

# **AGREEMENT**

## **CONCERNING THE ADOPTION OF UNIFORM CONDITIONS OF APPROVAL AND RECIPROCAL RECOGNITION OF APPROVAL FOR MOTOR VEHICLE EQUIPMENT AND PARTS**

done at Geneva on 20 March 1958

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### Addendum 57: Regulation No. 58

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#### **UNIFORM PROVISIONS CONCERNING THE APPROVAL OF:**

- I. REAR UNDERRUN PROTECTIVE DEVICES (RUPDs)
- II. VEHICLES WITH REGARD TO THE INSTALLATION OF AN RUPD OF AN APPROVED TYPE
- III. VEHICLES WITH REGARD TO THEIR REAR UNDERRUN PROTECTION (RUP)



**UNITED NATIONS**

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Regulation No. 58

UNIFORM PROVISIONS CONCERNING THE APPROVAL OF:

- I. REAR UNDERRUN PROTECTIVE DEVICES (RUPDs)
- II. VEHICLES WITH REGARD TO THE INSTALLATION OF AN RUPD OF AN APPROVED TYPE
- III. VEHICLES WITH REGARD TO THEIR REAR UNDERRUN PROTECTION (RUP)

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Regulation No. 58

UNIFORM PROVISIONS CONCERNING THE APPROVAL OF:

- I. REAR UNDERRUN PROTECTIVE DEVICES (RUPDs)
  - II. VEHICLES WITH REGARD TO THE INSTALLATION OF AN RUPD OF AN APPROVED TYPE
  - III. VEHICLES WITH REGARD TO THEIR REAR UNDERRUN PROTECTION (RUP)
1. SCOPE
    - 1.1 This Regulation applies to:
      - 1.1.1 PART I: the RUPDs which are intended to be fitted to vehicles of categories N2, N3, 03 and 04.; 1/
      - 1.1.2 PART II: the installation on vehicles of categories N2, N3, 03 and 04 1/ of RUPDs which have been type approved to Part I of this Regulation;
      - 1.1.3 PART III: vehicles of categories N2, N3, 03 and 04 1/ equipped with an RUPD which has not been separately approved according to Part I of this Regulation or so designed and/or equipped that its component parts can be regarded as totally or partially fulfilling the function of the RUPD.
    - 1.2 This Regulation does not apply to:
      - 1.2.1 Tractive units for articulated vehicles;
      - 1.2.2 Trailers specially designed and constructed for the carriage of very long loads of indivisible length, such as timber, steel bars, etc.;
      - 1.2.3 Vehicles where any RUPD is incompatible with their use.
  2. PURPOSE

The purpose of this Regulation is to offer effective protection against underrunning of vehicles mentioned in paragraph 1 of this Regulation in the event of rear collision with vehicles of category M<sub>1</sub> and N<sub>1</sub>. 1/
  3. DEFINITIONS COMMON TO PARTS I, II and III
    - 3.1 For the purpose of this Regulation:
      - 3.1.1 "Unladen mass" means the mass of the vehicle in running order, unoccupied and unladen but complete with fuel, coolant, lubricant, tools and a spare wheel (if provided as standard equipment by the vehicle manufacturer);

- 3.1.2 "Maximum mass" means the mass stated by the vehicle manufacturer to be technically permissible (this mass may be higher than the "permissible maximum mass" laid down by the national administration);
- 3.1.3 An "RUPD" normally consists of a cross-member and links to the chassis side members or other structural members of the vehicle.

#### PART I. APPROVAL OF RUPDs

#### 4. DEFINITIONS

- 4.1 For the purpose of Part I of this Regulation:
- 4.1.1 "Approval of an RUPD" means the approval of such a type of RUPD with respect to the requirements laid down in paragraph 7 below;
- 4.1.2 "Type of RUPD" means RUPDs which do not differ with respect to the essential characteristics such as shape, dimensions, attachment, materials and the markings cited in paragraph 5.2.2 below.

#### 5. APPLICATION FOR APPROVAL

- 5.1 The application for approval of an RUPD shall be submitted by the manufacturer of the RUPD or by his duly accredited representative.
- 5.2 For each type of RUPD the application must be accompanied by:
- 5.2.1 Documentation in triplicate giving a description of the technical characteristics of the RUPD: its dimensions, lines and constituent materials and the method of its installation;
- 5.2.2 A sample of the type of RUPD: the sample must be clearly and indelibly marked on all its main components with the applicant's trade name or mark and the type designation.
- 5.3 An RUPD representative of the type to be approved shall be submitted to the technical service responsible for conducting the approval tests.
- 5.4 The competent authority shall verify the existence of satisfactory arrangements for ensuring effective control of the conformity of production before type approval is granted.

#### 6. APPROVAL

- 6.1 If the RUPD submitted for approval pursuant to this Regulation meets the requirements of paragraph 7 below, approval of that type of RUPD shall be granted.

