



While many truck makers were absent at Birmingham's 2017 CV Show, market leader DAF took the wraps off a new UK managing director, and its new XF and CF models. Ian Norwell went to DAF's home country of the Netherlands to look at the detail and get behind the wheel

DAFinitely better

Product renewals for market leaders will inevitably have more impact than other marques; the registration numbers dictate that. So it was reasonable to see DAF president Preston Feight, together with the company's new UK managing director, Robin Easton, on flag-waving duty in Birmingham to unveil upgrades to its XF and CF heavy- and medium-duty truck ranges.

Feight's presentation trumpeted a 7% uplift in fuel economy. A very substantial figure, so where has it all come from? Big wins like this on fuel economy are hard to come by. This is certainly true of any single development, so the buzzword in engineering circles, for some time now, has been 'incremental gains'.

DAF has never been a member of the 700bhp club, looking relatively modest with a current 502bhp flagship. The evolution of its MX-11 and MX-13 power units takes another step forward with extensive changes. They follow the industry trend of down-speeding, and a multi-torque approach. For example, the 13-litre engine (pictured above integrated into the complete driveline)

makes a modest jump to 523bhp, but it reserves the extra 100Nm of resulting torque for top gear.

Ron Borsboom, DAF's chief engineer, explains why: "This helps the vehicle stay in the highest gear for longer periods, and it significantly cuts downshifting between 12th and 11th gear, saving fuel." Many engine internals have been redesigned, including pistons, rings and nozzles on both engines, and the engine gets a new turbocharger, new camshaft and new oil module. Both units also get a redesigned engine brake that now operates through one valve only, boosting performance to 340kW on the MX-11 (a 20% uplift) and 360kW on the MX-13 (an added 30%).

Borsboom has declared war on the sapping energy of auxiliary components too. He says: "We've made a major move on parasitic losses. The coolant pump is now a fully variable component that reacts to need intelligently; the air conditioning compressor speed has been dropped; the power steering pump is also variable, as is the high-efficiency oil pump." The volume of engine lubricant has been reduced,

too, cutting the energy needed to force it through the galleries. Exhaust aftertreatment paraphernalia is now a significant 50kg lighter and 40% smaller. This alone will contribute a 0.1% fuel saving. He adds: "There are very many small detail changes we have made that are not measurable within the realms of experimental error, but our engineering common sense tells us that they are helping to make economies."

TRANSMISSION

DAF's longstanding transmissions partner, ZF, brings its new TraXon gearbox to the XF and CF. This is claimed to give better manoeuvrability at very low speeds, faster upshifting, lower noise levels, and extended intelligent deployments of EcoRoll. I've watched this 'coasting' mode come of age over the last few years, and noticed a progression where it now takes every possible opportunity to disengage the drive, even for a few moments. Crucially, re-engagement is a lot smoother, too. TraXon comes as a standard 12-speed unit - where 85% of sales will go - plus a 16-speed for special applications. The optional intarder is probably my

favourite component, with a delicious efficiency and the challenge to avoid the use of service brakes for all but a final stop. New rear axles from DAF are here too, with faster gear ratios of 2.05:1 to 2.47:1. Lower viscosity oil – and less of it, too – is in the casings, meaning less churning losses and another incremental gain. Gathered together, the TraXon box, new rear axles and new powertrain software contribute nearly half of the claimed 7% fuel economy boost; the engine accounts for most of the rest.

Questioned on the likelihood of DAF taking the dual-clutch transmission from ZF's TraXon family, it's still a "no thanks." Borsboom clarifies: "Shifting speeds on single clutch AMTs are getting faster all the time. I won't say never, but the extra weight and cost of a DC system is not yet justified by any operational benefits."

SLIPPERY SHAPES

All truck makers, especially those basking in the luxury of a new cab, will have spent time in the wind tunnel, or its high-tech equivalent, the CFD (computational fluid dynamics) lab. Running one's hands over the Scania next generation cab reveals how all the joints and closures have been minimised. DAF has been busy, too: the CF and XF have sufficient improvements in airflow to claim a 0.5% fuel gain. Grille closure, radiator flow guides, elongated wheel arch extensions and cab split closure are all more finely engineered. Exterior sun visors are modified, but still present, as notoriously fuel-hungry as they are. I look forward to seeing the first new truck models from any maker with the sense to dispose of them entirely. Even with a through-flow design – as on some of these new DAFs – they are an unnecessary drag.



TESTING TIMES

The test fleet lined up in Maastricht consisted of five CF models and six XFs, with six power outputs. I chose a lightweight 4x2 tractor, the CF410FT 'Silent' (shown above), a 6x2 rigid XF480FAR, and the new flagship, an XF530 Super Space-cabbed 6x2 tractor (below). The cabin interiors are all new, and it shows. Fit and finish as well as materials are good, and they should stand up to fleet operations.

I was reminded how easy a 4x2 24-tonne tractor with a single steered-axle trailer behaves in an urban setting; better than a rigid 6x2, even with a rear-steer. Also, the small tractor's specification benefits from the trickle-down effect. Bigger siblings like the XF can justify the development of predictive cruise control, so for inter-urban

running its smaller sibling can be given this added luxury. The TraXon AMT and new, more powerful, MX engine brake make this 'little' truck a great package. The 'silent' treatment takes it down to less than 72dB(A) for clandestine work.

One of the UK's best-selling heavy trucks, DAF's XF 6x2 tractor goes and stops well. Interiors in the Super Space cab are better, and added items like a height-adjustable slide for the driver's integrated seatbelt are good, letting the belt lie where it should on drivers of different heights. Although there were not many opportunities to test the climbing ability in the low country, the horsepower was evident. Simple things like DAF's night lock are good to have, too, and the flagship still justifies the title.

DAF has done a good job with these upgrades, helping the fleet manager with the bottom line, and with any driver retention issues. They are attractive vehicles to drive, but buyers are advised to look carefully at the options list to be certain that they get the right product. Furthermore, I'd advise spending time on the handover, too, no matter how manic the traffic office may be. Drivers will only be as good as their briefing on these increasingly complex trucks. Contrary to comment we hear, the job of truck driver has not been de-skilled, it's been re-skilled; and getting the best out of these new trucks will be easy if you are shown how. **TE**

