

TANK TYPE Diphragm	MOUNT Pedestal	LOCATION Apex
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This is a 15" 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 on a pedestal mount located on the apex of the propellant hemisphere.

Part Number 80389-1

SIZE: 15.38-inch ID Sphere
SIZE: 390.6-mm

ISO 9001 & AS 9100 REGISTERED

APPLICABLE DOCUMENTS		TANK CHARACTERISTICS		ACCEPTANCE TESTS	
Qual Test Procedure	see Note 5	Operating Pressure, psig	320	Preliminary Examination of Product Pre-Proof Volume Determination Proof Pressure Tes Post-Proof Volume Determination Internal Diaphragm Leakage Test External Leakage Test Penetrant Inspection Radiographic Inspection Weight Determination Final Examination of Product Cleanliness Verification	
Acceptance Test Procedure	50-000476	Proof Pressure, psig	510		
Fracture Analysis plan	54-000150	Cryo Proof, psig	NA		
Qualification Test Report	see Note 5	Burst Pressure, psig	680		
Cleaning	CPP 3814	Total Volume, ci	1,865		
		Prop Volume, ci	1,375		
		Max Design Wt, lbs	8.20		
		Minimum Wall, inch	0.019		
DIAPHRAGM INFORMATION		TANK CHARACTERISTICS (Metrics)			
Diaphragm P/N	80-225017-1	Operating Pressure, Bar	22.06	Total Volume, l	30.56
Diaphragm Mold Tool No	T-1647	Proof Pressure, Bar	35.16	Prop Volume, l	22.53
Diaphragm Gross Wt	1.19 (.539 Kg)	Cryo Proof, Bar	NA	Max Design Wt, Kg	3.72
Diaphragm Material Type	AF-E-332	Burst Pressure, Bar	46.88	Minimum Wall, MM	0.483
Diaphragm Material Note 2	90-000075				
Diaphragm Processing Note 2	90-000087				
N-Ray Inspection Procedure	1002				

DIAPHRAGM INFORMATION	
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Diaphragm Mold Tool No	T-1647
Diaphragm Gross Wt	1.19 (.539 Kg)
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Notes:

- 1: Tooling owned by Northrop Grumman
- 2: Proprietary Document
- 3: This tank is a redesign 80225-1
- 4: Tube protectors are SK 1388 & SK 1389
- 5: QTP & QTR are for P/N 80225-1
- 6: Fracture Critical

FORGINGS		
FORGINGS P/N	SUPPLIER	Die No
80-225061-1, (2)		
RING FORGING		
RING SIZE, (Rough Machined)		
80-225063-1, Retainer	15.63 +.12 OD x 14.37 -.12 ID x 1.28 +.12 Lg	
80-225065-1, Base	9.5 +.09 OD x 7.12 -.09 ID x 2.2 +.09 Lg	

TUBE TYPE AND SIZE	
TRANSITION	SIZE
80-389017-1	Outlet Tube, overall length is 6.87 (174.49 mm)
	1st tube (-7) is 2.2" Long (55.88 mm)
	2nd tube (-5) is formed
	3rd tube is transition 1.6Long x .028Wall x .250OD (40.64 x .71 x 6.35 mm)
	(The -3 tube is made from a 80-285001-1)

QUALIFICATION TESTS
Qual by similarity on 80225-1.

