



<b>FUEL TYPE</b> NTO / MMH	<b>MOUNT</b> Polar	<b>LOCATION</b> Boss	<b>PMD DEVICE</b> yes
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This tank is an all-welded pressure vessel with hemispherical ends. It is mounted by 8 threaded holes in the polar boss of the propellant hemisphere, and 4 threaded holes in the polar boss of the pressurant hemisphere. The tank contains an internally-mounted propellant management device (PMD), with perforated sheet to provide gas-free liquid propellant under low or zero gravity.

**ATK Part Number 80474-1**

**SIZE: 29.8 -inch ID Sphere**  
**SIZE: 756.92 -mm ID Sphere**

**ISO 9001 & AS 9100 REGISTERED**

APPLICABLE DOCUMENTS		TANK CHARACTERISTICS		ACCEPTANCE TESTS
Qualification Test Procedure	50-000644	Operating Pressure, psig	250	Preliminary Inspection of Product Mass Measurement Pre-Proof Volumetric Capacity, Ambient Proof Pressure Visual Inspection Post-Proof Volumetric Capacity Expulsion Test Tank Assembly Bubble Point Test Radiographic Inspection & Dye Penetrant Inspection External Leakage Test Dry Random Vibration Test, and Visual Inspection Tank Assembly Bubble Point Test External Leakage Test Radiographic Inspection Dye Penetrant Inspection Cleanliness Check & Visual Inspection Data Review
Acceptance Test Procedure	50-000645	Proof Pressure, psig	313	
Bubble Point Procedure	50-000646	Cryo Proof, psig	No	
Fracture Analysis Plan	54-000225	Design Burst Pressure, psig	375	
Qualification Test Report	56-000217	Actual Burst Pressure, psig	565	
Cleaning	CPP 3979	Total Volume, ci	13,750	
		Prop Volume, ci	98% FF	

TANK CHARACTERISTICS (Metrics)			
Operating Pressure, Bar	17.24	Total Volume, l	225.32
Proof Pressure, Bar	21.55	Prop Volume, l	98% FF
Cryo Proof, Bar	No	Max Design Wt, Kg	8.44
Burst Pressure, Bar	25.85	Minimum Wall, MM	0.508
Actual Burst, Bar	38.95		

FORGINGS		
FORGINGS P/N	SUPPLIER	Die
80-474061-1 (2)		

TUBE TYPE AND SIZE	
TRANSITION	SIZE
80-466001-3	0.375" OD x 0.035" Wall
80-466001-1	0.250" OD x 0.035" Wall (9.525 mm x 0.889 mm) (6.35 mm x 0.889 mm)

QUALIFICATION TESTS
Preliminary Inspection of Product Mass Measurement Pre-Proof Volumetric Capacity Proof Pressure Test Post-Proof Volumetric Capacity MEOP Pressure Cycling Test Proof Pressure Cycling Test Tank Assembly Bubble Point Test Radiographic and Dye Penetrant Inspection Negative pressure Acceptance, Qual. Level Dry Random Vibration Test (3 axes) Bubble Point and Visual Inspection Wet Random Vibration Test, Sine Burst (3 axes) Bubble Point and Visual Inspection Volumetric Capacity & Expulsion Test External Leakage Test Tank Assembly Bubble Point Test Radiographic Inspection Dye Penetrant Inspection Burst Test

