

<b>TANK TYPE</b> DIAPHRAGM	<b>MOUNT</b> Lugs	<b>LOCATION</b> MID-PLANE	<b>PMD DEVICE</b>
<p>The propellant tank is a 23" diameter x 28" long pressure vessel constructed of 6AL-4V titanium. Positive propellant expulsion is provided by a reversing AF-E-332 rubber diaphragm retained at the sphere mid-plane. Mounting is accomplished by (3) lugs parallel with and adjacent to the mid-plane. Connection is made to the propellant and pressurant compartments through tube stubs.</p>			
<h2 style="color: blue; text-decoration: underline;">ISO 9001 &amp; AS 9100 REGISTERED</h2>			

**Part Number 80505-1**

**SIZE: 23.13-inch ID x 28.46 inch Long**

**SIZE: 587.5 mm x 722.9 mm**

APPLICABLE DOCUMENTS		TANK CHARACTERISTICS		QUALIFICATION TESTS					
Acceptance Test Procedure	50-000689	Operating Pressure, psig	760	Total Volume, in <sup>3</sup>	8,521				
Qualification Test Procedure	50-000690	Proof Pressure, psig	980	Prop Volume, in <sup>3</sup>	8,163				
Qual Test Report	56-000247	Cryo Proof, psig	N/A	Prop Volume, lbs	294				
Cleaning	CPP 4005	Burst Pressure, psig	1,188	Max Design Wt, lbs	35.25				
		Actual Burst, psig	1,433	Minimum Wall, inch	0.043				
<b>DIAPHRAGM INFORMATION</b>		<b>TANK CHARACTERISTICS (Metrics)</b>		<b>QUALIFICATION TESTS</b> Preliminary Examination of Product Pre-Proof Volume Determination Proof Pressure, MDP Volume, Proof Pressure Volume Post-Proof Volume Determination Expulsion Efficiency Radiographic Inspection * Penetrant Inspection * Internal Leakage External Leakage Proof Pressure Cycle MDP Pressure Cycle Internal Leakage External Leakage Acceleration Random Vibration Internal Leakage External Leakage Radiographic Inspection * Penetrant Inspection * Expulsion Cycle / Flow Rate Delta Pressure / Expulsion Efficiency Radiographic Inspection * Penetrant Inspection * Burst Test					
Diaphragm P/N	80-505007-1	Operating Pressure, bar	52.40			Total Volume, l	139.64		
Diaphragm Mold P/N	T-7067	Proof Pressure, bar	67.57			Prop Volume, l	133.77		
Diaphragm Gross Wt	3 Lbs.	Cryo Proof, bar	N/A			Prop Volume, kg	133.50		
Diaphragm Matl Type	AF-E-332	Burst Pressure, bar	81.91			Max Design Wt, kg	15.99		
Material Specification, Rubber	MT3-73	Actual Burst, bar	98.80			Minimum Wall, MM	1.09		
Diaphragm Processing	90-000094								
N-Ray Procedure	1002								
		<b>HEMISPHERE FORGINGS</b>							
		<table border="1"> <thead> <tr> <th>HEMI P/N</th> <th>QTY</th> </tr> </thead> <tbody> <tr> <td>80-323061-1</td> <td>2</td> </tr> </tbody> </table>				HEMI P/N	QTY	80-323061-1	2
HEMI P/N	QTY								
80-323061-1	2								
		<b>RING FORGINGS (Roughed Machined)</b>							
		80-323063-1, Retainer 23.44" +/- .06 OD x 22.0" +/- .06 ID x 1.7" +.25 Lg (595.4 mm +/- 1.52 OD x 558.5 mm +/- 1.52 ID x 43.2 mm + 6.4 Lg) 80-323063-7, Cylinder 24.0" +/- .06 OD x 22.44" +/- .06 ID x 5.31" + .25 Lg (609.6 mm +/- 1.52 OD x 569.98 mm +/- 1.52 ID x 134.87 mm + 6.4 Lg) 80-323065-1, Lug 23.87 +.13 OD x 22.25 +/- .06 ID x 4.0 +.25 Lg (606.29 mm + 3.3 OD x 565.15 mm +/- 1.52 ID x 101.6 mm + 6.4 Lg)							

- Notes:**
- 1: Tooling belongs to Northrop Grumman
  - 2: Proprietary Document
  - 3: Tube Protector SK 1505
  - 4: Fracture Critical

**ACCEPTANCE TESTS**

Preliminary Examination of Product
Pre-Proof Volume Determination
Proof Pressure
Post-Proof Volume Determination
Expulsion Efficiency
Radiographic Inspection
Penetrant Inspection
Internal Leakage
External Leakage
Determination of Weight and Final Inspection
Cleanliness Verification
Final Examination

**VACUUM RATED**

YES

**TUBE TYPE AND SIZE**

CRES 304L	SIZE
80-505002-1	0.500" OD x 0.035" Wall (12.7mm x 0.89 mm Wall)
80-505002-3	1.000" OD x 0.035" Wall (25.4 mm x 0.89 mm Wall)

