

TANK TYPE PMD PROPELLANT	MOUNT SIDEMOUNTS POLAR BOSS	LOCATION HEMISPHERE	NORTHROP GRUMMAN
<p>The Tank is a 35.6" dia. X 120.87" long, carbon overwrapped titanium tank with a polar mounted vane propellant Management device. The liner is constructed of solution treated and aged, 6Al-4V titanium machined hemisphere forgings, welded to a 0.032" thick 6Al-4V titanium, rolled and welded sheet stock cylinder. Mounting is provided by four bonded sidemounts and a polar boss attachment on the Pressurant hemisphere. The tank contains an internal PMD (propellant management device) assembly, constructed from titanium sheet and titanium woven screen. The PMD serves 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 propellant and pressurant ports are 3/8" titanium tubes.</p>			
			Part Number 80560-1
			SIZE:35.44" DIA x 120.87" LONG SIZE:900.176mm DIA x 3070.098 mm LONG
ISO 9001 & AS 9100 REGISTERED			

APPLICABLE DOCUMENTS	
Acceptance Test Procedure	50-000793
Qual Test Procedure-QBS	50-000591
Qual Test Report-QBS	56-000224
Stress and Dynamics Report	
FMECA	
Cleaning	CPP 4062

TANK CHARACTERISTICS			
Operating Pressure, psig	300	Total Volume, in ³	103.555
Proof Pressure, psig		Max Design Wt, lbs	141.7
Cryo Proof, psig	N/A	Minimum Wall, inch	0.026
Burst Pressure, psig	480	Qual Tank Mass	
Actual Burst, psig	640		

ACCEPTANCE TESTS
Examination of Product
Vol. Determination and Proof Pressure Test
Static Load Test
Pressure Drop Test
Tank Assembly Bubble Point Test
External Leakage Test
Examination of Product
Cleanliness
Data Review

TANK CHARACTERISTICS (Metrics)			
Operating Pressure, bar	21	Total Volume, l	1,697
Proof Pressure, bar		Max Design Wt, kg	64.27
Cryo Proof, bar	N/A	Minimum Wall, MM	0.660
Burst Pressure, bar	33	Qual Tank Mass	-
Actual Burst, bar	44		

HEMISPHERE FORGINGS	
HEMI P/N	QTY
80-391061-1	2

80434-1 QUALIFICATION TESTS
Examination of Product
Vol. Determination and Proof Pressure Test
MEOP and Proof Cycle Life Test
Load Test
Tank Assembly Bubble Point Test
External Leakage Test
Vibration Test
Volumetric Capacity Test
Pressure Drop & Expulsion Efficiency
External Pressure test
Tank Assembly Test Bubble Point
External Leakage Test
Examination of Product
Burst Test
Data review

ROLLED AND SEAM WELDED CYLINDER		
P/N	QTY	SIZE
80-391100-1	2	0.032" Thick x 35.326" ID X 48.00" LONG
0.8128mm Thick x 897.2804mm ID x 1219.2mm LONG		

TUBE TYPE AND SIZE		
Ti 3AL-2.5V	QTY	SIZE
80560-51	1	0.375" OD x 0.002" Wall x 7.60" LONG
		9.525mm OD x 0.0508mm Wall x 193.04mm LONG
80-391007-5	1	0.375" OD X0.25 Wall x 2.20" LONG
		9.525mm OD x 6.35mm Wall x 55.88mm LONG

