

TANK TYPE Diaphragm	MOUNT Lugs, 4	LOCATION Girth
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This is a 16.5" 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 4 lugs parallel with and adjacent to the sphere mid-plane.

Part Number 80384-1

SIZE: 16.5-inch ID Sphere
SIZE: 419.1-mm

ISO 9001 & AS 9100 REGISTERED

APPLICABLE DOCUMENTS		TANK CHARACTERISTICS		ACCEPTANCE TESTS
Acceptance Test Procedure	50-000467	Operating Pressure, psig	350	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
Fracture Analysis Plan	54-000144	Proof Pressure, psig	600	
Cleaning	CPP 3803	Cryo Proof, psig	NA	
		Burst Pressure, psig	800	
		Total Volume, ci	2,300	
		Prop Volume, ci	1,965	
		Max Design Wt, lbs	13.0	
		Minimum Wall, inch	0.040	

DIAPHRAGM INFORMATION	
Diaphragm P/N	80-271007-1
Diaphragm Mold P/N	SK 666
Diaphragm Gross Wt	0.88 (.399 Kg)
Diaphragm Matl Type	AF-E-332
Diaphragm, Material	Note 2 90-000075
Diaphragm Processing	Note 2 90-000087
N-Ray Procedure	1002

TANK CHARACTERISTICS (Metrics)			
Operating Pressure, Bar	24.13	Total Volume, l	37.69
Proof Pressure, Bar	41.37	Prop Volume, l	32.20
Cryo Proof, Bar	NA	Max Design Wt, Kg	5.9
Burst Pressure, Bar	55.16	Minimum Wall, MM	1.016

- Notes:**
- Majority of tooling belongs to Northrop Grumman
 - Proprietary Document
 - This tank is similar to P/N 80358-1
 - Each lug ring will make 9 lugs
 - Tube protectors are SK 1247 & SK 1249
 - Fracture Critical

FORGINGS		
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	

QUALIFICATION TESTS
Qual performed on tank 88275-1 & 80303-1.

TUBE TYPE AND SIZE	
TRANSITION	SIZE
80-385001 (2)	.250 OD x 3.74 Long (6.35 MM x 94.99 MM)
	1st 2.14" is .028 Wall (54.35 MM and .71 MM)
	Last 1.6" is .016 Wall (40.64 MM x .40 MM)

