





**DIRECTIVE 2000/30/EC OF THE EUROPEAN PARLIAMENT  
AND OF THE COUNCIL**

**of 6 June 2000**

**on the technical roadside inspection of the roadworthiness of  
commercial vehicles circulating in the Community**

THE EUROPEAN PARLIAMENT AND THE COUNCIL OF THE  
EUROPEAN UNION,

Having regard to the Treaty establishing the European Community, and  
in particular Article 71(1)(c) and (d) thereof,

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

Having regard to the opinion of the Economic and Social Committee <sup>(2)</sup>,

After consulting the Committee of the Regions,

Acting in accordance with the procedure laid down in Article 251 of the  
Treaty <sup>(3)</sup>,

Whereas:

- (1) The growth of traffic presents all Member States with safety and environmental problems of a similar nature and seriousness.
- (2) It is in the interest of road safety, environmental protection and equitable competition that commercial vehicles should be used only if they are maintained to a high degree of technical roadworthiness.
- (3) In accordance with Directive 96/96/EC of 20 December 1996 on the approximation of the laws of the Member States relating to roadworthiness tests for motor vehicles and their trailers <sup>(4)</sup>, commercial vehicles undergo an inspection by an authorised body every year.

<sup>(1)</sup> OJ C 190, 18.6.1998, p. 10, and OJ C 116E, 26.4.2000, p. 7.

<sup>(2)</sup> OJ C 407, 28.12.1998, p. 112.

<sup>(3)</sup> Opinion of the European Parliament of 9 February 1999, (OJ C 150, 28.5.1999, p. 27), Council Common Position of 2 December 1999 and Decision of the European Parliament of 14 March 2000 (not yet published in the Official Journal). Council Decision of 13 April 2000.

<sup>(4)</sup> OJ L 46, 17.2.1997, p. 1. Directive as amended by Commission Directive 1999/52/EC (OJ L 142, 5.6.1999, p. 26).

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- (4) Article 4 of Directive 94/12/EC<sup>(1)</sup> provides for a multi-directional approach to the cost/effectiveness aspects of the measures intended to reduce the pollution caused by road transport; whereas the European 'Auto-oil I' programme incorporated that approach and gave an objective assessment of all the most profitable measures in the fields of vehicle technology, fuel quality, monitoring and maintenance as well as non-technical measures, in order to reduce emissions by road transport.
- (5) In view of that approach, the European Parliament and the Council adopted Directive 98/70/EC<sup>(2)</sup>, intended to improve fuel quality and, with a view to laying down stricter emission standards, Directive 98/69/EC<sup>(3)</sup>, for private motor cars and light commercial vehicles and Directive 1999/96/EC<sup>(4)</sup> for heavy goods vehicles.
- (6) This Directive forms part of the same approach, but it would appear to be more effective from the point of view of environmental protection not at this stage to tighten the standards laid down for roadworthiness tests in Directive 96/96/EC but to provide for technical roadside inspections in order to ensure application of that Directive throughout the year.
- (7) The regulated annual roadworthiness test is in fact considered not to be sufficient to guarantee that commercial vehicles tested are in roadworthy condition throughout the year.
- (8) Effective enforcement through targeted additional technical roadside inspection is an important cost-effective measure to control the standard of maintenance of commercial vehicles on the road.
- (9) Roadside roadworthiness inspections should be carried out without discrimination on grounds of the nationality of the driver or of the country of registration or entry into service of the commercial vehicle.

<sup>(1)</sup> Directive 94/12/EC of the European Parliament and of the Council of 23 March 1994 relating to measures to be taken against air pollution by emissions from motor vehicles and amending Directive 70/220/EEC (OJ L 100, 19.4.1994, p. 42).

<sup>(2)</sup> Directive 98/70/EC of the European Parliament and of the Council of 13 October 1998 relating to the quality of petrol and diesel fuels and amending Council Directive 93/12/EEC (OJ L 350, 28.12.1998, p. 58).

<sup>(3)</sup> Directive 98/69/EC of the European Parliament and of the Council of 13 October 1998 relating to measures to be taken against air pollution by emissions from motor vehicles and amending Council Directive 70/220/EEC (OJ L 350, 28.12.1998, p. 1).

<sup>(4)</sup> Directive 1999/96/EC of the European Parliament and of the Council of 13 December 1999 on the approximation of the laws of the Member States relating to measures to be taken against the emission of gaseous and particulate pollutants from compression ignition engines for use in vehicles, and the emission of gaseous pollutants from positive ignition engines fuelled with natural gas or liquefied petroleum gas for use in vehicles and amending Council Directive 88/77/EEC (OJ L 44, 16.2.2000, p. 1).

