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TANK TYPE	MOUNT	LOCATION	PMD DEVICE
PROPELLANT WRAP	Bosses	Polar	NONE

The ETS VIII Xenon Tank is a Composite Overwrapped Pressure Vessel (COPV) whose liner is constructed of a center cylinder welded to end domes. The 6Al-4V titanium liner is a nominal .032 membrane thickness. The composite overwrap is made from T1000 carbon fiber. Mounting is provided by polar bosses located on the tank centerline axis.

ISO 9001 & AS 9100 REGISTERED

ATK Part Number 80412-1

SIZE: 12.8" ID x 27.5" Long
SIZE: 325 x 698.5 mm

APPLICABLE DOCUMENTS

Acceptance Test Procedure	50-000535
Qualification Test Procedure	50-000536
LBB Test Procedure	50-000537
Qualification Report	56-000178
Cleaning	CPP 3870

TANK CHARACTERISTICS

Operating Pressure, psig	2,176	Total Volume, in^3	3,052
Proof Pressure, psig	2,719	Prop Volume, in^3	3,052
Cryo Proof, psig	N/A	Max Design Wt, lbs	15.40
Burst Pressure, psig	3,264	Minimum Wall, inch	0.003
Actual Burst, psig	3,599		

ACCEPTANCE TESTS

Examination of Product, Preliminary
Volume Measurement Test
Proof Pressure Test
Volume Measurement Test
Leakage Test
Resonant Frequency & Vibration Test
Leakage Test
Examination of Product, Final
Cleanliness

Notes:

1: Tooling belongs to ATK
2: Aceleration of 12g's in any direction
3: Compatiable with xenon, helium, nitrogen, argon, IPA, PF-
4: Fracture Critical

TANK CHARACTERISTICS (Metrics)

Operating Pressure, bar	150.03	Total Volume, l	50.01
Proof Pressure, bar	187.47	Prop Volume, l	50.01
Cryo Proof, bar	NO	Max Design Wt, kg	6.99
Burst Pressure, bar	225.04	Minimum Wall, MM	0.081
Actual Burst, bar	248.14		

QUALIFICATION TESTS

Examination of Product, Preliminary
Volume Measurement Test
Proof Pressure Test
Post Proof Volume Measurement
Leakage Test
Pressure Cycling Test
Collapse Pressure Cycle
Leakage Test
MEOP Volumn Measurement
Resonant Frequency & Vibration Test
Penetrant Inspection
Leakage Test
Examination of Product, Final
Burst Test

HEMISPHERE FORGINGS

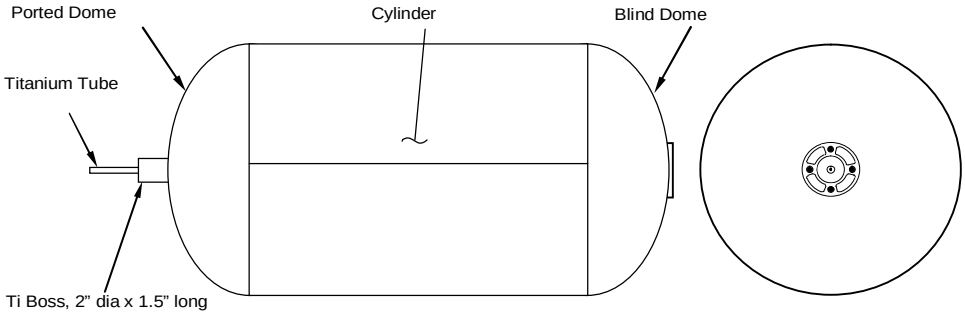
HEMI P/N	QTY	SUPPLIER	Die No
80-412061-1	2		

CYLINDER TYPE

ROLL & SEAM WELDED CENTER SECTION
.032 IN 6AL-4V Ti Sheet

TUBE TYPE AND SIZE

Ti 3AL-2.5V	SIZE
80-412005-3	.250 OD x .020 Wall 6.35 x .508 mm



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