PLUG AND PLAY

Older trucks may have been beset with erroneous warning lights, but their modern counterparts are more robust. Steve Banner takes advice on what to look for, how to do it and reasons for problems

Puzzled as to why one of your trucks has so many warning lights up on the dashboard? Things are not always what they seem and it could be due to ancillary equipment fitted incorrectly, advises FTA (Freight Transport Association) head of engineering Andy Mair.

"Electronics on modern trucks are complex and sensitive," he warns, "so installing something incompatible – a crane run from a PTO, for example – might cause all sorts of problems… The biggest headache comes when the operator gets stuck in the middle of a dispute between the chassis manufacturer and the machinery supplier."

Didn't the advent of European Community Whole Vehicle Type Approval (ECWVTA) bring warring factions closer together? Yes, he concedes: "What we're talking about is a multi-stage build and the second-stage manufacturer – the crane maker in this instance – needs the chassis maker to supply all relevant technical information before the build continues."

So that should mean fewer incompatibility problems. "And increased standardisation of plug-and-play wiring looms helps, too," suggests Mair. "However, the sensitivity of truck electronics means there is still room for improvement." And he adds that such sensitivity also means that onboard electronics can generate false positives – triggering erroneous warning lights.

Even though such lights may be misleading and may only require a reset in the workshop, they cannot be ignored. That's particularly the case if they relate to safety-critical systems. But it's all about severity.

Yellow ABS warning lights apparently come on so regularly that DVSA (Driver and Vehicle Standards Agency) has now accepted the FTA's proposal that an inspection notice, rather than a prohibition, should be issued if detected at a roadside inspection. However, the driver has to prove that the lamp lit up during his journey – for example, by showing that he stopped and texted the traffic office when he saw the alert.

"This is an area of increasing concern for us," agrees Dawsonrentals managing director John Fletcher. "Our controllers can now access images of truck dashboards on their screens, so, if a driver rings up with a problem, they can

"Electronics on modern trucks are complex and sensitive, so installing something incompatible – a crane run from a PTO, for example – might cause all sorts of problems"
Andy Mair

see what he's talking about and advise him accordingly. Quite often spurious warning lights can be reset by turning off the engine then re-starting it."

False positives could become even more of an issue when AEBS (advanced emergency braking systems) and LWDS (lane departure warning systems) become mandatory on all newly-registered trucks from 1 November, warns Mair. "I suspect that ultimately DVSA examiners will be equipped with tools they can plug into a vehicle's OBD [on-board diagnostics] port so they can find out exactly what is going on," he comments.

However, MAN head of service and support John Davies disagrees. He argues that the days of warning lamps coming on for no discernible reason have pretty much disappeared. "The electronic bugs all trucks used to suffer from have been largely ironed out," he contends. "What you can still occasionally get though are warning lamps that wrongly tell the driver that the lights on his trailer aren't working," he concedes. "That is because the tractor unit is looking for traditional bulbs with a resistance in the filament and can't find them because the trailer is fitted with LED lamps."

Iveco customer care and technical services director Alan Coppin agrees, adding that modern truck electronics are far more reliable than they are often perceived to be. When faults do occur, it can be because somebody ignored the wiring loom's plug-and-play facility and instead simply soldered something to a wire, he remarks. A feed for a telematics system for instance. "The truck reacts because it does not recognise it."

TELEMATICS TAKEOVER

Coppin is also concerned about some drivers' lack of understanding of their vehicles. "We've had at least one instance of a driver reporting that a warning light has come on, only to discover that it was because he hadn't shut the cab door properly," he recalls.

That said, hauliers are likely to become less reliant on drivers spotting warning lights as trucks fitted with telematics increasingly transmit information on faults direct to the operator, the dealer and/or the manufacturer's technical team. However,

"We've had at least one instance of a driver reporting that a warning light has come on, only to discover that it was because he hadn't shut the cab door properly"
Alan Coppin

while the fault codes trucks display can give technicians an indication of what is wrong, resolving the problem may involve using diagnostics software – although there are no magic wands.

"What MAN-cats, for instance, won't do is tell you that a particular sensor has failed or that there is water in a plug," explains Davies. "It will tell you there is a fault in a circuit, and guide you from one connection to the next until you identify the one causing trouble. So it is not a substitute for technical expertise."

Such software is available for technicians working for non-franchised dealerships or in-house workshops, as well as those employed by franchised dealerships. European Union competition legislation obliges manufacturers to make diagnostics software available to anybody who requires it at the same price they charge their dealers. Manufacturers make training available, too.

For example, MAN runs courses for operators to help them get the best out of MAN-cats, says Davies, and to improve understanding of their new vehicles. The training reflects the fact that onboard electronics now control virtually all aspects of a modern truck, so everything may require diagnostics.

"Even if all you are doing is changing the brake pads, you still have to reset their value using the laptop once the job is complete so the truck knows it has new ones," explains Volvo customer service director John Conway. Connecting up the laptop will also tell the technician if the fault codes shown are active or inactive, he adds.

"You usually don't need to worry about inactive codes," he advises. "I'm thinking about those that show, for example, that there was a drop in fuel pressure for a millisecond. That said, if that inactive code comes up again and again, there may be an intermittent fault that needs investigating." TE