- 6.2 An approval number shall be assigned to each type approved. Its first two digits (at present 01 corresponding to the 01 series of amendments which entered into force on 25 March 1989) shall indicate the series of amendments incorporating the most recent major technical amendments made to the Regulation at the time of issue of the approval. The same Contracting Party may not assign the same number to another type of rear underrun protective device.
- 6.3 Notice of approval, or of extension or of refusal of approval of a type of RUPD pursuant to this Regulation shall be communicated to the Parties to the 1958 Agreement which apply this Regulation, by means of a form conforming to the model in annex 1 to this Regulation.
- 6.4 There shall be affixed, conspicuously and in a readily accessible place specified on the approval form, to every RUPD conforming to a type of RUPD approved under this Regulation an international approval mark consisting of:
- 6.4.1 A circle surrounding the letter "E" followed by the distinguishing number of the country which has granted approval; 2/
- 6.4.2 The number of this Regulation, followed by the letter "R", a dash and the approval number to the right of the circle prescribed in paragraph 6.4.1.
- 6.5 The approval mark shall be clearly legible and be indelible.
- 6.6 Annex 4 to this Regulation gives examples of arrangements of approval marks.
7. REQUIREMENTS
- 7.1 The section height of the cross-member must not be less than 100 mm. The lateral extremities of the cross-member must not bend to the rear or have a sharp outer edge; this condition is fulfilled when the lateral extremities of the cross-member are rounded on the outside and have a radius of curvature of not less than 2.5 mm.
- 7.2 The RUPD may be so designed to have several positions at the rear of the vehicle. In this event, there must be a guaranteed method of securing it in the service position so that any unintentional change of position is precluded. The force applied by the operator to vary the position of the device must not exceed 40 daN.
- 7.3 The RUPD must offer adequate resistance to forces applied parallel to the longitudinal axis of the vehicle. (This shall be demonstrated in accordance with the test procedure and test conditions specified in annex 5 to this Regulation.) The maximum horizontal deflection of the RUPD observed during and after the application of the test forces specified in annex 5 shall be recorded on the type approval communication (annex 1, item 8).

8. CONFORMITY OF PRODUCTION

- 8.1 Every rear underrun protective device approved under this Regulation shall be so manufactured as to conform to the type approved by meeting the requirements set out in paragraph 7 above.
- 8.2 In order to verify that the requirements of paragraph 8.1 are met, suitable checks of the production shall be carried out.
- 8.3 The holder of the approval shall, in particular:
  - 8.3.1 Ensure existence of procedures for effective quality control of the protective devices;
  - 8.3.2 Have access to the testing equipment necessary for checking conformity of each approved type;
  - 8.3.3 Ensure that test result data are recorded and that the annexed documents remain available for a period to be determined in agreement with the administrative service;
  - 8.3.4 Analyse the results of each type of test, in order to verify and ensure the consistency of the protective device characteristics, making allowance for permissible variations in industrial production;
  - 8.3.5 Ensure that for each type of RUPD at least the dimensions, the constituent materials and the method of assembly correspond to the RUPD approved. If necessary at least the tests prescribed in paragraph 3 of annex 5 to this Regulation shall be carried out;
  - 8.3.6 Ensure that any set of samples or test pieces giving evidence of non-conformity in the type of test in question shall give rise to a further sampling and test. All necessary steps shall be taken to restore conformity of the corresponding production.
- 8.4 The competent authority which has granted type approval may at any time verify the conformity control methods applied in each production unit.
  - 8.4.1 At every inspection, the test records and production records shall be presented to the visiting inspector.
  - 8.4.2 The inspector may select samples at random to be tested in the manufacturer's laboratory. The minimum number of samples may be determined according to the results of the manufacturer's own checks.

8.4.3 Where the quality level appears unsatisfactory or it seems necessary to verify the validity of the tests carried out in application of paragraph 8.4.2, the inspector shall select samples to be sent to the technical service which conducted the type approval tests.

8.4.4 The competent authority may carry out any test prescribed in this Regulation.

8.4.5 The normal frequency of inspections authorized by the competent authority shall be one every year. In cases where unsatisfactory results are found during one of these inspections, the competent authority shall ensure that all necessary steps are taken to restore conformity of production as rapidly as possible.

## 9. PENALTIES FOR NON-CONFORMITY OF PRODUCTION

9.1 The approval granted in respect of a type of RUPD pursuant to this Regulation may be withdrawn if the requirements set forth above are not met or if the protective device has failed to pass the test prescribed in annex 5.

9.2 If a Contracting Party to the Agreement applying this Regulation withdraws an approval it has previously granted, it shall forthwith so notify the other Contracting Parties applying this Regulation, by means of a communication form conforming to the model in annex 1 to this Regulation.

## 10. MODIFICATION AND EXTENSION OF APPROVAL OF AN RUPD TYPE

10.1 Every modification of the RUPD type shall be notified to the administrative department which approved the RUPD type. The department may then either:

10.1.1 Consider that the modifications made are unlikely to have an appreciable adverse effect and that in any case the RUPD still complies with the requirements; or

10.1.2 Require a further test report from the technical service responsible for conducting the tests.

10.2 Confirmation or refusal of approval, specifying the alterations shall be communicated by the procedure specified in paragraph 6.3 above to the Parties to the Agreement applying this Regulation.

10.3 The competent authority issuing the extension of approval shall assign a series number of such an extension and inform thereof the other Parties to the 1958 Agreement applying this Regulation by means of a communication form conforming to the model in annex 1 to this Regulation.



11. PRODUCTION DEFINITELY DISCONTINUED

If the holder of the approval completely ceases to manufacture a type of rear underrun protective device approved in accordance with this Regulation, he shall so inform the authority which granted the approval. Upon receiving the relevant communication that authority shall inform thereof the other Parties to the 1958 Agreement applying this Regulation by means of a communication form conforming to the model in annex 1 to this Regulation.

