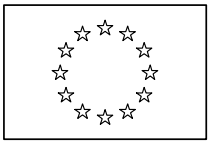

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ANNEX_
to the

Proposal for a

REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

on periodic roadworthiness tests for motor vehicles and their trailers and repealing Directive 2009/40/EC

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ANNEX I

TECHNICAL INFORMATION TO BE MADE AVAILABLE BY THE MANUFACTURER

1. BRAKING EQUIPMENT

1.1. SERVICE BRAKING

– General description, including secondary / emergency braking and possibilities to be tested on a standard roller brake test bench

– System layout

– Brake control

– Load sensing valve: positioning and working features

– Reference forces

– Drums

– Discs

– Brake lining and pads

– Pneumatic braking

– Hydraulic braking

1.2. PARKING BRAKE

– General description

– Parking brake control

– Axel(s) where parking brake applies

– Electronically operated parking brake

1.3. ENDURANCE BRAKES

– General description

– Brake control

1.4. ELECTRONIC MANAGEMENT SYSTEMS

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– BAS

– ESC

– EBS

1.5. BRAKES OF TRAILERS

– Coupling for trailer brakes: general description

– Safety system description

2. STEERING

– General description of the system

– Working principle

– Steering gear case position

– Power steering principle

– Steering wheel diameter

– Electronic control of the steering system

– Additional electronic features

3. VISIBILITY

3.1. GLASSES

– Windshield

– Other external glasses (except sun roof)

– Sun roof

– Inner glasses

– Emergency exit glasses

3.2. REAR VIEW MIRRORS

– Number of devices

– Categories

– Position of devices

– Approval mark

3.3. WINDSCREEN WIPERS

– Number of devices

– Length of wipers' blades

3.4. WINDSCREEN WASHERS

– Number of devices

3.5. DEMISTING SYSTEM

– Principle of operation

4. LAMPS, REFLECTORS, AND ELECTRICAL EQUIPMENT

4.1. HEADLAMPS

– Driving beam (high beam)

– Passing beam (low beam)

4.2. FRONT AND REAR POSITION LAMPS, SIDE MARKER LAMPS AND END OUTLINE MARKER LAMPS

– Front position lamps

– Rear position lamps

– Side marker lamps

– Front end outline marker lamps

– Rear end outline marker lamps

4.3. STOP LAMPS

– Number of devices

– Position of devices

– Light source

– Approval mark

– Adaptive brake lights

4.4. DIRECTION INDICATOR AND HAZARD WARNING LAMPS

– Number of devices

– Position of devices

– Light source

– Approval mark

– Tell-tale lamp

– Principle of activation of warning lamps

4.5. FRONT AND REAR FOG LAMPS

– Front fog lamps

– Rear fog lamps

– Number of devices

4.6. REVERSING LAMPS

– Number of devices

– Position of devices

– Light source

– Approval mark

4.7. REAR REGISTRATION PLATE LAMP

– Number of devices

– Position of devices

– Light source

– Approval mark

4.8. RETRO-REFLECTORS, SIDE REFLECTORS AND REAR MARKER PLATES

– Front retro-reflectors

– Rear retro-reflectors

– Side retro-reflectors

– Rear marker plates

4.9. ELECTRICAL CONNECTIONS WITH TOWING AND TOWED VEHICLES

– Connection diagram

– Standard of connection

4.10. NON OBLIGATORY LAMPS

– List of non obligatory lamps

– Position of devices

– Approval mark

4.11. BATTERY

– Number of devices

– Voltage (V)

– Capacity (Ah)

– Position of devices

4.12. LIGHTING SYSTEMS ELECTRONICALLY MANAGED

– General description

5. AXLES, WHEELS, TYRES AND SUSPENSION

5.1. AXLES

– General description

5.2. WHEELS

– Dimension

– Material

5.3. TYRES

– Number

– Arrangement

– Dimension

– Speed category

– Load-capacity index

– Spare wheel number

– Spare wheel dimension

– Equivalent devices to the spare wheel

5.4. SUSPENSION

– General description of the system

– Springs

– Shock absorbers

– Anti-roll bars

– Air suspension

– Electronic control of the suspension

6. CHASSIS AND CHASSIS ATTACHMENTS

6.1. CHASSIS OR FRAME ATTACHMENTS

– General description

6.2. FUEL TANK AND PIPES

– Number of fuel tanks

– General description of the tanks

– Expiration date of the tank (if applicable)

– Arrangement

– Capacity

– Marking

– Protecting means

– General description of fuel pipes

6.3. BUMPERS, LATERAL PROTECTION AND REAR UNDERRUN DEVICES

– Front underrun protection

– Lateral protection

– Rear underrun device

6.4. SPARE WHEEL CARRIER

– Position

6.5. COUPLING MECHANISMS AND TOWING EQUIPMENT

– Coupling mechanisms

– Towing equipment

6.6. TRANSMISSION

– General description

– Type of gear-shift

– Number of shifts

– Differentials / self-blocking differentials

– Number of powered axles

– Working modes of the transmission

– Clutch: general description

– Electronic management of transmission

6.7. ENGINE MOUNTING

– General description

6.8. CAB AND BODYWORK

– General description

– Doors

– Seats

– Cab steps

– Other interior and exterior fittings and equipment

– Mudguards, spray suppression devices

7. OTHER EQUIPMENT

7.1. SAFETY BELTS

– Safety belt category for each seat

– Approval mark

– Pyrotechnical pretensioner

7.2. AIRBAGS

– Number and arrangement

– Marking

– Tell-tale lamp

– Passenger airbag deactivator

7.3. FIRE EXTINGUISHER

– Number and arrangement

– Categories

7.4. ANTI-THEFT DEVICE

– Control blocked by the device

7.5. WHEEL CHOCKS (WEDGES)

– Number and arrangement

7.6. AUDIBLE WARNING DEVICE

– Number and position of the device

– Approval mark

– Sound level (dB(A))

7.7. SPEEDOMETER

– Units (km/h or mile/h)

– Maximum displayed speed (km/h or mile/h)

– Division

7.8. TACHOGRAPH

– Make and model

– Approval mark

– Serial number

– Position of seals

– Position of data's plate

7.9. SPEED LIMITER

– Speed set

– Make and model

– Arrangements of the connectors for inspection

– (rev/km or impulses/km)

– w (rev/km or impulses/km)

– Position of data's plate

7.10. ODOMETER

– Number of digits

8. NUISANCE

8.1. NOISE

– General description of the systems and devices intended to reduce the noise produced by the vehicle

– Sound level stationary (dB(A) @ min-1)

– Sound level drive-by (dB(A))

– Number of silencers on the exhaust pipe

– Position of silencers on the exhaust pipe

– Marking of silencers on the exhaust pipe

8.2. PETROL ENGINE EMISSIONS

– CO (g/km or g/kWh)

– CO idling (Vol %)

– CO high speed idling (Vol % @ min-1)

– HC high speed idling (Vol % @ min-1)

– Lambda high speed idling (min-1)

– HC (g/km or g/kWh)

– NOx (g/km or g/kWh)

– HC + NOx (g/km)

– CO2 (g/km)

– Indication of the environmental category of EC type-approval

– OBD connector type & position

– OBD communication protocol

– Emission control equipment installed in the vehicle

– Position of emission control equipment installed in the vehicle

– Marking of catalytic converter

– Number of lambda sensors

8.3. DIESEL ENGINE EMISSIONS

– CO (g/km or g/kWh)

– HC (g/km or g/kWh)

– NOx (g/km or g/kWh)

– HC + NOx (g/km)

– CO2 (g/km)

– Particulates for diesel (g/km or g/kWh)

– Corrected absorption coefficient for diesel (in m-1) (opacity)

– Indication of the environmental category of EC type-approval

– OBD connector

– OBD communication protocol

– Emission control equipment installed in the vehicle

– Position of emission control equipment installed in the vehicle

– Marking of catalytic converter

– Marking of particulates trap

8.4. ELECTROMAGNETIC INTERFERENCE SUPPRESSION

– Description of the spark-plugs' wiring features

– Marking of the spark-plugs's wiring

ANNEX II

MINIMUM REQUIREMENTS CONCERNING THE CONTENTS AND METHODS OF TESTING

1. GENERAL

This Annex identifies the vehicle systems and components to be tested; it details the method of testing them and the criteria to be used when determining whether the condition of the vehicle is acceptable.

The test must cover at least the items listed in point 3 below provided that these are related to the equipment of the vehicle being tested in the Member State concerned.

The tests shall be carried out using techniques and equipment currently available without the use of tools to dismantle or remove any part of the vehicle.

All the items listed shall be considered as mandatory at a periodic test of vehicles, except those marked with the indication (X), 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 roadworthiness test.

"Reasons for failure" do not apply in cases where they refer to requirements which were not prescribed in the relevant vehicle approval legislation at the time of first registration, first entry into service or retrofitting requirements.

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

2. SCOPE OF TEST

The test shall cover at least the following elements:

0) Identification of the vehicle;

1) Braking equipment;

2) Steering;

3) Visibility;

4) Lighting equipment and parts of electric system;

5) Axles, wheels, tyres, suspension;

6) Chassis and chassis attachments;

7) Other equipment;

8) Nuisance;

9) Supplementary tests for passenger carrying vehicles M2 and M3.

3. CONTENTS AND METHODS OF TESTING

The test shall cover at least the items and use the minimum standards and methods listed in the following table:.

Item	Method	Reasons for failure
0. IDENTIFICATION OF THE VEHICLE		
0.1. Registration number plates (if needed by requirements[1]	Visual inspection	(a) Number plate(s) missing or so insecure/fixed 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 chassis/ 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/hand lever 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/hand lever 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[1] (c) Multi-circuit protection valve or pressure relief valve not working. (d) Air leak causing a noticeable drop in pressure or audible air leaks. (e) External damage likely to affect the

Item	Method	Reasons for failure
		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 , electronic parking brake	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, 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 (electrical & pneumatic)	Disconnect and reconnect 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. (d) 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.
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.

Item	Method	Reasons for failure
		(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) Imminent risk of failure or fracture. (b) Pipes or connections leaking. (c) Pipes damaged or excessively corroded. (d) Pipes misplaced.
1.1.12. Flexible brake hoses	Visual inspection of the components while the braking system is operated.	(a) Imminent 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.
1.1.13. Brake linings and pads	Visual inspection.	(a) Lining or pad excessively worn. (b) Lining or pad contaminated (oil, grease etc.). (c) Lining or pad missing
1.1.14. Brake drums, brake discs	Visual inspection.	(a) Drum or disc excessively worn, excessively scored, cracked, insecure or fractured. (b) Drum or disc contaminated (oil, grease, etc.) (c) Drum or disc missing (d) Back plate insecure.
1.1.15. Brake cables, rods, levers, linkages	Visual inspection of the components while the braking system is operated.	(a) Cable damaged or knotted. (b) Component excessively worn or corroded. (c) Cable, rod or joint insecure. (d) Cable guide defective. (e) Restriction to free movement of the braking system. (f) Abnormal movement of the levers/linkage indicating

Item		Method	Reasons for failure
			maladjustment or excessive wear.
1.1.16.	Brake actuators (including spring brakes or hydraulic cylinders)	Visual inspection of the components while the braking system is operated.	(a) Actuator cracked or damaged. (b) Actuator leaking. (c) Actuator insecure or inadequately mounted. (d) Actuator excessively corroded. (e) Insufficient or excessive travel of operating piston or diaphragm mechanism. (f) Dust cover missing or excessively damaged.
1.1.17.	Load sensing valve	Visual inspection of the components while the braking system is operated	(a) Defective linkage. (b) Linkage incorrectly adjusted. (c) Valve seized or inoperative. (d) Valve missing. (e) Missing data plate. (f) Data illegible or not in accordance with requirements(1)
1.1.18.	Slack adjusters and indicators	Visual inspection.	(a) Adjuster damaged, seized or having abnormal movement, excessive wear or incorrect adjustment. (b) Adjuster defective. (c) Incorrectly installed or replaced.
1.1.19.	Endurance braking system (where fitted or required)	Visual inspection.	(a) Insecure connectors or mountings. (b) System obviously defective or missing.
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. (c) Any component insecure or inadequately mounted. (d) Inappropriate repair or modification to any component[1]

[1] Inappropriate repair or modification means a repair or modification that adversely affects the road safety of the vehicle or has a negative effect on the environment.

