

<b>TANK TYPE</b> Diaphragm	<b>MOUNT</b> Base Mount	<b>LOCATION</b> Apex
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The Propellant tank is a light-weight, cylindrical 6AL-4V Titanium Pressure Vessel, with a base mount and two ports (pressurant and propellant). The tank contains an ethylene propylene terpolymer (AF-E-332) rubber diaphragm retained near the girth weld of propellant hemisphere.

**Part Number 80526-1**

**SIZE: 16.5" ID x 19.99" Long**  
**SIZE: 419 x 507.7-mm**

**ISO 9001 & AS 9100 REGISTERED**

**APPLICABLE DOCUMENTS**

Acceptance Test Procedure	50-000721
Qualification Test Procedure	
Qualification Test Report	
Fracture Analysis Plan	
Cleaning	CPP 3954

**TANK CHARACTERISTICS**

Operating Pressure, psig	320	Total Volume, ci	2,996
Proof Pressure, psig	500	Prop Volume, lbs	83
Cryo Proof, psig	NA	Max Design Wt, lbs	12.4
Burst Pressure, psig	640	Minimum Wall, inch	0.020
Actual Burst, psig	1030		

**QUALIFICATION TESTS**

Qual by 80392

**ACCEPTANCE TESTS**

- Examination of Product
- Volume Determination
- Proof Pressure Test
- Expulsion Efficiency
- Radiographic Inspection & Penetrant Inspection
- Internal Helium Leak Test
- External Helium Leak Test
- Determination of Weight & Final Inspection
- Cleanliness Verification
- Final Examinal
- Pressure Cycle Log

**DIAPHRAGM INFORMATION**

Diaphragm P/N	80-288007-1
Diaphragm Mold Tool No	T-2318
Diaphragm Gross Wt	1.42
Diaphragm Material Type	AF-E-332
Diaphragm Material Note 4	90-000075
Diaphragm Processing Note 4	90-000087
N-Ray Inspection Procedure	1002

**TANK CHARACTERISTICS (Metrics)**

Operating Pressure, Bar	22.06	Total Volume, l	49.10
Proof Pressure, Bar	34.47	Prop Volume, Kg	37.7
Cryo Proof, Bar	NA	Max Design Wt, Kg	5.63
Burst Pressure, Bar	44.13	Minimum Wall, MM	0.508
Actual Burst, Bar	71.01		

**FORGINGS**

FORGINGS P/N	SUPPLIER	Die No
80-288061-1, Propellant, Note 3	ARCTURUS	2849A
80011-63, Pressurant	ARCTURUS	2272

**VACUUM RATED**

YES

**Notes:**

- 1: Tooling owned by Northrop Grumman
- 2: This tank is similar to 80288-1 & 80308-1
- 3: Alternate propellant forging is 80-276061-1
- 4: Proprietary Document
- 5: Tube protectors are SK 932 & SK 933
- 6: This tube is used on both sides of the tank
- 7: Burst Pressure shown above is design burst
- 8: Fracture Critical

**Ring Size (Rough Machined)**

80-214065-1, Retainer	16.75 +.06 OD x 15.5 -.06 ID x 1.4 +/- .06 Long
80-288063-1, Cylinder	17 +.09 OD x 15.87 -.09 ID x 3.31 +.12 Long
80-276065-1, Base	9.5 +.09 OD x 7.03 -.09 ID x 1.38 +.09 Long

**TUBE TYPE AND SIZE**

TITANIUM	SIZE
80-526007-1	
38883-301, Aerojet P/N	
80-526019-1, Extension	

**PROGRAM INFORMATION**

Program	Genesis Prop Tank
Customer	ATK Space, Beltsville
Customer P/N	
Original Job No.	
Customer Installed Device	
Customer Controlled Design	

**TUBE SIZE (mm)**

80-526007-1
38883-301, Aerojet P/N
80-526019-1, Extension

