

FRENCH PROPOSAL FOR DRAFT AMENDMENTS TO DOCUMENT  
TRANS/WP.29/2003/16  
DRAFT RULE NO. 2 (PERIODICAL TECHNICAL INSPECTION  
OF WHEELED VEHICLES WITH REGARD TO THEIR ROADWORTHINESS)

**A. INTRODUCTION**

This document proposes to modify some control items that do not look feasible or practical enough to be carried out in a reasonable amount of time. It also proposes to delete all items marked with an (X), which are not considered essential in a periodic inspection, as the purpose of this document is to define a list of minimum inspection requirements, not a list of possible inspection requirements.

This document also proposes to precise clearly that some control items might not be possible in some vehicle configurations, depending on the relative position of vehicle parts.

The text of document TRANS/WP.29/2003/16 is reproduced below: added text is underlined, deleted text is crossed.

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**B. PROPOSAL**

1. SCOPE

- 1.1. For the purpose of Article 1 of the Agreement concerning the Adoption of Uniform Conditions for Periodical Technical Inspections of Wheeled Vehicles and the Reciprocal Recognition of such Inspections, the items to be inspected are related to safety requirements;
- 1.2. Wheeled vehicles as defined in paragraph 2.4. used in international transport shall satisfy the requirements set out below;
- 1.3. Contracting Parties may decide to extend the requirement of paragraph 1.2. above also to vehicles used in domestic transport.

2. DEFINITIONS

For the purpose of this Rule,

- 2.1. "Agreement" means the 1997 Vienna Agreement concerning the Adoption of Uniform Conditions for Periodical Technical Inspections of Wheeled Vehicles and the Reciprocal Recognition of such Inspections;
- 2.2. "International Technical Inspection Certificate" means a certificate about the first registration after manufacture and the periodical technical inspections of wheeled vehicles in compliance

with the provisions of Article 1 and Appendix 2 of the Agreement (see para. 2.1. above);

- 2.3. "Periodical Technical Inspection" means a periodical administrative uniform procedure by which the authorised technical Inspection Centres responsible for conducting the inspection tests declare, after carrying out the required verifications, that the wheeled vehicle submitted conforms to the requirements of this Rule;
- 2.4. "Wheeled vehicle" means motor vehicles of categories M2, M3, N2 and N3 and trailers of categories O3 and O4, as specified in Consolidated Resolution R.E.3. (document TRANS/WP.29/78/Rev.1, as amended), used in international transport [whose permissible maximum mass exceeds 3,500 kg, except those used for the carriage of passengers and having not more than eight seats in addition to the driver's seat];
- 2.5. "Verification" means the proof of compliance with the requirements set out in the annex to this Rule through tests and checks carried out using techniques and equipment currently available, and without the use of tools to dismantle or remove any part of the vehicle;
- 2.6. "1958 Geneva Agreement" means the Agreement concerning the Adoption of Uniform Technical Prescriptions for Wheeled Vehicles, Equipment and Parts which can be fitted and/or used on Wheeled Vehicles and the Conditions for Reciprocal Recognition of Approvals granted on the basis of these Prescriptions, done at Geneva on 20 March 1958 and amended as of 16 October 1995;
- 2.7. "ECE Regulation" means a Regulation annexed to the 1958 Geneva Agreement.
- 2.8. "Inappropriate repair or modification" means a repair or modification that adversely affects the road safety of the vehicle.

### 3. PERIODICITY OF TECHNICAL INSPECTIONS

<b>Vehicle Categories</b>	<b>Maximum Inspection Intervals</b>
Passenger-carrying motor vehicles: M2 above 3,500 kg and M3 Goods vehicles: N2 and N3: Trailers: O3 and O4	One year after the first registration (or if the vehicle is not required to be registered, date of first use) and annually thereafter

### 4. TECHNICAL INSPECTION

Vehicles to which these provisions apply must undergo a periodic technical inspection in accordance with the annex hereafter.

Following verification, the International Technical Inspection Certificate shall confirm the compliance with at least the provisions of this annex.

### 5. INSPECTION REQUIREMENTS

The inspection shall cover at least the items listed below, provided that these are related to the obligatory equipment of the vehicle being tested in the implementing State concerned, **and that these can be checked without the use of tools to dismantle or remove any part of the vehicle.**

The inspection will therefore depend on the relative position of vehicle parts and on the possibility to check them visually.

- 5.1. Identification of the vehicle;
  - 5.2. Braking equipment;
  - 5.3. Steering;
  - 5.4. Visibility;
  - 5.5. ~~Lighting equipment and parts of electric system~~Lamps, reflectors and electrical equipment;
  - ~~5.6. — Electromagnetic interference suppression;~~
  - 5.76. Axles, wheels, tyres, and suspension;
  - 5.87. Chassis and chassis attachments;
  - 5.98. Other equipment;
  - 5.109. ~~Additional inspections of vehicles for the commercial carriage of passengers~~Supplementary tests for public transport vehicles.
6. NAMES AND ADDRESSES

The Contracting Parties to the Agreement applying this Rule shall communicate to the United Nations Secretariat basic information on administrative authorities responsible for supervising the inspection tests and issuing the International Technical Inspection Certificates.

