



TANK TYPE Diaphragm	MOUNT Pedestal	LOCATION Apex
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This is a 13-inch spherical pressure vessel constructed of 6Al-4V titanium. Positive fuel expulsion is provided by a resersible 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.

ATK Part Number 80216-1
SIZE: 12.88-inch ID Sphere

ISO 9001 & AS 9100 REGISTERED

APPLICABLE DOCUMENTS		TANK CHARACTERISTICS	
Acceptance Test Procedure	50-000190	Operating Pressure, psig	396
Quality Test Procedure	50-000191	Proof Pressure, psig	594
Quality Test Report	56-000071	Cryo Proof, psig	NA
Cleaning	CPP 3457	Burst Pressure, psig	792
		Total Volume, ci	1,080
		Prop Volume, ci	760
		Max Design Wt, lbs	6.0
		Minimum Wall, inch	0.019

ACCEPTANCE TESTS
Examination of Product
Pre-Proof Volume
Proof Pressure
Vibration
Internal Helium Leak Test (Hight Pressure)
Internal Helium Leak Test (Low Pressure)
External Helium Leak Test
Final Examination of Product
Cleanliness

DIAPHRAGM INFORMATION	
Diaphragm P/N	80-216007-1
Diaphragm Mold P/N	T-1262
Diaphragm Gross Wt	1.0
Diaphragm Matl Type	AF-E-332
Diaphragm, Material	Note 2 90-000075
Diaphragm Processin:	Note 2 90-000087
N-Ray Inspection Procedure	1002

TANK CHARACTERISTICS (Metrics)			
Operating Pressure, barg	27.30	Total Volume, l	17.70
Proof Pressure, barg	40.95	Prop Volume, l	12.45
Cryo Proof, barg	NA	Max Design Wt, Kg	2.722
Burst Pressure, barg	54.61	Minimum Wall, MM	0.483

QUALIFICATION TESTS
Examination of Product
Pre-Proof Volume
Proof Pressure
Post-Proof Pressure
Vibration
Internal Helium Leak Test (Hight Pressure)
Internal Helium Leak Test (Low Pressure)
External Helium Leak Test
Cycle Life & Expulsion Efficiency Test
Internal Helium Leak Test (Hight Pressure)
Internal Helium Leak Test (Low Pressure)
External Helium Leak Test
Cleanliness

- Notes:**
- 1: Tooling purchased from RI
 - 2: Proprietary Documents
 - 3: Very sketchy analysis was performed by RI, i.e. not rigorous
 - 4: Global Positioning Satellite (GPS)
 - 5: Rockwell International (Seal Beach)
 6. No burst test was performed on this tank

FORGINGS	
FORGINGS P/N	
80-216061-1	
80-216063-1	
RING FORGING	RING SIZE, (Rough Machined)
80-216003-1	13.13 OD x 11.81 ID x 1.38 Lg

TUBE TYPE AND SIZE	
TRANSITION	SIZE
80-216001-1 (2)	.250 OD x .020 Wall

SKETCH NOT TO SCALE

