COMMISSION IMPLEMENTING REGULATION (EU) 2019/621

of 17 April 2019

on the technical information necessary for roadworthiness testing of the items to be tested, on the use of the recommended test methods, and establishing detailed rules concerning the data format and the procedures for accessing the relevant technical information

(Text with EEA relevance)

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Directive 2014/45/EU of the European Parliament and of the Council of 3 April 2014 on periodic roadworthiness tests for motor vehicles and their trailers and repealing Directive 2009/40/EC ([1]), and in particular Article 4(3) thereof,

Whereas:

(1) In accordance with Directive 2014/45/EU, in order to facilitate the periodic roadworthiness testing of motor vehicles and their trailers, the Commission should adopt implementing acts defining the set of technical information necessary for the items to be tested and on the use of the recommended test methods.

(2) Annex I to Directive 2014/45/EU sets out the items to be tested as a minimum, the minimum standards to be used and the recommended test methods.

(3) In order to facilitate the periodic roadworthiness testing of motor vehicles and their trailers the Commission should also adopt detailed rules concerning the data format and the procedures for accessing the relevant technical information.

(4) Member States may exclude from the roadworthiness test two- or three-wheel vehicles – vehicle categories L3e, L4e, L5e and L7e with an engine displacement of more than 125 cm^3 — if effective alternative road safety measures have been put in place. However, with a view to facilitating the introduction and harmonisation of the roadworthiness testing of such vehicles, a set of information should be also defined for guidance.

(5) The obligations and requirements set out in this Regulation should not affect the obligations and requirements set out in Regulations (EC) No 715/2007 ([2]) and (EC) No 595/2009 ([3]) of the European Parliament and of the Council.

(6) Manufacturers should be provided with sufficient time to implement the online solutions needed to make the technical information available to testing centres and to relevant competent authorities.

(7) The measures provided for in this Regulation are adopted in accordance with the opinion of the Committee set up by Article 19(1) of Directive 2014/45/EU,

HAS ADOPTED THIS REGULATION:

Article 1

Subject matter

1. This Regulation sets out for the periodic roadworthiness tests of motor vehicles and their trailers:

(a) the set of technical information on braking equipment, steering, visibility, lamps, reflectors, electrical equipment, axles, wheels, tyres, suspension, chassis, chassis attachments, other equipment and nuisance necessary for roadworthiness testing of the items to be tested and on the use of the recommended test methods, in accordance with point 3 of Annex I of Directive 2014/45/EU; and

(b) detailed rules concerning the data format and the procedures for accessing the relevant technical information.

([1]) OJ L 127, 29.4.2014, p. 51.

([2]) Regulation (EC) No 715/2007 of the European Parliament and of the Council of 20 June 2007 on type approval of motor vehicles with respect to emissions from light passenger and commercial vehicles (Euro 5 and Euro 6) and on access to vehicle repair and maintenance information (OJ L 171, 29.6.2007, p. 1).

([3]) Regulation (EC) No 595/2009 of the European Parliament and of the Council of 18 June 2009 on type-approval of motor vehicles and engines with respect to emissions from heavy duty vehicles (Euro VI) and on access to vehicle repair and maintenance information and amending Regulation (EC) No 715/2007 and Directive 2007/46/EC and repealing Directives 80/1269/EEC, 2005/55/EC and 2005/78/EC (OJ L 188, 18.7.2009, p. 1).

Article 2

Scope

This Regulation shall apply to vehicles subject to roadworthiness tests pursuant to Article 2(1) of Directive 2014/45/EU, which are first registered or first put into service in a Member State as from 20 May 2018.

Article 3

Definitions

For the purposes of this Regulation the following definitions shall apply:

(1) 'manufacturer' means any natural or legal person as defined in Regulations (EU) No 167/2013 ([4]) and (EU) No 168/2013 ([5]) of the European Parliament and of the Council and Directive 2007/46/EC of the European Parliament and of the Council ([6]);

(2) 'manufacturer's representative' means any natural or legal person as defined in Regulations (EU) No 167/2013 and (EU) No 168/2013, and Directive 2007/46/EC;

(3) 'machine readable' means directly usable by a computer;

(4) 'repair and maintenance information' means the information as defined in Regulations (EU) No 167/2013 and (EU) No 168/2013, and Directive 2007/46/EC;

(5) 'registration' means the administrative authorisation for the entry into service in road traffic of a vehicle as defined in Article 2 point (b) of Council Directive 1999/37/EC ([7]).

