



TANK TYPE	MOUNT	LOCATION
Diaphragm	Lugs, 2	Girth

This is a 19-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 two (2) lugs parallel with and adjacent to the sphere mid-plane.

ATK Part Number 80274-1

SIZE: 19.06-inch ID Sphere
SIZE: 484-MM

ISO 9001 & AS 9100 REGISTERED

APPLICABLE DOCUMENTS	
Acceptance Test Procedure	50-000217
Qualification Test Procedure	50-000217
Qualification Test Report	56-000078
Cleaning	CPP 3531

TANK CHARACTERISTICS			
Operating Pressure, psig	377	Total Volume, ci	3,660
Proof Pressure, psig	566	Prop Volume, ci	2,748
Cryo Proof, psig	NA	Max Design Wt, lbs	14.77
Burst Pressure, psig	754	Minimum Wall, inch	0.023
Actual Burst, psig	Note 3		

ACCEPTANCE TESTS
Preliminary Examination of Product
Pre-Proof Volume Determination
Proof Pressure Test
Volume Determination
Internal Leakage
External Leakage
Expulsion Efficiency
Vibration Test
Internal Leakage
External Leakage
Weld Inspection
Final Examination of Product
Weight Determination
Contamination Check

DIAPHRAGM INFORMATION	
Diaphragm P/N	80-274007-1
Diaphragm Mold P/N	T-1981
Diaphragm Gross Wt	1.71
Diaphragm Matl Type	AF-E-332
Diaphragm, Material	Note 2 90-000075
Diaphragm Process	Note 2 90-000079
N-Ray Inspection Procedure	1002

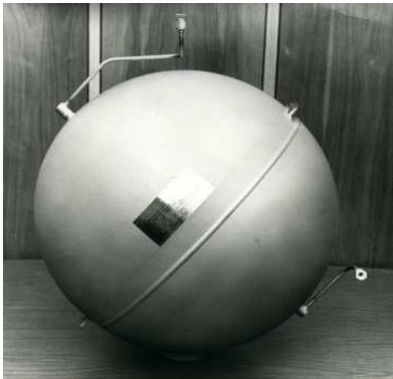
TANK CHARACTERISTICS (Metrics)			
Operating Pressure, Barg	25.99	Total Volume, l	59.98
Proof Pressure, Barg	39.02	Prop Volume, l	45.03
Cryo Proof	NA	Max Design Wt, Kg	6.70
Burst Pressure, Barg	51.99	Minimum Wall, MM	0.584
Actual Burst, Barg	Note 3		

Notes:
 1: Tooling owned by OA
 2: Proprietary Document
 3: The tank was pressurized to 800psig (55.16 bar) and held for five (5) seconds after which the pressur was returned to 0 psig

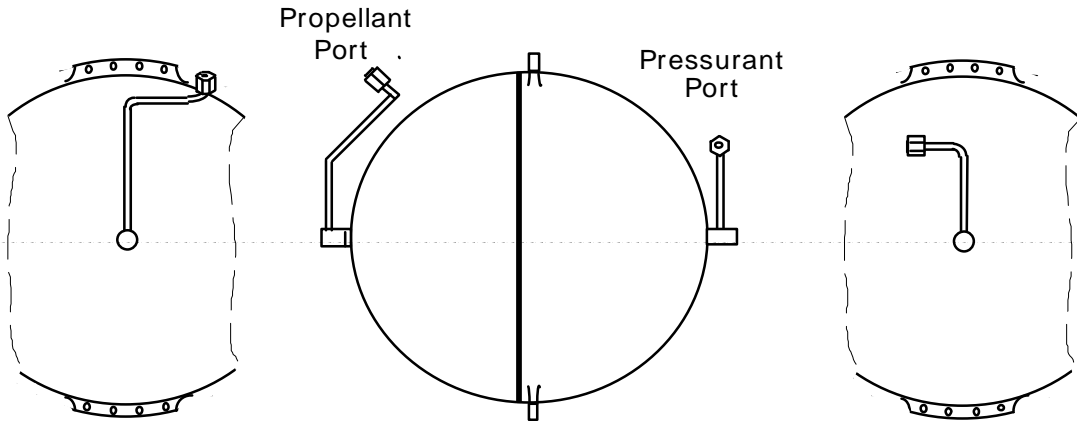
FORGINGS	
FORGINGS P/N	
80-182061-1 (2)	
RING FORGING	RING SIZE, (Rough Machined)
80-274065-1, Retainer	19.06 OD x 17.55 ID x 1.5Lg
80-274063-1, Lug	21.25 OD x 19.31 x .85 Lg

QUALIFICATION TESTS
Preliminary Examination of Product
Pre-Proof Volume
Proof Pressure
Volume Determination
Internal (Diaphragm) Leakage
External Leakage
Expulsion Efficiency
Vibration
Internal (Diaphragm) Leakage
External Leakage
Acceleration
Internal (Diaphragm) Leakage
External Leakage
Operating Cycle life
Internal (Diaphragm) Leakage
External Leakage
Burst Pressure Test

TUBE TYPE AND SIZE	
TITANIUM	SIZE
80-274001-3, Outlet	.250 OD x .035 Wall
80-274002-3, Inlet	.250 OD x .035 Wall (6.35 x .88 MM)



SKETCH NOT TO SCALE



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