No. 4789. 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[1]

ENTRY INTO FORCE of Regulation No. 36 *(Uniform provisions concerning the construction of public service vehicles)* as an annex to the above-mentioned Agreement

The said Regulation came into force on 1 March 1976 in respect of the United Kingdom of Great Britain and Northern Ireland[2] and France, in accordance with article 1 (5) of the Agreement.

1. SCOPE

This Regulation applies to single-deck rigid or articulated vehicles designed and constructed for the carriage of persons and having a capacity in excess of 16 passengers, whether seated or standing, in addition to the driver.

2. DEFINITIONS

For the purposes of this Regulation:

2.1. "Vehicle" means a vehicle designed and equipped for the public transport of more than eight passengers. There are three Classes of vehicles: Class I,

[1] United Nations, *Treaty Series*, vol. 335, p. 211; for subsequent actions, see references in Cumulative Indexes Nos. 4 to 11, as well as annex A in volumes 752, 754, 756, 759, 764, 768, 771, 772, 774, 777, 778, 779, 787, 788, 797, 801, 802, 808, 811, 814, 815, 818, 820, 825, 826, 829, 830, 834, 835, 848, 850, 854, 856, 857, 858, 860, 861, 865, 866, 871, 872, 882, 887, 891, 892, 893, 897, 899, 915, 917, 926, 932, 940, 943, 945, 950, 951, 955, 958, 960, 961, 963, 966, 973, 974, 978, 981, 982, 985, 986, 993 and 995.

[2] In a communication received by the Secretary-General on 4 March 1976, the Government of the United Kingdom of Great Britain and Northern Ireland declared as follows:

"... Public Service Vehicles approved under Regulation 36 which enter the United Kingdom will continue to have to comply with certain provisions of the "Public Service Vehicle (Conditions of Fitness, Equipment and Use) Regulations 1972" of the United Kingdom which regulate matters not covered by Regulation 36."

PROVISIONS OF THE PUBLIC SERVICE VEHICLE (CONDITIONS OF FITNESS, EQUIPMENT AND USE) REGULATIONS 1972 OF THE UNITED KINGDOM WITH WHICH PUBLIC SERVICE VEHICLES ENTERING THE UNITED KINGDOM ARE STILL REQUIRED TO COMPLY

Part I of Regulations: The whole part

Part II of Regulations: The following particular Regulations:

Regulation	*Content*
5	Certificate of Fitness
6	Stability
7	Suspension
9	Guard Rails
11	Brakes
12	Steering
13	Brake and Steering Connections
16	Exhaust Pipe
17	Locking of Nuts
18	Artificial Lighting
19	Electrical Equipment
20	Body (Secure fixing of Body to Chassis, Trap Doors)
25	Doors
26(*c*)	Means of operation of Emergency Doors
30(1)(*a*)	Seats (Secure support)
30(1)(*h*)	Seats (Protective Screen guarding Entrances/Exits)
31	Guarding of Transverse windows
32	Markings
33	Ventilation
34	Driver's Accommodation
35	Windscreens
36	Passengers Communication with Driver
38	Luggage racks
39	General construction

Part III of Regulations: The whole part

Part IV of Regulations: The whole part.

motor buses; Class II, interurban motor coaches; and Class III, long-distance touring motor coaches. A vehicle may be regarded as belonging in more than one Class. In such a case it may be approved for each Class to which it corresponds;

2.1.1. "Motor bus" (Class I) means a vehicle designed and equipped for urban and suburban transport; a vehicle of this Class has seats, and spaces for standing passengers; it is so arranged as to allow the movements of passengers associated with frequent stops;

2.1.2. "Interurban motor coach" (Class II) means a vehicle designed and equipped for interurban transport; a vehicle of this Class has no spaces specifically intended for standing passengers, but it can carry for short distances passengers standing in the gangway;

2.1.3. "Long-distance touring motor-coach" (Class III) means a vehicle designed and equipped for long-distance journeys; a vehicle of this Class is arranged to ensure the comfort of its seated passengers and does not carry standing passengers;

2.1.4. "Articulated bus" means a vehicle of Class I, II or III which consists of two rigid portions interconnected by an articulated section. On a vehicle of this type the passenger compartments of the two rigid portions intercommunicate. The articulated section enables passengers to move freely between the two rigid portions.

2.2. "Vehicle type" means a category of vehicles which do not differ essentially with regard to the constructional features specified in this Regulation;

2.3. "Approval of a vehicle" means the approval of a vehicle type with regard to the constructional features specified in this Regulation;

2.4. "Service door" means a door used by passengers in normal circumstances with the driver seated;

2.5. "Double door" means a door affording two, or the equivalent of two, access passages;

2.6. "Emergency door" means a door additional to the service doors intended for use by passengers as an exit only exceptionally, and in particular in an emergency;

2.7. "Emergency window" means a window, not necessarily glazed, intended for use as an exit by passengers in an emergency only;

2.8. "Double window" means an emergency window which, when divided into two by an imaginary vertical line (or plane), exhibits two parts each of which complies as to dimensions and access with the requirements applicable to a normal emergency window;

2.9. "Escape hatch" means a roof opening intended for use as an exit by passengers in an emergency only;

2.10. "Emergency exit" means an emergency door, emergency window or escape hatch;

2.11. "Exit" means a service door or emergency exit;

2.12. "Floor" means that part of the bodywork whose upper surface supports standing passengers, the feet of seated passengers and the driver, and the seat mountings;

2.13. "Gangway" means the space affording access by passengers from any seat or row of seats to any other seat or row of seats or to any access passage from or to any service door. It does not include the space extending to a depth of 30 cm in front of a seat or row of seats, which space is required

to accommodate the feet of seated passengers; nor does it include a staircase, or any space which, situated in front of a seat or row of seats, is intended solely for the use of passengers occupying that seat or row of seats;

2.14. "Driver's compartment" means the space intended for the driver's exclusive use and containing the steering wheel, controls, instruments and other devices necessary for driving the vehicle;

2.15. "Unladen kerb weight" means the weight of the vehicle in running order, unoccupied and unladen but complete with fuel, coolant, lubricant, tools and spare wheel, if any;

2.16. "Technical maximum weight" means the technically permissible maximum weight declared by the manufacturer of the vehicle and recognized by the administration granting approval. (This weight may be greater than the "permissible maximum weight" to be prescribed by national administrations.)