Item	Method	Reasons for failure
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 test on a static brake testing machine or, if impossible during a road test 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. 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 a recording decelerometer to establish the braking ratio which relates to the maximum authorised mass or, in the case of semi-trailers, to the sum of the authorised axle loads. Vehicles or a trailer with a maximum permissible mass exceeding 3500 kg has to be inspected following the standards given by ISO 21069 or equivalent methods. Road tests should be carried out under dry conditions on a flat, straight road.	Does not give at least the minimum figure as follows:- Vehicles registered first time after entry into force of Directive 2010/48/EU: – Category N1: 50 % – Category M1: 58 % – Category M2 and M3: 50 % – Category N2 and N3: 50 % – Category O2, O3 and O4: • for semi-trailers: 45% • for draw-bar trailers: 50% Vehicles registered before entry into force of Directive 2010/48/EU : Category N1: 45% Category M1, M2 and M3: 50% [2] Category N2 and N3: 43% [3] Category O2,O3 and O4: 40% [4] Other categories ,. - Categories L (both brakes):

[2] 48% for vehicles not fitted with ABS or type approved before 1 October 1991

[3] 45% for vehicles registered after 1988 or from the date specified in requirements whichever is the later

[4] 43% for semi-trailers and draw-bar trailers registered after 1988 or from the date in requirements whichever is the later.

Item	Method	Reasons for failure
		Category L1e: 42 % Category L2e, L6e: 40 % Category L3e: 50 % Category L4e: 46 % Category L5e, L7e: 44 % - Categories L (rear wheel brake): all categories: 25 %
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) 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. 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% [5] 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 (except L1e and L3e).
1.4. Parking braking performance and efficiency		
1.4.1. Performance	Apply the brake during a test on a static brake testing machine and/or during a road test with a decelerometer.	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 (except L1e and L3e).
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 (ABS)	Visual inspection and inspection of warning device.	(a) Warning device malfunctioning. (b) Warning device shows system malfunction. (c) Wheel speed sensors missing or damaged

[5] $2.2 m/s^2$ for N1, N2 and N3 vehicles.

Item	Method	Reasons for failure
		(d) Wirings damaged (e) Other components missing or damaged
1.7 Electronic brake system (EBS)	Visual inspection of warning device.	(a) Warning device malfunctioning. (b) Warning device shows system malfunction.
1.8 Brake fluid	Measuring of boiling temperature or water content	(a) Brake fluid boiling temperature to low or water content to high (b) Brake fluid contaminated (c) Insufficient brake fluid.
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 or on turn tables, 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 movement 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 / handle bar 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. (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 or using a specially adapted wheel play detector. 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) Inappropriate repair or modification. (g) Dust cover missing, damaged or severely deteriorated.
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 (power steering), 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 or

Item	Method	Reasons for failure
		missing.
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) Inappropriate repair or modification. (g) Cables/hoses damaged, excessively corroded.
2.2. Steering wheel, column and handle bar		
2.2.1. Steering wheel/handle bar 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/yokes and forks	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/handle bar in various directions at right angles to the column/forks. 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. (d) Attachment defective. (e) inappropriate repair or modification
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 requirements[(1)].
2.4.Wheel alignment (X)[(2)]	Check alignment of steered wheels with suitable equipment.	Alignment not in accordance with vehicle manufacturer's data or requirements[(1)].
2.5. 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.

Item	Method	Reasons for failure
2.6. Electronic Power Steering (EPS)	Visual inspection and consistency check between the angle of the steering wheel and the angle of the wheels when switching on/off the engine	(a) EPS Malfunction Indicator Lamp (MIL) indicates any kind of failure of the system. (b) Inconsistency between the angle of the steering wheel and the angle of the wheels. (c) power assistance not working
3. VISIBILITY		
3.1. Field of vision	Visual inspection from driving seat.	Obstruction 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 (including reflecting or tinted film) that does not comply with specifications in the requirements[(1)] (XX)[(3)], (c) Glass or transparent panel in unacceptable condition.
3.3. Rear-view mirrors or devices	Visual inspection.	(a) Mirror or device missing or not fitted according to the requirements[(1)]. (b) Mirror or device inoperative, damaged, loose or insecure.
3.4. Windscreen wipers	Visual inspection and by operation.	(a) Wipers not operating or missing (b) Wiper blade missing or obviously defective.
3.5.Windscreen washers	Visual inspection and by operation.	Washers not operating adequately.
3.6 Demisting system (X)[(2)]	Visual inspection and by operation.	System inoperative or obviously defective.
4. LAMPS, REFLECTORS AND ELECTRICAL EQUIPMENT		
4.1. Headlamps		
4.1.1. Condition and operation	Visual inspection and by operation.	(a) Defective or missing light / light source. (b) Defective or missing projection system (reflector and lens). (c) Lamp not securely attached.
4.1.2. Alignment	Determine the horizontal aim of each headlamp on dipped beam using a headlamp aiming device or a screen.	Aim of a headlamp not within limits laid down in the requirements[(1)].

Item	Method	Reasons for failure
4.1.3. Switching	Visual inspection and by operation.	(a) Switch does not operate in accordance with the requirements[1] (Number of headlamps illuminated at the same time) (b) Function of control device impaired.
4.1.4. Compliance with requirements[1].	Visual inspection and by operation.	(a) Lamp, emitted colour, position or intensity not in accordance with the requirements[1]. (b) Products on lens or light source which obviously reduce light intensity or change emitted colour. (c) Light source and lamp not compatible
4.1.5. Levelling devices (where mandatory)	Visual inspection and by operation if possible.	(a) Device not operating. (b) Manual device cannot be operated from driver's seat.
4.1.6. Headlamp cleaning device (where mandatory)	Visual inspection and by operation if possible.	Device not operating.
4.2. Front and rear position lamps, side marker lamps and end outline marker lamps		
4.2.1. Condition and operation	Visual inspection and by operation.	(a) Defective light source. (b) Defective lens. (c) Lamp not securely attached.
4.2.2 Switching	Visual inspection and by operation.	(a) Switch does not operate in accordance with the requirements[1]. (b) Function of control device impaired.
4.2.3. Compliance with requirements[1]	Visual inspection and by operation.	(a) Lamp, emitted colour, position or intensity not in accordance with the requirements[1]. (b) Products on lens or light source which reduce light intensity or change emitted colour.
4.3. Stop Lamps		
4.3.1. Condition and operation	Visual inspection and by operation.	(a) Defective light source. (b) Defective lens. (c) Lamp not securely attached.
4.3.2. Switching	Visual inspection and by operation.	(a) Switch does not operate in accordance with the requirements[1]. (b) Function of control device impaired.
4.3.3. Compliance with requirements[1].	Visual inspection and by operation.	Lamp, emitted colour, position or intensity not in accordance with the requirements[1].

Item	Method	Reasons for failure
4.4. Direction indicator and hazard warning lamps		
4.4.1. Condition and operation	Visual inspection and by operation.	(a) Defective light source. (b) Defective lens. (c) Lamp not securely attached
4.4.2. Switching	Visual inspection and by operation.	Switch does not operate in accordance with the requirements[(1).]
4.4.3. Compliance with requirements[(1).]	Visual inspection and by operation.	Lamp, emitted colour, position or intensity not in accordance with the requirements[(1).]
4.4.4. Flashing frequency	Visual inspection and by operation.	Rate of flashing not in accordance with the requirements[(1).]
4.5. Front and rear fog lamps		
4.5.1. Condition and operation	Visual inspection and by operation.	(a) Defective light source. (b) Defective lens. (c) Lamp not securely attached.
4.5.2 Alignment (X)[(2)]	by operation and using a headlamp aiming device	Front fog lamp out of horizontal alignment when the light pattern has cut-off line
4.5.3. Switching	Visual inspection and by operation.	Switch does not operate in accordance with the requirements[(1)].
4.5.4. Compliance with requirements[(1).]	Visual inspection and by operation.	(a) Lamp, emitted colour, position or intensity not in accordance with the requirements[(1)] (b) System does not operate in accordance with the requirements[(1)]
4.6. Reversing lamps		
4.6.1. Condition and operation	Visual inspection and by operation.	(a) Defective light source. (b) Defective lens. (c) Lamp not securely attached.
4.6.2. Compliance with requirements[(1)]	Visual inspection and by operation.	(a) Lamp, emitted colour, position or intensity not in accordance with the requirements[(1)]. (b) System does not operate in accordance with the requirements[(1)].
4.6.3. Switching	Visual inspection and by operation.	Switch does not operate in accordance with the requirements[(1)].
4.7. Rear registration plate lamp		
4.7.1. Condition and operation	Visual inspection and by operation.	(a) Lamp throwing direct light to the rear. (b) Defective light source. (c) Lamp not securely attached.
4.7.2. Compliance with requirements[(1)]	Visual inspection and by operation.	System does not operate in accordance with the requirements[(1)].

Item	Method	Reasons for failure
4.8. Retro-reflectors, conspicuity (retro reflecting) markings and rear marker plates		
4.8.1. Condition	Visual inspection.	(a) Reflecting equipment defective or damaged. (b) Reflector not securely attached.
4.8.2. Compliance with requirements[1]	Visual inspection.	Device, reflected colour or position not in accordance with the requirements[1].
4.9. Tell-tales mandatory for lighting equipment		
4.9.1. Condition and operation	Visual inspection and by operation.	Not operating.
4.9.2. Compliance with requirements[1]	Visual inspection and by operation.	Not in accordance with the requirements[1].
4.10. Electrical connections between towing vehicle and trailer or semi-trailer	Visual inspection: if possible examine the electrical continuity of the connection.	(a) Fixed components not securely attached. (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 inside the engine compartment in some cases.	(a) Wiring insecure or not adequately secured. (b) Wiring deteriorated (c) Damaged or deteriorated insulation.
4.12. Non obligatory lamps and retro-reflectors (X)[2]	Visual inspection and by operation.	(a) A lamp/retro-reflector fitted not in accordance with the requirements[1]. (b) Lamp operation not in accordance with the requirements[1]. (c) Lamp/retro-reflector not securely attached.
4.13. Battery(ies)	Visual inspection.	(a) Insecure. (b) Leaking. (c) Defective switch (if required). (d) Defective fuses (if required). (e) inappropriate ventilation (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.

Item	Method	Reasons for failure
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.	(a) Any wheel nuts or studs missing or loose. (b) Hub worn or damaged
5.2.2. Wheels	Visual inspection of both sides of each wheel with vehicle over a pit or on a hoist.	(a) Any fracture or welding defect (b) Tyre retaining rings not properly fitted. (c) Wheel badly distorted or worn. (d) Wheel size or type not in accordance with the requirements(1) and effecting road safety
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.	(a) Tyre size, load capacity, approval mark or speed rating not in accordance with the requirements(1) and effecting road safety (b) Tyres on same axle or on twin wheels of different sizes. (c) Tyres on same axle of different construction (radial / cross-ply). (d) Any serious damage or cut to tyre. (e) Tyre tread depth not in accordance with the requirements(1). (f) Tyre rubbing against other components. (g) Re-grooved tyres not in accordance with requirements(1). (h) air pressure monitoring system malfunctioning or obviously inoperative
5.3. Suspension system		

Item	Method	Reasons for failure
5.3.1. Springs and stabilizer	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.	(a) Insecure attachment of springs to chassis or axle. (b) A damaged or fractured spring component. (c) spring missing (d) inappropriate repair or modification
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 showing signs of severe leakage or malfunction.
5.3.2.1 efficiency testing of damping	Use special equipment and compare left /right differences and/or absolute values given by manufactures	(a) significant difference between left and right (b) given minimum values not reached
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.	(a) Insecure attachment of component to chassis or axle. (b) A damaged, fractured or excessively corroded component. (c) Inappropriate repair or modification.
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.	(a) Excessive wear in swivel pin and/or bushes or at suspension joints. (b) Dust cover missing or severely deteriorated.
5.3.5. Air suspension	Visual inspection	(a) System inoperable. (b) Any component damaged, modified or deteriorated in a way that would adversely affect the functioning of the system (c) audible system leakage
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 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.

