

<u>TANK TYPE</u> DIAPHRAGM	<u>MOUNT</u> LUGS	<u>LOCATION</u> GIRTH
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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.

Part Number 80549-1
SIZE: 22.14-inch ID Sphere
SIZE: 562.4mm

ISO 9001 & AS 9100 REGISTERED

APPLICABLE DOCUMENTS		TANK CHARACTERISTICS	
Acceptance Test Procedure	50-000750	Operating Pressure, psig	350
Cleaning	CPP 4044	Proof Pressure, psig	525
QTR - 80259-101	56-000097	Cryo Proof, psig	NA
ATP - 80259-101	50-000258	Burst Pressure, psig	700
QTP - 80259-101	50-000262	Total Volume, ci	5,555
		Prop Volume, ci	4,410
		Max Design Wt, lbs	15.5
		Minimum Wall, inch	0.027

ACCEPTANCE TESTS
Preliminary Examination of Product
Pre-Proof Volume Determination
Proof Pressure
Volume Determination
Expulsion Efficiency
Internal Leakage
External Leakage
Radiographic Inspection
Penetrant Inspection
Weight Determination
Final Examination of Product
Cleanliness Verification

DIAPHRAGM INFORMATION	
Diaphragm P/N	80-259007-1
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 (Metrics)			
Operating Pressure, barg	24.13	Total Volume, l	91
Proof Pressure, barg	36.20	Prop Volume, l	72
Cryo Proof, barg	N/A	Max Design Wt, kg	7.03
Burst Pressure, barg	48.26	Minimum Wall, MM	0.686

Notes:
1: Majority of tooling is owned by OA
2: Proprietary Document
3: Launch vehicle is Titan 34d & Shuttle/IUS
4: Fracture Critical

FORGINGS	
FORGINGS P/N	
80-203061-1 (2)	
RING FORGING	RING SIZE, (Rough Machined)
80-203009-11, Retainer	22.4 OD x 21 ID x 1.28 Lg
80-298063-1, Lug	25.81 OD x 22.38 ID x .71 Lg

QBS to OA P/N 80259-1 QUALIFICATION TESTS
Acceptance Test
Random Vibration
Cycle Life
External Leakage
Internal Leakage
Burst

TUBE TYPE AND SIZE	
Ti 3AL-2.5V	SIZE
80-549001-3 (2)	.250 O.D. x 2.55 long x .028 wall

