

TANK TYPE	MOUNT	LOCATION
DIAPHRAGM	LUGS	MID-PLANE

The propellant tank is a spherical pressure vessel constructed of 6AL-4V Titanium. Positive propellant expulsion is provided by a reversing AF-E-332 rubber diaphragm retained at the sphere mid-plane. Mounting is accomplished by four (4) equally spaced lugs parallel with and adjacent to the mid-plane. Connection is made to the propellant and pressurant compartments through tube stubs.

Part Number 80555-1

SIZE: 23.70" DIA x 27.220" LONG
SIZE: 601.98 mm DIA x 691.388mm LONG

ISO 9001 & AS 9100 REGISTERED

APPLICABLE DOCUMENTS

Acceptance Test Procedure	50-000788
Qual Test Procedure-QBS	50-000232
Qualification Test Report	56-000085
Stress and Dynamics Report	
FMECA	
Cleaning	CPP 3894

TANK CHARACTERISTICS

Operating Pressure, psig	401	Total Volume, in ³	7,261
Proof Pressure, psig		Max Design Wt, lbs	29.0
Cryo Proof, psig	N/A	Minimum Wall, inch	0.040
Burst Pressure, psig	1,200	Qual Tank Mass	
Actual Burst, psig	1670, 1690*		

ACCEPTANCE TESTS

- Preliminary Examination of Product
- Pre-Proof Volume Determination
- Proof Pressure
- post-Proof Volume Determination
- Expulsion Efficiency
- Internal Leakage
- External Leakage Test
- Radiographic Inspection
- Penetrant Inspection
- Determination of Weight and Final Inspection
- Cleanliness Verification
- Final Examination

TANK CHARACTERISTICS (Metrics)

Operating Pressure, bar	28	Total Volume, l	119
Proof Pressure, bar		Max Design Wt, kg	13.15
Cryo Proof, bar	N/A	Minimum Wall, MM	1.016
Burst Pressure, bar	83	Qual Tank Mass	
Actual Burst, bar	115.1, 116.5*		

Notes:

* Performed Two Qual Tests Concurrently

HEMISPHERE FORGINGS

HEMI P/N	QTY
80-323061-1	2

80280-1 QUALIFICATION TESTS

- Acceptance Test
- Vibration
- Cleanliness Test
- Life Test
- Extrenal Leakage
- Burst Pressure Test

RING FORGINGS

P/N	QTY	SIZE
80-323063-1	1	22.00" ID x 23.44" OD x 1.75" LONG
		558.8mm ID x 595.376mm OD x 44.45mm LONG
80-323063-3	1	22.44" ID x 24.00" OD x 3.56" LONG
		569.976mm ID x 609.6mm OD x 90.424mm LONG

TUBE TYPE AND SIZE

Ti 3AL-2.5V	QTY	SIZE
80-428001-5	1	0.250" OD x 0.035" Wall x 7.58" LONG
		9.525 OD mm x 1.270 mm Wall x 192.532mm LONG