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- (10) The method of inspection selection should be based on a targeted approach, giving greatest effort to identifying vehicles that seem most likely to be poorly maintained and thereby enhancing the authorities' operational effectiveness and minimising the costs and delays to drivers and operators.
- (11) In the event of serious deficiencies in a vehicle inspected it must be possible to ask the competent authorities of the Member State in which the vehicle is registered or in which the vehicle was brought into service to take appropriate measures and inform the requesting Member State of any follow-up measures taken.
- (12) The measures necessary for implementing this Directive shall be adopted in accordance with Council Decision 1999/468/EC of 28 June 1999 laying down the procedures for the exercise of implementing powers conferred on the Commission <sup>(1)</sup>.
- (13) In accordance with the subsidiarity and proportionality principles as set out in Article 5 of the Treaty, the objectives of the proposed action, namely to establish a regime of roadside inspections of commercial vehicles circulating in the Community, cannot be sufficiently achieved by the Member States and can, therefore, by reason of the scale of the action be better achieved by the Community; this Directive does not go beyond what is necessary for that purpose,

HAVE ADOPTED THIS DIRECTIVE:

*Article 1*

1. In order to improve road safety and the environment, the purpose of this Directive shall be to ensure that commercial vehicles circulating within the territories of the Member States of the Community comply more fully with certain technical conditions imposed by Directive 96/96/EC.
2. This Directive establishes certain conditions for roadside inspections of the roadworthiness of commercial vehicles circulating within the territory of the Community.
3. Without prejudice to Community regulations, this Directive shall not, however, affect the Member States' right to carry out inspections not covered by this Directive or to check other aspects of road transport, in particular those relating to commercial vehicles. On the other hand, there is nothing to prevent a Member State, in the context of inspections not covered by the scope of this Directive, from checking the items listed in Annex I in places other than on the public highway.

<sup>(1)</sup> OJ L 184, 17.7.1999, p. 23.

**▼B***Article 2*

For the purposes of this Directive:

- (a) ‘commercial vehicle’ shall mean those motor vehicles and trailers defined in categories 1, 2 and 3 of Annex I to Directive 96/96/EC;
- (b) ‘technical roadside inspection’ shall mean an inspection of a technical nature, not announced by the authorities and therefore unexpected, of a commercial vehicle circulating within the territory of a Member State carried out on the public highway by the authorities, or under their supervision;
- (c) ‘roadworthiness test’ shall mean a test of a vehicle's technical roadworthiness as provided for in Annex II to Directive 96/96/EC.

*Article 3*

1. Each Member State shall introduce technical roadside inspections such as will achieve the objectives stated in Article 1 as regards commercial vehicles covered by this Directive, bearing in mind the national arrangements applicable to such vehicles under Directive 96/96/EC.

2. Every technical roadside inspection shall be carried out without discrimination on grounds of the nationality of the driver or of the country of registration or entry into service of the commercial vehicle, bearing in mind the need to minimise the costs and delays entailed for drivers and operators.

*Article 4*

1. A technical roadside inspection shall comprise one, two or all of the following aspects:

- (a) a visual assessment of the maintenance condition of the commercial vehicle when stationary;
- (b) a check on a recent roadside technical inspection report as referred to in Article 5 or on the documentation attesting to the vehicle's technical roadworthiness and in particular, in the case of a vehicle registered or put into service in a Member State, proof that the commercial vehicle has undergone a statutory technical roadworthiness test in accordance with Directive 96/96/EC;
- (c) an inspection for irregularities covering one, more than one or all of the items to be checked listed in Annex I, point 10.

2. An inspection of the braking systems and exhaust emissions shall be carried out in accordance with the rules laid down in Annex II.

3. Before carrying out an inspection of the items listed in Annex I, point 10, the inspector shall take into consideration the last roadworthiness certificate and/or a recent technical roadside inspection report which the driver may produce.

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The inspector may also take into consideration any other safety certificate issued by an approved body, presented, where appropriate, by the driver.

Where these certificates and/or report prove that an inspection of one of the items listed in Annex I, point 10, has been carried out in the course of the preceding three months, that item shall not be checked again, except where justified in particular on the grounds of an obvious defect and/or irregularity.

*Article 5*

1. The technical roadside inspection report relating to the inspection referred to in Article 4(1)(c) shall be drawn up by the authority or inspector having carried it out. A specimen report is contained in Annex I, point 10 of which contains a checklist. The authority or inspector must tick the relevant boxes. The report must be given to the driver of the commercial vehicle.

2. If the authority or the inspector considers that deficiencies in the maintenance of a commercial vehicle may represent a safety risk such that, as regards the brakes in particular, further examination is justified, the commercial vehicle may be subjected to a more elaborate test at a testing centre in the vicinity, designated by the Member State, in accordance with Article 2 of Directive 96/96/EC.

