



TANK TYPE	MOUNT	LOCATION
Diaphragm	Lugs, 6	Girth

This is a 13-inch spherical pressure vessel constructed of 6Al-4V titanium. Positive fuel expulsion is provided by a reversible ethylene-propylene terpolymer (AF_E-332) rubber diaphragm retained (welded in) at the sphere mid-plane. Mounting is accomplished by six (6) lugs parallel with and adjacent to the sphere mid-plane.

ATK Part Number 80290-1

SIZE: 12.88-inch ID Sphere
SIZE: 327-mm

ISO 9001 & AS 9100 REGISTERED

APPLICABLE DOCUMENTS

Qualification Test Procedure	50-000238
Acceptance Test Procedure	50-000240
Fracture Control Plan	54-000042
Qual Test report	56-000086
Cleaning	CPP 3542

TANK CHARACTERISTICS

Operating Pressure, psig	396	Total Volume, ci	1,080
Proof Pressure, psig	594	Prop Volume, ci	760
Cryo Proof, psig	NA	Max Design Wt, lbs	5.6
Burst Pressure, psig	792	Minimum Wall, inch	0.019

ACCEPTANCE TESTS

Preliminary Examination of Product
Pre-Proof Volume
Proof Pressure
Post-Proof Volume
Internal Leakage
External Leakage
Final Examination of Product
Contamination Check

DIAPHRAGM INFORMATION

Diaphragm P/N	80-216007-1
Diaphragm Mold P/N	T-1262
Diaphragm Gross Wt	1.0
Diaphragm Matl Type	AF-E-332
Diaphragm, Material Note 2	90-000075
Diaphragm Processing Note 2	90-000087
N-Ray Inspection Procedure	1002

TANK CHARACTERISTICS (Metrics)

Operating Pressure, bar	27.30	Total Volume, l	17.70
Proof Pressure, bar	40.95	Prop Volume, l	12.45
Cryo Proof, bar	NA	Max Design Wt, kg	12.3
Burst Pressure, bar	54.61	Minimum Wall, MM	0.483

FORGINGS

FORGINGS P/N	SUPPLIER	Die
80-187061-1, Propellant		
80-198061-1, Pressurant		

RING FORGING	RING SIZE, (Rough Machined)
80-187003-11, Retainer	13.13 +.09 OD x 11.81 -.09 ID x 1.38 +.09 Lg
80-282040-7, Lug	14.81 +/--.06 OD x 13.18 +.03 -.06 ID x .70 +.06 -.03 Lg

Notes:

- 1: Majority of tooling belongs to ATK
- 2: Proprietary Document
- 3: This tank is similar to P/N 80282-1
- 4: Fracture Critical

TUBE TYPE AND SIZE

TITANIUM	SIZE
80-282001-1, Inlet	.190 OD x .015 Wall
80-290001-1, Outlet	.190 OD x .015 Wall

