



TANK PMD	MOUNT Tabs	LOCATION Girth Weld	PMD DEVICE Complex
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The Tank Assembly is a hemispherical pressure vessel with 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 girth weld joint. The tank contains an internally-mounted propellant management device (PMD), with perforated sheet and woven screen, 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. The PMD has been designed to allow horizontal handling with low fill fractions. The PMD has also been modified by the addition of a slosh control device to allow multiple erection and de-erection cycles.

ATK Part Number 80442-1

SIZE: 48.9" ID x 63.335" Long

SIZE: 1242.06-mm x 1608.71-mm

ISO 9001 & AS 9100 REGISTERED

APPLICABLE DOCUMENTS		TANK CHARACTERISTICS		ACCEPTANCE TESTS																	
Protoflight	50-000581	Operating Pressure, psig	250	Total Volume, ci	87,575																
Acceptance Test Procedure	50-000580	Proof Pressure, psig	312.5	Prop Volume, ci																	
Bubble Point Test Procedure	50-000584	Cryo Proof, psig	NA	Max Design Wt, lbs	100.5																
Materials List	54-000160	Burst Pressure, psig	375	Minimum Wall, inch	0.031																
Processes List	54-000161	TANK CHARACTERISTICS (Metrics) Operating Pressure, Bar 17.24 Total Volume, l 1,435.11 Proof Pressure, Bar 21.55 Prop Volume, l 0.00 Cryo Proof, Bar NA Max Design Wt, Kg 45.59 Burst Pressure, Bar 25.85 Minimum Wall, MM 0.787																			
Cleaning	CPP 3849																				
Notes:																					
1: Tooling owned by ATK 2: Tank shell is similar to P/N 80366-1 & 80403 3: PMD design is by PMD Technology 4: Tube protectors are SK 1353 & SK 1354 5: Vibration Fixture: T-4646.																					
		FORGINGS <table border="1"> <thead> <tr> <th>FORGINGS P/N</th> <th></th> <th>SUPPLIER</th> <th>Die</th> </tr> </thead> <tbody> <tr> <td>80-363061-1</td> <td>Hemi Forge</td> <td>Ladish</td> <td>TR038</td> </tr> <tr> <td>80-363063-3</td> <td>Center Section</td> <td>Carlton</td> <td></td> </tr> <tr> <td>80-363065-1</td> <td>Tab Ring</td> <td>Forged Metals</td> <td></td> </tr> </tbody> </table>		FORGINGS P/N		SUPPLIER	Die	80-363061-1	Hemi Forge	Ladish	TR038	80-363063-3	Center Section	Carlton		80-363065-1	Tab Ring	Forged Metals		Preliminary Inspection of Product Mass Measurement Pre-Proof Volumetric Capacity Ambient Proof Pressure Visual Inspection Post Proof Volumetric Capacity External Leakage Test Bubble Point Test Sine Vibration Test and Visual Inspection Pressure Drop Test Bubble Point Test External Leakage Test Radiographic Inspection Dye Penetrant Inspection Cleanliness Check and Visual Inspection Data Review	
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TUBE TYPE AND SIZE	
TITANIUM	SIZE
80-380002-1	.375 OD X .020 Wall
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