

EXPLANATORY MEMORANDUM TO
THE MOTOR VEHICLES (REPLACEMENT OF CATALYTIC CONVERTERS AND
POLLUTION CONTROL DEVICES) REGULATIONS 2009

2009 No. 1899

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

2. Description

2.1 These Regulations implement Article 11 of EU Regulation No 715/2007. This requires Member States to prohibit the sale and installation of pollution control devices which are replacement parts for vehicles approved to the emissions standards in the Regulation if they are not of a type in respect of which type approval has been granted in accordance with the EU Regulation as supplemented by EU Regulation No 692/2008. The latter sets out marking and information requirements as well as the procedures for obtaining a type approval. Pollution control devices are parts intended to ensure the vehicle meets the emission requirements and include catalytic converters and diesel particulate filters.

2.2 The Regulations also implement a requirement in Article 11 that Member States prohibit the sale and installation of replacement catalytic converters intended for certain vehicles approved to Directive 70/220/EEC, the EU emissions legislation that preceded Regulation No 715/2007, unless the replacements have also been approved to those emissions standards. In the Regulations, a reference to a catalytic converter of any particular description is to a catalytic converter for the purposes of Directive 70/220/EEC and a reference to a pollution control device includes a catalytic converter for the purposes of Regulation No 715/2007 (but also includes particulate filters used on diesel vehicles for similar purposes.)

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

3.1. None

4. Legislative Context

4.1. Subject to certain exceptions, new cars and vans must be of a type that has been "type approved" in order to be registered for use on public roads in the United Kingdom. One of the conditions of type approval is that the type of car or van must have satisfied certain emissions requirements.

4.2. In the United Kingdom the most recent relevant type approval legislation is the Road Vehicles (Approval) Regulations 2009 (the Approval Regulations). These Regulations transpose Directive 2007/46/EC which mandates a type approval system within the European Community for, amongst other things, cars and vans. That Directive replaced Directive 70/156/EEC which also mandated a system of type-approval within the Community (transposed by the predecessors of the Approval Regulations). The requirements of Directive 2007/46/EC are being phased in beginning with M₁ vehicles (passenger vehicles with no more than 8 seats in addition to the driver's); and this is provided for by the Approval Regulations. Any new type of M₁ vehicle must, on or after 29th April 2009, be approved in accordance with Directive 2007/46/EC rather than Directive 70/156/EEC. Other Member States have, of course, implemented those Directives.

4.3. The emission standards are often referred to as "Euro standards." These were first introduced into Directive 70/220/EC and the standards have been made more demanding over time with the Euro 3 and 4 standards coming into effect respectively in 2001 and 2006. Any petrol car or vans complying with Euro 3 and 4 would be fitted with a catalytic converter. Euro 5 and 6 are more

stringent standards contained in EU Regulations No 715/2007 and 692/2008. Vehicles have been able to obtain type approvals to Euro 5 since August 2008 and this standard will become mandatory for new type approvals from September 2009. Compliance with the Euro 6 standard will become mandatory for new type approvals from September 2014. It is anticipated that any diesel car or van will require a particulate filter when complying with Euro 5 and a catalytic converter and particulate filter when complying with Euro 6.

- 4.4. The Secretary of State is a Minister designated for the purposes of section 2(2) of the European Communities Act 1972 in relation to the type, description, construction or equipment of vehicles, and of components of vehicles, and in particular any vehicle type approval scheme. These Regulations are made in exercise of the powers conferred by that section of that Act.
- 4.5. The Regulations have the broad effect of prohibiting (except for vehicles first used before 1st March 2001) the supply of non-type approved catalytic converters for motor vehicles that are approved to EU Regulation 715/2007, the earlier standards of Directive 70/220/EEC, as amended, or UN ECE Regulation 83 (which the EU type approval process accepts as an equivalent alternative).

5. Extent

- 5.1. This instrument extends to the United Kingdom.

6. European Convention on Human Rights

- 6.1. As the instrument is subject to negative resolution procedure and does not amend primary legislation, no statement is required.

7. Policy background

• What is being done and why

- 7.1. The Regulations will assist in meeting legally binding EU air quality targets and, in doing so, improve public health and the environment. Pollution adversely affects health with effects ranging from mild irritation of the respiratory system, through exacerbating the symptoms of those with pre existing respiratory problems to reducing life expectancy. Air quality standards have been established in the EU and UK based on expert medical advice as to the likely effects of air pollution.
- 7.2. The latest projections produced in support of the UK Air Quality Strategy (AQS), predict that the UK will fall short of meeting EU legally binding air quality objectives for concentrations of Nitrogen Dioxide (NO₂) and particulate matter (PM₁₀) in a number of geographical areas. The objective for Ozone (O₃), of which Nitrogen Dioxide (NO₂) is one of the two main precursors, is also unlikely to be met in a large part of England. Oxides of Nitrogen (NO_x) emissions also contribute to the formation of secondary particulate matter, NO_x control measures therefore also make a contribution towards meeting air quality objectives on PM₁₀ and PM_{2.5} (for which an exposure reduction target has recently been adopted under EU Directive 2008/50/EC).
- 7.3. Latest estimates show that road transport still accounted for 32% of total United Kingdom NO_x emissions in 2006 of which 15 % was from light vehicles. For PM₁₀ emissions, road transport accounted for 15% of the total UK emissions of which light vehicles contributed 11%. The contribution of vehicle emissions to air pollution is even higher in areas where PM₁₀ and NO₂ air quality objectives are exceeded such as large urban areas and busy roadsides.
- 7.4. Catalytic converters have been fundamental to meeting the emissions limits contained in the Euro standards and in reducing air pollution to date. Together with diesel particulate filters, catalytic converters will play a key role in achieving the further emissions reductions required for Euro 5

and 6. In preparation of the Impact Assessment which accompanies this Memorandum, and following discussions with the after market catalyst supply industry, the Department has assumed that 5% of catalytic converters used by petrol vehicles fail each year and that 5% of diesel particle filters and other diesel emission control technologies will fail each year from 2011. Since up to 80% of the replacement market is currently made up of non-original replacements (i.e. those not produced by the vehicle manufacturer or their suppliers) which are not currently produced to the original type approval standard, the proposed regulations will bring significant emissions savings, preserving the emissions reductions achieved by the Euro standards.

- 7.5. The EU legislation exempts pollution control devices (including catalytic converters) intended for vehicles type approved before type approval for these components was introduced. The Department considers that application of the requirements to vehicles first used on or after 1 March 2001 (coinciding with the X to Y- vehicle registration changeover) to properly reflect the European law being implemented. It also minimizes the risk of providing loopholes to be exploited by the unscrupulous. The existence of loopholes arising from non-type approved catalysts is a concern voiced in discussions with at least two manufacturers. Given these prohibitions, and subject to the marking and information requirements described below, non-type approved catalysts will still be able to be supplied for type-approved vehicles first used before 1st March 2001. Non type-approved catalytic converters intended for vehicles that are not covered by the Regulations e.g. those which have been subject to single vehicle approval, may also continue to be supplied and installed.
- 7.6. To ensure effective enforcement the Regulations incorporate requirements for appropriate marking/labelling of, and information for, non-type approved pollution control devices. These requirements were notified to the European Commission under the terms of directive 98/34/EC as a potential barrier to trade. No comments were received.
- 7.7. Compliance with the requirements of these Regulations is to be enforced throughout the United Kingdom by the Secretary of State for Transport acting through the Vehicle Certification Agency (VCA), an Executive Agency of the Department for Transport. Initially the VCA will target its prosecution resources in respect of these Regulations in order to prevent catalyst manufacturers and importers selling non-compliant components into the supply chain. In addition they will undertake a campaign to educate distributors and retailers of their obligations under the Regulations. The substance of the enforcement provisions is very similar to provisions in other legislation for which the VCA is the enforcement authority, but drafting changes have been made, in particular because the Regulations are drafted on a “gender-neutral” basis”.

