

Council Directive of 26 July 1971 on the approximation of the laws of the Member States relating to the braking devices of certain categories of motor vehicles and of their trailers (71/320/EEC) (repealed)

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## [<sup>F1</sup>ANNEX IX

### Type-approval documentation

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#### **Textual Amendments**

- F1** Substituted by [Commission Directive 98/12/EC of 27 January 1998](#) adapting to technical progress [Council Directive 71/320/EEC on the approximation of the laws of the Member States relating to the braking devices of certain categories of motor vehicles and their trailers](#) (Text with EEA relevance).

#### Appendix 1

MODEL (maximum format: A4 (210 × 297 mm))

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EC TYPE-APPROVAL CERTIFICATE

Stamp of administration

Communication (\*) concerning the

- type approval (1)
- extension of type approval (1)
- refusal of type approval (1)
- withdrawal of type approval (1)

of a type of a vehicle/component/separate technical unit (1) with regard to Directive 71/320/EC, as last amended by Directive 98/12/EF.

Type-approval number: .....

Reason for extension: .....

SECTION I

- 0.1. Make (trade name of manufacturer):
0.2. Type:
0.3. Means of identification of type if marked on the vehicle/component/separate technical unit (1) (2):
0.3.1. Location of that marking:
0.4. Category of vehicle (1) (3):
0.5. Name and address of manufacturer:
0.7. In the case of components and separate technical units, location and method of affixing of the EC approval mark:
0.8. Address(es) of assembly plant(s):

SECTION II

- 1. Additional information (where applicable): See Addendum
2. Technical service responsible for carrying out the tests:
3. Date of test report:
4. Number of test report:
5. Remarks (if any): See Addendum
6. Place:
7. Date:
8. Signature:
9. The index to the information package lodged with the approval authority, which may be obtained on request, is attached.

(\*) At the request of (an) applicant(s) for an approval to Annex XV of Directive 71/320/EEC, the information referred to in Annex IX, Appendix 3, of Directive 71/320/EEC shall be provided by the Type Approval Authority. However, this information shall not be provided for purposes other than approvals to Annex XV of Directive 71/320/EEC.

(1) Delete where not applicable.

(2) If the means of identification of type contains characters not relevant to describe the vehicle, component or separate technical unit types covered by this type-approval certificate such characters shall be represented in the documentation by the symbol '?' (e. g. ABC?123?).

(3) As defined in Annex II (A) to Directive 70/156/EEC.

Addendum to EC type-approval certificate No ... concerning the type-approval of a vehicle with regard to Directive 71/320/EEC as last amended by Directive 98/12/EC

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1. ADDITIONAL INFORMATION
  - 1.1. *Mass of vehicle*
    - 1.1.1. Maximum mass of vehicle: .....
    - 1.1.2. Minimum mass of vehicle: .....
    - 1.1.3. Distribution of the mass on each axle (maximum value): .....
  - ▶<sup>(1)</sup> 1.2. *Brake linings:*
    - 1.2.1. Brake linings tested to all relevant prescriptions of Annex II: .....
    - 1.2.1.1. Make(s) and type(s) of brake linings: .....
    - 1.2.2. Alternative brake linings tested in Annex XII: .....
    - 1.2.2.1. Make(s) and type(s) of brake linings: .....
  - 1.3. *In the case of a motor vehicle:*
    - 1.3.1. Engine type: .....
    - 1.3.2. If applicable <sup>(1)</sup>, maximum mass of trailer which may be coupled: .....
    - 1.3.2.1. full trailer: .....
    - 1.3.2.2. semi-trailer: .....
    - 1.3.2.3. centre-axle trailer: indicate also the maximum ratio of the coupling overhang <sup>(2)</sup> to the wheelbase: .....
    - 1.3.2.4. maximum mass of the combination: .....
    - 1.3.2.5. O<sub>1</sub> trailer: braked/unbraked <sup>(1)</sup> .....
    - 1.3.2.6. vehicle is/is not <sup>(1)</sup> equipped to tow trailers with electrical braking system .....
    - 1.3.2.7. vehicle is/is not <sup>(1)</sup> equipped to tow trailers with anti-lock braking systems .....
  - 1.4. *Tyre dimensions:*
    - 1.4.1. Temporary-use spare wheel/tyre dimensions: .....
    - 1.4.2. Vehicle meets the requirements of Annex XIII: yes/no <sup>(1)</sup> .....
  - 1.5. *Number and arrangement of axles:* .....
  - 1.6. *Brief description of the braking equipment:* .....

