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TANK TYPE	MOUNT	LOCATION
Diaphragm	Tabs	Mid Plane

This is a 23-inch x 25 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) near the tank mid-plane. Mounting is accomplished by four (4) lateral tabs parallel with and adjacent to the sphere mid-plane.

ISO 9001 & AS 9100 REGISTERED

ATK Part Number 80323-1

SIZE: 23.13" ID x 25.46" Long
SIZE: 587.5 mm x 646.7 mm

APPLICABLE DOCUMENTS

Acceptance Test	50-000314
Qualification Test Procedure	50-000315
Fracture Analysis Plan	54-000076
Qualification Test Report	56-000129
Cleaning	CPP 3657

DIAPHRAGM INFORMATION

Diaphragm P/N	80-323007-1
Diaphragm Mold Tool Number	T-3129
Diaphragm Gross Weight	
Diaphragm Material Type	AF-E-332
Diaphragm, Material, Note 2	90-000075
Diaphragm Processing, Note 2	90-000087
N-Ray Inspection	1002

Notes:

1: Tooling belongs to ATK

2: Proprietary Document

3: Metric anchor nuts were furnished by the customer.

4: Tube protectors are SK 1031 & SK 1032

5: Fracture Critical

6. Tank pressure was held for thirty (30) seconds, depressurized to ambient pressure, visual examination, and drained

PROGRAM INFORMATION

Program	EURECA
Customer	MBB/ERNO
Customer P/N	SPE 1200744
Original Job No	8418
Customer Installed Device	No
Customer Controlled Design	No

TANK CHARACTERISTICS

Operating Pressure, psig	552	Total Volume, ci	7,261
Proof Pressure, psig	937	Prop Volume, lbs	250
Cryo Proof, psig	NA	Max Design Wt, lbs	31.50
Burst Pressure, psig	1,104	Minimum Wall, inch	0.040
Actual Burst Pressure, psig	Note 6		

TANK CHARACTERISTICS (Metrics)

Operating Pressure, bar	38.06	Total Volume, l	118.99
Proof Pressure, bar	64.60	Prop Volume, kg	113.55
Cryo Proof, bar	NA	Max Design Wt, kg	14.31
Burst Pressure, bar	76.12	Minimum Wall, mm	1.016
Burst Pressure, bar	Note 6		

HEMISPHERE FORGINGS

FORGINGS P/N	QTY	SUPPLIER	Die No
80-323061-1	2	ARCTURUS	3475

RING FORGINGS (Roughed Machined)

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)
80-323063-3, Cylinder	24.0" +/-.06 OD x 22.44" +/-.06 ID x 3.56" + .25 Lg
	(609.6 mm +/- 1.52 OD x 569.98 mm +/- 1.52 ID x 90.42 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)

TUBE TYPE AND SIZE

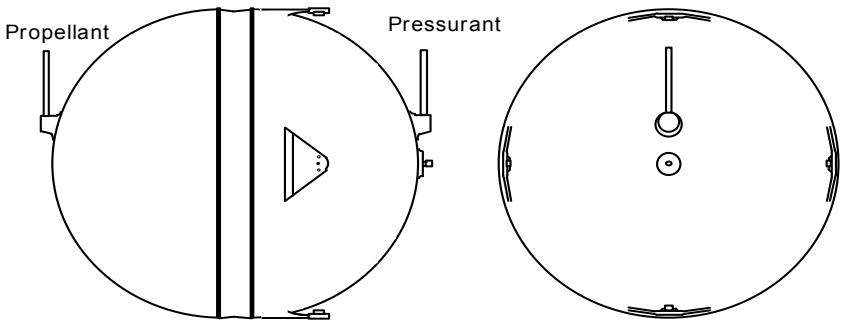
TITANIUM	SIZE
80-323001-1 (2)	.250" OD X .016" Wall
	(6.4 mm x .4064 mm Wall)

QUALIFICATION TESTS

- Acceptance Test
- Vibration
- Internal Leakage
- External Leakage
- Differential Pressure Test
- Internal Leakage
- Life Cycling
- Penetrant Inspection
- Radiographic Inspection
- Internal Leakage
- External Leakage
- Vibration
- Burst Pressure
- Radiographic Inspection
- Final Examination of Product

ACCEPTANCE TESTS

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



21-Nov-08

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