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## Annex

### MINIMUM INSPECTION REQUIREMENTS

The inspection shall cover at least the items listed below.

Item	Method	Principal reasons for rejection
0. IDENTIFICATION OF THE VEHICLE <u>1/</u>		
0.1. Registration number plates (if required by regulations) <u>2/</u>	Visual inspection	(a) Number plate(s) missing or so insecure that it is (they are) likely to fall off. (b) Inscription missing or illegible. (c) Not in accordance with vehicle documents or records.
0.2. Vehicle identification / serial number	Visual inspection	(a) Missing or can not be found. (b) Incomplete, illegible. (c) Not in accordance with vehicle documents or records.
1. BRAKING EQUIPMENT		
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) Bearing worn. (c) Excessive wear or play. (d) Inappropriate repair or modification.
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. (d) Inappropriate repair or modification.
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.	<del>(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).</del> <del>(b) Time taken to build up air pressure/vacuum to safe working value not in accordance with the regulations. <u>2/</u></del> <del>(a)</del> Multi-circuit protection valve or pressure relief valve not working. <del>(b)</del> Air leak causing a noticeable drop in pressure or audible air leaks. <del>(c)</del> External damage likely to affect the function of the braking system.
Item	Method	Principal reasons for rejection

1/ Inspection of these items may be omitted, if it has been carried out during the given periodical inspection under another Rule annexed to this Agreement (e.g. Rule No. 1).

2/ "regulations" means the relevant national or international requirements specified in national legislation.

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) Malfunction of control valve. (c) Control insecure on valve or valve insecure. (d) Loose connections or leaks in system. (e) Unsatisfactory operation (f) Inappropriate repair or modification.
1.1.6. Parking brake, 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) Inappropriate repair or modification.
1.1.7. Braking valves (foot valves, unloaders, 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	Disconnect braking system coupling between towing vehicle and trailer.	(a) Tap or self sealing valve defective. (b) Tap or valve insecure or inadequately mounted. (c) Excessive leaks.
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. (d) Inappropriate repair or modification.
1.1.10. Brake servo units, master cylinder (hydraulic systems)	Visual inspection of the components while the braking system is operated.	(a) Defective or ineffective servo unit. (b) Master cylinder defective or leaking. (c) Master cylinder insecure. (d) Insufficient brake fluid. (e) Master cylinder reservoir cap missing. (f) Brake fluid warning light illuminated or defective. (g) Incorrect functioning of brake fluid level warning device.
1.1.11. Rigid brake pipes	Visual inspection of the components while the braking system is operated.	(a) Risk of failure or fracture. (b) Pipes or connections leaking. (c) Pipes damaged or excessively corroded. (d) Pipes misplaced. (e) Inappropriate repair or modification.

<b>Item</b>	<b>Method</b>	<b>Principal reasons for rejection</b>
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) 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> <li>(f) Inappropriate repair or modification.</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> </ul>
1.1.14. Brake drums, brake discs	Visual inspection.	<ul style="list-style-type: none"> <li>(a) Drum or disk excessively worn, excessively scored, cracked, insecure or fractured.</li> <li>(b) Drum or disk contaminated (oil, grease, etc.)</li> <li>(c) 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> <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> <li>(g) Inappropriate repair or modification.</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> <li>(g) Inappropriate repair or modification.</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) Inappropriate repair or modification.</li> <li>(f) Missing data plate.</li> <li>(g) Data illegible or not in accordance with regulations <u>2</u>/</li> </ul>
1.1.18. Automatic 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.</li> </ul>
<b>Item</b>	<b>Method</b>	<b>Principal reasons for rejection</b>

1.1.19. Endurance braking system (where fitted or required)	Visual inspection.	(a) Insecure connectors or mountings. (b) System obviously defective.
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	(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. (b) Leakage of air or anti-freeze. Any component insecure or inadequately mounted.
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	During a road test and/or a test on a static brake testing machine, apply the brakes progressively up to maximum effort.	(a) Inadequate braking effort on one or more wheel. (b) Braking effort from any wheel is less than [70%] of maximum effort recorded from the other wheel on the same axle. Or in the case of testing on the road, the vehicle deviates excessively from a straight line. (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	Test with a static brake testing machine or, if one cannot be used for technical reasons, by a road test using either an indicating or recording decelerometer. For goods vehicles, the laden braking system performance should be assessed by testing the vehicle laden, by evaluation using a method based on extrapolation or by some other acceptable means.	Does not give at least the minimum figure as follows:- Category M2 and M3 – 50% <u>3/</u> Category N2 and N3 – 43% <u>4/</u> Category O3 and O4 – 40% <u>5/</u>
<b>Item</b>	<b>Method</b>	<b>Principal reasons for rejection</b>

3/ 48% for vehicles not fitted with ABS or type approved before 1 October 1991

4/ 45% for vehicles registered after 1988 or from the date of application of ECE Regulation No. 13, 06 series of amendments, whichever is the later.

