

<b>TANK TYPE</b> Diaphragm	<b>MOUNT</b> Lugs	<b>LOCATION</b> Girth
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This is a 22-inch spherical pressure vessel constructed of 6Al-4V titanium. Positive fuel expulsion is provided by a reversible ethylene-propylene terpolymer (AF-E-332) rubber diaphragm retained (welded in) at the sphere mid-plane. Mounting is accomplished by four (4) lugs parallel and adjacent to the sphere mid-plane.

**Part Number 80453-1**

**SIZE: 22.14-inch ID Sphere**  
**SIZE: 562.3-mm**

**ISO 9001 & AS 9100 REGISTERED**

APPLICABLE DOCUMENTS	
Acceptance Test Procedure	50-000610
Fracture Analysis Plan	54-000210
Cleaning	CPP 3961

TANK CHARACTERISTICS			
Operating Pressure, psig	350	Total Volume, ci	5,630
Proof Pressure, psig	525	Prop Volume, ci	4,410
Cryo Proof, psig	NA	Max Design Wt, lbs	15.5
Burst Pressure, psig	700	Minimum Wall, inch	0.027
Actual Burst, psig	860		

QUALIFICATION TESTS
Qual by 80259-1

DIAPHRAGM INFORMATION		
Diaphragm P/N		80-259007-1
Diaphragm Mold Tool No		T-1261
Diaphragm Gross Wt		2.47 (1.12 Kg)
Diaphragm Material Type		AF-E-332
Diaphragm, Material	Note 2	90-000075
Diaphragm Processin	Note 2	90-000087
N-Ray Inspection Procedure		1002

TANK CHARACTERISTICS (Metrics)			
Operating Pressure, Bar	24.13	Total Volume, l	92.26
Proof Pressure, Bar	36.20	Prop Volume, l	72.27
Cryo Proof, psig	NA	Max Design Wt, Kg	7.03
Burst Pressure, psig	48.26	Minimum Wall, MM	0.686
Actual Burst, Bar	59.29		

ACCEPTANCE TESTS
Examination of Product
Pre-Proof Volume Determination
Proof Pressure Test
Post-Proof Volume Determination
Internal (Diaphragm) Leakage Test
External Leakage Test
Penetrant Inspection
Radiographic Inspection
Weight Determination
Final Examination of Product
Cleanliness Verification

**Notes:**

- 1: Tooling owned by Northrop Grumman
- 2: Proprietary Document
- 3: This tank similar to 80388-1
- 4: Tube protector is SK 1307
- 5: Fracture Critical

FORGINGS		
FORGINGS P/N	SUPPLIER	Die No
80-346061-1 (1)		
80-203061-1 (1)		

VACUUM RATED
YES

RING SIZE, (Rough Machined)	
RING FORGING	RING SIZE, (Rough Machined)
80-203009-11, Retainer	24.4 +.06 OD x 21 -.06 ID x 1.28 +.06 Lg
80-298063-1, Lug	25.81 +.09 OD x 22.38 -.09 ID x .71 +.06 Lg

TUBE TYPE AND SIZE	
TRANSITION	SIZE
80-385001-1 (2)	.250" OD x 3.74" Long

TUBE SIZE	
80-385001-1 (2)	9.525 x .889mm