3. APPLICATION FOR APPROVAL

3.1. The application for approval of a vehicle type with regard to its constructional features shall be submitted by the vehicle manufacturer or by his duly accredited representative.

3.2. It shall be accompanied by the undermentioned documents in triplicate and by the following particulars:

3.2.1. a detailed description of the vehicle type with respect to its structure, dimensions, configuration and constituent materials;

3.2.2. drawings of the vehicle and its interior arrangement; and

3.2.3. particulars of

3.2.3.1. the technical maximum weight (PT) (kgf);

3.2.3.2. the technical maximum wiehgt for each axle (kgf);

3.2.3.3. the unladen kerb weight increased by 75 kgf for the weight of the driver (PV) (kgf);

3.2.4. provision made, if any, for the carriage of baggage or goods;

3.2.5. where one or more baggage compartments have been provided for baggage other than hand baggage, the total volume of such compartments (V) (m^3) and the total weight of the baggage that they can contain (B) (kgf);

3.2.6. where the vehicle is equipped to carry baggage on the roof, the total surface area available for such baggage (VX) (m^2) and the total weight of baggage that can be placed on it (BX) (kgf);

3.2.7. the horizontal projection of the total surface area intended for seated and standing passengers (S_0) (m^2);

3.2.8. the horizontal projection of the total surface area intended for standing passengers (S_1) (m^2) in accordance with paragraph 5.2;

3.2.9. the number of seats (A);

3.2.10. the intended total number of passengers (N).

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

4. APPROVAL

4.1. If the vehicle submitted for approval pursuant to this Regulation meets the requirements of paragraph 5. below, approval of that vehicle type shall be granted.

4.2. An approval number shall be assigned to each type approved. A Contracting Party may not assign the same number to another vehicle type within the meaning of paragraph 2.2. above.

4.3. Notice of approval or of refusal of approval of a vehicle type pursuant to this Regulation shall be communicated to the Parties to the Agreement which apply this Regulation by means of a form conforming to the model in annex 1 to this Regulation and of dimensioned drawings (supplied by the applicant for approval) of the vehicle structure in a format not exceeding A4 (210 × 297 mm) or folded to that format and on an appropriate scale.

4.4. 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:

4.4.1. an international approval mark consisting of:

4.4.1.1. a circle surrounding the letter "E" followed by the distinguishing number of the country which has granted approval,* and

4.4.1.2. the number of this Regulation, to the right of the circle prescribed in paragraph 4.4.1.1.; and

4.4.2. an additional symbol separated from the number of this Regulation by a vertical line and consisting of the Roman numeral(s) for the Class(es) in which the vehicle has been approved.

4.5. 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 4.4.1.1. need not be repeated; in such a case the additional numbers and 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 4.4.1.1.

4.6. The approval mark shall be clearly legible and be indelible.

4.7. The approval mark shall be placed close to or on the vehicle data plate affixed by the manufacturer.

4.8. Annex 2 to this Regulation gives examples of arrangements of the approval mark.

5. SPECIFICATIONS

5.1. *Loading conditions*

5.1.1. The load distribution of a stationary vehicle on level ground shall be such that the front axle or axles carry not less than:

5.1.1.1. 25 per cent of the vehicle's unladen kerb weight increased by a weight of 75 kgf placed on the driver's seat; the percentage figure may be reduced to 20 per cent in the case of vehicles of Class I;

* 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 and 16 for Norway; subsequent numbers shall be assigned to other countries in the chronological order in which they ratify the Agreement concerning the Adoption of Uniform Conditions of Approval and Reciprocal Recognition of Approval for Motor Vehicle Equipment and Parts, or in which they accede to that Agreement, and the numbers thus assigned shall be communicated by the Secretary-General of the United Nations to the Contracting Parties to the Agreement.

5.1.1.2. 25 per cent of the total weight of the vehicle when the vehicle is laden to its maximum weight, with a weight Q on each seat, a number, corresponding to the authorized number of standing passengers, of weight Q uniformly distributed over the areas S_1, a weight equal to B distributed normally in the baggage compartments, and, where appropriate, a weight equal to BX distributed normally over the surface area of the roof equipped for the carriage of baggage.

5.1.2. The values of Q for the different Classes of vehicle are specified in paragraph 5.3. below.

5.1.3. B (kgf) shall have a numerical value not less than 100 V (m^3).

5.1.4. BX shall exert a pressure of not less than 75 kg/m^2 over the whole surface area of the roof equipped for the carriage of baggage.

5.2. *Area available for passengers*

5.2.1. The total surface area S_0 available for passengers is calculated by deducting from the total area of the vehicle:

5.2.1.1. the area of the driver's compartment;

5.2.1.2. the area of the steps; and

5.2.1.3. the area of any part over which the vertical clearance above a horizontal plane tangential to the top of an undepressed seat cushion is less than 90 cm and over which the vertical clearance, above the whole area of the seat, is less than 135 cm measured from the floor where the feet of the seated passenger rest; and

5.2.1.4. the area of any part of the articulated section of an articulated bus to which part access is prevented by handrails and/or partitions.

5.2.2. The surface area S_1 available for standing passengers (only in the case of vehicles of Class I and Class II, in which the carriage of standing passengers is allowed) is calculated by deducting from S_0:

5.2.2.1. in vehicles of Class I:

5.2.2.1.1. the area of all parts, not being part of the gangway, in which the floor is not a plane surface with a slope of less than 6 per cent, or less than 8 per cent in the case of the areas specified in paragraph 5.7.6.1.;

5.2.2.1.2. the area of all parts which are not accessible to a standing passenger when all the seats are occupied;

5.2.2.1.3. the area of all parts where the clear height above the floor is less than 190 cm or—in the case of the section of the gangway situated above and behind the rear axle, and the attaching parts thereof—less than 180 cm (hand-holds shall not be taken into account in this connexion);

5.2.2.1.4. the area forward of a vertical plane passing through the centre of the seating surface of the driver's seat (in its rearmost position) and through the centre of the exterior rear-view mirror mounted on the opposite side of the vehicle; and,

5.2.2.2. in vehicles of Class II, the area of all parts which are not part of a gangway.