Item	Method	Reasons for failure
6.1.3. Fuel tank and pipes (including heating fuel tank and pipes)	Visual inspection with vehicle over a pit or on a hoist, use of leak detecting devices in case of LPG/CNG systems.	(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 or hydrogen system not in accordance with requirements(1).
6.1.4. Bumpers, lateral protection and rear underrun devices	Visual inspection.	(a) Looseness or damage likely to cause injury when grazed or contacted. (b) Device obviously not in compliance with the requirements(1).
6.1.5. Spare wheel carrier (if fitted)	Visual inspection.	(a) Carrier not in proper condition (b) Carrier fractured or insecure. (c) A spare wheel not securely fixed in carrier and likely to fall off.
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) Obstruct registration plate or any lamp (when not in use) (g) 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.

Item	Method	Reasons for failure
		(f) Bearing housing fractured or insecure. (g) Dust cover missing or severely deteriorated. (h) Illegal power-train modification
6.1.8. Engine mountings	Visual inspection not necessarily on a pit or hoist.	Deteriorated, obviously and severely damaged, loose or fractured mountings.
6.1.9 Engine performance	Visual inspection	(a) Control unit illegal modified (b) illegal engine modification
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) Permitting entry of engine or exhaust fumes. (d) Inappropriate repair or modification.
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.
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) Door, hinges, catches, pillar, missing, loose or deteriorated.
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.	(a) A loose seat or seat with defective structure. (b) Adjustment mechanism not functioning correctly.
6.2.6. Other seats	Visual inspection.	(a) Seats in defective condition or insecure. (b) Seats fitted not in accordance with requirements(1).
6.2.7. Driving controls	Visual inspection and by operation.	Any control necessary for the safe operation of

Item	Method	Reasons for failure
		the vehicle not functioning correctly.
6.2.8. Cab steps	Visual inspection.	(a) Step or step ring insecure. (b) Step or ring in a condition likely to cause injury to users.
6.2.9. Other interior and exterior fittings and equipment	Visual inspection.	(a) Attachment of other fitting or equipment defective. (b) Other fitting or equipment not in accordance with the requirements(1). (c) Leaking hydraulic equipment
6.2.10. Mudguards (wings), spray suppression devices	Visual inspection.	(a) Missing, loose or badly corroded. (b) Insufficient clearance to road wheel. (c) Not in accordance with the requirements(1).
7. OTHER EQUIPMENT		
7.1. Safety-belts/buckles and restraint systems		
7.1.1. Security of safety-belts/buckles mounting	Visual inspection.	(a) Anchorage point badly deteriorated. (b) Anchorage loose
7.1.2. Condition of safety-belts/buckles.	Visual inspection and by operation.	(a) Mandatory safety-belt missing or not fitted. (b) Safety-belt damaged. (c) Safety-belt not in accordance with the requirements(1). (d) Safety-belt buckle damaged or not functioning correctly. (e) Safety-belt retractor damaged or not functioning correctly.
7.1.3. Safety belt Load limiter	Visual inspection	Load limiter obviously missing or not suitable with the vehicle
7.1.4. Safety belt Pre-tensioners	Visual inspection	Pre-tensioner obviously missing or not suitable with the vehicle
7.1.5. Airbag	Visual inspection	(a) Airbags obviously missing or not suitable with the vehicle. (b) Airbag obviously non operative
7.1.6. SRS Systems	Visual inspection of MIL	SRS MIL indicates any kind of failure of the system
7.2. Fire extinguisher (X)(2)	Visual inspection.	(a) Missing. (b) Not in accordance with the requirements(1).

Item	Method	Reasons for failure
7.3. Locks and anti-theft device	Visual inspection and by operation	(a) Device not functioning to prevent vehicle being driven. (b) Defective or inadvertently locking or blocking
7.4. Warning triangle (if required) (X)[2]	Visual inspection.	(a) Missing or incomplete. (b) Not in accordance with the requirements[1].
7.5. First aid kit. (if required) (X)[2]	Visual inspection.	Missing, incomplete or not in accordance with the requirements[1].
7.6. Wheel chocks (wedges) (if required) (X)[2]	Visual inspection.	Missing or not in good condition.
7.7. Audible warning device	Visual inspection and by operation.	(a) Not working. (b) Control insecure. (c) Not in accordance with the requirements[1].
7.8. Speedometer	Visual inspection or by operation during road test or by electronically means..	(a) Not fitted in accordance with the requirements[1]. (b) Not operational. (c) Not capable of being illuminated.
7.9. Tachograph (if fitted/required)	Visual inspection.	(a) Not fitted in accordance with the requirements[1]. (b) Not operational. (c) Defective or missing seals. (d) Calibration plaque missing, illegible or out of date. (e) Obvious tampering or manipulation. (f) Size of tyres not compatible with calibration parameters
7.10. Speed limitation device (if fitted/required)	Visual inspection and by operation if equipment available.	(a) Not fitted in accordance with the requirements[1]. (b) Obviously not operational. (c) Incorrect set speed (if checked) (d) Defective or missing seals. (e) Calibration plaque missing, illegible or out of date. (f) size of tyres not compatible with calibration parameters
7.11 Odometer if available	Visual inspection	(a) obviously manipulated (fraud)

Item	Method	Reasons for failure
		(b) obviously inoperative
7.12 Electronic Stability Control (ESC) if fitted/required	Visual inspection	(a) Wheel speed sensors missing or damaged (b) Wirings damaged (c) Other components missing or damaged (d) Switch damaged or not functioning correctly (e) ESC MIL indicates any kind of failure of the system
8. NUISANCE		
8.1. Noise		
8.1.1 Noise suppression system	Subjective evaluation (unless the inspector considers that the noise level may be borderline, in which case a standing noise test using a noise meter may be conducted)	(a) Noise levels in excess of those permitted in the requirements(1). (b) Any part of the noise suppression system loose, likely to fall off, damaged, incorrectly fitted, missing or obviously modified in a way that would adversely affect the noise levels.
8.2. Exhaust emissions		
8.2.1 Petrol engine emissions		
8.2.1.1 Exhaust emissions control equipment	Visual inspection	(a) Emission control equipment fitted by the manufacturer absent, modified or obviously defective. (b) Leaks which would affect emission measurements
8.2.1.2 Gaseous emissions	Measurement using an exhaust gas analyser in accordance with the requirements(1). 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(1).	(a) Either, gaseous emissions exceed the specific levels given by the manufacturer; (b) Or, if this information is not available, the CO emissions exceed, i) for vehicles not controlled by an advanced emission control system, – 4.5%, or – 3.5% according to the date of first registration or use specified in requirements(1). ii) for vehicles controlled by an advanced emission control system, – at engine idle: 0.5%

Item	Method	Reasons for failure
		– at high idle: 0.3% or – at engine idle: 0.3%[6] – at high idle: 0.2% according to the date of first registration or use specified in requirements(1). (c) Lambda outside the range 1± 0.03 or not in accordance with the manufacturer's specification (d) OBD readout indicating significant malfunction
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 would affect emission measurements
8.2.2.2 Opacity Vehicles registered or put into service before 1 January 1980 are exempted from this requirement	(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 ºC, 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. (ii) Exhaust system shall be purged by at least three free acceleration cycles or by an equivalent method.	(a) For vehicles registered or put into service for the first time after the date specified in requirements(1), opacity exceeds the level recorded on the manufacturer's plate on the vehicle; (b) Where this information is not available or requirements(1) do not allow the use of reference values, for naturally aspirated engines: 2.5 m^{-1} , for turbo-charged engines: 3.0 m^{-1}, or, for vehicles identified in requirements(1) or first registered or put into service for the first time after the date specified in requirements(1), 1.5 m^{-1}.[7]

[6] Type-approved according to limits in row A or B section 5.3.1.4. of Annex I to Directive 70/220/EEC or first registered or put into service after 1 July 2002

[7] Type approved according to limits in row B section 5.3.1.4. of Annex I to Directive 70/220/EEC ; row B1, B2 or C section 6.2.1 of Annex I to Directive 88/77/EEC or first registered or put into service after 1 July 2008

Item	Method	Reasons for failure
	(c) Test procedure: 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. 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. 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 of category 1 and 2 of Annex 1, should be at least two seconds. 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. 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	
8.3 Electromagnetic interference suppression		
Radio-interference (X)[2]	Visual examination.	Any requirements of the requirements[1] not met.
8.4 Other items related to the environment		
8.4.1 Fluid leaks	Visual examination	Any excessive fluid leak likely to harm the environment or to pose a safety risk to other road users
9. SUPPLEMENTARY TESTS FOR PASSENGER CARRYING VEHICLES M2, M3		
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

Item	Method	Reasons for failure
		(e) Not in accordance with the requirements(1).
9.1.2 Emergency exits	Visual inspection and by operation (where appropriate)	(a) defective operation (b) Emergency exits signs missing or illegible (c) Missing hammer to break glass (d) Not in accordance with requirements(1).
9.2. Demisting and defrosting system (X)(2)	Visual inspection and by operation	(a) Not operating correctly (b) Emission of toxic or exhaust gases into driver's or passenger compartment (c) Defective defrosting (if compulsory)
9.3. Ventilation & heating system (X)(2)	Visual inspection and by operation	(a) Defective operation (b) Emission of toxic or exhaust gases into driver's or passenger compartment
9.4. Seats		
9.4.1 Passenger seats (including seats for accompanying personnel)	Visual inspection	a) Seats in defective condition or insecure b) Folding seats (if allowed) not working automatically c) Not in accordance with the requirements(1).
9.4.2 .Driver's seat (additional require-ments)	Visual inspection	a) Defective special devices such as anti-glare shield or anti-dazzle screen b) Protection for driver insecure or not in accordance with requirements(1).
9.5. Interior lighting and destination devices (X)(2)	Visual inspection and by operation	Device defective or not in accordance with requirements(1).
9.6. Gangways, standing areas	Visual inspection	(a) Insecure floor. (b) Defective rails or grab handles. (c) Not in accordance with the requirements(1).
9.7. Stairs and steps	Visual inspection and by operation (where appropriate)	(a) Deteriorated or damaged condition (b) Retractable steps not operating correctly (c) Not in accordance with requirements(1).

Item	Method	Reasons for failure
9.8. Passenger communication system (X)[2]	Visual inspection and by operation.	Defective system
9.9. Notices (X)[2]	Visual inspection.	(a) missing, erroneous or illegible notice (b) not in accordance with requirements[1].
9.10. Requirements regarding the transport of children. (X)[2]		
9.10.1 Doors	Visual inspection	Protection of doors not in accordance with the requirements[1]. regarding this form of transport.
9.10.2 Signalling and special equipment	Visual inspection	Signalling or special equipment absent or not in accordance with requirements[1].
9.11. Requirements regarding the transport of disabled persons (X)[2]		
9.11.1 Doors, ramps and lifts	Visual inspection and by operation	(a) Defective operation. (b) Deteriorated condition. (c) Defective control(s). (d) Defective warning device(s). (e) Not in accordance with the requirements[1].
9.11.2 Wheelchair fixings	Visual inspection and by operation if appropriate	(a) Defective operation. (b) Deteriorated condition. (c) Defective control(s). (d) Not in accordance with the requirements[1].
9.11.3 Signalling and special equipment	Visual inspection	Signalling or special equipment absent or not in accordance with requirements[1].
9.12. Other special equipment (X)[2]		
9.12.1. Installations for food preparation	Visual inspection	(a) installation not in accordance with the requirements[1]. (b) installation damaged to such an extent that it would be dangerous to use it.
12.2.Sanitary installation	Visual inspection	Installation not in accordance with the requirements[1].
9.12.3.Other devices (e.g. audio-visual systems)	Visual inspection	Not in accordance with the requirements[1].

NOTES :

'requirements' are laid down by type-approval requirements at the date of approval, first registration or first entry into service as well as retrofitting obligations or national legislation in the country of registration.

(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 roadworthiness test.

ANNEX III

REQUIREMENTS CONCERNING THE ASSESSMENT OF DEFICIENCIES OF VEHICLES

For each vehicle systems and components subject to testing, the rules to apply during roadworthiness tests to determine whether the condition of the vehicle is acceptable are the following.

