

FUEL TYPE Xenon	MOUNT Polar	LOCATION Boss	PMD DEVICE 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.

Part Number 80458-101
SIZE: 16.5" ID x 40.4" Long
ID is @ Ambient Temperature
SIZE: 419.1 mm ID x 1026.16 mm

ISO 9001 & AS 9100 REGISTERED

APPLICABLE DOCUMENTS	
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

TANK CHARACTERISTICS			
Operating Pressure, psig	2,700	Total Volume, ci	7,300
Proof Pressure, psig	3,375	Prop Volume, ci	7,300
Cryo Proof, psig	No	Max Design Wt, lb	42.0
Design Burst Pressure, psi	4,130	Minimum Wall, inc	0.032
Actual Burst Pressure, psig	5926	(80458-1)	

QUALIFICATION TESTS for 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

TANK CHARACTERISTICS (Metrics)			
Operating Pressure, Bar	186.16	Total Volume, l	119.63
Proof Pressure, Bar	232.69	Prop Volume, l	119.63
Cryo Proof, Bar	No	Max Design Wt, Kg	19.05
Burst Pressure, Bar	284.75	Minimum Wall, MM	0.813
Actual Burst Pressure, Bar	408.58		

Notes:
 (1) QBS is included in Stress Anal Report 54-000231

FORGINGS P/N
80-436061-1

TUBE TYPE AND SIZE	
TRANS Ti to SS	SIZE
Customer Furnished	

TUBE TYPE AND SIZE (Metrics)	
TRANS Ti to SS	SIZE
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