

<b>TANK TYPE</b>	<b>MOUNT</b>	<b>LOCATION</b>	<b>PMD DEVICE</b>
PROPELLANT	LUGS (32)	GIRTH	VANE, TRAP, SCREEN & SPONGE

The Extended Tank Assembly is a hemispherical pressure vessel with a cylindrical section of all welded construction. It is mounted by 32 circumferential tabs with nut plates located at on one of the hemispheres near the girth weld joint. The tank contains an internally-mounted propellant management device (PMD), with perforated sheet and woven screen, fabricated to maintain separation of liquid propellant and gaseous pressurant, and to provide predictable gas-free liquid propellant expulsion from the tank under low or zero gravity conditions. The PMD has been designed to allow horizontal handling with low fill fractions.

**Part Number 80422-1**

**SIZE: 48.9-inch ID x 57.8 Long**

**SIZE: 1242 x 1468-mm**

**ISO 9001 & AS 9100 REGISTERED**

APPLICABLE DOCUMENTS		TANK CHARACTERISTICS				ACCEPTANCE TESTS
Bubble Point Test Procedure	50-000554	Operating Pressure, psig	250	Total Volume, in <sup>3</sup>	77,805	Preliminary Inspection of Product
Acceptance Test Procedure	50-000556	Proof Pressure, psig	313	Prop Volume, in <sup>3</sup>	77,805	Mass Measurement
Protoflight Test Procedure	50-000557	Cryo Proof, psig	N/A	Max Design Wt, lbs	90.4	Pre-Proof Volumetric Capacity
Cleaning	CPP 3849	Burst Pressure, psig	375	Minimum Wall, inch	0.020	Ambient Proof Pressure
		Actual Burst, psig				Visual Inspection, and Post-Proof Volumetric Capacity
		TANK CHARACTERISTICS (Metrics)				External Leakage Test
		Operating Pressure, bar	17.24	Total Volume, l	1,275	Tank Assembly Bubble
		Proof Pressure, bar	21.58	Prop Volume, l	1,275	Point Test
		Cryo Proof, bar	NO	Max Design Wt, kg	41.01	Sine Vibration Test and Visual Inspection
		Burst Pressure, bar	25.85	Minimum Wall, mm	0.508	Pressure Drop Test
		Actual Burst, bar				Tank Assembly Bubble Point Test
		HEMISPHERE FORGINGS				External Leakage Test
		HEMI P/N	QTY	SUPPLIER	Die No	Radiographic Inspection
		80-363061-1	2			Dye Penetrant Inspection
		RING FORGINGS				
		RING P/N	QTY	RING SIZE, (Rough Machined)		
		80-363063-3	1	49.57+/- .09 x 48.40+/- .09 IDx .9.37 +.06 lg		
		TUBE TYPE AND SIZE (in.)				
		TRANS Ti to SS			SIZE	
		80-380126-2			.400 x .375"	
		80-380126-1			.350 x .375"	
		TUBE SIZE (mm)				
		Ti 3AL-2.5V			SIZE	
		80-380126-2			10.16 x 9.525 mm	
		80-380126-1			8.89 x 9.525 mm	

**Notes:**

1. Sine Vib Wet
2. Vib Fixture T-4646
3. Tube Protector Press. SK-1353
4. Tube Protector Prop. SK-1354