Article 4

Vehicle technical information

The technical information necessary for carrying out the roadworthiness test is set out in the Annex to this Regulation.

Article 5

Procedures for accessing the vehicle technical information

1. The vehicle technical information laid down in the Annex to this Regulation shall be made available to testing centres and relevant competent authorities in a non-discriminatory, readily accessible, unrestricted, timely and consistent manner.

2. The technical information shall be made available not later than 6 months after the registration or entry into service of the vehicle. However, for vehicles registered or put into service between 20 May 2018 and 20 November 2019, this information shall be made available on 20 May 2020.

3. By way of exception to paragraph 2, in the cases set out in the first, second and fifth indents of Article 5(4) of Directive 2014/45/EU, the manufacturer shall provide the technical information to the testing centre and the relevant competent authority upon request and without delay.

4. The manufacturer shall provide subsequent amendments and supplements to the technical information referred to in paragraph 1 to testing centres and relevant competent authorities at the same time as amendments and supplements to the vehicle repair and maintenance information are made available.

5. The technical information shall be made available in the official language or languages of the Member State of the testing centre or in any other language agreed upon by the competent authority of the Member State concerned.

([4]) Regulation (EU) No 167/2013 of the European Parliament and of the Council of 5 February 2013 on the approval and market surveillance of agricultural and forestry vehicles (OJ L 60, 2.3.2013, p. 1).

([5]) Regulation (EU) No 168/2013 of the European Parliament and of the Council of 15 January 2013 on the approval and market surveillance of two- or three-wheel vehicles and quadricycles (OJ L 60, 2.3.2013, p. 52).

([6]) Directive 2007/46/EC of the European Parliament and of the Council of 5 September 2007 establishing a framework for the approval of motor vehicles and their trailers, and of systems, components and separate technical units intended for such vehicles (Framework Directive) (OJ L 263, 9.10.2007, p. 1).

([7]) Council Directive 1999/37/EC of 29 April 1999 on the registration documents for vehicles (OJ L 138, 1.6.1999, p. 57).

6. Manufacturers shall designate a contact point responsible for granting access to the vehicle technical information. The contact details of the contact point shall be made available on the manufacturer's website. The contact point may also be the manufacturer's representative.

7. In order to ensure that a testing centre requesting access to vehicle technical information is authorised in accordance with Article 12(1) of Directive 2014/45/EU, Member States or their competent authorities shall assist the manufacturer as appropriate.

Article 6

Data format

1. The technical information shall be made available by the manufacturer based on the vehicle identification number of the vehicle in an open source and structured data format:

(a) to the competent authorities, upon request, as a collection of offline usable machine readable data files, and

(b) to the testing centres and to the competent authorities using an online solution. When using an online solution, the technical information, which has to be provided by the manufacturer at the same time as part of the repair and maintenance information on a website, shall be made available in the same data format. Other vehicle technical information shall be made available in the data format that is used for similar information.

2. The manufacturer may deviate from the requirements defined in paragraph 1 in respect of vehicles in receipt of individual, national or small series type approval as referred to in Regulations (EU) No 167/2013 and (EU) No 168/2013, and Directive 2007/46/EC, or if the manufacturer does not have to comply with Regulations (EC) No 715/2007 and (EU) No 167/2013, or (EU) No 168/2013. However, the information shall be provided in an easily accessible and consistent manner that can be processed with reasonable effort.

3. In the case of vehicles in receipt of step-by-step, mixed or multi-stage type-approval as referred to in Regulations (EU) No 167/2013 and (EU) No 168/2013, and Directive 2007/46/EC, the manufacturer responsible for the particular stage of the build shall be responsible for communicating the vehicle technical information relating to a particular system, component or separate technical unit for that stage to the final manufacturer. The final manufacturer shall be responsible for providing the technical information on the finished vehicle to the competent authorities and the testing centres.

4. Paragraph 3 shall not apply to vehicles in receipt of individual, national or small series approvals as referred to in Regulations (EU) No 167/2013 and (EU) No 168/2013, and Directive 2007/46/EC.

Article 7

Entry into force and application

This Regulation shall enter into force on the twentieth day following that of its publication in the *Official Journal of the European Union*.

It shall apply from 20 May 2020.

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Brussels, 17 April 2019.

For the Commission
The President
Jean-Claude JUNCKER

ANNEX

1. **GENERAL**

I. For the purposes of this Annex, 'instructions for the use of the electronic vehicle interface' shall mean basic diagnostic information and fitment test information, in particular:

I.1. Vehicle specific description of the location of and the access to the electronic vehicle interface.

