TANK TYPE	MOUNT	LOCATION
DIAPHRAGM	PEDESTAL	APEX

NORTHROP GRUMMAN

This is a 13-inch pressure vessel constructed of 6Al-4V titanium. The tank shell consists of a elliptical pressurant head and a hemispherical head. Positive fuel expulsion is provided by a reversible ethylene-propylene terpolymer (AF-E-332) rubber diaphragm retained (welded in) at the girth. Mounting is accomplished on a pedestal mount located on the apex of the propellant hemisphere.

Part Number 80444-1

SIZE: 12.88 inch ID
SIZE: 327- mm
Oblate Spheroid

ISO 9001 & AS 9100 REGISTERED

APPLICABLE DOCUMENTS

Acceptance Test Procedure	50-000589
Protoflight Test Procedure, Note 5	50-000589
Qualification Test Procedure	see Note 7
Fracture Analysis Plan	54-000211
Qualification Test Report	see Note 7
Cleaning	CPP 3668

DIAPHRAGM INFORMATION

Diaphragm P/N		80-216007-1
Diaphragm Mold Tool No		T-1262
Diaphragm Gross Wt		1.0
Diaphragm Material Type		AF-E-332
Diaphragm, Material	Note 2	90-000075
Diaphragm Processing	Note 2	90-000087
N-Ray Inspection		1002

Notes:

1: Majority of this tooling is owned by NG
2: Proprietary Document
3: This tanks is a derivative of 80342-1 and 80216
4: Tube protectors are SK 1127 & SK 1128
5: Protoflight sine vibration testing added to Acceptance Test Procedure
6: Fracture Critical
7: QTP & QTR for tank P/N 80342-1
8: Rupture pressure of 80342-1

TANK CHARACTERISTICS

Operating Pressure, psig	480	Total Volume, in^3	920
Proof Pressure, psig	720	Prop Volume, in^3	882
Cryo Proof, psig	NA	Max Design Wt, lbs	6.0
Burst Pressure, psig	945	Minimum Wall, inch	0.021
Actual Burst, psig (Note 8)	1,450	Propellant Weight, Lb	22.05

TANK CHARACTERISTICS (Metrics)

Operating Pressure, Bar	33.09	Total Volume, l	15.08
Proof Pressure, Bar	49.64	Prop Volume, l	14.45
Cryo Proof, Bar	NA	Max Design Wt, Kg	2.72
Burst Pressure, Bar	65.15	Minimum Wall, MM	0.533
Actual Burst, Bar	99.97	Propellant Weight, Kg	10.00

FORGINGS

FORGINGS P/N	SUPPLIER	Die
80-342061-1, Press		
80-216061-1, Prop		

RING FORGING	RING SIZE, (Rough Machined)
80-216003-11, Retainer	13.13 +.09 OD x 11.81 -.09 ID x 1.38 +.09 Lg

TUBE TYPE AND SIZE

TITANIUM	SIZE
80-444001-1, Inlet	.250 OD x .020 Wall
80-444004-1, Outlet	.250 OD x .020 Wall

TUBE TYPE AND SIZE (Metrics)

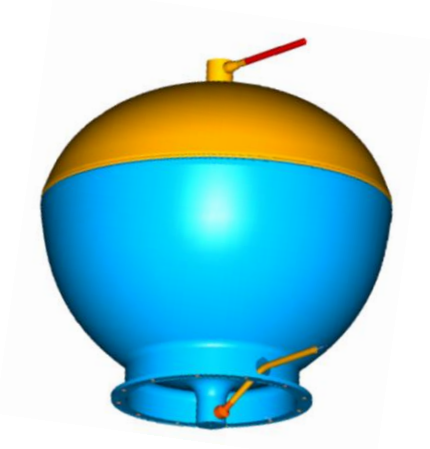
TITANIUM	SIZE
80-444001-1, Inlet	6.35 mm OD X .508mm Wall
80-444004-1, Outlet	6.35 mm OD X .508mm Wall

ACCEPTANCE TESTS

Preliminary Inspection & Examination of Product
Volumetric Capacity Test
Proof Pressure Test
Volumetric Expansion and Permanent Set Test
Internal Leakage
External Leakage
Protoflight Sine Vibration
Internal Leakage
External Leakage
Outside Surface Quality Inspection
Weld Quality Inspection
Weight Test
Final Examination of Product
Cleanliness

QUALIFICATION TESTS

Qual by similarity on 80342-1.



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