



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

QUALIFICATION TESTS
Qual performed on 80263-1
Preliminary Examination of Product
Pre-Proof Volumetric Capacity Test
Proof Pressure test
Post-Proof Volumetric Capacity Test
Internal Leakage Test
External Leakage Test
Penetrant Inspection
Radiographic Inspection
Weight Test
Final Examination of Product
Cleanliness Test
Acceleration Test
Internal Leakage Test
Negative Pressure Test
External Leakage Test
Diaphragm Integrity Test
Internal Leakage Test
Pressure Cycle Test
Blow Down Pressure Test
Expulsion Test
Internal Leakage Test
Proof Pressure test
Final Examination of Product
Weight Test
Cleanliness Test

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		

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		
FORGINGS P/N	SUPPLIER	Die No
80-260061-1 (3)	ARCTURUS	3241

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

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



VACUUM RATE
YES