I.2. Information on whether the specific system supports diagnostic interaction (Yes/No). If yes:

I.2.1. Vehicle-specific specification of bus types and protocols

I.2.2. Vehicle-specific specification of the communication parameters of the inspected system/function

I.3. Vehicle-specific information about the originally installed system.

II. The vehicle technical information concerning L-category vehicles and vehicles outside the scope of Directive 2014/45/EU is indicated as guidance.

2. **INFORMATION FOR TESTING**

Item	Method	Information needed	Category for which the information is needed				
			< 3,5 t	> 3,5 t	O	L	T
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.						
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.						
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.	Pressure/max. cut out – min. cut in [bar] *See UN R13 5.1.4.5.2*		X			
		Multi-circuit protection valve static closing pressure [bar] *See UN R13 5.1.4.5.2*		X			X

Item	Method	Information needed	Category for which the information is needed				
			< 3,5 t	> 3,5 t	O	L	T
1.1.4. Low pressure warning gauge or indicator	Functional check						
1.1.5. Hand-operated brake control valve	Visual inspection of the components while the braking system is operated.						
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.	General description for electronic parking brake	X	X			X
1.1.7. Braking valves (foot valves, unloaders, governors)	Visual inspection of the components while the braking system is operated.						
1.1.8. Couplings for trailer brakes (electrical & pneumatic)	Disconnect and reconnect braking system coupling between towing vehicle and trailer.						
1.1.9. Energy storage reservoir pressure tank	Visual inspection.						
1.1.10. Brake servo units, master cylinder (hydraulic systems)	Visual inspection of the components while the braking system is operated, if possible.						
1.1.11. Rigid brake pipes	Visual inspection of the components while the braking system is operated, if possible.						
1.1.12. Flexible brake hoses	Visual inspection of the components while the braking system is operated, if possible.						
1.1.13. Brake linings and pads	Visual inspection.	Method of assessing wear and wear limit *See UN R13 5.2.1.11.2 and 5.2.2.8.2.*	X	X	X	X	
1.1.14. Brake drums, brake discs	Visual inspection.	Method of assessing wear and wear limit *See UN R13 5.2.1.11.2 and 5.2.2.8.2.*	X	X	X		
1.1.15. Brake cables, rods, levers, linkages	Visual inspection of the components while the braking system is operated, if possible.						

Item	Method	Information needed	Category for which the information is needed				
			< 3,5 t	> 3,5 t	O	L	T
1.1.16. Brake actuators (including spring brakes or hydraulic cylinders)	Visual inspection of the components while the braking system is operated, if possible	Brake cylinder type Service/Parking Maximum stroke [mm] Lever length [mm] *See UN R13 5.1.4.5.2*		X	X		
1.1.17. Load sensing valve	Visual inspection of the components while the braking system is operated, if possible.	Input pressure [bar]		X	X		
		Output pressure for x % of maximum axle load [bar] *UN R 13 Annex 10 7.4 + Diagram 5*		X	X		
1.1.18. Slack adjusters and indicators	Visual inspection.	Maximum stroke [mm] *See UN R13 5.1.4.5.2*		X	X		
		working principle [automatic/manual adjusted]		X	X		
1.1.19. Endurance braking system (where fitted or required)	Visual inspection.						
1.1.20. Automatic operation of trailer brakes	Disconnect brake coupling between towing vehicle and trailer.						
1.1.21. Complete braking system	Visual inspection						
1.1.22. Test connections (where fitted or required)	Visual inspection	Location and identification of test connections *See UN R 13 5.1.4.2*		X	X		
		Location and identification of test connections See 2015/68 Annex I. 2.1.8.1					X
1.1.23. Overrun brake	Visual inspection and by operation						
1.2 Service braking performance and efficiency							
1.2.1. Performance	During a test on a brake tester or, if impossible, during a road test, apply the brakes progressively up to maximum effort.	Specific requirements for testing vehicle on a brake tester (test mode)	X	X	X	X	X

