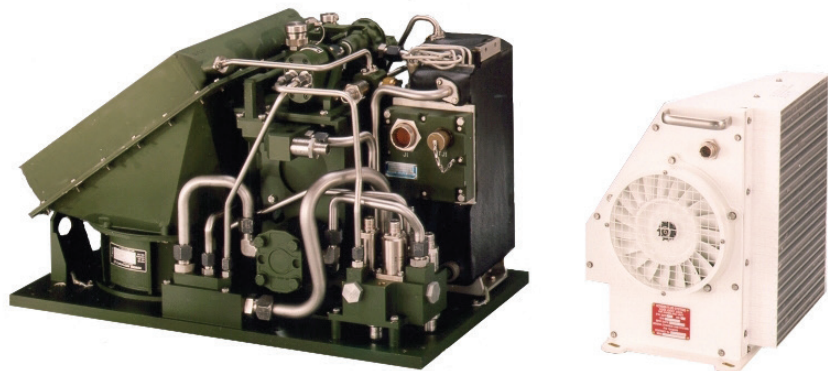


THERMAL MANAGEMENT SYSTEM (TMS)[™]

Model 3212



Product description

Under contract with General Dynamics Land Systems, Parker Meggitt Defense Systems is producing the Model 3212 Thermal Management System (TMS[™]) in the M1A2-SEP (System Enhancement Package) Abrams Tank.

The TMS[™] is designed to remove the excess heat produced by modern electronic equipment employed in today's ground combat systems. The TMS[™] ensures that combat performance is not degraded due to heat stress.

The modular design was developed to maximize the flexibility of the TMS[™] and to limit its intrusion into the fighting compartment. A Vapor Compression System Unit (VCSU), which houses the hydraulically driven refrigeration equipment, is mounted in an armored container located in the left corner of the turret bustle rack. The VCSU connects to the Air Handling Unit (AHU) by armor-protected tubes that deliver cooled propylene glycol and water. The AHU in turn provides more than two tons of cooling via a bulk air discharge into the crew compartment.

Designed for the M1A2 SEP Tank, the TMS[™] is readily adapted to other ground combat systems. The system's VCSU and AHU units are linked only by the power supply, electronic controls, and the propylene glycol-water cooling fluid. The reconfiguration of the modular units to meet space and power requirements, and method of heat extraction, provides the inherent design flexibility to meet the design and performance demands of the Abrams Tank, as well as most other ground combat manned and future unmanned vehicles.

Key features and benefits

- Modular design adaptable to other platforms
- Provides up to 7.5Kw (25,600 BTU/HR) cooling capacity
- Closed Loop R134a refrigerant
- Cooled propylene glycol - water provides for macro (micro) cooling
- Hydraulically powered, electronically controlled
- Automatic catastrophic hydraulic leak protection
- Quick disconnects for ease of maintenance
- NBC hardened

Applications

- M1A2 Abrams Tank
- Adaptable to other ground combat vehicles



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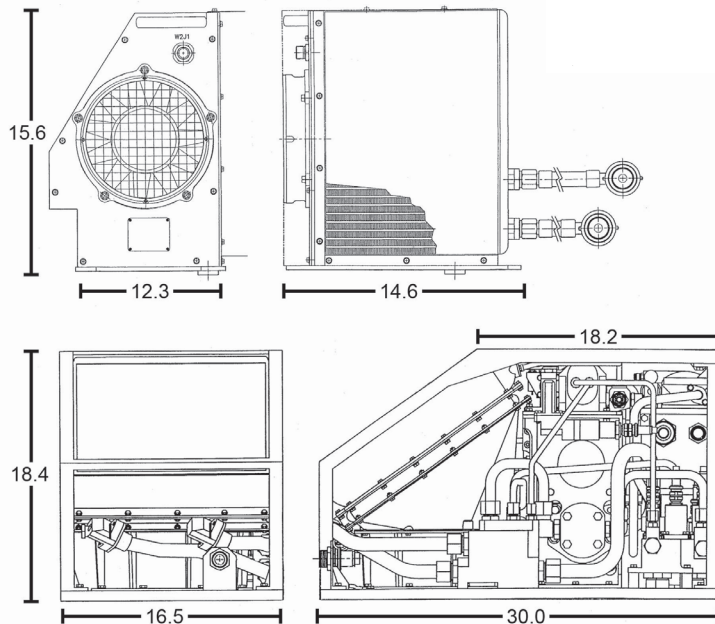
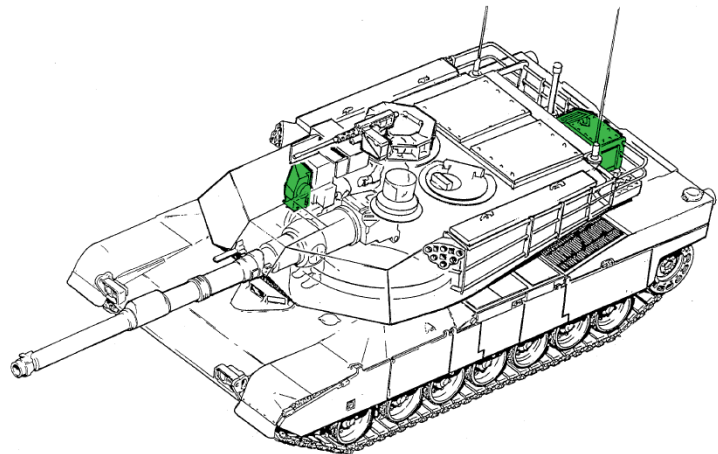
Specifications

Cooler touch panels and electronics

Increased equipment reliability

Improved crew fightability

Greater tank sustainability



Note: Due to continuous process improvement, specifications are subject to change without notice. TCO Review # 95