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|------------------|----------------------|-----------------|
| TANK TYPE | MOUNT | LOCATION |
| PMD PROPELLANT | CIRCUMFERENTIAL TABS | POLAR STRUTS |

The 702B Stretch Center qualification tank is identical to flight 702B tank with the exception that it has increased axial length of tank shell and PMD Vanes.

Part Number 80576-1

SIZE: 45.6" x 93" long

SIZE: 1158 mm OD x 2362 mm long boss-to-boss

ISO 9001 & AS 9100 REGISTERED

APPLICABLE DOCUMENTS

| | |
|----------------------------|-----------|
| Acceptance Test Procedure | 50-000863 |
| Qual Test Procedure | 50-000846 |
| Qualification Test Report | 56-000314 |
| Stress and Dynamics Report | |
| FMECA | |
| Cleaning | CPP 4008 |

TANK CHARACTERISTICS

| | | | |
|--------------------------|-----------------|------------------------------------|---------------------------|
| Operating Pressure, psig | 260 psig @ 70°F | Total Volume, in ³ | 131,281.5 in ³ |
| Proof Pressure, psig | 338 psig @ 70°F | Propellant Volume, lb _m | 5779.6 lb _m |
| Cryo Proof, psig | N/A | Max Design Mass, lb _m | 129.66 lb _m |
| Burst Pressure, psig | 407 psig @ 80°F | Qual Tank Mass, lb _m | 133.70 lb _m |
| Actual Burst, psig | 487 psig | Minimum Wall, in | 0.028 in |

ACCEPTANCE TESTS

- Preliminary Examination of Product
- Volumetric Capacity Measurement, Pre-Proof
- Hydrostatic Proof Test
- Volumetric Capacity Measurement, Post-Proof
- Pressure Drop, Flow Test, & Expulsion Efficiency
- External Leakage
- Internal Leakage
- Electrical Bonding
- Non-Destructive Evaluation
- Final Examination of Product
- Cleanliness Verification

TANK CHARACTERISTICS (Metrics)

| | | | |
|-------------------------|------------------|-----------------------|------------|
| Operating Pressure, bar | 17.93 bar @ 21°C | Total Volume, l | 59,550.1 |
| Proof Pressure, bar | 23.30 bar @ 21°C | Propellant Volume, kg | 2621.58 kg |
| Cryo Proof, bar | N/A | Max Design Mass, kg | 58.81 kg |
| Burst Pressure, bar | 28.06 bar @ 27°C | Qual Tank Mass, kg | 60.65 kg |
| Actual Burst, bar | 33.58 bar | Minimum Wall, mm | 0.711 mm |

QUALIFICATION TESTS

- Preliminary Examination of Product
- Pre-Proof Volumetric Capacity Test
- Proof Pressure Test
- Post-Proof Volumetric Capacity Test
- Proof Cycling Test
- MEOP Pressure Cycling Test
- Propellant Outflow Test
- Bubble Point Test
- Radiograph Inspection of Welds
- External Leak Test
- Vibration Test
- Bubble Point Test
- External Leak Test
- Collapse Pressure Test
- External Leak Test
- Radiograph and Penetrant Inspection
- Final Examination of Product
- Burst Test

HEMISPHERE FORGINGS

| HEMI P/N | QTY |
|-------------|-----|
| 80-507061-1 | 2 |

RING FORGINGS

| P/N | QTY | SIZE |
|--|-----|--------------------------------------|
| 80-507065-1 | 1 | 44.90" OD x 46.80" Wall x 4.20" Long |
| 1140.46 mm OD x 1188.72 mm Wall x 106.68 mm Long | | |

TUBE TYPE AND SIZE

| 6Al-4V Ti Bar | QTY | SIZE |
|-----------------|-----|--|
| 80-507005-5 | 1 | 0.250" OD x 0.020" Wall x 10.00" Long |
| Propellant Tube | | 6.35 OD mm x .0508 mm Wall x 254 mm Long |