12. NAMES AND ADDRESSES OF TECHNICAL SERVICES RESPONSIBLE FOR CONDUCTING APPROVAL TESTS, AND OF ADMINISTRATIVE DEPARTMENTS

The Parties to the 1958 Agreement applying this Regulation shall communicate to the United Nations Secretariat the names and addresses of the technical services responsible for conducting approval tests and of the administrative departments which grant approval and to which forms certifying approval or extension or refusal or withdrawal of approval, issued in other countries, are to be sent.

PART II. APPROVAL OF A VEHICLE WITH REGARD TO  
THE INSTALLATION OF AN RUPD OF AN  
APPROVED TYPE

13. DEFINITIONS

13.1 For the purposes of Part II of this Regulation:

13.1.1 "Approval of a vehicle" means the approval of a vehicle type with regard to the installation of an RUPD of an approved type according to Part I of this Regulation;

13.1.2 "Vehicle type" means vehicles which do not differ in such essential aspects as:

The width of the rear axle,

The structure, the dimensions, the shape and the height from the ground of the rear part of the vehicle and the characteristics of the suspension, in so far as they have a bearing on the requirements specified in paragraph 19 of this Regulation,

The approved RUPDs fitted to the vehicle.

13.2 Other definitions applicable to this Part II are contained in paragraph 3 of this Regulation.

14. APPLICATION FOR APPROVAL

- 14.1 The application for approval of a vehicle type with regard to the installation of an RUPD(s) of an approved type shall be submitted by the vehicle manufacturer or by his duly accredited representative.
- 14.2 It shall be accompanied by the under-mentioned documents in triplicate and by the following particulars:
- 14.2.1 Drawings of the vehicle showing, according to the criteria referred to in paragraph 13.1.2 of this Regulation, the vehicle type in side and rear elevation with the indication of the position of the approved RUPD(s) and design details of its (their) fixing elements to the chassis of the vehicle;
- 14.2.2 The maximum mass of the vehicle;
- 14.2.3 A list of the RUPDs intended to be fitted to the vehicle;
- 14.2.4 At the request of the competent authority the type approval communication form (i.e. annex 1 of this Regulation) of each RUPD shall also be supplied.
- 14.3 A vehicle representative of the type to be approved and fitted with an approved RUPD shall be submitted to the technical service responsible for conducting the approval tests.
- 14.3.1 A vehicle not comprising all the components proper to the type may be accepted for test provided that it can be shown by the applicant to the satisfaction of the competent authority that the absence of the components omitted has no effect on the results of the verifications, so far as the requirements of this Regulation are concerned.
- 14.4 The competent authority shall verify the existence of satisfactory arrangements for ensuring effective checks on conformity of production before type approval is granted.

15. APPROVAL

- 15.1 If the vehicle submitted for approval pursuant to this Regulation is provided with an approved RUPD and meets the requirements of paragraph 16 below, approval of that vehicle type shall be granted.
- 15.2 An approval number shall be assigned to each type approved. Its first two digits (at present 01 corresponding to the 01 series of amendments which entered into force on 25 March 1989) shall indicate the series of amendments incorporating the most recent major technical amendments made to the Regulation at the time of issue of the approval. The same Contracting Party may not assign the same number to another vehicle type.

- 15.3 Notice of approval or of extension or of refusal of approval of a vehicle type pursuant to this Regulation shall be communicated to the Parties to the 1958 Agreement which apply this Regulation, by means of a form conforming to the model in annex 2 to this Regulation.
- 15.4 There shall be affixed, conspicuously and in a readily accessible place specified on the approval form, to every vehicle conforming to a vehicle type approved under this Regulation an international approval mark consisting of:
- 15.4.1 A circle surrounding the letter "E" followed by the distinguishing number of the country which has granted approval; 2/
- 15.4.2 The number of this Regulation, followed by the letter "R", a dash and the approval number to the right of the circle prescribed in paragraph 15.4.1.
- 15.5 If the vehicle conforms to a vehicle type approved, under one or more other Regulations annexed to the Agreement, in the country which has granted approval under this Regulation, the symbol prescribed in paragraph 15.4.1 need not be repeated; in such a case the Regulation and approval numbers and the additional symbols of all the Regulations under which approval has been granted in the country which has granted approval under this Regulation shall be placed in vertical columns to the right of the symbol prescribed in paragraph 15.4.1.
- 15.6 The approval mark shall be clearly legible and be indelible.
- 15.7 The approval mark shall be placed close to or on the vehicle data plate affixed by the manufacturer.
- 15.8 Annex 4 to this Regulation gives examples of arrangements of approval marks.
16. REQUIREMENTS FOR INSTALLATION OF AN APPROVED RUPD
- 16.1 The ground clearance with respect to the underside of the protective device, even when the vehicle is unladen, must not exceed 550 mm over its entire width and shall be such that the height above the ground of the points of application of the test forces applied to the device according to Part I of this Regulation and recorded in the type approval communication form (annex 1, item 7) does not exceed 600 mm.

