NEW SUPERIOR THERMAL PERFORMANCE

e drive®

Electric fan drive cooling system

INTRODUCING THE NEW AND IMPROVED COOLING SYSTEM

Our breakthrough electric fan cooling module is designed to work only when required, lowering running costs, and environmental impact. The unique configuration ensures that energy is not wasted and fuel savings of up to 15% can be achieved.

The electric cooling module can be designed to customer specifications to include up to 20 fans which only operate when required. This reduces energy losses and improves engine efficiency through more accurate control of engine temperatures.

Grayson
THERMAL SYSTEMS

SUPERIOR

CURRENT VEHICLE APPLICATIONS

- ADL E400
- Optare Solo
- Optare Versa
- MAN 14.220
- MAN 18.240
- Volvo B7RLE
- Volvo B7TL
- Volvo B9TL
- Scania NU230D
- Mercedes Citaro
- Other models available on request

4 fan model

6 fan model

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SYSTEM BENEFITS

- Better fuel economy
- Reduced noise
- Reduced weight
- Reduced CO2
- Easy troubleshooting
- Improved serviceability

THE PACKAGE

- Prices from £3,500 fitted with 2 year warranty
- 5 year warranty option with service contract
- Northern and Midland service centres
- Mobile engineers available
- Free cooling/heating system training credits available with purchase of 20+ systems

THERMAL PERFORMANCE

NEW FEATURES FOR 2014/15

- Next generation CANbus controller
- Next generation control box
- New finger guards for fans
- 3lbs lighter fan
- 30,000 hour fan life
- New lighter tube and fin design

Next generation CANbus controller

Next generation control box

Fan finger guard

BETTER FUEL ECONOMY

Customers have reported fuel savings of up to 15%. Unlike conventional single hydraulic fans, this cooling module uses multiple, smaller electric fans which in turn provide more accurate control of engine temperature and less wasted energy. These electric fans provide greater coverage so that the air flows evenly over the radiator and charge air cooler.

REDUCED WEIGHT

The E-Drive is lighter when compared to the conventional system. This reduction in weight also means greater fuel savings.

DESIGNED FOR YOU

The E-Drive can be designed to customer specifications to include up to 20 fans that allow controlled airflow over the cooling module.

EASY TROUBLESHOOTING

The E-Drive has simple and intuitive blink-codes that permit efficient troubleshooting; technicians can easily analyse data and adjust system parameters to match the requirements of vehicles on specific routes.

REDUCED NOISE

The E-Drive's "kerb side quiet" operation feature means that the fans are automatically dampened as the vehicles slow to a stop. While in service, reductions of up to 30% in noise levels have been reported.

e-drive FACTS

Q: WHAT'S AN E-DRIVE COOLING SYSTEM?

A: An electric fan drive cooling system (E-drive) is an innovative solution that replaces traditional hydraulic/viscous fan systems found on passenger service vehicles. Rather than the conventional singular hydraulic fan, the engine is cooled by smaller electric fans.

Q: HOW DOES IT WORK?

A: The cooling system is made up of 2 heat exchangers: a radiator and a charge air cooler. During a vehicle's duty cycle, each heat exchanger will have different thermal settings. With a traditional hydraulic system the single fan covers the 2 heat exchangers, requiring more energy to be used when the system is not operational. Because the smaller, E-drive, electric fans are positioned in "banks" directly across the respective heat exchanger, surface coverage is improved and energy consumption is reduced.

Q: HOW MANY FANS WILL MY E-DRIVE COOLING SYSTEM REQUIRE?

A: Our highly experienced design team will provide you with a bespoke solution based on your specification. The E-drive is designed to your requirements, to include up to 20 fans, all of which only operate against thermal temperature settings. Requiring minimal maintenance, the E-drive system reduces servicing costs and vehicle downtime.

Q: HOW MUCH FUEL CONSUMPTION CAN BE ACHIEVED?

A: Our customers have reported fuel savings of up to 15%, with 5-10% being the average. However, the fuel efficiency is dependent on various factors such as operating conditions, vehicle loads and routes.

Q: WHAT'S THE PRODUCT LIFE TIME?

A: The product life with annual servicing is around 4-5 years. The fans have 30,000 hour life so this is dependent on duty cycle; this will offer 5 years minimum life.

Q: CAN NOISE LEVEL ALSO BE REDUCED?

A: Yes. Reductions of up to 30% in noise levels, whilst in service, have been reported. With the fan on full in a hydraulic system, we have measured as high as 104dB. In simulation, with the fan fully operating in the electric system, 101dB has been measured. And, in service, the fans on the charge air cooler ran at 30-40% capacity and the radiator at 50-60% capacity, recording a level of 78dB.

Q: DOES E-DRIVE REDUCE OPERATING COST?

A: The E-Drive is designed to reduce the amount of energy used to cool the engine, resulting in lower running costs and reduced environmental impact. Unlike a traditional hydraulic system, where the fan is constantly operational, electric fans only work when they need to. In addition, each fan on the E-drive can be reversed; reversing the fans helps to remove debris collected over a period of time.

Q: IS IT EXPENSIVE TO RETROFIT AN E-DRIVE SYSTEM?

A: As we are targeting vehicles which are out of manufacturer's warranty the cost of replacement systems would be £2,000 on cost of the overall maintenence budget per vehicle if you take into consideration that the original systems would need to be replaced around this time. The return on investment is targeted at 12-18 months, after this period the system should generate operation and fuel saving.

For more information on our E-Drive cooling systems or any other product call our sales team now on:

+44 (0) 121 700 5610

or email:

SALES@GRAYSONTS.COM

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Wharfdale House, 257 Wharfdale Road, Tyseley, Birmingham B11 2DP

WWW.GRAYSONTS.COM