5.3. *Number of passengers accommodated*

5.3.1. There must be a number (A) of seats on the vehicle that conforms to the requirements of paragraph 5.7.8. at least equal to the nearest whole number of square metres of the area S_0.

5.3.2. The total number of passenger accommodations (N) shall not exceed either of the two numbers N_1 and N_2 calculated as follows:

$$N_1 = \frac{PT - PV - 100V - 75VX}{Q}$$

$$N_2 = A + \frac{S_1}{S_{sp}}$$

The values of Q and S_{sp} for the several Classes of vehicle are as follows:

Class	*Q (kgf) weight of one passenger*	*S_{sp} (m^2/passenger) space needed for one standing passenger*
Class I**	68	0.125
Class II.....	71*	0.15
Class III	71*	No standing passengers

5.4. *Strength of superstructure*

It must be shown by calculation or by any other suitable method that the structure of the vehicle is strong enough to withstand an evenly-distributed static load on the roof equal to the technical maximum weight (PT) of the vehicle up to a maximum of 10 tons.

5.5. *Protection against fire risks*

5.5.1. *Engine compartment*

5.5.1.1. No inflammable sound-proofing material or material liable to become impregnated with fuel or lubricant shall be used in the engine compartment unless the material is covered by an impermeable sheet.

5.5.1.2. Precautions shall be taken, either by a suitable layout of the engine compartment or by the provision of drainage orifices, to avoid so far as possible the accumulation of fuel or lubricating oil in any part of the engine compartment.

5.5.1.3. A partition of heat-resisting material shall be fitted between the engine compartment or any other source of heat (such as a device designed to absorb the energy liberated when a vehicle is descending a long gradient, e.g. a retarder or a device for heating the interior of the body, other however than a device functioning by warm-water circulation) and the rest of the vehicle.

5.5.2. *Fuel filler-holes*

5.5.2.1. Fuel filler-holes shall be accessible only from outside the vehicle.

5.5.2.2. Fuel filler-holes shall be not less than 50 cm from any door aperture when the fuel tank is intended to contain petrol, and not less than 25 cm when it its intended to contain diesel fuel; they shall moreover not be in the passenger compartment.

5.5.2.3. Even if the tank is completely overturned, the fuel shall not be able to run out through the filler-hole cap or through the devices provided to stabilize the pressure in the tank. A drip will however be tolerated.

5.5.2.4. If the filler-hole is situated on a side of the vehicle, the cap shall, when closed, not projeect beyond the adjacent surfaces of the bodywork.

5.5.2.5. Fuel filler-hole caps shall be so designed and constructed that they cannot be opened accidentally.

* Including 3 kgf of hand baggage.

** If a vehicle of Class II or Class III is approved as a Class I vehicle, the weight of luggage carried in luggage compartments accessible only from outside the vehicle is not taken into account.

5.5.3. *Fuel tanks*

5.5.3.1. All of a vehicle's fuel tanks shall be so situated as to be protected by the structure of the vehicle in the event of a frontal collision. No part of a fuel tank shall be less than 60 cm from the front of the vehicle.

5.5.3.2. No part of a fuel tank shall project beyond the overall width of the bodywork.

5.5.3.3. All tanks shall be subjected to a hydraulic internal-pressure test, which shall be carried out on an isolated unit complete with standard filler-pipe, filler-neck and cap. The tank shall be completely filled with water. After all communication with the outside has been cut off, the pressure shall be gradually increased, through the pipe connexion through which fuel is fed to the engine, to a relative pressure of 0.3 kg/cm^2, which shall be maintained for one minute. During this time the tank shell shall not crack or leak; it may, however, be permanently distorted.

5.5.4. *Fuel-feed systems*

5.5.4.1. No apparatus used for the fuel feed shall be placed in the driver's compartment or the passenger compartment.

5.5.4.2. Fuel lines and all other parts of the fuel-feed system shall be accommodated in positions on the vehicle where they have the fullest reasonable protection.

5.5.4.3. Twisting or bending movements and vibration of the vehicle structure or the power unit shall not subject the fuel lines to abnormal stress.

5.5.4.4. The unions of pliable or flexible pipes with rigid parts of the fuel-feed system shall be so designed and constructed as to remain leakproof in the various conditions of use of the vehicle, despite ageing, twisting or bending movements, or vibration of the vehicle structure or the power unit.

5.5.4.5. Fuel leaking from any part of the system shall be able to flow away freely to the road surface, but never on to the exhaust system.

5.5.5. *Emergency switch*

5.5.5.1. There shall be provided within immediate reach of the driver seated in the driver's seat an emergency switch which, when operated, causes simultaneous performance of the following functions:

5.5.5.1.1. quick stoppage of the engine;

5.5.5.1.2. actuation of a fuel supply valve fitted in the fuel supply line as close to the fuel tank as possible;

5.5.5.1.3. actuation of a battery-isolating switch fitted as close to the batteries as possible and capable of isolating at least one outlet of the battery;

5.5.5.1.4. automatic switching-on of the vehicle-hazard warning signal.

5.5.5.2. The emergency switch shall be clearly marked and its mode of operation clearly shown.

5.5.5.3. Performance of the functions referred to in paragraph 5.5.5.1. may be initiated not only by the emergency switch, but also by separate controls, provided that the latter do not in an emergency interfere with the functioning of the emergency switch.

5.5.6. *Electrical wiring*

5.5.6.1. All cables shall be well insulated and protected to withstand the temperature and humidity conditions to which they are exposed, particularly in the engine compartment.

5.5.6.2. No cable used in an electrical circuit shall carry a current in excess of that acceptable for such a cable in the light of its mode of installation and the maximum ambient temperature.

5.5.6.3. Every electrical circuit feeding an item of equipment other than the starter, the ignition circuit (positive ignition), the glow-plugs, the engine-stopping device, the battery-charging circuit and the battery shall include a fuse or circuit-breaker. Circuits feeding low-consumption equipment may however be protected by a common fuse or a common circuit-breaker, provided that the strength does not exceed 16 A.