- 16.2 The width of the rear protective device must at no point exceed the width of the rear axle measured at the outermost points of the wheels, excluding the bulging of the tyres close to the ground, nor must it be more than 100 mm shorter on either side. Where there is more than one rear axle, the width to be considered is that of the widest rear axle. In addition the requirements of paragraphs 3.1.2 and 3.1.3 of annex 5 relating the distance of the points of application of the test forces from the outer edges of the rear wheels (annex 1, paragraph 7) must be verified and recorded in the type approval communication form.
- 16.3 The device must be so fitted that the horizontal distance between the rear of the device and the rear extremity of the vehicle does not exceed 400 mm diminished by the recorded deformation (paragraph 7.3 of Part I) measured at any of the points where the test forces have been applied (annex 1, item 8) during the type approval of the rear underrun protective device in conformity with the provisions of Part I of this Regulation and recorded in the type approval communication form. In measuring this distance, any part of the vehicle which is more than 3 m above the ground when the vehicle is unladen shall be excluded.
- 16.4 The maximum mass of a vehicle type for which approval is requested shall not exceed the value indicated on the type approval communication form of each approved RUPD intended to be installed on that vehicle. The distance between the two longitudinal planes tangential to the outer edges of the wheels on the rear axle of a vehicle type for which approval is requested shall be such that the distance of the two outer test points mentioned in paragraph 3.1.3 of annex 5 of the RUPD from each of these plans is  $300 \pm 25$  mm.
17. CONFORMITY OF PRODUCTION
- 17.1 Every vehicle approved pursuant to this Regulation shall be so manufactured as to conform to the type approved by meeting the requirements set out in paragraph 16 above.
- 17.2 In order to verify that the requirements of paragraph 17.1 above are met, suitable checks on production shall be carried out.
- 17.3 The holder of the approval shall in particular:
- 17.3.1 Ensure existence of procedures for effective quality control of the vehicles as regards all aspects relevant to compliance with the requirements set out in paragraph 16 above;
- 17.3.2 Ensure that for every approved vehicle sufficient checks are carried out regarding the installation of a type approved rear protective device, in such a way that all vehicles in production comply with the specifications of the vehicles submitted for type approval;

17.3.3 Ensure that, if the checks carried out pursuant to paragraph 17.3.2 above give evidence of non-conformity of one or more vehicles with the requirements set out in paragraph 16 above, all necessary steps are taken to restore conformity of the corresponding production.

17.4 The competent authority which has granted type approval may at any time verify the conformity control methods applied in each production unit. The authority may also carry out random checks on serially manufactured vehicles in respect to the requirements set out in paragraph 16 above.

17.5 Where unsatisfactory results are found during verifications and checks pursuant to paragraph 17.4 above, the competent authority shall ensure that all necessary steps are taken to restore conformity of production as rapidly as possible.

17.6 The normal frequency of inspections authorized by the competent authority shall be one every year. In cases where unsatisfactory results are found during one of these inspections, the competent authority shall ensure that all necessary steps are taken to restore conformity of production as rapidly as possible.

#### 18. PENALTIES FOR NON-CONFORMITY OF PRODUCTION

18.1 The approval granted in respect of a vehicle type pursuant to this Regulation may be withdrawn if the requirements set forth above are not met.

18.2 If a Contracting Party to the Agreement applying this Regulation withdraws an approval it has previously granted, it shall forthwith so notify the other Contracting Parties applying this Regulation, by means of a communication form conforming to the model in annex 2 to this Regulation.

#### 19. MODIFICATION AND EXTENSION OF APPROVAL OF A VEHICLE TYPE

19.1 Every modification of the vehicle type shall be notified to the administrative department which approved the vehicle type. The department may then either:

19.1.1 Consider that the modifications made are unlikely to have an appreciable adverse effect and that in any case the vehicle still complies with the requirements; or

19.1.2 Require a further test report from the technical service responsible for conducting the tests.

19.2 Confirmation or refusal of approval, specifying the alteration, shall be communicated by the procedure specified in paragraph 15.3 above to the Parties to the Agreement applying this Regulation.

19.3 The competent authority issuing the extension of approval shall assign a series number for such an extension and inform thereof the other Parties to the 1958 Agreement applying this Regulation by means of a communication form conforming to the model in annex 2 to this Regulation.

20. PRODUCTION DEFINITELY DISCONTINUED

If the holder of the approval completely ceases to manufacture a type vehicle approved in accordance with this Regulation, he shall so inform the authority which granted the approval. Upon receiving the relevant communication, that authority shall inform thereof the other Parties to the 1958 Agreement applying this Regulation by means of a communication form conforming to the model in annex 2 to this Regulation.

21. NAMES AND ADDRESSES OF TECHNICAL SERVICES RESPONSIBLE FOR CONDUCTING APPROVAL TESTS, AND OF ADMINISTRATIVE DEPARTMENTS

The Parties to the 1958 Agreement applying this Regulation shall communicate to the United Nations Secretariat the names and addresses of the technical services responsible for conducting approval tests and of the administrative departments which grant approval and to which forms certifying approval or extension or refusal or withdrawal of approval, issued in other countries, are to be sent.

PART III. APPROVAL OF A VEHICLE WITH REGARD TO ITS  
REAR UNDERRUN PROTECTION (RUP)

22. DEFINITIONS

22.1 For the purposes of Part III of this Regulation:

22.1.1 "Approval of a vehicle" means the approval of a vehicle type with regard to its RUP;

22.1.2 "Vehicle type" means a category of vehicles which do not differ with respect to the essential points as the width of the rear axle, the structure, the dimensions, the shape and the materials of the rear part of the vehicle, the characteristics of the suspension in so far as they have a bearing on the requirements specified in paragraph 25 of this Regulation;

22.1.3 "Rear underrun protection (RUP)" means the presence at the rear of the vehicle of either:

22.1.3.1 A special RUPD; or

22.1.3.2 Body work, chassis parts or other components, such that, by virtue of their shape and characteristics, these elements can be regarded as totally or partially fulfilling the function of the RUPD.

22.2 Other definitions applicable to this Part III are contained in paragraph 3 of this Regulation.

23. APPLICATION FOR APPROVAL

23.1 The application for approval of a vehicle type with regard to the protection afforded by the RUP shall be submitted by the vehicle manufacturer or by his duly accredited representative.

