



<u>TANK TYPE</u>	<u>MOUNT</u>	<u>LOCATION</u>
Diaphragm	Bosses	Polar

This is a 28-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 on polar bosses.

ATK Part Number 80228-1

SIZE: 28-inch ID Sphere
SIZE: 711-mm

ISO 9001 & AS 9100 REGISTERED

APPLICABLE DOCUMENTS		TANK CHARACTERISTICS			
Acceptance Test Procedure	50-000194	Operating Pressure, psig	355	Total Volume, ci	11,350
Qualification Test Procedure	50-000195	Proof Pressure, psig	970	Prop Volume, ci	8,060
Forging Qualification Procedure	55-000054	Cryo Proof, psig	NA	Max Design Wt, lbs	43.0
Weld Qualification Procedure	55-000056	Design Burst, psig	1,070	Minimum Wall, inch	0.047
Forging Qualification Report	55-000057	Actual Burst, psig	1,170	normalized	
Qualification Test Report	56-000070				
Cleaning	CPP 9005				

ACCEPTANCE TESTS
Examination of Product, Preliminary
Pre-Proof Volume
Proof Pressure
Post-Proof Pressure
Pressure Drop/Expulsion Efficiency
External Leakage
Diaphragm Leakage
Examination of Product, Final
Cleanliness Verification

DIAPHRAGM INFORMATION	
Diaphragm P/N	80-228007-1
Diaphragm Mold P/N	T-1669
Diaphragm Gross Wt	4.16
Diaphragm Matl Type	AF-E-332
Diaphragm, Material, Note 2	90-000075
Diaphragm Processing, Note 2	90-000087
N-Ray Procedure	1002

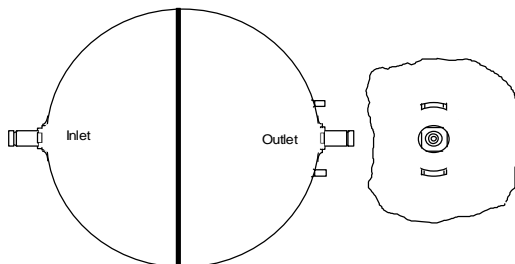
TANK CHARACTERISTICS (metrics)			
Operating Pressure, Barg	24.48	Total Volume, l	186.00
Proof Pressure, Barg	66.88	Prop Volume, l	132.08
Cryo Proof, Barg	NA	Max Design Wt, Kg	19.5
Design Burst, Barg	73.77	Minimum Wall, MM	1.194
Actual Burst, Barg	80.67	normalized	

QUALIFICATION TESTS

- Acceptance Tests
- Pressure Hold
- Low Temperature Test
- Internal Volume
- External Leakage
- Internal Leakage
- Radiographic Inspection
- Penetrant Inspection
- Expulsion Cycle Life Test
- Internal Leakage
- Pressure Cycle Life Test
- External Leakage
- Internal Leakage
- Transient Vibration Test
- Random Vibration Test
- External Leakage
- External Leakage
- Radiographic Inspection
- Penetrant Inspection
- Design Shock
- External Leakage
- Acceleration Test
- External Leakage
- Depletion Pressure Test
- Internal Leakage
- Slosh Test
- Expulsion Efficiency
- Internal Leakage
- Radiographic Inspection
- Penetrant Inspection
- External Pressure Test
- Burst Rupture Test

- Notes:**
- 1: Tooling owned by OA (Purchased from RI)
 - 2: Proprietary Documents
 - 3: The vibration fixture used during qualification testing no longer exist.
It was lost by the test vendor.
 - 4: Fracture Critical

FORGINGS	
FORGINGS P/N	
80-228061-1, (2)	
RING FORGING	RING SIZE, (Rough Machined)
80-228063-1	28.35 OD x 26.81 ID x 1.59 Lg



6033 East Bandini Boulevard
Commerce, California 90040

Telephone (323) 722-0222
Facsimile (323) 721-6002