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**PROPOSAL FOR A DRAFT REVISION OF ANNEX 2
TO THE CONSOLIDATED RESOLUTION ON ROAD TRAFFIC (R.E.1):
PERIODIC INSPECTION OF VEHICLES - CHECKS TO BE CARRIED OUT**

Transmitted by the Expert from the International Motor Vehicle
Inspection Committee (CITA)

Note: The text reproduced below was prepared by the experts from CITA, following the invitation by the World Forum for Harmonisation of Vehicle Regulations (WP.29) at its one-hundred-and-twenty-first session (TRANS/WP.29/735, paras. 105 and 106). The text is based on document TRANS/WP.29/2000/2-TRANS/WP.1/2000/3 into which the comments submitted by WP.29 representatives were incorporated by CITA. In addition comments received from CITA members were taken into account. The modifications made with respect to document TRANS/WP.29/2000/2-TRANS/WP.1/2000/3 are underlined.

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Annex 2, amend to read:

"Annex 2

**PERIODIC INSPECTION OF VEHICLES - CHECKS TO BE CARRIED OUT
(Recommendation 2.6.)**

LIST OF ITEMS TO BE INSPECTED

INTRODUCTION

This annex contains a list of items that should be included in a periodic vehicle inspection. The following general principles apply:

- 1) Inspections should be carried out using normal inspection techniques, without dismantling or removing any part of the vehicle. The equipment used should be commercially available and that which it is reasonable to provide in an inspection station.
- 2) It must be possible to perform the inspection within a limited time. An average total time of 30 minutes/vehicle is considered reasonable. The actual time taken will vary according to the category and condition of the vehicle concerned.
- 3) Inspections are not limited to safety, but include items related to environmental protection (e.g. exhaust emissions, and noise).
- 4) 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 are marked with an (X). All the other items listed should be considered as mandatory at a periodic vehicle inspection.

This annex identifies the vehicle system or component(s) to be inspected, gives the method of inspection and provides information on the criteria to be used to determine whether its condition is acceptable.

The "principal reasons for rejection" are not applicable to items that are not prescribed in the law of the country carrying out the inspection.

Where a prescribed item may have to satisfy quantitative criteria in order to be acceptable, the requirements to be met are those defined in the applicable regulations. In this annex "regulations" means relevant national or international regulations, directives or other legal instruments that contain specific provisions relating to the standards to be met at periodic inspection. These are not specified in this annex.

Except for some special provisions for public passenger vehicles in section 9, no distinction has been made between the categories of vehicles to which the inspections apply, since this is obvious from the test. Most of the inspections are applicable to all categories of vehicles (goods vehicles, large passenger vehicles, passenger cars and trailers).

Where a method of inspection is given as visual, it means that the inspector will, as necessary, handle relevant components, evaluate noise, etc in addition to looking at them.

The identification of the vehicle, which is a prerequisite to any inspection, has not been included in this list as it is not a safety item.

Item	Method	Principal reasons for rejection
1. BRAKING EQUIPMENT		
1.1. Mechanical condition and operation		
1.1.1. Service brake pedal pivot	Visual inspection of the components while the <u>braking system</u> 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) <u>Inappropriate repair or modification.</u>
1.1.2. Pedal condition and travel of the brake operating device	Visual inspection of the components while the <u>braking system</u> 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) <u>Inappropriate repair or modification.</u>
1.1.3. Vacuum pump or compressor and reservoirs	Without the engine running, deplete pressure/vacuum until warning device operates. With the engine running, observe time required for vacuum or air pressure to achieve safe working value. Check that pressure relief valve is working. Visual inspection of the components at normal working pressure.	(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 regulations. ^{1/} (c) Pressure relief valve not working. (d) Air leak causing a noticeable drop in pressure or audible air leaks.
1.1.4. Low pressure warning indicator or gauge	Without the engine running, deplete pressure/vacuum until warning device operates or observe gauge.	Malfunctioning or defective gauge or indicator.
1.1.5. Hand operated brake control valve	Visual inspection of the components while the <u>braking system</u> is operated.	(a) Control cracked, damaged or <u>excessively worn.</u> (b) Malfunction of control valve. (c) Control insecure on valve or valve insecure. (d) Loose connections or leaks in system. (e) Unsatisfactory operation (f) <u>Inappropriate repair or modification.</u>
1.1.6. Parking brake, lever control, parking brake	Visual inspection of the components while the <u>braking system</u> is operated.	(a) Ratchet not holding correctly. (b) Excessive wear at lever pivot or in ratchet mechanism.