5/ 43% for semi-trailers and draw-bar trailers registered after 1988 or from the date of application of ECE Regulation No. 13, 06 series of amendments, whichever is the later.

1.3. Secondary (emergency) braking performance and efficiency (if met by separate system)		
1.3.1. Performance	If the secondary braking system is separate from the service braking system, use the method specified in 1.2.1.	(a) Brake inoperative on one side. (b) Braking effort from any wheel is less than 70% of maximum effort recorded from another wheel on the same axle specified. Or in the case of testing on the road, the vehicle deviates excessively from a straight line. (c) No gradual variation in brake effort (grabbing).
1.3.2. Efficiency	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% <u>6/</u> of the service brake performance defined in section 1.2.2 in relation to the maximum authorized mass or, in the case of semi-trailers, to the sum of the authorized axel loads.
1.4. Parking braking performance and efficiency		
1.4.1. Performance	Apply the brake during a road test with a decelerometer and/or a test on a static brake testing machine.	Brake inoperative on one side or in the case of testing on the road, the vehicle deviates excessively from a straight line.
1.4.2. Efficiency	Test with a static brake testing machine or by a road test using either an indicating or recording decelerometer or with the vehicle on a slope of known gradient. Goods vehicles should, if possible, be tested laden.	Does not give at least for all vehicles a braking ratio of 16% in relation to the maximum authorized mass, or, for motor vehicles, of 12% in relation to the maximum authorized combination mass of the vehicle, whichever is the greater
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.
2. STEERING		
2.1. Mechanical condition		
2.1.1. Steering gear condition	With the vehicle over a pit or on a hoist and with the road wheels <b>off-on</b> the ground, rotate the steering wheel from lock to lock. Visual inspection of the operation of the steering gear.	(a) Roughness in operation of gear. (b) Sector shaft twisted or splines worn. (c) Excessive wear in sector shaft. (d) Excessive "end float" of sector shaft. (e) Leaking.
2.1.2. Steering gear casing attachment	With vehicle on a pit or hoist and the weight of the vehicle road wheels on the ground, rotate steering wheel clock-wise and anticlockwise or using a specially adapted wheel play detector. Visual inspection of the attachment of gear casing to chassis.	(a) Steering gear casing not properly attached. (b) Elongated fixing holes in chassis. (c) Missing or fractured fixing bolts. Steering gear casing fractured.
<b>Item</b>	<b>Method</b>	<b>Principal reasons for rejection</b>
2.1.3. Steering linkage	With the vehicle over a pit or on a hoist	(a) Relative movement between

6/ 2.2 m/s<sup>2</sup> for N2 and N3 vehicles.



condition	and with the road wheel on ground, rock steering wheel clockwise and anti-clockwise or using a specially adapted wheel play detector. Visual inspection of steering components for wear, fractures and security.	<p>components which should be fixed.</p> <p>(b) Excessive wear at joints.</p> <p>(c) Fractures or deformation of any component.</p> <p>(d) Absence of locking devices.</p> <p>(e) Misalignment of components (e.g. track rod or drag link).</p> <p>(f) Inappropriate repair or modification.</p> <p>(g) Dust cover missing, damaged or severely deteriorated.</p>
2.1.4. Steering linkage operation	With the vehicle over a pit or on a hoist and with the road wheels on ground and the engine running, rotate steering wheel from lock to lock. Visual inspection of movement of linkages.	<p>(a) Moving steering linkage fouling a fixed part of chassis.</p> <p>(b) Steering stops not operating.</p>
2.1.5. Power steering	Check steering system for leaks and hydraulic fluid reservoir level (if visible). With the road wheels on ground and with the engine running, check that the power steering system is operating.	<p>(a) Fluid leak.</p> <p>(b) Insufficient fluid.</p> <p>(c) Mechanism not working.</p> <p>(d) Mechanism fractured or insecure.</p> <p>(e) Misalignment or fouling of components.</p> <p>(f) Inappropriate repair or modification.</p> <p>Cables/hoses damaged, excessively corroded.</p>
2.2. Steering wheel and column		
2.2.1. Steering wheel condition	With the road wheels on the ground, rock steering wheel from side to side at right angles to column and apply slight downward and upward pressure. Visual inspection of play.	<p>(a) Relative movement between steering wheel and column indicating looseness.</p> <p>(b) Absence of retaining device on steering wheel hub.</p> <p>(c) Fracture or looseness of steering wheel hub, rim or spokes.</p>
2.2.2. Steering column	With the vehicle over a pit or on a hoist and the mass of the vehicle on the ground, push and pull the steering wheel in line with column, push steering wheel in various directions at right angles to the column. Visual inspection of play, and condition of flexible couplings or universal joints.	<p>(a) Excessive movement of centre of steering wheel up or down.</p> <p>(b) Excessive movement of top of column radially from axis of column.</p> <p>(c) Deteriorated flexible coupling.</p> <p>(d) Attachment defective.</p>
2.3. Steering play	With the vehicle over a pit or on a hoist, the mass of the vehicle on the road-wheels, the engine running for vehicles with power steering and with the road wheels in the straight-ahead position, lightly turn the steering wheel clockwise and anti-clockwise as far as possible without moving the road wheels. Visual inspection of free movement.	Free play in steering excessive (for example movement of a point on the rim exceeding one fifth of the diameter of the steering wheel or not in accordance with the regulations. <u>2/</u>

