VISIT US ON OUR WEBSITE @ WWW.PSI-PCI.COM

TANK TYPE	MOUNT	LOCATION	PMD DEVICE
PMD	Tabs	Prop hemi	

The 80520 Propellant Tank is an assembly consisting of titanium elliptical domes and cylinder, with an incorporated propellant management device. A tank mounting ring is located above the aft dome. The aft dome contains an outlet/drain port as well as the pressurization port.

ISO 9001 & AS 9100 REGISTERED

ATK Part Number 80520-1

SIZE: 45.95" ID x 59.145" Length
SIZE: 1,158 mm ID x 1,524 mm

APPLICABLE DOCUMENTS

Acceptance Test Procedure	50-000715
Qualification Test Procedure	50-000714
Cleaning	CPP 4039
Qualification Test Report	

Notes:

TANK CHARACTERISTICS

Operating Pressure, psig	338	Total Volume, in^3	76,525
Proof Pressure, psig	423	Prop Volume, in^3	54,353
Cryo Proof, psig	N/A	Prop Volume, lbs	1,980
Burst Pressure, psig	507	Max Design Wt, lbs	139.00
Actual Burst, psig		Minimum Wall, inch	0.044

TANK CHARACTERISTICS (Metrics)

Operating Pressure, bar	23.30	Total Volume, l	1,254
Proof Pressure, bar	29.16	Prop Volume, l	891
Cryo Proof, bar	N/A	Prop Volume, kg	898.12
Burst Pressure, bar	34.956	Max Design Wt, kg	63.05
Actual Burst, bar		Minimum Wall, mm	1.118

HEMISPHERE FORGINGS

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

RING FORGINGS (Roughed Machined) (inches)

80-520065-1, Mounting Tab Ring	47.00 OD x 44.88 ID x 3.38 Lg

RING FORGINGS (Roughed Machined) (mm)

80-520065-1, Mounting Tab Ring	1,193.8 OD x 1,139.952 ID x 85.85200 Lg

TUBE TYPE AND SIZE(inches)

Titanium		SIZE
80-520005-5	Pressurant	0.250 OD x 0.020 Wall
80-520007-5	Outlet	.3750 OD x 0.020 Wall

TUBE TYPE AND SIZE (mm)

Titanium		SIZE
80-520005-5	Pressurant	6.350 mm x 0.508 Wall
80-520007-5	Outlet	9.525 mm x 0.508 Wall

ACCEPTANCE TESTS

- Preliminary Examination of Product
- Pre-Proof Volumetric Capacity Test
- Proof Pressure Test
- Tank Dimensions
- Post-Proof Volumetric Capacity Test
- In-Tank PMD Bubble Point Test
- External Leak Test
- Visual Inspection
- Radiographic Inspection of Welds
- Penetrant Inspection
- Final Examination of Product

QUALIFICATION TESTS

- Cyclic Pressurization
- Flow Rate and Pressure Drop
- PMD Integrity Radiographic Inspection
- Bubble Point
- External Leakage
- Dry Sine Sweep - Tank Empty and Pressurized
- Dry Random Vibration - Tank Empty and Pressurized
- Natural Frequency - Tank Loaded and Pressurized
- Sine Burst (Launch Accelerations - Tank Loaded and Pressurized)
- Acoustic - Tank Empty and Pressurized
- PMD Integrity Radiographic Inspection*
- Bubble Point Test *
- External Leakage
- Visual Inspection
- Penetrant Inspection
- Radiographic Inspection
- Final Dimensional Inspection
- Burst Pressure

6033 East Bandini Boulevard
Commerce, California 90040

Telephone (323) 722-0222
Facsimile (323) 721-6002