

EXPLANATORY MEMORANDUM TO
THE ROAD VEHICLES (CONSTRUCTION AND USE) (AMENDMENT)
REGULATIONS 2025

2025 No. 454

1. Introduction

- 1.1. This explanatory memorandum has been prepared by the Department for Transport and is laid before Parliament by Command of His Majesty.

2. Declaration

- 2.1. Lilian Greenwood MP, Parliamentary Under Secretary of State at the Department for Transport confirms that this Explanatory Memorandum meets the required standard.
- 2.2. Phil Earl, Deputy Director for International Vehicle Standards at the Department for Transport confirms that this Explanatory Memorandum meets the required standard.

3. Contact

- 3.1. Eleanor Deansmith at the Department for Transport Telephone: 07977 694767 or email: IVS.ENQUIRIES@dft.gov.uk can be contacted with any queries regarding the instrument.

Part One: Explanation, and context, of the Instrument

4. Overview of the Instrument

What does the legislation do?

- 4.1. This instrument will amend the Road Vehicles (Construction and Use) Regulations 1986 (S.I. 1986/1078) (“the 1986 Regulations”) to allow hydrogen powered Non-Road Mobile Machinery (NRMM) (e.g. diggers and other mobile construction machinery) and agricultural vehicles (e.g. tractors) to be driven on the road, provided they meet minimum safety requirements.

Where does the legislation extend to, and apply?

- 4.2. The extent of this instrument (that is, the jurisdiction(s) which the instrument forms part of the law of) is England and Wales, and Scotland.
- 4.3. The territorial application (that is, where the instrument produces a practical effect) of this instrument is England and Wales, and Scotland.

5. Policy Context

What is being done and why?

- 5.1. Most NRMM and agricultural vehicles are powered by fossil fuels, resulting in carbon dioxide (CO₂) emissions as well as air and noise pollution. As in many other sectors, manufacturers of NRMM and agricultural vehicles are looking to alternative fuels to reduce CO₂ emissions.
- 5.2. The 1986 Regulations specify the technical requirements for vehicles to be used on the road. Currently, hydrogen powered NRMM and agricultural vehicles can be sold

in the UK, but not driven on roads. This presents a regulatory barrier for wider uptake of this machinery as occasional road use is often needed (e.g. to drive between construction sites or between fields). Therefore, the Government is amending the 1986 Regulations to allow hydrogen powered NRMM and agricultural vehicles to be used on the road.

- 5.3. Ensuring appropriate safety standards are applied has been a key consideration when preparing this amendment. The approach to hydrogen safety has been adapted in response to the views expressed during the public consultation exercise. This includes introduction of a new schedule to the 1986 Regulations (Schedule 5A) to ensure the risks associated with road use of hydrogen machinery are minimised.

What was the previous policy, how is this different?

- 5.4. Previously, using hydrogen powered NRMM or agricultural vehicles on the road required a Vehicle Special Order (VSO), issued under section 44 of the Road Traffic Act 1988, c. 52. This is a specific exemption from a regulatory requirement for individual or small numbers of vehicles. To obtain a VSO a manufacturer must provide sufficient evidence of the safety of machinery to the Vehicle Certification Agency, an executive agency of the Department for Transport. Upon issuing a VSO, the usage of the machinery is typically limited to a particular set of roads and is valid for one year. This process provides a useful route to enable the testing of prototypes, but is time consuming and expensive for manufacturers seeking to bring larger numbers of vehicles to market.
- 5.5. Conversely, hydrogen powered passenger cars, vans, trucks and buses can all be used on the road without the use of a VSO. This was the result of an amendment to the 1986 Regulations in 2017. Due to the way this amendment was drafted, hydrogen powered NRMM and agricultural vehicles were excluded, hence the need for a VSO.

6. Legislative and Legal Context

How has the law changed?