If it becomes clear that a commercial vehicle presents a serious risk to its occupants or other road users either during the roadside inspection referred to in Article 4(1) or during the more elaborate test referred to in the first subparagraph of this paragraph, use of that vehicle may be prohibited until the dangerous deficiencies discovered have been rectified.

*Article 6*

Every two years, before 31 March, Member States shall communicate to the Commission the data collected relating to the previous two years concerning the number of commercial vehicles checked, classified by category in accordance with Annex I, point 6 and by the country of registration, and the items checked and defects noted, on the basis of Annex I, point 10.

The first data submitted shall cover a period of two years beginning on 1 January 2003.

The Commission shall forward this information to the European Parliament.

*Article 7*

1. Member States shall assist one another in applying this Directive. In particular, they shall provide each other with details of the office(s) responsible for carrying out the checks and of the names of contact persons.

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2. Serious deficiencies in a commercial vehicle belonging to a non-resident, in particular those resulting in a ban on using the vehicle, shall be reported to the competent authorities of the Member State in which the vehicle is registered or has been put into service by means of the specimen report in Annex I, without prejudice to the prosecution in accordance with the legislation in force in the Member States in which the deficiency was recorded.

Without prejudice to Article 5, the competent authorities of the Member State in which a serious deficiency has been found in a commercial vehicle belonging to a non-resident may ask the competent authorities of the Member State in which the vehicle is registered or has been put into service to take appropriate measures with regard to the offender, for example submitting the vehicle to a further roadworthiness inspection.

The competent authorities to which such a request is made shall notify the competent authorities of the Member State in which the deficiencies of the commercial vehicle were found of any measures taken with regard to the offender.

*Article 8*

Any amendments which are necessary to adapt Annex I or the technical standards defined in Annex II to technical progress shall be adopted in accordance with the procedure laid down in Article 9(2).

Such amendments must not, however, result in the scope of this Directive being extended.

*Article 9*

1. The Commission shall be assisted by the Committee on the Adaptation to Technical Progress set up pursuant to Article 8 of Directive 96/96/EC, hereinafter referred to as 'the Committee'.

2. Where reference is made to this paragraph, Articles 5 and 7 of Decision 1999/468/EC shall apply, in compliance with the provisions of Article 8 thereof.

The period provided for in Article 5(6) of Decision 1999/468/EC shall be laid down as three months.

3. The Committee shall adopt its rules of procedure.

*Article 10*

Member States shall draw up arrangements for the penalties applicable where a driver or operator fails to abide by the technical requirements verified on the basis of this Directive.

They shall take all necessary measures to ensure that these penalties are enforced. The penalties thus provided for shall be effective, proportionate and dissuasive.

**▼B***Article 11*

Within a year of receiving the data referred to in Article 6 from the Member States, the Commission shall submit to the Council a report on the application of this Directive together with a summary of the results achieved.

The first report shall cover the period of two years beginning on 1 January 2003.

*Article 12*

1. The Member States shall bring into force the laws, regulations and administrative provisions necessary for them to comply with this Directive ►**C1** before 10 August 2002. ◀ They shall forthwith inform the Commission thereof.

2. When the Member States adopt those measures they shall include references to this Directive or shall add such references on their official publication. The Member States shall lay down the manner in which such references shall be made.

3. The Member States shall communicate to the Commission the texts of the provisions of national law that they adopt in the field governed by this Directive.

*Article 13*

This Directive shall enter into force on the day of its publication in the *Official Journal of the European Communities*.

*Article 14*

This Directive is addressed to the Member States.

▼ **M2***ANNEX I*

(front side)

**SPECIMEN TECHNICAL ROADSIDE INSPECTION REPORT INCORPORATING A CHECK-LIST**

1. Place of check .....
2. Date .....
3. Time .....
4. Vehicle nationality mark and registration number .....
5. Vehicle identification/VIN number .....
6. Category of vehicle
 

(a) <input type="checkbox"/> N2 <sup>(a)</sup> (3,5 to 12 t) (b) <input type="checkbox"/> N3 <sup>(a)</sup> (more than 12 t) (c) <input type="checkbox"/> O3 <sup>(a)</sup> (3,5 to 10 t) (d) <input type="checkbox"/> O4 <sup>(a)</sup> (more than 10 t)	(e) <input type="checkbox"/> M2 <sup>(a)</sup> (> 9 seats <sup>(b)</sup> to 5 t) (f) <input type="checkbox"/> M3 <sup>(a)</sup> (> 9 seats <sup>(b)</sup> more than 5 t) (g) <input type="checkbox"/> Other vehicle category (Article 1(3))
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7. Undertaking carrying out transport
  - (a) Name and address .....
  - .....
  - (b) Number of the Community licence<sup>(c)</sup> (Regulation (EC) No 1072/2009) .....
8. Nationality (driver) .....
9. Driver name .....
10. Checklist .....

