

# NEW CABS

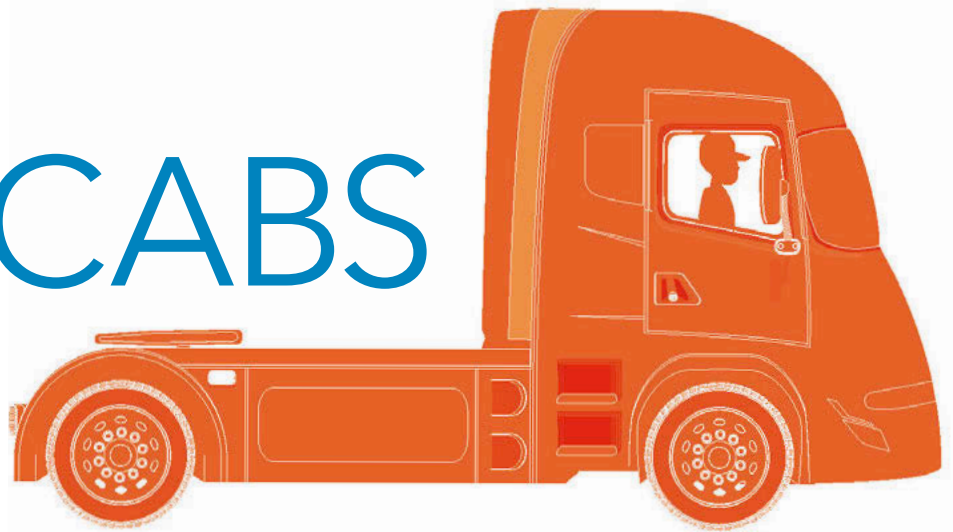
**A derogation to EU limits on HGV cab length should also reduce fuel consumption and improve safety**

From 1 September, the first longer truck cabs meeting an official new EU derogation will be allowed to drive on Continental roads. The 80-90cm of cab length they permit could offer superior aerodynamics, enhanced driver vision and improved safety.

"European truck cabs have been shaped like bricks for the past 50 years. That's set to change," states James Nix, freight director at Transport & Environment, which campaigned for the introduction of the legislation.

Vehicle makers who choose the extra cab length, which is not mandatory, will have to sign up early to the EU's coming raft of rules for cars, vans and trucks in the General Safety Regulation (2019/2144). That includes a number of measures including Direct Vision (widely enforced from 2028), cyclist detection and warning systems, driver drowsiness and attention warnings, TPMS and reversing cameras (all widely enforced from 2024). It remains uncertain, however, whether the UK will adopt the regulation once it leaves the EU.

But if it does not, UK operators



Larger windscreens to improve driver vision



Reduced fuel usage and CO2 emissions



Tapered cabs enable streamlined front ends



Tapered cabs reduce VRU injuries and run-over



Extra cab space enhances driver comfort



Truck cabs permitted to drive on the road 1 September 2020

may be at a disadvantage, says TRL head of biomechanics Phil Martin, as adopting aerodynamic cabs will reduce vehicle drag, and hence improve fuel consumption. Martin was involved in conducting cost-benefit research that evaluated a range of vehicle safety features, work that supported development of the regulation.

He says: "The length derogation is all about improving the aerodynamic design of the cab. The regulation ensures that this has the additional effect of improving driver comfort and the safety of vulnerable road users [VRUs]."

Two particular exterior design changes are regulated: rake, how much the cab leans back from the front edge in a vertical plane, and taper, which is the degree to which the vehicle's sides merge toward a point in front. In case

of a collision with a VRU, increasing the rake reduces the risk of head injury, as the vehicle is more likely to hit lower body features such as hips and torso, absorbing some of the impact energy. The increase in taper angle may also further deflect the VRU laterally away from the wheels, reducing run-over risk.

Because of increased rake and taper, VRUs will be located farther from the driver, reducing the forward blind spot.

In particular, the design envelope requires a rake of at least 3° from 1m to 2m high, and 20° of taper from the maximum width of the vehicle. Both of these changes have to be within 200mm of the front of the vehicle, according to Martin. That might allow a long-haul cab to be extended by up to about a metre at ground level, but overall length still depends on turning circle maximums. **TE**

## DIRECT VISION UPDATE

Although originally expected to begin on 1 October, the start of enforcement of Direct Vision has been pushed back six months to 1 March 2021 at the earliest because of COVID-19, according to Transport for London.

The scheme proposes design

changes in cabs of vehicles over 12t gvw to improve sight lines of vulnerable road users such as cyclists. A number of design details have been wrapped up into a star rating for HGV cabs. Vehicles rated from 1-5 have been able to apply for a HGV Safety Permit

since last year, and will be able to do so until 2024. At that time, 1 and 2-star cabbled vehicles will need additional equipment in a 'Progressive Safety System' to be announced in 2022. Vehicles rated 0-star can still run within the area if fitted with extra cameras and

mirrors according to the 'Safe System' stipulations (see [www.is.gd/fexaya](http://www.is.gd/fexaya)).

The affected area overlaps with the Low Emissions Zone, which is also increasing emissions standards for commercial vehicles over 3.5t gvw to Euro VI levels, from March 2021.