Item	Method	Principal reasons for rejection
<del>2.4. Wheel alignment (X) 7/</del>	<del>Check alignment of steered wheels with suitable equipment.</del>	<del>Alignment not in accordance with vehicle manufacturer's data or regulations 2/.</del>
2.54. Trailer steered axle turntable	Visual inspection or using a specially adapted wheel play detector	(a) Component damaged or cracked. (b) Excessive play. (c) Attachment defective.
3. VISIBILITY		
3.1. Field of vision	Visual inspection from driving seat.	Obstruction (including reflecting or tinted film) within driver's field of view that materially affects his view in front or to the sides.
3.2. Condition of glass	Visual inspection.	(a) Cracked or discoloured glass or transparent panel (if permitted). (b) Glass or transparent panel that does not comply with specifications in the regulations. 2/ (c) Glass or transparent panel in unacceptable condition.
3.3. Rear-view mirrors	Visual inspection.	(a) Mirror missing or not fitted according to the regulations. 2/ (b) A mirror not giving an adequate view to the rear. (c) Mirror damaged, loose or insecure.
3.4. Windscreen wipers	Visual inspection and by operation.	(a) Wipers not operating Wiper blade missing or obviously defective.
3.5. Windscreen washers	Visual inspection and by operation.	Washers not operating adequately.
<del>3.6. Demisting system (X) 7/</del>	<del>Visual inspection and by operation.</del>	<del>System inoperative or obviously defective.</del>
4. LAMPS, REFLECTORS AND ELECTRICAL EQUIPMENT		
4.1. Headlamps		
4.1.1. Condition and operation	Visual inspection and by operation.	(a) Defective bulb. (b) Defective lens. (c) Lamp not in accordance with the regulations. 2/ (d) Lamp not securely attached. (e) Products on lens or bulb which reduce light intensity or change colour.

7/ "(X)" identifies items which are related to the condition of the vehicle and its suitability for use on the road, but which are not considered essential in a periodic inspection.

Item	Method	Principal reasons for rejection
4.1.2. Alignment	Determine the horizontal and vertical aim of each headlamp on both main and dipped beam using a headlamp aiming device.	Aim of a headlamp not within limits laid down in the regulations. <u>2/</u>
4.1.3. Switching	Visual inspection and by operation.	(a) Number of headlamps illuminated at the same time not in accordance with the regulations. <u>2/</u> (b) Function of control device impaired.
<del>4.1.4. Compliance with regulations <u>2/</u> (X) <u>2/</u></del>	<del>Visual inspection and by operation.</del>	<del>Lamp colour, position or intensity not in accordance with the regulations. <u>2/</u></del>
<del>4.1.5. Levelling devices (where mandatory) (X) <u>2/</u></del>	<del>Visual inspection and by operation.</del>	<del>(a) Device not operating. (b) Manual device cannot be operated from driver's seat.</del>
<del>4.1.6. Headlamp washers (where mandatory) (X) <u>2/</u></del>	<del>Visual inspection and by operation.</del>	<del>Washer not operating.</del>
4.2. Front and rear position (side) lamps, side marker lamps and end outline marker lamps		
4.2.1. Condition and operation	Visual inspection and by operation.	(a) Defective bulb. (b) Defective lens. (c) Lamp not securely attached.
4.2.2. Compliance with regulations <u>2/</u>	Visual inspection and by operation.	(a) Lamp, colour, position or intensity not in accordance with the regulations. <u>2/</u> (b) Products on lens or bulb which reduce light intensity or change colour. (c) Switch does not operate in accordance with the regulations. <u>2/</u>
4.3. Stop Lamps		
4.3.1. Condition and operation	Visual inspection and by operation.	(a) Defective bulb. (b) Defective lens. (c) Lamp not securely attached.
4.3.2. Compliance with regulations <u>2/</u>	Visual inspection and by operation.	(a) Lamp, colour, position or intensity not in accordance with the regulations. <u>2/</u> (b) Switch does not operate in accordance with the regulations. <u>2/</u>
4.4. Direction indicator and hazard warning lamps		
4.4.1. Condition and operation	Visual inspection and by operation.	(a) Defective bulb. (b) Defective lens. (c) Lamp not securely attached.
4.4.2. Compliance with regulations <u>2/</u>	Visual inspection and by operation.	Lamp, colour, position or intensity not in accordance with the regulations. <u>2/</u>