Item	Method	Information needed	Category for which the information is needed				
			< 3,5 t	> 3,5 t	O	L	T
1.2.2. Efficiency	Test with a brake tester or, if one cannot be used for technical reasons, by a road test using a deceleration recording instrument 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 3,5 tonnes 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.	Design system pressure for maximum load [bar] *See UN R13 5.1.4.5.2*		X	X		
		Reference brake force [kN] at input pressure [bar] axle 1		X	X		
		Reference brake force [kN] at input pressure [bar] axle 2		X	X		
		Reference brake force [kN] at input pressure [bar] axle 3		X	X		
		Reference brake force [kN] at input pressure [bar] axle 4 *See UN R13 5.1.4.6.2*		X	X		
		Calculation pressure for each axle		X	X		
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.	General description of system including circuits (clear definition of the secondary brake)	X	X			X
1.3.2. Efficiency	If the secondary braking system is separate from the service braking system, use the method specified in 1.2.2.						
1.4. Parking braking performance and efficiency							
1.4.1. Performance	Apply the brake during a test on a brake tester.	General description of system including recommended test procedure if dynamic test (on brake tester or road test) not possible	X	X	X		
1.4.2. Efficiency	Test with a brake tester. If not possible, then by a road test using either an indicating or deceleration recording instrument or with the vehicle on a slope of known gradient.						
1.5. Endurance braking system performance	Visual inspection and, where possible, test whether the system functions.	General description		X			

Item	Method	Information needed	Category for which the information is needed				
			< 3,5 t	> 3,5 t	O	L	T
1.6. Anti-lock braking system (ABS)	Visual inspection and inspection of warning device and/or using electronic vehicle interface.	instructions for the use of the electronic vehicle interface	X	X	X	X	X
1.7. Electronic brake system (EBS)	Visual inspection and inspection of warning device and/or using electronic vehicle interface.	instructions for the use of the electronic vehicle interface	X	X	X		X
1.8. Brake fluid	Visual inspection						
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 turntables, rotate the steering wheel from lock to lock. Visual inspection of the operation of the steering gear.						
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 clockwise and anticlockwise or using a specially adapted wheel play detector. Visual inspection of the attachment of gear casing to chassis.						
2.1.3. Steering linkage condition	With the vehicle over a pit or on a hoist and with the road wheel on the 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.						
2.1.4. Steering linkage operation	With the vehicle over a pit or on a hoist and with the road wheel on the 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.						

Item	Method	Information needed	Category for which the information is needed				
			< 3,5 t	> 3,5 t	O	L	T
2.1.5. Power steering	Check steering system for leaks and hydraulic fluid reservoir level (if visible). With the road wheels on the ground and with the engine running, check that the power steering system is operating.						
2.2. Steering wheel, column and handle bar							
2.2.1. Steering wheel/handle bar condition	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.						
2.2.2. Steering column/yokes and forks and steering dampers	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.	Steering damper fitted (YES/NO)				X	
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, if possible, 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.						
2.4. Wheel alignment (X)[2]	Check alignment of steered wheels with suitable equipment.						
2.5. Trailer steered axle turntable	Visual inspection or using a specially adapted wheel play detector						

Item	Method	Information needed	Category for which the information is needed				
			< 3,5 t	> 3,5 t	O	L	T
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, and/or using the electronic vehicle interface	instructions for the use of the electronic vehicle interface	X	X			
3. VISIBILITY							
3.1. Field of vision	Visual inspection from driving seat.						
3.2. Condition of glass	Visual inspection.						
3.3. Rear-view mirrors or devices	Visual inspection.						
3.4. Windscreen wipers	Visual inspection and by operation.						
3.5. Windscreen washers	Visual inspection and by operation.						
3.6. Demisting system (X)[2]	Visual inspection and by operation.						
4. LAMPS, REFLECTORS AND ELECTRICAL EQUIPMENT							
4.1. Headlamps							
4.1.1. Condition and operation	Visual inspection and by operation.	Category of light source […,…]	X	X		X	X
4.1.2. Alignment	Determine the horizontal aim of each headlamp on dipped beam using a headlamp aiming device or using the electronic vehicle interface.	Alignment of dipped beam [per cent] for both vertical inclination and direction	X	X		X	
		instructions for the use of the electronic vehicle interface	X	X		X	
		For determining the horizontal aim by using the electronic vehicle interface information on the actuation of the headlamp beam movement to allow assessment of alignment	X	X		X	
4.1.3. Switching	Visual inspection and by operation or using the electronic vehicle interface	instructions for the use of the electronic vehicle interface	X	X		X	

