



TANK TYPE	MOUNT	LOCATION	PMD DEVICE
PROPELLANT	LUGS (32)	GIRTH	VANE, TRAP, SCREEN & SPONGE

The Extended Tank Assembly is a hemispherical pressure vessel with a cylindrical section of all welded construction. It is mounted by 32 circumferential tabs with nut plates located at on one of the hemispheres near the girth 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. The PMD has been designed to allow horizontal handling with low fill fractions.

ATK Part Number 80422-1

SIZE: 48.9-inch ID x 57.8 Long
SIZE: 1242 x 1468-mm

ISO 9001 & AS 9100 REGISTERED

APPLICABLE DOCUMENTS	TANK CHARACTERISTICS	ACCEPTANCE TESTS
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Bubble Point Test Procedure	50-000554
Acceptance Test Procedure	50-000556
Protoflight Test Procedure	50-000557
Cleaning	CPP 3849

Operating Pressure, psig	250	Total Volume, in ³	77,805
Proof Pressure, psig	313	Prop Volume, in ³	77,805
Cryo Proof, psig	N/A	Max Design Wt, lbs	90.4
Burst Pressure, psig	375	Minimum Wall, inch	0.020
Actual Burst, psig			

Preliminary Inspection of Product
Mass Measurement
Pre-Proof Volumetric Capacity, Ambient Proof Pressure, Visual Inspection, and Post-Proof Volumetric Capacity
External Leakage Test
Tank Assembly Bubble Point Test
Sine Vibration Test and Visual Inspection
Pressure Drop Test
Tank Assembly Bubble Point Test
External Leakage Test
Radiographic Inspection
Dye Penetrant Inspection

Notes:

1. Sine Vib Wet
2. Vib Fixture T-4646
3. Tube Protector Press. SK-1353
4. Tube Protector Prop. SK-1354

TANK CHARACTERISTICS (Metrics)			
Operating Pressure, bar	17.24	Total Volume, l	1,275
Proof Pressure, bar	21.58	Prop Volume, l	1,275
Cryo Proof, bar	NO	Max Design Wt, kg	41.01
Burst Pressure, bar	25.85	Minimum Wall, mm	0.508
Actual Burst, bar			

HEMISPHERE FORGINGS			
HEMI P/N	QTY	SUPPLIER	Die No
80-363061-1	2		

RING FORGINGS			
RING P/N	QTY	RING SIZE, (Rough Machined)	
80-363063-3	1	49.57+/-0.09 x 48.40+/-0.09 IDx .937 +.06 lg	

TUBE TYPE AND SIZE (in.)	
TRANS Ti to SS	SIZE
80-380126-2	.400 x .375"
80-380126-1	.350 x .375"

TUBE SIZE (mm)	
Ti 3AL-2.5V	SIZE
80-380126-2	10.16 x 9.525 mm
80-380126-1	8.89 x 9.525 mm

