



TANK TYPE	MOUNT	LOCATION	PMD DEVICE
Complex PMD MMH & NTO	Bosses	Polar	Vane, Trap Screen, Sponge

This is a 35-inch x 46-inch pressure vessel constructed of 6Al-4V titanium. Fuel expulsion is provided by a complex propellant management device (PMD) fabricated to provide expulsion capability with low or zero gravity conditions. Mounting is by polar bosses.

ATK Part Number 80399-1

SIZE: 35.1-inch ID x 46.54 Long
SIZE: 891.5-MM ID x 1182-MM

ISO 9001 & AS 9100 REGISTERED

APPLICABLE DOCUMENTS

Bubble Point Test	50-000509
Acceptance Test Procedure	50-000504
Qualification Test Procedure	50-000505
Qualification Test Report	56-000172
Stress & Fracture Mechanics	260-2
Cleaning	CPP 3845

TANK CHARACTERISTICS

Operating Pressure, psig	260	Total Volume, ci	32.610
Proof Pressure, psig	325	Prop Volume, lbs	1.660
Cryo Proof, psig	NA	Max Design Wt, lbs	41.0
Burst Pressure, psig	390	Minimum Wall, inch	0.023

ACCEPTANCE TESTS

Examination of Product
Tank Capacity
Proof Pressure Test
Tank Capacity
Sinusoidal Vibration
PMD Functional Test
External Leakage
Radiographic & Penetrant Inspection Tank Shell
Radiographic Inspection of PMD
Tank Weight
Final Examination of Product
Cleanliness

Notes:

- 1: Tooling owned by ATK.
- 2: Acceptance Sine is dry
- 3: Fracture Critical

TANK CHARACTERISTICS (Metrics)

Operating Pressure, Bar	17.93	Total Volume, l	534.39
Proof Pressure, Bar	22.41	Prop Volume, Kg	752.97
Cryo Proof, Bar	NA	Max Design Wt, Kg	18.6
Burst Pressure, Bar	26.89	Minimum Wall, MM	0.584

FORGINGS

Forging PN	SUPPLIER	Die
80-391061-1 (2)	ARCTURUS	3540A
Cylinder		Size
80-399063	35.68 +.12 OD x 35.68-.12 ID x 7.75-.12 Lg	

PROGRAM INFORMATION

Program	HS-601 HP
Customer	Hughes Space & Communication
Customer P/N	N/A
Original Job No	9618
Customer Installed Device	No
Customer Controlled Design	No

TUBE TYPE AND SIZE

TITANIUM	SIZE
80-3990250-5, Press	.250 OD x .018 Wall
80-350150-5, Prop	.375 OD x .018 Wall

TUBE TYPE AND SIZE (Metrics)

TITANIUM	SIZE
80-3990250-5, Press	6.35 OD x .457 Wall
80-350150-5, Prop	9.52 OD x .457 Wall

QUALIFICATION TESTS

Preliminary Examination
Tank Capacity
Proof Pressure Test
Tank Capacity
PMD Functional Test
External Leakage Test
Radiographic & Penetrant Inspect
Radiographic Inspection of PMD
Tank Weight
Pressure Cycle
External Leakage Test
Acoustic Test
Sinusoidal Vibration Dry
PMD Functional Test
Radiographic Inspection of PMD/Girth Weld
Collapse Pressure
External Leakage Test
Penetrant Inspection
Final Examination of Product
Burst