<sup>(1)</sup> Delete as appropriate.

<sup>(2)</sup> 'Coupling overhang' is the horizontal difference between the coupling for centre-axle trailers and the centre-line of the rear axle(s).

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- 1.7. *Distribution of braking among the axles of a vehicle:* .....
- 1.7.1. Does the vehicle fulfil the requirements contained in the Appendix to Annex II: yes/no <sup>(1)</sup>
- 1.7.2. Information required in point 7.3 of the Appendix to Annex II: .....
- 1.8. *Vehicles equipped with anti-lock braking systems*
- 1.8.1. Motor vehicles
- 1.8.1.1. Does the vehicle fulfil the requirements contained in Annex X: yes/no <sup>(1)</sup>
- 1.8.1.2. Category of anti-lock braking system: Category 1/2/3 <sup>(1)</sup>
- 1.8.2. Trailers
- 1.8.2.1. Does the vehicle fulfil the requirements contained in Annex X: yes/no <sup>(1)</sup>
- 1.8.2.2. Category of anti-lock braking system: Category A/B <sup>(1)</sup>
- 1.8.2.3. Where an Annex XIV test report has been utilised, the test report number shall be stated: .....
- 1.9. *Trailers with electrical braking systems*
- 1.9.1. Does the vehicle fulfil the requirements in Annex XI: yes/no <sup>(1)</sup> .....
- 5. *Remarks:* .....

<sup>(1)</sup> Delete as appropriate.

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1. *Mass of vehicle at the time of testing on the following:*

	unladen (kg)	laden (kg)
King pin supporting load <sup>(1)</sup>		
Axle No 1 <sup>(2)</sup>		
Axle No 2		
Axle No 3		
Axle No 4		
Total		

2. *Result of the tests:*

Test	Test speed km/h	Measured performance	Measured force applied to the control (N)
2.1. Type 0 tests, engine disconnected service braking secondary braking			
2.2. Type 0 test engine connected service braking in accordance with Annex II, point 2.1.1.1.1 <sup>(2)</sup>			
2.3. Type I tests with repeated braking <sup>(3)</sup> with continuous braking <sup>(4)</sup>			
2.4. Type II or Type IIA tests, as appropriate			
2.4.1. Type III test <sup>(4)</sup>			

<sup>(1)</sup> In the case of a semi-trailer or a centre-axle trailer, enter the mass corresponding to the load on the coupling device.

<sup>(2)</sup> Delete as appropriate.

<sup>(3)</sup> Applies only to motor vehicles.

<sup>(4)</sup> Applies only to trailers.

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- 2.5. Braking system(s) used during the Type II/IIA or Type III <sup>(1)</sup> test:
- 2.6. Reaction time and dimensions of flexible pipes
- 2.6.1. Reaction time at the brake actuator ..... sec.
- 2.6.2. Reaction time at the control line coupling head ..... sec.
- 2.6.3. Flexible pipes of tractive units for semi-trailers:  
— length: ... m  
— internal diameter ... mm
- 2.7. Cases in which Type I and/or II (or IIA) or Type III tests do not have to be carried out (Annex VII):
- 2.7.1. Type-approval number of the reference vehicle
- 2.7.2.

	Vehicle axles			Reference axles		
	Mass per axle (*)	Required braking force to the wheels	Speed	Mass per axle (*)	Actual braking force developed at the wheels	Speed
	kg	N	km/h	kg	N	km/h
Axle 1						
Axle 2						
Axle 3						
Axle 4						

(\*) This is the technically permissible maximum mass per axle.

- 2.7.3.

Maximum mass of the vehicle submitted for type-approval	... kg
Required braking force to the wheels	... N
Required retarding torque on the main shaft of the brake	... Nm
Retarding torque obtained on the main shaft of the brake (according to diagram)	... Nm

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## 2.7.4.