5.5.6.4. All cables shall be well protected and shall be held securely in position in such a way that they cannot be damaged by cutting, abrasion or chafing.

5.5.7. *Batteries*

5.5.7.1. All batteries shall be well secured and easily accessible.

5.5.7.2. The battery compartment shall be separated from the passenger compartment and ventilated to outside air.

5.5.8. *Fire extinguishers and first-aid equipment*

5.5.8.1. Space shall be provided for the fitting of one or more fire extinguishers, one being near the driver's seat and the space provided for each measuring not less than 600 mm × 200 mm × 200 mm.

5.5.8.2. Space shall be provided for the fitting of one or more first-aid kits, the space provided for each measuring not less than 360 mm × 200 mm × 100 mm.

5.5.9. *Materials*
No inflammable material shall be permitted within 10 cm of the exhaust pipe unless the material is effectively shielded.

5.6. *Exits*

5.6.1. *Number*

5.6.1.1. Vehicles of Class I

The minimum number of service doors required is as follows:

*Number of passengers**	*Number of service doors*
16-60	2
61-95	3
Over 95	4

5.6.1.2. Vehicles of Classes II and III
Every vehicle of either of these Classes shall have at least two doors, i.e., either one service door and one emergency door or two service doors.

5.6.1.3. Vehicles of all Classes
For the purposes of this requirement, service doors equipped with a servo-operated control system shall not be deemed to be exits unless they can be readily opened by hand, once the control prescribed in paragraph 5.6.4.1.1. has been actuated if necessary.

5.6.1.4. The minimum number of emergency exits shall be such that the total number of exits, excluding escape hatches, is as follows:

*Number of passengers**	*Number of exits*
16-22	3
23-35	4
Over 35	5

* Not including the driver.

5.6.1.5. Each rigid section of an articulated vehicle shall be treated as a separate vehicle for the purpose of calculating the minimum number of exits to be provided. A number of passengers shall be determined for the section forward of and for that rearward of the articulation.

5.6.1.6. If the driver's compartment does not communicate with the inside of the vehicle it shall have two exits, which shall not both be in the same lateral walls; where one of the exits is a window it shall comply with the requirements set out in paragraph 5.6.4.3. for emergency windows.

5.6.1.7. A double service door shall count as two doors and a double window as two emergency windows.

5.6.1.8. Escape hatches, additional to the emergency doors and windows, may be required to be fitted in the roof. In such case the minimum number of hatches shall be:

*Number of passengers**	*Number of hatches*
Not exceeding 50	1
Exceeding 50	2

5.6.2. *Siting of exits*

5.6.2.1. The service doors shall be situated on the side of the vehicle that is nearer to the side of the road corresponding to the direction of traffic,** and at least one of them shall be in the forward half of the vehicle.

5.6.2.2. If the two doors referred to in paragraph 5.6.1.2. are on the same side of the vehicle, an equal number of emergency exits shall be placed on the opposite side.

5.6.2.3. The exits shall be placed in such a way that their number on each of the two sides of the vehicle is substantially the same.

5.6.2.4. The exits on the same side of the vehicle shall be suitably spaced out along the length of the vehicle.

5.6.2.5. A door shall, provided that it is not a service door, be permitted in the rear face of the vehicle.

5.6.2.6. If escape hatches are fitted they shall be positioned as follows:
If there is only one hatch it shall be situated in the middle section of the roof. If there are two hatches they shall be separated by a distance of at least 2 m.

5.6.3. *Minimum dimensions*

5.6.3.1. The several kinds of exit shall have the following minimum dimensions:

			Class I	*Class II*	*Class III*	*Remarks*
		Height (cm)	180		165	—
Service door	Door aperture	Width (cm)	single door:		65	This dimension may be reduced by 10 cm when the measurement is made at the level of the hand-holds
			double door:		120	
Emergency door		Height (cm)	125			—
		Width (cm)	55			

* Not including the driver.

** In the country in which the vehicle is licensed for operation.

			Class I	Class II	Class III	Remarks
Emergency window		Area (cm²)		4000		It shall be possible to inscribe in this area a rectangle 50 cm high and 70 cm wide
Escape hatch	Hatch aperture	Area (cm²)		4000		It shall be possible to inscribe in this area a rectangle measuring 50 × 70 cm
		Width (cm)		50		
		Length (cm)		50		

5.6.4. *Technical conditions*

5.6.4.1. Service doors

5.6.4.1.1. For each remote-controlled service door two controls shall be provided, one inside the vehicle and near the door that it controls, the other on the outside of the vehicle, near the door and in a recessed housing.

5.6.4.1.2. Service doors shall be capable of being easily opened from inside and from outside the vehicle.

5.6.4.1.3. The control or device for opening the door from outside shall not be more than 180 cm from the ground when the vehicle is standing unladen on a level surface.

5.6.4.1.4. One-piece hinged doors shall be hinged at their forward edge.

5.6.4.1.5. If the doors are fitted with slam locks the locks shall be of the two-stage type.

5.6.4.1.6. There shall not be on the inside of the door any device which can be swung down over the inside steps when the door is closed.

5.6.4.1.7. If the direct view is not adequate, optical devices shall be installed to enable the driver to see clearly, from his seat, the immediate interior and exterior vicinity of each service door.

5.6.4.2. *Emergency doors*

5.6.4.2.1. Emergency doors shall be capable of being easily opened from inside and from outside. However, this requirement shall not be construed as precluding the possibility of locking the door from the outside, provided that the door can always be opened from the inside by the use of the normal opening mechanism.

5.6.4.2.2. Emergency doors shall not be of the servo-assisted or of the sliding type.

5.6.4.2.3. The outside handles of emergency doors shall be not more than 180 cm above the ground.

5.6.4.2.4. Emergency doors shall be hinged at their forward edge. Check straps, chains or other restraining devices shall be permitted, provided that they do not prevent the door from opening to and remaining open at an angle of at least 100°.

5.6.4.2.5. Emergency doors shall open outwards and be so constructed that there is little danger of their jamming even if the body of the vehicle is distorted by impact.

5.6.4.2.6. If the driver's service door is not readily accessible, in particular if it is necessary to squeeze between the steering wheel and the driver's seat in order to reach the service door, the service door shall not be deemed to be an emergency door.

