BRAKING REGULATIONS

Consultation on proposed amendments to braking regulations for vehicle categories:

- M2 Mid size passenger vehicle (>8 passenger seats, <5t)
- M3 Large passenger vehicle (>8 passenger seats, >5t)
- N1 Light vans and trucks (<3.5t)
- N2 Mid size vans and trucks (3.5t-12t)
- N3 Heavy Vans and trucks (>12t)
- M1 Passenger cars

Moy Valley Business Park
Primrose Hill
Ballina
Co Mayo

[1]
INTRODUCTION

This consultation document sets out the Road Safety Authority’s proposal to make it obligatory for new vehicles of categories M2, M3, N1, N2 and N3 to comply with EC Directive 71/320/EEC or UN/ECE Regulations 13 or 13H (collectively the “braking regulations”). The braking regulations define the key concepts relating to the braking systems such as a requirement for vehicles to be equipped with service braking, secondary braking, and a park brake and the technical provisions which must be met. They also require new buses, trucks and vans to be fitted with anti-lock braking (ABS) devices. In practice the vast majority of such vehicles on Irish roads already comply with the braking regulations. The RSA’s proposal would, however, make compliance with the standards a pre-requisite for registration thereby ensuring that all vehicles of these categories comply with the requirements of the braking regulations.

The RSA is also proposing to strengthen the current legal obligations for vehicles in use on our roads in relation to the maintenance of braking systems and ensuring compatibility of the braking systems in towing vehicles and trailers. This would apply to M1 passenger cars as well as vehicle categories M2, M3, N1, N2 and N3.

The RSA is also proposing amendments to the vehicle testing manuals.

These measures will endeavour to ensure a high standard of braking is maintained throughout the lifetime of the vehicle.

BACKGROUND

The standard of braking systems fitted to vehicles is a key safety issue and a sufficient braking capability is one of the most important qualities a vehicle must have.

Compliance with directive 71/320/EEC has been mandatory for any M1 passenger cars produced in a series of more than 500 since the year 2000. From April 2009, all M1 passenger cars registered in Ireland will be required to have either EC Type approval requiring full compliance with the braking regulations or National Type approval which requires compliance with the essential technical provisions of the braking regulations.

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1 Up until now, braking devices were required by CE&U however the standard required had not been specified
2 With a Design Gross Vehicle Weight (GVW) in excess of 3.5 tonnes
To date, legislation in Ireland has not required new vehicles of categories M2, M3, N2 or N3 presented for registration to show certification to the latest international braking standards. The requirement to comply with the EC / UNECE braking regulations will become mandatory in accordance with the European Communities Whole Vehicle Type Approval Framework Directive (2007/46/EC) over the next five years. However, the RSA is proposing that the measures be introduced earlier because of the safety critical nature of vehicle braking. These requirements are already in place in most other European countries; therefore almost all vehicles manufactured in the EU or entering the European fleet already satisfy the requirements of these braking regulations.

Should the proposal be adopted, the main impact for stakeholders will be that new vehicles presented for registration at the Revenue Commissioners will be required to show evidence of braking certification (as described below). This will mainly affect vehicle importers and distributors; however vehicle manufacturers and convertors will also be required to comply with the requirements.

As there is a significant industry involved in the manufacture, modification and distribution of vehicles in Ireland, the RSA wishes to provide an opportunity for stakeholders to comment on the proposals.

OVERVIEW OF THE BRAKING REGULATIONS

EC Directive 71/320/EEC and the UN/ECE Regulations 13 and 13H define the key concepts relating to the braking systems for certain vehicle categories. In order to keep up to date with technological advancements, various amendments have been made to the original Regulations from time to time. The following table presents a summary of the requirements for new vehicles of categories M2, M3, N1, N2 and N3 should the RSA’s proposal be adopted (through the introduction of appropriate regulations).
<table>
<thead>
<tr>
<th>Vehicle Type</th>
<th>Requirements at Registration</th>
<th>Summary of Braking Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>N1 Light vans and trucks (&lt;3.5t)</td>
<td>Service, secondary and parking brake Anti-lock braking system not a Requirement</td>
<td></td>
</tr>
<tr>
<td>M2 Mid size passenger vehicle (&gt;8 passenger seats, &lt;5t)</td>
<td>certification to 71/320/EEC³, UN/ECE Regulation 13³ or UN/ECE Regulation 13H⁴</td>
<td></td>
</tr>
<tr>
<td>N2 Mid size vans and trucks (3.5t-12t)</td>
<td>Service, secondary and parking brake and Anti-lock braking system (Category 1)⁴</td>
<td></td>
</tr>
<tr>
<td>M3 Large passenger vehicle (&gt;8 passenger seats, &gt;5t)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N3 Heavy Vans and trucks (&gt;12t)</td>
<td></td>
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</tr>
</tbody>
</table>

**ANTI-LOCK BRAKING SYSTEMS (ABS)**

The principle of ABS is that a combination of electronic and mechanical systems is used to apply the brakes independently to individual wheels in order to prevent them from locking. ABS helps maintain steer-ability and vehicle stability during braking, and ensures shorter stopping distances when compared to locked-wheel braking. The system works on most types of road surfaces and can decrease the risk of an accident and the severity of impact. ABS provides a clear safety advantage for mid-size and heavy vehicles and will therefore be a mandatory requirement in such vehicles. In addition to reducing vehicle stopping distances, ABS also helps to reduce the likelihood of articulated truck and trailer combinations jack-knifing.