Item	Method	Information needed	Category for which the information is needed				
			< 3,5 t	> 3,5 t	O	L	T
4.1.4. Compliance with requirements[1].	Visual inspection and by operation.						
4.1.5. Levelling devices (where mandatory)	Visual inspection and by operation, if possible, or using the electronic vehicle interface.	Operation mode [manual/automatic)	X	X		X	
		instructions for the use of the electronic vehicle interface	X	X		X	
4.1.6. Headlamp cleaning device (where mandatory)	Visual inspection and by operation if possible.	Device mandatory [Y/N]	X	X			
4.2. Front and rear position lamps, side marker lamps, end outline marker lamps and daytime running lamps							
4.2.1. Condition and operation	Visual inspection and by operation.	Fitment of daytime running lamps, [Y/N]	X	X		X	
4.2.2. Switching	Visual inspection and by operation.						
4.2.3. Compliance with requirements[1]	Visual inspection and by operation.						
4.3. Stop Lamps							
4.3.1. Condition and operation	Visual inspection and by operation.						
4.3.2. Switching	Visual inspection and by operation or using the electronic vehicle interface.	Fitment of emergency stop signal, [Y/N]	X	X	X		
		instructions for the use of the electronic vehicle interface	X	X	X		
4.3.3. Compliance with requirements[1].	Visual inspection and by operation.						
4.4. Direction indicator and hazard warning lamps							
4.4.1. Condition and operation	Visual inspection and by operation.						
4.4.2. Switching	Visual inspection and by operation.						
4.4.3. Compliance with requirements[1].	Visual inspection and by operation.						
4.4.4. Flashing frequency	Visual inspection and by operation.						

Item	Method	Information needed	Category for which the information is needed				
			< 3,5 t	> 3,5 t	O	L	T
4.5. Front and rear fog lamps							
4.5.1. Condition and operation	Visual inspection and by operation.						
4.5.2. Alignment (X)[2]	By operation and using a headlamp aiming device						
4.5.3. Switching	Visual inspection and by operation.						
4.5.4. Compliance with requirements[1].	Visual inspection and by operation.						
4.6. Reversing lamps							
4.6.1. Condition and operation	Visual inspection and by operation.						
4.6.2. Compliance with requirements[1]	Visual inspection and by operation.						
4.6.3. Switching	Visual inspection and by operation.						
4.7. Rear registration plate lamp							
4.7.1. Condition and operation	Visual inspection and by operation.						
4.7.2. Compliance with requirements[1]	Visual inspection and by operation.						
4.8. Retro-reflectors, conspicuity (retro reflecting) markings and rear marking plates							
4.8.1. Condition	Visual inspection.						
4.8.2. Compliance with requirements[1]	Visual inspection.						
4.9. Tell-tales mandatory for lighting equipment							
4.9.1. Condition and operation	Visual inspection and by operation.						
4.9.2. Compliance with requirements[1]	Visual inspection and by operation.						
4.10. Electrical connections between towing vehicle and trailer or semi-trailer	Visual inspection: if possible examine the electrical continuity of the connection.						

Item	Method	Information needed	Category for which the information is needed				
			< 3,5 t	> 3,5 t	O	L	T
4.11. Electrical wiring	Visual inspection with vehicle over a pit or on a hoist, including inside the engine compartment (if applicable).	Wiring/cable identification (e.g. colour, shielding, cross section, size), insulation monitoring (high voltage)	X	X		X	
		Location of any high voltage wiring	X	X		X	
4.12. Non obligatory lamps and retro-reflectors (X)[2]	Visual inspection and by operation.						
4.13. Battery(ies)	Visual inspection.	Location of battery(ies)	X	X		X	X
		Number of batteries	X	X		X	X
		Special arrangements for high voltage batteries	X	X		X	
		Vehicle (VIN) specific information on battery switch [Y/N]	X	X		X	
		Vehicle (VIN) specific information on battery fuse [Yes/No]	X	X		X	
		Vehicle (VIN) specific information on battery ventilation [Yes/No]	X	X		X	
		Vehicle (VIN) specific information on operation principle	X	X		X	
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 having a maximum mass exceeding 3,5 tonnes	General description, number of axles	X	X	X	X	X
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 having a maximum mass exceeding 3,5 tonnes. Apply a vertical or lateral force to each wheel and note the amount of movement between the axle beam and stub axle.						

