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TANK TYPE	MOUNT	LOCATION
Diaphragm	Pedestal	Apex

This Tank is a light-weight, cylindrical 6Al-4V titanium pressure vessel, with a pedestal mount and two ports (pressurant and propellant). The tank contains a fully reversible ethylene-propylene terpolymer (AF-E-332) rubber diaphragm retained (welded in) near the mid-plane.

ISO 9001 & AS 9100 REGISTERED

ATK Part Number 80308-1

SIZE: 16.5-inch ID x 19.99-inch Long
SIZE: 419-mm ID x 508-mm Long

APPLICABLE DOCUMENTS

Acceptance Test Procedure	50-000289
Qualification Test Procedure	50-000290
Fracture Control Plan	54-000057
Qualification Test Report	56-000108
Cleaning	CPP 3622

DIAPHRAGM INFORMATION

Diaphragm P/N		80-288007-1
Diaphragm Mold Tool Number		T-2318
Diaphragm Gross Weight		1.42
Diaphragm Material Type		AF-E-332
Diaphragm, Material	Note 7	90-000075
Diaphragm Processing	Note 7	90-000087
N-Ray Procedure		1002

Notes:

1: Tooling owned by ATK
2: This tank is similar to 80288-1
3: Alternate propellant forging is 80-276061-1
4: This diaphragm is fully reversible
5: Four hours @ 43 +0,-4 F and Four hours @ 113 +4,-0 F
6: Tube protectors are SK 932 & SK 933
7: Proprietary Document
8: Fracture Critical

TANK CHARACTERISTICS

Operating Pressure, psig	320	Total Volume, ci	2,996
Proof Pressure, psig	480	Prop Volume, lbs	83
Cryo Proof, psig	NA	Max Design Wt, lbs	12.4
Burst Pressure, psig	640	Minimum Wall, inch	0.020

TANK CHARACTERISTICS (Metrics)

Operating Pressure, Bar	22.06	Total Volume, l	49.10
Proof Pressure, Bar	33.09	Prop Volume, Kg	37.6
Cryo Proof, Bar	NA	Max Design Wt, Kg	5.62
Burst Pressure, Bar	44.13	Minimum Wall, MM	0.508

FORGINGS

FORGINGS P/N	SUPPLIER	Die No
80-288061-1, Propellant		
80011-63, Pressurant		

RING FORGING	RING SIZE, (Rough Machined)
80-214065-1, Retainer	16.75 +.06 OD x 15.5 -.06 ID x 1.4 +/-.06 Lg
80-288063-1, Cylinder	17 +.09 OD x 15.87 -.09 ID x 3.31 +.12 Lg
80-276065-1, Base	9.5 +.09 OD x 7.03 -.09 ID x 1.38 +.09 Lg

TUBE TYPE AND SIZE

TITANIUM	SIZE
80-308001-1, Pressurant	.250 OD x .020 Wall
80-308002-3, Propellant	.250 OD x .035 Wall

ACCEPTANCE ENVIRONMENTAL TESTS

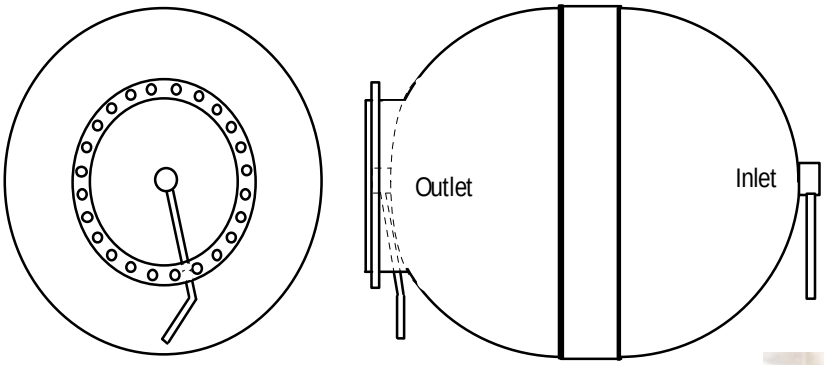
Random Vibration
Temperature Extremes, Note 4

ACCEPTANCE TESTS

Preliminary Examination of Product
Pre-Proof Volume Determination
Proof Pressure
Post-Proof Volume Determination
Expulsion Efficiency
Radiographic Inspection
Penetrate Inspection
Random Vibration
Temperature Extremes Function Test
Internal Leakage
External Leakage
Determination of Weight and Final Inspection
Cleanliness Verification
Final Examination

QUALIFICATION TESTS

Preliminary Examination of Product
Pre-Proof Volume Determination
Proof Pressure
Post-Proof Volume Determination
Internal Vacuum
Expulsion Efficiency
Radiographic Inspection
Penetrate Inspection
Vibration
Post Vibration Internal Helium Leak Test
Spin Expulsion
Static Load
Temperature, Altitude Test
Thermal Cycle
Post Thermal Cycle Internal Helium Leak Test
Cleanliness Verification
Internal Leak
External Leak
Determination of Weight and Center of Mass
Final Examination
Burst Pressure
Final Inspection



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