

FUEL TYPE NTO / MMH	MOUNT Polar	LOCATION Boss	PMD DEVICE yes
-------------------------------	-----------------------	-------------------------	--------------------------

This tank is an all-welded pressure vessel with hemispherical ends. It is mounted by 8 threaded holes in the polar boss of the propellant hemisphere, and 4 threaded holes in the polar boss of the pressurant hemisphere. The tank contains an internally-mounted propellant management device (PMD), with perforated sheet to provide gas-free liquid propellant under low or zero gravity.

Part Number 80474-1

SIZE: 29.8 -inch ID Sphere
SIZE: 756.92 -mm ID Sphere

ISO 9001 & AS 9100 REGISTERED

APPLICABLE DOCUMENTS	TANK CHARACTERISTICS	ACCEPTANCE TESTS
-----------------------------	-----------------------------	-------------------------

Qualification Test Procedure	50-000644
Acceptance Test Procedure	50-000645
Bubble Point Procedure	50-000646
Fracture Analysis Plan	54-000225
Qualification Test Report	56-000217
Cleaning	CPP 3979

Operating Pressure, psig	250	Total Volume, ci	13,750
Proof Pressure, psig	313	Prop Volume, ci	98% FF
Cryo Proof, psig	No	Max Design Wt, lbs	18.6
Design Burst Pressure, psig	375	Minimum Wall, inch	0.021
Actual Burst Pressure, psig	565		

Preliminary Inspection of Product
Mass Measurement
Pre-Proof Volumetric Capacity, Ambient Proof Pressure
Visual Inspection
Post-Proof Volumetric Capacity
Expulsion Test
Tank Assembly Bubble Point Test
Radiographic Inspection & Dye Penetrant Inspection
External Leakage Test
Dry Random Vibration Test, and Visual Inspection
Tank Assembly Bubble Point Test
External Leakage Test
Radiographic Inspection
Dye Penetrant Inspection
Cleanliness Check & Visual Inspection
Data Review

PROGRAM INFORMATION

Program	Classified
Customer	Praxis/NRL
Customer P/N	N/A
Original Job No	0324
Customer Installed Device	No
Customer Controlled Design	No

Operating Pressure, Bar	17.24	Total Volume, l	225.32
Proof Pressure, Bar	21.55	Prop Volume, l	98% FF
Cryo Proof, Bar	No	Max Design Wt, Kg	8.44
Burst Pressure, Bar	25.85	Minimum Wall, MM	0.533
Actual Burst, Bar	38.95		

FORGINGS P/N	SUPPLIER	Die
80-474061-1 (2)	ARCTURUS	3912

TUBE TYPE AND SIZE

TRANSITION	SIZE
80-466001-3	0.375" OD x 0.035" Wall
80-466001-1	0.250" OD x 0.035" Wall (9.525 mm x 0.889 mm) (6.35 mm x 0.889 mm)

QUALIFICATION TESTS

Preliminary Inspection of Product
Mass Measurement
Pre-Proof Volumetric Capacity
Proof Pressure Test
Post-Proof Volumetric Capacity
MEOP Pressure Cycling Test
Proof Pressure Cycling Test
Tank Assembly Bubble Point Test
Radiographic and Dye Penetrant Inspection
Negative pressure
Acceptance, Qual. Level Dry Random Vibration Test (3 axes)
Bubble Point and Visual Inspection
Wet Random Vibration Test, Sine Burst (3 axes)
Bubble Point and Visual Inspection
Volumetric Capacity & Expulsion Test
External Leakage Test
Tank Assembly Bubble Point Test
Radiographic Inspection
Dye Penetrant Inspection
Burst Test