23.2 It shall be accompanied by the under-mentioned documents in triplicate and by the following particulars:

23.2.1 A detailed description of the vehicle type with respect to its structure, dimensions, lines and constituent materials in so far as required for the purpose of this Regulation;

23.2.2 Drawings of the vehicle showing the vehicle type in side and rear elevation and design details of the rear parts of the structure;

23.2.3 The maximum mass of the vehicle;

23.2.4 A detailed description of the RUP: its dimensions, lines, constituent materials and position on the vehicle.

23.3 A vehicle representative of the type to be approved shall be submitted to the technical service responsible for conducting the approval tests.

23.3.1 A vehicle not comprising all the components proper to the type may be accepted for test provided that it can be shown by the applicant to the satisfaction of the competent authority that the absence of the components omitted has no effect on the results of the verification, so far as the requirements of this Regulation are concerned.

23.4 The competent authority shall verify the existence of satisfactory arrangements for ensuring effective checks on conformity of production before type approval is granted.

24. APPROVAL

24.1 If the vehicle submitted for approval pursuant to this Regulation meets the requirements of paragraph 25 below, approval of that vehicle type shall be granted.

24.2 An approval number shall be assigned to each type approved. Its first two digits (at present 01 corresponding to the 01 series of amendments which entered into force on 25 March 1989) shall indicate the series of amendments incorporating the most recent major technical amendments made to the Regulation at the time of issue of the approval. The same Contracting Party may not assign the same number to another vehicle type.

- 24.3 Notice of approval or of extension or of refusal of approval of a vehicle type pursuant to this Regulation shall be communicated to the Parties to the 1958 Agreement which apply this Regulation, by means of a form conforming to the model in annex 3 to this Regulation.
- 24.4 There shall be affixed, conspicuously and in a readily accessible place specified on the approval form, to every vehicle conforming to a vehicle type approved under this Regulation an international approval mark consisting of:
- 24.4.1 A circle surrounding the letter "E" followed by the distinguishing number of the country which has granted approval; 2/
- 24.4.2 The number of this Regulation, followed by the letter "R", a dash and the approval number to the right of the circle prescribed in paragraph 24.4.1.
- 24.5 If the vehicle conforms to a vehicle type approved, under one or more other Regulations annexed to the Agreement, in the country which has granted approval under this Regulation, the symbol prescribed in paragraph 24.4.1 need not be repeated; in such a case the Regulation and approval numbers and the additional symbols of all the Regulations under which approval has been granted in the country which has granted approval under this Regulation shall be placed in vertical columns to the right of the symbol prescribed in paragraph 24.4.1.
- 24.6 The approval mark shall be clearly legible and be indelible.
- 24.7 The approval mark shall be placed close to or on the vehicle data plate affixed by the manufacturer.
- 24.8 Annex 4 to this Regulation gives examples of arrangements of approval marks.

25. REQUIREMENTS FOR RUP

- 25.1 The ground clearance with respect to the underside of the RUP, even when the vehicle is unladen, must not exceed 550 mm over its entire width.
- 25.2 The RUP must be situated as close to the rear of the vehicle as possible.



- 25.3 The width of the RUP must at no point exceed the width of the rear axle measured at the outermost points of the wheels, excluding the bulging of the tyres close to the ground, nor must it be more than 100 mm shorter on either side. Where there is more than one rear axle, the width to be considered is that of the widest rear axle. Where the device is contained in or comprised by the vehicle bodywork which itself extends beyond the width of the rear axle the requirement that the width of the RUP must not exceed that of the rear axle shall not apply.
- 25.4 The section height of the RUP must not be less than 100 mm. The lateral extremities of the RUP must not bend to the rear or have a sharp outer edge, this condition is fulfilled when the lateral extremities of the RUP are rounded on the outside and have a radius of curvature of not less than 2.5 mm.
- 25.5 The RUP may be so designed to have several positions at the rear of the vehicle. In this event, there must be a guaranteed method of securing it in the service position so that any unintentional change of position is precluded. The force applied by the operator to vary the position of the RUP must not exceed 40 daN.
- 25.6 The RUP must offer adequate resistance to forces applied parallel to the longitudinal axis of the vehicle and be connected, when in the service position, with the chassis side-members or whatever replaces them. This requirement will be satisfied if it is shown that both during and after the application of the forces described in annex 5 the horizontal distance between the rear of the RUP and the rear extremity of the vehicle does not exceed 400 mm at any of the points where the test forces are applied. In measuring this distance, any part of the vehicle which is more than 3 m above the ground when the vehicle is unladen must be excluded.
- 25.7 A practical test shall not be required where it can be shown by calculation that the requirements of annex 5, paragraph 3, are met. Where a practical test is carried out, the device must be connected to the chassis side-members of the vehicle or to a significant part of these or to other structural members.
26. CONFORMITY OF PRODUCTION
- 26.1 Every vehicle approved under this Regulation shall be so manufactured as to conform to the type approved by meeting the requirements set out in paragraph 25 above.
- 26.2 In order to verify that the requirements of paragraph 26.1 are met, ~~suitable checks of the production~~ shall be carried out.
- 26.3 The holder of the approval shall, in particular:
- 26.3.1 Ensure existence of procedures for effective quality control of the RUP;

