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TANK TYPE	MOUNT	LOCATION
DIAPHRAGM	LUGS	GIRTH

This is a 22-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 by four (4) lugs parallel with and adjacent to the sphere mid-plane.

ATK Part Number 80259-1

SIZE: 22.14-inch ID Sphere
SIZE: 562.4mm

ISO 9001 & AS 9100 REGISTERED

APPLICABLE DOCUMENTS

Forging Qual Report	50-000086
Acceptance Test Procedure	50-000200
Qualification Test Procedure	50-000202
Qualification Test Report	56-000073
QBS & Analysis Report	60-000124
Cleaning	CPP 3486

DIAPHRAGM INFORMATION

Diaphragm P/N	80-203005-1
Diaphragm Mold P/N	T-1261
Diaphragm Gross Wt	2.47
Diaphragm Matl Type	AF-E-332
Diaphragm, Material, **Note 2**	90-000075
Diaphragm Processing, **Note 2**	90-000087
N-Ray Inspection Procedure	1002

TANK CHARACTERISTICS

Operating Pressure, psig	375	Total Volume, ci	5,555
Proof Pressure, psig, Note 5	650	Prop Volume, ci	4,167
Cryo Proof, psig	NA	Max Design Wt, lbs	14.0 Note 4
Burst Pressure, psig, Note 6	750	Minimum Wall, inch	0.027
Actual Burst psig	809	normalized	

TANK CHARACTERISTICS (Metrics)

Operating Pressure, barg	25.85	Total Volume, l	91
Proof Pressure, barg	44.82	Prop Volume, l	68
Cryo Proof, barg	N/A	Max Design Wt, kg	6.35
Burst Pressure, barg	51.71	Minimum Wall, MM	0.686
Actual Burst, Barg	55.78	normalized	

FORGINGS

FORGINGS P/N	
80-203061-1 (2)	
RING FORGING	**RING SIZE, (Rough Machined)**
80-203009-11, Retainer	22.4 +.06 OD x 21 -.06 ID x 1.28 +.06 Lg
80-203063-1, Lug	25.3 +.06 OD x 22.3 -.06 ID x 2.5 +.06 Lg

TUBE TYPE AND SIZE

TRANSITION	SIZE
80-203011-1 (2)	

ACCEPTANCE TESTS

- Preliminary Examination of Product
- Pre-Proof Volume Determination
- Proof Pressure
- Volume Determination
- Internal Leakage
- External Leakage
- Acceptance Vibration
- Internal Leakage
- External Leakage
- Final Examination of Product

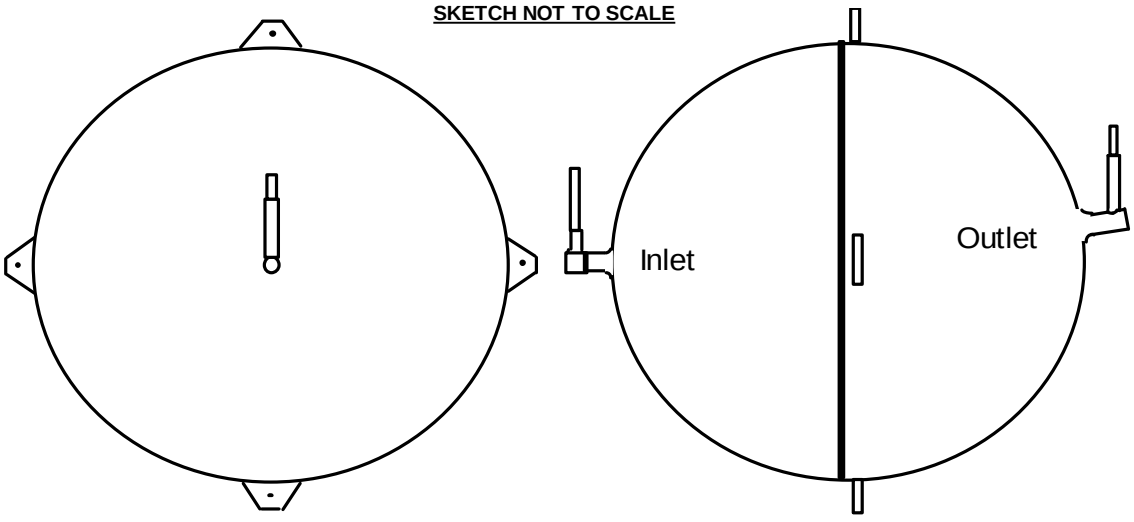
QUALIFICATION TESTS

- Acceptance Tests
- Reverse Pressure
- Random Vibration
- External Leakage
- Internal Leakage
- Burst Pressure

Notes:

1: Majority of tooling is owned by OA
2: Proprietary Document
3: Acceptance random vibration is notched
4: 14 lbs is the light weight version (Special processing is required to achieve this weight). Std weight is 16 lbs.
5: The proof pressure of 650 psig is F/M proof
6: Burst pressure is 750 psig when normalized
7: Launch vehicle is Titan 34d & Shuttle/IUS
8: QTR for 80259-101, 56-000097
9: ATP for 80259-101, 50-000258
10: QTP for 80259-101, 50-000262
11: Life Demonstration Test for 80259-101, 50-000275
12: Fracture Critical

SKETCH NOT TO SCALE



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