EXPLANATORY MEMORANDUM TO

THE NON-ROAD MOBILE MACHINERY (EMISSION OF GASEOUS AND PARTICULATE POLLUTANTS) (AMENDMENT) REGULATIONS 2011

2011 No. 2134

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

2 Purpose of the instrument

2.1. These Regulations implement EU law obligations relating to the emission of gaseous and particulate pollutants from internal combustion engines to be installed in non-road mobile machinery (NRMM). The legislation is a response to progress in the design of engines, difficulties encountered by manufacturers in complying with the EU requirements and drafting anomalies in an earlier and technically complex EU Directive.

3 Matters of special interest to the Joint Committee on Statutory Instruments

3.1. None

4 Legislative context

4.1. These regulations relate to Directive 97/68/EU, as amended. Its objective is to harmonise the laws of EU Member States relating to exhaust emission standards and type approval procedures for engines to be installed in NRMM. The Directive is intended to contribute to the smooth running of the internal market, whilst protecting human health and the environment.

4.2. Within the EU, maximum limits on permissible exhaust pollutant emissions for machinery to be placed on the market for the first time are regulated by a 'type approval' Directive. This Directive (97/68/EC) has been amended several times to make the limits more stringent in "Stages".

4.3. The term NRMM refers to mobile machines, transportable industrial equipment or vehicles which are fitted with an internal combustion engine and not intended for transporting goods or passengers on the road. The term covers machinery powered by compression-ignition (diesel) engines as diverse as, but not limited to, inland waterway vessels, railway locomotives, road-making machinery, combine harvesters and excavators. NRMM also includes some small machinery powered by spark-ignition (petrol) engines e.g. lawnmowers, chainsaws, hedge trimmers, portable generators, etc.

4.4. Directive 2010/26/EU introduces for the first time a requirement for NRMM fitted with engines equipped with exhaust emissions after-treatment by "selective catalytic reduction" (SCR) using a consumable reagent to be fitted with a device

to alert the operator in the event of pending or actual malfunction. SCR technology is expected to be fitted to all diesel engines at emissions "Stage IV" and may be fitted to some engines manufactured ahead of the date from which the Stage IV requirements take effect.

4.5. Directive 2010/26/EU extends a temporary derogation for certain hand held machinery powered by spark-ignition engines manufactured to Stage I to enable them to be type approved until the end of July 2013 and placed on the market until the end of January 2014. Substantial technical difficulties in complying with the Stage II requirements are the reason for this extension.

4.6. A previous amendment to Directive 97/68/EC, Directive 2004/26/EC, contains a number of significant drafting difficulties that prevent engines from being type approved to the forthcoming Stage IIIB and Stage IV standards. Directive 2010/26/EU corrects those difficulties.

4.7. Directive 97/68/EC was transposed into UK legislation by the Non-Road Mobile Machinery (Emission of Gaseous and Particulate Pollutants) Regulations 1999 (Statutory Instrument (SI) 1999 No 1053). The principal Directive was amended by Directives 2001/63/EC, 2002/88/EC, 2004/26/EC and 2006/105/EC and Regulation 596/2009. These amending Directives were transposed into UK legislation by SI 2002 No 1649, SI 2004 No 2034, SI 2006 No 29 and SI 2008 No 2011 respectively. Directive 2010/26/EU is the most recent amendment of Directive 97/68/EC and the newly made regulations transpose it into UK law.

4.8. Directive 2010/26/EU was adopted by comitology and therefore not subject to Parliamentary scrutiny.

4.9. A transposition note is attached to this Memorandum that indicates how the provisions of the Directive have been incorporated into UK legislation.

5 Territorial Extent and Application

5.1. This instrument applies to the United Kingdom.

6 European Convention on Human Rights

6.1. No statement is required because the instrument is subject to negative resolution procedure and does not amend primary legislation.

7 Policy background

- **What is being done and why**

7.1. NRMM is a small but significant source of oxides of nitrogen (NOx) and particulate emissions, two pollutants for which the UK has continuing air quality problems. Directive 97/68/EC was the European Commission's first legislation to reduce NRMM emissions. It established a timetable for the introduction of exhaust emission limits for diesel and petrol engines fitted to NRMM. The first

amending Directive (transposed as SI 2002 No 1649) made minor amendments to test procedures. The second amending Directive (transposed as SI 2004 No 2034) set emission standards for small, petrol-fuelled utility engines below 19 kW and for constant-speed diesel engines.

