

TANK TYPE Complex PMD	MOUNT Tabs	LOCATION Girth	PMD DEVICE Note 10
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The tank assembly is a hemispherical pressure vessel of all welded construction. It is mounted by 20 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 and gaseous pressurant and to provide predictable gas-free liquid propellant expulsion from the tank under low or zero gravity conditions.

Part Number 80301-1

SIZE: 34.25-inch Sphere
SIZE: 870-mm

ISO 9001 & AS 9100 REGISTERED

APPLICABLE DOCUMENTS

Acceptance Test Procedure, Tank	50-000266
Qualification Test Procedure	50-000267
Acceptance Test Procedure, PMD	50-000269
Fracture Analysis Plan	54-000042
Qualification Test Report	56-000093
Cleaning Procedure, PMD	CPP 3546
Cleaning Procedure, Tank	CPP 3597

TANK CHARACTERISTICS

Operating Pressure, psig	255	Total Volume, ci	20,900
Proof Pressure, psig	385	Propellant Volume	1,129
Cryo Proof, psig	No	Max Design Wt, lbs	34
Burst Pressure, psig	510	Minimum Wall, inch	0.028

TANK CHARACTERISTICS (Metrics)

Operating Pressure, bar	17.58	Total Volume, l	348.20
Proof Pressure, bar	26.54	Prop Volume, l	18.81
Cryo Proof, bar	N/A	Max Design Wt, kg	15.42
Burst Pressure, bar	35.16	Minimum Wall, MM	0.711

Notes:

- 1: Tooling owned by Northrop Grumman
- 2: Special processing required to achieve weight
- 3: Launch Vehicle is Shuttle or Ariane
- 4: 20 Mounting Tabs
- 5: PMD design is LMSC proprietary
- 6: Tube protectors are SK 903 & SK 904
- 7: Lockheed Missiles & Space (LMSC)
- 8: LMSC SK6213320, FACC 541401-1
- 9: Perforated Sheet, SK-870
- 10: Complex Vane, Cylinder Trap
- 11: Fracture Critical

FORGINGS

FORGINGS P/N	SUPPLIER	Die No
80-301061-1 (2)		
RING FORGING	RING SIZE, (Rough Machined)	
80-301063-1, Tab	35.0 +.12 OD x 33.5 -.12 ID x 3.38 +.12 Lg	

TUBE TYPE AND SIZE

TRANSITION	SIZE
80-301001-1, Propellant	.375 OD x .020 Wall
80-301002-1, Pressurant	.250 OD x .020 Wall

