DAF helps Scottish cities prepare for winter

Dundee City Council is preparing for the onslaught of winter, with the arrival of three DAF-based gritter-snowploughs.

Tayside Contracts, which looks after Dundee and the Councils of Angus and Perth and Kinross, says it will use these vehicles in Dundee, where their compact size is suited to the urban environment.

The 18-tonne LF55s are powered by six-cylinder GR165 engines, which deliver 300bhp and 1,100Nm of torque between 1,200 rpm and 1,900 rpm, to help keep the trucks moving.

As for gritting, an engine-mounted PTO drives a hydraulic pump for the gritter equipment and plough, and each of the DAFs has been fitted with long chassis brackets, complete with a carrier plate to attach a 3,050 x 900mm steel scraper blade.

It's serious stuff: the scraper comes with a three-stage, marine specification power angle ram to enable slewing from left to right, operated from the cab.

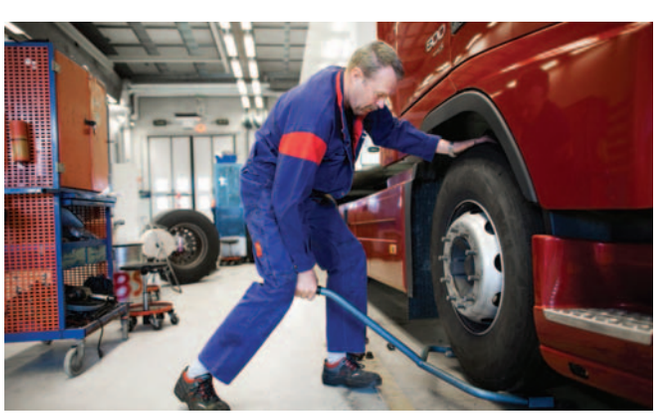
"These are impressive vehicles that will play an important part in keeping Dundee's roads clear and safe for local people in the winter months," says Bob Ritchie, transport manager at Tayside.

He explains that, given the corrosive nature of rock salt, extensive measures have been taken to provide additional protection for the vehicles and bodies. These include shrouding all electrical cables in UPVC conduits and enhancing the paint finish by applying one coat of zinc-rich primer and two of two-pack polyurethane to the cab, along with a heavy-duty gelled thixotropic bitumen solution to the chassis.

To increase the flexibility in deployment, and as an added safeguard for drivers working alone, each gritter is also fitted with a web-based, real-time tracking system, using GPS. Meanwhile, a 'gritting in progress' sign supplements the hazard beacons and the salt spinner assembly incorporates a spring-loaded break system to reduce damage, in the event of a rear impact.

"The DAF LF55 is well specified for the job, providing a warm, comfortable and safe working environment for the driver, and delivering ample power to deal with the demands of gritting and ploughing," comments Ritchie.

Correct tyre and wheel setup saves fuel



Two-thirds of Europe's truck combinations are driving around with incorrect wheel alignment, while many also have the wrong tyre types and tyre pressures.

Those are among key findings of a large-scale test carried out by tyre manufacturer Michelin in partnership with Volvo – and the pair now reckon that the resulting fuel and CO_2 emissions penalties could be as high as 14.5%.

Arne-Helge Andreassen, business area manager for tyres and wheel alignment at Volvo Trucks' aftermarket department, explains that Volvo and Michelin recently completed a two-week trial, under the auspices of SP (Technical Research Institute of Sweden), to check the figures.

They compared two identical combinations, each using a Volvo FH 4x2 tractor, equipped with a 500hp 13-litre Euro 5 engine, hauling a fully loaded box-bodied trailer and grossing 40 tonnes. One was equipped with optimal tyres at the right pressures and with correct wheel alignment, while the other was driven with a variety of incorrect – but realistic – wheel alignment settings and tyre parameters.

Jacques de Giancomoni, technical account manager at Michelin, explains that the trucks were equipped with instruments that monitored precise speed, tyre wear, tyre pressure, rolling resistance etc. Also, prior to each test cycle, the two combinations were driven for one hour on the track to warm up the engines, transmissions and rear axles, and make the test data as reliable as possible. Additionally, test engineers compensated for factors such as wind, rain and temperature.

Hence the 14.5% fuel penalty claim – and de Giancomoni says that choice of tyres alone can result in an 11% differential, with tyre inflation accounting for 1% (within safety limits) and wheel alignment 2.5%.

"One-third of fuel consumption stems from the tyres' rolling resistance. Having the right tyres is of paramount importance. In addition, checking tyre pressure - which has a significant effect on fuel consumption - is also important," comments de Giancomoni.

