



TANK TYPE	MOUNT	LOCATION	PMD DEVICE
Complex PMD	Tabs, 24	Girth	Channel

This tank assembly is a hemispherical pressure vessel of all welded construction. It is mounted by 24 circumferential tabs with nut plates located on one of the hemispheres near the girth weld joint. The tank contains an internally-mounted propellant management device (PMD), fabricated to maintain separation of liquid propellant & gaseous pressurant, & to provide predictable gas-free liquid propellant expulsion from the tank under low or zero gravity conditions.

ATK Part Number 80338-1

SIZE: 40.446-Inch ID Sphere

SIZE: 1027-MM

ISO 9001 & AS 9100 REGISTERED

APPLICABLE DOCUMENTS

Bubble Point Test Procedure	50-000332
Acceptance Test Procedure	50-000333
Qualification Test Procedure	50-000334
Materials List	54-000088
Processes List	54-000089
PMD Gap Determination	54-000112
Qualification Test Report	56-000122
Fracture Analysis Plan	54-000090
Cleaning Procedure, PMD	CPP 3546
Cleaning Procedure, Tank	CPP 3665

TANK CHARACTERISTICS

Operating Pressure, psig	250	Total Volume, ci	34.500
Proof Pressure, psig	375	Prop Volume, lbs	1.710
Cryo Proof, psig	No	Max Design Wt, lbs	56.0
Burst Pressure, psig	500	Minimum Wall, inch	0.034

ACCEPTANCE TESTS

- Inspection
- Mass Measurement
- Ambient Proof Pressure & Internal Volume
- Visual Inspection
- External Leakage
- Bubble Point
- Random Vibration
- Radiographic Inspection
- Penetrant Inspection
- Expulsion Test
- Bubble Point
- External Leakage
- Cleanliness & Visual Inspection
- Data Review

TANK CHARACTERISTICS (Metrics)

Operating Pressure, Bar	17.24	Total Volume, l	565.36
Proof Pressure, Bar	25.85	Prop Volume, Kg	775.65
Cryo Proof, Bar	No	Max Design Wt, Kg	25.40
Burst Pressure, Bar	34.47	Minimum Wall, MM	0.864

Notes:

- 1: Tooling belongs to Customer/Govt
- 2: VTP for Channel Assy is 50-000361
- 3: VTP for Trap/Sponge Assy is 50-000362
- 4: Weld Qual Ring = SK-1029
- 5: Window Assy Weld Verification = SK-1030
- 6: Perforated Sheet SK-1033,SK-1035,SK-870
- 7: Tube protectors are SK 1037 & SK 1038
- 8: Geostationary Environment Satellite
- 9: Fracture Critical

FORGINGS

FORGINGS P/N	SUPPLIER	Die No
80-338061-1, (2)		
Trap Body		SIZE
80-338063-5	10.87 +.12, -.06 OD x 7.75 +.12, -.06 ID x 4.00 +.12, -.06 Long	
Channel		
80-338063-3	40.25 +.12, -.06 OD x 37.68 +.12, -.06 ID x 1.31 +.12, -.06 Long	
Mounting		
80-338063-1		ID x 3.87 +.12, -.06 Long

TUBE TYPE AND SIZE

TRANSITION	SIZE
80-338001-1, Inlet	.250 OD x .020 Wall
80-338002-1, Outlet	.375 OD x .020 Wall

TUBE TYPE AND SIZE (Metrics)

TRANSITION	SIZE
80-338001-1, Inlet	6.35 x .5 MM
80-338002-1, Outlet	9.52 x .5 MM

