

TANK TYPE Simple NTO	MOUNT Pads	LOCATION Cylinder	PMD DEVICE Vane
<p>This tank is a 21-inch x 48-inches long titanium tank. The tank is constructed of titanium 6Al-4V with a nominal membrane thickness of 0.029"-0.032". Mounting is provided by 1 welded sidemount & 4 strut supports located on the tank inlet & outlet bosses. The tank contains an internal Propellant Management Device, constructed from titanium sheet & titanium woven screen. The PMD serves to maintain separation of liquid propellant (NTO) & gaseous pressurant, & to provide predictable gas-free liquid propellant expulsion from the tank under low or zero gravity conditions.</p>			

Part Number 80394-1

SIZE: 21.25-inch ID x 47.8-inch Long
SIZE: 540 x 1214-mm

ISO 9001 & AS 9100 REGISTERED

APPLICABLE DOCUMENTS		TANK CHARACTERISTICS		ACCEPTANCE TESTS		
Qualification Test Procedure	50-000489	Operating Pressure, psig	300	Total Volume, ci	13,979	Examination of Product Bubble Point Test Volume & Proof Test Pressure Drop Test Vibration Test Bubble Point Test External Leak Test Radiographic Inspection Examination of Product Cleanliness Verification Data Review & Ship
Qualification Test Report	56-000168	Proof Pressure, psig	375	Prop Volume, ci		
Acceptance Test Procedure	50-000491	Cryo Proof, psig	NA	Max Design Wt, lbs	25.70	
Bubble Point Test Procedure	50-000492	Burst Pressure, psig	450	Minimum Wall, inch	0.017	
Fracture Mechanics Plan	54-000148	TANK CHARACTERISTICS (Metrics)				
Cleaning	CPP 3820	Operating Pressure, Bar	20.68	Total Volume, l	229.08	
		Proof Pressure, Bar	25.85	Prop Volume, l		
		Cryo Proof, Bar	NA	Max Design Wt, Kg	11.66	
		Burst Pressure, Bar	31.03	Minimum Wall, MM	0.432	

- Notes:**
- 1: Tooling belongs to Northrop Grumman
 - 2: Stress/Fracture Report, Tank, 255
 - 3: Stress/Fracture Report, PMD, 251-A
 - 4: Fracture Critical

PROGRAM INFORMATION

Program	A2100, Oxidizer, A Size
Customer	Lockheed Martin
Customer P/N	20053743P47
Original Job No.	9521 & 9522
Customer Installed Device	No
Customer Controlled Design	

FORGINGS

FORGINGS P/N	SUPPLIER	Die No
80-390061-1	ARCTURUS	
RING FORGING	RING SIZE, Rough Machined	
80-390063-5, Cylinder	22.38+.12,-.03ODx20.93+.03,-.09IDx25.75+.25,-.00	

TUBE TYPE AND SIZE

TITANIUM	SIZE
80-390040-5 (2)	

QUALIFICATION TESTS

Examination of Product
Bubble Point Test
Volume Determination
Proof Pressure Test
Proof MEOP Pressure Cycle Life Test
Pressure Drop & Expulsion Efficiency Test
Vibration Testing
Bubble Point Test
External Leakage Test
Radiographic & Penetrant Inspection
Burst Pressure Test
Data Review

