

TANK TYPE Complex PMD	MOUNT Flange	LOCATION Girth	PMD DEVICE Vane & Trap
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This is a 38-inch spherical pressure vessel constructed of 6AL-4V titanium. A vane and trap type propellant management device (PMD) is provided to expel fuel under low or zero gravity conditions. Mounting is accomplished by a continuous flange parallel with and adjacent to the mid-plane.

Part Number 80340-1

SIZE: 38.97-inch ID Sphere
SIZE: 990-mm ID Sphere

ISO 9001 & AS 9100 REGISTERED

APPLICABLE DOCUMENTS

Acceptance Test Procedure	50-000348
Bubble Point Test Procedure	50-000347
Qualification Test Procedure	50-000349
Fracture Analysis Plan	54-000095
Qualification Test Report	56-000124
Cleaning Procedure, PMD	CPP 3546
Cleaning Procedure, Tank	CPP 3667

TANK CHARACTERISTICS

Operating Pressure, psig	276	Total Volume, ci	30,728
Proof Pressure, psig	355	Prop Volume, lbs	1,495
Cryo Proof, psig	No	Max Design Wt, lbs	37.75
Burst Pressure, psig	424	Minimum Wall, inch	0.026

ACCEPTANCE TESTS

Preliminary Inspection of Product
 Volumetric Capacity Test
 Proof Pressure Test
 Volumetric Expansion and Permanent Set Test
 Acoustic Noise Test
 External Leakage
 Weld Quality Inspection
 Lines and Fittings Weld Quality Inspection
 Bubble Point Test
 Design and Construction
 Preparation for Delivery

TANK CHARACTERISTICS (Metrics)

Operating Pressure, Bar	19.03	Total Volume, l	503.55
Proof Pressure, Bar	24.48	Prop Volume, Kg	678.13
Cryo Proof, Bar	No	Max Design Wt, Kg	17.12
Burst Pressure, Bar	29.23	Minimum Wall, MM	0.660

FORGINGS

FORGINGS P/N	SUPPLIER	Die No
80-340061-1 (2)		

QUALIFICATION TESTS

Preliminary Inspection of Product
 Volumetric Capacity Test
 Proof Pressure Test
 Volumetric Expansion and Permanent Set Test
 Acoustic Test
 External Leakage
 Lines and Fittings Weld Quality Inspection
 Bubble Point Test
 Pressure Cycle Life Test
 External Leakage
 Slosh Test
 Vibration Test
 Weld Quality Inspection
 Bubble Point Test
 External Leakage
 Expulsion Test
 Vibration Test
 Bubble Point Test
 External Leakage
 Expulsion Test
 Burst Pressure Test
 Design and Construction
 Data Review
 Bubble Point Test

Notes:

- 1: Tooling belongs to Northrop Grumman
- 2: Weld Qual Ring Forging is SK-1091
- 3: Supplier Proprietary *
- 4: Perforated Sheet SK-1035 & SK-1097
- 5: Tube protectors are SK 1040 & SK 1041
- 6: Fracture Critical

TUBE TYPE AND SIZE

TITANIUM	SIZE
80-340001-5, Inlet	.375 OD x .015 Wall
80-340002-5, Outlet	.500 OD x .020 Wall