- 6.1. For a vehicle to be used on the road in Great Britain it must comply with the 1986 Regulations. Regulation 94 of the 1986 Regulations specifies requirements for the use of gas propulsion systems of vehicles. In 2017, regulation 94 was amended to permit vehicles on the road to use hydrogen if that vehicle was approved under the Road Vehicles (Approval) Regulations 2009 (S.I. 2009/717) (“the RVAR 2009”) for that system at the time of registration. The RVAR 2009 have since been replaced with the Road Vehicles (Approval) Regulations 2020 (S.I. 2020/818) (“the RVAR 2020”).
- 6.2. As NRMM and agricultural vehicles are not within scope of the RVAR 2020, they were not able to meet the requirements of regulation 94. Instead, under section 44 of the Road Traffic Act, the Secretary of State could authorise the use on roads of specified hydrogen powered NRMM or agricultural vehicles through a VSO.
- 6.3. This instrument amends regulation 94 of the 1986 Regulations and inserts a new Schedule 5A to the 1986 Regulations. This will enable hydrogen powered NRMM and agricultural vehicles to be used on the road without requiring a VSO, provided they meet the new requirements specified in regulation 94.
- 6.4. Regulation 94(2A) is amended to enable the road use of hydrogen-fuelled vehicles that meet the requirements in new paragraph (2B) or (2C).
- 6.5. The requirements in paragraph (2B) are that the vehicle must be an agricultural motor vehicle, engineering plant or a works truck, have been designed and constructed to be

fuelled by hydrogen, and must comply with the Pressure Equipment (Safety) Regulations 2016 and the requirements in new Schedule 5A.

- 6.6. The requirements in paragraph (2C) are that the vehicle must be a category T tractor, have been designed and constructed to be fuelled by hydrogen, and must comply with Parts I and II of UN Regulation 134, 134.01 or 134.02¹ and the requirements in new Schedule 5A.
- 6.7. The safety requirements set out in new Schedule 5A extend to requirements for the fuelling receptacle, pressure relief devices, protection against flammable conditions, signal warnings to the driver, fuel system leakage and installation requirements.
- 6.8. This instrument also updates the reference to the RVAR 2009 to refer to the RVAR 2020 instead.

Why was this approach taken to change the law?

- 6.9. Relying on VSOs enabled specified vehicles to use hydrogen on roads, but it was creating a barrier for wider manufacturer uptake of hydrogen-fuelled NRMM and agricultural vehicles. Amendment of the 1986 Regulations to allow hydrogen use on roads for NRMM and agricultural vehicles will provide a more permanent and certain arrangement for manufacturers. Amending the 1986 Regulations via a statutory instrument is the only possible solution to achieve this.

7. Consultation

Summary of consultation outcome and methodology

- 7.1. Section 195(2) of the Road Traffic Act requires the Secretary of State to consult with such representative organisations as they think fit. The Department for Transport ran a public consultation between 27 March 2024 and 3 May 2024. This asked six open ended questions about our proposal and received 33 responses from a range of manufactures, representative bodies, end users and private individuals.
- 7.2. Overall, the responses were supportive of enabling the road use of hydrogen powered NRMM and agricultural vehicles. The responses raised some important points to consider on retrofitting, hydrogen safety and the inclusion of other gaseous fuels within the amendment.
- 7.3. As a result of the consultation responses, the route to ensuring hydrogen safety was adapted to avoid duplication of requirements already applied through compliance to The Pressure Equipment (Safety) Regulations. A new schedule was also introduced within the 1986 Regulations to set out additional hydrogen safety requirements that must be met. The content of this schedule was developed through further targeted engagement with machinery manufacturers and relevant trade bodies following the consultation².

Hard copies may be obtained from the Department for Transport, Great Minster House, 33 Horseferry Road, London, SW1P 4DR

¹Copies of UN Regulation 134, 134.01 and 134.02 may be obtained from the UNECE website: <http://www.unece.org/trans/main/wp29/wp29regs.html>. Hard copies may be obtained from the Department for Transport, Great Minster House, 33 Horseferry Road, London, SW1P 4DR.

