



TANK TYPE	MOUNT	LOCATION	PMD DEVICE
Complex PMD	Flange	Girth	Vane & Trap

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.

ATK 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

Notes:

- 1: Tooling belongs to ATK
- 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

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

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