Item	Reasons for failure	Assessment of deficiencies		
		Minor	Major	Dangerous
0. IDENTIFICATION OF THE VEHICLE				
0.1. Registration number plates (if needed by requirements[1]	(a) Number plate(s) missing or so insecure/fixed that it is (they are) likely to fall off.		X	
	(b) Inscription missing or illegible.		X	
	(c) Not in accordance with vehicle documents or records.		X	
0.2. Vehicle identification chassis/ serial number	(a) Missing or can not be found.		X	
	(b) Incomplete, illegible.		X	
	(c) Not in accordance with vehicle documents or records.		X	
1. BRAKING EQUIPMENT				
1.1. Mechanical condition and operation				
1.1.1. Service brake pedal/hand lever pivot	(a) Pivot too tight.		X	
	b) Excessive wear or play.		X	
1.1.2. Pedal/hand lever condition and travel of the brake operating device	(a) Excessive or insufficient reserve travel.		X	
	(b) Brake control not releasing correctly. Functionality affected	X	 X	
	(c) Anti-slip provision on brake pedal missing, loose or worn smooth.	X		
1.1.3. Vacuum pump or compressor and reservoirs	(a) Insufficient pressure/vacuum to give assistance for at least four brake applications after the warning device has operated (or gauge shows an unsafe reading);. at least two brake applications after the warning device has operated (or gauge shows an unsafe reading);.		X	 X
	(b) Time taken to build up air pressure/vacuum to safe working value not in accordance with the requirements[1]		X	
	(c) Multi-circuit protection valve or pressure relief valve not working.		X	
	(d) Air leak causing a noticeable drop in pressure or audible air leaks.		X	

Item	Reasons for failure	Assessment of deficiencies		
		Minor	Major	Dangerous
	(e) External damage likely to affect the function of the braking system. Secondary braking performance not met		X 	 X
1.1.4. Low pressure warning gauge or indicator	Malfunctioning or defective gauge or indicator Low pressure not identifyable.	X 	 X	
1.1.5. Hand operated brake control valve	(a) Control cracked, damaged or excessively worn.		X	
	(b) Control insecure on valve or valve insecure.		X	
	(c) Loose connections or leaks in system.		X	
	(d) Unsatisfactory operation.		X	
1.1.6. Parking brake activator, lever control, parking brake ratchet , electronic parking brake	(a) Ratchet not holding correctly.		X	
	(b) wear at lever pivot or in ratchet mechanism Excessive wear.	X 	 X	
	(c) Excessive movement of lever indicating incorrect adjustment.		X	
	(d) Activator missing, damaged or inoperative		X	
	(e) Incorrect functioning, warning indicator shows malfunction		X	
1.1.7. Braking valves (foot valves, unloaders, governors)	(a) Valve damaged or excessive air leak. Functionality affected		X 	 X
	(b) Excessive oil discharge from compressor.	X		
	(c) Valve insecure or inadequately mounted.		X	
	(d) Hydraulic fluid discharge or leak Functionality affected.		X 	 X
1.1.8. Couplings for trailer brakes (electrical & pneumatic)	(a) Tap or self sealing valve defective. Functionality affected.	X 	 X	
	(b) Tap or valve insecure or inadequately mounted. Functionality affected.	X 	 X	
	(c) Excessive leaks. Functionality affected.		X 	 X
	(d) Not functioning correctly Operation of brake affected		X 	 X
1.1.9. Energy storage reservoir	(a) Tank slightly damaged or slightly corroded.	X		

Item		Reasons for failure	Assessment of deficiencies		
			Minor	Major	Dangerous
	pressure tank	Tank heavily damaged, corroded or leaking.		X	
		(b) Drain device operation affected.	X		
		Drain device inoperative		X	
		(c) Tank insecure or inadequately mounted.		X	
1.1.10.	Brake servo units, master cylinder (hydraulic systems)	(a) Defective or ineffective servo unit.		X	
		(b) Master cylinder defective, but brake still operating.		X	
		Master cylinder defective or leaking			X
		(c) Master cylinder insecure, but brake still operating.		X	
		Master cylinder insecure.			X
		(d) Insufficient brake fluid (below MIN mark but more than 50% of reservoir capacity)	X		
		Insufficient brake fluid (below MIN mark but less than 50% of reservoir capacity)		X	
		No brake fluid visible			X
		(e) Master cylinder reservoir cap missing.	X		
		(f) Brake fluid warning light illuminated or defective.	X		
		(g) Incorrect functioning of brake fluid level warning device.	X		
1.1.11.	Rigid brake pipes	(a) Imminent risk of failure or fracture.			X
		(b) Pipes or connections leaking (air brake systems).		X	
		Pipes or connections leaking (hydraulic brake systems)			X
		(c) Pipes damaged or excessively corroded.		X	
		Affecting the functioning of the brakes by blocking or imminent risk of leaking			X
		(d) Pipes misplaced.	X		
		Risk of damage		X	
1.1.12.	Flexible brake hoses	(a) Imminent risk of failure or fracture.			X
		(b) Hoses twisted or to short	X		
		Hoses damaged or chafing		X	
		(c) Hoses or connections leaking. (air brake systems).		X	
		Hoses or connections leaking (hydraulic brake systems)			X
		(d) Hoses bulging under pressure.		X	
		Cord impaired			X
		(e) Hoses porous.		X	

Item		Reasons for failure	Assessment of deficiencies		
			Minor	Major	Dangerous
1.1.13.	Brake linings and pads	(a) Lining or pad excessively worn.(min mark reached) Lining or pad excessively worn.(below min mark)		X	X
		(b) Lining or pad contaminated (oil, grease etc.). Braking performance affected		X	X
		(c) Lining or pad missing			X
1.1.14.	Brake drums, brake discs	(a) Drum or disc worn (min mark reached) or significant scored,. Drum or disc excessively worn, excessively scored, cracked, insecure or fractured.		X	X
		(b) Drum or disc contaminated (oil, grease, etc.)		X	
		(c) Drum or disc missing			X
		(d) Back plate insecure.		X	
1.1.15.	Brake cables, rods, levers, linkages	(a) Cable damaged or knotted. Braking performance affected		X	X
		(b) Component excessively worn or corroded. Braking performance affected		X	X
		(c) Cable, rod or joint insecure.		X	
		(d) Cable guide defective.		X	
		(e) Restriction to free movement of the braking system.		X	
		(f) Abnormal movement of the levers/linkage indicating maladjustment or excessive wear.		X	
1.1.16.	Brake actuators (including spring brakes or hydraulic cylinders)	(a) Actuator cracked or damaged. Braking performance affected		X	X
		(b) Actuator leaking Braking performance affected		X	X
		(c) Actuator insecure or inadequately mounted. Braking performance affected		X	X
		(d) Actuator excessively corroded. Likely to crack		X	X
		(e) Insufficient or excessive travel of operating piston or diaphragm mechanism. Braking performance affected (lack of reserve for movement)		X	X

Item		Reasons for failure	Assessment of deficiencies		
			Minor	Major	Dangerous
		(f) Dust cover damaged. Dust cover missing or excessively damaged	X	 X	
1.1.17.	Load sensing valve	(a) Defective linkage.		X	
		(b) Linkage incorrectly adjusted.		X	
		(c) Valve seized or inoperative.(ABS functioning) Valve seized or inoperative		X	 X
		(d) Valve missing.(if required)			X
		(e) Missing data plate.	X		
		(f) Data illegible or not in accordance with requirements[(1)]	X		
1.1.18.	Slack adjusters and indicators	(a) Adjuster damaged, seized or having abnormal movement, excessive wear or incorrect adjustment.		X	
		(b) Adjuster defective.		X	
		(c) Incorrectly installed or replaced.		X	
1.1.19.	Endurance braking system (where fitted or required)	(a) Insecure connectors or mountings. Functionality affected	X	 X	
		(b) System obviously defective or missing.		X	
1.1.20.	Automatic operation of trailer brakes	Trailer brake does not apply automatically when coupling disconnected.			X
1.1.21.	Complete braking system	(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. Braking performance affected		X	 X
		(b) Leakage of air or anti-freeze. System functionality affected	X	 X	
		(c) Any component insecure or inadequately mounted.		X	
		(d) Inappropriate repair or modification to any component[8] Braking performance affected		X	 X
1.1.22.	Test connections	(a) Missing.		X	

[8] Inappropriate repair or modification means a repair or modification that adversely affects the road safety of the vehicle or has a negative effect on the environment.

Item	Reasons for failure	Assessment of deficiencies		
		Minor	Major	Dangerous
(where fitted or required)	(b) Damaged unusable or leaking.	X	 X	
1.2. Service braking performance and efficiency				
1.2.1. Performance	(a) Inadequate braking effort on one or more wheels. No braking effort on one or more wheels		X	 X
	(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. Braking effort from any wheel is less than 50% of maximum effort recorded from the other wheel on the same axle in case of steered axles		X	 X
	(c) No gradual variation in brake effort (grabbing).		X	
	(d) Abnormal lag in brake operation of any wheel.		X	
	(e) Excessive fluctuation of brake force during each complete wheel revolution.		X	
1.2.2. Efficiency	Does not give at least the minimum figure as follows:- Vehicles registered first time after entry into force of Directive 2010/48/EU: – Category N1: 50 % – Category M1: 58 % – Category M2 and M3: 50 % – Category N2 and N3: 50 % – Category O2 (XX)(3), O3 and O4: • for semi-trailers: 45% • for draw-bar trailers: 50% Vehicles registered before entry into force of Directive 2010/48/EU : Category N1: 45% Category M1, M2 and M3: 50% [9] Category N2 and N3: 43% [10] Category O2 (XX)(3),O3 and O4: 40% [11] Other categories (XX)(3),. - Categories L (both brakes):		X	

9 48% for vehicles not fitted with ABS or type approved before 1 October 1991

10 45% for vehicles registered after 1988 or from the date specified in requirements whichever is the later

11 43% for semi-trailers and draw-bar trailers registered after 1988 or from the date in requirements whichever is the later.

Item	Reasons for failure	Assessment of deficiencies		
		Minor	Major	Dangerous
	Category L1e: 42 % Category L2e, L6e: 40 % Category L3e: 50 % Category L4e: 46 % Category L5e, L7e: 44 % - Categories L (rear wheel brake): all categories: 25 % Less than 50% of the above values reached in relation to the vehicle mass during testing			X
1.3. Secondary (emergency) braking performance and efficiency (if met by separate system)				
1.3.1. Performance	(a) Inadequate braking effort on one or more wheels. No braking effort on one or more wheels		X	X
	(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. Braking effort from any wheel is less than 50% of maximum effort recorded from the other wheel on the same axle in case of steered axles		X	X
	(c) No gradual variation in brake effort (grabbing).		X	
1.3.2. Efficiency	Braking effort less than 50% [12] 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 (except L1e and L3e). Less than 50% of the above values reached in relation to the vehicle mass during testing		X	X
1.4. Parking braking performance and efficiency				
1.4.1. Performance	Brake inoperative on one side or in the case of testing on the road, the vehicle deviates excessively from a straight line. Less than 50% of the efficiency values reached in relation to the vehicle mass during testing		X	X
1.4.2. Efficiency	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 (except L1e and L3e). Less than 50% of the above values reached in relation to the vehicle mass during testing		X	X
1.5. Endurance braking system performance	(a) No gradual variation of efficiency (not applicable to exhaust brake systems).		X	
	(b) System not functioning.		X	

[12] 2.2m/s^2 for N1, N2 and N3 vehicles.