- Consolidation

- 7.8. These are free standing Regulations in a previously unregulated area.

8. Consultation Outcome

- 8.1. A statutory public consultation was undertaken between 27 January 2009 and 25 March 2009.
- 8.2. The main issue raised was whether there should be a “sell-through” period so that the Regulations would not “bite” until there had been a chance to sell and install stock already in the system. There was a difference of opinion between consultees. Three manufacturers favoured such a sell-through period, saying that their competitive position would have been adversely affected if they had complied with the requirements before they became mandatory; job losses, business closures and a rise in costs for consumers would now result if there was not to be a sell-through period. Two suppliers however pointed out that the Regulations implement mandatory EU requirements which had been known about for some time and that, in any event the UK was already late in implementing. Those who had already complied with the requirements even though they had not yet been implemented in UK law would continue to be at a competitive disadvantage during any sell through period. The air quality benefits would also be less if there was a sell through period.

8.3. The Regulations do not include a sell-through period. The Department has informed those affected of the signing of the Regulations and the date they are due, subject to Parliamentary process, to come into force.

8.4. Fuller details of comments received on this and on other issues, and the Department's response to these may be found at www.dft.gov.uk/consultations/closedconsultations.

9. Guidance

9.1 The VCA is undertaking a programme of visits to manufacturers and suppliers to advise them of the new legislative requirements. VCA will also issue an advisory leaflet to manufacturers and stockists.

10. Impact

10.1 An Impact Assessment is attached to this Memorandum.

10.2 There is no impact on the public sector other than the additional cost of enforcement which is mentioned in the Impact Assessment.

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

13.1 Tony Baker at the Department for Transport (tel: 020 7944 2063 or mail:tonyt.baker@dft.gsi.gov.uk) can answer any queries regarding the instrument.

Summary: Intervention & Options

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|---|--|-------------------|
| Department /Agency: Department for Transport | Title: Impact Assessment of The Motor Vehicles (Replacement of Catalytic Converters and Pollution Control Devices) Regulations 2009 | |
| Stage: Final | Version: 2 | Date: 6 July 2009 |
| Related Publications: | | |

Available to view or download at: www.dft.gov.uk/consultations

Contact for enquiries: Tony Baker

Telephone: 0207 944 2063

What is the problem under consideration? Why is government intervention necessary?

As part of a Europe-wide strategy to address air pollution, the European Union has agreed new Regulations under which Member States are required to prohibit sale and installation of replacement pollution control devices on passenger cars and vans unless these devices have been approved to specified emissions standards. Most replacement devices sold in the UK are currently not approved and do not meet the required standards. Regulations are required to correct this.

What are the policy objectives and the intended effects?

Substantial emissions reductions have been achieved in recent years through the mandating of EU wide emissions standards for new vehicles. Manufacturers have met these standards primarily by fitting catalytic converters to their vehicles. Future standards for particulate emissions will be met by the fitting of diesel particulate filters. To ensure that the air quality benefits obtained by these measures are maintained when vehicles are in service, it is necessary to ensure that these replacement pollution control devices achieve similar levels of emissions control to the original versions.

What policy options have been considered? Please justify any preferred option.

1. Do nothing
2. Enact the UK regulations which implement the requirements of the EU Regulations relating to the sale and installation of replacement pollution control devices on passenger cars and vans. This is a mandatory requirement which Member States have a duty to comply with as part of their Treaty obligations.

When will the policy be reviewed to establish the actual costs and benefits and the achievement of the desired effects?

Enforcement during the first 2 years will give an indication of the level of compliance by manufacturers.

Ministerial Sign-off For final proposal/implementation stage Impact Assessments:

I have read the Impact Assessment and am satisfied that, given the available evidence, it represents a reasonable view of the likely costs, benefit and impacts of the leading options.

Signed by the responsible Minister:

Sadiq Khan 14th July 2009

Summary: Analysis & Evidence

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|--|---|---|---|---|---------------------|
| Policy Option: 2 | | Description: Enact the Regulations. | | | |
| COSTS | ANNUAL COSTS | | Description and scale of key monetised costs by 'main affected groups' Increase in production costs = £450m to £1,120m Increase in testing (type approval) costs = £39m to £97m | | |
| | One-off £6m to £14m | Yrs 1 | | | |
| | Average Annual Cost (excluding one-off) £40m to £98m | | 17 | One-off set up cost for enforcement agency, VCA £0.05m Annual enforcement cost to VCA = £0.114m | |
| | | | Total Cost (PV) | | £ 489m to £1,217m |
| | Other key non-monetised costs by 'main affected groups' | | | | |
| BENEFITS | ANNUAL BENEFITS | | Description and scale of key monetised benefits by 'main affected groups' Reduction in NOx emissions = £572m to £834m Reduction in PM emissions = £241m to £350m | | |
| | One-off £0 | Yrs | | | |
| | Average Annual Benefit (excluding one-off) £68m to £99m | | 17 | | |
| | | | Total Benefit (PV) | | £813m to £1,184m |
| | Other key non-monetised benefits by 'main affected groups' Reduction in emissions of Carbon Monoxide and Non-Methane Hydrocarbons. | | | | |
| Key Assumptions/Sensitivities/Risks Expert advice suggests health benefits likely to be towards upper end of the range. | | | | | |
| Price Base Year 2008 | Time Period Years 17 | Net Benefit Range (NPV) £ -404m to £695m | | NET BENEFIT (NPV Best estimate) £ -404m to £695m | |
| What is the geographic coverage of the policy/option? | | | | UK | |
| On what date will the policy be implemented? | | | | 13 August 2009 | |
| Which organisation(s) will enforce the policy? | | | | VCA | |
| What is the total annual cost of enforcement for these | | | | £114,000 | |
| Does enforcement comply with Hampton principles? | | | | Yes | |
| Will implementation go beyond minimum EU requirements? | | | | Marginally | |
| What is the value of the proposed offsetting measure per year? | | | | £n/a | |
| What is the value of changes in greenhouse gas emissions? | | | | £n/a | |
| Will the proposal have a significant impact on competition? | | | | No | |
| Annual cost (£-£) per organisation (excluding one-off) | | Micro | Small | Medium | Large |
| Are any of these organisations exempt? | | No | No | N/A | N/A |
| Impact on Admin Burdens Baseline (2005 Prices) | | | | (Increase - Decrease) | |
| Increase of | £ 0 | Decrease of | £ 0 | Net Impact | £ 0 |
| | | Key: | Annual costs and benefits: Constant Prices | | (Net) Present Value |

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| Evidence Base (for summary sheets) |
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SUPPORTING INFORMATION

1. Title

Regulations controlling the sale and installation of replacement catalytic converters and diesel particulate traps for passenger cars and light vans.

2. Purpose and intended effect

2.1 Purpose

To ensure that cars and vans which have been approved to stringent EU emissions standards continue to deliver the emission reductions which they were designed to deliver when they are in service. This will be assisted through the implementation into UK domestic regulations of the provisions of EU Regulations No 715/2007 and No 692/2008 which include requirements for the sale and installation of replacement catalytic converters and diesel particulate filters.

2.2. Intended effect

To maintain the reductions in vehicle emissions which have resulted from tighter emissions standards for new cars and vans so as to assist in meeting legally binding air quality targets and hence improves public health and the environment.

3. Background

3.1 Health Effects of Air Pollution

Knowledge about the effects of air pollution is continually developing. Pollution adversely affects health; the effects vary between pollutants but range from mild irritation of the respiratory system, through exacerbated symptoms for those with pre existing respiratory problems to reduced life expectancy. Air quality standards have been established in the EU and UK based on expert medical advice as to the likely effects of air pollutants.