- 26.3.2 Have access to the testing equipment necessary for checking conformity to each approved type;
- 26.3.3 Ensure that test result data are recorded and that the annexed documents remain available for a period to be determined in agreement with the administrative service;
- 26.3.4 Analyse the results of each type of test, in order to verify and ensure the consistency of characteristics of the RUP, making allowance for permissible variations in industrial production;
- 26.3.5 Ensure that for each type of vehicle sufficient checks and tests are carried out regarding the dimensions, materials and performance of the components, which fulfil the function of the RUP and of those used for the installation on the vehicle;
- 26.3.6 Ensure that any set of samples or test pieces giving evidence of non-conformity in the type of test in question shall give rise to a further sampling and test. All necessary steps shall be taken to restore conformity of the corresponding production.
- 26.4 The competent authority which has granted type approval may at any time verify the conformity control methods applied in each production unit.
  - 26.4.1 At every inspection, the test records and production records shall be presented to the visiting inspector.
  - 26.4.2 The inspector may select samples at random to be tested in the manufacturer's laboratory. The minimum number of samples may be determined according to the results of the manufacturer's own checks.
  - 26.4.3 Where the quality level appears unsatisfactory or it seems necessary to verify the validity of the tests carried out in application of paragraph 26.4.2, the inspector shall select samples to be sent to the technical service which conducted the type approval tests.
  - 26.4.4 The competent authority may carry out any test prescribed in this Regulation.
  - 26.4.5 The normal frequency of inspections authorized by the competent authority shall be one every two years. In cases where unsatisfactory results are found during one of these inspections, the competent authority shall ensure that all necessary steps are taken to restore conformity of production as rapidly as possible.
- 27. PENALTIES FOR NON-CONFORMITY OF PRODUCTION
  - 27.1 The approval granted in respect of a vehicle type pursuant to this Regulation may be withdrawn if the requirements set forth above are not met or if the vehicle has failed to pass the test prescribed in annex 5.

27.2 If a Contracting Party to the Agreement applying this Regulation withdraws an approval it has previously granted, it shall forthwith so notify the other Contracting Parties applying this Regulation, by means of a communication form conforming to the model in annex 3 to this Regulation.

28. MODIFICATION AND EXTENSION OF APPROVAL OF A VEHICLE TYPE

28.1 Every modification of the vehicle type shall be notified to the administrative department which approved the vehicle type. The department may then either:

28.1.1 Consider that the modifications made are unlikely to have an appreciable adverse effect and that in any case the vehicle still complies with the requirements; or

28.1.2 Require a further test report from the technical service responsible for conducting the tests.

28.2 Confirmation or refusal of approval, specifying the alterations shall be communicated by the procedure specified in paragraph 24.3 above to the Parties to the Agreement applying this Regulation.

28.3 The competent authority issuing the extension of approval shall assign a series number for such an extension and inform thereof the other Parties to the 1958 Agreement applying this Regulation by means of a communication form conforming to the model in annex 3 to this Regulation.

29. PRODUCTION DEFINITELY DISCONTINUED

If the holder of the approval completely ceases to manufacture a vehicle type approved in accordance with this Regulation, he shall so inform the authority which granted the approval. Upon receiving the relevant communication that authority shall inform thereof the other Parties to the 1958 Agreement applying this Regulation by means of a communication form conforming to the model in annex 3 to this Regulation.

30. NAMES AND ADDRESSES OF TECHNICAL SERVICES RESPONSIBLE FOR CONDUCTING APPROVAL TESTS, AND OF ADMINISTRATIVE DEPARTMENTS

The Parties to the 1958 Agreement applying this Regulation shall communicate to the United Nations Secretariat the names and addresses of the technical services responsible for conducting approval tests and of the administrative departments which grant approval and to which forms certifying approval or extension or refusal or withdrawal of approval, issued in other countries, are to be sent.

Notes

1/ See Consolidated Resolution R.E.3 (TRANS/SC1/WP29/78 and Amend.1).

2/ 1 for the Federal Republic of Germany, 2 for France, 3 for Italy, 4 for the Netherlands, 5 for Sweden, 6 for Belgium, 7 for Hungary, 8 for Czechoslovakia, 9 for Spain, 10 for Yugoslavia, 11 for the United Kingdom, 12 for Austria, 13 for Luxembourg, 14 for Switzerland, 15 for the German Democratic Republic, 16 for Norway, 17 for Finland, 18 for Denmark, 19 for Romania, 20 for Poland, 21 for Portugal and 22 for the Union of Soviet Socialist Republics. Subsequent numbers shall be assigned to other countries in the chronological order in which they ratify or accede to the Agreement concerning the Adoption of Uniform Conditions of Approval and Reciprocal Recognition of Approval for Motor Vehicle Equipment and Parts, and the numbers thus assigned shall be communicated by the Secretary-General of the United Nations to the Contracting Parties to the Agreement.

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Annex 1

(Maximum format: A4 (210 x 297 mm))

COMMUNICATION



issued by:

Name of administration:

.....  
.....  
.....

concerning: 2/ APPROVAL GRANTED

APPROVAL EXTENDED

APPROVAL REFUSED

APPROVAL WITHDRAWN

PRODUCTION DEFINITELY DISCONTINUED

of a type of: rear underrun protective device (RUPD)

pursuant to Regulation No. 58

Approval No. ....

Extension No. ....

- 
1. Trade name or mark of device .....
  2. Type of device .....
  3. Name and address of manufacturer .....  
.....
  4. If applicable, name and address of manufacturer's representative .....  
.....

---

1/ Distinguishing number of the country which has granted/extended/  
refused/withdrawn approval (see approval provisions in the Regulation).

