



Press release

27 November 2015

Next generation Dearman transport refrigeration system begins on-vehicle testing

Dearman's latest, Generation 2, zero-emission transport refrigeration system has begun on-vehicle testing.

The system is powered by an innovative, liquid nitrogen Dearman engine, which replaces the standard diesel engine. As a result, the Dearman system is zero-emission, producing no harmful NOx or particulates, and it helps to significantly reduce CO₂ emissions.

Dearman began testing a Generation 1 transport refrigeration system on a truck in early 2015. Since then the Dearman engine has been re-designed and it is already proving to be 30% lighter, 30% smaller, and 30% more efficient than its predecessor.

Working with its technology partner Hubbard Products, the entire refrigeration system has also been reconfigured, downsizing a number of components and optimising them to deliver maximum efficiency and higher levels of performance. Dearman's Generation 2 system will now be tested with support from HORIBA MIRA, before a commercial, on-road, field trial begins with a UK operator in 2016.

Discussing the development, Michael Ayres, Deputy CEO of Dearman said: "This is another important milestone as we develop our revolutionary clean cold and power technology. We have always planned to evolve and continuously improve our core Dearman engine, but to achieve such rapid improvements in weight and efficiency is a significant achievement. We aspire to offer systems which are not only cleaner, but that are also cheaper and perform better than polluting diesel alternatives. We are another step closer to achieving that goal."

Transport refrigeration systems are used to keep the cargo in refrigerated trucks cool. They are generally diesel powered and can be up to 29 times more polluting than modern, EuroVI, truck engines.

There are an estimated one million transport refrigeration systems in operation in the EU, with many more around the world. The number is also growing rapidly and so is their environmental impact.

Dearman is developing its zero-emission technology as an alternative, which will help operators to deliver substantial emissions savings, while also reducing their operating costs.

The zero-emission transport refrigeration system is the first of a portfolio of clean cold and power technologies being developed by Dearman, with eventual applications in public transportation and the built environment, as well as logistics.



This latest testing builds on the Innovate UK-funded Cool-E project conducted earlier this year. It benefits from continued support from project partners, including HORIBA MIRA, Air Products, Loughborough University and Hubbard Products Ltd.

For further information please contact:

Ben Heatley, Head of Corporate Communications, Dearman
T: +44 (0) 203 617 9170
M: +44 (0) 755 7944 230
E: ben.heatley@dearman.co.uk

Caroline Tecks, Senior Associate – Communications, Dearman
T: +44 (0) 203 829 0035
M: +44 (0) 773 9172 564
E: caroline.tecks@dearman.co.uk

Notes to Editors

Dearman

Dearman is a global technology company delivering clean 'cold and power'.

Dearman's cutting-edge technology uniquely harnesses liquid air to deliver zero-emission power and cooling. It is developing a portfolio of proprietary technologies, products and services, which deliver significant reductions in operating cost, fuel usage and emissions, at low capital cost.

The first application of Dearman technology, to provide sustainable and efficient zero-emission transport refrigeration. This will be in commercial trials in the coming months, ahead of multi-country trials later in 2016.

The company is building an international reputation for innovation, rigour, commercial acumen and engineering excellence, all to fulfil its primary objective – to make the world a cleaner, cooler place.