3.1.1 Short Term Health Effects

The Department of Health's Committee on the Medical Effects of Air Pollutants (COMEAP) estimated the number of deaths and hospital admissions for respiratory diseases affected per year (in 1996) by

Particulate Matter at or below 10 micrometres (that is, ten one-thousandths of a millimetre) in size (PM₁₀), Nitrogen Dioxide (NO₂) and Ozone (O₃). The estimates were:

PM₁₀

- Deaths brought forward: 8,100 (Urban areas of Great Britain).
- Hospital admissions for respiratory complaints, additional or brought forward: 10,500.

Nitrogen Dioxide

- Hospital admissions for respiratory complaints, additional or brought forward: 8,700. (Note that the reliability of this estimate for NO₂ is very much less certain than the other estimates, and ought to be considered with care).

Ozone

- Deaths brought forward: between 700 and 12,500, depending upon the threshold assumed for health effects.
- Hospital admissions for respiratory complaints, additional or brought forward: between 500 and 9,900, depending upon the threshold assumed for health effects.

Whilst Ozone is not emitted by vehicles, Nitrogen Dioxide, which is emitted, is a precursor for Ozone. It should be noted that a large component of Ozone has a transboundary nature. EU-wide measures, such as Euro standards and replacement pollution control device standards, to reduce emissions of precursors, would, consequently, eventually benefit the UK via reduced transboundary pollution as well. Latest studies indicate that there may be no lower threshold below which concentrations of Ozone have no health effect. If this is confirmed to be the case, then the higher figures of the health impact ranges given above will apply.

COMEAP also concluded that PM₁₀ is associated with cardiovascular illness and that the magnitude of these effects is more significant than the respiratory impacts.

3.1.2 Long Term and Chronic Health Effects

Whilst air pollutant emissions from transport have decreased substantially since 1996, COMEAP have also said that long-term exposure to air pollutants is likely to damage health. Such effects are not included in the above figures and would substantially increase the magnitude of the health effects of air pollution.

There is evidence from the United States that long term exposure to particulate air pollution is associated with a decrease in life expectancy. In 2001 the COMEAP published a report on the long-term effects of particles smaller than PM₁₀ on mortality (Department of Health, 2001). COMEAP concluded that it was more likely than not that long-term exposure to particles reduced life expectancy. Hence, since 2001 the Interdepartmental Group on Costs, Benefits, and Air Quality (IGCB) has followed the COMEAP recommendation and quantifies the long-term mortality effects from reductions in PM₁₀ emissions in any benefits assessment (Reference A).

COMEAP recently published an updated interim statement on the long-term effects of particles. This statement suggested that the magnitude of the effects was at the larger end of the range recommended in 2001.

Nitrogen Dioxide may have both acute and chronic health effects - long term exposure may affect lung function and exposure may enhance the response to allergens in sensitised individuals. Preliminary studies into the evaluation of the benefits of reducing emissions for Nitrogen Dioxide have been undertaken by the Department for Environment, Food and Rural Affairs (DEFRA) in the context of the Air Quality Strategy for England, Scotland, Wales, and Northern Ireland.

3.2 The United Kingdom's Air Quality Objectives

Due to the significant impact of air pollution on health and the environment, European and international (UNECE) legislation sets legally binding health and ecosystem-based objectives. The UK Government is committed to achieving these air quality objectives.

The latest projections produced in support of the UK Air Quality Strategy (AQS), predict that the UK will fall short of meeting EU legally binding air quality objectives for concentrations of Nitrogen Dioxide (NO₂) and particulate matter (PM₁₀) in a number of geographical areas. These are mostly urban areas and busy roads. The objective for Ozone (O₃), of which Nitrogen Dioxide (NO₂) is one of the two main precursors, is also unlikely to be met in a large part of England. Oxides of Nitrogen (NO_x) emissions also contribute to the formation of secondary particulate matter, NO_x control measures therefore also make a contribution towards meeting air quality objectives on PM₁₀ and PM_{2.5} (for which an exposure reduction target has recently been adopted under EU Directive 2008/50/EC).

Of a total of two hundred and five AQMAs declared at July 2007, one hundred and ninety-nine Local Authorities (LAs) in Great Britain have declared Air Quality Management Areas (AQMAs) for NO₂, for PM₁₀, or

for both and are implementing air quality action plans to work in pursuit of these objectives. More than 95% of AQMAs declared are due to transport pollution only, or are where transport plays a major role. It is therefore clear that more action to reduce vehicle emissions is required in terms of national or EU-wide measures, or both, if our air quality objectives are to be met.

Although the UK and EU have agreed concentration-based objectives for all key pollutants, PM₁₀ is, and O₃ may be, a no-threshold pollutant. This means that reducing concentration of these pollutants below the objectives still delivers health benefits. All else being equal, the same health benefits, in percentage terms, that are generated by reducing the concentration of these pollutants by 1µg/m³ in areas above the objectives would be achieved by reducing them by 1µg/m³ in areas that are already below the objectives. This is the rationale behind EU targets for PM_{2.5} being set on an exposure reduction basis.

3.3 Road Transport Emissions

Road transport continues to be a significant contributor to emissions of air pollutants. Latest estimates show that, despite significant improvements in this sector, road transport still accounted for 32% of total United Kingdom NO_x emissions in 2006 of which 15% was from light vehicles. The contribution of road transport will still account for 31% of UK NO_x emissions in 2010 with 16% being attributed to light vehicles.

For PM₁₀ emissions, road transport accounts for 15% of the total UK emissions of which light vehicles contributed 11%. The contribution is forecast to be 13% in 2010 with light duty vehicles being responsible for 10%. The contribution of vehicle emissions to air pollution is even higher in urban areas than is indicated by their contribution to the UK total.

There is growing evidence (although not as yet conclusive evidence) that particles finer than PM₁₀ (such as PM_{2.5}, PM₁ and PM_{0.1}) are responsible for the deleterious health effects ascribed to Particulate Matter. For this reason exposure reduction targets have been adopted in the CAFÉ Directive 2008/50/EC updating the Air Quality Framework Directive 96/62/EC. In addition, the World Health Organisation has recently advised that health guidelines should be set for PM_{2.5}. If emissions of the finer particles are considered, the contribution of the transport sector in 2001 was 39% of total UK emission of PM_{2.5} and 54% of total UK emission of PM_{0.1} (by far the biggest source in the UK).

Roadside monitoring data indicates that the transport sector contribution to ambient concentrations of NO₂ and PM₁₀ (rather than emissions) in London, with current measures, road transport will still be the largest

single contributor to background (and roadside) concentrations of NO₂ in 2010. The situation is likely to be similar in other large urban areas.

3.4 Vehicle Emission Standards

Current emission standards for new light duty vehicles (that is, passenger vehicles with up to a total of nine seats and goods vehicles with a maximum gross mass up to three and a half tonnes) are defined by mandatory European Directive 70/220/EEC as last amended by 2003/76/EC.

The standards are defined as performance requirements in terms of the maximum permissible mass of pollutants which may be emitted per kilometre travelled when a vehicle is tested on a specified driving cycle. The regulated pollutants are Carbon Monoxide (CO), Hydrocarbons (HC), Oxides of Nitrogen (NO_x) and mass of particulate matter (PM).

For convenience, the emission standards are generally referred to as “Euro” standards. These have been gradually tightened over the last decade and a half for all classes of vehicle, and the currently applicable standard for newly registered light passenger vehicles, as of 1st January 2006, and for light goods vehicles, as of 1 January 2007, is Euro 4.