^{1/} 'regulations' means the relevant national or international requirements specified in national legislation.

Item	Method	Principal reasons for rejection
ratchet		(c) Excessive movement of lever indicating incorrect adjustment. (d) <u>Inappropriate repair or modification.</u>

Item	Method	Principal reasons for rejection
1.1.8. Couplings for trailer brakes	Disconnect braking system coupling between <u>towing vehicle and trailer</u> .	(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) <u>Inappropriate repair or modification</u> .
1.1.10. Brake servo units, master cylinder (hydraulic systems)	Visual inspection of the components while the <u>braking system</u> 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 <u>braking system</u> is operated.	(a) Risk of failure or fracture. (b) Pipes or connections leaking. (c) Pipes damaged or excessively corroded. (d) Pipes misplaced. (e) <u>Inappropriate repair or modification</u> .
1.1.12. Flexible brake hoses	Visual inspection of the components while the <u>braking system</u> is operated.	(a) Risk of failure or fracture. (b) Hoses damaged, chafing, twisted or too short (c) Hoses or connections leaking. (d) Hoses bulging under pressure. (e) Hoses porous. (f) <u>Inappropriate repair or modification</u> .
1.1.13. Brake linings <u>and</u> pads	Visual inspection.	(a) Lining or pad excessively worn. (b) Lining or pad contaminated (oil, grease etc.).
1.1.14. Brake drums, brake discs	Visual inspection.	(a) Drum or disk excessively worn, excessively scored, cracked, insecure or fractured. (b) Drum or disk contaminated (oil, grease, etc.) (c) Back plate insecure.
1.1.15. Brake cables, rods, levers, linkages	Visual inspection of the components while the <u>braking system</u> is operated.	(a) Cable damaged or knotted. (b) Component excessively worn or corroded. (c) Cable or rod joint insecure. (d) Cable guide defective. (e) Restriction to free movement of the <u>braking system</u> . (f) Abnormal movement of the levers/linkage indicating maladjustment or excessive wear. <u>Inappropriate repair or modification</u> .

Item	Method	Principal reasons for rejection
1.1.16. Brake actuators (including spring brakes or hydraulic cylinders)	Visual inspection of the components while the <u>braking system</u> is operated.	<ul style="list-style-type: none"> (a) Actuator cracked or damaged. (b) Actuator leaking. (c) Actuator insecure or inadequately mounted. (d) Actuator excessively corroded. (e) Excessive travel of operating piston or diaphragm mechanism. (f) Dust cover missing or excessively damaged. (g) <u>Inappropriate repair or modification.</u>
1.1.17. Load sensing valve	Visual inspection of the components while the <u>braking system</u> is operated.	<ul style="list-style-type: none"> (a) Defective linkage. (b) Linkage incorrectly adjusted. (c) Valve seized or inoperative. (d) Valve missing. (e) <u>Inappropriate repair or modification.</u>
1.1.18. Automatic slack adjusters and indicators	Visual inspection.	<ul style="list-style-type: none"> (a) Adjuster seized or having abnormal movement, excessive wear or incorrect adjustment. (b) Adjuster defective.
1.1.19. <u>Endurance braking</u> system (where fitted or required)	Visual inspection.	<ul style="list-style-type: none"> (a) Insecure connectors or mountings. (b) System <u>obviously</u> defective.
1.1.20. Automatic operation of trailer brakes	Disconnect brake coupling between <u>towing vehicle and trailer.</u>	Brake does not apply automatically when coupling disconnected.
1.2. Service <u>braking</u> 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.	<ul style="list-style-type: none"> (a) Inadequate braking effort on one or more wheel. (b) Braking effort from any wheel is less than the percentage of maximum effort recorded from the other wheel on the same axle specified in <u>the regulations</u>. 1/ 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 <u>force during each complete wheel revolution.</u>

