



TANK TYPE	MOUNT	LOCATION
Diaphragm	Lugs, 4	Girth

This is a 22-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 four (4) lugs parallel with and adjacent to the sphere mid-plane.

ATK Part Number 80488-1

SIZE: 22.14-inch ID Sphere
SIZE: 562-mm

ISO 9001 & AS 9100 REGISTERED

APPLICABLE DOCUMENTS		TANK CHARACTERISTICS		ACCEPTANCE TESTS	
Acceptance Test Procedure	50-000255	Operating Pressure, psig	485	Total Volume, ci	5,555
Qualification Test Procedure	50-000259	Proof Pressure, psig	805	Prop Volume, ci	4,754
Qualification Test Plan	50-000296	Cryo Proof, psig	NA	Max Design Wt, lbs	21.0
Fracture Control plan	54-000049	Burst Pressure, psig	950	Minimum Wall, inch	0.033
Qualification Test report	56-000099	TANK CHARACTERISTICS (Metrics)			
Qualification Re-Test Report	56-000106				
Cleaning	CPP 3593	Operating Pressure, Bar	33.44	Total Volume, l	91.03
DIAPHRAGM INFORMATION		Proof Pressure, Bar	55.50	Prop Volume, l	77.91
Diaphragm P/N	80-259007-1	Cryo Proof, Bar	NA	Max Design Wt, Kg	9.53
Diaphragm Mold P/N	T-1261	Burst Pressure, Bar	65.50	Minimum Wall, MM	0.838
Diaphragm Gross Wt	2.47 (1.12 Kg)	FORGINGS			
Diaphragm Matl Type	AF-E-332	FORGINGS P/N	SUPPLIER	Die No	
Diaphragm, Material	Note 2	80-203061-1 (2)			
Diaphragm Processing	Note 2	RING FORGING	RING SIZE, (Rough Machined)		
N-Ray Procedure	1002	80-203009-11, Retainer	24.4 +.06 OD x 21.0 -.06 ID x 1.28 +.06 Lg		
		80-298063-1, Lug	25.81 +.09 OD x 22.38 -.09 ID x .71 +.06 Lg		
		TUBE TYPE AND SIZE			
		TRANSITION	SIZE		
		80-466001-1, Inlet	.25" OD x .035" Wall		
		80-466001-1, Outlet	.25" OD x .035" Wall		
			(6.35 mm x .889 mm)		
		QUALIFICATION TESTS			
		Qual by similarity on 80298-1.			

Notes:

- 1: Majority of tooling belongs to ATK
- 2: Proprietary Document
- 3: Ea lug ring makes 16 pcs of -7 or 8 pcs of -5
- 4: Ea tank has one -7 and two -5 lugs
- 5: Centaur, Titan Centaur
- 6: Lockheed Martin Astronautics Space Systems
(Formerly General Dynamics Space Systems)
- 7: Fracture Critical