In addition to mandating requirements for replacement catalytic converters and diesel particulate filters, EU Regulations Nos 715/2007 and 692/2008 mandate tighter “Euro 5” emissions standards for new passenger cars and light goods vehicles from 1 January 2011 and 1 January 2012 respectively and “Euro 6” emissions standards from 1 September 2015 and 1 September 2016 respectively. .

Catalytic converters have been fundamental to the achievement of the Euro standards to date and together with diesel particulate filters, will play a key role in achieving the further emissions reductions required under Euro 5 and 6. The proposed UK regulations controlling sale of replacement catalytic converters and diesel particulate filters will help to maintain the performance of these devices which are offered for use as replacement components and hence preserve as far as is feasible, the emissions reductions achieved by the Euro standards.

4. The EU legislative requirements

4.1. EU Regulation No 715/2007

This Regulation requires Member States to prohibit the sale or installation of replacement pollution control devices intended to be fitted to vehicles approved to the emission standards in this Regulation if the replacements

are not of a type in respect of which type approval has been granted in accordance with this Regulation and Regulation No 692/2008.

Member States are also required to prohibit the sale or installation of replacement pollution control devices intended for vehicles approved to emissions standards which existed prior to Regulation No 715/2007 unless the replacements are of a type in respect of which type approval was granted in accordance with such standards (see 4.3 below).

Replacements intended to be fitted on vehicles type approved prior to the adoption of component type approval requirements are exempted from these requirements.

Replacement pollution control devices are defined in the Regulation as replacement catalytic converters and replacement diesel particulate filters.

4.2. EU Regulation No 692/2008

This Regulation contains the technical requirements necessary to implement Regulation No 715/2007. It defines the duty on manufacturers to ensure that replacement pollution control devices intended to be fitted to vehicles type approved to the Regulation, are type approved to the emissions standard in the Regulation. Manufacturers must also ensure that replacement devices contain specified identifying marks and be accompanied by specified information

Replacement pollution control devices may be either “original replacements” i.e. those covered by the type approval for the vehicle but which are sold as separate technical units, or non –original “after market” replacements.

4.3. EU Directives 98/77/EC and 2002/80/EC

As indicated in 4.1.above, Member States are also required to prohibit the sale or installation of replacement pollution control devices intended for vehicles approved to emissions standards which existed prior to Regulation No 715/2007 unless the replacements are of a type in respect of which type approval was granted in accordance with such standards. Vehicles approved to previous emissions standards would require replacement pollution control devices approved to the standards in EU directive 98/77/EEC as amended by EU directive 2002/80/EC.

Directive 98/77/EC introduced provisions for the type-approval, as separate technical units, of replacement catalytic converters intended for “EU approved” passenger cars with up to 9 seats and light goods vehicles

up to 3.5 tonnes. These provisions were related to catalysts intended for vehicles which were not equipped with on-board diagnostic systems for emissions (OBD), technical standards for catalysts for vehicles with OBD not being sufficiently developed at that time. The directive established performance criteria and required Member States to prohibit the sale or installation of replacement catalysts that did not meet the directive's requirements.

However the directive did not define precisely those vehicles to which the measures were to apply. Catalytic converters are a technology that is used in order to deliver certain performance standards and as such it is not possible to say when it became necessary to fit this technology to comply with regulated limits. There was similar uncertainty concerning the fitting of on-board diagnostic systems (OBD). This technology was being fitted to certain models from some manufacturers in advance of any regulatory requirement. This situation meant that it was not possible for enforcement bodies to differentiate, at point of sale, those catalysts that required approval and those that did not.

Directive 2002/80/EC remedied the second of these deficiencies by extending requirements to vehicles equipped with OBD. In addition to ensuring the efficiency of the replacement catalyst, as is the case with Directive 98/77/EC, the directive also sought to ensure the compatibility of the catalyst with the OBD system of the vehicle(s) for which it was designed. Furthermore, to help remedy the deficiencies of the first directive concerning the identification of product application, requirements for marking and information to accompany replacement catalytic converters were introduced.

5. Additional domestic UK requirements

To ensure the effectiveness of these measures, the Government considers that these provisions need to be supplemented by incorporating requirements in the regulations for appropriate marking/labelling and information to accompany replacement catalysts intended for passenger cars and vans which are not the primary subject of the regulations (e.g. vehicles with "single vehicle approval"). These requirements have been notified to the European Commission under the terms of directive 98/34/EC, to ensure that a potential barrier to trade is not created.

6. Aim of the UK regulations

The regulations necessary to implement Regulations 715/2007 and 692/2008 are therefore aimed at ensuring that:

i) with minor exceptions only catalytic converters and diesel particulate filters which have been type approved to the emissions standards of EU Regulations No 715/2007 and 692/2008 may be offered for sale for or installed on passenger cars or vans which are type approved to those Regulations.

ii) with minor exceptions, only catalytic converters which have been type approved to Directive 70/220/EEC, as amended by directive 2002/80/EC (or UN ECE Regulation 103) may be offered for sale for or installed on passenger cars and vans which were type approved to those directives (or UNECE Regulation 83) and which were first used on or after 1 March 2001. This is the date of the first registration changeover (X to Y-registration) following the date from which petrol engined passenger cars were required to be fitted with OBD systems (1 January 2001) and will simplify identification and enforcement.

iii) as an aid to enforcement non type-approved replacement catalytic converters and particulate filters intended for passenger cars and light goods vehicles other than those described above will be marked or labelled accordingly and accompanied by information identifying those vehicles for which they are suited.

7. Consultation

(a) Within Government

Colleagues in other Government Departments were consulted during the progress of the EU Regulations through EU institutions.

(b) Public consultation

Public consultation on the Commission proposal which became Regulation 715/2007 and included approval requirements for replacement pollution control devices ran from 15th September to 8th December 2006. The association of European vehicle manufacturers (ACEA) and the UK Society of Motor Manufacturers were also involved in consultations during the preparation of the Regulations.

The Department has been in regular contact with after market replacement catalyst suppliers during the preparation of the regulations which form the subject of this Impact Assessment.

A statutory public consultation on these regulations was undertaken, beginning on 21 January 2009 and formally ending on 25 March 2009

8. Options

(a) Do nothing

Failure to transpose could result in the European Commission initiating infraction proceedings against the United Kingdom and periodic fines from the European Court of Justice that would continue until such time as the UK 's obligations under the EU Regulations are discharged.

(b) Apply the EU Regulations

Applying the EU Regulations will ensure that the health and environmental benefits obtained through previous and future EU emission standards for new cars and vans will be preserved when the vehicle is in service. Increased costs will be incurred by UK aftermarket catalyst manufacturers, but these will also secure access to a wider EU market for their products.

To facilitate enforcement and understanding by stockists, the Department proposed to apply the requirements to catalysts intended for EU approved vehicles first used on or after 1 January 2001, This is the date from which the vast majority of light vehicles will have had catalysts fitted. It also coincides with the date from which new petrol cars were required to be fitted with on-board diagnostic systems, a feature with which the second directive, 2002/80/EC, is concerned. As a result of comments made during the public consultation, as an aid to stockists/installers this date has been changed to 1 March 2001 to coincide with the date of the change in the registration plate ("X" to "Y")

9. Costs and Benefits

The costs have been estimated for the purposes of this impact assessment using analysis and data provided by industry. The benefits have been estimated using analysis from AEA Technology. An appraisal period of 2009-2025 has been used, as this allows for the full impacts of the regulations to take effect following the introduction of forthcoming Euro 5 and 6 standards.

9.1 Benefits

(i) Identifying the benefits

The requirements contained in the Regulations, when taken in association with the technical requirements contained in the associated "type approval" regulations will ensure that replacement catalysts and diesel particulate filters meet performance and quality standards, protecting both the environment and the interests of consumers.