Item	Method	Principal reasons for rejection
1.3. Secondary (emergency) <u>braking</u> performance and efficiency (if met by separate system)		
1.3.1. Performance	<u>If the secondary braking system is separate from the service braking system, use the method specified in 1.2.1.</u>	(a) Brake inoperative on one side. (b) Braking effort from any wheel is less than the percentage of maximum effort recorded from the other wheel on the same axle specified in <u>the regulations</u> . <u>1/</u> 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	<u>If the secondary braking system is separate from the service braking system, use the method specified in 1.2.2.</u>	Does not give at least the minimum figure laid down in the regulations. <u>1/</u>
1.4. Parking <u>braking</u> 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 and/or with the vehicle on a slope of known gradient.	Brake inoperative on one side.
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 the minimum figure laid down in the regulations. <u>1/</u>
1.5. <u>Endurance braking</u> system performance		
	<u>Visual inspection and, where possible test whether the system functions using</u> a static brake testing machine or by a road test using either an indicating or recording decelerometer.	(a) No gradual variation of efficiency (not applicable to exhaust brake systems). (b) System <u>not functioning</u> .
1.6. Anti-lock braking system		
	Visual inspection of warning device.	(a) Warning device malfunctioning. (b) <u>Warning device shows system malfunction</u> .
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 off the ground, rotate the steering wheel from lock to lock.	(a) Roughness in operation of gear. (b) Sector shaft twisted or splines worn. (c) Excessive wear in sector shaft.

Item	Method	Principal reasons for rejection
	Visual inspection of the operation of the steering gear.	(d) Excessive "end float" of sector shaft.
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 clockwise and counter-clockwise. Visual inspection of the attachment of gear casing to chassis.	(a) <u>Steering gear casing not properly attached.</u> (b) Elongated fixing holes in chassis. (c) Missing or fractured fixing bolts. (d) Steering gear casing fractured.
2.1.3. Steering linkage condition	With the vehicle over a pit or on a hoist and with the road wheel on ground, rock steering wheel clockwise and anti-clockwise. Visual inspection of steering components for wear, fractures and security.	(a) Relative movement between components which should be fixed. (b) Excessive wear at joints. (c) Fractures or deformation of any component. (d) Absence of locking devices. (e) Misalignment of components (e.g. track rod or drag link). (f) <u>Inappropriate repair or modification.</u> (g) <u>Dust cover missing or severely deteriorated.</u>
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.	(a) Moving steering linkage fouling a fixed part of chassis. (b) Steering stops not operating.
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.	(a) Fluid leak. (b) Insufficient fluid. (c) Mechanism not working. (d) Mechanism fractured or insecure. (e) Misalignment or fouling of components. (f) <u>Inappropriate repair or modification.</u>
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.	(a) Relative movement between steering wheel and column indicating looseness. (b) Absence of retaining device on steering wheel hub. (c) Fracture or looseness of steering wheel hub, rim or spokes.
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.	(a) Excessive movement of centre of steering wheel up or down. (b) Excessive movement of top of column radially from axis of column. (c) Deteriorated flexible coupling.

