



## **DAF Transport Efficiency:**

### **DAF strengthens transport efficiency leadership**

- Fuel savings of up to 5%
  - Enhancements to PACCAR MX-11 and MX-13 engines
  - Eco Mode
  - Predictive Cruise Control and Predictive Shifting
- New deflectors and fenders
- Improved engine brake performance and reduced operational costs
- DAF MultiSupport Uptime Plus

**At the start of 2015, DAF will introduce a large number of innovations that will significantly contribute to optimised transport efficiency. Enhancements to the already efficient PACCAR MX engines combined with innovative technologies such as Predictive Cruise Control, Predictive Shifting and Eco Mode add up to fuel saving opportunities of 4–5%. New deflectors and fenders offer possibilities for additional savings. All these innovations are part of the new ‘DAF Transport Efficiency’ programme, with products and services aimed at achieving maximum return per kilometre.**

In order to further increase efficiency, the successful PACCAR MX-11 and MX-13 engines have been optimized.

Oil flow of the 10.8 litre MX-11 engine has been improved while even more efficient combustion is achieved through a new design of the combustion chamber, optimised fuel injection and enhanced software.

The new turbo on the 12.9 litre PACCAR MX-13 engine results in improved flow and a new camshaft leads to optimised valve timing. The PACCAR MX-13 engine also benefits from an even more efficient

oil flow, while friction losses have been minimized. In addition, a very efficient dual-stage water pump is applied, next to optimised software.

With an already excellent reputation for fuel efficiency, the PACCAR MX-11 and MX-13 engines are now up to 2% more economical, of course depending on application and conditions. Multi-pulse injection also means that the engines run even more quietly than before.

#### **More powerful engine brake for greater efficiency**

The PACCAR MX-13 engine optimizations not only improve fuel efficiency, they also have a positive influence on the performance of the engine brake. With a 20% increase in power (360 kW at 2,000 rpm), the engine brake is an excellent alternative to a retarder for the majority of applications. The MX Engine Brake – which can now be controlled from the steering column in three stages - offers significant cost, weight and fuel consumption benefits.

#### **Eco Mode**

Eco Mode is a new standard feature on all Euro 6 CF and XF models with PACCAR MX engine. Eco Mode reduces engine torque by 10% in the first eleven gears, again reducing fuel consumption in daily use by approximately 1%. Most driving conditions don't require full acceleration, and maximum torque can easily be made available at the touch of a button.

#### **Predictive Cruise Control & Predictive Shifting**

Predictive Cruise Control is a great example of the DAF Transport Efficiency philosophy. This option is available - combined with Predictive Shifting - on the Euro 6 CF and XF. Both sophisticated technologies have been developed by DAF's engineering team and contribute to enhanced vehicle efficiency.

Predictive Cruise Control uses advanced GPS-technology to determine the exact position of the vehicle and to know which driving conditions have to be taken account of over the next 1 to 2 kilometres. In fact, the system 'looks' ahead and anticipates slopes and descents.

Within the specified range, Predictive Cruise Control determines the ideal speed and Predictive Shifting selects the ideal gear.

The starting point for both technologies is to drive as long as possible in the highest gear possible and consequently in the optimal rpm range. As the vehicle nears the end of a hill climb, the system strives to stay in a higher gear. If a hill climb is immediately followed by a descent, less fuel is injected before the top of the climb, making use of the vehicle mass to 'push' the vehicle over the top.

In some cases, Predictive Cruise Control will permit the speed of the vehicle to fall below the set value; for example when the top of a hill has almost been reached and the system 'knows' that the potential energy will quickly bring the vehicle back up to the desired level on the descent. Predictive Cruise Control can even temporarily permit a speed that is slightly higher than that set—within predefined tolerances, of course—also with a view to lowering fuel consumption as much as possible.

Thanks to Predictive Cruise Control and Predictive Shifting, fuel consumption and CO<sub>2</sub> emissions can be reduced by as much as 3%, specifically over hilly routes.

### **New deflectors & fenders**

As part of the DAF Transport Efficiency program, the range of deflectors and collars has been expanded further to provide the best aerodynamics and the lowest possible fuel consumption.

For the Euro 6 CF with sleeper cab a new aerodynamic package has been developed, featuring a roof deflector that is 10 cm higher and fenders spanning 2.55 metres, leaving a gap of just 5 centimetres between truck and trailer. A new roof deflector that can be adjusted to trailer heights of 4 metres has been designed especially for Low Deck vehicles.

### **More information via Driver Performance Assistant**

Obviously the driver has a key role to play in reducing operational costs and, in particular, fuel consumption. This is why DAF has developed the Driver Performance Assistant (DPA) for its LF, CF and XF models. It provides the driver with comprehensive feedback on fuel consumption achieved, levels of anticipation whilst driving and on braking behaviour. In addition, the central information display provides advice about how to save fuel.

As a new feature, information from the tachograph can now be projected on the central information display, giving the driver a clear overview of driving and resting times to avoid infringements. The screen will also display when the vehicle's next service inspection is due, ensuring timely maintenance for maximum vehicle efficiency. Based on the driver card, the DPA will switch automatically to the required language for driver convenience.

### **DAF Transport Efficiency**

All product innovations for 2015 are part of DAF's Transport Efficiency programme aimed at further increasing truck efficiency through lower operational costs and maximum vehicle availability. The many services behind the product play an important role in achieving this. PACCAR Parts ensures first class parts supply, while DAF's unrivalled International Truck Service (ITS) guarantees maximum uptime. PACCAR Financial Services offers attractive financing solutions for low operational costs.

MultiSupport Repair and Maintenance contracts include the option of Uptime Plus with additional services and features to optimise revenues. This is a great example of how the DAF Transport Efficiency programme not only includes the most efficient trucks, but also represents a full range of services to maximise the profitability of the transport operator.