	Checked <sup>(d)</sup>	Not checked	Failed <sup>(e)</sup>
(0) identification <sup>(f)</sup>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(1) braking equipment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(2) steering <sup>(f)</sup>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(3) visibility <sup>(f)</sup>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(4) lighting equipment and electric system <sup>(f)</sup>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(5) axles, wheels, tyres, suspension <sup>(f)</sup>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(6) chassis and chassis attachments <sup>(f)</sup>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(7) other equipment including tachograph <sup>(f)</sup> and speed limitation device	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(8) nuisance including emissions and spillage of fuel and/or oil	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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11. Result of inspection:

Ban on using the vehicle, which has dangerous defects

12. Miscellaneous/remarks: .....

13. Authority/officer or inspector having carried out the inspection

Signature of:

Testing authority/officer or inspector

.....

Driver

.....

*Notes:*

- (a) Vehicle category according to Annex II to Directive 2007/46/EC (OJ L 263, 9.10.2007, p. 1).
- (b) Number of seats including the driver's seat (item S.1 of registration certificate).
- (c) If available.
- (d) 'Checked' means that at least one or more of the inspection items listed in Annex II to Directive 2009/40/EC as amended by Directive 2010/48/EU of this group have been checked.
- (e) Defects indicated on the rear side.
- (f) Methods for testing and guidelines for assessment of defects according to Annex II to Directive 2009/40/EC as amended by Directive 2010/48/EU.

## ▼ M2

(reverse side)

0.	<b>IDENTIFICATION OF THE VEHICLE</b>	1.4.	Parking braking performance and efficiency	4.4.3.	Compliance with requirements	6.1.4.	Bumpers, lateral protection and rear under-run devices
0.1.	Registration number plates	1.4.1.	Performance	4.4.4.	Flashing frequency	6.1.5.	Spare wheel carrier
0.2.	Vehicle identification/chassis/serial number	1.4.2.	Efficiency	4.5.	Front and rear fog lamps	6.1.6.	Coupling mechanisms and towing equipment
1.	<b>BRAKING EQUIPMENT</b>	1.5.	Endurance braking system performance	4.5.1.	Condition and operation	6.1.7.	Transmission
1.1.	Mechanical condition and operation	1.6.	Anti-lock braking system	4.5.2.	Alignment	6.1.8.	Engine mountings
1.1.1.	Service brake pedal pivot	2.	<b>STEERING</b>	4.5.3.	Switching	6.1.9.	Engine performance
1.1.2.	Pedal condition and travel of brake operating device	2.1.	Mechanical condition	4.5.4.	Compliance with requirements	6.2.	Cab and bodywork
1.1.3.	Vacuum pump or compressor and reservoirs	2.1.1.	Steering gear condition	4.6.	Reversing lamps	6.2.1.	Condition
1.1.4.	Low pressure warning gauge or indicator	2.1.2.	Steering gear casing attachment	4.6.1.	Condition and operation	6.2.2.	Mounting
1.1.5.	Hand-operated brake control valve	2.1.3.	Steering linkage condition	4.6.2.	Switching	6.2.3.	Doors and door catches
1.1.6.	Parking brake activator, lever control, parking brake ratchet	2.1.4.	Steering linkage operation	4.6.3.	Compliance with requirements	6.2.4.	Floor
1.1.7.	Braking valves (foot valves, un-loaders, governors)	2.1.5.	Power steering	4.7.	Rear registration plate lamp	6.2.5.	Driver's seat
1.1.8.	Couplings for trailer brakes (electrical and pneumatic)	2.2.	Steering wheel and column	4.7.1.	Condition and operation	6.2.6.	Other seats
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1.1.15.	Brake cables, rods, levers, linkages	3.1.	Field of vision	4.9.2.	Compliance with requirements	7.1.1.	Security of mounting
1.1.16.	Brake actuators (including spring brakes or hydraulic cylinders)	3.2.	Condition of glass	4.10.	Electrical connections between towing vehicle and trailer or semi-trailer	7.1.2.	Condition
1.1.17.	Load sensing valve	3.3.	Rear-view mirrors	4.11.	Electrical wiring	7.1.3.	Safety belt load-limiter
1.1.18.	Slack adjusters and indicators	3.4.	Windscreen wipers	4.12.	Non-obligatory lamps and reflectors	7.1.4.	Safety belt pre-tensioners
1.1.19.	Endurance braking system (where fitted or required)	3.5.	Windscreen washers	4.13.	Battery	7.1.5.	Airbag
1.1.20.	Automatic operation of trailer brakes	3.6.	Demisting system	5.	<b>AXLES, WHEELS, TYRES AND SUSPENSION</b>	7.1.6.	SRS systems
1.1.21.	Complete braking system	4.	<b>LAMPS, REFLECTORS, ELECTRICAL EQUIPMENT</b>	5.1.	Axles	7.2.	Fire extinguisher
1.1.22.	Test connections	4.1.	Headlamps	5.1.1.	Axles	7.3.	Locks and anti-theft device
1.2.	Service braking performance and efficiency	4.1.1.	Condition and operation	5.1.2.	Stub axles	7.4.	Warning triangle
1.2.1.	Performance	4.1.2.	Alignment	5.1.3.	Wheel bearings	7.5.	First aid kit
1.2.2.	Efficiency	4.1.3.	Switching	5.2.	Wheels and tyres	7.6.	Wheel chocks (wedges)
1.3.	Secondary (emergency) braking performance and efficiency	4.1.4.	Compliance with requirements	5.2.1.	Road wheel hub	7.7.	Audible warning device
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		4.4.	Direction indicator and hazard warning lamps	6.1.1.	General condition	8.2.1.2.	Gaseous emissions
		4.4.1.	Condition and operation	6.1.2.	Exhaust pipes and silencers	8.2.2.	Diesel engine emissions
		4.4.2.	Switching	6.1.3.	Fuel tank and pipes (including heating fuel tank and pipes)	8.2.2.1.	Exhaust emission control equipment
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▼ **M2***ANNEX II*