Item	Method	Principal reasons for rejection
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 <u>or not in accordance with the regulations.</u> 1/
2.4. Wheel alignment (X)		
	Check alignment of steered wheels with suitable equipment.	Alignment not in accordance with vehicle manufacturer's data.
3. VISIBILITY		
3.1. Field of vision		
	Visual inspection from driving seat.	Obstruction (<u>including reflecting or tinted film</u>) within driver's field of view that materially affects his view in front or to the sides.
3.2. Condition of glass		
	Visual inspection.	<p>(a) Cracked or discoloured glass or transparent panel (if permitted).</p> <p>(b) Glass or transparent panel that does not comply with specifications in the regulations. 1/</p> <p>(c) Glass or transparent panel in unacceptable condition.</p>
3.3. Rear-view mirrors		
	Visual inspection.	<p>(a) Mirror missing or not fitted according to the regulations. 1/</p> <p>(b) A mirror not giving an adequate view to the rear.</p> <p>(c) Mirror loose or insecure.</p>
3.4. Windscreen wipers		
	Visual inspection and by operation.	<p>(a) Wipers not operating <u>or too slow</u>.</p> <p>(b) Wiper blades not sweeping sufficient area of windscreen.</p> <p>(c) <u>Wiper blade rubbers deteriorated</u>.</p>

Item	Method	Principal reasons for rejection
3.5. Windscreen washers		
	Visual inspection and by operation.	(a) Washers not operating. (b) Washer liquid not directed to appropriate part of windscreen.
4. LAMPS, REFLECTORS AND ELECTRICAL EQUIPMENT		
4.1. Headlamps		
4.1.1. Condition & operation	Visual inspection and by operation.	(a) Defective bulb. (b) Defective lens. (c) <u>Lamp not in accordance with the regulations. 1/</u> (d) <u>Lamp not securely attached.</u> (e) <u>Products on lens or bulb which reduce light intensity or change colour.</u>
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. 1/
4.1.3. Switching	Visual inspection and by operation.	Number of headlamps illuminated at the same time not in accordance with the regulations. 1/
4.1.4. <u>Compliance with regulations 1/</u> (X)	<u>Visual inspection and by operation.</u>	<u>Lamp, colour, position or intensity not in accordance with the regulations. 1/</u>
4.1.5. <u>Levelling devices (where mandatory) (X)</u>	<u>Visual inspection and by operation.</u>	(a) <u>Device not operating.</u> (b) <u>Manual device cannot be operated from driver's seat.</u>
4.1.6. <u>Headlamp washers (where mandatory) (X)</u>	<u>Visual inspection and by operation.</u>	(a) <u>Washer not operating.</u> (b) <u>Washer liquid not directed on to headlamp surface.</u>
4.2. Front and rear position (side) lamps, <u>side marker lamps</u>		
4.2.1. Condition & operation	Visual inspection and by operation.	(a) Defective bulb. (b) Defective lens. (c) <u>Lamp not securely attached.</u>
4.2.2. Compliance with regulations 1/	Visual inspection and by operation.	(a) <u>Lamp, colour, position or intensity not in accordance with the regulations. 1/</u> (b) <u>Products on lens or bulb which reduce light intensity or change colour.</u>
4.3. Stop lamps		
4.3.1. Condition & operation	Visual inspection and by operation.	(a) Defective bulb. (b) Defective lens.