Reference axle ...	Report No ...	Date ... (copy attached)	
	Type I	Type III	
Brake forces per axle (N) (see point 4.2, Appendix 1 of Annex VII)			
Axle 1	$T_1 = \dots\dots\dots \% P_e$	$T_1 = \dots\dots\dots \% P_e$	
Axle 2	$T_2 = \dots\dots\dots \% P_e$	$T_2 = \dots\dots\dots \% P_e$	
Axle 3	$T_3 = \dots\dots\dots \% P_e$	$T_3 = \dots\dots\dots \% P_e$	
Predicted actuator stroke (mm) (see point 4.3.1.1, Appendix 1 of Annex VII)			
Axle 1	$S_1 = \dots\dots\dots$	$S_1 = \dots\dots\dots$	
Axle 2	$S_2 = \dots\dots\dots$	$S_2 = \dots\dots\dots$	
Axle 3	$S_3 = \dots\dots\dots$	$S_3 = \dots\dots\dots$	
Average output thrust (N) (see point 4.3.1.2, Appendix 1 of Annex VII)			
Axle 1	$Th_{A1} = \dots\dots\dots$	$Th_{A1} = \dots\dots\dots$	
Axle 2	$Th_{A2} = \dots\dots\dots$	$Th_{A2} = \dots\dots\dots$	
Axle 3	$Th_{A3} = \dots\dots\dots$	$Th_{A3} = \dots\dots\dots$	
Braking performance (N) (see point 4.3.1.4, Appendix 1 of Annex VII)			
Axle 1	$T_1 = \dots\dots\dots$	$T_1 = \dots\dots\dots$	
Axle 2	$T_2 = \dots\dots\dots$	$T_2 = \dots\dots\dots$	
Axle 3	$T_3 = \dots\dots\dots$	$T_3 = \dots\dots\dots$	
	Type 0 subject trailer test result (E)	Type I (predicted) hot	Type III (predicted hot)
Braking performance of vehicle (see point 4.3.2, Appendix 1 of Annex VII)			
Hot braking requirements (see point 1.3.3 and 1.6.2 of Annex II)	$\geq 0,36$ and $\geq 0,6 E$	$\geq 0,40$ and $\geq 0,6 E$	

3. *Reservoirs and energy sources using compressed-air:*

3.1. Total volume of the brake reservoirs .....

3.2. Value  $p_2$  declared by manufacturer .....

3.3. Pressure in the reservoir after a test of eight brake applications .....



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- 3.4. Charging time  $T_1$  .....
- 3.5. Charging time  $T_2$  .....
- 3.6. Total volume of the reservoirs of auxiliary systems .....
- 3.7. Charging time  $T_3$  .....
- 4. *Automatic braking on trailers with compressed-air braking system*
- 4.1. Braking rate achieved .....
- 5. *Trailers with electrical braking system*
- 5.1. Braking rate achieved .....

#### Appendix 3 List of vehicle data for the purpose of approvals pursuant to Annex XV

- 1. Description of the vehicle type
  - 1.1. Trade name or mark of the vehicle, if available:
  - 1.2. Vehicle category:
  - 1.3. Vehicle type according to Annex IX, Appendix 1:
  - 1.4. Models or trade names of vehicles constituting the vehicle type, if available:
  - 1.5. Manufacturer's name and address:
- 2. Make and type of brake linings
  - 2.1. Brake linings tested to all relevant prescriptions of Annex II:
  - 2.2. Brake linings tested to Annex XII:
- 3. Minimum mass of vehicle:
  - 3.1. Distribution of mass of each axle (minimum value):
- 4. Maximum mass of vehicle:
  - 4.1. Distribution of mass of each axle (maximum value):
- 5. Maximum vehicle speed:
- 6. Tyre and wheel dimensions:
- 7. Brake circuit configuration (e.g. front/rear or diagonal split):
- 8. Declaration of which system is the secondary braking system:
- 9. Specifications of brake valves (if applicable)
  - 9.1. Adjustment specifications of the load sensing valve:
  - 9.2. Setting of pressure valve:
- 10. Designed brake force distribution:
- 11. Specification of brake

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11.1. Disc brake type

(e.g. number of pistons with diameter(s), ventilated or solid disc):

11.2. Drum brake type

(e.g. simplex/duplex, with piston size and drum dimensions):

11.3. In the case of compressed air brake systems, e.g. type and size of chambers, levers, etc.:

12. Master cylinder type and size:

13. Booster type and size:]