

TANK TYPE DIAPHRAGM	MOUNT LUGS	LOCATION MID-PLANE
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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 80524-1

SIZE: 23.70" DIA x 27.320" LONG
SIZE: 601.98mm DIA x 693.928mm LONG

ISO 9001 & AS 9100 REGISTERED

APPLICABLE DOCUMENTS

Acceptance Test Procedure	50-000711
Qual Test Procedure-QBS	50-000232
Qualification Test Report	56-000085
Stress and Dynamics Report	
FMECA	
Cleaning	CPP 4025

TANK CHARACTERISTICS

Operating Pressure, psig	417	Total Volume, in ³	7,261
Proof Pressure, psig	625	Max Design Wt, lbs	31.5
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	29	Total Volume, l	119
Proof Pressure, bar	43	Max Design Wt, kg	14.29
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:

* Preforemed two burst Tests Concurrently

HEMISPHERE FORGINGS

HEMI P/N	QTY
80-323061-1	2

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
80-524001-5	1	0.250" OD x 0.035" Wall x 7.58" LONG
		6.35 OD mm x 8.89mm Wall x 192.532mm LONG
801-524005-5	1	0.375" OD x 0.035" Wall x 7.58" LONG
		9.525" OD mm x 8.89mm wall x 192.532mm LONG

80280-1 QUALIFICATION TESTS

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

