



TANK/FUEL TYPE PMD, MMH	MOUNT Pads	LOCATION Cylinder	PMD DEVICE Simple Vane
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This tank is a 35.5-inch x 109-inches long, carbon overwrapped titanium tank. The liner is constructed of titanium 6Al-4V with a nominal membrane thickness of 0.029"-0.032". Mounting is provided by 4 bonded sidemounts & 2 strut supports located on the tank inlet boss. The tank contains an internal Propellant Management Device assembly, constructed from titanium sheet & titanium woven screen. The PMD serves to maintain separation of liquid propellant (MMH) & gaseous pressurant, & to provide predictable gas-free liquid propellant expulsion from the tank under low or zero gravity conditions.

ATK Part Number 80391-1

SIZE: 35.5-inch ID x 109-inch Long
SIZE: 901.7 x 2768.6-mm

ISO 9001 & AS 9100 REGISTERED

APPLICABLE DOCUMENTS	
Qualification Test Procedure	50-000482
Acceptance Test Procedure	50-000484
Bubble Point Test Procedure	50-000486
Induction Heat Treat	50-000487
Fracture Analysis Plan	54-000149
Qualification Test Report	56-000170
Stress Fracture	96-008A & 96-009A
Cleaning	CPP 3815

TANK CHARACTERISTICS			
Operating Pressure, psig	300	Total Volume, ci	92,247
Proof Pressure, psig	375	Prop Volume, ci	87,634
Cryo Proof, psig	NA	Max Design Wt, lbs	122.0
Burst Pressure, psig	450	Minimum Wall, inch	0.029

ACCEPTANCE TESTS
Examination of Product
Vol Determina
Pressure Drop Test
Vibration
Tank Assembly Bubble Point Test
External Leakage
Examination of Product
Cleanliness
Data Review

TANK CHARACTERISTICS (Metrics)			
Operating Pressure, Bar	20.68	Total Volume, l	1,511.68
Proof Pressure, Bar	25.85	Prop Volume, l	1,436.08
Cryo Proof, Bar	NA	Max Design Wt, Kg	55.34
Burst Pressure, Bar	31.03	Minimum Wall, MM	0.737

Notes:

- 1: Tooling belongs to ATK.
- 2: Only the cylinder section is wrapped
- 3: This is the 80350 female die with a new punch
- 4: Fracture Critical

FORGINGS		
FORGINGS P/N	SUPPLIER	Die
80-391061-1		

QUALIFICATION TESTS
Examination of Product
Volume Determination and Proof Pressure Test
Proof & MEOP Pressure Cycle Life
Pressure Drop & Expulsion Efficiency Test
Radiographic Inspection
Vibration Test
Slosh Test
Tank Assembly Bubble Point Test
External Leakage
Burst Pressure
Data Review

TUBE TYPE AND SIZE		
TITANIUM		SIZE
80-391011-5, Gas		.0250 x .375
80-391007-5, Prop		.0250 x .375

