

Jack Pease's Air Quality Blog

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Air Quality Consultants (AQC) is delighted to share some typically insightful thoughts from our friend Jack Pease.

In this blog Jack discusses **vehicle exhaust emission reductions that may be delivered through a future Euro 7 standard.**

These are, though, Jack's words and not those of AQC.



About Jack:

Jack Pease graduated as a Civil Engineer working for British Rail then became a journalist writing on the construction, transport, oil and truck industries before becoming editor of the Air Quality Bulletin and Noise Bulletin newsletters in 1998 until very recently.

What should we expect from Euro 7 emission standards?

Euro 7 emission standards have been proposed in what is likely to be the last standard needed before new petrol and diesel cars are banned and attention falls more squarely on non-exhaust emissions.

Euro standards tend to come every five years - the last to be applied was Euro 6 in 2015 so we are overdue for Euro 7. Sure enough, before Christmas, Europe outlined its Euro 7/VII plans that could take us through to the European ban on fossil fuel cars in 2035, not that far away given the lead time for new models and technology.

Every new Euro standard is accompanied by squealing from industry that it is not necessary/too expensive/impossible to comply with. Hitherto, the fears have not been realised - once the standard is agreed, by and large manufacturers have largely delivered the improvements without huge cost or performance penalties (Dieselgate aside!).

However, where manufacturers may have a point is that deadlines are tight - the implementation date for cars is 2025 and the standard is still a year away from being finalised.

At the heart of the Euro 7 car proposals is fuel neutrality - i.e. that diesel has to meet the same standards as petrol. To achieve fuel neutrality, Euro 7 tightens diesel limits but leaves petrol standards virtually unchanged.

Some later Euro 6 cars (e.g. 6c variants and above) are already achieving these limits and so the real burden (and benefit) will come from the inclusion of tougher real world testing, extended emission durability periods, as well as the first-ever limits for particulate emissions from brakes and microplastics from tyres (modern tyres being more plastic than rubber). Dealing with non-exhaust emissions (tyres and brakes) is ambitious and riddled with scientific, commercial and practical problems which are a long way from being resolved.

Manufacturers argue that vehicles will inevitably be more expensive and less affordable. Fleet renewal will be slowed and given that later versions of Euro 6 (6c) did in fact work, then arguably Euro 7 misses the elephant in the room - speeding up fleet replacement to remove older more polluting vehicles as quickly as possible.

Car manufacturers further argue that money spent complying with Euro 7 limits would be better spent on zero exhaust emission technologies. This is somewhat undermined by the same manufacturers admitting that the crippling costs of batteries is hindering mass market take up of purely electric vehicles.

The chosen Euro 7 standard may actually reflect these arguments - standards are laxer than first thought. Environmentalists quip the standards "are so weak, the auto industry might have drafted them themselves". There's less controversy over trucks and buses where the chosen standards should drive improvements in the emissions of NOx and particles.

All these arguments may be moot of course - in theory the UK no longer has to agree to European standards but in practice we will. That's not to say that manufacturers may use the UK to dump old stock, or fit cheaper and dirtier emission components for the UK market.

As progressive controls on tyre and brake wear are adopted in Europe, a distracted UK Government will need pressure to ensure the UK does not become a dumping ground for cheap, low performance tyres, and have higher PM and microplastic emissions as a result.

Euro standards do not of course tackle 'softer' issues that affect emissions such as tampering and driver behaviour. Just last week I muttered to my mechanic that my new Euro 6 diesel had far less torque than its Euro 5 predecessor despite being the same rated 'power'. An engine remap was quickly offered to restore 'performance'!

UK plans for anti-tampering laws (see below) appear to have died a death after vociferous lobbying from petrolheads. Europe is also nervous of nanny statism - it is introducing intelligent speed control - new cars must be capable of identifying what speed limit applies.

But the speed warnings are voluntary, and there remains nothing to stop drivers buying absurdly overpowered cars then driving them like loons. Emissions under such conditions go off the scale.

The refusal to accept 'nanny state' regulation is a huge shame. As we have seen from the use of variable motorway speed limits, lowering speeds and smoothing traffic can have immense emission benefits. If urban limits could be enforced by technology, there'd be no need for road humps which are unhelpful for emissions (and tiresome).

Extra controls seem unthinkable in post-Brexit post-Boris UK - red tape cutting is still the order of the day and plans are afoot to decrease MOT testing frequencies. Expect more illegal mods and failed emission controls e.g. DPF removal.

All said and done, even though Euro 7 is being criticised as weak, and likely will end up delayed, the car industry has delivered clean vehicles in later Euro 6 vehicles. Doing nothing is in fact doing something with natural wastage and replacement gradually cutting emissions.

Further Reading:

Commission proposes new Euro 7 standards to reduce pollutant emissions from vehicles and improve air quality:

https://ec.europa.eu/commission/presscorner/detail/en/ip_22_6495

International Council on Clean Transportation:

<https://theicct.org/statement-proposed-euro-7-nov22>

European Commission proposes Euro 7/VII emission standards. Dieselnet - a considered industry perspective:

<https://dieselnet.com/news/2022/11eu.php>

Euro 7 – a missed opportunity and a gift to carmakers? A view from T&E:

<https://www.transportenvironment.org/discover/euro-7-a-missed-opportunity-and-a-gift-to-carmakers/>

Anti tampering: Future of transport regulatory review: modernising vehicle standards:

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1033151/future-of-transport-regulatory-review-modernising-vehicle-standards-print-version.pdf