

MOT Consultation  
3rd Floor, Zone 19  
Great Minster House  
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London SW1P 4DR

14 March 2023

Dear Sir / Madam

I write on behalf of the CO Research Trust in response to the Department for Transport's "*Changes to the date of the first MOT test and research into other MOT enhancements*" consultation which closes on 22 March 2023.

The CO Research Trust is a registered charity, established in 2005. The objective of the charity is to reduce the incidents of death and serious injury from carbon monoxide (CO) exposure. We do this by funding evidence-based research relating to CO exposure, the outcomes of which we make freely available to policymakers, campaigning organisations, and those seeking to raise awareness amongst the public.

CO is a colourless, tasteless, odourless, non-irritating gas produced as a by-product during incomplete combustion of fuels due to there being insufficient oxygen present. Complete combustion occurs when sufficient oxygen is present and leads to the production of carbon dioxide.

Our interests and expertise are in the prevention of CO exposure, and we recently funded AirSafe London to undertake a small observational pilot study which looked at CO in cars, *CO in cars: what are we breathing? A UK-based observational study of in-cabin vehicle CO levels*. You can read more find out more about this study on our website:-

<https://www.coresearchtrust.org/our-activities/co-inside-cars-what-are-we-breathing-a-uk-based-observational-study-of-in-cabin-vehicle-co-levels>

Given our interests and expertise, we have restricted our comments to the relevant questions and are responding to Questions 1 – 3, 14, and 18: -

1. In your view, should the date of the first MOT

[Move from 3 to 4 years](#)

2. Please explain why you hold this view.

[Moving the date of the first MOT to four years would reduce operating costs for drivers and may, be an appropriate adjustment given improved car safety design.](#)

[However, in order to safeguard public health, we believe that increases in the testing schedule regarding emissions would be appropriate. For the same reasons, we recommend testing on MOT for the presence of in-cabin leakage of exhaust gas, as outlined at question 3 below.](#)

3. In your view, should changes be introduced alongside changing the date of the first MOT test to mitigate any effects on road safety (for example, re brake and tyre wear) or polluting emissions

- additional safety information campaigns for drivers
- additional odometer checks)?
- DfT publicity to ensure that motorists keep their vehicles safe ahead of the date of first MOT test?
- ensure vehicle service packages include items that are also covered in the MOT
- other (please specify)

[Alongside the proposed widening of emissions testing on MOT for the purposes of public health, we also advocate adding measurement of in-cabin emissions. This could be trialled through regional pilot schemes prior to adoption of a routine test.](#)

This recommendation follows recent UK-based research funded by the CO Research Trust which showed elevated exhaust levels within the interiors of a proportion of cars tested (1).

This data reproduces several larger studies, (including meta-analyses) conducted worldwide (2-9).

It is accepted that the inhalation of low-level exhaust fumes is damaging to health, with the effect of CO inhalation upon cardiovascular (10-12), neurological (13-16) and mitochondrial function (17,18) being well-documented. Furthermore, pregnant women (19,20), children (21) and the unborn (22, 23) are especially vulnerable to its effects.

In-cabin exhaust leaks may also contribute to the incidence of road traffic accidents: the threshold at which elevated carboxyhaemoglobin causes drowsiness has been placed as low as 3.4 per cent (24), which correlates to approximately 20ppm ambient CO (25).

From 2030, this issue is likely to become an increasing focus of publicised health inequality, as lower-income households find themselves driving an ageing cohort of petrol- and diesel-fuelled cars.

We believe that in-cabin air quality testing on MOT would be a low-cost, proportional and timely response to this issue. As a service-based public health intervention, in-cabin air quality testing would also fulfil Marmot Policy Objective 6: strengthening the role and impact of ill-health prevention (26), cited in the UK Government policy document, *'Health disparities and health inequalities: applying All Our Health'* (27). This also concurs with the 2019 NHS Long Term Plan (28).

14. How does the MOT (or other roadworthiness testing) need to change to accommodate the differences between electric and hybrid vehicles and traditional internal combustion engine vehicles?

As noted at (3) above, the shift to electric vehicles from internal combustion engine vehicles is likely to be accompanied by disparity in ownership across income groups, with resulting health inequality. The MOT test will need to prioritise and address key features of this inequality. We would strongly suggest that in-cabin air quality is one such feature.

18. What changes do you think should be made to elements of the current MOT test for cars, motorbikes and vans? This could be elements that should be added to or removed from the current test or tested in other ways:

- alternative ways of testing the main failure items such as brakes and tyres
- other actions to ensure the emission control technology fitted to cars is operating correctly
- enhanced testing of noise emissions
- testing of window tinting
- change approach on advisory standards (tyres, brakes near safety critical levels)
- other (specify)

Please see our response at (3), above.

Thank you for the opportunity to respond to this consultation, if you require any further information, please do not hesitate to contact me by email ([adrian@coresearchtrust.org](mailto:adrian@coresearchtrust.org))

With kind regards



Adrian McConnell  
Chief Executive  
CO Research Trust

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