



TANK TYPE	MOUNT	LOCATION
Diaphragm	Lugs	Girth

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.

ISO 9001 & AS 9100 REGISTERED

ATK Part Number 80388-1

SIZE: 22.14-inch ID Sphere

SIZE: 562.3-mm

APPLICABLE DOCUMENTS		TANK CHARACTERISTICS	
Acceptance Test Procedure	50-000479	Operating Pressure, psig	350
Cleaning	CPP 3813	Proof Pressure, psig	525
		Cryo Proof, psig	NA
		Burst Pressure, psig	700
		Actual Burst, psig	935
		Total Volume, ci	5,555
		Prop Volume, ci	4,410
		Max Design Wt, lbs	15.5
		Minimum Wall, inch	0.027

QUALIFICATION TESTS
N/A

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 Processir	Note 2 90-000087
N-Ray Inspection Procedure	1002

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 ATK
 - 2: Proprietary Document
 - 3: This tank similar to 80259-1
 - 4: Tube protector is SK 1307
 - 5: Fracture Critical

TANK CHARACTERISTICS (Metrics)	
Operating Pressure, Bar	24.13
Proof Pressure, Bar	36.20
Cryo Proof, Bar	NA
Burst Pressure, Bar	48.26
Actual Burst, Bar	64.46
Total Volume, l	91.03
Prop Volume, l	72.27
Max Design Wt, Kg	7.03
Minimum Wall, MM	0.686

VACUUM RATED
YES

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

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
80-259001-5	.247 OD x .010 Wall
80-259001-3	.475 OD x .020 Wall

TUBE SIZE (mm)	
80-259001-5	6.274 x .254 mm
80-259001-3	12.06 x 0.508 mm