Item	Reasons for failure	Assessment of deficiencies		
		Minor	Major	Dangerous
1.6. Anti-lock braking system (ABS)	(a) Warning device malfunctioning.		X	
	(b) Warning device shows system malfunction.		X	
	(c) Wheel speed sensors missing or damaged		X	
	(d) Wirings damaged		X	
	(e) Other components missing or damaged		X	
1.7 Electronic brake system (EBS)	(a) Warning device malfunctioning.		X	
	(b) Warning device shows system malfunction.		X	
1.8 Brake fluid	(a) Brake fluid boiling temperature too low or water content too high Boling temperature < 180°C or water content > 1,5% Boling temperature < 150°C or water content > 2,0%	X	X	
	(b) Brake fluid contaminated Imminent risk of failure		X	X
	(c) Insufficient brake fluid (below MIN mark but more than 50% of reservoir capacity) Insufficient brake fluid (below MIN mark but less than 50% of reservoir capacity) No brake fluid visible	X	X	X
2. STEERING				
2.1. Mechanical condition				
2.1.1. Steering gear condition	(a) Roughness in operation of gear.		X	
	(b) Sector shaft twisted or splines worn. Affecting functionality		X	X
	(c) Excessive wear in sector shaft. Affecting functionality		X	X
	(d) Excessive movement of sector shaft. Affecting functionality		X	X
	(e) Leaking. formation of drops	X	X	
2.1.2. Steering	(a) Steering gear casing not properly attached.		X	

Item	Reasons for failure	Assessment of deficiencies		
		Minor	Major	Dangerous
gear casing attachment	More than 50% of attachments loose or relative movement to chassis/bodywork visible			X
	(b) Elongated fixing holes in chassis. More than 50 % of attachments affected		X	 X
	(c) Missing or fractured fixing bolts. More than 50 % of attachments affected		X	 X
	(d) Steering gear casing fractured. Stability or attachment of casing affected		X	 X
2.1.3. Steering linkage condition	(a) Relative movement between components which should be fixed. Excessive movement or likely to un-link		X	 X
	(b) Excessive wear at joints. Likely to unlink		X	 X
	(c) Fractures or deformation of any component. Affecting function		X	 X
	(d) Absence of locking devices.		X	
	(e) Misalignment of components (e.g. track rod or drag link).		X	
	(f) Inappropriate repair or modification. Affecting function		X	 X
	(g) Dust cover damaged or deteriorated. Dust cover missing or severely deteriorated	X	 X	
2.1.4. Steering linkage operation	(a) Moving steering linkage fouling a fixed part of chassis.		X	
	(b) Steering stops not operating or missing.		X	
2.1.5. Power steering	(a) Fluid leak. Function affected		X	 X
	(b) Insufficient fluid. (below MIN mark but more than 50% of reservoir capacity to MIN mark Less than 50% of reservoir capacity to MIN mark	X	 X	
	(c) Mechanism not working. Steering affected		X	 X
	(d) Mechanism fractured or insecure. Steering affected		X	 X

Item	Reasons for failure	Assessment of deficiencies		
		Minor	Major	Dangerous
	(e) Misalignment or fouling of components. Steering affected		X	X
	(f) Inappropriate repair or modification. Steering affected		X	X
	(g) Cables/hoses damaged, excessively corroded. Steering affected		X	X
2.2. Steering wheel, column and handle bar				
2.2.1. Steering wheel/handle bar condition	(a) Relative movement between steering wheel and column indicating looseness.		X	
	(b) Absence of retaining device on steering wheel hub Likely to unlink		X	X
	(c) Fracture or looseness of steering wheel hub, rim or spokes Likely to unlink		X	X
2.2.2.Steering column/yokes and forks	(a) Excessive movement of centre of steering wheel up or down.		X	
	(b) Excessive movement of top of column radially from axis of column.		X	
	(c) Deteriorated flexible coupling.		X	
	(d) Attachment defective. Likely to unlink		X	X
	(e) inappropriate repair or modification			X
2.3.Steering play	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 requirements[(1)]. Safe steering affected		X	X
2.4.Wheel alignment (X)[(2)]	Alignment not in accordance with vehicle manufacturer's data or requirements[(1)]. Straight on driving affected; directional stability impaired	X	X	
2.5. Trailer steered axle turntable	(a) Component slightly damaged. Component heavy damaged or cracked.		X	X
	(b) Excessive play. Straight on driving affected; directional stability impaired		X	X
	(c) Attachment defective.(less than 50% of fixings loose) Attachment defective.(more than 50% of fixings loose)		X	X

Item	Reasons for failure	Assessment of deficiencies		
		Minor	Major	Dangerous
2.6. Electronic Power Steering (EPS)	(a) EPS Malfunction Indicator Lamp (MIL) indicates any kind of failure of the system.		X	
	(b) Inconsistency between the angle of the steering wheel and the angle of the wheels. Steering affected		X	X
	(c) power assistance not working		X	
3. VISIBILITY				
3.1. Field of vision	Obstruction within driver's field of view that materially affects his view in front or to the sides. (outside cleaning area of windscreen wipers) Inside cleaning area of windscreen wipers affected or outer mirrors not visible	X	X	
3.2. Condition of glass	(a) Cracked or discoloured glass or transparent panel (if permitted). (outside cleaning area of windscreen wipers) Inside cleaning area of windscreen wipers affected or outer mirrors not visible	X	X	
	(b) Glass or transparent panel (including reflecting or tinted film) that does not comply with specifications in the requirements[(1)] (XX)[(3)], (outside cleaning area of windscreen wipers) Inside cleaning area of windscreen wipers affected or outer mirrors not visible	X	X	
	(c) Glass or transparent panel in unacceptable condition. Visibility through inside cleaning area of windscreen wipers heavily affected		X	X
3.3. Rear-view mirrors or devices	(a) Mirror or device missing or not fitted according to the requirements[(1)]. (at least two rear-view possibilities available) Less than two rear-view possibilities available	X	X	
	(b) Mirror or device slightly damaged or loose. Mirror or device inoperative, heavily damaged, loose or insecure	X	X	
3.4. Windscreen wipers	(a) Wipers not operating or missing		X	
	(b) Wiper blade defective. Wiper blade missing or obviously defective	X	X	
3.5.Windscreen washers	Washers not operating adequately.(lack of washing fluid but pump operating or water-jet misaligned Washers not operating	X	X	
3.6 Demisting system (X)[(2)]	System inoperative or obviously defective.	X		
4. LAMPS, REFLECTORS AND ELECTRICAL EQUIPMENT				
4.1. Headlamps				

Item	Reasons for failure	Assessment of deficiencies		
		Minor	Major	Dangerous
4.1.1. Condition and operation	(a) Defective or missing light / light source.(multiple light /light sources; in case of LED more than 1/3 functioning)	X		
	Single light / light sources; in case of LED less than 2/3 functioning		X	
	(b) Slightly defective projection system (reflector and lens).	X		
	Heavily defective or missing projection system (reflector and lens).		X	
	(c) Lamp not securely attached.		X	
4.1.2. Alignment	Aim of a headlamp not within limits laid down in the requirements(1).		X	
4.1.3. Switching	(a) Switch does not operate in accordance with the requirements(1) (Number of headlamps illuminated at the same time)	X		
	Exceeding of maximum permitted light intensity to the front		X	
	(b) Function of control device impaired.		X	
4.1.4. Compliance with requirements(1).	(a) Lamp, emitted colour, position or intensity not in accordance with the requirements(1).		X	
	(b) Products on lens or light source which obviously reduce light intensity or change emitted colour.		X	
	(c) Light source and lamp not compatible		X	
4.1.5. Levelling devices (where mandatory)	(a) Device not operating.		X	
	(b) Manual device cannot be operated from driver's seat.		X	
4.1.6. Headlamp cleaning device (where mandatory)	Device not operating.	X		
	In case of gas-discharging lamps		X	
4.2. Front and rear position lamps, side marker lamps and end outline marker lamps				
4.2.1. Condition and operation	(a) Defective light source.		X	
	(b) Defective lens.		X	
	(c) Lamp not securely attached.	X		
	Likely to fall off		X	
4.2.2 Switching	(a) Switch does not operate in accordance with the requirements(1).	X		
	Rear position lamps and side marker lamps can be switched off when headlamps are on		X	
	(b) Function of control device impaired.		X	
4.2.3. Compliance with requirements(1)	(a) Lamp, emitted colour, position or intensity not in accordance with the requirements(1).	X		
	Red light to the front or white light to the rear; heavily reduced light intensity		X	

Item	Reasons for failure	Assessment of deficiencies		
		Minor	Major	Dangerous
	(b) Products on lens or light source which reduce light intensity or change emitted colour. Red light to the front or white light to the rear; heavily reduced light intensity	X	X	
4.3. Stop Lamps				
4.3.1. Condition and operation	(a) Defective light source.(multiple light source in case of LED more than 1/3 functioning) Single light sources; in case of LED less than 2/3 functioning All light sources defective	X	X	X
	(b) slightly defective lens (no influence on emitted light). Heavily defective lens (emitted light affected).	X	X	
	(c) Lamp not securely attached. Likely to fall off	X	X	
4.3.2. Switching	(a) Switch does not operate in accordance with the requirements(1). Delayed operation (more than 2,5m/s^2 deceleration before brake lights are on) No operation at all	X	X	X
	(b) Function of control device impaired.		X	
4.3.3. Compliance with requirements(1).	Lamp, emitted colour, position or intensity not in accordance with the requirements(1). White light to the rear; heavily reduced light intensity	X	X	
4.4. Direction indicator and hazard warning lamps				
4.4.1. Condition and operation	(a) Defective light source. .(multiple light source in case of LED more than 1/3 functioning) Single light sources; in case of LED less than 2/3 functioning	X	X	
	(b) slightly defective lens. (no influence on emitted light) Heavily defective lens (emitted light affected).	X	X	
	(c) Lamp not securely attached Likely to fall off	X	X	
4.4.2. Switching	Switch does not operate in accordance with the requirements(1). No operation at all	X	X	
4.4.3. Compliance with requirements(1).	Lamp, emitted colour, position or intensity not in accordance with the requirements(1). Other than amber light emitted	X	X	
4.4.4. Flashing frequency	Rate of flashing not in accordance with the requirements(1).(frequency more than 25% deviating) Frequency more than 50% deviating	X	X	
4.5. Front and rear fog lamps				
4.5.1. Condition and operation	(a) Defective light source. .(multiple light source in case of LED more than 1/3 functioning) Single light sources; in case of LED less than 2/3 functioning	X	X	

Item	Reasons for failure	Assessment of deficiencies		
		Minor	Major	Dangerous
	(b) slightly defective lens. (no influence on emitted light)	X		
	Heavily defective lens (emitted light affected).		X	
	(c) Lamp not securely attached.	X		
	Likely to fall off or dazzling upcoming traffic		X	
4.5.2 Alignment (X)[2]	Front fog lamp out of horizontal alignment when the light pattern has cut-off line (cut-off line too low)	X		
	Cut-off line above that for head lamps		X	
4.5.3. Switching	Switch does not operate in accordance with the requirements[1].	X		
	Not operative		X	
4.5.4. Compliance with requirements[1].	(a) Lamp, emitted colour, position or intensity not in accordance with the requirements[1]		X	
	(b) System does not operate in accordance with the requirements[1]		X	
4.6. Reversing lamps				
4.6.1. Condition and operation	(a) Defective light source.	X		
	(b) Defective lens.	X		
	Lamp not securely attached.	X		
	Likely to fall off		X	
4.6.2. Compliance with requirements[1]	(a) Lamp, emitted colour, position or intensity not in accordance with the requirements[1].		X	
	(b) System does not operate in accordance with the requirements[1].		X	
4.6.3. Switching	Switch does not operate in accordance with the requirements[1].	X		
	Reversing lamp can be switched on with gear not in position reverse		X	
4.7. Rear registration plate lamp				
4.7.1. Condition and operation	(a) Lamp throwing direct light to the rear.	X		
	Directly emitting white light to the rear		X	
	(b) Defective light source. multiple light source	X		
	Defective light source. single light source		X	
	Lamp not securely attached.	X		
	Likely to fall off		X	
4.7.2. Compliance with requirements[1]	System does not operate in accordance with the requirements[1].	X		
4.8. Retro-reflectors, conspicuity (retro reflecting) markings and rear marker plates				
4.8.1. Condition	(a) Reflecting equipment defective or damaged.	X		

