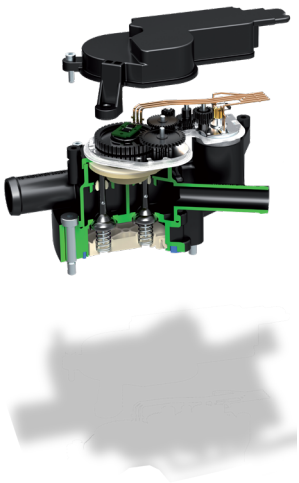
THERMAL MANAGEMENT
ACTUATOR

ENGINE EFFICIENCY

Improve engine performance



TECHNOLOGY
MECHATRONIC

Application description

The use of mechatronic modules integrating an electronically controlled thermal management valve powered by a DC actuator is a new and innovative solution for intelligent thermal management. Developed by EFI Automotive within a partnership with MANN+HUMMEL, this module offers more accurate and therefore more effective control, all in a smaller package.

This Active Cooling Thermo Management Valve separately regulates up to three cooling water circuits independently of each other and in and in any combination suitable for the application.

It is now possible to regulate the coolant flow, for example, between the cooling unit, cabin heating and engine at any operating point and in any demand-driven combination.

A solution that reacts quicker than passive systems, controls the temperature of the coolant precisely and reduces CO2 emissions up to 2 grams per kilometer.

MANN+HUMMEL Active Cooling Thermo management Valve is powered by EFI Automotive DC actuator. The EFI Automotive actuator module houses one or more sensors (position and temperature) together with a motor and gears in a single case. This module drives and measures the rotational motion of the cam that controls the valves distributing water between the vehicle's engine, radiator and air conditioner. In addition to the electronic systems, EFI Automotive provides the intelligent control models.

Technical characteristics

- Short reaction time
- Accurate temperature control
- Can be used as add-on on existing engine for retrofit (Euro 5 to Euro 6)
- Very compact core design: only one actuator needed
- High level of design freedom to fit with customer packaging constraints
- Sophisticated strategies can be implemented thanks to independant switchable valves
- Outstanding valve tightness performances

EFI AUTOMOTIVE
77, Allée des Grandes Combes
ZI OUEST BEYNOST
F - 01708 MIRIBEL CEDEX FRANCE
T. +33 0(4) 72 01 34 34 - F. +33 0(4) 72 01 34 50
WWW.EFIAUTOMOTIVE.COM

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