5.6.4.3. *Emergency windows*

5.6.4.3.1. Every emergency window shall either be equipped with a window-ejecting device recognized as satisfactory by the competent authority, or be capable of being easily and instantaneously operated from inside and from outside the vehicle by means of a device recognized as satisfactory by the competent authority, or be made of readily-breakable safety glass.*

5.6.4.3.2. If the emergency window is of a horizontally-hinged type, an appropriate device shall be provided to hold it open.

5.6.4.3.3. The height of the lower edge of an emergency window from the level of the floor immediately below it shall be not more than 100 cm nor less than 50 cm. However, the latter figure may be reduced provided that the window aperture is equipped with a guard up to a height of 50 cm to prevent the possibility of a passenger's falling out of the vehicle.

5.6.5. *Markings*

5.6.5.1. Each emergency exit shall be marked by an inscription reading "Emergency exit" inside and outside the vehicle.

5.6.5.2. The emergency controls of service doors and of all emergency exits shall be marked as such inside and outside the vehicle either by a representative symbol or by a clearly-worded inscription.

5.6.5.3. Clear instructions concerning the method of operation shall be placed on or close to every emergency-exit control.

5.6.5.4. The language in which the markings referred to in paragraphs 5.6.5.1. to 5.6.5.3. above are to be inscribed shall be determined by the competent administrative department of the country of registration of the vehicle.

5.7. *Interior arrangements*

5.7.1. *Access to service doors* (see annex 3, fig. 1)

5.7.1.1. On vehicles of Class I the free space extending 40 cm inwards into the vehicle from the side wall in which the door is mounted shall permit the free passage of a vertical rectangular panel 10 cm thick, 40 cm wide and 70 cm in height above the floor, having a second panel 55 cm wide and 110 cm high superimposed symmetrically above it. The dual panel shall be maintained parallel with the door aperture until the first step is reached, after which it shall be kept at right angles to the probable direction of motion of a person using the entrance; when the centreline of the dual panel is more than 40 cm from the centre of the door opening, the height of the upper rectangular panel shall be increased to 120 cm.

5.7.1.2. On vehicles of Class II the height of the upper rectangular panel shall be reduced to 95 cm.

5.7.1.3. On vehicles of Class III the height of the upper rectangular panel shall be reduced to 85 cm.

5.7.1.4. When this dual panel reaches a position in which it is at least 40 cm from the door opening and is touching the floor it shall be retained in that position. Whether the conditions of access from the vertical plane of the dual panel to the gangway are adequate shall be verified by means of the cylindrical figure used for testing the gangway clearance.

* This provision precludes the possibility of using panes of laminated glass or of a plastics material.

5.7.1.5. The free passage clearance for this figure shall not include any space extending to 30 cm in front of any undepressed seat cushion and to the height of the top of the seat cushion.

5.7.1.6. In the case of folding seats, this space shall be required to be determined with the seat in the opened position.

5.7.1.7. The maximum slope of the floor in the access passage shall not exceed 3 per cent when measured with the unladen vehicle standing on a smooth and horizontal surface.

5.7.2. *Access to emergency doors* (see annex 3, fig. 2)

5.7.2.1. The free space between the gangway and the side wall in which the door is mounted shall permit the free passage of a vertical cylinder 30 cm in diameter and 70 cm high from the floor and supporting a second vertical cylinder 55 cm in diameter, the aggregate height of the assembly being not less than 140 cm.

5.7.2.2. The base of the first cylinder shall be within the projection of the second cylinder.

5.7.2.3. Where folding seats are installed alongside this passage, the free space for the cylinder shall be required to be determined when the seat is in the opened position.

5.7.3. *Access to emergency windows*
A free space, clear of obstacles and having an area of 2 300 cm^2, a depth of 43 cm and a width of 60 cm, shall be provided in front of each emergency window. The corners may be rounded to a radius of curvature not exceeding 25 cm.

5.7.4. *Access to escape hatches*
Escape hatches shall be situated above a seat or some other equivalent support affording access to them. They shall be of the sliding or the ejectable type. Hinged hatches shall not be allowed.

5.7.5. *Gangways* (see annex 3, fig. 3)

5.7.5.1. The gangway of a public service shall be so designed and constructed as to permit the free passage of a gauging device consisting of two co-axial cylinders with an inverted truncated cone interposed between them, the gauging device having the following dimensions (in cm):

	Class I	*Class II*	*Class III*
Diameter of lower cylinder	45	35	30
Height of lower cylinder.....	90	90	90
Diameter of upper cylinder	55	55	45
Height of upper cylinder	50	50	50
Overall height	190	190	190

5.7.5.2. On vehicles of Class I the diameter of the lower cylinder in any part of the gangway that is rearward of both the centreline of the rear axle and the rearmost service door shall be reduced from 45 to 40 cm.

5.7.5.3. On vehicles of Class III the seats on one side or on both sides of the gangway may be movable laterally, it being then possible to reduce the width of the gangway to a figure corresponding to a lower cylinder diameter of 22 cm, on condition that the operation of a control on each seat, readily accessible to a person standing in the gangway, shall be sufficient to cause the seat to return automatically, even when it is loaded, to the position corresponding to a minimum width of 30 cm.

5.7.5.4. On rear-engined vehicles the height of the upper cylinder may be reduced by 10 cm, thereby reducing to 180 cm the overall height of the part of the gangway extending rearward from the rear axle, and of any service door rearward of the rear axle.

5.7.5.5. On articulated buses the gauging device defined in paragraph 5.7.5.1. shall be able to pass unobstructed through the articulated section. No part of the soft covering of that section, including parts of bellows, shall project into the gangway.

5.7.6. *Slope of floor*

5.7.6.1. The maximum slope of the floor in the areas intended for standing passengers shall not exceed 6 per cent; however, in the parts of the vehicle, situated rearward of a transverse vertical plane situated 1.5 m forward of the centreline of the rear axle it may be 8 per cent, all measurements being taken on an unladen vehicle standing on a smooth and horizontal surface.

5.7.6.2. The provision of one or more steps in gangways shall be permitted, provided that the height of each step is not less than 15 cm nor more than 25 cm.

