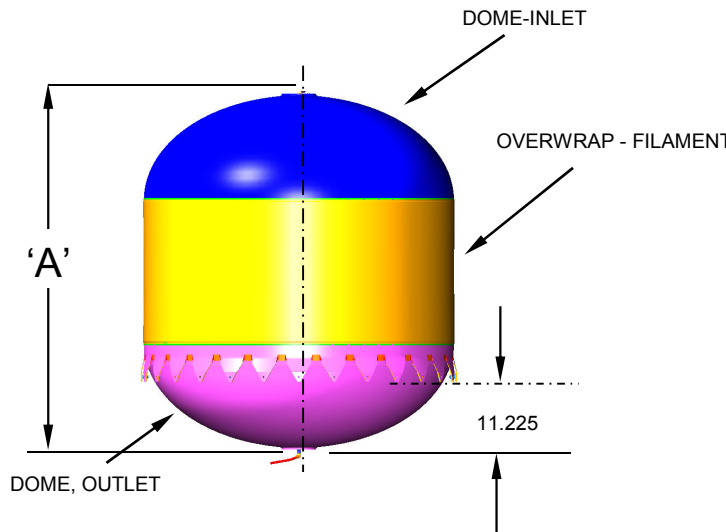
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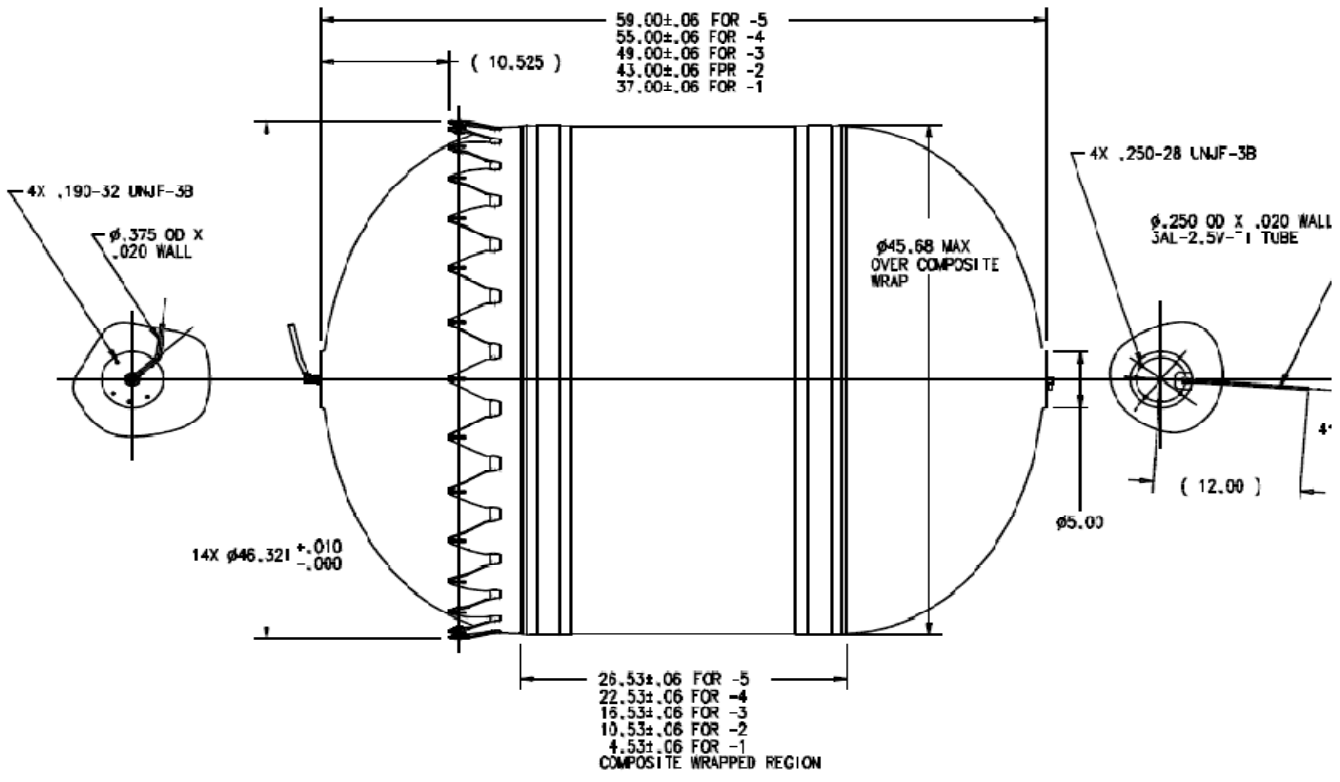
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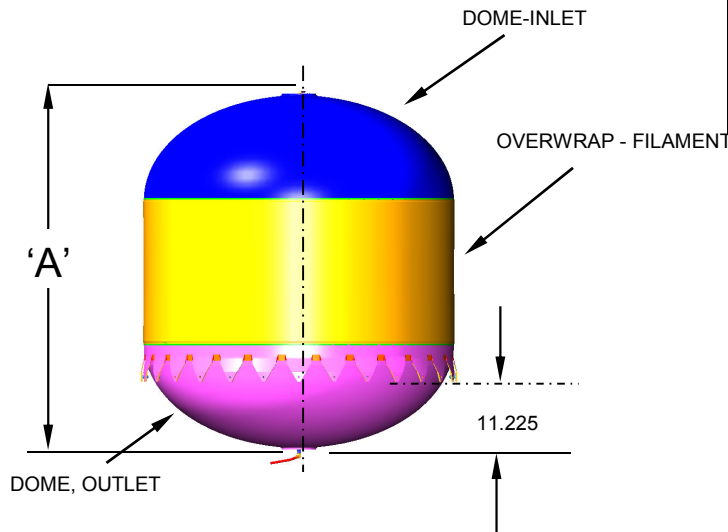
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