

TANK TYPE	MOUNT	LOCATION	PMD DEVICE
SIMPLE PMD	Tabs, 32	Girth	VANE, TRAP & SPONGE

This tank assembly is a pressure vessel with hemispherical ends & a cylindrical section of all welded construction. It 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 & woven screen, fabricated to maintain separation of propellant & gaseous pressurant, & to provide predictable gas-free liquid propellant expulsion from the tank under low or zero gravity conditions.

Part Number 80456-1

SIZE: 48.9" ID x 63.335" Long

SIZE: 1,242 x 1,608 mm

ISO 9001 & AS 9100 REGISTERED

APPLICABLE DOCUMENTS

Acceptance Test Procedure	50-000632
Bubble Point Test Procedure	50-000631
Materials List	54-000218
Processes List	54-000209
Cleaning	CPP 3943

TANK CHARACTERISTICS

Operating Pressure, psig	250	Total Volume, in ³	87,575
Proof Pressure, psig	313	Prop Volume, in ³	87,575
Cryo Proof, psig	N/A	Max Design Wt, lbs	99.20
Burst Pressure, psig	375	Minimum Wall, inch	0.031
Actual Burst, psig	N/A		

QUALIFICATION TESTS

Qual performed on 80411-1

ACCEPTANCE TESTS

Preliminary Inspection of Product
 Pre-Proof Volumetric Capacity
 Pressure Drop Test
 Bubble Point Test
 External Leakage Test
 Radiographic Inspection
 Dye Penetrant Inspection
 Mass Determination
 Cleanliness Che
 Data Review

Notes:

- 1: Tooling belongs to Northrop Grumman
- 2: Tube protectors are SK 1488 & 1489
- 3: Vibration Fixture T-4646
- 4: Fracture Critical

TANK CHARACTERISTICS (Metrics)

Operating Pressure, bar	17.24	Total Volume, l	1,435
Proof Pressure, bar	21.55	Prop Volume, l	1,435
Cryo Proof, bar	NO	Max Design Wt, kg	45.00
Burst Pressure, bar	25.85	Minimum Wall, MM	0.787
Actual Burst, bar	0.00		

FORGINGS

HEMI P/N	SUPPLIER	Die No
80-363061 (2)	LADISH	TR-038

VACUUM RATED

YES

RING FORGINGS

P/N	QTY	Size
80-363063	1	49.57 +/- .06 x 48.31 +/- .06 x 3.19 +/- .09
80-363065	1	49.75 +/- .09 x 48.40 +/- .09 x 16 +/- .06

TUBE TYPE AND SIZE (in.)

Ti 3AL-2.5V	SIZE
80-456090-5	0.375" O.D. x 0.020" Wall
80-456009-5	0.375" O.D. x 0.020" Wall (*9.525 mm x 0.508 mm) (*9.525 mm x 0.508 mm)

