

TANK TYPE COMPLEX PMD	MOUNT BRACKET & PIN	LOCATION POLAR / CYLINDER	PMD DEVICE SPONGE
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This oxidizer propellant tank is a 6AL-4V titanium pressure vessel constructed of two 21.3" dia. hemispherical heads with a center cylinder for an overall length of 35.9". Mounting of the tank is provided by two polar brackets and a side mount. The tank contains a propellant management device (PMD) to provide gas free liquid throughout the mission.

Part Number 80426-1

SIZE: 21.3" DIA x 35.9" LONG
SIZE: 541 mm DIA x 912 mm LONG

ISO 9001 & AS 9100 REGISTERED

APPLICABLE DOCUMENTS

Acceptance Test Procedure	50-000569
Protoflight Test Procedure	50-000568
Bubble Point Test Procedure	50-000565
Stress Report	54-000184
Dynamics Report	54-000183
Fracture Analysis Plan	54-000176
PMD Performance Analysis	54-000198
Cleaning (tank)	CPP-3909

TANK CHARACTERISTICS

Operating Pressure, psig	300	Total Volume, in ³	9,712
Proof Pressure, psig	375	Prop Volume, in ³	9,712
Cryo Proof, psig	N/A	Prop Volume, lbs	492
Burst Pressure, psig	450	Max Design Wt, lbs	20.0
Actual Burst, psig (3)	647	Minimum Wall, inch	0.017

ACCEPTANCE TESTS

Examination of Product, Preliminary
Volumetric Capacity Measurement
Proof Pressure Test
Volumetric Capacity Measurement
PMD Bubble Point Test
External Leak Test
Weld Quality Inspection
Mass Measurement
Final Visual Inspection
Final Cleanliness

TANK CHARACTERISTICS (Metrics)

Operating Pressure, Bar	20.68	Total Volume, l	159
Proof Pressure, Bar	25.85	Prop Volume, l	159
Cryo Proof, Bar	N/A	Prop Volume, kg	223.17
Burst Pressure, Bar	31.03	Max Design Wt, kg	9.07
Actual Burst, Bar	44.61	Minimum Wall, mm	0.432

QUALIFICATION TESTS

Qual by similarity on 80394-1.

Notes:

1. Fracture Critical
2. Tank shell is qualified by similarity to P/N 80394-1
3. Rupture pressure of 80394-1

HEMISPHERE FORGINGS

HEMI P/N	QTY	SUPPLIER	Die No
80-390061-1	2		

RING FORGING

P/N	QTY	SIZE
80-390063-7	1	22.35 in OD; 20.93 in ID x 13.62 in LONG

TUBE TYPE AND SIZE (in.)

Ti 3SL-2.5V	SIZE
80426-51	0.375 x 0.02 Wall Press
80426-51	0.375 x 0.02 Wall Press

TUBE SIZE (mm)

80426-51	9.525 x 0.508 Wall Press
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