Item	Method	Principal reasons for rejection
4.4.3. Switching	Visual inspection and by operation.	Switch does not operate in accordance with the regulations. <u>2/</u>
4.4.4. Flashing frequency	Visual inspection and by operation.	Rate of flashing not in accordance with the regulations. <u>2/</u>
4.5. Front and rear fog lamps		
4.5.1. Condition and operation	Visual inspection and by operation.	(a) Defective bulb. (b) Defective lens. (c) Lamp not securely attached. (d) Front fog lamp out of alignment
4.5.2. Compliance with regulations <u>2/</u>	Visual inspection and by operation.	(a) Lamp colour, position or intensity not in accordance with the regulations. <u>2/</u> (b) System does not operate in accordance with the regulations. <u>2/</u>
<del>4.6. Reversing lamps (X) <u>7/</u></del>		
<del>4.6.1. Condition and operation</del>	<del>Visual inspection and by operation.</del>	<del>(a) Defective bulb. (b) Defective lens. (c) Lamp not securely attached.</del>
<del>4.6.2. Compliance with regulations <u>2/</u></del>	<del>Visual inspection and by operation.</del>	<del>(a) Lamp colour, position or intensity not in accordance with the regulations. <u>2/</u> (b) System does not operate in accordance with the regulations. <u>2/</u></del>
4.76. Rear registration plate lamp		
4.76.1. Condition and operation	Visual inspection and by operation.	(a) Lamp throwing light to the rear. (b) Defective bulb. (c) Lamp not securely attached.
4.76.2. Compliance with regulations <u>2/</u>	Visual inspection and by operation.	System does not operate in accordance with the regulations. <u>2/</u>
4.87. Retro-reflectors, side reflectors and rear marker plates		
4.87.1. Condition	Visual inspection.	(a) Reflecting equipment defective or damaged. (b) Reflector not securely attached.
4.87.2. Compliance with regulations <u>2/</u>	Visual inspection.	Not in accordance with the regulations. <u>2/</u>
4.98. Tell-tales		
4.98.1. Condition and operation	Visual inspection and by operation.	Not operating.
4.98.2. Compliance with regulations <u>2/</u>	Visual inspection and by operation.	Not in accordance with the regulations. <u>2/</u>

Item	Method	Principal reasons for rejection
4.109. Electrical connections between towing vehicle and trailer or semi-trailer	Visual inspection: if possible examine the electrical continuity between the vehicles.	(a) Fixed components not securely attached. (b) Damaged or deteriorated insulation. (c) Trailer or towing vehicle electrical connections not functioning correctly.
4.110. Electrical wiring	Visual inspection with vehicle over a pit or on a hoist, including in the engine compartment in some cases.	(a) Wiring insecure or not adequately secured. Damaged or deteriorated insulation.
<del>4.12. Non obligatory lamps (X) 2/</del>	<del>Visual inspection and by operation.</del>	<del>(a) A lamp fitted not in accordance with the regulations. 2/ (b) Lamp operation not in accordance with the regulations. 2/ (c) Total intensity (including headlamps) not in accordance with the regulations. 2/ (d) Lamp not securely attached.</del>
4.111. Battery	Visual inspection.	(a) Insecure. (b) Leaking. (c) Defective switch (if required). (d) Defective fuses (if required).
5. AXLES, WHEELS, TYRES AND SUSPENSION		
5.1. Axles		
5.1.1. Axles	Visual inspection with vehicle over a pit or on a hoist. Wheel play detectors may be used and are recommended for vehicles over 3.5 tonnes gross vehicle mass (GVM).	(a) Axle fractured or deformed. (b) Insecure fixing to vehicle. (c) Inappropriate repair or modification.
5.1.2. Stub axles	Visual inspection with vehicle over a pit or on a hoist. Wheel play detectors may be used and are recommended for vehicles over 3.5 tonnes GVM. Apply a vertical or lateral force to each wheel and note the amount of movement between the axle beam and stub axle.	(a) Stub axle fractured. (b) Excessive wear in the swivel pin and/or bushes. (c) Excessive movement between stub axle and axle beam. (d) Stub axle pin loose in axle.
5.1.3. Wheel bearings	Visual inspection with the vehicle over a pit or on a hoist. Wheel play detectors may be used and are recommended for vehicles over 3.5 tonnes GVM. Rock the wheel or apply a lateral force to each wheel and note the amount of upward movement of the wheel relative to the stub axle.	(a) Excessive play in a wheel bearing. (b) Wheel bearing too tight, jammed.
5.2. Wheels and tyres		
5.2.1. Road wheel hub	Visual inspection.	Any wheel nuts or studs missing or loose.

