



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

ATK Part Number 80463-1

SIZE: 40-inch Oblate Spheroid

SIZE: 1016 mm

ISO 9001 & AS 9100 REGISTERED

APPLICABLE DOCUMENTS		TANK CHARACTERISTICS			
Acceptance Test Procedure	50-000619	Operating Pressure, psig	338	Total Volume, ci	28,144
Qualification Test Procedure	see 80263-1	Proof Pressure, psig	525	Prop Mass, lbm	Various
Qualification Test Report	see 80263-1	Cryo Proof, psig	N/A	Max Design Wt, lbm	76.0
Fracture Analysis	54-000217	Design Burst, psig	676	Minimum Wall, inch	0.050
Cleaning	3960	Actual Burst, psig	840		

QUALIFICATION TESTS
Qual performed on 80263-1

DIAPHRAGM INFORMATION	
Diaphragm P/N	80-263027-1
Diaphragm Mold P/N	T-1868
Diaphragm Gross Wt	7.6 (3.44 Kg)
Diaphragm Matl Type	AF-E-332
Material Spec, Rubber	MT3-73
Diaphragm Processing, Note 2	90-000094
N-Ray Inspection Procedure	1002

TANK CHARACTERISTICS (Metrics)			
Operating Pressure, Bar	23.30	Total Volume, l	461.2
Proof Pressure, Bar	36.20	Prop Volume, kg	454
Cryo Proof, Bar	N/A	Max Design Wt, Kg	34.5
Design Burst, Bar	46.61	Minimum Wall, mm	1.270
Actual Burst, Bar	57.92		

ACCEPTANCE TESTS
Examination of Product
Pre-Proof Volumetric Capacity Test
Proof Pressure Test
Post-Proof Volumetric Capacity Test
Internal Leak Test
External Leak Test
Radiographic Inspection
Dye Penetrant Inspection
Final Exam of Product
Cleanliness
Data Review

Notes:

- 1: Tooling owned by TRW
- 2: Proprietary Document
- 3: Fracture Critical
- 4: Different tubes, same mounting flange as 80263-1
- 5: Tube protectors are SK 1487

FORGINGS P/N	SUPPLIER	Die No
80-260061-1 (3)		

ROLL RING FORGING SIZE, (Rough Machined)		
80-263065-1	40.46 +.09 OD x 39.12 -.09 ID x 1.68 +.09 Lg	
80-263063-1	42.57 +.09 OD x 39.56 -.09 ID x 3.81 +.25 Lg	

TUBE TYPE AND SIZE (in.)	
Ti 3AL-2.5V	SIZE
80-263001-1 (2)	.250 OD x .016 wall

TUBE SIZE (mm)	
80-263001-1 (2)	6.35 x .406 mm

VACUUM RATE
YES