Pollution from cars and vans will be controlled as effectively as possible to the emissions standards met when the vehicle was new. In the absence of regulation, non-type approved catalysts and diesel particulate filters could continue to be sold which perform significantly worse than original-equipment parts. UK manufacturers of replacement catalysts produce generally non-differentiated or generic products, with the only performance requirement being that the product should enable the vehicle to pass the MOT test standard, although this requirement is not formalised. The standards required for MOT are much less stringent than for vehicle type-approval, and manufacturers have no incentive to produce a higher-quality product than required to pass this test. The consumer has little or no indication of the performance and quality of the product, other than price. The regulations as proposed will provide the consumer with the assurance that the product purchased is at least as good as that originally fitted to the vehicle.

Option (a) Doing nothing may be considered a missed opportunity to reduce emissions, as vehicles' original emission performance would not be retained if its catalyst or DPF is replaced with a lower standard replacement part. Doing nothing also reduces the long term benefits brought about by increasingly stringent emissions standards for new vehicles as the performance of replacement catalysts and DPFs will not be required to keep pace with these standards.

Option (b) Adopting the Regulations would ensure that the emission control systems on cars continue to operate to their fullest potential, thus assuring the health and environmental benefits brought by tighter emissions standards for new cars and vans. By setting uniform standards, the regulations would also ensure fair competition for UK businesses and access to EU markets, whilst providing quality assurance for consumers.

(ii) Quantifying the benefits

The air pollutants that will be addressed by these Regulations are carbon monoxide (CO), hydrocarbons (HC), oxides of nitrogen (NO_x) and Particulate Matter (PM); and in respect of the latter two pollutants the Regulations will assist the UK in achieving its air quality targets, and deliver associated health benefits.

AEA Technology was commissioned to model the air quality emissions impacts of the Regulations. The estimated reductions in NO_x and PM are as follows:

Summary of Air Quality Benefits:

| Average Annual Reduction (Tonnes) | | NOx | PM |
|-----------------------------------|--------|--------|-----|
| Passenger Cars | Petrol | 46,297 | 0 |
| | Diesel | 1,034 | 257 |
| Light Goods Vehicles (<3.5t) | Petrol | 1,562 | 0 |
| | Diesel | 330 | 162 |
| Total | | 49,222 | 418 |

| 2009-2025 Reduction (Tonnes) | | NOx | PM |
|------------------------------|--------|---------|-------|
| Passenger Cars | Petrol | 805,991 | 0 |
| | Diesel | 18,617 | 4,620 |
| Light Goods Vehicles (<3.5t) | Petrol | 27,407 | 0 |
| | Diesel | 5,934 | 2,911 |
| Total | | 857,949 | 7,531 |

These estimates are based on the following assumptions:

1. 5% of three-way catalysts fail each year on petrol cars and vans regardless of vehicle age. Emissions then rise to pre-Euro 1 levels¹ if not rectified.
2. In the absence of regulation 80% of replacement catalysts (i.e. those which are non original replacements) do not meet the standard required for type approval, and for non-compliant replacements emissions are assumed to remain at pre-Euro 1 levels.
3. The remaining 20% are assumed to return vehicles to their original Euro standard emissions.
4. The benefits are modelled as the difference between this scenario and the option (b) scenario, where 100% of replacement catalysts restore emissions to the vehicle's original Euro standard.
5. For PM emissions, Diesel Particulate Filter failure is assumed to raise emissions to Euro 4 levels on a Euro 5 or 6 vehicle.
6. Diesel DeNOx catalysts are assumed to be introduced at Euro 6 in 2015. Failure of DeNOx catalysts at Euro 6 is assumed to increase NOx to Euro 5 levels.

For effects on CO and HC (which relate primarily to Petrol three-way catalysts), figures for reductions are as follows: note that these will not be

¹ Since Euro standards were introduced in the early 1990s, much of the emissions reductions have been achieved through the use of catalytic converters. It is therefore a fair assumption that emissions will rise to pre-Euro 1 levels in the case of failed catalysts.

monetised as damage costs have not been estimated for these pollutants.

| (tonnes) | Total 2009-2025 | Average Annual |
|--------------|-----------------|----------------|
| Carbon | | |
| Monoxide | 4,372,909 | 257,230 |
| Hydrocarbons | 752,506 | 44,265 |

(iii) Monetised benefits

The reductions in emissions have been monetised using the standard damage cost estimates of NOx and PM as identified in the Defra Air Quality Strategy Review². Values are expressed in their average annual impact and the Present Value (PV) of benefits.

| Passenger cars | Average annual benefit (£m) | | PV benefit (£m, 2009 - 2025) | |
|------------------|-----------------------------|------|------------------------------|-------|
| | Low | High | Low | High |
| Reduction in NOx | 45 | 65 | 551 | 804 |
| Reduction in PM | 13 | 19 | 152 | 221 |
| Total | 58 | 84 | 704 | 1,025 |
| LGVs | Average annual benefit (£m) | | PV benefit (£m, 2009 - 2025) | |
| | Low | High | Low | High |
| Reduction in NOx | 2 | 3 | 21 | 30 |
| Reduction in PM | 8 | 12 | 89 | 129 |
| Total | 10 | 15 | 109 | 159 |
| Total | Average annual benefit (£m) | | PV benefit (£m, 2009 - 2025) | |
| | Low | High | Low | High |
| Reduction in NOx | 46 | 68 | 572 | 834 |
| Reduction in PM | 22 | 32 | 241 | 350 |
| Total | 68 | 99 | 813 | 1,184 |

² <http://www.defra.gov.uk/environment/airquality/strategy/index.htm>

9.2 Costs

(a) Sectors and groups affected

The Regulations will mainly impact on manufacturers, importers, suppliers and installers of non-original (“aftermarket”) replacement catalytic converters and replacement diesel particulate filters for passenger cars and light vans. Estimates suggest that in the UK there are five main aftermarket manufacturers, but that about 30 to 35 manufacturers/importers in total will be affected by this legislation. Where costs are passed on, the Regulations will also impact on businesses purchasing replacement parts and upon consumers generally. The size of the market for replacement catalysts has been estimated in the work commissioned from AEA. It has been assumed that aftermarket replacement parts that will be affected by the regulations comprise 80% of the market.

The impact on manufacturers and importers of light duty vehicles, their franchised dealers and on those companies that supply only original (i.e. type-approved) replacement catalytic converters to them, will be marginal since they will already be producing to the standards required.

Wholesalers supply installers and retailers, some larger wholesalers offer their own brand product, assembled by the aforementioned suppliers. Installers and retailers complete the chain and installation of catalytic converters has to a large extent become a function of the exhaust-fitting business.

The retail sector in the UK has been estimated as comprising of the order of 6,000 franchised dealer outlets, 4,000 motor accessory shops, 2,400 motor factor wholesale outlets and 6,000 exhaust repair/garage/specialist outlets, most either selling or selling and fitting these products.

Option (a) – In the absence of the Regulations, catalyst manufacturers need not incur the costs of type approving catalysts or manufacturing them to meet the required standards. Manufacturers currently producing to type approval standards (e.g. for access to other EU markets) would not incur additional costs, however they would continue to be at a competitive disadvantage relative to manufacturers producing cheaper, lower quality, non-approved catalysts.

Option (b) - There will be a need to clear current non type-approved stock for the main aftermarket manufacturers in advance of the regulation coming into force. These manufacturers have been aware since late 2007 of the impending legislation. During initial discussions with aftermarket manufacturers in mid -2008 the Department was informed that local retail

outlets which they supplied still held substantial stocks of non-approved products. These would need to be sold before the Regulations take effect or would need to be withdrawn from sale. However Indications from some manufacturers during the public consultation were that this process had not been completed and that substantial stocks of non approved product would remain if the regulations were introduced without a sell through period. These products continued to be produced in response to demands from distributors who were likely to source their products elsewhere if their requirements were not met. Products produced for vehicles first used before 1 March 2001 should be largely unaffected.

