



# BIG problems

Although mobile cranes generally have been brought into the annual test required of all HGVs, larger units are still exempt. Toby Clark examines new voluntary guidance for them

Before May 2018, mobile cranes based on HGV chassis – that is, vehicles used solely as cranes, rather than load-carrying HGVs fitted with loader cranes – were exempt from annual MOT testing. The change in the law, in line with European Directives covering vehicles in categories N2 and N3, brought cranes based on conventional truck chassis into the MOT testing regime.

Even before then, however, cranes were – and still are – covered by the UK Road Vehicles (Construction and Use, or C&U) Regulations 1986 that points out that all vehicles, including mobile cranes, are maintained so that “... no danger is caused or is likely to be caused to any person in or on the vehicle or on a road”.

However, specialist mobile cranes built on bespoke chassis – often with much higher axle ratings and sometimes very high gross weights – are operated under special types (STGO) rules. This

derogation from C&U means that they were and are still exempt from MOT testing. That decision was made for pragmatic reasons – and not because the vehicles don’t need testing, explains Gordon MacDonald, DVSA’s head of enforcement policy. He explains that they retained their exemptions “because of the practical difficulties of testing such atypical or outsized vehicles at authorised testing facilities”. However, he adds that the government encouraged industry parties to suggest ways to test these vehicles on a self-regulation basis.

One of those parties was The Construction Plant Hire Association (CPA). It has developed a voluntary inspection scheme for STGO vehicles; this is laid out in a Good Practice Guide (CIG 1901; see links opposite). Technical consultant Tim Watson, pictured above, who was involved, emphasises that there is little difference in the test procedure: “Basically, we say follow what the HGV testers’ manual tells you. [But] there is an annex at the end of the document which sets out the criteria for pass or fail, and there are a number of derogations permitted by STGO.”

In fact, the annex shows no derogations for the smallest Category A STGO vehicles – up to 36t gvw on four axles, with 11.5t drive axles. For category B and C vehicles, with axle weights up

to 16.5t and up to 150 tonnes gvw, most of the derogations are relatively minor: size and type of tyres; side guards, rear underrun devices and bumper bars; spray suppression, wings and wheel arches.

But one derogation in particular is more significant. “Brake performance is the big one,” says Watson.

This is split into service brake performance, secondary brake performance and parking brake performance. CPA’s recently published TIN104 provides three alternatives for in-service testing of mobile crane chassis brakes, in order of preference:

- Roller brake testing (if a sufficiently rated roller tester is available)
- Decelerometer brake testing (using a DVSA-approved decelerometer; see also [www.is.gd/megesa](http://www.is.gd/megesa))
- Stopping distance test (again using approved equipment).

Watson explains: “You are permitted lower brake performance than normal Construction & Use regulations require.” STGO requires a service brake deceleration of just 3m/s<sup>2</sup>, and the heaviest category C vehicles only need to be tested from 30mph. According to WABCO, that figure corresponds to a braking ratio of 30% (see links). In comparison, motor vehicles fitted with a manufacturer’s plate are required





to achieve a service braking efficiency of 50% design gross vehicle weight, according to the DVSA HGV inspection manual. It also requires the same braking efficiency for drawbar trailers manufactured since 2012, though semi-trailers manufactured since 1982 are only required to have 45% efficiency.

Although STGO regulations may water down braking requirements, they also impose other restrictions, including maximum speeds: to 50mph on motorways, 45mph on dual carriageways and 40mph on other roads for Category B vehicles, and 10mph less in all road types for Category C. Both must be fitted with amber illuminating beacons.

Watson argues that, for mobile cranes, the trouble hasn't been a reduced braking standard. "There have been a number of accidents where brakes have been an issue - but the problem is not the performance of a fully maintained brake, but the fact that people weren't maintaining them.

"The thing to emphasise about this scheme is that it is an annual check of the condition of the crane at the time - just like a normal MOT - but the really important thing is that you should have a rigorous maintenance routine. If your maintenance system is up to scratch, then your truck should sail through the test." To that end, CPA has also republished its best practice guide for mobile crane maintenance,

## CITY LIFTING

Purfleet, Essex-based mobile crane operator City Lifting began to MOT test its fleet of HGV-mounted cranes before it became a requirement. Its heavy cranes are all maintained and inspected at the firm's workshop. Transport and workshop manager Bill Buckley says: "We follow a six-month maintenance schedule and we'll do an annual MOT on the crane. We have roller brake testers, headlamp aligners and diesel smoke testers, and it's well worth having the in-house facilities, especially when it comes to brakes."

which also states that operators follow manufacturers' maintenance recommendations. They are normally based on engine hours run or distance travelled, whichever parameter is reached first, it says.

The CPA documentation says technicians undertaking the inspection must have appropriate training, and lists suggested qualifications; it mentions that the irtec Inspection Technician qualification is particularly appropriate.

"The whole scheme is very much in its early stages," says Watson, adding that some organisations who offer third party roadworthiness inspections, such as the FTA, have expressed 'a very strong interest' in moving into the mobile crane market. There is also interest from SAFED - the trade body

One significant difference between mobile cranes and HGVs is that cranes are not subject to periodic four- or six-weekly interim inspections: "That's not part of the CPA [advice]," says Buckley, "but the driver does daily checks, and obviously if that comes up with anything we repair it straight away."

A mobile crane is used quite differently from a typical HGV: "Because we are predominantly in London, our road-going mileage is very low - we can do just ten miles a day. It's more to do with how many hours we do. The MOT is only the bare minimum to be legal on the road."

that performs thorough examinations on cranes: "It might be a one-stop shop for crane owners." Test intervals are compatible, in that a TE is also required every 12 months.

A meeting of interested parties has been scheduled by the CPA this month, and Watson says: "We hope that crane owners will take the scheme up - it is completely voluntary - and that a connection will develop between the third parties and the crane owners." **TE**

### FURTHER INFORMATION

CPA CIG 1901 - [www.is.gd/bixuge](http://www.is.gd/bixuge)

CPA TIN 104 - [www.is.gd/xunuba](http://www.is.gd/xunuba)

DVSA HGV manual - [www.is.gd/bojuve](http://www.is.gd/bojuve)

STGO enforcement - [www.is.gd/akegaq](http://www.is.gd/akegaq)

WABCO training guide - [www.is.gd/nuxaqu](http://www.is.gd/nuxaqu)