5.7.6.3. Folding seats allowing passengers to sit in the gangway shall not be permitted.

5.7.6.4. Laterally-sliding seats which in one position encroach on the gangway shall not be permitted except on vehicles of Class III and subject to the conditions prescribed in paragraph 5.7.5.3.

5.7.7. *Steps at service doors* (see annex 3, fig. 4)

5.7.7.1. The maximum height and the minimum depth of steps shall meet the following requirements:

		Class I	*Class II*	*Class III*	*Remarks*
First step	Height (cm)		40		In the case of vehicles of Class II and Class III having a solely mechanical suspension a tolerance of 3 cm shall be permitted.
	Depth (cm)		30		—
Subsequent steps	Height (cm)	30		35	—
	Depth (cm)		20		—

5.7.7.2. The height of the first step in relation to the ground shall be measured with the vehicle unladen.

5.7.7.3. Where there is more than one step, the first step may extend 10 cm into the area of the vertical projection of the second step.

5.7.7.4. The length of the steps shall be such that a rectangle of 40 × 20 cm can be placed on any step of a single entry and two rectangles each of 40 × 20 cm on any step of a double entry. This condition shall be deemed to be fulfilled when at least 95 per cent of the surface of the rectangle or rectangles can be placed on the step or steps.

5.7.8. *Passenger seats*

5.7.8.1. *Seat dimensions* (see annex 3, figs. 5 and 7)
The minimum dimensions for each seating place, as measured from a vertical plane passing through the centre of that seating place, shall be as follows:

		Class I	*Class II*	*Class III*
	Width of the seat cushion, on each side (cm)	20		22.5
Individual seats	Width of the available space, measured in a horizontal plane along the seat back at heights between 27 and 65 cm above the undepressed seat cushion (cm)		25	
	Width of the seat cushion per passenger, on each side (cm)	20		22.5
Continuous seats for two or more passengers	Width of the available space, measured in a horizontal plane along the seat back at heights between 27 and 65 cm above the undepressed seat cushion (cm)		22.5	
Height of seat cushion (cm)		The height of the undepressed seat cushion relative to the floor under the passenger's feet shall be such that the distance from the floor to a horizontal plane tangent to the front upper surface of the seat cushion is between 40 and 50 cm; this height may however be reduced to not less than 35 cm at the wheel arches.		
Depth of seat cushion (cm)		35	40	

5.7.8.2. *Seat spacing* (see annex 3, fig. 6)

5.7.8.2.1. In the case of seats facing in the same direction, the distance between the front of a set squab and the back of the squab of the seat preceding it, shall, when measured horizontally and at all heights above the floor between the level of the top surface of the seat cushion and a point 62 cm above the floor, be not less than:

Class I ..... 65 cm
Class II ..... 68 cm
Class III ..... 75 cm

5.7.8.2.2. All measurements shall be taken, with the seat cushion and squab undepressed, in a vertical plane passing through the centreline of the individual seating place.

5.7.8.2.3. Where transverse seats face one another the minimum distance between the front faces of the seat squabs of facing seats, as measured across the highest points of the seat cushions, shall be not less than 130 cm.

5.7.8.2.4. Where seats face a solid partition there shall be a clearance of at least 28 cm between the front edge of the seat cushion and the solid partition, this distance being increased to 30 cm at all levels between floor level and a level of 10 cm above floor level (see annex 3, fig. 8).

5.8. *Interior lighting*

The interior lighting shall be electrical and so designed as to illuminate the passenger compartment adequately, particularly in the area of the steps and in places where there may be obstacles.

5.9. *Articulated section of articulated buses*

5.9.1. The articulated section that interconnects rigid portions of the vehicle shall be so designed and constructed as to allow a rotary movement about a horizontal axis and a vertical axis. These axes shall intersect in the point of articulation and be perpendicular to the direction of travel of the vehicle.

5.9.2. When the articulated vehicle at its unladen kerb weight is stationary on a horizontal level surface there shall not be between the floor of either of the rigid sections and the floor of the rotating base or of the element replacing that base an uncovered gap of a width exceeding:

5.9.2.1. 1 cm when all the wheels of the vehicle are on the same plane, or

5.9.2.2. 2 cm when the wheels of the axle adjacent to the articulated section are resting on a surface which is 15 cm higher than the surface on which the wheels of the other axles are resting.

5.9.3. The difference in level between the floor of the rigid portions and the floor of the rotating base, measured at the joint, shall not exceed:

5.9.3.1. 2 cm in the conditions described in paragraph 5.9.2.1. above, or

5.9.3.2. 3 cm in the conditions described in paragraph 5.9.2.2. above.

5.9.4. On articulated buses handrails and/or partitions shall prevent access by passengers to any part of the articulated section where
—the floor has an uncovered gap not complying with the requirements of paragraph 5.9.2.;
—the floor cannot carry the weight of the passengers; or
—the movements of the walls constitute a danger to passengers.

5.10. *Manoeuvrability*

5.10.1. The vehicle shall be able to manoeuvre inside a circle of 12 m radius without any of its outermost points projecting outside the circumference of the circle.

5.10.2 When the outermost points of the vehicle are moving on a circle of 12 m radius the vehicle shall be able to move within the limits of a circular tract 6.7 m wide (see annex 4, fig. A).

5.10.3. When the vehicle is stationary and has its steered wheels so directed that if the vehicle moved its outermost forward point would describe a circle of 12 m radius, a vertical plane tangential to the side of the vehicle which faces outwards from the circle shall be established by marking a line on the ground. In the case of an articulated vehicle the two rigid portions shall be aligned with the plane. When the vehicle moves forward, following the circle of 12 m radius, no part of it shall move outside the vertical plane by more than 0.8 m (see annex 4, fig. B) in the case of a rigid vehicle or by more than 1.2 m (see annex 4, fig. C) in the case of an articulated vehicle.

5.11. *Direction-holding of articulated vehicles*
When an articulated bus is moving in a straight line the longitudinal median planes of its rigid portions shall coincide and form a continuous plane without any deflection.