Item	Method	Principal reasons for rejection
		(c) <u>Lamp not securely attached.</u>
4.3.2. Compliance with regulations 1/	Visual inspection and by operation.	<u>Lamp</u> , colour, position or intensity not in accordance with the regulations. 1/
4.4. Direction indicator lamps		
4.4.1. Condition & operation	Visual inspection and by operation.	(a) Defective bulb. (b) Defective lens. (c) <u>Lamp not securely attached.</u>
4.4.2. Compliance with regulations 1/	Visual inspection and by operation.	<u>Lamp, colour, position or intensity not in accordance with the regulations. 1/</u>
4.4.3. Switching	Visual inspection and by operation.	(a) Switching of lamps not in accordance with <u>the regulations. 1/</u> (b) Any provision for special switching of direction indicators (e.g. all indicators flashing) not operating satisfactorily.
4.4.4. Flashing frequency	Visual inspection and by operation.	Rate of flashing not in accordance with <u>the regulations. 1/</u>
4.5. Front and rear fog lamps (X)		
4.5.1. Condition & operation	Visual inspection and by operation.	(a) Defective bulb. (b) Defective lens. (c) <u>Lamp not securely attached.</u>
4.5.2. Compliance with regulations 1/	Visual inspection and by operation.	(a) A lamp fitted <u>not in accordance</u> with the regulations. 1/ (b) Lamp operation <u>not in accordance</u> with the regulations. 1/
4.6. Reversing lamps (X)		
4.6.1. Condition and operation	Visual inspection and by operation.	(a) Defective bulb. (b) Defective lens. (c) <u>Lamp not securely attached.</u>
4.6.2. Compliance with regulations 1/	Visual inspection and by operation.	(a) A lamp fitted not in accordance with the regulations. 1/ (b) Lamp operation not in accordance with the regulations. 1/
4.7. Rear registration plate lamp		
4.7.1. Condition and operation	Visual inspection and by operation.	(a) Lamp throwing light to the rear. (b) Defective bulb. (c) <u>Lamp not securely attached.</u>

Item	Method	Principal reasons for rejection
4.7.2. Compliance with regulations 1/	Visual inspection and by operation.	Not in accordance with the regulations. 1/
4.8. Retro-reflectors, side reflectors and rear marker plates		
4.8.1. Condition	Visual inspection.	(a) Reflecting equipment defective or damaged. (b) <u>Reflector not securely attached.</u>
4.8.2. Compliance with regulations 1/	Visual inspection.	Not in accordance with the regulations. 1/
4.9. Tell-tales		
4.9.1. Condition and operation	Visual inspection and by operation.	Not operating.
4.9.2. Compliance with regulations 1/	Visual inspection and by operation.	Not in accordance with <u>the</u> regulations. 1/
4.10. Electrical connections between <u>towing</u> vehicle and trailer or semi-trailer		
	Visual inspection: if possible examine the electrical continuity between the vehicles.	(a) <u>Fixed components not securely attached.</u> (b) Damaged or deteriorated insulation. (c) Trailer or towing vehicle electrical connections not functioning correctly.
4.11. 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. (b) Damaged or deteriorated insulation.
4.12. Non obligatory lamps (X)		
	Visual inspection and by operation.	(a) A lamp fitted <u>not in accordance with the regulations.</u> 1/ (b) Lamp operation <u>not in accordance</u> with the regulations. 1/ (c) Total intensity <u>(including headlamps) not in accordance with the regulations.</u> 1/ (d) <u>Lamp not securely attached.</u>
4.13. Battery		
	<u>Visual inspection.</u>	(a) <u>Insecure.</u> (b) <u>Leaking.</u> (c) <u>Defective switch (if required).</u> (d) <u>Defective fuses (if required).</u>