Item	Method	Information needed	Category for which the information is needed				
			< 3,5 t	> 3,5 t	O	L	T
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 having a maximum mass exceeding 3,5 tonnes. 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.						
5.2. Wheels and tyres							
5.2.1. Road wheel hub	Visual inspection.						
5.2.2. Wheels	Visual inspection of both sides of each wheel with vehicle over a pit or on a hoist.	Wheel size/dimensions/offset	X	X	X	X	X
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.	Tyre size,	X	X	X	X	X
		load capacity,	X	X	X	X	X
		speed category	X	X	X	X	X
		Tyre pressure monitoring system [N/Y] direct/indirect	X	X	X	X	X
5.3. Suspension system							
5.3.1. Springs and stabiliser	Visual inspection with vehicle over a pit or on a hoist. Wheel play detectors may be used and are recommended for vehicles having a maximum mass exceeding 3,5 tonnes						
5.3.2. Shock absorbers	Visual inspection with vehicle over a pit or on a hoist or using special equipment, if available.						
5.3.2.1 efficiency testing of damping (X)[2]	Use special equipment and compare left/right differences						

Item	Method	Information needed	Category for which the information is needed				
			< 3,5 t	> 3,5 t	O	L	T
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 having a maximum mass exceeding 3,5 tonnes						
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 having a maximum mass exceeding 3,5 tonnes						
5.3.5. Air suspension	Visual inspection						
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.						
6.1.2. Exhaust pipes and silencers	Visual inspection with vehicle over a pit or on a hoist.						
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 the case of LPG/CNG/LNG systems.	General description and location including shielding	X	X		X	X
6.1.4. Bumpers, lateral protection and rear underrun devices	Visual inspection.	Exempt side guards and or rear underrun (Y/N)		X	X		
6.1.5. Spare wheel carrier (if fitted)	Visual inspection.						
6.1.6. Mechanical coupling and towing device	Visual inspection for wear and correct operation with special attention to any safety device fitted and/or use of measuring gauge.						
6.1.7. Transmission	Visual inspection.						
6.1.8. Engine mountings	Visual inspection not necessarily on a pit or hoist.						

Item	Method	Information needed	Category for which the information is needed				
			< 3,5 t	> 3,5 t	O	L	T
6.1.9. Engine performance (X)[2]	Visual inspection and/or using electronic interface	Engine Control Unit valid configuration	X	X		X	X
		Instructions for the use of the electronic vehicle interface	X	X		X	X
		Instructions on how to read the Calibration Identification	X	X		X	X
		Information about the valid Calibration Identifications	X	X		X	X
		Software identification number including checksums or similar integrity validation data.	X	X		X	X
6.2. Cab and bodywork							
6.2.1. Condition	Visual inspection						
6.2.2. Mounting	Visual inspection over a pit or on a hoist.						
6.2.3. Doors and door catches	Visual inspection.						
6.2.4. Floor	Visual inspection over a pit or on a hoist.						
6.2.5. Driver's seat	Visual inspection.						
6.2.6. Other seats	Visual inspection.	Max Number of seats total (excluding driver's seat)	X	X			
		Number of rear-facing seats	X	X			
6.2.7. Driving controls	Visual inspection and by operation.						
6.2.8. Cab steps	Visual inspection.						
6.2.9. Other interior and exterior fittings and equipment	Visual inspection.						
6.2.10. Mudguards (wings), spray suppression devices	Visual inspection.						

Item	Method	Information needed	Category for which the information is needed				
			< 3,5 t	> 3,5 t	O	L	T
6.2.11. Stand	Visual inspection.						
6.2.12. Handgrips and footrests	Visual inspection.						
7. OTHER EQUIPMENT							
7.1. Safety-belts/buckles and restraint systems (as regards L category: L6/L7)							
7.1.1. Security of safety-belts/buckles mounting	Visual inspection.	Number and location of safety belt anchorage points	X	X		X	X
7.1.2. Condition of safety-belts/buckles.	Visual inspection and by operation.	Safety belt category for each sitting position	X	X		X	X
7.1.3. Safety belt load limiter	Visual inspection, and/or using electronic interface	instructions for the use of the electronic vehicle interface	X	X		X	
7.1.4. Safety belt Pre-tensioners	Visual inspection, and/or using electronic interface	instructions for the use of the electronic vehicle interface	X	X		X	
7.1.5. Airbag	Visual inspection, and/or using electronic interface	Number of airbags and location	X	X		X	
		instructions for the use of the electronic vehicle interface	X	X		X	
7.1.6. SRS Systems	Visual inspection of MIL, and/or using electronic interface	instructions for the use of the electronic vehicle interface	X	X		X	
7.2. Fire extinguisher (X)[2]	Visual inspection.						
7.3. Locks and anti-theft device	Visual inspection and by operation						
7.4. Warning triangle (if required) (X)[2]	Visual inspection.						
7.5. First aid kit. (if required) (X)[2]	Visual inspection.						

