



<b>TANK TYPE</b>	<b>MOUNT</b>	<b>LOCATION</b>
DIAPHRAGM	BOSSES	POLAR

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.

**ATK 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

**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

**ACCEPTANCE TESTS**

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

**DIAPHRAGM INFORMATION**

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

**TANK CHARACTERISTICS (Metrics)**

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

**QUALIFICATION TESTS**

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

**FORGINGS**

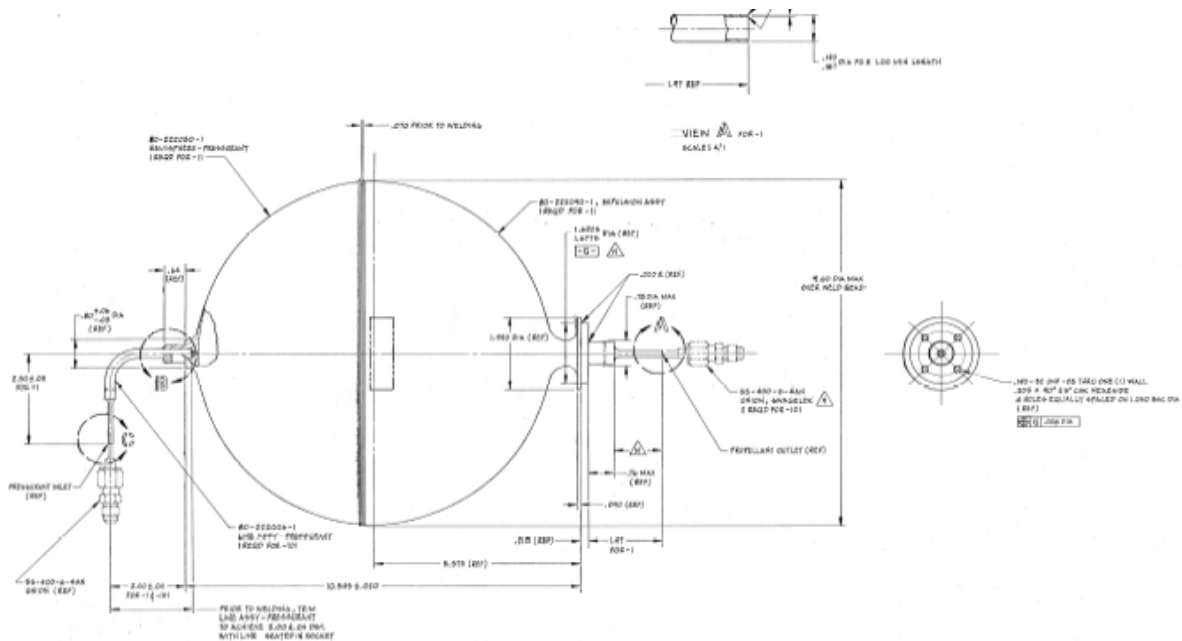
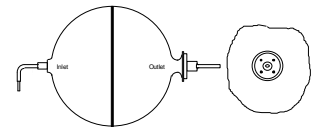
FORGINGS P/N	SUPPLIER	Die No
80082-63 (2)		
<b>RING FORGING</b>	<b>RING SIZE, (Rough Machined)</b>	
80-156002-11, Retainer	9.64 +.06 OD x 8.38 -.06 ID x 1.39 +.06 Lg	

**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

**Notes:**

- 1: Tooling owned by ATK
- 2: Proprietary Document
- 3: Qualified with EPT-10 diaphragm. Will quote AF-E-332
- 4: Launch vehicle is Delta
- 5: International Ultraviolet Explorer



6033 East Bandini Boulevard  
 Commerce, California 90040

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