Item	Method	Principal reasons for rejection
5.2.2. Wheels	Visual inspection of both sides of each wheel with vehicle over a pit or on a hoist.	<ul style="list-style-type: none"> <li>(a) Any fracture or welding defect</li> <li>(b) Tyre retaining rings not properly fitted.</li> <li>(c) Wheel badly distorted.</li> <li>(d) Wheel size or type not in accordance with the regulations. 2/</li> </ul>
5.2.3. Tyres	<p style="color: red;">Visual inspection of both sides of each wheel with vehicle over a pit or on a hoist. Visual inspection of the entire tyre by either rotating the road wheel with it off the ground and the vehicle over a pit or on a hoist or by rolling the vehicle backwards and forwards over a pit.</p>	<ul style="list-style-type: none"> <li>(a) Tyre size, load capacity or speed rating not in accordance with the regulations. 2/</li> <li>(b) Tyres on same axle or on twin wheels of different sizes.</li> <li>(c) Tyres on same axle of different construction (radial / cross-ply).</li> <li>(d) Any serious damage or cut to tyre.</li> <li>(e) Tyre tread depth not in accordance with the regulations. 2/</li> <li>(f) Tyre rubbing against other components.</li> <li>(g) Re-grooved tyres not in accordance with regulations 2/.</li> </ul>
5.3. Suspension		
5.3.1. Springs	Visual inspection with vehicle over a pit or on a hoist. Wheel play detectors may be used and are recommended for vehicles over 3.5 tonnes GVM.	<ul style="list-style-type: none"> <li>(a) Insecure attachment of springs to chassis or axle.</li> <li>(b) A damaged or fractured spring component.</li> </ul>
5.3.2. Shock absorbers	Visual inspection with vehicle over a pit or on a hoist or using special equipment, if available.	<ul style="list-style-type: none"> <li>(a) Insecure attachment of shock absorbers to chassis or axle.</li> <li>(b) Damaged shock absorber.</li> </ul>
5.3.3. Torque tubes, radius arms, wishbones and suspension arms	Visual inspection with vehicle over a pit or on a hoist. Wheel play detectors may be used and are recommended for vehicles over 3.5 tonnes GVM.	<ul style="list-style-type: none"> <li>(a) Insecure attachment of component to chassis or axle.</li> <li>(b) A damaged, fractured or excessively corroded component.</li> <li>(c) Inappropriate repair or modification.</li> </ul>
5.3.4. Suspension joints	Visual inspection with vehicle over a pit or on a hoist. Wheel play detectors may be used and are recommended for vehicles over 3.5 tonnes GVM.	<ul style="list-style-type: none"> <li>(a) Excessive wear in swivel pin and/or bushes or at suspension joints.</li> <li>(b) Dust cover missing or severely deteriorated.</li> </ul>
5.3.5. Air suspension	Visual inspection	<ul style="list-style-type: none"> <li>(a) System inoperable.</li> <li>(b) Any component damaged, modified or deteriorated in a way that would adversely affect the functioning of the system</li> </ul>
6. CHASSIS AND CHASSIS ATTACHMENTS		
6.1. Chassis or frame and attachments		
6.1.1. General condition	Visual inspection with vehicle over a pit or on a hoist.	<ul style="list-style-type: none"> <li>(a) Fracture or deformation of any side or cross member.</li> <li>(b) Insecurity of strengthening plates or fastenings.</li> <li>(c) Excessive corrosion, which affects the rigidity of the assembly.</li> </ul>

Item	Method	Principal reasons for rejection
6.1.2. Exhaust pipes and silencers	Visual inspection with vehicle over a pit or on a hoist.	(a) Insecure or leaking exhaust system. (b) Fumes entering cab or passengers compartment.
6.1.3. Fuel tank and pipes (including heating fuel tank and pipes)	Visual inspection with vehicle over a pit or on a hoist.	(a) Insecure tank or pipes. (b) Leaking fuel or missing or ineffective filler cap. (c) Damaged or chafed pipes. (d) Fuel stopcock (if required) not operating correctly. (e) Fire risk due to - Leaking fuel - Fuel tank or exhaust improperly shielded - Engine compartment condition. (f) LPG/CNG system not in accordance with regulations 2/.
6.1.4. Bumpers, lateral protection and rear underrun devices	Visual inspection.	(a) Looseness or damage likely to cause injury. (b) Device obviously not in compliance with the regulations. 2/
6.1.5. Spare wheel carrier (if fitted)	Visual inspection.	(a) Carrier fractured or insecure. (b) A spare wheel not securely fixed in carrier.
6.1.6. Coupling mechanisms and towing equipment	Visual inspection for wear and correct operation with special attention to any safety device fitted and /or use of measuring gauge.	(a) Component damaged, defective or cracked. (b) Excessive wear in a component. (c) Attachment defective. (d) Any safety device missing or not operating correctly. (e) Any indicator not working. (f) Inappropriate repair or modification.
6.1.7. Transmission	Visual inspection.	(a) Loose or missing securing bolts. (b) Excessive wear in transmission shaft bearings. (c) Excessive wear in universal joints. (d) Deteriorated flexible couplings. (e) A damaged or bent shaft. (f) Bearing housing fractured or insecure. (g) Dust cover missing or severely deteriorated.
6.1.8. Engine mountings	Visual inspection not necessarily on a pit or hoist.	Deteriorated, loose or fractured mountings.
6.2. Cab and bodywork		
6.2.1. Condition	Visual inspection.	(a) A loose or damaged panel or part likely to cause injury. (b) Insecure body pillar. (c) Leaks permitting entry of engine or exhaust fumes. (d) Inappropriate repair or modification.

