

TANK TYPE DIAPHRAGM	MOUNT BOSS	LOCATION
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The Centaur propellant tank (80600-1) is designed to meet the requirements of the Centaur Performance Specification. The tank is designed using heritage Northrop Grumman tank assemblies 80156 (shell) and 80222 (interface), with a slightly modified weld geometry (thicker).

Part Number 80600-1

SIZE: 9.6" DIA x 10.545" LONG
SIZE: 243.86 mm DIA x 267.843 mm LONG

ISO 9001 & AS 9100 REGISTERED

APPLICABLE DOCUMENTS

Acceptance Test Procedure	50-000918
QBS Report	56-000331
Qual Test Report (80156)	56-000044
Qual Test Report (80222)	56-000066
Protoflight Test Procedure	50-000919
Stress and Dynamics Report	
FMECA	
Cleaning	CPP 4106

TANK CHARACTERISTICS

Operating Pressure, psig	386	Total Volume, in ³	415
Proof Pressure, psig	500 @ 122 °F	Max Design Wt, lbs	2.85
Cryo Proof, psig	N/A	Minimum Wall, inch	0.022
Burst Pressure, psig	1,233	Qual Tank Mass, lbs	2.63
Actual Burst, psig	1,620		

ACCEPTANCE TESTS

- Preliminary Examination of Product
- Volumetric Capacity Measurement, Pre-Proof
- Hydrostatic Proof Test
- Volumetric Capacity Measurement, Post-Proof
- Pressure Drop, Flow Test, & Expulsion Efficiency
- Negative Pressure Capability
- External Leakage
- Internal Leakage
- Non-Destructive Evaluation
- Final Examination of Product
- Cleanliness Verification

TANK CHARACTERISTICS (Metrics)

Operating Pressure, bar	27	Total Volume, l	7
Proof Pressure, bar	34.5 @ 50 °C	Max Design Wt, kg	1.29
Cryo Proof, bar	N/A	Minimum Wall, mm	0.559
Burst Pressure, bar	85	Qual Tank Mass, kg	1.19
Actual Burst, bar	112		

QUALIFICATION TESTS for 80156

- Pressure Loss
- Resonant Frequency Determination
- Vibration
- Acceleration
- Internal Leakage
- Expulsion Cycle Life
- Internal Leakage
- External Leakage
- Burst Pressure

HEMISPHERE FORGINGS

HEMI P/N	QTY
80082-63	2

RING FORGINGS

P/N	QTY	SIZE
80-600063-1	1	8.38" ID x 9.64" OD x 1.39" LONG

TUBE TYPE AND SIZE

Ti 3AL-2.5V	QTY	SIZE
80-600025-3	1	.250" OD x 0.020" Wall x 2" LONG

QUALIFICATION TESTS for 80222

- Vibration
- Internal Helium Leak
- External Helium Leak
- Life Cycle and Expulsion Efficiency
- Internal Leakage
- Post Test Inspection