**PROPOSED AMENDMENT TO ENTRY INTO SERVICE LEGISLATION**

The European Communities (Mechanically Propelled Vehicle Entry into Service) Regulations 2008 (S.I. No. 195 of 2008) outlines the requirements for new vehicles of categories M2, M3, N1, N2 and N3 presented for first registration. The RSA proposes that S.I. No. 195 of 2008 be amended in order to explicitly require compliance with either Council Directive 71/320/EEC

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³ As amended and updated
⁴ Fitted with an ISO 7638 connection for vehicles authorised to tow 03 and 04 vehicles (trailers)
(as amended and updated) or UN/ECE Regulations 13 or 13H (as amended and updated) relating to the braking devices of motor vehicles.

If the RSA’s proposals are adopted though the introduction of the appropriate legislation, manufacturers, importers, distributors and convertors of vehicles will be required to ensure that each new vehicle of these categories presented for registration has certification to either 71/320/EEC, UN/ECE Regulation 13 or UN/ECE Regulation 13H.

PROPOSED AMENDMENTS TO THE CE&U REGULATIONS

Post registration, all vehicles on Irish roads must comply with the Construction, Equipment, and Use Regulations (“CE&U Regulations”). It is proposed to update the CE&U Regulations as set out below. These amendments will also apply to M1 passenger cars and in certain cases category O vehicles (trailers) will be affected.

- **Maintenance of Braking Systems**

  Under the proposal, if adopted, the vehicle operator will be required to maintain the braking systems, including ABS, to the standards specified in the braking regulations throughout the lifetime of the vehicle. For vehicles registered after the introduction of any legislation implementing the RSA’s proposal (if implemented), the legislation will have the effect of outlawing items such as shut-off devices which are not automatically actuated, and manually adjusted slack adjusters.

- **Compatibility between towing vehicle and its trailer**

  Incompatible combinations of towing vehicles and their trailers create a serious safety implication for the effectiveness of brakes. For example, where the braking system in an old tractor unit is not compatible with a new trailer there may be insufficient power for the braking devices of the trailer, thus increasing the stopping distance and increasing the likelihood of trailer swing. Under the RSA’s proposal any regulations that might be adopted to implement such a proposal would:

  (a) strengthen the existing regulations to explicitly require compatibility of braking systems on the towing vehicle and their trailers; and
(b) also mandate the use of the ISO 7638 connector\(^5\) when installed on the towing vehicle and trailer.

**Implications for the conversion of N1s to M2s**

Until now, buses have not been required to be fitted with ABS prior to vehicle registration. If the RSA’s proposal is adopted, it is envisaged that, as part of implementing regulations, all new buses entering into service will be required to have ABS fitted and certification showing compliance with the braking regulations. Under the proposed amendments to the CE&U Regulations, it will only be possible to convert an N1 (light goods) vehicle to an M2 (e.g. minibus) where the N1 vehicle has been factory fitted with ABS prior to the conversion.

**PROPOSED CHANGES TO THE VEHICLE TESTING MANUALS**

Should the RSA’s proposal be adopted and implementing regulations introduced, the commercial vehicle and heavy goods vehicle tests [and related testing manuals] will be updated accordingly. Compliance with the braking regulations will be examined during these periodic tests and the scope of vehicles requiring ABS will be extended and where applicable, vehicles will be examined for the presence of a working ISO 7638 connector. Vehicles required to have ABS fitted at the time of registration will fail the test if ABS is not fitted or if the ABS is found to be insufficient or defective. All HGV test centres will be issued ABS information sheets containing reference tables for ABS warning lamps.

**APPROVAL FOR BRAKING SYSTEMS**

Under the proposals, the certification required by the Revenue Commissioners at vehicle registration will be amended to require compliance with EC Directive 71/320/EEC or the UN/ECE Regulations 13 or 13H. Vehicle importers and distributors should contact the vehicle manufacturer in order to obtain the required certification. Vehicle convertors should ensure the base vehicle has the appropriate braking certification prior to the conversion. Although the proposed legislation will mainly impact on distributors and convertors of vehicles, any

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\(^5\) The vast majority of Heavy Goods Vehicles operating within Ireland are equipped with an ISO 7638 connector which provides the electrical connection between the towing and towed vehicles, serving braking systems and running gear
vehicle manufacturer wishing to gain approval to these braking standards should contact the National Standards Authority of Ireland (nsai@nsai.ie).

YOUR COMMENTS

The Road Safety Authority is offering you the opportunity to submit comments on the proposal by 6th March 2009 via email to vehiclestandards@rsa.ie or in writing to:

Vehicle Standards Section
Road Safety Authority
Moy Valley Business Park
Primrose Hill
Ballina
Co Mayo