TANK TYPE	MOUNT	LOCATION
PMD	TABS	HEMISPHERE

NORTHROP GRUMMAN

The Tank Assembly is mounted by 32 circumferential tabs with nut plates located on one of the hemispheres near the cylindrical section weld joint. The tank contains an internally-mounted propellant management device (PMD), with perforated sheet and woven screen, fabricated to maintain separation of liquid propellant and gaseous pressurant, and to provide predictable gas-free liquid propellant expulsion from the tank under low or zero gravity conditions.

Part Number 80535-1

SIZE: 49.250" DIA x 49.990" LONG

SIZE: 1250.95 mm DIA x 1269.7 mm LONG

ISO 9001 & AS 9100 REGISTERED

APPLICABLE DOCUMENTS

Acceptance Test Procedure	50-000767
Qual Test Procedure	
Protoflight Test Procedure	50-000768
QBS Report	56-000273
Stress and Dynamics Report	
FMECA	
Cleaning	CPP 3866

TANK CHARACTERISTICS

Operating Pressure, psig	251	Total Volume, in^3	62,545
Proof Pressure, psig	314.0	Max Design Wt, lbs	77.5
Cryo Proof, psig	N/A	Minimum Wall, inch	0.032
Burst Pressure, psig		Qual Tank Mass, lbs	
Actual Burst, psig			

TANK CHARACTERISTICS (Metrics)

Operating Pressure, bar	17.3	Total Volume, l	1,024.9
Proof Pressure, bar	21.7	Max Design Wt, kg	35.2
Cryo Proof, bar	N/A	Minimum Wall, mm	0.813
Burst Pressure, bar		Qual Tank Mass, kg	
Actual Burst, bar			

HEMISPHERE FORGINGS

HEMI P/N	QTY
80-363061-1	2

RING FORGINGS

P/N	QTY	SIZE
80-380065-1	2	13.42" OD x 6.62" ID x 1.25" LONG
80-435132-1	3	1.650" OD x .805" ID x .330" LONG
80-380063-1	1	12.75" OD x 6.18" ID x 1.38" LONG
80-363065-1	1	49.75" OD x 48.31" ID x 3.19" LONG

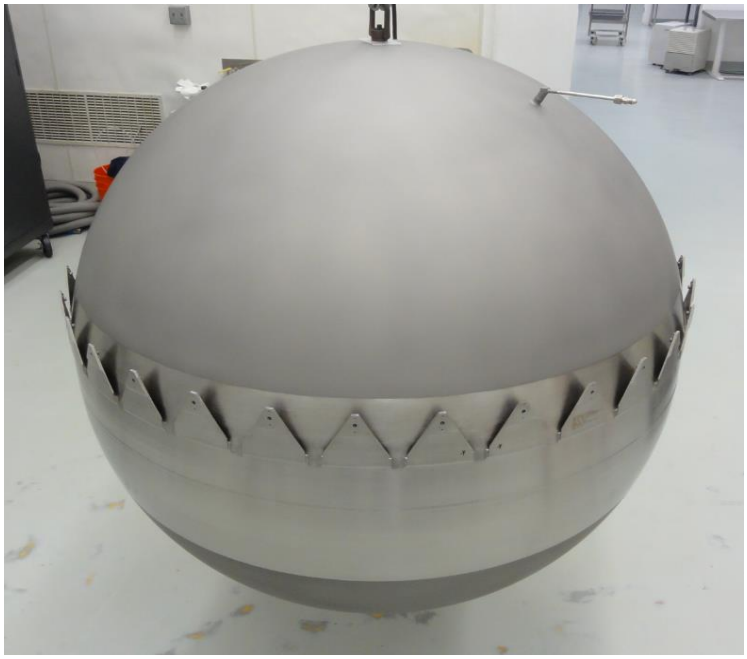
TUBE TYPE AND SIZE

Ti 6AL-4V	QTY	SIZE
80-411001-1	1	.250" OD x .035" WALL x 4.25" LONG
Ti 6AL-4V		
80-411001-3	1	.375" OD x .020" WALL x 2" LONG

ACCEPTANCE TESTS

- Preliminary Inspection of Product
- Mass Measurement
- Pre-Proof Volumetric Capacity
- Ambient Proof Pressure
- Visual Inspection
- Post-Proof Volumetric Capacity
- External Leakage Test
- Tank Assembly Bubble Point Test
- Wet Sine Vibration Test and Visual Inspection
- Volumetric Capacity & Expulsion Test
- Tank Assembly Bubble Point Test
- External Leakage Test
- Radiographic Inspection
- Dye Penetrant Inspection
- Cleanliness Check & Visual Inspection
- Data Review

QUALIFICATION TESTS



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