

Recent truck launches show increasing levels of drivetrain automation. So where does the driver's influence now lie with fuel economy? Ian Norwell drives the latest hi tech tractors from the Germans, Italians and Dutch



Seat of learning

It's often been said that 'the problem with many motor vehicles that don't perform is the nut behind the wheel – a tragi-comic reference to the driver's contribution. The fact is, they've always been important, but, until relatively recently, it's not been easy to isolate driver performance. However, as fuel has become such a large part of operating costs – and volatile pricing the victim of political and economic forces – driving performance must be measured and improved.

Martin Flach, Iveco's product director in the UK, believes the manual gearbox has been the most recent, and biggest, factor to be removed. "A key driver influence was their choice of gear ratios and the attendant engine revolutions. In the wrong hands, that could destroy fuel economy," he reasons. This pitfall has largely gone with AMTs (automated manual transmissions), but manual modes are still usually included. Iveco's new Eco-Stralis Hi-Way, for example, uses the familiar ZF AS-Tronic and has eco fleet software that allows a single manual intervention before reverting to auto mode.

A key is provided to fleet managers and they can decide to either allow this level of intervention or disable the manual mode altogether. Iveco's Eco package also takes away the kick-down function, sets the speed limiter to 85kph, not 90, and can also be specified with a taller RAR (rear axle ratio) for economy, if the routing topography allows. Further, its system logic senses load and makes only proportional torque available, so that laden and unladen trucks perform the same. This prevents drivers speeding home empty.

As for Telematics, Iveco outsources its provision to Qualcomm for fleet managers. However, there is an additional driving style evaluation system, with an

in-cab display, that measures a variety of parameters to give the driver an end-of-shift score. It is easy to navigate and reminds drivers they are being observed. Iveco made this drivers' aid a no-cost option at the Hi-Way's launch.

Dutch courage

While DAF also uses the ZF AS-Tronic as its AMT, the firm takes a different approach. The new XF's standard specification is its 12S2840 12-speed manual, with a 16-speed for heavy applications. The



MX engine brake, the AS-Tronic and the intarder built into it are all highly effective, but are cost options. Since the tide is now running fiercely against the manual gearbox in this class of truck, this is an interesting strategy. With 77% of XF customers in the UK ordering AS-Tronic in the last 12 months, as an option, it can't be long before DAF comes clean and reverses its standard versus options listing here.

Phil Moon, product marketing manager for DAF in the UK, confirms that an AS-Tronic Lite version of the AMT is also available, which removes the manual

Above and right: the new DAF XF exterior and dashboard



override. That's a no-cost option. He also points out that, of the bigger fleets going for AMTs, fewer than 10% ask for manual intervention to be disabled.

"Drivers do still have a big influence and most fleets are happy to let them get on with the job," he says.

In fact, the latest version of ZF's AS Tronic has some DAF-specific functions. Dedicated software for long distance, heavy haulage and off-road work may help fleet engineers tailor their orders, and the fast-shift between the top two ratios (soon to be three) almost gives the impression of a dual clutch.

If the preference is to give drivers full control, some kind of monitoring is required. DAF has chosen not to provide a bespoke telematics package, nor to nominate a preferred supplier, but many DAF operators do in fact select one. At the end of a drive in the Euro 6 XF, the firm's driver performance assistant (DPA) was available for interrogation and a wide range of parameters, with individual scores, gave a cumulative result. It was admirably simple and could certainly encourage drivers to strive for improvements.

Teutonic tables

What about the Germans and, in particular, Mercedes-Benz? Well, they're ahead of the game. The new Actros has more Euro 6 AMT miles under its tyres than any other truck. The firm uses its own PowerShift 3, a 12-speed auto, which is a mature and competent offering. There is no manual 'box available to order, but a manual mode is included. It is presented as either full manual, with individual



lever movements for each gear, or as a single gear intervention while remaining in auto.

Drivers tempted to regularly intervene with their own gear choices can check whether they are achieving a better result by interrogating the on-board computer, which measures eight categories. Possible with early AMTs, most are now highly competent and difficult to match, let alone beat. That said, PowerShift 3's combination of automation and intervention is just about right.

Meanwhile, in addition to the on-board information and coaching, fleet managers can mine data to incredible depths with Mercedes-Benz's own system FleetBoard. With today's telematics equipment, there is now no hiding place for poor driving technique – and nowhere is this more the case than under the all-seeing eye of FleetBoard.

So far, so good, but what about training? As ever, this plays a vital role here. You can make it a co-operative affair or an old-style adversarial stick-not-carrot event. Assuming you have professional and competent drivers, the role of training should not primarily be to teach them how to drive, but how to get the best performance from the truck in their charge. This is important, since it sets the tenor of the process. Getting it wrong will cost you money.

A cynical view of drivers in a fleet could be that they fall into three categories: a top fifth, who are exemplary and one of whom should be your driver-trainer; a bottom fifth, who you may wish you'd never taken on; and the rest. It is acknowledged that AMTs will raise the game of 'the rest' and move them up towards the top drivers. But early training, for younger drivers in particular, is essential to teach skills, such as observation and planning, as well as vehicle sympathy, before they have had the chance to develop bad habits.

All drivers should also know how to quiz their trucks for performance data: it is there. Yes, fuel is still the main event, but tyres, suspension components and nuisance damage rates will all as surely hit your bottom line.

And then there's aerodynamics. All three of these trucks have made big improvements in the way they slip through the air. This matters, but it remains a mystery why so many combinations still blithely ply the motorways with mismatched air deflectors. Health and safety legislation quite rightly prevents drivers clambering atop cabs to make adjustments these days, so I like the DAF XF's elegant solution of a winding handle that can be operated from ground level to raise or lower the blade.

That said, all three of these newcomers present drivers with a comfortable environment, low noise levels (the DAF was astonishingly quiet, even under load) and the ability to make a real difference. The road to economic operation lies as much in their hands as the fleet engineers who specify the vehicles. They both need to watch what they do. TE

Above: Mercedes-Benz's new Actros
Left: Iveco's Eco Stralis Hi-Way dashboard