² <https://www.gov.uk/government/consultations/enabling-road-use-of-hydrogen-powered-non-road-mobile-machinery>

8. Applicable Guidance

- 8.1. This instrument does not implement or require associated guidance.

Part Two: Impact and the Better Regulation Framework

9. Impact Assessment

- 9.1. The Department for Transport has not published an impact assessment for this measure as the direct impacts on business have been assessed at under £10m per year. A de minimis Impact Assessment is published alongside the Explanatory Memorandum on the [legislation.gov.uk](https://www.legislation.gov.uk) website. A summary of the analysis is presented below.
- 9.2. Quantifying potential costs and benefits has not been attempted, but rather described qualitatively, as this policy is believed to be an enabler and is not expected to influence manufacturers' decarbonisation strategies of NRMM and agricultural vehicles alone.
- 9.3. Relevant costs cover operating and capital expenditure from purchasing and operating hydrogen NRMM and agricultural vehicles, and administrative cost savings from no longer needing to apply for a VSO. Currently, NRMM and agricultural vehicle manufacturers need to obtain a VSO to allow their hydrogen powered vehicles on the road for a year. Although there is no application fee for a VSO, there are administrative costs related to it. As to potential benefits, these include environmental impacts, including CO₂ reductions and reductions in air and noise pollution.
- 9.4. Whether these costs and benefits (and their size) will materialise following this regulatory change mainly depends on two factors: 1) if this policy alone will impact the uptake of hydrogen NRMM and agricultural vehicles, and; 2) if these vehicles will have lower values of the identified costs and benefits compared to the vehicles they would be replacing. The former is hard to robustly quantify given the multitude of factors influencing manufacturers' production decisions, and we do not think this regulatory change alone would influence these. As such, we have not attempted to quantify any of the impacts above.

Impact on businesses, charities and voluntary bodies

- 9.5. The impact on business, charities or voluntary bodies is limited, but we expect there to be an administrative cost saving for business producing and marketing hydrogen powered NRMM and agricultural vehicles.
- 9.6. The legislation could have an impact on small businesses, but the Department for Transport expects it to be a positive impact owing to reduced administrative costs related to VSOs.
- 9.7. There is no, or no significant, impact on the public sector because this instrument does not impose further duties on authorities with regards to inspection or approval of machinery. In the absence of the instrument, it is likely that further burden could be incurred on the public sector owing to the need for issuing large volumes of VSOs.

10. Monitoring and review

What is the approach to monitoring and reviewing this legislation?

- 10.1. No special monitoring is planned to accompany this legislation. However, the Department for Transport remains in regular contact with trade associations,

manufacturers and other relevant stakeholders to ensure the associated legislation continues to operate effectively.

- 10.2. The instrument does not include a statutory review clause and, in line with the requirements of the Small Business, Enterprise and Employment Act 2015, c. 26. the Parliamentary Under Secretary of State at the Department for Transport, Lilian Greenwood MP has made the following statement:

“Having had regard to sections 28 to 32 of the Small Business, Enterprise and Employment Act 2015, and the statutory guidance under section 31 of that Act, I have decided that it is not appropriate to make provision for review of the provisions of this instrument because it would be disproportionate to do so taking into account the economic impact of those provisions.”

Part Three: Statements and Matters of Particular Interest to Parliament

11. Matters of special interest to Parliament

- 11.1. None.

12. European Convention on Human Rights

- 12.1. The Parliamentary Under Secretary of State at the Department for Transport, Lilian Greenwood MP, has made the following statement regarding Human Rights:

“In my view the provisions of the Road Vehicles (Construction and Use) (Amendment) Regulations 2025 are compatible with the Convention rights.”

13. The Relevant European Union Acts

- 13.1. This instrument is not made under the European Union (Withdrawal) Act 2018, the European Union (Future Relationship) Act 2020 or the Retained EU Law (Revocation and Reform) Act 2023 (“relevant European Union Acts”).