Item	Method	Information needed	Category for which the information is needed				
			< 3,5 t	> 3,5 t	O	L	T
7.6. Wheel chocks (wedges) (if required) (X)[2]	Visual inspection.						
7.7. Audible warning device	Visual inspection and by operation						
7.8. Speedometer	Visual inspection or by operation during road test or by electronic means.	instructions for the use of the electronic vehicle interface		X			
7.9. Tachograph (if fitted/required)	Visual inspection.	Sensor location		X			
		Location of seals		X			X
7.10. Speed limitation device (if fitted/required)	Visual inspection and by operation if equipment available.						
7.11. Odometer if available (X)[2]	Visual inspection, and/or using electronic interface	instructions for the use of the electronic vehicle interface	X	X		X	
7.12. Electronic Stability Control (ESC) if fitted/required	Visual inspection, and/or using electronic interface	instructions for the use of the electronic vehicle interface	X	X			
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 measurement of noise emitted by stationary vehicle using a sound level meter may be conducted)	Noise levels of stationary vehicle [dB(A) at 1/min].	X	X		X	X
8.2. Exhaust emissions							
8.2.1. Positive ignition engine emissions							
8.2.1.1. Exhaust emissions control equipment	Visual inspection	Emission control system general description. Particulate trap installed [Y/N]	X	X			

Item	Method	Information needed		Category for which the information is needed				
				< 3,5 t	> 3,5 t	O	L	T
8.2.1.2. Gaseous emissions	— For vehicles up to emission classes Euro 5 and Euro V (1): measurement using an exhaust gas analyser in accordance with the requirements[1] or reading of OBD. Tailpipe testing shall be the default method of exhaust emission assessment. On the basis of an assessment of equivalence, and by taking into account the relevant type-approval legislation, Member States may authorise the use of OBD in accordance with the manufacturer's recommendations and other requirements. — For vehicles as of emission classes Euro 6 and Euro VI (2): measurement using an exhaust gas analyser in accordance with the requirements[1] or reading of OBD in accordance with the manufacturer's recommendations and other requirements[1]. Measurements not applicable for two- stroke engines.	Levels of gaseous emissions if given by the manufacturer		X	X		X	
		Vehicle (VIN) or Engine Code specific information		X	X		X	
		For tail-pipe testing:	Engine preconditioning requirements such as min. Oil temp./water temp. [°C] and procedures to bring engine to Type II testing mode	X	X		X	
			Type II emission test results	X	X		X	
			Engine idle CO [%]	X	X		X	
			High idle CO [%]	X	X		X	
			Lambda []	X	X		X	
		For OBD use:	Connector & Communication protocol (Standard, power supply voltage, location)	X	X			
			List of DTCs (class A, B1 and B2 currently for HDV only)	X	X			
8.2.2. Compression ignition engine emissions								
8.2.2.1. Exhaust emission control equipment	Visual inspection	Emission control system general description. Such as DeNOx system [Y/N] Particulate trap installed [Y/N]		X	X			
		EGR location		X	X			
		(Vehicle (VIN)/) engine type specific information		X	X			

Item	Method	Information needed		Category for which the information is needed				
				< 3,5 t	> 3,5 t	O	L	T
8.2.2.2. Opacity Vehicles registered or put into service before 1 January 1980 are exempted from this requirement	— For vehicles up to emission classes Euro 5 and Euro V ([3]): 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 or reading of OBD. The tailpipe testing shall be the default method of exhaust emission assessment. On the basis of an assessment of equivalence, Member States may authorise the use of OBD in accordance with the manufacturer's recommendations and other requirements. — For vehicles as of emission classes Euro 6 and Euro VI ([4]): 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 or reading of OBD in accordance with the manufacturer's recommendations and other requirements[1]. Vehicle preconditioning: 1. Vehicles may be tested without preconditioning, although for safety reasons checks should be made that the engine is warm and in a satisfactory mechanical condition. 2. Precondition requirements: (i) Engine shall be fully warm, for instance the engine oil temperature measured by a probe in the oil level dipstick tube to be at least 80 °C, or normal operating temperature if lower, or the engine block temperature measured by the level of infrared radiation to be at least an equivalent temperature. If, owing to the 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.	Vehicle (VIN) engine type specific information		X	X		X	
		For tail-pipe testing:	Engine preconditioning requirements such as min. Oil temp./water temp. [°C] and procedures to bring engine to Type II testing mode	X	X		X	
			k-value recorded on the manufacturer's plate on the vehicle (type II emission test result)	X	X		X	
			Cut off Engine speed at Type II tests					
			Engine speed limiter for acceleration without load [Y/N]	X	X		X	
			Description for de-activation of Engine speed limiter to perform free acceleration test;	X	X		X	
		For OBD use:	Allowed DTC's at OBD scan {codes for NOx group 3000 for LDV}	X	X		X	
			Connector & Communication protocol (Standard, power supply voltage, location)	X	X		X	
			List of DTCs (class A, B1 and B2 currently for HDV only)	X	X		X	