Item	Method	Principal reasons for rejection
5. AXLES WHEELS, TYRES AND SUSPENSION		
5.1. Axles		
5.1.1. Axles	Visual inspection with vehicle over a pit or on a hoist. <u>Wheel play detectors may be used and are recommended for vehicles over 3.5 tonnes gross vehicle mass (GVM).</u>	<ul style="list-style-type: none"> (a) <u>Axle fractured or deformed.</u> (b) Insecure fixing to vehicle. (c) <u>Inappropriate repair or modification.</u>
5.1.2. Stub axles	Visual inspection with vehicle over a pit or on a hoist. <u>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.</u>	<ul style="list-style-type: none"> (a) <u>Stub axle fractured.</u> (b) Excessive wear in the swivel pin and/or bushes. (c) Excessive <u>movement</u> between stub axle and axle beam. (d) Stub axle pin loose in axle.
<u>5.1.3. Wheel bearings</u>	<u>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.</u>	<u>Excessive play in a wheel bearing.</u>
5.2. Wheels and tyres		
5.2.1. Road wheel hub	Visual inspection.	Any wheel nuts or studs missing or loose.
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"> (a) Any fracture or welding defect (b) Tyre retaining rings not properly fitted. (c) Wheel badly distorted.
5.2.3. Tyres	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.	<ul style="list-style-type: none"> (a) Load capacity of tyres <u>not in accordance with the regulations.</u> 1/ (b) Tyres on same axle or on twin wheels of different sizes. (c) Tyres on same axle of different construction (radial / crossply). (d) Any <u>serious</u> damage or cut to tyre. (e) Tyre tread depth not in accordance with the regulations. 1/ (f) <u>Tyre speed rating not in accordance with the regulations.</u> 1/ (g) <u>Tyre rubbing against other components.</u> (h) <u>Re-grooved tyres on passenger cars.</u>

Item	Method	Principal reasons for rejection
5.3. Suspension		
5.3.1. Springs	Visual inspection with vehicle over a pit or on a hoist. <u>Wheel play detectors may be used and are recommended for vehicles over 3.5 tonnes GVM.</u>	(a) Insecure attachment of springs to chassis or axle. (b) A damaged or fractured spring component.
5.3.2. Shock absorbers	Visual inspection with vehicle over a pit or on a hoist or using special equipment, if available.	(a) Insecure attachment of shock absorbers to chassis or axle. (b) Damaged shock absorber.
5.3.3. Torque tubes, radius arms, wishbones and suspension arms	Visual inspection with vehicle over a pit or on a hoist. <u>Wheel play detectors may be used and are recommended for vehicles over 3.5 tonnes GVM.</u>	(a) Insecure attachment of component to chassis or axle. (b) A damaged or fractured component. (c) <u>Inappropriate repair or modification.</u>
5.3.4. Suspension joints	Visual inspection with vehicle over a pit or on a hoist. <u>Wheel play detectors may be used and are recommended for vehicles over 3.5 tonnes GVM.</u>	(a) Excessive wear in swivel pin and/or bushes or at suspension joints. (b) <u>Dust cover missing or severely deteriorated.</u>
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.	(a) Fracture or deformation of any side or cross member. (b) Insecurity of strengthening plates or fastenings. (c) Excessive corrosion which affects the rigidity of the assembly.
6.1.2. Exhaust pipes & 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 <u>or ineffective</u> 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) Any special requirement for liquid gas fuel not met.

Item	Method	Principal reasons for rejection
6.1.4. Bumpers, <u>lateral protection</u> and rear underrun devices	Visual inspection.	(a) <u>Looseness or damage likely to cause injury.</u> (b) <u>Lateral protection or rear underrun device</u> obviously not in compliance with the regulations. <u>1/</u>
6.1.5. Spare wheel carrier (if fitted)	Visual inspection.	(a) <u>Carrier fractured or insecure.</u> (b) A spare wheel not securely fixed in carrier.
6.1.6. Coupling devices	Visual inspection for wear and correct operation with special attention to any safety device fitted <u>and /or use of measuring gauge.</u>	(a) Excessive wear in a component. (b) Insecurity of coupling to chassis. (c) Any safety device missing or not operating correctly. (d) Any indicator not working. (e) <u>Inappropriate repair or modification.</u>
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) <u>Dust cover missing or severely deteriorated.</u>
6.1.8. Engine mountings	Visual inspection not necessarily on a pit or hoist.	Deteriorated, loose or fractured mountings.
6.1.9. Tipping gear (X)	Visual inspection.	Hydraulic fluid leak.
6.2. Cab and bodywork		
6.2.1. Condition	Visual inspection.	(a) <u>A loose or damaged panel or part likely to cause injury.</u> (b) Insecure body pillar. (c) Leaks permitting entry of <u>engine or exhaust fumes.</u> (d) <u>Inappropriate repair or modification.</u>
6.2.2. Mounting	Visual inspection over a pit or on a hoist.	(a) Body or cab insecure. (b) Body/cab obviously not located squarely on chassis. (c) Insecure or missing fixing of body/cab to chassis or cross members. (d) Excessive corrosion at fixing points on integral bodies.

