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TANK & FUEL TYPE	MOUNT	LOCATION
Propellant	Struts & Bearing	Prop Boss/Side Tabs

The propellant tank is constructed of 6AL-4V titanium. Mounting is by two struts connected to the boomerang at the propellant boss, two struts connected to the side tabs of the mounting hemi and a side mounting pin on the mounting hemi. Fluid connection is by two titanium tubes welded to 'the two ports on the polar bosses. Has internal baffles & vortex suppressor.

ATK Part Number 80433-1

SIZE: 22.14 ID X 39.175" Long
SIZE: 562 mm ID X 994 mm Long

ISO 9001 & AS 9100 REGISTERED

APPLICABLE DOCUMENTS

Protoflight Test Procedure	50-000560
Qualification Test Procedure	50-000561
Messenger Fracture Control Plan	54-000185
QTR	56-000187
Cleaning	CPP 3916

Notes:

1: New tooling belongs to Aerojet/NASA
2: Fracture Critical Items
4: 80433-101 is the qual tank.

TANK CHARACTERISTICS

Operating Pressure, psig	325	Total Volume, ci	12,150
Proof Pressure, psig	406	Prop Volume, ci	95% Max F.F.
Cryo Proof, psig	N/A	Max Design Wt, lbs	20.00
Burst Pressure, psig	488	Minimum Wall, inch	0.017

TANK CHARACTERISTICS (Metrics)

Operating Pressure, Bar	22.408	Total Volume, l	199
Proof Pressure, Bar	27.992	Prop Volume, l	95% Max F.F.
Cryo Proof, Bar	N/A	Max Design Wt, Kg	9.07
Burst Pressure, bar	33.646	Minimum Wall, MM	0.432

PROTOFLIGHT TESTS

Examination of Product, Preliminary
Volumetric Capacity Measurement
Proof Pressure Test
Volumetric Capacity Measurement
External Leak Test
Protoflight Vibration & Modal Survey
External Leak Test
Weld Quality Inspection
Examination of Product, Final
Precision Clean

FORGINGS

FORGINGS P/N	SUPPLIER	Die No
80-313061-1 (2)		
RING FORGING	**RING SIZE, (Rough Machined)**	
80-433063-1	21.75" +0-.12"ID X 22.75"OD X 8.88"Long	
80-433063-3	21.75" +0-.12"ID X 22.75"OD X 5.81"Long	
Mounting Tab	**Mounting Tab, (Rough Machined)**	
80-433065-1	21.53"+0"-.12"ID X 22.75" OD X 2.12" Long	
80-433065-3	21.37"+0"-.12"ID X 23.12" OD X 2.94" Long	

QUALIFICATION TESTS

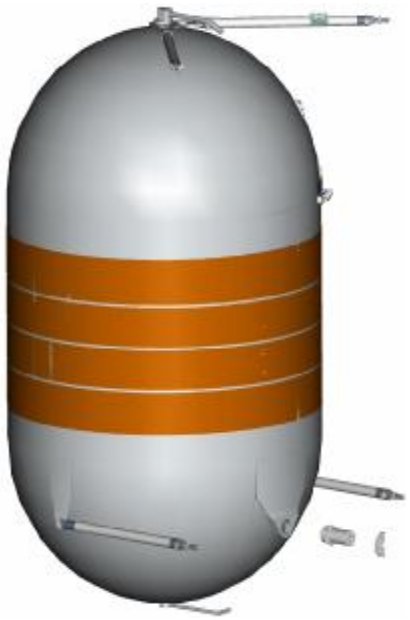
Preliminary Examination of Product
Volumetric Capacity
Proof Presssure Test
Volumetric Capacity
MEOP Pressure Cycling
Proof Pressure Cycling
Expulsion Efficiency
Flow Rate Determination
External Leak Test
Qualification Vibration & Modal Survey
External Leak Test
Final Examination of Product
Burst Pressure Test

TUBE TYPE AND SIZE

TRANSITION		SIZE
1224578-001	Pressure .030 OD X .020 Wall	CFM
1224579-001	Inlet .030 OD X .020 Wall	CFM

TUBE TYPE AND SIZE (Metrics)

TRANSITION		SIZE
1224578-001	Pressure .762 OD X .508 Wall	CFM
1224579-001	Inlet .762 OD X .508 Wall	CFM



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