C-130 AVIONICS MODERNIZATION PROGRAM

Vapor Cycle System

Product description

Parker Meggitt Defense Systems has developed, qualified, and delivered a Vapor Cycle System (VCS) for the C-130 aircraft to The Boeing Company. This VCS provides supplemental cooling for the increased electronics heat loads generated by the Avionics Modernization Program (AMP).

The C-130 AMP supplemental VCS provides cooling to the flight station and cargo compartment of the aircraft via an evaporator subassembly installed at each location. Each evaporator subassembly provides in excess of 20,490 BTU/hr (6 kW) of cooling capacity. The VCS is designed for both ground and in-flight operation.

The VCS consists of the following subassemblies; one condenser subassembly (including¬ ground fan), one compressor subassembly, one receiver subassembly, two evaporator subassemblies, and one controller subassembly. The VCS uses the MDSI 90cc Scroll Compressor Assembly, which leverages automotive COTS scroll compressor technology for high performance and affordability.

Key features and benefits

- Cools the flight deck and cargo bay
- Designed to meet MIL-STD 810F
- MTBF: > 3000 hrs

Applications

- Aircraft cooling

Parker Defense Systems

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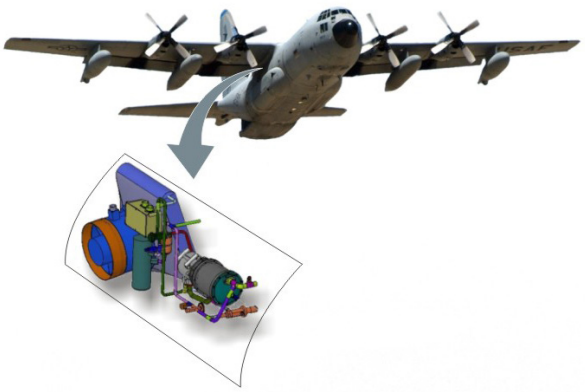
Specifications	
Cooling capacity	Over 12 kW
Refrigerant	R-134a
Cooling medium	Air
Air flow	720 scfm per evaporator subassembly
Power	115/200 Vac, 400 Hz (12 kVA max) & 28 Vdc (2 A max)
Temperature	Non-operating -71˚ F to +185˚ F Operating +50˚ F to +160˚ F (120˚ F OAT max)
Weight	156 lbs
MTBF	>3000 hrs



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Note: Due to continuous process improvement, specifications are subject to change without notice. TCO Review # 118