

ON THE BUSES

Keeping buses and coaches roadworthy and costs under control is about attention to detail, all the way from driver walkaround checks to service inspection frequencies.

Steve Banner reports

Catch faults on buses as soon as they arise, ensure they are dealt with promptly, and they are less likely to evolve into costly headaches. And one of the best ways to do that is to ensure that drivers carry out walkaround checks and report what they find.

"That's absolutely key," asserts Arriva UK Bus engineering director Ian Tarran, who is ultimately responsible for 6,000 buses and coaches spread around 73 depots. Every one of his fleet's 16,000 drivers is expected to complete a walkaround check each time he or she takes over a vehicle. "That is the case no matter whether a bus has just one driver during the course of a working day or five," he says.

"The first check of the day is the most important and we allow five to 10 minutes," Tarran continues. "It includes looking at the wheels, lights, glass, checking for accident damage and seeing if there is any graffiti, too." A driver who takes over a bus later in the day at a busy city centre stop is not required to carry out a check immediately, but still must as soon as it is safe. "If a defect is detected and it's safety-related then the fleet's engineers must be contacted immediately."

Arriva UK Bus still uses a paper-based inspection system, rather than a hand-held PDA. "Issuing all our drivers with a PDA would cost us a fortune and we've yet to find one robust enough," says Tarran.

Meanwhile, Donisthorpe, Derbyshire-based Macpherson Coaches, which runs a fleet of 16 vehicles, uses a SmartCheck defect recording app for its walk-around checks. "We end up with an electronic record, rather than paper documentation, which makes the information much easier to store," explains managing director Neil Macpherson.

Using a smartphone (Android or Apple in this case) also means that, if the driver is some distance from base, the defect can also be photographed and the picture reviewed by engineers. The



seriousness, or otherwise, of the problem can then be assessed and steps taken to deal with it.

Thorough examination

As part of ensuring roadworthiness, vehicles also need inspection in the workshop – and it is the thoroughness and frequency of these that makes the difference. "We inspect each of our 650 buses at least every 28 days – more frequently if they do a higher than average mileage," states Go North East chief engineer Kirk Trewin. "We look at them inside, outside and underneath... The inspection takes 90 minutes; we use an iPad to record what's found and we home in on critical tolerances."

For him, the latter involves looking, for example, at the wear on a ball joint and determining if there is enough left to last another 28 days in safety until the next thorough inspection. If there is, then it is not replaced: swapping parts unnecessarily, he notes, is an expensive practice. And so is replacing oil if there is no need. "We change oil on a mileage basis and



**“We’re now going for IRTE Workshop Accreditation”
Ilan Tarran**

each vehicle’s mileage is recorded on the bulk tank’s monitoring system when the vehicle is refuelled,” explains Trewin. “That then triggers an alert.”

Oil producer Total goes further, suggesting that lubricant in engines and other driveline components should be analysed periodically (the firm offers an analysis service), because of what that can tell you about the wear rate of key parts and the extent to which the lubricant is contaminated by, for instance, soot or fuel. Armed with the results, fleet engineers can take action to avert what could be the premature failure of an expensive major unit.

What about servicing? There are various regimes, but Arriva Bus UK uses a system of ‘A’, ‘B’, and ‘C’ services at 35 days, 30 weeks and 60 weeks respectively. The ‘C’ service is clearly more comprehensive than its ‘A’ counterpart, but this approach, coupled with the inspection regime, ensures that MoT first-time pass rates currently average 97% to 98%, states Tarran. “Some of our garages are averaging 100%,” he reports.

But achieving that standard is not even just about strict and sensible servicing regimes. It also requires a high standard of training. Last July, a team of Arriva technicians won the IRTE Skills

Challenge Award for Outstanding Achievement – its third successful year running. “We’re now going for IRTE Workshop Accreditation,” comments Tarran. “We’ve got a dozen or so depots accredited to date, as well as irtec for our technicians,” he continues. “We’re also giving them additional diagnostics training.”

Cost conscious

What about parts costs and fleet replacement terms? Go North East uses a procurement team to get best deals from parts suppliers, and while the OE route is preferred, that does not necessarily mean sourcing everything from the chassis manufacturer. “A compressor in a bus manufacturer’s box can cost £3,000 while the identical OE component in a Wabco box may be no more than £1,500,” Trewin observes. “That level of price difference is frankly ridiculous.”

On the other hand, parts that are not OE quality may be inexpensive but can end up costing fleets more in the long run, warns Knorr-Bremse. It cites the example of an operator who complained that the £40 non-OE-quality sets of pads he was buying for his buses were only lasting six months. He switched to Knorr-Bremse OE pads, which while costing £80–£100, ended up lasting two years.

As for depreciation, Go North East passes on its buses after 15 years, which can mean what Trewin calls a “soft overhaul” in year seven or eight. “What this can involve, among other things, is taking the head off the engine and replacing components such as piston rings, injectors – indeed any item that’s likely to fail,” he comments.

Tarran doesn’t go quite that far. “We keep our buses for 15 years, too, and TfL [Transport for London] requires any operated in the capital to be refurbished at five years. But otherwise we refurbish in year six or seven,” he says. “That involves a re-paint and changing the seats and flooring.”

“Something we don’t do is overhaul gearboxes,” says Go North East’s Trewin. “We’ll carry out basic repairs, but if the clutch pack is worn out, we’ll replace the box with a remanufactured one as part of our policy of maximising the life of the vehicle.”

Tarran agrees and adds that replacing engines is not usually necessary these days either, thanks to their increased reliability and the intensive serving regimes generally adopted around the industry, and certainly at Arriva. “Twenty years ago you’d be lucky if a bus engine lasted five years,” he remarks. “But that’s now no longer the case.”

Incidentally, in London and the Midlands, Arriva has introduced inspectors whose sole job is to examine vehicles. “They’re not responsible for fixing them as well,” says Tarran. “That gets us away from the situation where technicians who find something on a vehicle late on a Friday afternoon turn a blind eye because they know they’ll have to repair it.” **TE**



**“We inspect each of our 650 buses at least every 28 days – more frequently if they do a higher than average mileage”
Kirk Trewin**