Item	Method	Principal reasons for rejection
6.2.3. Doors and door catches	Visual inspection.	(a) A door will not open or close properly. (b) A door likely to open inadvertently or one that will not remain closed. (c) <u>Door</u> , hinges, catches, pillar loose or deteriorated.
6.2.4. Floor	Visual inspection <u>over a pit or on a hoist</u> .	Floor insecure or badly deteriorated
6.2.5. Driver's seat	Visual inspection.	(a) A loose seat or seat with defective structure. (b) Adjustment mechanism not functioning correctly.
6.2.6. Other seats	Visual inspection.	Seats in defective condition or insecure.
6.2.7. Driving controls	Visual inspection and by operation.	(a) Any control necessary for the safe operation of the vehicle not in good working order. (b) <u>Any control necessary for the safe operation of the vehicle which does not carry out the function for which it is provided.</u>
6.2.8. Cab steps	Visual inspection.	(a) Step or step ring insecure. (b) <u>Step or ring in a condition likely to cause injury to users.</u>
6.2.9. Other interior & exterior fittings	Visual inspection.	Not in accordance with the regulations. 1/
6.2.10. Mudguards (wings), spray suppression devices	Visual inspection.	(a) Missing, loose or badly corroded. (b) Insufficient clearance for road wheel. (c) <u>Not in accordance with the regulations. 1/</u>
7. OTHER EQUIPMENT		
7.1. Safety-belts/buckles		
7.1.1. Security of mounting	Visual inspection.	Anchorage point badly deteriorated.
7.1.2. Condition.	Visual inspection <u>and by operation</u> .	(a) Mandatory safety-belt missing or not fitted. (b) Safety-belt damaged. (c) <u>Safety-belt not in accordance with the regulations. 1/</u> (d) <u>Safety-belt buckle damaged or not functioning correctly.</u> (e) <u>Safety-belt retractor damaged or not functioning correctly.</u>

Item	Method	Principal reasons for rejection
7.2. Fire extinguisher (X)		
	Visual inspection.	(a) Missing. (b) Not in accordance with the regulations. 1/
7.3. Locks and anti-theft device (X)		
	Visual inspection and by operation	Device not functioning to prevent vehicle being driven.
7.4. Warning triangle (if required)(X)		
	Visual inspection.	Missing or incomplete.
7.5. First aid kit. (if required)(X)		
	Visual inspection.	Missing, incomplete or not in accordance with the regulations. 1/
7.6. Wheel chocks (if required)(X)		
	Visual inspection.	Missing or not in good condition.
7.7. Audible warning device		
	Visual inspection and by operation.	(a) Horn not working. (b) Control insecure or not conveniently placed. (c) <u>Not in accordance with the regulations.</u> 1/
7.8. Speedometer		
	Visual inspection or by operation during road test.	(a) Not fitted in accordance with the regulations. 1/ (b) <u>Not operational.</u> (c) Not capable of being illuminated.
7.9. Tachograph		
	Visual inspection.	(a) <u>Not fitted in accordance with the regulations.</u> 1/ (b) <u>Not operational.</u> (c) Defective or missing seals. (d) Calibration plaque missing, illegible or out of date. (e) <u>Obvious tampering or manipulation.</u>

