

TANK TYPE PMD NTO & N ₂ H ₄	MOUNT Bosses	LOCATION Polar	PMD DEVICE Note 4
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This tank assembly is a hemispherical pressure vessel with a cylindrical section & is of all welded construction. It is mounted by a six threaded hole pattern machined into the polar boss end of each hemisphere. The tank contains an internally-mounted propellant management device (PMD), with perforated sheet & woven screen, fabricated to maintain separation of liquid propellant & gaseous pressurant, & to provide predictable gas-free liquid propellant expulsion from the tank under low or zero gravity conditions.

Part Number 80398-1

SIZE: 28.5-inch ID x 54.9-inch Long
SIZE: 724 mm ID x 1394 mm

ISO 9001 & AS 9100 REGISTERED

APPLICABLE DOCUMENTS	TANK CHARACTERISTICS	ACCEPTANCE TEST
Acceptance Test Procedure 50-000523	Operating Pressure, psig 350 Total Volume, ci 26,750	Preliminary Examination of Product
Qualification Test Procedure 50-000524	Proof Pressure, psig 468 Prop Volume, ci 13,375	Volume, Proof, Volume
Bubble Point Test Procedure 50-000512	Cryo Proof, psig NA Max Design Wt, lbs 50.0	External Leak Test
Qualification Test Report 56-000177	Burst Pressure, psig 525 Minimum Wall, inch 0.024	Bubble Point Test
Cleaning CPP 3854		Radiographic Inspection
		Penetrant Inspection
		Mass Measurement
		Final Inspection
		Cleanliness Check

Notes:

- 1: Tooling owned by Customer/Govt
- 2: PMD design is proprietary to Northrop Grumman
- 3: Tube protector is SK -1224
- 4: Complex Channel
- 5: Fracture Critical

TANK CHARACTERISTICS (Metrics)

Operating Pressure, Bar 24.13	Total Volume, l 438.36
Proof Pressure, Bar 32.27	Prop Volume, l 219.18
Cryo Proof, Bar NA	Max Design Wt, Kg 22.68
Burst Pressure, Bar 36.20	Minimum Wall, MM 0.610

FORGINGS

FORGINGS P/N	SUPPLIER	Die
80-287061-1 (2)		
RING FGG	RING SIZE, (Rough Machined)	
80-356063-1	28.87 +/- .03 OD x 27.87 +/- .03 ID x 29.81 +.12, -.06 Long	

TUBE TYPE AND SIZE

TITANIUM	SIZE
Tube Pressurant, 80-398002-1	1/4" OD (6.35 MM)
Tube Propellant, 80-398002-3	1/4" OD (6.35 MM)

QUALIFICATION TESTS

Preliminary Examination of Product
Volumetric Capacity
Proof Pressure
Post Proof Volumetric Capacity
External Leakage
In Tank Bubble Point Test
Final Inspection of Product