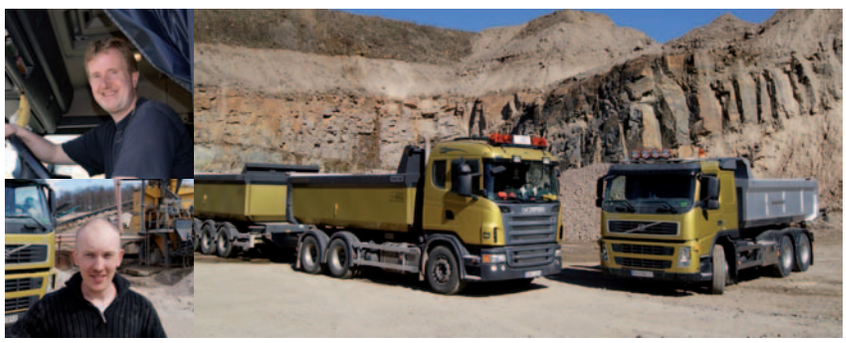
"There is a lack of awareness in the transport industry about the importance of checking tyres and wheel alignment, on both truck and the trailer," adds Andreassen. "At our dealers, we can help haulage companies check the entire combination and correct any problems. If everyone did this, it would have a significant impact on CO_2 emissions."

Hall selects Volvo FM480 and Allison combo

Improved productivity and cost reductions are being reported by Hall Brothers, since specifying a "sensational" Volvo FM480 truck with Allison automatic transmission – the first such unit in Europe.

It was experience with an Allison-equipped Scania truck that brought the transmission to the Swedish aggregates company's attention, according to Peter Hansson, who drives that Scania. "We'd been running with Volvo trucks for as long as we can remember, but when we bought a Scania G480 we wanted to test an Allison fully automatic transmission," he explains.

Finance manager Kent Hall recalls that, when it was time for another Volvo, the firm chose the 13-litre FM480 and went for a seven-speed Allison 4700R gearbox, equipped with integral retarder, because of its claimed improvement in traction, as well as VEB+ – Volvo's 'intelligent' engine braking device.



Top: Lars Andersson, "The Volvo starts smoothly and doesn't slip" Bottom: Kent Hall, "Engine power is transmitted to the wheels very smoothly"

"Thanks to the torque converter and the full power-shifting, engine power is transmitted to the wheels very smoothly and without jerks," comments Hall. "This allows you to start a fully loaded gravel truck on a gradient of 14% with no fuss. The extra planetary gear module and a 4.5 rear axle ratio ensure optimum performance for our duty," he adds.

Hall also says that performance is just as good on-highway, "with low revs for optimum fuel economy". And he adds that the ride is much smoother, "which protects the entire drivetrain". He believes this will lead directly to money and time saving in the workshop, as well as less downtime.

Lars Andersson, who drives the new Volvo, is equally impressed: "It is so comfortable driving a fully automatic transmission," he says. "The Volvo starts smoothly and [doesn't] slip its wheels, even in the gravel pit."

Andersson says he also notices benefits compared to automated manuals. "With an AMT, the engine loses power in every gear change, while the Allison transmission delivers traction without interruption." he explains.

Stralis tractors for Wilson Steven Transport

Cupar-based Wilson Steven Transport is now running its first Iveco heavy trucks – four Stralis Active Space 6x2 twin-steer tractor units, from local Iveco dealer AM Phillip.

The vehicles join a fleet of 14 tractive units, replacing four older Volvo FM12s and operating primarily with multi-compartment, grain carrying bulk blower trailers – although also with other specialist trailers, including walking-floor units capable of rapidly discharging up to 28 tonnes of grain.

Iain Steven, who runs the family business with wife Liana, says: "We were in the market for some new tractors and found the Ivecos were available promptly from UK stock. We had a good look at the Stralis, decided it was right for our fleet, and placed the order."

All the trucks are Stralis AS440S45TX/P units, finished in the company's blue, white and red livery and powered by 10.3 litre Cursor 10 engines (capable of 450hp between 1,550 and 2,100 rev/min and up to 2,100Nm between 1,050 and 1,550 rev/min).

As with other Iveco power plants, these are all certified to EEV (environmentally enhanced vehicle) emissions compliance – and in this case, they have been matched to 12-speed EuroTronic gearboxes.

As for the cab, features include air-conditioning, a slide-out fridge, electrically operated roof-vent and windscreen blind, door roller blinds and black curtains.

Steven says the new trucks will be in operation seven days a week, clocking-up approximately 120,000km per year. Three have been supplied on three-year contract hire through Iveco Finance, with the fourth backed by Iveco's Elements repair and maintenance deal.