Item	Method	Principal reasons for rejection
7.10. Speed limitation device		
	Visual inspection and by operation if equipment available.	(a) <u>Not fitted in accordance with the regulations.</u> 1/ (b) <u>Not operational.</u> (c) Incorrect set speed (if checked) (d) Defective or missing seals. (e) Calibration plaque missing, illegible or out of date.
8. NUISANCE		
8.1. Noise		
	Evaluate subjectively or measure sound level in accordance with regulations. 1/	Noise level excessive or exceeds limits specified in the regulations. 1/
8.2. Exhaust emissions		
8.2.1. Positive ignition engines	Measure gaseous emissions using an exhaust gas analyser in accordance with the regulations. 1/	(a) Any gaseous emission exceeds levels specified in the regulations. 1/ (b) Emission control equipment absent or obviously defective. (c) <u>Exhaust leaks which would affect emission measurements.</u>
8.2.2. Compression ignition engines.	Measure opacity using an opacity meter in accordance with the regulations. 1/	(a) Opacity exceeds levels specified in the regulations. 1/ (b) <u>Emission control equipment absent or obviously defective.</u>
8.3. Radio-interference (X)		
	Visual examination.	Any requirements of the regulations 1/ not met.
8.4. Fluid leaks (X)		
	<u>Visual examination.</u>	<u>Excessive leaks of oil or other fluid.</u>
9. SUPPLEMENTARY TESTS FOR PUBLIC TRANSPORT VEHICLES		
9.1. Doors		
9.1.1. Entrance and exit doors	Visual inspection and by operation.	(a) Defective operation. (b) Deteriorated condition. (c) Defective emergency control. (d) Remote control of doors or warning devices defective. (e) <u>Not in accordance with the regulations.</u> 1/

Item	Method	Principal reasons for rejection
9.1.2. Emergency exits	Visual inspection and by operation.	(a) Defective operation. (b) Emergency door signs missing or illegible. (c) Missing hammer to break glass. (d) <u>Not in accordance with the regulations. 1/</u>
9.2. Demisting and defrosting system. (X)		
	Visual inspection and by operation.	(a) Not operating correctly. (b) Emissions of toxic gas. (c) Defective defrosting (if compulsory).
9.3. Ventilation system.(X)		
	Visual inspection and by operation.	Defective operation.
9.4. Seats		
9.4.1. Passenger seats	Visual inspection.	(a) Seats in defective condition or insecure. (b) Folding seats, if allowed, not folding automatically. (c) <u>Not in accordance with the regulations. 1/</u>
9.4.2. Driver's seat (additional requirements)	Visual inspection.	(a) Defective special devices such as anti-glare shield or anti-dazzle screen. (b) Insecure protection for driver.
9.5. Lighting and destination devices. (X).		
	Visual inspection and by operation.	Device defective or not in accordance with the regulations. 1/
9.6. Gangways, standing areas		
	Visual inspection.	(a) Insecure floor. (b) Defective rails or grab handles.
9.7. Stairs and steps		
	Visual inspection.	(a) Deteriorated condition. (b) <u>Not in accordance with the regulations. 1/</u>
9.8. Passenger communication system (X)		
	Visual inspection and by operation.	(a) Defective signal. (b) Defective stop sign or warning device for driver.
9.9. Notices (X)		
	Visual inspection.	Missing, erroneous or illegible notice.
9.10. Regulations regarding the transport of children (X)		

Item	Method	Principal reasons for rejection
9.10.1. Doors	Visual inspection.	Protection of doors not in accordance with the regulations 1/ for this form of transport.
9.10.2. Signalling and <u>special equipment required by regulations 1/</u>	Visual inspection.	Signalling or <u>special equipment</u> absent or not in accordance with the regulations. 1/ .
9.11. Special equipment (X)		
9.11.1. Installations for food preparation	Visual inspection.	(a) Installation not in accordance with the regulations. 1/ (b) Installation damaged to such an extent that it would be dangerous to use it.
9.11.2. Sanitary installations	Visual inspection.	Installation not in accordance with the regulations. 1/

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