Item	Method	Principal reasons for rejection
6.2.2. Mounting	Visual inspection over a pit or on a hoist.	<p>(a) Body or cab insecure.</p> <p>(b) Body/cab obviously not located squarely on chassis.</p> <p>(c) Insecure or missing fixing of body/cab to chassis or cross members.</p> <p>(d) Excessive corrosion at fixing points on integral bodies.</p>
6.2.3. Doors and door catches	Visual inspection.	<p>(a) A door will not open or close properly.</p> <p>(b) A door likely to open inadvertently or one that will not remain closed.</p> <p>(c) Door, hinges, catches, pillar, missing, loose or deteriorated.</p>
6.2.4. Floor	Visual inspection over a pit or on a hoist.	Floor insecure or badly deteriorated
6.2.5. Driver's seat	Visual inspection.	<p>(a) A loose seat or seat with defective structure.</p> <p>(b) Adjustment mechanism not functioning correctly.</p>
6.2.6. Other seats	Visual inspection.	<p>(a) Seats in defective condition or insecure.</p> <p>(b) Seats fitted not in accordance with regulations <u>2/</u></p>
6.2.7. Driving controls	Visual inspection and by operation.	<p>(a) Any control necessary for the safe operation of the vehicle not in good working order.</p> <p>(b) Any control necessary for the safe operation of the vehicle which does not carry out the function for which it is provided.</p>
6.2.8. Cab steps	Visual inspection.	<p>(a) Step or step ring insecure.</p> <p>(b) Step or ring in a condition likely to cause injury to users.</p>
6.2.9. Other interior and exterior fittings and equipment	Visual inspection.	<p>(a) Attachment of other fitting or equipment defective.</p> <p>(b) Other fitting or equipment not in accordance with the regulations. <u>2/</u></p> <p>(c) Leaking hydraulic equipment</p>
6.2.10. Mudguards (wings), spray suppression devices	Visual inspection.	<p>(a) Missing, loose or badly corroded.</p> <p>(b) Insufficient clearance for road wheel.</p> <p>(c) Not in accordance with the regulations. <u>2/</u></p>
7. OTHER EQUIPMENT		
7.1. Safety-belts/buckles		
7.1.1. Security of mounting	Visual inspection.	Anchorage point badly deteriorated.



Item	Method	Principal reasons for rejection
7.1.2. Condition.	Visual inspection and by operation of a statistical sample.	<ul style="list-style-type: none"> <li>(a) Mandatory safety-belt missing or not fitted.</li> <li>(b) Safety-belt damaged.</li> <li>(c) Safety-belt not in accordance with the regulations. 2/</li> <li>(d) Safety-belt buckle damaged or not functioning correctly.</li> <li>(e) Safety-belt retractor damaged or not functioning correctly.</li> </ul>
<del>7.2. Fire extinguisher (X) 7/</del>	<del>Visual inspection.</del>	<del>(a)Missing- (b)Not in accordance with the regulations. 2/</del>
<del>7.3. Locks and anti-theft device (X) 7/</del>	<del>Visual inspection and by operation</del>	<del>Device not functioning to prevent vehicle being driven-</del>
<del>7.4. Warning triangle (if required)(X) 7/</del>	<del>Visual inspection.</del>	<del>(a)Missing or incomplete- (b)Not in accordance with the regulations. 2/</del>
<del>7.5. First aid kit. (if required)(X) 7/</del>	<del>Visual inspection.</del>	<del>Missing, incomplete or not in accordance with the regulations. 2/</del>
<del>7.6. Wheel chocks (if required) (X) 7/</del>	<del>Visual inspection.</del>	<del>Missing or not in good condition.</del>
7.72. Audible warning device	Visual inspection and by operation.	<ul style="list-style-type: none"> <li>(a) Not working.</li> <li>(b) Control insecure.</li> <li>(c) Not in accordance with the regulations. 2/</li> </ul>
7.83. Speedometer	Visual inspection or by operation during road test.	<ul style="list-style-type: none"> <li>(a) Not fitted in accordance with the regulations. 2/</li> <li>(b) Not operational.</li> <li>(c) Not capable of being illuminated.</li> </ul>
7.94. Tachograph	Visual inspection.	<ul style="list-style-type: none"> <li>(a) Not fitted in accordance with the regulations. 2/</li> <li>(b) Not operational.</li> <li>(c) Defective or missing seals.</li> <li>(d) Calibration plaque missing, illegible or out of date.</li> <li>(e) Obvious tampering or manipulation.</li> </ul>
7.105. Speed limitation device	Visual inspection and by operation if equipment available.	<ul style="list-style-type: none"> <li>(a) Not fitted in accordance with the regulations. 2/</li> <li>(b) Not operational.</li> <li>(c) Incorrect set speed (if checked)</li> <li>(d) Defective or missing seals.</li> <li>(e) Calibration plaque missing, illegible or out of date.</li> </ul>
8.1	Not used. See Rule No. 1	
8.2	Not used. See Rule No. 1	