7.2. Directive 2004/26/EC, and the UK Regulations implementing it (SI 2006 No 29) had a wider remit. They cover railway and inland waterway engines for the first time and tighten standards for other diesel engines in three Stages (IIIA, IIIB and IV). Whilst Directive 2004/26/EC set new emission limits, it did not prescribe how Members States were to ensure that engines achieve them. To comply with Stage IIIB which takes effect between 2010 and 2012, depending on engine type and power output, most manufacturers will fit engines with particulate traps, and to ensure compliance to Stage IV (2013-2014) they will fit engines with selective catalytic reduction (SCR) to reduce NOx emissions using a consumable reagent.

7.3. To ensure emissions are controlled in service on machinery powered by Stage IV engines, a warning indicator needs to be fitted. The warning indicator will alert NRMM operators of a pending or actual malfunction of the SCR system, including the consumable reagent running out. Failure to correct a malfunction of the SCR system will render the NOx reduction system inoperative, leading to increased levels of NOx and negate the improvements in air quality that Stage IV was intended to assist in achieving.

7.4. The manufacturers of top handle chainsaws and hedge trimmers powered by spark-ignition engines have not yet been able to develop and certify engines to Stage II standards, so Directive 2010/46/EU extends existing derogations for these machine types built to Stage I. This extension applies to the products of manufacturers who are not classified as "small volume engine manufacturers" (because the UK has already transposed the longer derogation for small volume manufacturers). The total number of top handle chain saws placed on the market in UK is static at only about 3,000 to 6,000 machines per annum, and the market for hedge trimmers is about 10,000 per year. The power output of these engines is of the order 2.5 to 3.3 kW, and the total quantity of NOx is extremely small compared with that from road transport, so the extension of the derogation for these machines will not contribute significantly to total emissions of polluting substances in UK.

7.5. Directive 2010/26/EU corrects drafting issues introduced by Directive 2004/26/EC to enable type approval authorities to certify engines to Stage IIIB and Stage IV. Details of the amendments to Directive 97/68/EC are shown in the recitals of Directive 2010/26/EU that are attached to the Transposition Note for this instrument.

7.6. The Secretary of State must make these regulations to ensure that the UK complies with its EU obligations. Other measures short of legislation would be insufficient.

- **Consolidation**

7.7. The Department does not currently have plans to consolidate the Non-Road Mobile Machinery (Emission of Gaseous and Particulate Pollutants) Regulations 1999. This is the fifth occasion when amending regulations have been made.

8 Consultation Outcome

8.1. Due to the highly technical subject matter of these Regulations and the limited options as regards transposition of the EU requirements, the consultation undertaken by the Department was restricted in scope. Discussions took place during November and December 2010 with the UK NRMM manufacturers, manufacturers of engines for NRMM, the Construction Industry Association, and trade associations related to arboriculture.

8.2. The manufacturers and users of engines requiring SCR who were contacted were all content that the requirement to fit an indicator was necessary. They provided the Department with an estimate of the cost of fitting such a device. Compared with the overall cost of machines, the added cost was negligible. The associations related to arboriculture machinery welcomed an extension of the derogation for hand held machinery enabling the continued sale of machinery to Stage I up to and including 31 January 2014.

9 Guidance

9.1 The manufacturers and importers of NRMM are aware of the requirements of the Regulations, so no further publicity or guidance is required.

10 Impact

10.1. An Impact Assessment is attached to this Memorandum that will be published alongside the Memorandum on www.legislation.gov.uk.

10.2. There is no impact on the public sector other than the cost of conducting a 5 year review of the transposition of the Directive.

11 Regulating small business

11.1. The effect on small business is dealt with in the Impact Assessment.

12 Monitoring and Review

12.1. This will be undertaken by the VCA as part of their enforcement duties.

13 Contact

Eur Ing Robert Falk at the Department for Transport (tel: 020 7944 2077 or email: robert.falk@dft.gsi.gov.uk) can answer any queries regarding the instrument.