For the purpose of quantifying the costs to the industry and potentially to the consumer of the regulations, a range of estimates for production and other cost increases were provided by the five main after market manufacturers during the initial discussions These formed the assumptions on the cost side of the analysis. With the exception of additional costs for any unsalable non-approved catalysts, no further information was provided by manufacturers during the formal consultation period

(b) Compliance costs for a typical business

Cost increases as a result of the regulation come from increased production/hardware costs and type approval testing costs.

Manufacturers of original replacement catalytic converters and diesel particulate filters that are offered for sale by the vehicle manufacturer do not normally require separate approval as their performance is assessed as part of the emissions approval of the vehicle concerned. Little or no cost effect is anticipated for this sector therefore.

However, these replacements are generally supplied to the vehicle manufacturer by a specialist manufacturer who would be required to gain a separate approval if he chose to also sell the product as a “replacement catalytic converter”, other than through the commercial channels of the vehicle manufacturer. In this case the costs discussed below will apply.

Manufacturers of “non-original” replacement catalysts and diesel particulate filters not currently produced to EU emission standards will need to type approve those products affected by the Regulations which they wish to continue to market. This will require increased hardware cost such as increased precious metal loading for catalysts and higher efficiency particulate filter substrates in order to meet the same performance standards as applied to the original equipment catalyst or filter fitted to the vehicle when new. Manufacturers have indicated that they may cease to produce less popular lines. Manufacturers and

distributors with remaining stocks of non-approved replacement catalysts, or liabilities in relation to these, will face potential losses should this situation remain unchanged once the regulations have entered into force.

(i) Increased production costs

Increased use of precious metals

The quantity of precious metal coating is the main factor that determines the quality of the catalyst and its emission reducing performance. Increasing the amount of precious metals used to coat the substrate in the manufacturing process is a significant factor of the cost of the regulation. Cost increases for precious metals vary between petrol and diesel catalysts, the latter requiring a lesser increase in precious metals in order to meet the required standard. These estimates come with the caveat that they are heavily subject to fluctuating commodity prices particularly that of Rhodium, which one manufacturer informed us could double in the space of six weeks. The cost estimates range from £15 to £40 for petrol catalysts and from £10 to £20 for diesel catalysts.

Increased canning costs

The basic catalyst substrate or “brick” needs to be housed or “canned” in a metal container. Increased canning costs were mentioned by most of the manufacturers consulted. Figures ranged from £3 per unit to £25 per unit.

Information and marking requirements

It is anticipated that in all cases the cost of compliance with the information requirements in the legislation will be minimal, as manufacturers would already have in place systems for identifying components and/or as a necessary part of their marketing arrangements. One manufacturer’s initial estimates suggest a cost of about 20p per unit for marking the catalyst. Another has suggested a figure of £1.

(ii) Costs of type approval

Estimates of the cost of the type approval test range broadly from £5000 to £9000 per approval. This includes sample procurement of an original equipment catalyst and hire or purchase of an appropriate vehicle. The resulting cost per unit depends on how many units are produced and sold per type approval. This cost may be wholly or partly passed on through the distribution chain.

The number of type approval tests required as a result of the Regulations is based on estimates provided by the five main aftermarket manufacturers, who gave an estimate of their initial testing requirement intended for vehicles first type approved after 2001, plus subsequent annual approvals. For this reason there is a first-year, one-off annual cost for type approvals that is higher than the annual cost for subsequent years. We do not have a breakdown of this figure by vehicle type. These figures are estimated to make up about 95% of the replacement catalyst market. It is also assumed that these figures account for 100% of the market though not all manufacturers will type approve every product required, because sales of that product may not be enough to justify the type approval cost. A potential unintended consequence could be that replacement catalysts for less popular, rare or specialist vehicles may become more expensive or difficult to find.

(iii) Costs of unsold non-approved stock

The cost of any unsold stock will vary according to the proportion of non approved catalysts remaining in the manufacturer's range and/or distributors' storage. One manufacturer has estimated that non-approved stock to the value of £425k might remain unsold in the market as a whole if no sell through period is allowed. Another said that 200,000 units were believed to be in the supply chain. Another has indicated that a large part of their stock with distributors, valued at £700K, could not be sold and that massive transport and logistical costs would be incurred in rehousing or disposing of these parts. Other manufactures or suppliers, with a large proportion of their range type approved may face small or negligible costs.

(iv) Increased costs for DPF

Emission standards which would force manufacturers to fit DPFs to new cars and vans do not become mandatory until 2011 (Euro 5). The increased production costs for replacement diesel particulate filters as a result of the regulation is therefore uncertain at present, and manufacturers consulted were unable to provide estimates as the market for replacement DPFs is in its infancy. Internal estimates give a total increase of £90 per unit for a type-approved part over what could otherwise materialise in the market as a non-type approved part.

(v) Examples of catalyst and diesel particulate filter prices

From a small sample of prices obtained by the Department, the current cost of aftermarket catalysts appears to vary considerably according to source, model, age of vehicle, vehicle manufacturer and the design of the emission control system and of the exhaust system. Some vehicle

manufacturers make provision for the replacement of the catalyst as a separate component, while others incorporate the component within a section of the exhaust system.

Little or no price impact is anticipated on catalysts supplied by vehicle manufacturers through their franchised dealers.

(vi) Non-approved catalysts and diesel particulate filters

To ensure effective enforcement it is also necessary to require in regulations that, for the minority of catalysts and filters destined for vehicles not covered by the EU legislation (primarily those which did not require type approval to the EU emissions directive 70/220/EEC, as amended), the catalyst or filter should also be accompanied by appropriate information. As suggested above, the cost involved is likely to be very marginal while the requirement is considered essential for enforcement of the Regulations as a whole.

(c) Enforcement costs

VCA, the agency charged with enforcement, estimate a one-off set up cost of £55,000, plus an annual cost of £110,000 rising to £114,000. The test fee that will be charged for type approval is not revenue-generating, and will only cover the costs of the type approval and not point of sale enforcement.

(d) Overall cost increases

| Passenger cars - Increased Production Costs | Average annual cost (excluding one off) (£m) | | PV costs (£m, 2009 - 2025) | |
|---|--|------|----------------------------|-------|
| | Low | High | Low | High |
| Petrol 3-Way | 10 | 47 | 126 | 607 |
| Diesel DeNOx | 2 | 8 | 19 | 88 |
| Diesel DPF | 22 | 29 | 252 | 336 |
| Total | 33 | 84 | 397 | 1,032 |

| LGVs - Increased Production Costs | Average annual cost (excluding one off) (£m) | | PV costs (£m, 2009 - 2025) | |
|-----------------------------------|--|------|----------------------------|------|
| | Low | High | Low | High |
| Petrol 3-Way | 0 | 1 | 2 | 10 |
| Diesel DeNOx | 0 | 1 | 3 | 15 |
| Diesel DPF | 4 | 5 | 47 | 63 |
| Total | 5 | 8 | 53 | 89 |

| Total | One off annual cost (£m) | | Average annual cost (excluding one off) (£m) | | PV costs (£m, 2009 - 2025) | |
|------------------------------|--------------------------|-----------|--|-----------|----------------------------|--------------|
| | Low | High | Low | High | Low | High |
| Increase in production costs | 0.02 | 0.1 | 38 | 91 | 450 | 1,120 |
| Type Approval costs | 6 | 14 | 3 | 6 | 39 | 97 |
| Total | 6 | 14 | 40 | 98 | 489 | 1,217 |

