

<b>TANK TYPE</b>	<b>MOUNT</b>	<b>LOCATION</b>
PRESSURANT	POLAR	POLAR

This Pressurant Tank is a light-weight, spherical 6Al-4V Titanium Pressure Vessel used to deliver the high pressure Pressurant Gas necessary for the transfer of propellant liquid from propellant storage to the spacecraft engines. The tank is polar-mounted and provides pressurized gas through a single polar outlet port.

**Part Number 80558-1**

**SIZE: 12.75" DIA x 13.324" LONG**

**SIZE: 323.85 mm DIA x 338.43 mm LONG**

**ISO 9001 & AS 9100 REGISTERED**

**APPLICABLE DOCUMENTS**

Acceptance Test Procedure	50-000797
Qual Test Procedure	50-000798
Qualification Test Report	56-000301
FMECA	54-000384
Cleaning	CPP 4067

**TANK CHARACTERISTICS**

Operating Pressure, psig	2,538	Total Volume, in <sup>3</sup>	955
Proof Pressure, psig	4,024	Max Design Wt, lbs	13.2
Cryo Proof, psig	N/A	Minimum Wall, inch	
Burst Pressure, psig	5,288	Qual Tank Mass	11.87
Actual Burst, psig	5321 (80558-11)		

**ACCEPTANCE TESTS**

Examination of Product
Determination of Volume
Proof Pressure
Determination of Volume
Flow Rate / External Leakage
Radiographic Inspection
Penetrant Inspection
Cleanliness Verification
Final Examination of Product

**TANK CHARACTERISTICS (Metrics)**

Operating Pressure, bar	175	Total Volume, l	16
Proof Pressure, bar	277	Max Design Wt, kg	5.99
Cryo Proof, bar	N/A	Minimum Wall, MM	
Burst Pressure, bar	365	Qual Tank Mass	301.5
Actual Burst, bar	367 (80558-11)		

**QUALIFICATION TESTS**

Preliminary Examination of Product
Pre-Proof Volume Determination
Shell Proof Pressure
Post-Proof Volume Determination
Radiographic Inspection
Penetrant Inspection
Flow Rate / External Leak Test
Vibration
External Leak Test
Quasi Static Acceleration
Thermal Cycle Test
Radiographic Inspection
Penetrant Inspection
Pressure Cycle
Internal Vacuum Test External Leak Test
Radiographic Inspection
Penetrant Inspection
Burst Pressure
Final Examination of Product

**HEMISPHERE FORGINGS**

HEMI P/N	QTY
80-558061-1	2

**TUBE TYPE AND SIZE**

TI 3.0AL-2.5V	QTY	SIZE
80-558040-5	1	.250" OD x .028" WALL x 2.75" LONG