Item	Method	Information needed		Category for which the information is needed				
				< 3,5 t	> 3,5 t	O	L	T
	(ii) Exhaust system shall be purged by at least three free acceleration cycles or by an equivalent method. 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 categories M_2, M_3, N_2 and N_3, 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.							

Item	Method	Information needed		Category for which the information is needed				
				< 3,5 t	> 3,5 t	O	L	T
	5. To avoid unnecessary testing, Member States may fail vehicles which have measured values significantly in excess of the limit values after fewer 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 fewer than three free acceleration cycles or after the purging cycles							
8.3. Electromagnetic interference suppression								
Radio interference (X)[2]								
8.4. Other items related to the environment								
8.4.1. Fluid leaks								
9. SUPPLEMENTARY TESTS FOR PASSENGER-CARRYING VEHICLES CATEGORIES M_2, M_3								
9.1. Doors								
9.1.1. Entrance and exit doors	Visual inspection and by operation.							
9.1.2. Emergency exits	Visual inspection and by operation (where appropriate)							
9.2. Demisting and defrosting system (X)[2]	Visual inspection and by operation							
9.3. Ventilation & heating system (X)[2]	Visual inspection and by operation							
9.4. Seats								
9.4.1. Passenger seats (including seats for accompanying personnel)	Visual inspection							
9.4.2. Driver's seat (additional requirements)	Visual inspection							

Item	Method	Information needed	Category for which the information is needed				
			< 3,5 t	> 3,5 t	O	L	T
9.5. Interior lighting and destination devices (X)[2]	Visual inspection and by operation						
9.6. Gangways, standing areas	Visual inspection						
9.7. Stairs and steps	Visual inspection and by operation (where appropriate)						
9.8. Passenger communication system (X)[2]	Visual inspection and by operation.						
9.9. Notices (X)[2]	Visual inspection.						
9.10. Requirements regarding the transportation of children. (X)[2]							
9.10.1. Doors	Visual inspection						
9.10.2. Signalling and special equipment	Visual inspection						
9.11. Requirements regarding the transportation of persons with reduced mobility (X)[2]							
9.11.1. Doors, ramps and lifts	Visual inspection and operation						
9.11.2. Wheelchair restraint system	Visual inspection and by operation if appropriate						
9.11.3. Signalling and special equipment	Visual inspection						
9.12. Other special equipment (X)[2]							
9.12.1. Installations for food preparation	Visual inspection						
9.12.2. Sanitary installation	Visual inspection						

Item	Method	Information needed	Category for which the information is needed				
			< 3,5 t	> 3,5 t	O	L	T
9.12.3. Other devices (e.g. audiovisual systems)	Visual inspection						

([1]) Type-approved in accordance with Directive 70/220/EEC, Regulation (EC) No 715/2007, Annex I, Table 1 (Euro 5), Directive 88/77/EEC and Directive 2005/55/EC.
([2]) Type-approved in accordance with Regulation (EC) No 715/2007, Annex I, Table 2 (Euro 6) and Regulation (EC) No 595/2009 (Euro VI).
([3]) Type-approved in accordance with Directive 70/220/EEC, Annex I, Table 1 (Euro 5) to Regulation (EC) No 715/2007, Directive 88/77/EEC and Directive 2005/55/EC.
([4]) Type-approved in accordance with Annex I, Table 2 (Euro 6) to Regulation (EC) No 715/2007, and Regulation (EC) No 595/2009 (Euro VI)

NOTES:

[1] 'Requirements' are laid down by type-approval at the date of approval, first registration or first entry into service as well as by retrofitting obligations or by national legislation in the country of registration. These reasons for failure apply only when compliance with requirements has been checked.

[2] (X) identifies items which relate to the condition of the vehicle and its suitability for use on the road but which are not considered essential in a roadworthiness test.