MOUNT TANK TYPE LOCATION Diaphragm

Bosses Polar



This is a 28-inch spherical pressure vessel constructed of 6AI-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 80325-1

SIZE: 28-inch ID Sphere

SIZE: 711-mm

9001 & AS 9100 REGISTERED

APPLICABLE DOCUMENTS

Acceptance Test Procedure	50-000319
Cleaning	CPP 3650

DIAPHRAGM INFORMATION

Diaphragm P/N		80-228007-1
Diaphragm Mold P/N		T-1669
Diaphragm Gross Wt		4.16 (2.02 Kg)
Diaphragm Matl Type		AF-E-332
Diaphragm, Material	Note 2	90-000075
Diaphragm Processing	Note 2	90-000087
N-Ray Procedure		1002

Notes:

- 1: Tooling belongs to ATK
- 2: Proprietary Document
- 3: Forging was qualified under P/N 80228-1, 55-000056
- 4: Girth weld was qualified under P/N 80228-1
- 5: Martin Marietta (Denver)
- 6: Fracture Critical

TANK CHARACTERISTICS

Operating Pressure, psig	450	Total Volume, ci	11,350
Proof Pressure, psig	675	Prop Volume, ci	8,060
Cryo Proof, psig	NA	Max Design Wt, Ibs	44.0
Design Burst Pressure, psig	900	Minimum Wall, inch	0.047
Actual Burst Pressure, psig	1,321	_	

TANK CHARACTERISTICS (Metrics)

Operating Pressure, Bar	31.03	_Total Volume, I	186.0
Proof Pressure, Bar	46.54	Prop Volume, I	132.1
Cryo Proof, Bar	NA	Max Design Wt, Kg	20.0
Design Burst Pressure, Bar	62.05	Minimum Wall, MM	1.194
Actual burst Pressure Bar	91 15	_	

FORGINGS

FOF	RGINGS P/N	SUPPLIER	<u>Die</u>
80-2	287061-1 (2)		
RIN	G FORGING	RING SIZE, (Rough M	lachined)
80-2	228063-1, Retainer	28.35 +.12 OD x 26.8112 ID x 1.5	9 +.09 Lg

TUBE TYPE AND SIZE

TRANSITION	SIZE
80-325002-1, Outlet	.750 OD x .028 Wall
80-326001-1, Inlet	.250 OD x .035 Wall

TUBE TYPE AND SIZE (Metrics)

TRANSITION	SIZE
80-325002-1, Outlet	19.05 OD x .71 Wall
80-326001-1, Inlet	6.35 OD x .889 Wall

ACCEPTANCE TESTS

Pre-Proof Volume Proof Pressure Test Post-Proof Volume Pressure Drop and Expulsion Efficiency

External Leakage

Preliminary Examination of Product

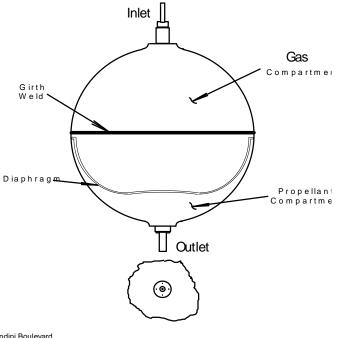
Low Pressure Diaphragm Ga Final Inspecton of Product

QUALIFICATION TESTS

Examination of Product, Preliminary Pre-Proof Pressure Proof Pressure

Post Proof Volume Pressure Drop/Expulsion Efficiency

External Leakage Diaphragm Leakage Examination of Product, Final Cleanliness Verification



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