

## COUNCIL DIRECTIVE 92/54/EEC

of 22 June 1992

amending Directive 77/143/EEC on the approximation of the laws of the Member States relating to roadworthiness tests for motor vehicles and their trailers (brakes)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Economic Community and in particular Article 75 thereof,

Having regard to the proposal from the Commission <sup>(1)</sup>,

Having regard to the opinion of the European Parliament <sup>(2)</sup>,

Having regard to the opinion of the Economic and Social Committee <sup>(3)</sup>,

Whereas Directive 77/143/EEC <sup>(4)</sup> provides for the regular roadworthiness testing of all categories of vehicles listed in Annex I thereto;

Whereas that Directive provides for the adoption of separate directives for testing the standard of the items listed in Annex II thereto and the establishment of a technical committee to advise the Commission before it adopts measures to adjust roadworthiness tests to technical progress;

Whereas most Member States have adopted procedures for testing heavy commercial vehicles with regard to the condition of the braking system;

Whereas several Member States have national rules for testing the lighter vehicles, including passenger cars, and that those rules are commensurate with the scheme outlined in this Directive;

Whereas assessment of the type approval procedures for testing vehicle braking for all vehicle types shows that applying those procedures in the roadworthiness test presents some difficulty;

Whereas in-service testing should be relatively simple, quick and inexpensive;

Whereas at this stage it would be premature to set values for the required braking efficiencies, air pressure settings and

build up times, etc. given the variance in test equipments and methods within the Community; whereas the aim of brake performance testing must be that a realistic judgment can be made at the time of testing that the vehicle, irrespective of its laden condition within the bounds of its gross weights, would be safe and reliable on the road and that, if tested to the technical requirements of Council Directive 71/320/EEC of 26 July 1971 on the approximation of the laws of the Member States relating to the braking devices of certain categories of motor vehicles and of their trailers <sup>(5)</sup>, then it would pass;

Whereas Member States may extend the scope of the braking test to include vehicles or test items outside the scope of this Directive;

Whereas Member States may enhance the severity of the braking test or increase the frequency of testing,

HAS ADOPTED THIS DIRECTIVE:

*Article 1*

Annex II of Directive 77/143/EEC is hereby amended as follows:

1. the introductory note and the two columns of heading 1 (braking systems) shall be replaced by the text set out in the Annex to this Directive;
2. under heading 1, the following headings shall be inserted above the two columns:

VEHICLES IN  
CATEGORIES  
1, 2, 3 and 4

VEHICLES IN  
CATEGORIES  
5 and 6

*Article 2*

1. Member States shall implement the laws, regulations and administrative measures necessary to comply with this

<sup>(1)</sup> OJ No C 189, 20. 7. 1991, p. 16.

<sup>(2)</sup> OJ No C 94, 13. 4. 1992.

<sup>(3)</sup> OJ No C 49, 24. 2. 1992, p. 64.

<sup>(4)</sup> OJ No L 47, 18. 2. 1977, p. 47. Last amended by Directive 91/328/EEC (OJ No L 178, 6. 7. 1991, p. 29).

<sup>(5)</sup> OJ No L 202, 6. 9. 1971, p. 37. Last amended by Commission Directive 91/422/EEC (OJ No L 233, 22. 8. 1991, p. 2).

Directive within one year of the date of its adoption. They shall forthwith inform the Commission thereof.

When the Member States adopt these measures, they shall contain a reference to this Directive or shall be accompanied by such a reference at the time of their official publication. The methods of making such a reference shall be laid down by the Member States.

2. Member States shall communicate to the Commission the texts of the provisions of domestic law which they adopt in the field governed by this Directive.

*Article 3*

This Directive is addressed to the Member States.

Done at Luxembourg, 22 June 1992.

*For the Council*

*The President*

Joaquim FERREIRA DO AMARAL

## ANNEX

## 'ANNEX II

The test shall cover at least the items listed below, since these refer to the obligatory equipment of the vehicle tested in the Member State in question.

The tests covered by this Annex may be carried out visually without disassembly of vehicle parts.

