



TANK TYPE	MOUNT	LOCATION
Diaphragm	Flange	Girth

This is a 40-inch oblate spheroid pressure vessel constructed of 6Al-4V titanium. Positive fuel expulsion is provided by fully reversible ethylene-propylene terpolymer (AF-E-332) rubber diaphragm retained (welded in) at the mid-plane. Mounting is accomplished on a continuous flange parallel with and adjacent to the mid-plane.

ISO 9001 & AS 9100 REGISTERED

ATK Part Number 80318-1

SIZE: 40-inch Oblate Spheroid
SIZE: 1016-mm Oblate Spheroid

APPLICABLE DOCUMENTS	
Acceptance Test Procedure	50-000291
Qualification Test Procedure	50-000292
Qualification Test Report	56-000114
Cleaning	CPP 9107

TANK CHARACTERISTICS			
Operating Pressure, psig	338	Total Volume, ci	28,144
Proof Pressure, psig	545	Prop Volume, ci	0
Cryo Proof, psig	NA	Max Design Wt, lbs	76.0
Burst Pressure, psig	721	Minimum Wall, inch	0.050

ACCEPTANCE TESTS
Examination of Product
Pre-Proof Volumetric Capacity Test
Proof Pressure Test
Post-Proof Volumetric Capacity Test
Acoustic Test
Internal (Diaphragm) Leakage Test
External Leakage Test
Penetrant Inspection
Radiographic Inspection
Weight Test
Cleanliness Test

DIAPHRAGM INFORMATION	
Diaphragm P/N	80-263007-1
Diaphragm Mold P/N	T-1868
Diaphragm Gross Wt	7.6
Diaphragm Matl Type	AF-E-332
Diaphragm, Material, Note 2	90-000075
Diaphragm Processing, Note 2	90-000110
N-Ray Procedure	1002

TANK CHARACTERISTICS (Metrics)			
Operating Pressure, Bar	23.30	Total Volume, l	461.20
Proof Pressure, Bar	37.58	Prop Volume, Kg	0.0
Cryo Proof, Bar	NA	Max Design Wt, Kg	34.47
Burst Pressure, Bar	49.71	Minimum Wall, MM	1.270

- Notes:**
- 1: Tooling belongs to TRW
 - 2: Proprietary Documents
 - 3: Performed at Rockwell, Downey
 - 4: Rockwell International (Seal Beach)
 - 5: Fracture Critical

FORGINGS P/N	SUPPLIER	Die
80-260061-1 (2)		
RING FORGING	RING SIZE, (Rough Machined)	
80-263063-1, Cylinder	42.57 +.09 ODx39.56 -.09 IDx3.81 +.25 Lg	
80-263065-1, Retainer	40.46 +.09 ODx39.12 -.09 IDx1.68 +.09 Lg	

QUALIFICATION TESTS
Acceptance Test
Acceleration
Internal Leakage
Negative Pressure
External Leakage Test
Diaphragm Integrity
Internal Leakage
Acoustic Test
Life Test
Internal Leakage
Proof Pressure Cycle
Acceleration Supplemental
Design Burst Test

TUBE TYPE AND SIZE	
TRANSITION	SIZE
80-318001-1, Outlet	.503 OD x .035 Wall
80-318003-1, Inlet	.253 OD x .020 Wall