(e) Summary of Costs & Benefits

| Net Benefits | | | | | |
|----------------|---------------------------------|------|-----------------------|------|--|
| Passenger cars | Average annual net benefit (£m) | | NPV (£m, 2009 - 2025) | | |
| | Low | High | Low | High | |
| | 58 | 84 | -328 | 628 | |
| LGVs | Average annual net benefit (£m) | | NPV (£m, 2009 - 2025) | | |
| | Low | High | Low | High | |
| | 10 | 15 | 21 | 106 | |
| Total | Average annual net benefit (£m) | | NPV (£m, 2009 - 2025) | | |
| | Low | High | Low | High | |
| | 54 | 94 | -404 | 695 | |

10. Small firms impact test

Manufacturers of light duty vehicles which are subject to EU type approval are all large enterprises, or subsidiaries of larger companies and are largely unaffected by these measures. Some manufacturers producing aftermarket exhausts/catalysts are relatively small to medium size businesses. It is likely that the measure will have greatest impact on these manufacturers as, until recently, they have not produced replacement catalysts to the type approval standard specified by the EU directives for the UK market. The Department has held discussions with a number of small businesses affected by the regulations to obtain a fuller idea of their impact and sought further information from these bodies during the public consultation. Three of these manufacturers, one of which estimated that these form some 40% of the replacement market,

indicated that if no "sell- through" period were allowed this could be very damaging for their businesses. Many would be forced to stop selling catalysts, leading to job losses and likely business closures for both distributors and manufacturers...

11. Competition Assessment

Application of the requirements to catalysts and diesel particulate filters intended for type-approved vehicles first used on or after 1 March 2001 is not in itself expected to have a negative effect on competition. However it appears that any manufacturers or distributors with large volumes of unsold non-approved stock on the date of implementation are likely to be adversely affected at least on a temporary basis and possibly for a longer period. On the other hand the introduction of the regulations will ensure fair competition by requiring all catalysts to meet the type approval standards and prohibiting sale of cheaper product which does not meet the required standard.

Within the affected market no single business is thought to have more than a 20% share although about six, primarily businesses producing replacement catalysts, account for about 95% of the market for non original replacements catalysts in the UK

We understand that two suppliers of exhaust systems, Bosal and Tenneco Automotive, account for the largest portion of the supply of both original equipment and replacement exhausts in the EU. These and other international manufacturers of exhaust systems and catalytic converters, supply vehicle manufacturers directly, as well as supplying the replacement aftermarket.

The expanding range of vehicle models, leading to a proliferation of parts, is reported to be having a significant effect on smaller companies and the biggest suppliers' share of the market is forecast to increase. However, smaller manufacturers in the UK currently have a strong presence and also supply original equipment, while local manufacturers supply a limited range of parts to the replacement market.

UK exhaust and catalyst manufacturers are thought generally to supply a smaller range of product than globally based companies. UK specialist catalyst manufacturers offer varying ranges while importers and agents representing non-UK manufacturers offer selected ranges to all distribution levels. Five UK aftermarket manufacturers were consulted during the preparation of the UK Regulations and of this Assessment.

The cost of the regulations will impinge differently between businesses in different market sectors. Only marginal effects are anticipated on vehicle

manufacturers or their suppliers producing “original replacements” since these will already be designed and approved to the new standards as part of the vehicle type approval process. Similarly businesses producing a significant proportion of replacement catalysts or filters for non-EU approved vehicles (e.g. those subject to single vehicle approval) or for pre 2001 EU-approved vehicles which are not covered by the Regulations, should initially be affected to a lesser extent and only by the requirement to provide identifying information with their products. No UK aftermarket manufacturers are understood to have been producing to the type approval emissions standards for the UK market until about mid 2008 though some have been type approving part of their product in order to gain access to the wider EU market; the latter will therefore be slightly less affected.

As indicated above, additional production and approval costs might be expected for those manufacturers who have not been producing or approving exhausts or filters to type approval standards. The precise impact is likely to depend on their product range (i.e. the number of EU-approved models for which catalysts or filters are produced, whether producing catalysts/filters for non-EU approved vehicles or for export to non-EU countries) and, if appropriate, their ability to switch to alternative products. Manufacturers seeking to type approve product for the whole post 2000 vehicle market would incur the highest costs. As indicated above it seems likely that the competitive position of any manufacturers and distributors which still had large volumes of unsold non-approved stock when the regulations come into effect would be adversely affected,

The effect of the regulations on the structure of the market is uncertain. It has been suggested that the cost of type approving a wide range of products could lead to smaller firms concentrating on production of catalysts for the more popular models, possibly leading to higher prices or lack of availability of catalysts for low volume or rarer models. This could well affect competition in these sectors. New businesses starting up may similarly be led to focus their efforts in this way in order to minimise start-up costs.

12. Enforcement, sanctions and monitoring

The Department intends enforcement to be carried out through the Vehicle Certification Agency. Regulation 7 and the Schedule to the Regulations make provision as to offences and enforcement. Offenders are liable on summary conviction to a fine not exceeding level 5 on the standard scale. The Ministry of Justice has been consulted on the penalty provisions. The Department would carry out the monitoring function in liaison with VCA.

13. Implementation and delivery plan

Implementation will be achieved through transposition of the requirements of EU Regulations 715/2007 and 692/2008 into UK law by means of The Motor Vehicles (Replacement Catalytic Converters and Pollution Control Device) Regulations 2009. The Vehicle Certification Agency, as the enforcement body for Great Britain, will provide advice and guidance directly to business. The Department will liaise regularly with VCA on implementation and enforcement

14. Legal Aid

It is not anticipated that the Regulations would either increase or decrease the work of the courts. In consequence, no impact upon the legal aid budget is anticipated. A Legal Aid and Justice Impact Test Assessment has been carried out.

15. Sustainable Development

The impact of this measure upon sustainable development is expected to be small. All of the proposed scenarios are likely to lead to some increased demand for Platinum Group metals for catalysts and diesel particulate filters. It is unlikely, in the short or medium term, that it will be possible to meet a significant proportion of that increased demand through recycling. Where demand cannot be met through recycling, it will lead to an increase in extraction and refining. Increased extraction and refining will have some impact upon both the economies and the local environments of those countries involved in the processes.

16. Carbon Assessment

This measure is likely to have negligible impact upon Carbon Dioxide emissions. There may be some small increase in indirect Carbon Dioxide emissions in consequence of additional manufacturing activity, and in consequence of recycling and extraction activity required to meet increased demand for Platinum Group metals. It is doubtful whether any realistic assessment of the extent of these additional emissions could be made at the present time. In terms of vehicle use the impact on carbon dioxide emissions compared to those of the original vehicle should be largely neutral.

17. Other Environmental Impacts

Other environmental impacts of the measure should all be positive in the United Kingdom for all of the scenarios that involve a real reduction in emissions of pollutants. The propensity exists for negative environmental

impacts outside the United Kingdom consequent upon increased manufacturing activity and the extraction and recycling of Platinum Group Metals. It is not possible to produce realistic assessments of either the risk or the extent of such negative impacts occurring at the present time. They are not, however, expected to be significant in comparison to the impacts which have been quantified above.

18. Health Impacts

The health impacts of the improvements in air quality that would flow from the adoption of any of the scenarios that involved a real reduction in vehicle pollution are discussed in section 3, above.

19. Race Equality

There are no race equality issues associated with this measure.

20. Disability Equality

The measure will impact adversely on disabled people as they tend to have lower than average household incomes and many are very reliant on the use of a car for personal mobility. On the other hand some disabled people have more to benefit from measures to improve air quality than has the population in general, particularly those who might, due to their below average incomes, live in busy urban areas.