Item	Reasons for failure	Assessment of deficiencies		
		Minor	Major	Dangerous
	Reflecting affected		X	
	(b) Reflector not securely attached.	X		
	Likely to fall off		X	
4.8.2. Compliance with requirements[1]	Device, reflected colour or position not in accordance with the requirements[1].	X		
	Missing or reflecting red colour to the front or white colour to the rear		X	
4.9. Tell-tales mandatory for lighting equipment				
4.9.1. Condition and operation	Not operating.	X		
	Not operating for un-dipped beam or rear fog lamp		X	
4.9.2. Compliance with requirements[1]	Not in accordance with the requirements[1].	X		
4.10. Electrical connections between towing vehicle and trailer or semi-trailer	(a) Fixed components not securely attached.	X		
	Loose socket		X	
	(b) Damaged or deteriorated insulation.	X		
	Likely to cause a short-circuit fault		X	
	(c) Trailer or towing vehicle electrical connections not functioning correctly.		X	
	Trailer braking system affected; trailer brake lights not working at all			X
4.11. Electrical wiring	(a) Wiring insecure or not adequately secured.	X		
	Fixings loose, touching sharp edges, connectors likely to be disconnected		X	
	Wiring likely to touch hot parts, rotating parts or ground, connectors disconnected (relevant parts for braking, steering)			X
	(b) Wiring slightly deteriorated.	X		
	Wiring heavily deteriorated		X	
	Wiring extreme deteriorated (relevant parts for braking, steering)			X
	(c) Damaged or deteriorated insulation.	X		
	Likely to cause a short-circuit fault		X	
	Eminent risk of fire, formation of sparks			X
4.12. Non obligatory lamps and retro-reflectors (X)[2]	(a) A lamp/retro-reflector fitted not in accordance with the requirements[1].	X		
	Emitting/reflecting red light to the front or white light to the rear		X	
	(b) Lamp operation not in accordance with the requirements[1].	X		
	Number of headlights simultaneous operating exceeding permitted light intensity; Emitting red light to the front or white light to the rear		X	
	(c) Lamp/retro-reflector not securely attached.	X		
	Likely to fall off		X	
4.13. Battery(ies)	(a) Insecure.	X		

Item	Reasons for failure	Assessment of deficiencies		
		Minor	Major	Dangerous
	Not properly attached; Likely to cause a short-circuit fault		X	
	(b) Leaking. Loss of hazardous substances	X	 X	
	(c) Defective switch (if required).		X	
	(d) Defective fuses (if required).		X	
	(e) inappropriate ventilation (if required)		X	
5. AXLES, WHEELS, TYRES AND SUSPENSION				
5.1. Axles				
5.1.1. Axles	(a) Axle fractured or deformed.			X
	(b) Insecure fixing to vehicle. Relative movement to chassis/bodywork/ loose		X	 X
	(c) Inappropriate repair or modification. Stability impaired, functionality affected, insufficient clearance to other vehicle parts or to the ground		X	 X
5.1.2. Stub axles	(a) Stub axle fractured.			X
	(b) Excessive wear in the swivel pin and/or bushes. Likely of loosening; directional stability impaired		X	 X
	(c) Excessive movement between stub axle and axle beam. Likely of loosening; directional stability impaired		X	 X
	Stub axle pin loose in axle. Likely of loosening; directional stability impaired		X	 X
5.1.3. Wheel bearings	(a) Excessive play in a wheel bearing. directional stability impaired; danger of demolishment		X	 X
	(b) Wheel bearing too tight, jammed. Danger of overheating; danger of demolishment		X	 X
5.2. Wheels and tyres				
5.2.1. Road wheel hub	(a) Any wheel nuts or studs missing or loose(<3,5t: at least 4 symmetric distributed remaining; >3,5t. at least 75% symmetric distributed remaining) . More than 25% wheel nuts or studs missing or loose.		X	 X

Item	Reasons for failure	Assessment of deficiencies		
		Minor	Major	Dangerous
	(b) Hub worn or damaged Hub worn or damaged in a way that secure fixing of wheels affected		X	 X
5.2.2. Wheels	(a) Any fracture or welding defect.			X
	(b) Tyre retaining rings not properly fitted. Likely to come-off		X	 X
	(c) Wheel badly distorted or worn. Secure fixing to hub affected; secure fixing of tyre affected		X	 X
	(d) Wheel size or type not in accordance with the requirements[(1)] and effecting road safety		X	
5.2.3. Tyres	(a) Tyre size, load capacity, approval mark or speed rating not in accordance with the requirements[(1)] and effecting road safety Insufficient load capacity or speed rating for actual use, tyre touches other fix vehicle parts impairing save driving		X	 X
	(b) Tyres on same axle or on twin wheels of different sizes.		X	
	(c) Tyres on same axle of different construction (radial / cross-ply).		X	
	(d) Any serious damage or cut to tyre. Cord visible or damaged		X	 X
	(e) Tyre tread depth not in accordance with the requirements[(1)]. Less than 80% of required tread depth		X	 X
	(f) Tyre rubbing against other components (flexible anti spray devices). Tyre rubbing against other components (save driving not impaired)	X	 X	
	(g) Re-grooved tyres not in accordance with requirements[(1).] Cord protection layer affected		X	 X
	(h) Air pressure monitoring system malfunctioning obviously inoperative	X	 X	
5.3. Suspension system				
5.3.1. Springs and	(a) Insecure attachment of springs to chassis or axle.		X	

Item	Reasons for failure	Assessment of deficiencies		
		Minor	Major	Dangerous
stabilizer	Relative movement visible; more than 50% of fixings loose			X
	(b) A damaged or fractured spring component. Main spring (-leaf), or more than 50 % of additional leafs affected		X	 X
	(c) spring missing Main spring (-leaf), or more than 50 % of additional leafs affected		X	 X
	(d) inappropriate repair or modification Insufficient clearance to other vehicle parts; spring system inoperative		X	 X
5.3.2. Shock absorbers	(a) Insecure attachment of shock absorbers to chassis or axle. Shock absorber loose	X	 X	
	(b) Damaged shock absorber showing signs of severe leakage or malfunction.		X	
5.3.2.1 efficiency testing of damping	(a) significant difference between left and right		X	
	(b) given minimum values not reached		X	
5.3.3. Torque tubes, radius arms, wishbones and suspension arms	(a) Insecure attachment of component to chassis or axle. Likely of loosening; directional stability impaired		X	 X
	(b) A damaged or excessively corroded component. Stability of component affected or component fractured		X	 X
	(c) Inappropriate repair or modification. Insufficient clearance to other vehicle parts; system inoperative		X	 X
5.3.4. Suspension joints	(a) Excessive wear in swivel pin and/or bushes or at suspension joints. Likely of loosening; directional stability impaired		X	 X
	(b) Dust cover severely deteriorated. Dust cover missing or fractured	X	 X	
5.3.5. Air suspension	(a) System inoperable.			X
	(b) Any component damaged, modified or deteriorated in a way that would adversely affect the functioning of the system. Functioning of system seriously affected		X	 X
	(c) audible system leakage		X	
6. CHASSIS AND CHASSIS ATTACHMENTS				

Item	Reasons for failure	Assessment of deficiencies		
		Minor	Major	Dangerous
6.1. Chassis or frame and attachments				
6.1.1. General condition	a) Slight fracture or deformation of any side or cross member. Serious fracture or deformation of any side or cross member.		X	X
	b) Insecurity of strengthening plates or fastenings (< 50%). Loose fastenings (>50%); insufficient strength of parts		X	X
	c) Excessive corrosion which affects the rigidity of the assembly. insufficient strength of parts		X	X
6.1.2. Exhaust pipes and silencers	a) Insecure or leaking exhaust system.		X	
	b) Fumes entering cab or passengers compartment. Danger to health of persons on board		X	X
6.1.3. Fuel tank and pipes (including heating fuel tank and pipes)	(a) Insecure tank or pipes. Risk of fire		X	X
	(b) Leaking fuel or missing or ineffective filler cap. Risk of fire; excessive loss of hazardous material		X	X
	(c) chafed pipes. Damaged pipes	X	X	
	(d) Fuel stopcock (if required) not operating correctly.		X	
	(e) Fire risk due to leaking fuel fuel tank or exhaust improperly shielded engine compartment condition			X
	(f) LPG/CNG or hydrogen system not in accordance with requirements[(1).] Any part of the system defective		X	X
6.1.4. Bumpers, lateral protection and rear underrun devices	(a) Looseness or damage likely to cause injury when grazed or contacted. Parts likely to fall off; functionality heavily affected		X	X
	(b) Device obviously not in compliance with the requirements[(1).]		X	
6.1.5. Spare wheel carrier (if fitted)	(a) Carrier not in proper condition	X		

Item	Reasons for failure	Assessment of deficiencies		
		Minor	Major	Dangerous
	(b) Carrier fractured or insecure.		X	
	(c) A spare wheel not securely fixed in carrier		X	
	likely to fall off.			X
6.1.6. Coupling mechanisms and towing equipment	(a) Component damaged, defective or cracked (if not in use).		X	
	Component damaged, defective or cracked (if in use)			X
	(b) Excessive wear in a component.		X	
	Below wear limit			X
	(c) Attachment defective.		X	
	Any attachment loose			X
	(d) Any safety device missing or not operating correctly.		X	
	(e) Any indicator not working.		X	
	(f) Obstruct registration plate or any lamp (when not in use)	X		
	Registration plate not readable (when not in use)		X	
	(g) Inappropriate repair or modification (secondary parts)		X	
	Inappropriate repair or modification (primary parts)			X
6.1.7. Transmission	(a) Loose or missing securing bolts.(<30%)		X	
	Loose or missing securing bolts.(>30%)			X
	(b) Excessive wear in transmission shaft bearings.		X	
	Likeliness of loosening or cracking			X
	(c) Excessive wear in universal joints.		X	
	Likeliness of loosening or cracking			X
	(d) Deteriorated flexible couplings.		X	
	Likeliness of loosening or cracking			X
	(e) A damaged or bent shaft.		X	
	(f) Bearing housing fractured or insecure.		X	
	Likeliness of loosening or cracking			X
	(g) Dust cover severely deteriorated.	X		
	Dust cover missing or fractured		X	
	(h) Illegal power-train modification		X	
6.1.8. Engine mountings	Deteriorated, obviously and severely damaged,		X	
	loose or fractured mountings.			X
6.1.9 Engine performance	(a) Control unit illegal modified		X	
	(b) illegal engine modification		X	

Item	Reasons for failure	Assessment of deficiencies		
		Minor	Major	Dangerous
6.2. Cab and bodywork				
6.2.1. Condition	(a) A loose or damaged panel or part likely to cause injury. Likely to fall off		X	X
	(b) Insecure body pillar. Stability impaired		X	X
	(c) Permitting entry of engine or exhaust fumes. Danger to health of persons on board		X	X
	(d) Inappropriate repair or modification. Insufficient clearance to rotating or moving parts and road		X	X
6.2.2. Mounting	(a) Body or cab insecure. Stability affected		X	X
	(b) Body/cab obviously not located squarely on chassis.		X	
	(c) Insecure or missing fixing of body/cab to chassis or cross members.(< 50 % and if symmetrical) Insecure or missing fixing of body/cab to chassis or cross members.(> 50 %)		X	X
	(d) Excessive corrosion at fixing points on integral bodies. Stability affected		X	X
6.2.3. Doors and door catches	(a) A door will not open or close properly.		X	
	(b) A door likely to open inadvertently or one that will not remain closed.(sliding doors) A door likely to open inadvertently or one that will not remain closed.(turning doors)		X	X
	(c) Door, hinges, catches or pillar deteriorated. Door, hinges, catches or pillar missing or loose.	X	X	
6.2.4. Floor	Floor insecure or badly deteriorated Insufficient stability		X	X
6.2.5. Driver's seat	(a) Seat with defective structure. A loose seat or		X	X
	(b) Adjustment mechanism not functioning correctly. Seat moving or backrest not fixable		X	X
6.2.6. Other seats	(a) Seats in defective condition or insecure.(secondary parts) Seats in defective condition or insecure (main parts).	X	X	
	(b) Seats fitted not in accordance with requirements[(1)]. Permitted number of seats exceeded; positioning not in compliance with approval	X	X	
6.2.7. Driving	Any control necessary for the safe operation of the vehicle not functioning correctly.		X	