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## 1. INTRODUCTION

This Annex lays down the rules for testing and/or checking braking systems and exhaust emissions during a technical roadside inspection. The use of equipment is not mandatory during roadside inspections. However, it will enhance the quality of inspections and, where possible, it is recommended.

Items that may only be checked by the use of equipment have been marked with an **(E)**.

Where a method of inspection is given as visual, it means that in addition to looking at the items, the inspector should, if appropriate, also handle them, evaluate noise or use any other appropriate means of inspection without the use of equipment.

## 2. INSPECTION REQUIREMENTS

Roadside technical inspections may cover items and use the methods listed below. Deficiencies are examples of defects that can be detected.

Item	Method	Deficiencies
<b>1. BRAKING EQUIPMENT</b>		
1.1. Mechanical condition and operation		
1.1.1. Service brake pedal pivot	Visual inspection of the components while the braking system is operated. Note: Vehicles with power-assisted braking systems should be inspected with the engine switched off.	(a) Pivot too tight. (b) Excessive wear or play.
1.1.2. Pedal condition and travel of the brake operating device	Visual inspection of the components while the braking system is operated. Note: Vehicles with power-assisted braking systems should be inspected with the engine switched off.	(a) Excessive or insufficient reserve travel. (b) Brake control not releasing correctly. (c) Anti-slip provision on brake pedal missing, loose or worn smooth.
1.1.3. Vacuum pump or compressor and reservoirs	Visual inspection of the components at normal working pressure. Check time required for vacuum or air pressure to reach safe working value and function of warning device, multi-circuit protection valve and pressure relief valve.	(a) Insufficient pressure/vacuum to give assistance for at least two brake applications after the warning device has operated (or gauge shows an unsafe reading). (b) Time taken to build up air pressure/-vacuum to safe working value not in accordance with the requirements <sup>(*)</sup> . (c) Multi-circuit protection valve or pressure relief valve not working.

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Item	Method	Deficiencies
		(d) Air leak causing a noticeable drop in pressure or audible air leaks. (e) External damage likely to affect the function of the braking system.
1.1.4. Low pressure warning gauge or indicator	Functional check	Malfunctioning or defective gauge or indicator.
1.1.5. Hand-operated brake control valve	Visual inspection of the components while the braking system is operated.	(a) Control cracked, damaged or excessively worn. (b) Control insecure on valve or valve insecure. (c) Loose connections or leaks in system. (d) Unsatisfactory operation.
1.1.6. Parking brake activator, lever control, parking brake ratchet	Visual inspection of the components while the braking system is operated.	(a) Ratchet not holding correctly. (b) Excessive wear at lever pivot or in ratchet mechanism. (c) Excessive movement of lever indicating incorrect adjustment. (d) Activator missing, damaged or inoperative. (e) Incorrect functioning, warning indicator shows malfunction.
1.1.7. Braking valves (foot valves, un-loaders, governors)	Visual inspection of the components while the braking system is operated.	(a) Valve damaged or excessive air leak. (b) Excessive oil discharge from compressor. (c) Valve insecure or inadequately mounted. (d) Hydraulic fluid discharge or leak.
1.1.8. Couplings for trailer brakes (electrical and pneumatic)	Disconnect and reconnect all braking system couplings between towing vehicle and trailer.	(a) Tap or self-sealing valve defective. (b) Tap or valve insecure or inadequately mounted. (c) Excessive leaks. (d) Incorrectly or not connected where required. (e) Not functioning correctly.
1.1.9. Energy storage reservoir pressure tank	Visual inspection.	(a) Tank damaged, corroded or leaking. (b) Drain device inoperative. (c) Tank insecure or inadequately mounted.

