



TANK TYPE	MOUNT	LOCATION	PMD DEVICE
Complex PMD	Bosses & lugs	Polar & Girth	Note 8

This is a spherical pressure vessel constructed of 6AL-4V titanium. Fuel expulsion is provided by a channel type propellant management device (PMD). Mounting is accomplished on polar bosses & lugs parallel with & adjacent to the mid-plane.

ATK Part Number 80324-1

SIZE: 32.84-inch ID Sphere
SIZE: 834-MM ID Sphere

ISO 9001 & AS 9100 REGISTERED

APPLICABLE DOCUMENTS	TANK CHARACTERISTICS	ACCEPTANCE TESTS
Bubble Point Test Procedure 50-000310	Operating Pressure, psig 400 Total Volume, ci 18,390	Inspection
Acceptance Test Procedure 50-000311	Proof Pressure, psig 600 Prop Volume, lbs 920	Pre-Proof Internal Volume
Qualification Test Procedure 50-000312	Cryo Proof, psig No Max Design Wt, lbs 44.50	Proof Pressure
Materials & Processes List 54-000075	Burst Pressure, psig 800 Minimum Wall, inch 0.043	Post-Proof Internal Volume
Weight Analysis 54-000086		Drain Test
Fracture Analysis Plan 54-000071		Internal Vacuum
Qualification Test Report 56-000115		Leak Test
Partial Qual Test Report 56-000144		Radiographic Inspection
Cleaning Procedure, PMD CPP 3546		Penetrant Inspection
Cleaning Procedure, Tank CPP 3644		Final Inspection of Product
		Cleanliness Test

Notes:

- 1: Tooling (99 PCS) belongs to LMSC/Govt
- 2: The PMD design is LMSC proprietary
- 3: Inlet Tube Protector, SK-980
- 4: Outlet Tube Protector, SK-978
- 5: Perforated Sheet, .063 holes, SK-990
- 6: Complex Gallery
- 7: Stress & FM Analysis, PMD (Wada), 205A
- 8: Stress & FM Analysis, Tank (Wada), 205B
- 9: PMD Stress/Fracture Analysis, 54-000086
- 10: Stress/Fracture Report, 54-000084
- 11: Fracture Critical

TANK CHARACTERISTICS (Metrics)			
Operating Pressure, bar	27.58	Total Volume, l	301.36
Proof Pressure, bar	41.37	Prop Volume, l	15.08
Cryo Proof, bar	No	Max Design Wt, kg	20.19
Burst Pressure, bar	55.16	Minimum Wall, MM	1.092

FORGINGS P/N	SUPPLIER	Die No
80-324061-1 (2)		
ROLL RINGS		SIZE
Roll Ring, 80-324161-16.25 +.00-.12 ID x 20.5 +.12-.00 OD x 1.81 +.1-.00		
Roll Ring, 80-324160-1 18 +.00-.25 ID x 20.13 +.25-.00 OD x 1 +.25-.00		

QUALIFICATION TESTS
Inspection
Pre-Proof Internal Volume
Proof Pressure
Post-Proof Internal Volume
Internal Pressure Cycling
Drain Test
Internal Vacuum Cycling
Leak Test
Radiographic Inspection
Penetrant Inspection
Cleanliness Test
Resonant Frequency Search
Accerlation Test
Drain Test
Radiographic Inspection
Leak Test
Final Inspection of Product
Burst Pressure

TUBE TYPE AND SIZE		
TITANIUM		SIZE
80-324020-5, Inlet		.250 OD x .020 Wall (6.35 x .5 mm)
80-324050-5, Outlet		.375 OD x .020 Wall (9.525 x .5 mm)