2/ Strike out what does not apply.

---

5. Characteristics of the device (dimensions and its fixing elements) .....  
.....
6. Test conducted on a rigid bench/on a vehicle/on a representative part of  
the chassis of a vehicle 2/
7. Position on the device of the points of application of the test forces ...  
.....
8. Maximum horizontal deflection observed during and after the application  
of the test forces in annex 5 .....  
.....
9. Vehicles on which the device may be installed (if applicable) .....
10. Maximum mass of vehicle on which the device may be installed .....
11. Device submitted for approval on .....
12. Technical service responsible for conducting approval tests .....  
.....
13. Date of report issued by that service .....
14. Number of report issued by that service .....
15. Approval has been granted/refused/extended/withdrawn in respect of the  
RUPD 2/
16. Position of approval mark on the device .....
17. Place .....
18. Date .....
19. Signature .....
20. The following documents, bearing the approval number shown above, are  
available upon request:

Drawings, diagrams and layout plans of the components of the structure  
considered to be of importance for the purposes of this Regulation;

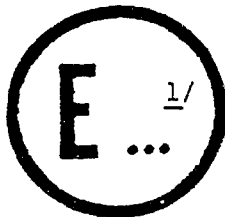
Where applicable drawings of the protective devices and their position on  
the vehicle.

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Annex 2

(Maximum format: A4 (210 x 297 mm))

COMMUNICATION



issued by:

Name of administration:

.....

.....

.....

concerning: 2/ APPROVAL GRANTED

APPROVAL EXTENDED

APPROVAL REFUSED

APPROVAL WITHDRAWN

PRODUCTION DEFINITELY DISCONTINUED

of a type of: a vehicle type with regard to the installation of a rear  
underrun protective device (RUPD) of an approved type

pursuant to Part II of Regulation No. 58

Approval No. ....

Extension No. ....

1. Trade name or mark of the vehicle .....

2. Vehicle type .....

3. Manufacturer's name and address .....

.....

1/ Distinguishing number of the country which has granted/extended/  
refused/withdrawn approval (see approval provisions in the Regulation).

2/ Strike out what does not apply.



4. If applicable, name and address of manufacturer's representative .....
5. Brief description of the vehicle type as regards its dimensions and lines .....
6. Trade name or mark of the RUPD(s) and its/their approval number(s) .....
7. Maximum mass of vehicle .....
8. Vehicle submitted for approval on .....
9. Technical service responsible for conducting approval tests .....
10. Date of report issued by that service .....
11. Number of report issued by that service .....
12. Approval granted/refused/extended/withdrawn 2/
13. Position of approval mark on the vehicle .....
14. Place .....
15. Date .....
16. Signature .....
17. The following documents, bearing the approval number shown above, are available upon request:

Drawings, diagrams and layout plans of the components of the structure considered to be of importance for the purposes of this Regulation;

Where applicable drawings of the protective devices and their position on the vehicle.

Annex 3

(Maximum format: A4 (210 x 297 mm))

COMMUNICATION



issued by:

Name of administration:

.....  
.....  
.....

concerning: 2/ APPROVAL GRANTED

APPROVAL EXTENDED

APPROVAL REFUSED

APPROVAL WITHDRAWN

PRODUCTION DEFINITELY DISCONTINUED

of a type of: a vehicle with regard to its rear underrun protection (RUP)

pursuant to Part III of Regulation No. 58

Approval No. ....

Extension No. ....

- 
1. Trade name or mark of the vehicle .....
  2. Vehicle type .....
  3. Manufacturer's name and address .....  
.....
  4. If applicable, name and address of manufacturer's representative .....  
.....

---

1/ Distinguishing number of the country which has granted/extended/  
refused/withdrawn approval (see approval provisions in the Regulation).

2/ Strike out what does not apply.

5. Brief description of the vehicle type as regards its structure, dimensions, lines and any fixing elements .....
6. Brief description of the RUP, as regards its dimensions and constituent materials.....
7. Maximum mass of vehicle .....
8. Value of force applied in test .....
9. Vehicle submitted for approval on .....
10. Technical service responsible for conducting approval tests .....
11. Date of report issued by that service .....
12. Number of report issued by that service .....
13. Approval granted/refused/extended/withdrawn 2/
14. Position of approval mark on the vehicle .....
15. Place .....
16. Date .....
17. Signature .....
18. The following documents, bearing the approval number shown above, are available upon request.

Drawings, diagrams and layout plans of the components of the structure considered to be of importance for the purpose of this Regulation;

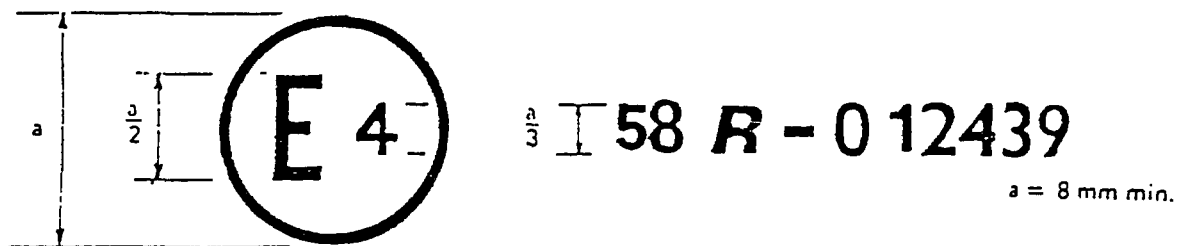
Where applicable drawings of the protective devices and their position on the vehicle.

