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|------------------|--------------|-----------------|
| TANK TYPE | MOUNT | LOCATION |
| DIAPHRAGM | PEDESTAL | PROPELLANT SIDE |

The propellant tank is a pressure vessel constructed of a 12.88" diameter hemisphere and ellipsoid fabricated from 6AL-4V Titanium. Positive propellant expulsion is provided by a reversing AF-E-332 rubber diaphragm retained at the tank's girth area. Mounting is accomplished by a pedestal welded onto the propellant side. Connection is made to the propellant and pressurant compartments through titanium interface tubes.

Part Number 80581-1

SIZE: 13.220" DIA x 12.35" LONG
SIZE: 335.788 mm DIA x 313.69 mm LONG

ISO 9001 & AS 9100 REGISTERED

APPLICABLE DOCUMENTS

| | |
|------------------------------|-----------|
| Acceptance Test Procedure | 50-000866 |
| Stress and Fracture Analysis | 54-000538 |
| Cleaning | CPP 4092 |

TANK CHARACTERISTICS

| | | | |
|--------------------------|-----|-------------------------------|-----|
| Operating Pressure, psig | 490 | Total Volume, in ³ | 920 |
| Proof Pressure, psig | 740 | Max Design Wt, lbs | 6.0 |
| Cryo Proof, psig | N/A | Minimum Wall, inch | |
| Burst Pressure, psig | | Qual Tank Mass, lbs | |
| Actual Burst, psig | | | |

ACCEPTANCE TESTS

- Preliminary Examination of Product
- Pre-Proof Volume Determination
- Proof Pressure
- Post-Proof Volume Determination
- Internal Leakage
- External Leakage
- Penetrant Inspection
- Radiographic Inspection
- Determination of Weight and Final Inspection
- Cleanliness Verification
- Final Examination

TANK CHARACTERISTICS (Metrics)

| | | | |
|-------------------------|------|--------------------|------|
| Operating Pressure, bar | 33.8 | Total Volume, l | 15.1 |
| Proof Pressure, bar | 51.0 | Max Design Wt, kg | 2.7 |
| Cryo Proof, bar | N/A | Minimum Wall, mm | |
| Burst Pressure, bar | | Qual Tank Mass, kg | |
| Actual Burst, bar | | | |

QUALIFICATION TESTS

HEMISPHERE FORGINGS

| HEMI P/N | QTY |
|-------------|-----|
| 80-216061-1 | 1 |
| 80-342061-1 | 1 |

RING FORGINGS

| P/N | QTY | SIZE |
|--------------|-----|------------------------------------|
| 80-216003-11 | 1 | 13.13" OD x 11.81" ID x 1.38" LONG |

TUBE TYPE AND SIZE

| Ti 3AL-2.5V | QTY | SIZE |
|-------------|-----|--------------------------------------|
| 80-581001-5 | 1 | .250" OD x .0280" WALL x 4.45" LONG |
| Ti 3AL-2.5V | | |
| 80-581001-7 | 1 | .250" OD x .0280" WALL x 6.069" LONG |