Item	Reasons for failure	Assessment of deficiencies		
		Minor	Major	Dangerous
controls	Safe operation affected			X
6.2.8. Cab steps	(a) Step or step ring insecure. Insufficient stability	X	X	
	(b) Step or ring in a condition likely to cause injury to users.		X	
6.2.9. Other interior and exterior fittings and equipment	(a) Attachment of other fitting or equipment defective.		X	
	(b) Other fitting or equipment not in accordance with the requirements[(1).] Parts fitted likely to cause injuries; safe operation affected	X	X	
	(c) Leaking hydraulic equipment Extensive loss of hazardous material	X	X	
6.2.10. Mudguards (wings), spray suppression devices	(a) Missing, loose or badly corroded. Likely to cause injuries; likely to fall off	X	X	
	(b) Insufficient clearance to road wheel (spray suppression). Insufficient clearance to road wheel.(mudguards)	X	X	
	(c) Not in accordance with the requirements[(1).] Insufficient coverage of tyre-band	X	X	
7. OTHER EQUIPMENT				
7.1. Safety-belts/buckles and restraint systems				
7.1.1. Security of safety-belts/buckles mounting	(a) Anchorage point badly deteriorated. Stability affected		X	X
	(b) Anchorage loose			X
7.1.2. Condition of safety-belts/buckles.	(a) Mandatory safety-belt missing or not fitted.		X	
	(b) Safety-belt damaged. Any cut or sign of overstretching	X	X	
	(c) Safety-belt not in accordance with the requirements[(1).]		X	
	(d) Safety-belt buckle damaged or not functioning correctly.		X	
	(e) Safety-belt retractor damaged or not functioning correctly.		X	
7.1.3. Safety belt Load limiter	Load limiter obviously missing or not suitable with the vehicle		X	
7.1.4. Safety belt Pre-tensioners	Pre-tensioner obviously missing or not suitable with the vehicle		X	
7.1.5. Airbag	(a) Airbags obviously missing or not suitable with the vehicle.		X	
	(b) Airbag obviously non operative		X	

Item	Reasons for failure	Assessment of deficiencies		
		Minor	Major	Dangerous
7.1.6. SRS Systems	SRS MIL indicates any kind of failure of the system		X	
7.2. Fire extinguisher (X)[2]	(a) Missing.		X	
	(b) Not in accordance with the requirements[1].	X		
	If required (e.g. Taxi, busses, coaches, etc)		X	
7.3. Locks and anti-theft device	(a) Device not functioning to prevent vehicle being driven.	X		
	(b) Defective		X	
	inadvertently locking or blocking			X
7.4. Warning triangle (if required) (X)[2]	(a) Missing or incomplete.	X		
	(b) Not in accordance with the requirements[1].	X		
7.5. First aid kit. (if required) (X)[2]	Missing, incomplete or not in accordance with the requirements[1].	X		
7.6. Wheel chocks (wedges) (if required) (X)[2]	Missing or not in good condition.	X		
	Insufficient stability or dimension		X	
7.7. Audible warning device	(a) Not properly working.	X		
	Not working at all		X	
	(b) Control insecure.	X		
	(c) Not in accordance with the requirements[1].	X		
	Emitted sound likely to be mixed with official sirens		X	
7.8. Speedometer	(a) Not fitted in accordance with the requirements[1].	X		
	Missing if required		X	
	(b) operation impaired.	X		
	Not operational at all		X	
	(c) Not capable of being sufficient illuminated.	X		
	Not being illuminated at all		X	
7.9. Tachograph (if fitted/required)	(a) Not fitted in accordance with the requirements[1].		X	
	(b) Not operational.		X	
	(c) Defective or missing seals.		X	
	(d) Calibration plaque missing, illegible or out of date.		X	
	(e) Obvious tampering or manipulation.		X	
	(f) Size of tyres not compatible with calibration parameters		X	
7.10. Speed limitation device (if fitted/required)	(a) Not fitted in accordance with the requirements[1].		X	

Item		Reasons for failure		Assessment of deficiencies		
				Minor	Major	Dangerous
		(b)	Obviously not operational.		X	
		(c)	Incorrect set speed (if checked)		X	
		(d)	Defective or missing seals.		X	
		(e)	Calibration plaque missing, illegible or out of date.		X	
		(f)	size of tyres not compatible with calibration parameters		X	
7.11	Odometer if available	(a)	obviously manipulated (fraud)		X	
		(b)	obviously inoperative		X	
7.12	Electronic Stability Control (ESC) if fitted/required	(a)	Wheel speed sensors missing or damaged		X	
		(b)	Wirings damaged		X	
		(c)	Other components missing or damaged		X	
		(d)	Switch damaged or not functioning correctly		X	
		(e)	ESC MIL indicates any kind of failure of the system		X	
8.	**NUISANCE**					
8.1.	Noise					
8.1.1	Noise suppression system	(a)	Noise levels in excess of those permitted in the requirements[(1).]		X	
		(b)	Any part of the noise suppression system loose, damaged, incorrectly fitted, missing or obviously modified in a way that would adversely affect the noise levels. likely to fall off		X	X
8.2.	Exhaust emissions					
8.2.1	Petrol engine emissions					
8.2.1.1	Exhaust emissions control equipment	(a)	Emission control equipment fitted by the manufacturer absent, modified or obviously defective.		X	
		(b)	Leaks which would affect emission measurements		X	
8.2.1.2	Gaseous emissions	(a)	Either, gaseous emissions exceed the specific levels given by the manufacturer;		X	

Item	Reasons for failure	Assessment of deficiencies		
		Minor	Major	Dangerous
	(b) Or, if this information is not available, the CO emissions exceed, i) for vehicles not controlled by an advanced emission control system, – 4.5%, or – 3.5% according to the date of first registration or use specified in requirements(1). ii) 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%[13] – at high idle: 0.2% according to the date of first registration or use specified in requirements(1).		X	
	(c) Lambda outside the range 1± 0.03 or not in accordance with the manufacturer's specification		X	
	(d) OBD readout indicating significant malfunction		X	
8.2.2 Diesel engine emissions				
8.2.2.1 Exhaust emission control equipment	(a) Emission control equipment fitted by the manufacturer absent or obviously defective		X	
	(b) Leaks which would affect emission measurements		X	
8.2.2.2 Opacity Vehicles registered or put into service before 1 January 1980 are	(a) For vehicles registered or put into service for the first time after the date specified in requirements(1), opacity exceeds the level recorded on the manufacturer's plate on the vehicle;		X	

[13] Type-approved according to limits in row A or B section 5.3.1.4. of Annex I to Directive 70/220/EEC or first registered or put into service after 1 July 2002

Item	Reasons for failure	Assessment of deficiencies		
		Minor	Major	Dangerous
exempted from this requirement	(b) Where this information is not available or requirements[1] do not allow the use of reference values, for naturally aspirated engines: 2.5 m^{-1} , for turbo-charged engines: 3.0 m^{-1}, or, for vehicles identified in requirements[1] or first registered or put into service for the first time after the date specified in requirements[1], 1.5 m^{-1}.[14]		X	
8.3 Electromagnetic interference suppression				
Radio-interference (X)[2]	Any requirements of the requirements[1] not met.	X		
8.4 Other items related to the environment				
8.4.1 Fluid leaks	Any excessive fluid leak likely to harm the environment or to pose a safety risk to other road users		X	
	Steady formation of drops			X
9. SUPPLEMENTARY TESTS FOR PASSENGER CARRYING VEHICLES M2, M3				
9.1. Doors				
9.1.1 Entrance and exit doors	(a) Defective operation		X	
	(b) Deteriorated condition	X		
	Likely to cause injuries		X	
	(c) Defective emergency control		X	
	(d) Remote control of doors or warning devices defective		X	
	(e) Not in accordance with the requirements[1]	X		
	Insufficient door width		X	
9.1.2 Emergency exits	(a) defective operation		X	
	(b) Emergency exits signs illegible	X		
	Emergency exits signs missing		X	
	(c) Missing hammer to break glass		X	
	(d) Not in accordance with requirements[1]	X		
	Insufficient width or access blocked		X	
9.2. Demisting and defrosting system (X)[2]	(a) Not operating correctly	X		
	Affecting safe operation of vehicle		X	
	(b) Emission of toxic or exhaust gases into driver's or passenger compartment		X	
	Danger to health of persons on board			X
	(c) Defective defrosting (if compulsory)		X	
9.3. Ventilation & heating system (X)[2]	(a) Defective operation	X		
	Risk to health of persons on board		X	
	(b) Emission of toxic or exhaust gases into driver's or passenger compartment		X	
	Danger to health of persons on board			X

[14] 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 or first registered or put into service after 1 July 2008

Item	Reasons for failure	Assessment of deficiencies		
		Minor	Major	Dangerous
9.4. Seats				
9.4.1 Passenger seats (including seats for accompanying personnel)	a) Seats in defective condition Seats insecure	X	X	
	b) Folding seats (if allowed) not working automatically blocking an emergency exit	X	X	
	c) Not in accordance with the requirements(1). Number of seats exceeding approved amount	X	X	
9.4.2 .Driver's seat (additional requirements)	a) Defective special devices such as anti-glare shield or anti-dazzle screen field of vision impaired	X	X	
	b) Protection for driver insecure or not in accordance with requirements(1). Likely to cause injuries	X	X	
9.5. Interior lighting and destination devices (X)(2)	Device defective or not in accordance with requirements(1). Not operational at all	X	X	
9.6. Gangways, standing areas	(a) Insecure floor. Stability affected		X	X
	(b) Defective rails or grab handles. Insecure or un-useable	X	X	
	(c) Not in accordance with the requirements(1). Insufficient width or space	X	X	
9.7. Stairs and steps	(a) Deteriorated condition damaged condition stability affected	X	X	X
	(b) Retractable steps not operating correctly		X	
	(c) Not in accordance with requirements(1). Insufficient width or exceeding height	X	X	
9.8. Passenger communication system (X)(2)	Defective system Not operational at all	X	X	
9.9. Notices (X)(2)	(a) missing, erroneous or illegible notice	X		
	(b) not in accordance with requirements(1). False information	X	X	
9.10. Requirements regarding the transport of children. (X)(2)				
9.10.1 Doors	Protection of doors not in accordance with the requirements(1). regarding this form of transport		X	
9.10.2 Signalling and special equipment	Signalling or special equipment absent or not in accordance with requirements(1).	X	X	
9.11. Requirements regarding the transport of disabled persons (X)(2)				
9.11.1 Doors, ramps and lifts	(a) Defective operation. Safe operation affected	X	X	

Item	Reasons for failure	Assessment of deficiencies		
		Minor	Major	Dangerous
	(b) Deteriorated condition. Stability affected; likely to cause injuries	X	X	
	(c) Defective control(s). Safe operation affected	X	X	
	(d) Defective warning device(s). Not operating at all	X	X	
	(e) Not in accordance with the requirements(1).		X	
9.11.2 Wheelchair fixings	(a) Defective operation. Safe operation affected	X	X	
	(b) Deteriorated condition. Stability affected; likely to cause injuries	X	X	
	(c) Defective control(s). Safe operation affected	X	X	
	(d) Not in accordance with the requirements(1).		X	
9.11.3 Signalling and special equipment	Signalling or special equipment absent or not in accordance with requirements(1).		X	
9.12. Other special equipment (X)(2)				
9.12.1. Installations for food preparation	(a) installation not in accordance with the requirements(1).		X	
	(b) installation damaged to such an extent that it would be dangerous to use it.		X	
12.2.Sanitary installation	Installation not in accordance with the requirements(1). likely to cause injuries	X	X	
9.12.3.Other devices (e.g. audio-visual systems)	Not in accordance with the requirements(1). Safe operation of vehicle affected	X	X	

NOTES :

(1) ‘requirements’ are laid down by type-approval requirements at the date of approval, first registration or first entry into service as well as retrofitting obligations or national legislation in the country of registration.

(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 roadworthiness test.

ANNEX IV

MINIMUM CONTENTS OF A ROADWORTHINESS CERTIFICATE

The roadworthiness certificate issued following a roadworthiness test shall cover at least the following elements:

1) Vehicle Identification Number (VIN number)

2) Registration plate number of the vehicle and country symbol of the State of registration

3) Place and date of the test

4) Odometer reading at the time of the test, if available

5) Vehicle category if available

6) Identified deficiencies and their category

7) Measurement results:

   – Boil temperature or water-content of braking fluid

   – Brake forces per wheel, input air pressure in case of air brake systems and calculation results for brake efficiency

   – Concentrations of gaseous emissions and calculated λ value of petrol engines or opacity values of diesel engines

8) Overall assessment of the vehicle

9) Date of next roadworthiness test, if this information is not provided by other means

10) Name of testing organisation or centre and signature or identification of the inspector responsible for the test.

