TANK TYPE	MOUNT	LOCATION
PMD	POLAR	CENTERLINE

NORTHROP GRUMMAN

This Propellant Tank is a titanium pressure vessel with a propellant management device (PMD) constructed of a center cylinder welded to end domes. Mounting is provided by shear plates mounted to polar bosses located on the tank centerline axis and bearing mounted to the tank through a trunnion attached to the center cylinder.

Part Number 80589-1

SIZE: 29.83" DIA x 43.713" LONG

SIZE: 757.7 mm DIA x 1110.3 mm LONG

ISO 9001 & AS 9100 REGISTERED

APPLICABLE DOCUMENTS

Acceptance Test Procedure	50-000905
Protoflight Test Procedure	50-000906
Protoqual Test Report	56-000334
Cleaning	CPP 4105

TANK CHARACTERISTICS

Operating Pressure, psig	315	Total Volume, in^3	22,850
Proof Pressure, psig	472.5	Max Design Wt, lbs	62.0
Cryo Proof, psig	N/A	Minimum Wall, inch	
Burst Pressure, psig		Qual Tank Mass, lbs	58.80
Actual Burst, psig			

TANK CHARACTERISTICS (Metrics)

Operating Pressure, bar	21.7	Total Volume, l	374.4
Proof Pressure, bar	32.6	Max Design Wt, kg	28.1
Cryo Proof, bar	N/A	Minimum Wall, mm	
Burst Pressure, bar		Qual Tank Mass, kg	26.67
Actual Burst, bar			

HEMISPHERE FORGINGS

HEMI P/N	QTY
80-527040-1	1
80-589020-1	1

RING FORGINGS

P/N	QTY	SIZE
80-527063-1	1	31.88" OD x 29" ID x 15.72" LONG

TUBE TYPE AND SIZE

Ti 6AL-4V	QTY	SIZE
80-527001-1	2	.3784" OD x .0224" WALL x 1.75" LONG

ACCEPTANCE TESTS

- Pre-Assembly Inspection & Test
- Post-Assembly Inspection & Test
- Preliminary Examination of Product
- Mass Measurement
- Volumetric Capacity Measurement
- Proof Pressure Test
- Volumetric Capacity Measurement
- Δ Pressure, Mass Flow Rate, Expulsion Efficiency
- External Leak Test
- Weld Quality Inspection (X-ray & Dye Pen)
- Final Visual & Dimensional Inspection
- Final Cleanliness Verification & Dry
- Data Review
- Preparation for Delivery

PROTOQUAL TESTS

- Pre-Assembly Inspection & Test
- Post-Assembly Inspection & Test
- Preliminary Examination of Product
- Mass Measurement
- Volumetric Capacity Measurement
- System Priming Test
- Δ Pressure, Mass Flow Rate, Expulsion Efficiency
- External Leak Test
- Weld Quality Inspection (X-ray & Dye Pen)
- Visual & Dimensional Inspection
- Sine Vibration Test
- Random Vibration Test
- External Leak Test
- Δ Pressure, Mass Flow Rate, Expulsion Efficiency
- External Leak Test
- Weld Quality Inspection (X-ray & Dye Pen)
- Final Visual & Dimensional Inspection
- Final Cleanliness Verification & Dry
- Data Review
- Preparation for Delivery

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