

<b>TANK TYPE</b> Note 3	<b>MOUNT</b> Bosses	<b>LOCATION</b> Polar
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This tank is a 23-inch spherical pressure vessel constructed from 6AL-4V titanium. Mounting is accomplished on polar bosses. One tube is provided for fuel outlet operation and one (1) tube for tank draining (See sketch below). A smaller version of this tank (PSI P/N 80182, 19-inch) exist.

**PSI P/N 80280-103**

**SIZE: 23.1-inch ID Sphere**

**SIZE: 586.7-MM**

**ISO 9001 (1994) REGISTERED**

Customer **Stress Fracture**

**APPLICABLE DOCUMENTS**

Acceptance Test Procedure	50-000273
Traceability	60-000042
Quality Assurance Program Plan	60-000233
Powder Blast	65-000030
Penetrant Inspection	65-000045
Fusion Welding, TIG	90-000003
Radiographic Acceptance STD	90-000004
Radiographic Inspection	90-000006
Pre-Weld Cleaning	90-000022
Identification	90-000047
Electrochemical Etch	90-000049
Heat Treat	90-000082
Closed Die Forging	90-000083
Qualification Test Procedure	<b>Note 6</b>
Cleaning	CPP 3558

**TANK CHARACTERISTICS**

Operating Pressure, psig	<b>600</b>	Total Volume, ci	<b>6,428</b>
Proof Pressure, psig	<b>900</b>	Prop Volume, ci	<b>4,875</b>
Cryo Proof, psig	<b>1,400</b>	Max Design Wt, lbs	<b>23.50</b>
Burst Pressure, psig	<b>1,200</b>	Minimum Wall, inch	<b>0.052</b>

**ACCEPTANCE**

**ENVIRONMENTAL TESTS**

Cryogenic Proof

**PROGRAM INFORMATION**

Program	DSP
Customer	TRW
Customer P/N	C422755-5
Original Job No	7917
Customer Installed Device	No
Customer Controlled Design	No

**FORGINGS**

FORGINGS P/N	SUPPLIER	Die No
80-280061-1 (2)	ARCTURUS	2431D

**TUBE TYPE AND SIZE**

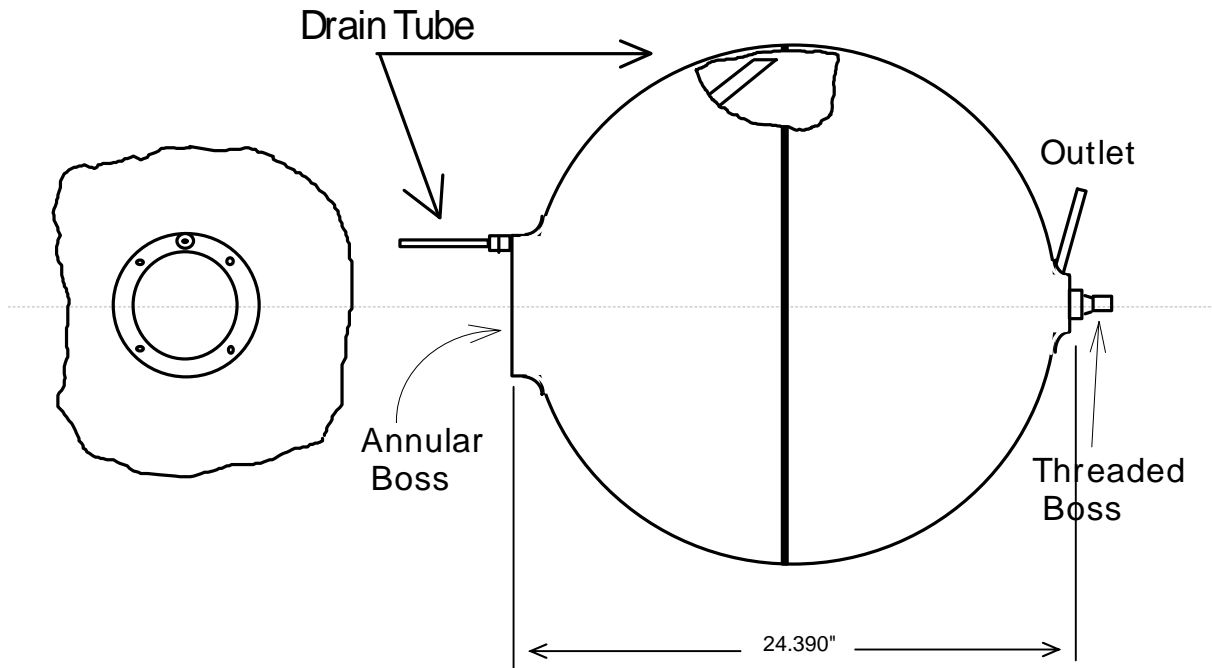
TRANSITION	SIZE
80-280001-1, Drain	.250 OD x .016 Wall
80-280002-1, Outlet	.250 OD x .016 Wall

The DSP (Defense Support Program) is a satellite-based early warning system operating under NORAD's Tactical Warning and Attack Assessment System. Using highly sensitive infrared detectors to sense the heat from missile plumes against the earth background, DSP satellites can detect, characterize, and report ballistic missile launches as well as nuclear detonations. First launched in early 1970's, the DSP satellites have gone through several upgrades to improve capability, survivability and life expectancy. However, the SBIRS (Space-based Infrared System) is scheduled to replace the DSP after 2000. PSI fabricated 29 spherical propellant tanks and 15 spherical plenum gas tanks for the DSP program.

**Notes:**

- 1: Tooling belongs to TRW/Govt
- 2: This is a TRW designed tank
- 3: This tank has no internal device for expelling the propellant and is therefore used as a spinner tank
- 4: QTR for P/N 80280-1 is 56-000085
- 5: Acceptance Test Procedure for -1 tank is 50-000231
- 6: Qualification Test Procedure for -1 tank is 50-000232

**SKETCH NOT TO SCALE**



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