5.12. *Hand-rails and hand-holds*

5.12.1. *General requirements*

5.12.1.1. Hand-rails and hand-holds shall be of adequate strength.

5.12.1.2. They shall be so designed and installed as to present no risk of injury to passengers.

5.12.1.3. Hand-rails and hand-holds shall be of a section enabling passengers to grasp them easily and firmly. No dimension of the section shall be smaller than 2 cm or greater than 4.5 cm except in the case of hand-rails on doors and seats, for which hand-rails a minimum dimension of 1.5 cm shall be permitted provided that one other dimension is of at least 2.5 cm.

5.12.1.4. The clearance between a hand-rail or hand-hold and the adjacent part of the vehicle body or walls shall be of at least 4 cm. However, in the case of hand-rails on doors a minimum clearance of 3.5 cm shall be permitted.

5.12.2. *Hand-rails and hand-holds for standing passengers: vehicles of Class I and Class II*

5.12.2.1. Hand-rails and hand-holds shall be provided in sufficient number for each point of the floor area intended, in conformity with paragraph 5.2.2., for standing passengers. This requirement shall be deemed to be fulfilled if, for all possible sites of the testing device shown in annex 5 hereto, at least two hand-rails or hand-holds can be reached by the device's movable arm. The testing device may be freely turned about its vertical axis.

5.12.2.2. When applying the procedure described in paragraph 5.12.2.1. above, only such hand-rails and hand-holds shall be considered as are not less than 80 cm and not more than 190 cm above the floor.

5.12.2.3. For every position that can be occupied by a standing passenger, at least one of the two required hand-rails or hand-holds shall be not more than 150 cm above the level of the floor at that position.

5.12.2.4. Areas which can be occupied by standing passengers and are not separated by seats from the side walls or rear wall of the vehicle shall be provided with horizontal hand-rails parallel to the walls and installed at a height of between 80 cm and 150 cm above the floor.

5.12.3. *Hand-rails for service doors in vehicles of Class I and Class II*

5.12.3.1. Door apertures shall be fitted with hand-rails on each side. For double doors, this requirement may be met by the installation of one central stanchion or hand-rail.

5.12.3.2. Hand-rails to be provided for service doors shall be such that they include a grasping point available to a person standing on the ground adjacent to the service door or on any of the successive steps. Such points shall be situated, vertically, between 80 and 100 cm above the ground or above the surface of each step, and, horizontally,

(i) for the position appropriate to a person standing on the ground, not more than 40 cm inwards from the outer edge of the first step; and

(ii) for the position appropriate to a particular step, not outwards from the outer edge of the step considered, and not more than 40 cm inwards from the inboard edge of that step.

6. MODIFICATIONS OF THE VEHICLE TYPE

6.1. Every modification of the vehicle type shall be notified to the administrative department which approved the vehicle type. That department may than either:

6.1.1. consider that the modifications made are unlikely to have an appreciable adverse effect, and that in any case the vehicle still meets the requirements; or

6.1.2. require a further test report from the technical service responsible for conducting the tests.

6.2. Notice of confirmation of approval or of refusal of approval, specifying the modifications, shall be communicated by the procedure specified in paragraph 4.3. above to the Contracting Parties to the Agreement which apply this Regulation.

7. CONFORMITY OF PRODUCTION

7.1. Every vehicle bearing an approval mark as prescribed under this Regulation shall conform to the vehicle type approved.

7.2. In order to verify conformity as prescribed in paragraph 7.1. above, serially-produced vehicles bearing the approval mark required by this Regulation shall be subjected to a sufficient number of random checks.

8. PENALTIES FOR NON-CONFORMITY OF PRODUCTION

8.1. The approval granted in respect of a vehicle type pursuant to this Regulation may be withdrawn if the requirement laid down in paragraph 7.1. above is not complied with.

8.2. If a Party to the Agreement which applies this Regulation withdraws an approval it has previously granted, it shall forthwith notify the other Contracting Parties applying this Regulation thereof by means of a copy of the approval form bearing at the end, in large letters, the signed and dated annotation "APPROVAL WITHDRAWN".

9. NAMES AND ADDRESSES OF TECHNICAL SERVICES CONDUCTING APPROVAL TESTS, AND OF ADMINISTRATIVE DEPARTMENTS

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

ANNEX 1

(Maximum format: A 4 (210 mm × 297 mm))

NAME OF ADMINISTRATION

Communication concerning the approval (or refusal or withdrawal of approval) of a vehicle type with regard to its constructional features, pursuant to Regulation No. 36

Approval No. .....

1. Trade name or mark of the power-driven vehicle .....
2. Vehicle type .....

3. Name and address of applicant for approval .....
4. If applicable, name and address of representative of applicant for approval .
5. Brief description of the vehicle type as regards its structure, dimensions, configuration and constituent materials .....
6. Technical maximum weight of vehicle when tested (kgf)
6.1. front axle: .....
6.2. rear axle: .....
6.3. total (PT): .....
7. Unladen kerb weight increased by 75 kgf for the weight of driver (PT) (kgf)
8. Carriage of baggage or goods
8.1. total volume of baggage compartments or goods compartments (V) (m^3) ...
8.2. total weight of baggage or goods these compartments can contain (B) (kgf) .....
8.3. carriage of baggage or goods on the roof provided for: yes/no* .....
8.3.1. total area of roof arranged for carriage of baggage or goods (VX) (m^2) .....
8.3.2. total weight of baggage or goods which may be carried in this area (BX) (kgf) .....
9. Area for passengers
9.1. total (S_o) (m^2) .....
9.2. for standing passengers (S_1) (m^2) .....
10. Number of passengers accommodated:
10.1. total (N) .....
10.2. seated (A) .....
11. Vehicle submitted for approval on .....
12. Vehicle approved for Class(es) .....
13. Technical service responsible for conducting approval tests .....
14. Date of report issued by that service .....
15. Number of report issued by that service .....
16. Approval granted/refused* .....
17. Position of approval mark on the vehicle .....
18. Place .....
19. Date .....
20. Signature .....
21. The following documents, bearing the approval number shown above, are annexed to this communication:

..... drawings of the vehicle and its interior arrangement with all details considered to be of importance for the purposes of this Regulation.

