



<b>FUEL TYPE</b> Xenon	<b>MOUNT</b> Polar	<b>LOCATION</b> Boss	<b>PMD DEVICE</b> no
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The Xenon Propellant Tank is a composite overwrapped pressure vessel (COPV) with a liner constructed of a center cylinder welded to end domes and overwrapped with T1000 carbon fiber. The CP-70 titanium heads, and CP-3 cylinder have a nominal .032" membrane thickness. Mounting is provided by polar bosses located on the tank centerline axis.

**ATK Part Number 80458-201**  
**SIZE: 16.5" ID x 21" Long**  
**ID is @ Ambient Temperature**  
**SIZE: 419.1 mm ID x 533.4 mm Long**

**ISO 9001 & AS 9100 REGISTERED**

<b>APPLICABLE DOCUMENTS</b>	<b>TANK CHARACTERISTICS</b>	<b>QUALIFICATION TESTS for 80458-1</b>
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Acceptance Test Procedure	50-000625
Qualification Test Procedure	50-000626
QBS Report	See note 1
Fracture Analysis Plan	54-000230
Stress Analysis Report	54-000231
Qualification Test Report	56-000206
Range Safety Compliance Report	56-000207
Cleaning	CPP 3970

Operating Pressure, psig	2,700	Total Volume, ci	3,300
Proof Pressure, psig	3,375	Prop Volume, ci	3,300
Cryo Proof, psig	No	Max Design Wt, lb	27.0
Design Burst Pressure, psig	4,150	Minimum Wall, in	0.032
Actual Burst Pressure, psig	5926	(80458-1)	

- Examination of Product, Preliminary
- Autofrettage
- Volumetric Measurement
- Proof Pressure Test
- Volumetric Measurement
- Strain Data Correlation
- Volumetric Capacity @ MEOP
- External Leakage Test
- Weight Measurement and Inspection
- Propellant Flow Rate Test
- MEOP Pressure Cycle Life Test
- Proof Pressure Cycle Life Test
- External Leakage Test
- Dynamic Testing Approval
- Sinusoidal Vibration Test
- Sine Burst Test
- Random Vibration Test
- External Leakage Test
- Thermal Cycling Test
- Random Vibration Test
- External Leakage Test
- Weld Quality Inspection
- Examination of Product, Final
- Burst Test

<b>TANK CHARACTERISTICS (Metrics)</b>			
Operating Pressure, Bar	186.16	Total Volume, l	54.08
Proof Pressure, Bar	232.69	Prop Volume, l	54.08
Cryo Proof, Bar	No	Max Design Wt, kg	12.25
Burst Pressure, Bar	286.13	Minimum Wall, mm	0.813
Actual Burst Pressure, Bar	408.58		

**Notes:**

(1) QBS is incld in Stress Anal Report 54-000231

<b>FORGINGS P/N</b>	
80-436061-1	

<b>TUBE TYPE AND SIZE</b>	
<b>TRANS Ti to SS</b>	<b>SIZE</b>
Customer Furnished	

<b>TUBE TYPE AND SIZE (Metrics)</b>	
<b>TRANS Ti to SS</b>	<b>SIZE</b>
Customer Furnished	



**ACCEPTANCE TESTS**

- Examination of Product, Preliminary
- Autofrettage @ Ambient
- Volumetric Measurement @ Ambient
- Proof Pressure Test @ Ambient
- Volumetric Measurement @ Ambient
- Volumetric Capacity @ MEOP
- Boroscope Inspection
- Internal Vacuum Test
- External Leak Test
- Weld Quality Inspection
- Examination of Product, Final
- Final Clean