TANK TYPE	MOUNT	LOCATION
DIAPHRAGM	BOSSES	POLAR

NORTHROP GRUMMAN

This is a 9-inch spherical pressure vessel constructed of 6Al-4V titanium. Positive fuel expulsion is provided by a reversing EPT-10 rubber diaphragm retained (welded in) at the sphere mid-plane. Mounting is accomplished by polar bosses. See note 3 below.

Part Number 80222-1

SIZE: 9.41-inch ID Sphere
SIZE: 239 MM

ISO 9001 & AS 9100 REGISTERED

APPLICABLE DOCUMENTS

Acceptance Test Procedure	50-000181
Qualification Test Procedure	50-000182
Qualification Test Report	56-000066
Quality Assurance Program Plan	60-000072
Powder Blast	65-000030
Cleaning	CPP 3439

DIAPHRAGM INFORMATION

Diaphragm P/N	80-156005-3
Diaphragm Mold P/N	T-1020
Diaphragm Gross Wt	
Diaphragm Matl Type	EPT-10
Diaphragm, Mater Note 2	90-000035
Diaphragm Proces Note 2	90-000081
N-Ray Inspection Procedure	1002

TANK CHARACTERISTICS

Operating Pressure, psig	400	Total Volume, ci	415
Proof Pressure, psig	600	Prop Volume, ci	290
Cryo Proof, psig	NA	Max Design Wt, lbs	2.85
Burst Pressure, psig	800	Minimum Wall, inch	0.014

TANK CHARACTERISTICS (Metrics)

Operating Pressure, barg	27.58	Total Volume, l	6.80
Proof Pressure, barg	41.37	Prop Volume, l	4.75
Cryo Proof, barg	NA	Max Design Wt, Kg	1.293
Burst Pressure, barg	55.16	Minimum Wall, MM	0.356

FORGINGS

FORGINGS P/N	
80082-63 (2)	
RING FORGING	**RING SIZE, (Rough Machined)**
80-156002-11	9.64 OD x 8.38 ID x 1.39 Lg

TUBE TYPE AND SIZE

TITANIUM	SIZE
80-222006-3	.125 OD x .015 Wall
	3.175 x .381 mm
80-222008-1	.190 OD x .015 wall
	4.826 x .381mm

ACCEPTANCE TESTS

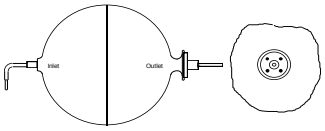
- Examination of Product, Preliminary
- Volume
- Proof Pressure
- Internal Leak Test
- External Leak Test
- Weight
- Final Cleaning

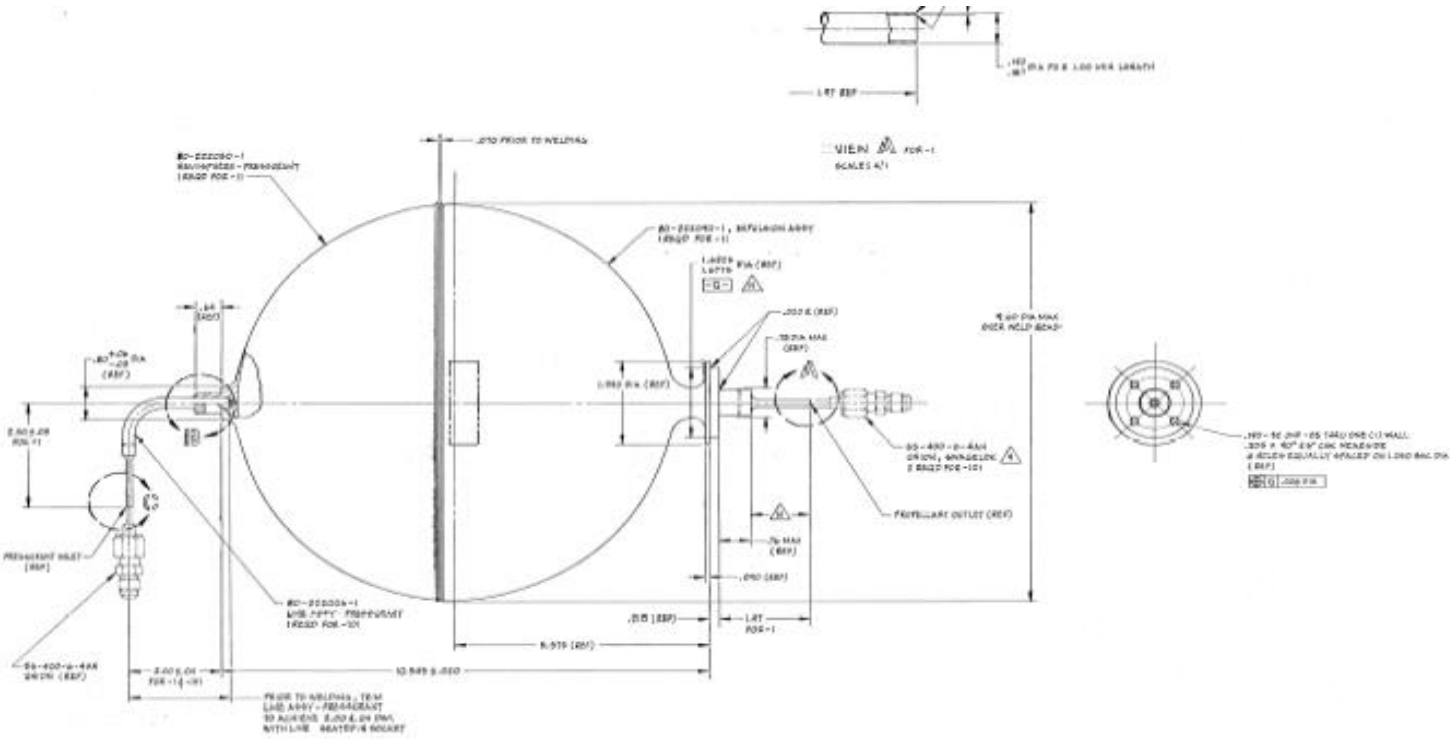
QUALIFICATION TESTS

- Vibration
- Internal Helium Leak
- External Helium Leak
- Life Cycle and Expulsion Efficiency
- Internal Leakage
- Post Test Inspection

Notes:

1: Tooling owned by OA
2: Proprietary Document
3: Qualified with EPT-10 diaphragm. Will quote A
4: Launch vehicle is Delta
5: International Ultraviolet Explorer
6. No burst test performed





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