



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.

ATK Part Number 80263-1

SIZE: 40.2" ID x 31.8" Long Oblate Spheroid
SIZE: 1021 mm ID x 808 mm Long

ISO 9001 & AS 9100 REGISTERED

APPLICABLE DOCUMENTS	
Acceptance Test Procedure	50-000205
QTP Supplemental	50-000209
QTP Supplemental	50-000224
Burst Test Procedure	50-000327
Qualification Test Report	56-000075
Qual Test Report, Supplemental	56-000082
Burst Test Report	56-000120
Cleaning	CPP 3511

TANK CHARACTERISTICS			
Operating Pressure, psig	338	Total Volume, ci	28,144
Proof Pressure, psig	574	Prop Volume, ci	Various
Cryo Proof, psig	NA	Max Design Wt, lbs	76.0
Burst Pressure, psig	676	Minimum Wall, inch	0.050
Actual Burst, psig	840	normalized	

ACCEPTANCE TESTS
Preliminary Examination of Product
Pre-proof Volume Determination
Proof Pressure
Post-Proof Volume Determination
Internal Leakage
External Leakage
Final Examination of Product
Weight Determination
Cleanliness Verification
Post Test Inspection

DIAPHRAGM INFORMATION	
Diaphragm P/N	80-263007-1
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, Barg	23.30	Total Volume, l	461.2
Proof Pressure, Barg	39.58	Prop Volume, l	Various
Cryo Proof, Barg	NA	Max Design Wt, Kg	34.5
Burst Pressure, Barg	46.61	Minimum Wall, MM	1.270
Actual Burst, Barg	57.92	normalized	

QUALIFICATION TESTS
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

Notes:
 1: Tooling owned by OA
 2: Proprietary Document
 3: Launch vehicle is Shuttle/IUS
 4: Fracture Critical
 5: Tracking Data Relay Satellite System (TDRSS)
 6: The only difference between the dash 1 and the dash 101 is that the dash 101 does not get leak tests

FORGINGS	
FORGINGS P/N	
80-260061-1 (2)	
RING FORGING	
RING SIZE, (Rough Machined)	
80-263065-1, Retainer	40.46 OD x 39.12 ID x 1.68 Lg
80-263063-1, Cylinder	42.57 OD x 39.56 ID x 3.81 Lg

TUBE TYPE AND SIZE	
TRANSITION	SIZE
80-263001-1, (2)	.250 OD x .016 wall
80-263001-3	.375 OD x .035 Wall

