

<b>TANK TYPE</b>	<b>MOUNT</b>	<b>LOCATION</b>	<b>PMD DEVICE</b>
Complex PMD	Tabs	Girth	Channel, Trap & Screen

This tank assembly is a pressure vessel with hemispherical ends & a cylindrical section of all welded construction. It is mounted by 32 circumferential tabs with nut plates located on one of the hemispheres near the cylindrical section weld joint. The tank contains an internally mounted propellant management device (PMD), with perforated sheet & woven screen, 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.

**Part Number 80367-1**

**SIZE: 48.9" ID x 59.66" Long**  
**SIZE: 1242 x 1515 mm**

## ISO 9001 & AS 9100 REGISTERED

APPLICABLE DOCUMENTS		TANK CHARACTERISTICS		ACCEPTANCE TESTS	
Acceptance Test Procedure	50-000396	Operating Pressure, psig	250	Preliminary Inspection of Product Mass Measurement Pre-Proof Volumetric Capacity Ambient Proof Visual Inspection Post Proof Volumetric Capacity External Leakage Test Bubble Point Test Sine and Random Vibration Test Ambient Proof Expulsion Test Bubble Point Test External Leakage Test Radiographic Inspection Dye Penetrant Cleanliness Data Review	
Qualification Test Procedure	50-000397	Proof Pressure, psig	313		
Bubble Point Test procedure	50-000400	Cryo Proof, psig	430		
Protoflight Test Procedure	50-000400	Burst Pressure, psig	375		
Bubble Point Test Procedure	50-000417	Total Volume, ci	77.800		
Materials List	54-000122	Prop Volume, ci	77.800		
Processes List	54-000123	Max Design Wt, lbs	93.5		
Qualification Test Report	56-000155	Minimum Wall, inch	0.031		
Cleaning, PMD	CPP 3546	<b>TANK CHARACTERISTICS (Metrics)</b>			
Cleaning, Tank	CPP 3722	Operating Pressure, bar	17.24		Total Volume, l
		Proof Pressure, bar	21.58	Prop Volume, l	1,274.93
		Cryo Proof, bar	29.65	Max Design Wt, Kg	42.41
		Burst Pressure, bar	25.85	Minimum Wall, MM	0.787
<b>Notes:</b>		<b>FORGINGS</b>		<b>QUALIFICATION TESTS</b>	
1: Tooling owned by Northrop Grumman		<b>FORGINGS P/N</b>		Preliminary Inspection of Product Mass Measurement Pre-Proof Volumetric Capacity Ambient Proof Pressure Post-Proof Volumetric Capacity Cryogenic Proof Pressure Visual Inspection Post-Proof Volumetric Capacity External Leakage Test Tank Assembly Bubble Point Test Tank Cleanliness Sine & Random Vibration Test Tank Assembly Bubble Point Test Acceleration Test & Visual Inspection Pressure Cycling Test & Visual Inspection Expulsion Test Tank Assembly Bubble Point Test External Leakage Test Radiographic Inspection Dye Penetrant Inspection Cleanliness Check Burst Test	
2: This tank is similar to P/N 80363-1		<b>SUPPLIER</b>			
3: Center body, channel, & trap vent screens are SS.		<b>Die</b>			
4: PMD is proprietary to Loral		<b>RING FGG</b>			
5: Brunswick Wintec Proprietary*		<b>RING SIZE, (Rough Machined)</b>			
6: Weld Qual Ring = SK1285		80-363061-1 (2)			
7: Tube protectors are SK 1314 & SK 1315		80-363063-3, Cyl			
8: Stress Analysis, Tank (Foster), 92-014A		49.57 +/- .09 OD x 48.4 +/- .09 ID x 9.37 +/- .06 Lg			
9: Fracture Mechanics Analysis(Foster), 92-015A		80-363065-1, Tab			
10: Stress Analysis, PMD, 92-016A		49.75 +/- .09 OD x 48.31 +/- .09 ID x 3.19 +/- .06 Lg			
11: Fracture Critical		<b>TUBE TYPE AND SIZE</b>			
		<b>TRANSITION</b>			
		80-363001-1 (2)			
		.500 OD x .028 Wall			
		12.7 x .711 mm			

