

# Automated vehicle speed control functions for CF and XF vehicles



## **Cruise control**

All modern commercial vehicles are equipped with cruise control. Cruise control maintains a set, constant vehicle speed under varying road conditions and is a great relief for the driver, especially on not too busy motorways. In the event the driver uses the cruise control resume function after having reduced the vehicle speed, the vehicle will return to the set cruise speed.

The cruise function of all CF and XF vehicles combines all vehicle speed and distance control functions, so cruise control, Adaptive Cruise Control, Predictive Cruise Control and Downhill Speed Control. For easy operation by the driver, all these functions are controlled with the right-hand steering wheel switches.

## **Adaptive Cruise Control**

Adaptive Cruise Control (ACC) is an addition to the standard cruise control function and allows automatic speed and/or distance adaptation to a vehicle ahead. ACC decelerates the vehicle to maintain a safe distance as preset by the driver when it catches up with another vehicle immediately ahead. When traffic conditions allow, the cruise control function will take care of re-acceleration of the vehicle to the cruise speed. Driving becomes much more relaxed and driving safety is enhanced.

The ACC functionality includes the safety systems Forward Collision Warning (FCW) and Advanced Emergency Braking (AEBS). FCW and AEBS only become active to avert an impending collision. If driver intervention is needed to maintain the required distance FCW will generate a visual and audible distance alert. If necessary, this warning is followed by partial braking. In the event the driver does not react properly, AEBS will intervene with full braking power to avoid a rear-end collision.

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## **Predictive Cruise Control**

Predictive Cruise Control is a great example of the DAF Transport Efficiency philosophy, which aims to further improve the efficiency of the Euro 6 truck range.

Whilst Adaptive Cruise Control and Downhill Speed Control help the driver to maintain good average speeds on flat to slightly undulating roads in an efficient and effortless manner, Predictive Cruise Control (PCC) will add to fuel economy in steeper road conditions.

PCC uses GPS-technology to determine the exact position of the vehicle and to know which driving conditions have to be taken into account over the next one to two kilometres. By anticipating on ascents and descents and predetermining the optimum speed and gear selection the system is used to optimize fuel consumption. A reduction of fuel use and CO<sub>2</sub> emissions by as much as 3% is possible, depending on the terrain in which the vehicle is travelling.

PCC is optional available for all CF and XF vehicles with a TraXon gearbox. Vehicles with a manual gearbox can also be equipped with PCC, without optimum gear selection (Predictive Shift).

## **Eco mode and EcoRoll**

Within its Transport Efficiency programme, DAF has introduced two features to reduce fuel consumption: Eco mode and EcoRoll. Eco mode supports the driver to drive more economically and is

standard on all vehicles with a manual or TraXon gearbox. The function reduces fuel consumption by smoothening the drive. This is accomplished by avoiding the limits where only a little more torque or acceleration would cost disproportionately more fuel. Driving in Eco mode does not allow manual intervention on the shifting of the TraXon gearbox.

EcoRoll is standard on all CF and XF vehicles with a TraXon gearbox and allows downhill “free” rolling of a vehicle when cruise control is active. On slight descents the gearbox shifts to neutral and the engine runs idle. At the end of the slope the vehicle continues to roll idling and starts fuelling at a later stage than would be the case without EcoRoll. In combination with Predictive Cruise Control the EcoRoll function will be further enhanced, which results in higher fuel savings.

## **Downhill Speed Control**

Downhill Speed Control endeavours to limit the vehicle speed during descents. In combination with cruise control, the downhill speed limit is by default 2 km/h above the cruise speed. It can be adjusted manually to maximum 10 km/h above the cruise speed.

Downhill Speed Control is standard for all CF and XF vehicles equipped with either a TraXon gearbox and MX Engine Brake and/or Intarder or a manual gearbox and Intarder. Depending on the vehicle configuration, Downhill Speed Control deploys braking power using the MX Engine Brake or the Intarder.