



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.

ATK 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		
DIAPHRAGM INFORMATION		TANK CHARACTERISTICS (Metrics)		
Diaphragm P/N	80-271007-1	Operating Pressure, Bar	24.13	
Diaphragm Mold P/N	SK 666	Proof Pressure, Bar	41.37	
Diaphragm Gross Wt	0.88 (.399 Kg)	Cryo Proof, Bar	NA	
Diaphragm Matl Type	AF-E-332	Burst Pressure, Bar		
Diaphragm, Material	Note 2 90-000075			
Diaphragm Processing	Note 2 90-000087			
N-Ray Procedure	1002			

- Notes:**
- 1: Majority of tooling belongs to ATK
 - 2: Proprietary Document
 - 3: This tank is similar to P/N 80358-1
 - 4: Each lug ring will make 9 lugs
 - 5: Tube protectors are SK 1247 & SK 1249
 - 6: 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
80-385001 (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)

QUALIFICATION TESTS
Qual performed on tank 80358-1.