21. Gender Equality

There are no gender equality issues associated with the Regulations.

22. Human Rights

The possibility that this measure might impinge upon human rights in the areas of privacy, property, freedom to choose and practice a profession, and the right to a fair hearing have been explicitly addressed and are referenced in the Regulations. It is not considered that the measure will impinge upon these or other human rights.

23. Rural Proofing

No negative effects on rural areas are anticipated from the Regulations.

24, Summary costs and benefits table.

| Option | Total benefit per annum; - economic; environmental, social; - policy and administrative | Total cost per annum: - economic, environmental, social; - policy and administrative |
|----------------------------|--|--|
| (a) Do nothing | <p>(i) Negative environmental benefit due to the risk that the benefits of new light vehicle emission standards would not be achieved;</p> <p>(ii) Economic benefits to those manufacturers not currently producing to type approval standards.</p> | <p>Failure to transpose could seriously prejudice the UK's position with the Commission and, ultimately, before the European Court of Justice, leading to the UK incurring substantial financial penalties.</p> |
| (b) Apply the requirements | <p>(i) Environmental benefits This option will ensure that the emission control systems on the most modern cars and vans continue to operate to their full potential.</p> <p>(ii) Uniform standards will ensure fair competition over this range of vehicles at home, access to EU markets, and quality assurance for consumers.</p> | <p>(i) Estimated possible increase of up to £30 per unit for the majority of catalysts.</p> <p>(ii) Increased costs for those businesses not currently approving all or part of their catalyst range. to EU type approval standards Some reduction in product range seems likely for these businesses</p> <p>(iii) Significantly increased costs for those manufacturers or distributors with any unsold non-approved stock.</p> |

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Specific Impact Tests: Checklist

| Type of testing undertaken | Results in Evidence Base? | Results annexed? |
|----------------------------|---------------------------|------------------|
| Competition Assessment | Yes | No |
| Small Firms Impact Test | Yes | No |
| Legal Aid | Yes | No |
| Sustainable Development | Yes | No |
| Carbon Assessment | Yes | No |
| Other Environment | Yes | No |
| Health Impact Assessment | Yes | No |
| Race Equality | Yes | No |
| Disability Equality | Yes | No |
| Gender Equality | Yes | No |
| Human Rights | Yes | No |
| Rural Proofing | Yes | No |

**TRANSPOSITION NOTE
THE MOTOR VEHICLES (REPLACEMENT OF CATALYTIC
CONVERTERS AND POLLUTION CONTROL DEVICES)
REGULATIONS 2009**

1. For the purpose of this note:-

"Directive 70/220/EEC" means Council Directive of 20 March 1970 on the approximation of the law of the Member States on measures to be taken against air pollution from motor vehicles.

"EU Regulation No 715/2007" means Regulation (EC) No 715/2007 of the European Parliament and the Council of 20 June 2007 on type approval of motor vehicles with respect to emissions from light passenger and commercial vehicles (Euro 5 and 6) and on access to vehicle repair and maintenance.

"EU Regulation No 692/2008" means Commission Regulation (EC) No 692/2008 of 18 July 2008 implementing and amending Regulation (EC) No 715/2007 on type approval of motor vehicles with respect to emissions from light passenger and commercial vehicles (Euro 5 and 6) and on access to vehicle repair and information.

2. These Regulations do what is necessary to implement Article 11 of EU Regulation No 715/2007.

Regulation EU No 715/2007

| Article | Objectives | Implementation | Responsibility |
|------------|--|--|------------------------|
| Article 11 | <p>Article 11, paragraph 1 requires Member States to prohibit the sale or installation of new replacement pollution control devices intended to be fitted on vehicles approved under Regulation EC No 715/2007 if they are not of a type in respect of which type approval has been granted in compliance with the Regulation and its implementing measures, namely EC Regulation No 692/2008.</p> <p>Article 11 paragraph 2, Insofar as it requires Member States to prohibit the sale or</p> | <p>This provision is implemented by regulations 6 and 7 of the Motor Vehicles (Replacement of Catalytic Converters and Pollution Control Devices) Regulations 2009 "The Regulations").</p> <p>Regulation 6 prohibits the supply of a pollution control device unless it complies with the requirements in i) points 2.1 and 2.2, of Annex XIII to EC Regulation No 692/2008 , or ii) points 3 and 5.1 of Annex XIII to EU Regulation No 692/2008</p> <p>Regulation 7 prohibits the installation of a pollution control device unless it complies with the requirements in; i) point 2.1. of Annex XIII to EC Regulation No 692/2008 and is being installed on a vehicle for which the original replacement pollution control device is of a type covered by point 2.3 of the Addendum to the EU type approval certificate issued in respect of that type of vehicle, or ii) point 3 of Annex XIII to the EC Regulation No 692/2008 and is being installed on a vehicle of a type covered by point 1.2 of Section II of the EC type approval certificate issued in respect of that replacement pollution control device.</p> <p>This provision is implemented by regulations 4 and 5 of the Regulations.</p> <p>Regulation 4 prohibits the supply of catalytic converters unless they</p> | The Secretary of State |

| | | | |
|--|--|---|--|
| | <p>installation on a vehicle of replacement pollution control devices intended for emissions standards preceding those in Regulations No 715/2007 unless they are of a type in respect of which a relevant type approval has been granted.</p> | <p>comply with the requirements in</p> <ul style="list-style-type: none"> i) sections 5.3.8.2.1, 5.3.8.2.2 and 5.3.8.2.2..5 of Annex 1 to EC Directive 70/220/EEC as amended; ii) paragraphs 4.2.1, 4.2.2 and 4.2.2.5 of ECE Regulation 103; iii) sections 5.1 to 5.3, 7 and 7.2 of Annex XIII of EC Directive 70/220/EEC, as amended; or iv) paragraphs 4.6 to 4.8, 11 and 11.2 of ECE Regulation 103. <p>Regulation 5 prohibits the installation of catalytic converters unless they comply with the requirements in;</p> <ul style="list-style-type: none"> i) section 5.3.8.2.1 to Annex 1 to EC Directive 70/220/EEC, as amended, and is being installed on a vehicle for which the original replacement catalytic converter is of a type covered by point 1.10 of the addendum to the EC type approval certificate issued in respect of that type of vehicle; or ii) paragraph 4.2.1 of ECE Regulation 103 and is being installed on a vehicle for which the original replacement catalytic converter is of a type approved as a replacement part approved pursuant to ECE Regulations 83 and 103; or iii) sections 5.1. to 5.3 of Annex XIII to EC Directive 70/220/EEC, as amended, and is being installed on a vehicle of a type covered by point 1.2 of the addendum to the EC type approval certificate issued in respect of that type of replacement catalytic converter; or iv) paragraphs 4.6 to 4.8 of ECE Regulation 103 and is being installed on a vehicle of a type covered by point 6 of the communication document issued in respect of that type of replacement catalytic converter. | |
|--|--|---|--|

| | | | |
|--|--|---|--|
| | <p>Article 11 paragraph 3 exempts replacement pollution control devices intended to be fitted to vehicles type approved prior to the adoption of component type approval requirements.</p> | <p>The Regulations mentioned above apply to replacement catalytic converters for vehicles approved to EC Directive 70/220/EEC as amended, and first used on or after 1 March 2001 (regulations 4 and 5) and replacement pollution control devices intended for vehicles approved to EC Regulation No 715/2007 (regulations 6 and 7), only. Consequently they do not apply to catalysts intended to be fitted to vehicles type approved prior to the adoption of component type approval requirements. The Regulations do however require that such catalysts are identifiable as being not to be supplied for vehicles type approved from 1/3/01.</p> | |
|--|--|---|--|