Where the vehicle is found to be defective with regard to the test items below, the competent authorities in the Member States shall adopt a procedure for setting the conditions under which the vehicle may be used before passing another roadworthiness test.

## VEHICLES IN CATEGORIES 1, 2, 3, 4, 5 AND 6

## 1. BRAKING SYSTEMS

The following items are to be included in the roadworthiness test of vehicle braking systems. The test results achieved during the checks of the braking systems shall be equivalent as far as is practicable to the technical requirements of Directive 71/320/EEC.

<i>Items to be checked/tested</i>	<i>Reasons for failure</i>
1.1. Mechanical condition and operation	
1.1.1. Footbrake pedal pivot	<ul style="list-style-type: none"> <li>— too tight</li> <li>— bearing worn</li> <li>— excessive wear/play;</li> </ul>
1.1.2. Pedal condition and travel of the brake operating device	<ul style="list-style-type: none"> <li>— excessive or insufficient reserve travel</li> <li>— brake control not releasing correctly</li> <li>— anti-slip provision on brake pedal missing, loose or worn smooth;</li> </ul>
1.1.3. Vacuum pump or compressor and reservoirs	<ul style="list-style-type: none"> <li>— time taken to build up air pressure/vacuum for the effective operation of the brakes is excessive</li> <li>— insufficient air pressure/vacuum to give assistance for at least two applications of the brake after the warning device has operated (or gauge shows unsafe reading)</li> <li>— air leak causing a noticeable drop in pressure or audible air leaks;</li> </ul>
1.1.4. Low pressure warning indicator or gauge	<ul style="list-style-type: none"> <li>— malfunctioning or defective low pressure indicator/air pressure gauge;</li> </ul>
1.1.5. Hand operated brake control valve	<ul style="list-style-type: none"> <li>— cracked or damaged control, excessive wear</li> <li>— malfunction of control valve</li> <li>— control insecure on valve spindle or valve unit insecure</li> <li>— connections loose or leak in system</li> <li>— unsatisfactory operation;</li> </ul>
1.1.6. Parking brake, lever control, parking brake ratchet	<ul style="list-style-type: none"> <li>— parking brake ratchet not holding correctly</li> <li>— excessive wear at lever pivot or ratchet mechanism</li> <li>— excessive movement of lever indicating incorrect adjustment;</li> </ul>

<i>Items to be checked/tested</i>	<i>Reasons for failure</i>
1.1.7. Braking valves (footvalves, unloaders, governors etc.)	<ul style="list-style-type: none"> <li>— damaged, excessive air leakage</li> <li>— excessive discharge of oil from compressor</li> <li>— insecure/inadequate mounting</li> <li>— discharge of hydraulic brake fluid;</li> </ul>
1.1.8. Couplings for trailer brakes	<ul style="list-style-type: none"> <li>— defective isolation taps or self-sealing valve</li> <li>— insecure/inadequate mounting</li> <li>— excessive leaks;</li> </ul>
1.1.9. Energy storage reservoir pressure tank	<ul style="list-style-type: none"> <li>— damaged, corroded, leaking</li> <li>— drain device inoperative</li> <li>— insecure/inadequate mounting;</li> </ul>
1.1.10. Brake servo units, master cylinder (hydraulic systems)	<ul style="list-style-type: none"> <li>— servo unit is defective or ineffective</li> <li>— master cylinder defective or leaking</li> <li>— master cylinder insecure</li> <li>— insufficient quantity of brake fluid</li> <li>— master cylinder reservoir cap missing</li> <li>— brake fluid warning light illuminated or defective</li> <li>— incorrect functioning of brake fluid level warning device;</li> </ul>
1.1.11. Rigid brake pipes	<ul style="list-style-type: none"> <li>— risk of failure or fracture</li> <li>— leaks from pipes or connections to couplings</li> <li>— damaged or excessively corroded</li> <li>— misplaced;</li> </ul>
1.1.12. Flexible brake hoses	<ul style="list-style-type: none"> <li>— risk of failure or fracture</li> <li>— damaged, chafing, brake hoses too short, twisted</li> <li>— leaks from hoses or couplings</li> <li>— hose bulging under pressure</li> <li>— porosity;</li> </ul>
1.1.13. Brake coverings (lining spads)	<ul style="list-style-type: none"> <li>— excessive wear</li> <li>— contaminated (oil, grease, etc.);</li> </ul>
1.1.14. Brake drums, brake discs	<ul style="list-style-type: none"> <li>— excessive wear, excessive scoring, cracks, insecure or fractured</li> <li>— contaminated (oil, grease, etc.)</li> <li>— back plate insecure;</li> </ul>
1.1.15. Brake cables, rods, levers linkage	<ul style="list-style-type: none"> <li>— cables damaged, knotted</li> <li>— excessively worn or corroded</li> <li>— cable or rod joint insecure</li> <li>— cable guide defective</li> <li>— any restriction to free movement of the brake system</li> <li>— any abnormal movement of levers/rods/linkage indicating maladjustment or excessive wear;</li> </ul>
1.1.16. Brake actuators (including spring brakes or hydraulic wheel cylinders)	<ul style="list-style-type: none"> <li>— cracked or damaged</li> <li>— leaking</li> <li>— insecure/inadequate mounting</li> <li>— excessively corroded</li> <li>— excessive travel of operating piston or diaphragm mechanism</li> <li>— dust protection cover missing or excessively damaged;</li> </ul>