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Item	Method	Deficiencies
1.1.10. Brake servo units, master cylinder (hydraulic systems)	Visual inspection of the components while the braking system is operated.	<ul style="list-style-type: none"> <li>(a) Defective or ineffective servo unit.</li> <li>(b) Master cylinder defective or leaking.</li> <li>(c) Master cylinder insecure.</li> <li>(d) Insufficient brake fluid.</li> <li>(e) Master cylinder reservoir cap missing.</li> <li>(f) Brake fluid warning light illuminated or defective.</li> <li>(g) Incorrect functioning of brake fluid level warning device.</li> </ul>
1.1.11. Rigid brake pipes	Visual inspection of the components while the braking system is operated.	<ul style="list-style-type: none"> <li>(a) Eminent risk of failure or fracture.</li> <li>(b) Pipes or connections leaking.</li> <li>(c) Pipes damaged or excessively corroded.</li> <li>(d) Pipes misplaced.</li> </ul>
1.1.12. Flexible brake hoses	Visual inspection of the components while the braking system is operated.	<ul style="list-style-type: none"> <li>(a) Eminent risk of failure or fracture.</li> <li>(b) Hoses damaged, chafing, twisted or too short.</li> <li>(c) Hoses or connections leaking.</li> <li>(d) Hoses bulging under pressure.</li> <li>(e) Hoses porous.</li> </ul>
1.1.13. Brake linings and pads	Visual inspection.	<ul style="list-style-type: none"> <li>(a) Lining or pad excessively worn.</li> <li>(b) Lining or pad contaminated (oil, grease etc.).</li> <li>(c) Lining or pad missing.</li> </ul>
1.1.14. Brake drums, brake discs	Visual inspection.	<ul style="list-style-type: none"> <li>(a) Drum or disc excessively worn, corroded or scored or cracked, insecure or fractured.</li> <li>(b) Drum or disc contaminated (oil, grease, etc.).</li> <li>(c) Drum or disc missing.</li> <li>(d) Back plate insecure.</li> </ul>
1.1.15. Brake cables, rods, levers, linkages	Visual inspection of the components while the braking system is operated.	<ul style="list-style-type: none"> <li>(a) Cable damaged or knotted.</li> <li>(b) Component excessively worn or corroded.</li> <li>(c) Cable, rod or joint insecure.</li> <li>(d) Cable guide defective.</li> </ul>

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Item	Method	Deficiencies
		<ul style="list-style-type: none"> <li>(e) Restriction to free movement of the braking system.</li> <li>(f) Abnormal movement of the levers/linkage indicating maladjustment or excessive wear.</li> </ul>
1.1.16. Brake actuators (including spring brakes or hydraulic cylinders)	Visual inspection of the components while the braking system is operated.	<ul style="list-style-type: none"> <li>(a) Actuator cracked or damaged.</li> <li>(b) Actuator leaking.</li> <li>(c) Actuator insecure or inadequately mounted.</li> <li>(d) Actuator excessively corroded.</li> <li>(e) Insufficient or excessive travel of operating piston or diaphragm mechanism.</li> <li>(f) Dust cover missing or excessively damaged.</li> </ul>
1.1.17. Load sensing valve	Visual inspection of the components while the braking system is operated.	<ul style="list-style-type: none"> <li>(a) Defective linkage.</li> <li>(b) Linkage incorrectly adjusted.</li> <li>(c) Valve seized or inoperative.</li> <li>(d) Valve missing.</li> <li>(e) Missing data plate.</li> <li>(f) Data illegible or not in accordance with requirements (*)</li> </ul>
1.1.18. Slack adjusters and indicators	Visual inspection.	<ul style="list-style-type: none"> <li>(a) Adjuster damaged, seized or having abnormal movement, excessive wear or incorrect adjustment.</li> <li>(b) Adjuster defective.</li> <li>(c) Incorrectly installed or replaced.</li> </ul>
1.1.19. Endurance braking system (where fitted or required)	Visual inspection.	<ul style="list-style-type: none"> <li>(a) Insecure connectors or mountings.</li> <li>(b) System obviously defective or missing.</li> </ul>
1.1.20. Automatic operation of trailer brakes	Disconnect brake coupling between towing vehicle and trailer.	Trailer brake does not apply automatically when coupling disconnected.
1.1.21. Complete braking system	Visual inspection.	<ul style="list-style-type: none"> <li>(a) Other system devices (e.g. anti-freeze pump, air dryer, etc.) damaged externally or excessively corroded in a way that adversely affects the braking system.</li> <li>(b) Excessive leakage of air or anti-freeze.</li> <li>(c) Any component insecure or inadequately mounted.</li> <li>(d) Inappropriate repair or modification to any component.</li> </ul>

