



Tractor engineering

Too many fleet engineers are buying new tractor units with one eye on the residuals and the other on driver preferences. Steve Banner examines the engineering issues that should matter

Are the specifications of fleet operators' new tractor units increasingly being dictated by the perceived needs of the second-hand market? That certainly appears to be the case. And since used truck buyers want big sleeper cab 6x2s that can run at 44 tonnes – so they can take any job they're offered – fleets are wary of specifying day cab units even if they are what best suits their needs.

"The residual value of day-cab tractors is virtually zero," remarks Iveco product director Martin Flach. And that matters because of the impact on contract hire rates. The better the residual, the lower the monthly rate the operator pays. As a result, firms looking to acquire new tractors have to strike a balance between what they require and what second-hand buyers will demand.

"It becomes far less of an issue though if they are proposing to buy the truck, keep it for several years and write it down to nothing," observes DAF

product marketing manager Phil Moon. If that is the policy, then whatever the unit fetches on the used market will be a bonus.

That said, while many used buyers want plenty of power, that is not necessarily something the first owner should worry about, reckons Flach – although power can bring benefits other than flat-out performance.

HIGHER POWER?

"In our case, the 480bhp Cursor engine used in Stralis offers a slightly better fuel return than its 460bhp stablemate," he explains. "Because it has more grunt, it gets up to cruising speed more quickly, which means it spends more time in the sweet spot on the rev band."

Turning to axles, 6x2s with mid-lifts are undoubtedly the most popular configuration among both new and second-hand buyers. However, those buying new should not be afraid of specifying a tag axle if that is what their operational needs dictate, says Volvo

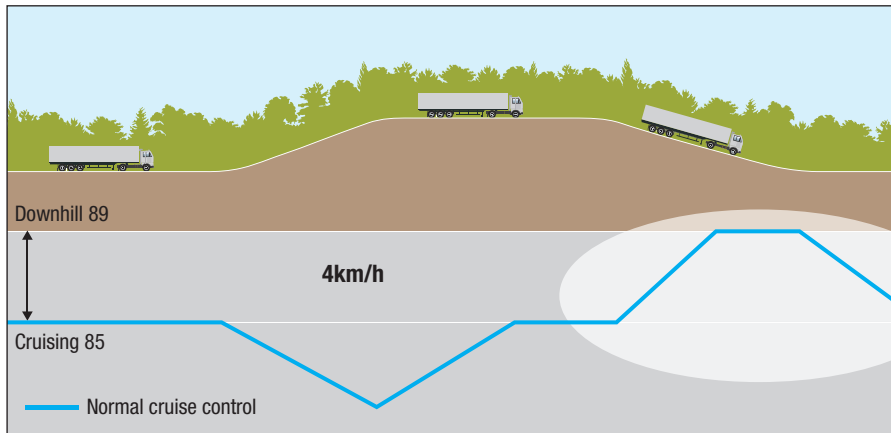
product manager John Comer. "Tags can attract a £4,000 to £5,000 premium on the used market because there aren't so many of them about," he adds.

"We've also seen a shift in favour of 6x2s with a 17.5in mid-lift," says Moon. "It gives you more space on the chassis than a twin-steer with 22.5in wheels does. That means you can fit bigger fuel tanks with as much as 900 litres' capacity. What's more, you get a significant weight saving."

Meanwhile, Moon adds that the arrival of Euro 6 has resulted in a marked swing away from 295/80 tyres towards their 315/70 stablemates. "Operators feel they offer better fuel efficiency and last longer... There is also the point that they are compatible with higher front axle weights, although this is more of an issue with 4x2s than it is with 6x2s."

Talking of which, despite the clear popularity of 6x2s, operators should not be shy of specifying a 4x2 if that is what they need, insists Comer. The fact that

“Using GPS data to read the topography ahead, Active Prediction manipulates the truck’s speed. It increases it before a gradient and reduces it before downhill sections, relying on the truck’s own momentum and gravity to get back to the speed desired.” *Phil Rootham, Scania*



4x2s are a minority, so far as new tractor unit registrations are concerned, again gives them a rarity value – and potentially a healthier price – when it comes to second-hand sales. “Clearly you can’t run at 44 tonnes with a 4x2, but remember that it is 1,200kg lighter than a 6x2 and you can experiment with wide single tyres on the drive axle,” he says. “You can’t do that at 44 tonnes.”

Sliding fifth-wheels are more problematic. New buyers may not want them, yet used buyers still seem to insist on them, and it is not always easy to see why. “A sliding fifth-wheel used to be needed when there were a lot of short-nosed trailers around, but there aren’t so many about these days,” muses Moon. “As a result, we’re seeing a bit of a move back towards fixed fifth-wheels... Remember that with a slider there is always the risk that the driver will leave it in a non-optimum position, which can give you problems with weight distribution and affect fuel economy.”

Returning to cabs, while many hauliers buying new and used units want big cabs to attract and retain drivers, the situation is not as clear cut as it might appear. “Admittedly, more customers buying new XFs are going for Super Space Cabs, but the Space Cab still remains the more popular of the two,” observes Moon. “However a lot of employers and drivers favour the CF

Space Cab.” The former like the weight and cost savings on offer compared with the bigger XF. Drivers like its increased manoeuvrability, good all-round vision and narrower cab, especially if they have to take it down country lanes and into awkward farmyards.

In the end, all this boils down to understanding total cost of ownership. As Renault Trucks commercial director Nigel Butler puts it: “As well as driver acceptability – and that means a roomy cab with a fridge, Bluetooth and decent seats among other things – you’ve got to think of the total pence-per-mile figure,” he observes.

FRUGAL TRUCKS

That means fuel consumption must be a priority and a frugal truck will also appeal to both new and second-hand customers. “With Range T tractors, we’re regularly seeing returns of 9–11 mpg,” he remarks. And an aerodynamic package for both the tractor unit and trailer obviously enhances fuel economy on long-haul runs.

Automated boxes now dominate, with some manufacturers no longer even offering manual alternatives – although Renault does on the Range T. DAF continues to offer a manual box on both CF and XF. “A lot of older drivers prefer it,” asserts Moon, although adding that approximately 75% of the

tractor units it sells are now supplied with the AS Tronic gearbox.

But a wide variety of systems – some standard, others optional – are now on offer to help boost operational efficiency. “So far as gearboxes are concerned, don’t forget Volvo’s I-Shift Dual Clutch,” urges Comer. “There is no break in torque or power when you change gear, so you may be able to opt for 460bhp instead of 500bhp and that will offset the additional cost... Dual Clutch gives you the performance you need, but without increasing fuel consumption,” he contends.

Another good example of technology designed to improve efficiency is Scania’s Active Prediction intelligent cruise control system. “Using GPS data to read the topography ahead, it manipulates the truck’s speed,” explains Scania sales engineer Phil Rootham. “It increases it before a gradient and reduces it before downhill sections, relying on the truck’s own momentum and gravity to get back to the speed desired.”

Other manufacturers offer similar packages. DAF, for example, can equip both the CF and XF with Predictive Cruise Control. Something else of value is telematics to monitor the driver’s on-road behaviour with an eye to minimising fuel usage, says Butler. Driver Performance Assistant is also fitted to DAF tractor units as standard to help achieve the same end, but is not monitored, says Moon.

“We treat it as an onboard support system purely for drivers that helps them get the best out of their truck,” he says. “It’s a simple bit of kit that gives them a percentage score, which encourages them to adopt a less-aggressive driving style.” Less aggression means less fuel used and less CO₂ generated. And there is less of a risk that the driver will have an accident. **TE**