Item	Method	Principal reasons for rejection
<del>8.3 — ELECTROMAGNETIC INTERFERENCE SUPPRESSION</del>		
<del>Radio-interference</del>	<del>Visual examination.</del>	<del>Any requirements of the regulations <u>2</u>/ not met.</del>
9. SUPPLEMENTARY TESTS FOR PUBLIC TRANSPORT VEHICLES		
9.1. Doors		
9.1.1. Entrance and exit doors	Visual inspection and by operation.	<ul style="list-style-type: none"> <li>(a) Defective operation.</li> <li>(b) Deteriorated condition.</li> <li>(c) Defective emergency control.</li> <li>(d) Remote control of doors or warning devices defective.</li> <li>(e) Not in accordance with the regulations. <u>2</u>/</li> </ul>
9.1.2. Emergency exits	Visual inspection and/or by operation.	<ul style="list-style-type: none"> <li>(a) Defective operation.</li> <li>(b) Emergency door signs missing or illegible.</li> <li>(c) Missing hammer to break glass.</li> <li>(d) Not in accordance with the regulations. <u>2</u>/</li> </ul>
<del>9.2. Demisting and defrosting system. (X) <u>7</u>/</del>	<del>Visual inspection and by operation.</del>	<ul style="list-style-type: none"> <li><del>(a) Not operating correctly.</del></li> <li><del>(b) Emission of toxic or exhaust gases into driver's or passengers' compartment.</del></li> <li><del>(c) Defective defrosting (if compulsory).</del></li> </ul>
<del>9.3. Ventilation and heating system. (X) <u>7</u>/</del>	<del>Visual inspection and by operation.</del>	<ul style="list-style-type: none"> <li><del>(a) Defective operation.</del></li> <li><del>(b) Emission of toxic or exhaust gases into driver's or passengers' compartment.</del></li> </ul>
9.4. Seats		
9.4.1. Passenger seats (including seats for accompanying personnel)	Visual inspection.	<ul style="list-style-type: none"> <li>(a) Seats in defective condition or insecure.</li> <li>(b) Folding seats, if allowed, not folding automatically.</li> <li>(c) Not in accordance with the regulations. <u>2</u>/</li> </ul>
9.4.2. Driver's seat (additional requirements)	Visual inspection.	<ul style="list-style-type: none"> <li>(a) Defective special devices such as anti-glare shield or anti-dazzle screen.</li> <li>(b) Protection for driver insecure or not in accordance with the regulation <u>1</u>/.</li> </ul>
<del>9.5. Interior lighting and destination devices. (X) <u>7</u>/</del>	<del>Visual inspection and by operation.</del>	<del>Device defective or not in accordance with the regulations. <u>2</u>/</del>
9.65. Gangways, standing areas	Visual inspection.	<ul style="list-style-type: none"> <li>(a) Insecure floor.</li> <li>(b) Defective rails or grab handles.</li> <li>(c) Not in accordance with the regulations. <u>2</u>/</li> </ul>
9.76. Stairs and steps	Visual inspection.	<ul style="list-style-type: none"> <li>(a) Deteriorated condition.</li> <li>(b) Not in accordance with the regulations. <u>2</u>/</li> </ul>

Item	Method	Principal reasons for rejection
<del>9.8. Passenger communication system (X) <u>2/</u></del>	<del>Visual inspection and by operation.</del>	<del>(a) Defective signal. (b)(a) Defective stop sign or warning device for driver.</del>
<del>9.9. Notices (X) <u>2/</u></del>	<del>Visual inspection.</del>	<del>Missing, erroneous or illegible notice.</del>
<del>9.10. Regulations regarding the transport of children (X) <u>2/</u></del>		
<del>9.10.1. Doors</del>	<del>Visual inspection.</del>	<del>Protection of doors not in accordance with the regulations <u>2/</u> for this form of transport.</del>
<del>9.10.2. Signalling and special equipment required by regulations <u>2/</u></del>	<del>Visual inspection.</del>	<del>Signalling or special equipment absent or not in accordance with the regulations. <u>2/</u>.</del>
<del>9.11. Special equipment (X) <u>2/</u></del>		
<del>9.11.1. Installations for food preparation</del>	<del>Visual inspection.</del>	<del>(a) Installation not in accordance with the regulations. <u>2/</u> (b)(a) Installation damaged to such an extent that it would be dangerous to use it.</del>
<del>9.11.2. Sanitary installations</del>	<del>Visual inspection.</del>	<del>Installation not in accordance with the regulations. <u>2/</u></del>

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### C. JUSTIFICATION

5. Inspection requirements : the list of items is not consistent with the items listed in the annex.

Annex – Item 1.1.3 : observations (a) and (b) do not currently exist. They need very long operations. Necessary information for observation (b) is not easily available.

Annex – Item 2.1.1 : the suggested method is not realistic with a loaded vehicle. Several countries perform periodical technical inspections on loaded vehicles.

Annex – Item 5.2.3 : the suggested method is too long. It is not necessary to move the vehicle to inspect the technical condition of tyres.

Annex – Item 7.1.2 : it is too long to operate every safety belt in a vehicle, especially in public transport vehicles. The operation of a statistical sample should be enough.

Annex – Item 8.3 : this item is not essential in a periodic inspection.

Annex – Item 9.1.2 : it is preferable not to operate every emergency exit in a public transport vehicle, especially if this means breaking safety glass.