

## LIQUID COOLING SYSTEM

PDT Model 5390-2



### Description

The PDT Model 5390-2 is a complete Liquid Cooling System (LCS) for an unmanned helicopter. This LCS provides coolant circulation for heat-generating

equipment and a liquid-to-air heat exchanger for heat rejection. This LCS also includes an edge-welded bellows accumulator, thermal control valve,

fans, heater, over-temp switch, purge/fill manifold, and an internal pressure relief valve. 5390-2 was designed to withstand various MIL-STD-810 conditions.

### Specification

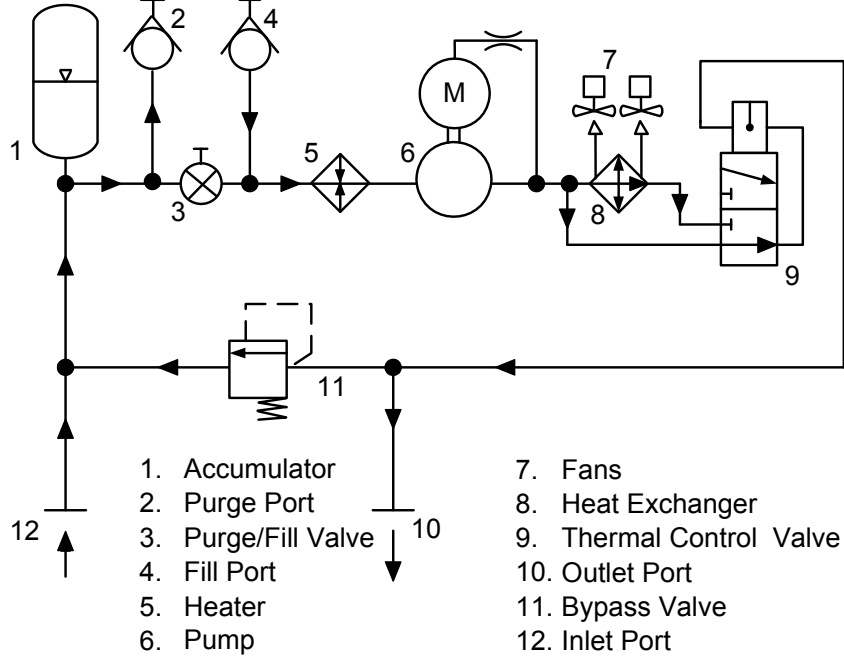
#### System Parameters

Fluid:	Polyalphaolefin (PAO) per MIL-PRF-87252
Pump Flow:	1.0 +0.10/-0.00 GPM @ +20 °C to +60 °C
Operating Temperature Ranges:	Ambient Operating (daytime): -32 °C to +50 °C Ambient Operating (nocturnal): -32 °C to +40 °C Ambient Non-operating: Sea Level to 35 kft: -40 °C to +71 °C
Operating Voltage:	28 VDC (nominal) ≤ 200 Watts @ rated condition (≤ 800 Watts @ start-up)
Input Power:	Proof (Low Pressure-side) 52.5 psig (min)
Pressure:	Proof (High Pressure-side) 100 psig (min) Burst (Return-side) 70 psig (min) Burst (Supply-side) 200 psig (min)
Pump Type:	Positive displacement
Heat Loads:	200 Watts (nominal) 400 Watts (max)
Altitude:	Sea Level to 20,000 feet
Dry Weight:	7.8 lbs (max)

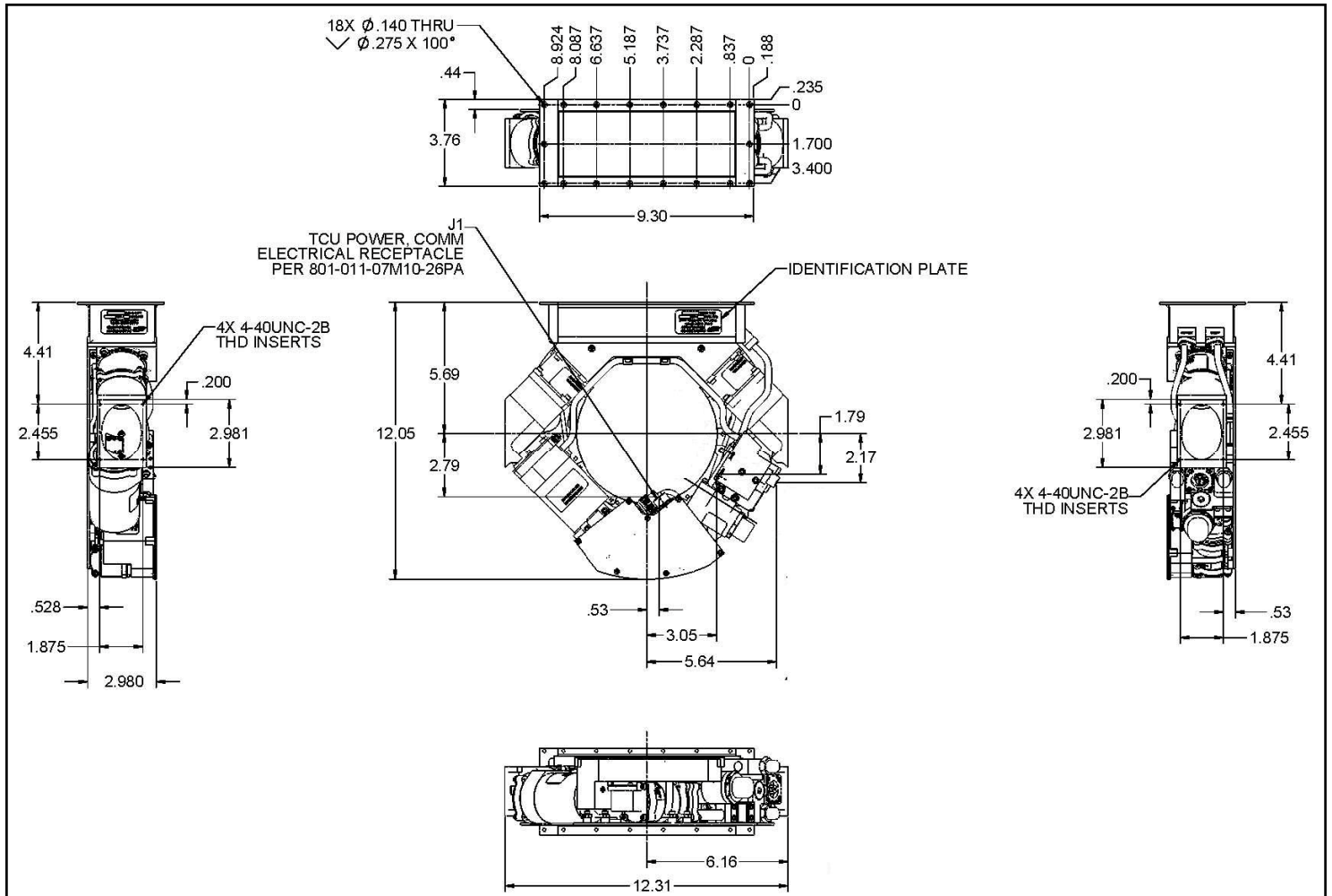
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## Hydraulic Schematic



## Outline



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