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Item	Method	Deficiencies
1.1.22. Test connections (where fitted or required)	Visual inspection.	(a) Missing. (b) Damaged, unusable or leaking.
1.2. Service braking performance and efficiency		
1.2.1 Performance (E)	Test on a static brake testing machine; apply the brakes progressively up to maximum effort.	(a) Inadequate braking effort on one or more wheels. (b) Braking effort from any wheel is less than 70 % of maximum effort recorded from the other wheel on the same axle. (c) No gradual variation in brake effort (grabbing). (d) Abnormal lag in brake operation of any wheel. (e) Excessive fluctuation of brake force during each complete wheel revolution.
1.2.2 Efficiency (E)	Test on a static brake testing machine at the presented weight.	(a) Does not give at least the minimum figure as follows: (b) Category M1, M2 and M3 – 50 % <sup>(1)</sup> (c) Category N1 – 45 % (d) Category N2 and N3 – 43 % <sup>(2)</sup> (e) Category O2, O3 and O4 – 40 % <sup>(3)</sup>
1.3. Secondary (emergency) braking performance and efficiency (if met by separate system)		
1.3.1. Performance (E)	If the secondary braking system is separate from the service braking system, use the method specified in 1.2.1.	(a) Inadequate braking effort on one or more wheels. (b) Braking effort from any wheel is less than 70 % of maximum effort recorded from another wheel on the same axle specified. (c) No gradual variation in brake effort (grabbing).
1.3.2. Efficiency (E)	If the secondary braking system is separate from the service braking system, use the method specified in 1.2.2.	Braking effort less than 50 % <sup>(4)</sup> of the service brake performance defined in section 1.2.2 in relation to the maximum authorised mass or, in the case of semi-trailers, to the sum of the authorised axle loads.
1.4. Parking braking performance and efficiency		
1.4.1. Performance (E)	Apply the brake on a static brake testing machine.	Brake inoperative on one or more wheels.
1.4.2. Efficiency (E)	Test on a static brake testing machine at the presented weight.	Does not give at least for all vehicles a braking ratio of 16 % in relation to the maximum authorised mass, or, for motor vehicles, of 12 % in relation to the maximum authorised combination mass of the vehicle, whichever is the greater.

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Item	Method	Deficiencies
1.5. Endurance braking system performance	Visual inspection and, where possible test whether the system functions.	(a) No gradual variation of efficiency (not applicable to exhaust brake systems). (b) System not functioning.
1.6. Anti-lock braking system	Visual inspection of warning device.	(a) Warning device malfunctioning. (b) Warning device shows system malfunction.

**8. NUISANCE**

## 8.2. Exhaust emissions

## 8.2.1 Petrol engine emissions

8.2.1.1. Exhaust emission control equipment	Visual inspection.	(a) Emission control equipment fitted by the manufacturer absent or obviously defective. (b) Leaks which could significantly affect emission measurements.
8.2.1.2. Gaseous emissions (E)	Measurement using an exhaust gas analyser in accordance with the requirements <sup>(a)</sup> . Alternatively, for vehicles equipped with suitable on-board diagnostic systems, the proper functioning of the emission system can be checked by appropriate reading of the OBD device and checks on the proper functioning of the OBD system in place of emission measurements at engine idle in accordance with the manufacturer's conditioning recommendations and other requirements <sup>(a)</sup> and taking account of appropriate tolerances.  Alternatively, measurement using remote sensing equipment and confirmed by standard test methods.	(a) Either, gaseous emissions exceed the specific levels given by the manufacturer; (b) or, if this information is not available, the CO emissions exceed,  1. for vehicles not controlled by an advanced emission control system, — 4,5 %, or — 3,5 %, <p>according to the date of first registration or use specified in requirements <sup>(a)</sup></p> 2. for vehicles controlled by an advanced emission control system, — at engine idle: 0,5 %, — at high idle: 0,3 %, or — at engine idle: 0,3 % <sup>(5)</sup> — at high idle: 0,2 %, <p>according to the date of first registration or use specified in requirements <sup>(a)</sup>.</p>

## ▼ M2

Item	Method	Deficiencies
		(c) Lambda outside the range $1 \pm 0,03$ or not in accordance with the manufacturer's specification. (d) OBD read out indicating significant malfunction. (e) Remote sensing measurement showing significant non-compliance.