Annex 4

ARRANGEMENTS OF APPROVAL MARKS

Model A

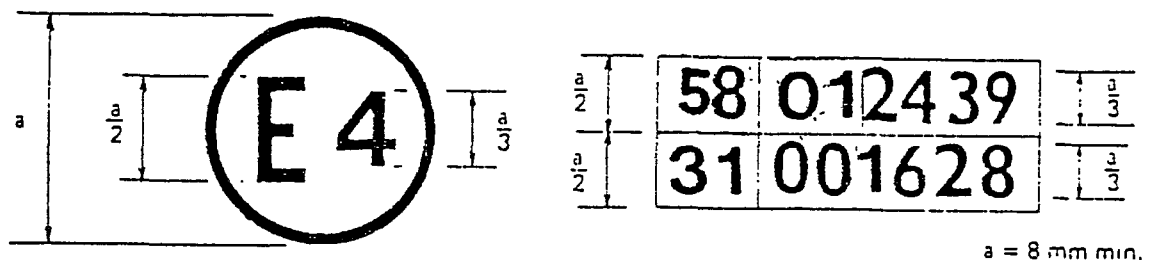
(see paragraphs 6.4, 15.4, 24.4 of this Regulation)



The above approval mark affixed to a vehicle or to an RUPD shows that the vehicle type or RUPD type concerned has, with regard to the rear underrun protection in the event of a collision, been approved in the Netherlands (E 4) pursuant to Regulation No. 58 under approval number 012439. The first two digits of the approval number indicate that the approval was granted in accordance with the requirements of Regulation No. 58 as amended by the 01 series of amendments.

Model B

(see paragraphs 6.5, 15.5, 24.5 of this Regulation)



The above approval mark affixed to a vehicle shows that the vehicle type concerned has been approved in the Netherlands (E 4) pursuant to Regulations Nos. 58 and 31. 1/ The approval numbers indicate that, at the dates when the respective approvals were given, Regulation No. 58 included the 01 series of amendments and Regulation No. 31 was still in its original form.

1/ The latter number is given as an example only.

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Annex 5

TEST CONDITIONS AND PROCEDURES

1. TEST CONDITIONS FOR RUPDs

- 1.1 At the request of the manufacturer the test may be conducted either:
  - 1.1.1 On a vehicle of the type for which RUPD is intended; in this case the conditions set out in paragraph 2 shall be observed; or
  - 1.1.2 On a part of the chassis of the vehicle type for which the RUPD is intended; this part shall be representative of the vehicle type(s) in question; or
  - 1.1.3 On a rigid test bench.
- 1.2 In the case of paragraphs 1.1.2 and 1.1.3 the parts used to connect the RUPD to part of the vehicle chassis or to the rigid test bench shall be equivalent to those which are used to secure the RUPD when it is installed on the vehicle.
- 1.3 At the request of the manufacturer and with the consent of the technical service the test procedure described in paragraph 3 may be simulated by calculation.

2. TEST CONDITIONS FOR VEHICLES

- 2.1 The vehicle shall be at rest on a level, flat, rigid and smooth surface.
- 2.2 The front wheels shall be in the straight-ahead position.
- 2.3 The tyres shall be inflated to the pressure recommended by the vehicle manufacturer.
- 2.4 The vehicle may, if necessary to achieve the test forces required in paragraph 3.1 below, be restrained by any method, this method to be specified by the vehicle manufacturer.
- 2.5 Vehicles equipped with hydropneumatic, hydraulic or pneumatic suspension or a device for automatic levelling according to load shall be tested in the normal running condition specified by the manufacturer.

3. TEST PROCEDURE

- 3.1 The requirements of paragraphs 7.3 and 25.6 of this Regulation shall be verified by means of suitable test mandrels; the forces for tests prescribed in paragraphs 3.1.1 and 3.1.2 below shall be applied separately and consecutively, via a surface not more than 250 mm in height (the exact height must be indicated by the manufacturer) and

200 mm wide, with a radius of curvature of  $5 \pm 1$  mm at the vertical edges. The height above the ground of the centre of the surface must be defined by the manufacturer within the lines that bound the device horizontally. When the test is carried out on a vehicle the height must not, however, exceed 600 mm when the vehicle is unladen. The order in which the forces are applied may be specified by the manufacturer.

- 3.1.1 A horizontal force of 100 kN or 50% of the force generated by the maximum mass of the vehicle, whichever is the lesser, shall be applied consecutively to two points situated symmetrically about the centre line of the device or of the vehicle whichever is applicable at a minimum distance apart of 700 mm and a maximum of 1 m. The exact location of the points of application shall be specified by the manufacturer.
- 3.1.2 In the cases defined in paragraphs 1.1.1 and 1.1.2 of this annex a horizontal force of 25 kN or 12.5% of the force generated by the maximum mass of the vehicle, whichever is the lesser, shall be applied consecutively to two points located  $300 \pm 25$  mm from the longitudinal planes tangential to the outer edges of the wheels on the rear axle and to a third point located on the line joining these two points, in the median vertical plane of the vehicle.
- 3.1.3 In the cases defined in paragraph 1.1.3 of this annex a horizontal force of 25 kN or 12.5% of the force generated by the maximum mass of the vehicle for which the device is intended, whichever is the lesser, shall be applied consecutively to two points located at the discretion of the manufacturer of the rear underrun protective device and to a third point located on the line joining these two points, in the median vertical plane of the device.
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