ANNEX V

MINIMUM REQUIREMENTS CONCERNING ROADWORTHINESS FACILITIES AND TEST EQUIPMENT

I – Facilities and equipment

Roadworthiness tests shall be carried out using facilities and equipment complying at least with the following minimum requirements:

1) A test facility with adequate space for the evaluation of vehicles and which meets the necessary health and safety requirements applicable for the testing personnel;

2) A test lane of sufficient size for each test, a pit or lift which is equipped with a device to lift a vehicle on an axle, equipped with appropriate lighting and, where necessary, with aeration devices;

3) A roller brake tester capable of measuring, displaying and recording the braking forces, pedal force and the air-pressure in air brake systems according to Annex A of standard ISO 21069-1 on the technical requirements of roller brake tester;

4) A roller brake tester according to item 3, not including the recording braking forces, pedal force and the air-pressure in air brake systems and their display;

5) A plate brake tester equivalent to the roller brake tester according to item 3 not including the recording capability of the braking forces, pedal force and the display of air-pressure at air brake systems;

6) A deceleration recording instrument, while non-continuous measurement instruments must record/store measurements at least 10 times per second;

7) Facilities for the testing of air brake systems;

8) A device to determine the axle loads (optional facilities for measuring of two wheel loads);

9) A device for testing the wheel-axle suspension (wheel play detector) without lifting the axis, which shall meet the following requirements:

   (a) The device must be equipped with at least two power-operated plates that can be moved in opposite sense both in the longitudinal and transversal directions;

   (b) The movement of the plates must be controllable by the operator from the testing position;

   (c) The plates shall comply with the following technical requirements:

      (i) for vehicles up to 3.5 tons:

– Minimum axle load of 2000 kg,

– Minimum plate load of 1000 kg,

– Minimum horizontal force per plate of 7000 N,

– Longitudinal and transversal movement of at least 40 mm,

– Lifting speed 5 cm / s to 10 cm / s;

(ii) for vehicles over 3.5 tons:

– Minimum axle load of 15 000 kg,

– Minimum plate load of 9 000 kg,

– Minimum horizontal force per plate of 30 000 N,

– Longitudinal and transversal movement of at least 100 mm,

– Lifting speed 5 cm / s to 10 cm / s;

10) A device for testing the efficiency of shock absorber;

11) A sound level meter grade 1;

12) A 4-gas analyser according to Directive 2004/22/EC on measuring instruments[15];

13) A device for measurement of the absorption coefficient with sufficient accuracy;

14) One headlamp aiming device, that allows the test of the setting of the headlight according to the provisions for the setting of headlights of motor vehicles (Directive 76/756/EEC), the light / dark boundary must be easily recognizable in daylight (without direct sunlight);

15) A device for measuring the tread depth of tyres;

16) A device for checking the brake fluid, in accordance with the following criteria:

(a) brake fluid testing device for testing the water content are permitted when the following requirements are met:

– at least a water content of 1.0% to 2.5% can be displayed,

– the measured value must be displayed in not more than 0.5% steps,

– the device must be calibrated, analogue display devices only with a zero adjustment allowed;

(b) Brake fluid testing devices to measure the boiling point are permitted when the following requirements are met:

– display area of at least 120 ° C to 210 ° C,

[15] JO L 135,30.4.2004, p.1.

– the measured value must be displayed in not more than 30 °steps,

– the device must be calibrated, analogue display devices only with azero adjustment allowed.

17) An OBD scan tool.

Devices 12 and 13 can be combined into one device.

II - Calibration of equipment used for measurements

Unless specified otherwise by the relevant European legislation, the interval between two successive calibrations may not exceed

(i) 24 months for the measurement of weight, pressure and sound level

(ii) 12 months for the measurement of forces,

(iii) 6 months for the measurement of gaseous emissions.

Equipment required for the purpose of performing a roadworthiness test

Vehicles		**Category**		**Equipment required for each item listed in Paragraph I**																
	Maximum mass			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1. motorcycles			[1]					[2]												
		L1e	P	x										X	x		x	x	x	x
		L3e,L4e	P	x										X	x		x	x	x	x
		L3e,L4e	D	x										X		x	x	x	x	x
		L2e	P	x	x									X			x	x	x	x
		L2e	D	x	x									X		x	x	x	x	x
		L5e	P	x	x								x	X	x		x	x	x	x
		L5e	D	x	x									X		x	x	x	x	x
		L6e	P	x	x									X			x	x	x	x
		L6e	D	x	x									X		x	x	x	x	x
		L7e	P	x	x								x	X	x		x	x	x	x
		L7e	D	x	x									X		x	x	x	x	x
2. vehicles for carriage of persons	Up to 2800 kg	M1,M2	P	x	x		x	x					x	X	x		x	x	x	x
	Up to 2800 kg	M1,M2	D	x	x		x	x						X		x	x	x	x	x
	› 2800 to 3500 kg	M1,M2	P	x	x		x	x				x	x	X	x		x	x	x	x
	› 2800 to 3500 kg	M1,M2	D	x	x		x	x				x		X		x	x	x	x	x
	› 3500 kg	M2,M3	P	x	x	x			x	x	x	x		X	x		x	x	x	x
	› 3500 kg	M2,M3	D	x	x	x			x	x	x	x		X		x	x	x	x	x
Vehicles for carriage of goods	Up to 2800 kg	N1	P	x	x		x	x					x	X	x		x	x	x	x
	Up to 2800 kg	N1	D	x	x		x	x						X		x	x	x	x	x
	› 2800 to 3500 kg	N1	P	x	x		x	x				x	x	X	x		x	x	x	x
	› 2800 to3500 kg	N1	D	x	x		x	x				x		X		x	x	x	x	x
	› 3500 kg	N2,N3	P	x	x	x			x	x	x	x		X	x		x	x	x	x

Equipment required for the purpose of performing a roadworthiness test

Vehicles		**Category**		**Equipment required for each item listed in Paragraph I**																
	Maximum mass			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
	› 3500 kg	N2,N3	D	x	x	x			x	x	x	x		X		x	x	x	x	x
Special vehicles derived from a category N vehicle, T5	Up to 2800 kg	N1	P	x	x		x	x					x	X	x		x	x	x	x
	upto2800 kg	N1	D	x	x		x	x						X		x	x	x	x	x
	› 2800 to 3500 kg	N1	P	x	x		x	x				x	x	X	x		x	x	x	x
	› 2800 to 3500 kg	N1	D	x	x		x	x				x		X		x	x	x	x	x
	› 3500 kg	N2,N3, T5	P	x	x	x			x	x	x	x		X	x		x	x	x	x
	› 3500 kg	N2,N3, T5	D	x	x	x			x	x	x	x		X		x[3]	x	x	x	x
3. Trailer	Up to 750 kg	O1		x														x		
	› 750 to 3500 kg	O2		x	x		x											x		
	› 3500 kg	O3,O4, R3,R4		x	x	x			x	x	x	x						x		
	Up to 3500 kg	R1,R2		x	x		x											x		
4. Agricultural tractors and vehicles up to 40 km/h	Up to 3500 kg	T1,T2,T 3, T4, C1,C2, C3,C4, C5	P	x	x				x								x	x	x	x
	Up to 3500 kg	T1,T2,T 3 T4, C1,C2, C3,C4, C5	D	x	x				x								x	x	x	x
	› 3500 kg	T1,T2,T 3, T4, C1,C2, C3,C4,	P	x	x				x	x			x				x	x	x	x

Equipment required for the purpose of performing a roadworthiness test																			
Vehicles		**Category**		**Equipment required for each item listed in Paragraph I**															
	Maximum mass			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
		C5																		
	› 3500 kg	T1,T2, T3 T4, C1, C2, C3,C4, C5	D	x	x				x	x							x	x	x	x

1) P…petrol ; D…Diesel

ANNEX VI

MINIMUM REQUIREMENTS CONCERNING THE COMPETENCE, TRAINING AND CERTIFICATION OF INSPECTORS

1. Competence

Before authorising an applicant for a position as inspector to carry out roadworthiness tests, Member States shall verify that that person :

(a) has a qualification certifying the knowledge and understanding related to vehicle engineering in the following areas:

- Mechanics.
- Dynamics.
- Vehicle dynamics.
- Combustion engines.
- Material and material processing.
- Electronics.
- Electrics.
- Electronic vehicle components.
- IT applications.

(b) has at least three years of documented experience in the area of vehicle engineering, repair or maintenance,

2. Initial and refresher training

Member States shall ensure that inspectors receive the appropriate initial and refresher training, including theoretical and practical elements, before being authorised to carry out roadworthiness tests.

The minimum contents of the initial and refresher training shall include the following topics:

(a) Initial training

The initial training provided by the Member State or by an authorised training centre of the Member State shall include at least the following topics:

(i) Vehicle technology:

- Braking systems,
- Steering systems,

– Fields of vision,

– Light installation, lighting equipment and electronic components,

– Axles, wheels and tyres,

– Chassis and bodywork,

– Nuisance and emissions,

– Additional requirements for special vehicles,

(ii) Testing methods;

(iii) Assessment of deficiencies;

(iv) Legal requirements applicable at national, European and international level on the vehicle condition for approval;

(v) Legal requirements at national, European and international level related to roadworthiness testing;

(vi) Administrative provisions related to vehicle approval, registration and roadworthiness testing;

(vii) IT applications related to testing and administration.

(b) Refresher training

Member States shall ensure that inspectors follow every year a refresher training provided by the Member State or by an authorised training centre of the Member State.

Member States shall ensure that the contents of the refresher training enables to maintain and refresh the necessary knowledge and skills of inspectors on the topics referred to in point (a), (i) to (vii) above.

3. Certificate of competence

The certificate issued to an inspector authorised to carry out roadworthiness tests shall include at least the following information, updated when appropriate:

– Identification of the inspector (first name, surname, date of birth);

– Vehicle categories for which the inspector is authorised to carry out roadworthiness tests;

– Date of next refresher training;

– Name of issuing authority;

– Date of issue;

ANNEX VII

SUPERVISING BODIES

Rules and procedures concerning supervising bodies established by Member States in accordance with Article 13 shall cover the following minimum requirements:

1. Tasks and activities of the supervising body

Supervising bodies shall perform at least the following tasks:

(a) Authorisation of testing centres:

- verifying if the minimum requirements for premises and test equipment are met;
- verifying the mandatory requirements of the authorised entity;
- checking of good repute of the testing centre manager and inspectors.

(b) Training and examination of inspectors:

- verifying the initial training of inspectors;
- verifying the periodic refresher training of inspectors;
- training of the testing centre managers;
- periodic refresher training of supervising body examiners;
- conducting or supervising examination.

(c) Auditing:

- pre-audit of testing centre prior to authorisation;
- periodic re-audit of testing centre;
- special audit in case of irregularities;
- audit of training/examination centre.

(d) Monitoring, using at least five of the following measures:

- re-testing of a statistically valid proportion of tested vehicles;
- roadside inspections of a statistically valid proportion of vehicle park;
- mystery shopper checks (use of defective vehicle optional);
- analysis of results of roadworthiness tests (statistical methods);
- appeal tests;

– investigation of complaints.

(e) Validation of measurement results of roadworthiness tests

(f) Withdrawal or suspension of authorisation of testing centres and/or of inspectors licence:

– lacking in significant authorisation requirement;

– detected major irregularities;

– continued negative audit results;

– loss of good repute.

2. Requirements concerning the supervising body

(a) Compliance with the ISO/IEC 17020 standard 'General Criteria for the operation of various types of bodies performing inspection', type A.

(b) Requirements applicable to the personnel employed by a supervising body shall cover the following areas:

– technical competence;

– impartiality;

– standards for qualification and training.

3. Contents of the rules and procedures

Each competent authority shall establish the rules and procedures concerning supervising bodies which shall include at least the following items :

(a) Requirements concerning the authorisation and supervision of testing centres:

– application to become a testing centre;

– responsibilities of the testing centre;

– pre-authorisation visit, or visits, to verify that all requirements are complied with;

– authorisation of a testing centre;

– periodic re-testings/audits of testing centres;

– periodic checks of testing centres for continued compliance;

– evidence based unannounced special checks or audits of testing centres;

– analysis of test data for evidence of non-compliance;

– withdrawal or suspension of authorisations granted to testing centres.

(b) Inspectors of testing centres:

- requirements to become an inspector;
- initial training and refresher training and examination;
- withdrawal or suspension of inspectors certification.

(c) Equipment and premises:

- requirements for test equipment;
- requirements for testing premises;
- requirements for signage;
- requirements for maintenance and calibration of testing equipment;
- requirements for computerised systems.

(d) Supervising bodies:

- powers of the supervising bodies;
- requirements for staff of supervising bodies;
- appeals and complaints.