## 8.2.2 Diesel engine emissions

8.2.2.1. Exhaust emission control equipment	Visual inspection.	(a) Emission control equipment fitted by the manufacturer absent or obviously defective. (b) Leaks which could significantly affect emission measurements.
8.2.2.2. Opacity (E)	(a) Exhaust gas opacity to be measured during free acceleration (no load from idle up to cut-off speed) with gear lever in neutral and clutch engaged. (b) Vehicle preconditioning: 1. Vehicles may be tested without preconditioning although for safety reasons checks should be made that the engine is warm and in a satisfactory mechanical condition. 2. Precondition requirements: (i) Engine shall be fully warm, for instance the engine oil temperature measured by a probe in the oil level dipstick tube to be at least 80 °C, or normal operating temperature if lower, or the engine block temperature measured by the level of infrared radiation to be at least an equivalent temperature. If, owing to vehicle configuration, this measurement is impractical, the establishment of the engine's normal operating temperature may be made by other means, for example by the operation of the engine cooling fan.	(a) For vehicles registered or put into service for the first time after the date specified in requirements <sup>(a)</sup> , opacity exceeds the level recorded on the manufacturer's plate on the vehicle; (b) where this information is not available or requirements <sup>(a)</sup> do not allow the use of reference values, — for naturally aspirated engines: 2,5 m <sup>-1</sup> , — for turbo-charged engines: 3,0 m <sup>-1</sup> , or, for vehicles identified in requirements <sup>(a)</sup> or first registered or put into service for the first time after the date specified in requirements <sup>(a)</sup> , — 1,5 m <sup>-1</sup> <sup>(6)</sup> . (c) Remote sensing measurement showing significant non-compliance.

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Item	Method	Deficiencies
	<p>(ii) Exhaust system shall be purged by at least three free acceleration cycles or by an equivalent method.</p> <p>(c) Test procedure:</p> <ol style="list-style-type: none"> <li>1. Engine and any turbocharger fitted, to be at idle before the start of each free acceleration cycle. For heavy-duty diesels, this means waiting for at least 10 seconds after the release of the throttle.</li> <li>2. To initiate each free acceleration cycle, the throttle pedal must be fully depressed quickly and continuously (in less than one second) but not violently, so as to obtain maximum delivery from the injection pump.</li> <li>3. During each free acceleration cycle, the engine shall reach cut-off speed or, for vehicles with automatic transmissions, the speed specified by the manufacturer or if this data is not available then two thirds of the cut-off speed, before the throttle is released. This could be checked, for instance, by monitoring engine speed or by allowing a sufficient time to elapse between initial throttle depression and release, which in the case of vehicles M2, M3, N2 or N3 should be at least two seconds.</li> <li>4. Vehicles shall only be failed if the arithmetic means of at least the last three free acceleration cycles are in excess of the limit value. This may be calculated by ignoring any measurement that departs significantly from the measured mean, or the result of any other statistical calculation that takes account of the scattering of the measurements. Member States may limit the number of test cycles.</li> </ol>	

▼ **M2**

Item	Method	Deficiencies
	<p>5. To avoid unnecessary testing, Member States may fail vehicles which have measured values significantly in excess of the limit values after less than three free acceleration cycles or after the purging cycles. Equally to avoid unnecessary testing, Member States may pass vehicles which have measured values significantly below the limits after less than three free acceleration cycles or after the purging cycles and taking account of appropriate tolerances.</p> <p>Alternatively, measurement using remote sensing equipment and confirmed by standard test methods.</p>	

(<sup>1</sup>) 48 % for vehicles not fitted with ABS or type approved before 1 October 1991.

(<sup>2</sup>) 45 % for vehicles registered after 1988 or from the date specified in requirements (<sup>a</sup>) whichever is the later.

(<sup>3</sup>) 43 % for semi-trailers and draw-bar trailers registered after 1988 or from the date in requirements (<sup>a</sup>) whichever is the later.

(<sup>4</sup>) 2,2 m/s<sup>2</sup> for N1, N2 and N3 vehicles.

(<sup>5</sup>) Type-approved according to limits in row A or B section 5.3.1.4 of Annex I to Directive 70/220/EEC as amended by Directive 98/69/EC or later or first registered or put into service after 1 July 2002.

(<sup>6</sup>) Type-approved according to limits in row B section 5.3.1.4 of Annex I to Directive 70/220/EEC as amended by Directive 98/69/EC or later; row B1, B2 or C section 6.2.1 of Annex I to Directive 88/77/EEC as amended by Directive 1999/96/EC or later or first registered or put into service after 1 July 2008

*NOTES:*

(<sup>a</sup>) 'Requirements' are laid down by type-approval requirements at the date of first registration or first entry into service as well as retrofitting obligations or national legislation of the country of registration.