

TANK TYPE Simple Pmd	MOUNT Bosses	LOCATION Girth	PMD DEVICE Vane & Channel
--------------------------------	------------------------	--------------------------	-------------------------------------

This is a 19-inch spherical pressure vessel constructed of 6AL-4V titanium. A vane & channel type propellant management device (PMD) is provided to expel fuel under low or zero gravity conditions. Mounting is accomplished by three (3) lugs parallel with & adjacent to the mid-plane.

Part Number 80353-1

SIZE: 19.03-inch ID Sphere
SIZE: 483-mm

ISO 9001 & AS 9100 REGISTERED

APPLICABLE DOCUMENTS		TANK CHARACTERISTICS		ACCEPTANCE TESTS
Acceptance Test Procedure	50-000371	Operating Pressure, psig	400	Preliminary Examination of Product Radiographic & Penetrant Inspection Volumetric Capacity Test Proof Pressure Test Post-Proof Volumetric Inspection Cryogenic Proof Pressure Test Post Cryogenic Proof Dimensional Test External Leakage Test Weld Quality Inspection Weight Cleanliness Verification
Protoflight Test Procedure	50-000372	Proof Pressure, psig	500	
Protoflight Test Report	56-000139	Cryo Proof, psig	750	
Cleaning Procedure, Tank	CPP 3685	Burst Pressure, psig	600	
Cleaning Procedure, PMD	CPP 3546	Total Volume, ci	3,575	
		Prop Volume, ci	3,575	
		Max Design Wt, lbs	8.50	
		Minimum Wall, inch	0.024	
		TANK CHARACTERISTICS (Metrics)		
		Operating Pressure, bar	27.58	
		Proof Pressure, bar	34.47	
		Cryo Proof, bar	51.71	
		Burst Pressure, bar	41.37	
		Total Volume, l	59.56	
		Prop Volume, l	59.56	
		Max Design Wt, kg	3.86	
		Minimum Wall, MM	0.610	

Notes:

- 1: Tooling belongs to Northrop Grumman
- 2: Forging die is controlled by GE/ASD
- 3: Tube protector is SK 1222
- 4: Foster Engineering
- 5: Fracture Analysis Plan, 88-045
- 6: Stress Report, Tank, 88-052
- 7: Stress Report, PMD, 88-061
- 8: Fracture Analysis Report, Tank, 88-003
- 9: Fracture Critical

FORGINGS		
FORGINGS P/N	SUPPLIER	Die
2306579-2 (2)		
RING FORGING		RING SIZE. (Rough machined)
80-353063-1, Channel	19.18 +.13 ODx17.62 +/- .06 IDx1.0 +.25 Lg	

TUBE TYPE AND SIZE	
TITANIUM	SIZE
80-304009-1, Inlet	.250 OD x .016 Wall
80-304009-3, Outlet	.250 OD x .016 Wall

TUBE TYPE AND SIZE	
TITANIUM	SIZE
80-304009-1, Inlet	6.35 x .406mm
80-304009-3, Outlet	6.35 x .406mm

