



TANK TYPE Spinner, MMH or NTO	MOUNT Bosses	LOCATION Polar
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This tank assembly is a 36 inch diameter polar boss mounted spherical tank constructed of light-weight 6AL-4V titanium.. The Inlet & Outlet ports are respectively, 1/4" and 1/2" titanium tubes.

ATK Part Number 80377-1

ISO 9001 & AS 9100 REGISTERED

SIZE: 35.87-inch ID Sphere
SIZE: 911-MM

APPLICABLE DOCUMENTS

Acceptance Test Procedure	50-000445
Qualification Test Procedure	50-000446
Forging Qualification Report	55-000089
Qualification Test Report	56-000160
Fracture Analysis Plan	54-000136
Stress Analysis Plan	54-000135
Cleaning	CPP 3677

TANK CHARACTERISTICS

Operating Pressure, psig	260	Total Volume, ci	24,040
Proof Pressure, psig	325	Prop Volume, lbs	1,228
Cryo Proof, psig	NA	Max Design Wt, lbs	28.9
Burst Pressure, psig	390	Minimum Wall, inch	0.028

ACCEPTANCE TESTS

- Examination of Product
- Tak Capacity
- Proof Pressure Test
- Tank Capacity
- External Leakage
- Penetrant Inspection
- Radiographic Inspection
- Weight
- Inspection of Powder Blast
- Cleaning

TANK CHARACTERISTICS (Metrics)

Operating Pressure, Bar	17.93	Total Volume, l	393.95
Proof Pressure, Bar	22.41	Prop Volume, Kg	557.02
Cryo Proof, Bar	NA	Max Design Wt, Kg	13.11
Burst Pressure, Bar	26.89	Minimum Wall, MM	0.711

QUALIFICATION TESTS

- Examination of Product
- Weight
- Tank Capacity
- Proof Pressure Test
- Tank Capacity
- External Leakage
- Penetrant Inspection
- Radiographic Insepction
- Inspection of Powder Blast
- Pressure Cycle
- External Leakage
- Acceleration Tests
- Radiographic Insepction
- Collapse Pressure
- External Leakage
- Burst Pressure Test

Notes:

- 1: Tooling owned by Hughes
- 2: Tubing is furnished by Hughes
- 3: Forging material is triple melt,
19 oxygen, & 1826 degrees beta transus.
- 4: Fracture Critical

FORGINGS

FGGS P/N	SUPPLIER	Die
80-377061-1, Note 3		

TUBE TYPE AND SIZE

TITANIUM	SIZE
80-377007-1, Inlet	20 Wall x 2.75
80-377007-3, Outlet	.500 OD x .020 Wall x 2.0
80-377007-5, Drain	.375 OD x .020 Wall x 1.8

TUBE TYPE AND SIZE (Metrics)

TITANIUM	SIZE
80-377007-1, Inlet	6.35 x .5 x 69.85 MM
80-377007-3, Outlet	12.7 x .5 x 50.8 MM
80-377007-5, Drain	9.52 x .5 x 45.72 MM

