TANK & FUEL TYPE	MOUNT	LOCATION	PMD DEVICE
Simple PMD-NTO	Pad & Flex Plate	Cylinder & Ports	Vane

NORTHROP GRUMMAN

The new generation AX Oxidizer tank is identical to the qualified design except the titanium screen in the PMD has been replaced with perforated sheet. The PMD serves to maintain a volume of predictable NTO expulsion from the tank under low or zero gravity conditions. The tank is constructed from titanium 6Al-4V with a nominal membrane thickness of 0.016"-0.032'. Mounting is provided by 1 welded sidemount & 4 strut supports located on the tank inlet and outlet bosses. The propellant & pressurant ports are 3/8" titanium tubes.

Part Number 80504-1

SIZE: 21.25" ID x 65.03" Long
SIZE: 540 x 1652-mm

ISO 9001 & AS 9100 REGISTERED

APPLICABLE DOCUMENTS

Acceptance Test Procedure	50-000511
Fracture Mechanics Plan	See Note 4
Cleaning	CPP 3820

Notes:

1: Tooling belongs to Northrop Grumman
2: This tank is Proton Launch Qualified
3: Fracture Critical
4: This tank is a derivative of 80405-1.

PROGRAM INFORMATION

Program	BSAT-3A
Customer	Lockheed Martin
Customer P/N	N/A
Original Job No.	0610
Customer Installed Device	No
Customer Controlled Design	N

TANK CHARACTERISTICS

Operating Pressure, psig	300	Total Volume, ci	19,984
Proof Pressure, psig	375	Prop Volume, ci	19,984
Cryo Proof, psig	NA	Max Design Wt, lbs	33.50
Burst Pressure, psig	450	Minimum Wall, inch	0.017

TANK CHARACTERISTICS (Metrics)

Operating Pressure, Bar	20.68	Total Volume, l	327.48
Proof Pressure, Bar	25.85	Prop Volume, l	327.48
Cryo Proof, Bar	NA	Max Design Wt, Kg	15.20
Burst Pressure, Bar	31.03	Minimum Wall, MM	0.432

FORGINGS

FORGINGS P/N	SUPPLIER	Die No
80-390061-1	ARCTURUS	

RING FORGING	RING SIZE, Rough Machined
80-390063-1	21.87 +.12,ODx20.93IDx22 +.25, -.00L
80-390063-3	22.38 +.12,ODx20.93, -.09IDx 22 +.25, -.00L

TUBE SIZE AND TYPE (inches)

3.OAL-2.5V Titanium	
80-390040-5	.375 x .250 Wall inches

TUBE SIZE AND TYPE (metrics)

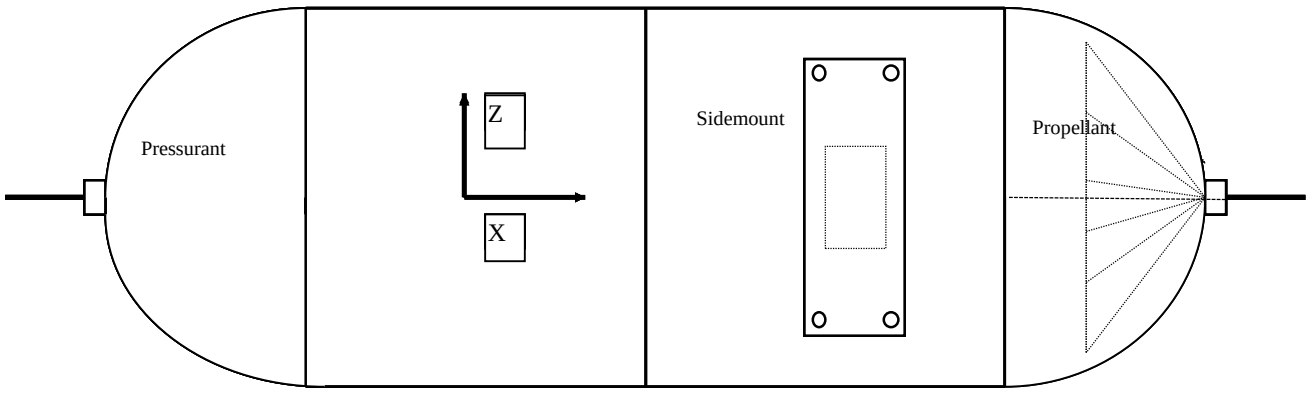
3.OAL-2.5V Titanium	
80-390040-5	7.62 x 6.35 mm

ACCEPTANCE TESTS

Examination of Product
Volume & Proof Test
Vibration Test
External Leakage
Radiographic & Penetrant Inspection
Examination of Product
Cleanliness Verification
Data Review & Ship

QUALIFICATION TESTS

Qual by similiarity on 80405-1.



6033 East Bandini Boulevard
Commerce, California 90040

Telephone (323) 722-0222
Facsimile (323) 721-6002