Maintenance

Changes to meet emissions legislation, as well as operator and driver demands, have seen LCV workshops add a wealth of new mechanical and diagnostic equipment. Keith Read looks at the scale of this transformation

When it comes to maintenance, a van is a van is a van, right? Wrong. That might have been the case in the past, but not now, when efficiency, comfort and vehicle functionality are so much more important. As a result, and to keep pace, there has been an overhaul of the workshops where vans and LCVs are maintained.

One man who knows all about this is Ian Sedgwick, UK technical operations manager for Peugeot and Citroën. At the company's high-tech headquarters in Coventry – where fully equipped workshops and a training academy have risen out of the dust of the demolished former Humber, Rootes, Chrysler UK and Peugeot factory, a stone's throw from the city centre – Sedgwick says things are very different.

"Going back, a van used to involve quite simple engineering. It would have a pretty basic diesel engine, and a very robust powertrain and chassis, because it was built for a purpose," he recalls. "What's happened now is that vans' sophistication is following that of cars. We have vans that now share platform technology with cars, so the underpinnings of a lot of light commercial vehicles – such as our Partner and Expert – are based on car-derived products.

"As such, the technology also comes across. So we have particulate filters, HDi, electronic diesel injection, air conditioning, satellite navigation, ABS, ESP – all the elements that people associate with modern cars." Sedgwick highlights the Expert's similarity with Peugeot's people carrier, the 807, for example. "More recently, the Partner van is based on the 308," he adds. "A van now is a great deal more sophisticated and the van driver expects more – especially from the point of view of safety, comfort and equipment. Therefore, these elements are also being built into the van of today. So, as a transport manager maintaining these vehicles, you have to take into account extra considerations."

Sedgwick remembers a time when commercial vehicle workshops wouldn't have to think about recharging air conditioning systems or reprogramming ECUs. "These are things we have had to do on cars for a long time and now we have to look after them on vans, together with maintaining particulate filters and changing additive reservoirs," he observes. "Van service intervals, technology requirements and training have all changed. Something like 90% of the systems on an LCV today are operated by a microchip."

Invest for the best

And hence the need for capital investment in today's van fleet workshops, depending on the fleet in question. "If we're just talking about an average [LCV] fleet that would run, in our case, a small Bipper or Nemo van, through to Partners, Berlingos, Experts and Boxers, then, from a garage

Filtering through

Diesel particulate filters (DPFs) are becoming a service item for some LCVs, says Doug Bentley, technical centre manager at Klarius, the Manchester-based manufacturer of aftermarket parts, including the Klarius emission control and QH automotive brands.

"DPFs are now becoming a more frequent problem component," he says. "The proportion of diesel cars on our roads is getting closer to 50% and we have picked up on increasing demand from our customers for DPFs. Original parts are supposed to last 50,000 to 70,000 miles, but a lot of the time they fail before that. For some vehicles, they have become almost a service item."

Rather than simply replacing the DPFs, though, Klarius encourages repairers to check vehicle systems for the root cause of failures – such as additive fluids.

makeover

lift point of view, for example, consideration has got to be given to lifting two tonnes-plus.

"Then, when it comes to workshop tools – apart from the standard [hand] tools – you're going to be investing in diagnostic equipment which would be linked to the Internet. It's no longer the days of a few basic tools, a trolley jack and a ramp: you're now into car electronics."

Sedgwick agrees that such investment can be expensive. "A multi-franchise workshop might go for a diagnostic tool that covers many different marques. However, if you talk specifically Peugeot Citroën, we have a tool – which costs just short of £2,000 – that gives you the ability to diagnose problems and download system software."

Future fault-finding

In the future, that system will also be able to diagnose faults, if a vehicle stops while away from the workshop. It is already operational in mainland Europe, via a GPS unit fitted to the vehicle. This system, says Sedgwick, is due to be launched in the UK soon, enabling transport managers to see if faults are developing in their vehicles while on the road. The same system could also alert him to an imminent service, as well as providing a degree of driver-management. However, there will need to be some improvements. "One of the biggest challenges we face here is the quality and reliability of the [Internet] signal, when trying to remotely download software," explains Sedgwick.

All of which indicates that workshop technicians will need even greater skill levels to work on new vans. "Training simply has to move with the times," says Sedgwick. "We train van technicians just as we change car technicians, because they have to be able to use laptops, download software, read and diagnose electronics faults etc."

For example, among the new routine maintenance tasks might be updating the satellite navigation system. "Ten years ago, you bought a vehicle and the system stayed the same. It aged with the vehicle," Sedgwick points out. "Now, with all the systems, we routinely have to update software with patches and upgrades."

And it's the same with intelligent service indicators on modern LCVs. "For example, the Boxer has a system that looks at the condition of the oil and usage of that vehicle. It tells you when it wants servicing." But no matter when the service falls due, if a van is off the road during normal working hours it adversely affects delivery operations. And this is why fleets are increasingly demanding out-of-hours or overnight maintenance from franchised or independent service centres – or are implementing twilight and overnight shifts in their own workshops. That is a trend that can only grow, says Sedgwick.

"This is particularly relevant on specialist conversion vehicles that might carry a lot of expensive equipment, used during the day. If that vehicle is off the road, it could be quite expensive for the operator, in terms of lost access to his vehicle. Being able to get that vehicle serviced overnight, when it's not being used, means the operator's business keeps going.

"There are benefits, too, for the workshop. If you are going to run a big, 24-hour operation, then you want workflow, to help with the utilisation."

Incidentally, Sedgwick also identifies a shift in who is servicing LCVs. "The truck people are picking up a lot of van work, because some of the things we're talking about have been on trucks for a while. So there is a skills base in those workshops that can be readily adapted to the technology we find on LCVs today. They also have the larger lifting equipment."

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