



Ease the pressure

One of the biggest pieces of kit in forestry is the timber truck. **Roland Stiven MICFor** takes a look at how technology is benefiting both the timber haulier and the UK's fragile roads

The modern timber lorry is bristling with technology. Some is generic, like the new "Euro 6" diesel engines which boast that the air coming out of the engine is cleaner than the air going in, or the GPS tracking devices that also monitor fuel consumption and log drivers' hours. Other technology is more timber-specific such as the on-board loading cranes and the load cells which can reasonably accurately estimate the weight of the load.

The limiting factor these days is not so much the lorries themselves as the roads, particularly the minor public roads that lead up into forested hills. Such roads were never constructed for 44-tonne trucks, so timber haulage is sometimes working at the limits of a road's weight-bearing capacity.

In some parts of the country, large concentrations of timber can only be accessed over fragile roads. Timber transport groups around the country manage the issue, working with local authorities to minimise the impact of haulage on the fabric of the roads.

One new tool in their armoury is the lorry fitted with a Tyre Pressure

Control System (TPCS), sometimes called a Central Tyre Inflation System. These systems allow the driver to adjust the tyre pressure on the drive and trailer axles from the cab while on the move. Reducing the tyre pressure increases the tyre's footprint on the road, spreading the load and thereby reducing damage to the road. The principle works on both in-forest gravel roads and on minor tarmac roads.

The tyre pressure on a typical haulage lorry will be set at around 100psi. However, when a lorry is unloaded this is unnecessarily high and 90psi is more appropriate even at motorway speeds. When the driver moves onto the single track glen roads and forest roads the pressure can be dropped to 65psi which smoothes the ride and helps stop the empty trailer bouncing about.

Once loaded with 25 tonnes of logs, the tyre pressure might be increased to around 75psi while travelling at low speeds on the forest roads and minor public roads. As the lorry moves back onto the trunk roads the tyres are reset back to

normal pressures. If the driver forgets, a GPS system measuring the speed of the lorry will automatically start to re-inflate the tyres.

Over the past five years, evidence has grown to demonstrate that this can make a real difference, reducing damage to fragile public roads and to "softer" forest roads. In some cases, being able to specify use of a TPCS lorry has proved key in reaching agreement with local authorities over fragile road use.

As we learn more, hauliers are experimenting with tyre pressure control on different tyre configurations including reverting to double tyres and new extra-wide single tyres (known as "maxi tyres").

There are nearly fifty lorries fitted with the technology in Britain. It adds about £12,000 to the cost of a new lorry so the haulier needs to know that they will be able to reflect this cost in their haulage rates.

There are other benefits however, with drivers reporting fewer punctures on forest roads, improved comfort, reduced maintenance to vehicles and extra traction within forests, and in snow.

With public roads already bearing the brunt of two severe winters, every timber haulier should be hoping to receive a TPCS lorry for Christmas.

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