<i>Items to be checked/tested</i>	<i>Reasons for failure</i>
1.1.17. Load sensing valve	<ul style="list-style-type: none"> <li>— defective linkage</li> <li>— incorrect adjustment</li> <li>— seized, not working</li> <li>— missing;</li> </ul>
1.1.18. Automatic slack adjusters indicating	<ul style="list-style-type: none"> <li>— seized or abnormal movement, excessive wear or wrong adjustment</li> <li>— defective;</li> </ul>
1.1.19. Retarder system (where fitted or required)	<ul style="list-style-type: none"> <li>— insecure connectors or mountings</li> <li>— defective;</li> </ul>
1.2. Service brake performance and efficiency	
1.2.1. Performance (progressively increased to maximum effort)	<ul style="list-style-type: none"> <li>— little or no braking effort on one or more wheels</li> <li>— braking effort from any wheel is less than 70 % of the highest recorded effort from another wheel on the same axle (where road test necessary then vehicle's deviation from a straight line on braking is excessive)</li> <li>— no gradual variation of brake effort (grabbing)</li> <li>— abnormal time-lag in brake operation at any wheel</li> <li>— excessive fluctuation of brake effort due to ovality of discs or drums;</li> </ul>
1.2.2. Efficiency	<ul style="list-style-type: none"> <li>— brakes inefficient, minimum performance not met;</li> </ul>
1.3. Secondary (emergency) brake performance and efficiency (if met by separate system)	
1.3.1. Performance	<ul style="list-style-type: none"> <li>— brake(s) inoperative on one side</li> <li>— braking effort from any wheel is less than 70 % of the highest recorded effort from another wheel on the same axle</li> <li>— no gradual variation of efficiency (grabbing)</li> <li>— automatic brake system not working in the case of trailers</li> </ul>
1.3.2. Efficiency	<ul style="list-style-type: none"> <li>— brake inefficient, minimum performance not met;</li> </ul>
1.4. Parking brake performance and efficiency	
1.4.1. Performance	<ul style="list-style-type: none"> <li>— brake inoperative on one side</li> </ul>
1.4.2. Efficiency	<ul style="list-style-type: none"> <li>— brake inefficient, minimum performance not met;</li> </ul>
1.5. Retarder or exhaust brake system performance	<ul style="list-style-type: none"> <li>— no gradual variation of efficiency (retarder)</li> <li>— defective;</li> </ul>
1.6. Anti-lock braking	<ul style="list-style-type: none"> <li>— malfunction of the anti-lock warning device</li> <li>— defective'.</li> </ul>