

TANK TYPE Diaphragm	MOUNT Lugs	LOCATION Girth
-------------------------------	----------------------	--------------------------



This is a 16.5-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.

Part Number 80358-1
SIZE: 16.5-inch ID Sphere
SIZE: 419-mm

ISO 9001 & AS 9100 REGISTERED

APPLICABLE DOCUMENTS		TANK CHARACTERISTICS		ACCEPTANCE TESTS
Acceptance Test Procedure	50-000382	Operating Pressure, psig	396	Preliminary Examination of Product Pre-Proof Volume Determination Proof Pressure Test Post-Proof Volume Determination Internal Leakage External Leakage Outside Surface Quality Inspection Weld Quality Inspection Weight Test Examination of Product Cleanliness
Cleaning	CPP 3681	Proof Pressure, psig	792	
DIAPHRAGM INFORMATION		Cryo Proof, psig	NA	
Diaphragm P/N	80-271007-1	Burst Pressure, psig	1,212	
Diaphragm Mold P/N	SK 666	TANK CHARACTERISTICS (Metrics)		
Diaphragm Gross Wt	0.88	Operating Pressure, bar	27.30	
Diaphragm Matl Type	AF-E-332	Proof Pressure, bar	54.61	Total Volume, ci 2,300 Prop Volume, ci 1,965 Max Design Wt, lbs 13.0 Minimum Wall, inch 0.040 Total Volume, l 38.32 Prop Volume, l 32.74 Max Design Wt, kg 5.90 Minimum Wall, MM 1.016
Diaphragm, Material, Note 2	90-000075	Cryo Proof, bar	NA	QUALIFICATION TESTS
Diaphragm Processing, Note 2	90-000087	Burst Pressure, bar	83.56	Qual by similarity on tank 80303-1
N-Ray Procedure	1002	FORGINGS		

- Notes:**
- Majority of tooling belongs to Northrop Grumman
 - Proprietary Document
 - This tank is similar to 80303 & 80275
 - Each lug ring will make 9 lugs
 - General Electric Astro Space
 - Fracture Critical

FORGINGS P/N	SUPPLIER	Die
80011-63, Pressurant		
80157-61, Propellant		
RING FORGING		RING SIZE, (Rough Machined)
80-214065-1, Retainer	16.75 +.06 OD x 15.5 -.06 ID x 1.4 +/- .06 Lg	
80-271060-3, Lug	19.38 +.06 OD x 17.19 -.06 ID x .87 +/- .06 Lg	

TUBE TYPE AND SIZE	
TRANSITION	SIZE
80-275001-3, Outlet	.500 OD x .025 Wall (12.7 x .635)
80-358001-1, Inlet	.375 OD x .025 Wall (9.525 x .635)