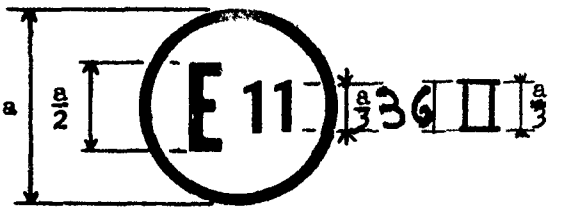
* Strike out what does not apply.

ANNEX 2

ARRANGEMENTS OF APPROVAL MARKS

Model A

(see paragraph 4.4. of this Regulation)

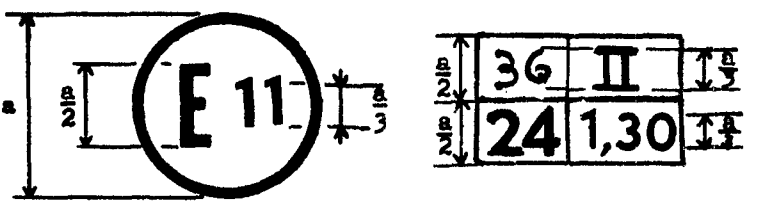


a = 8 mm min.

The above approval mark affixed to a vehicle shows that the vehicle type concerned has, with regard to its constructional features, been approved in the United Kingdom (E 11), for Class II, pursuant to Regulation No. 36.

Model B

(see paragraph 4.5. of this Regulation)



a = 8 mm min.

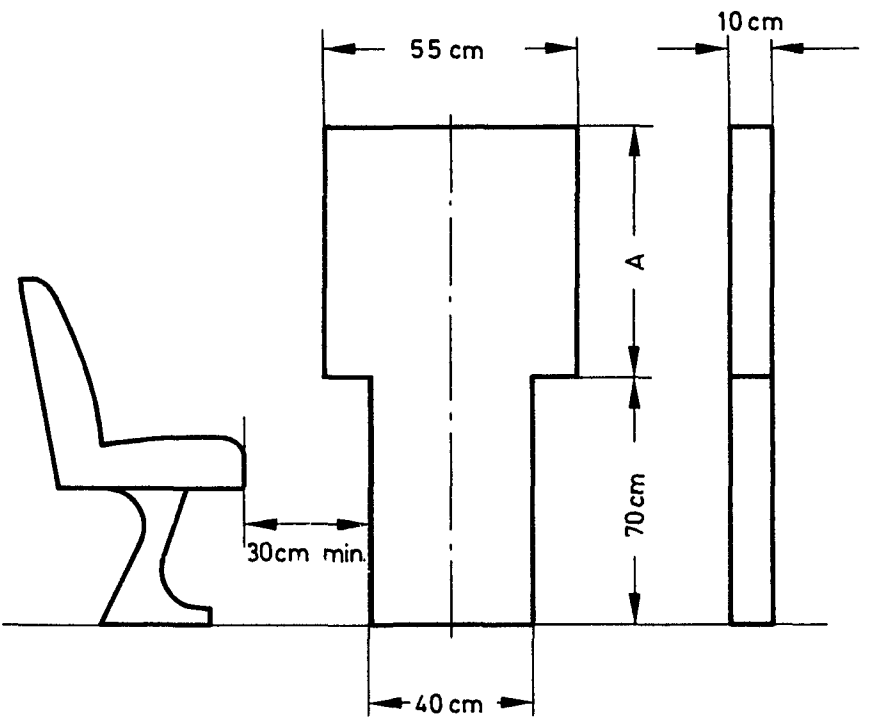
The above approval mark affixed to a vehicle shows that the vehicle type concerned has been approved in the United Kingdom (E 11), for Class II, pursuant to Regulations Nos. 36 and 24. (In the case of the latter Regulation the corrected absorption coefficient is 1.30 m^{-1}).

ANNEX 3

EXPLANATORY DIAGRAMS

Figure 1

ACCESS TO SERVICE DOORS
(see paragraph 5.7.1.)



	Dimension A (cm)	
	Distance of centreline from door opening	
	≤40 cm	>40 cm
Class I	100	120
Class II	95	120
Class III	85	120

Figure 2

ACCESS TO EMERGENCY DOORS

(see paragraph 5.7.2.)

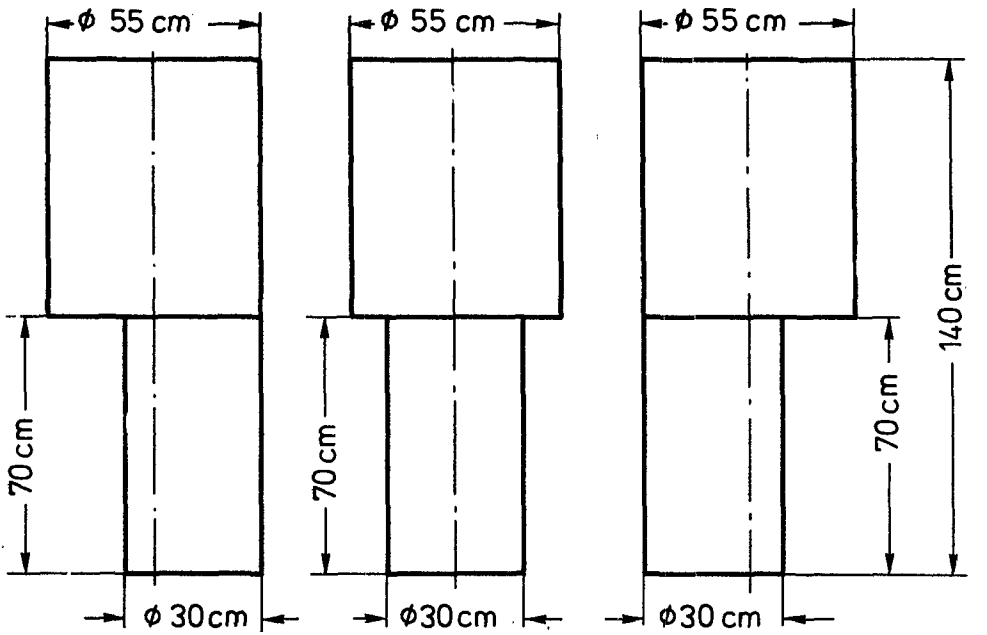
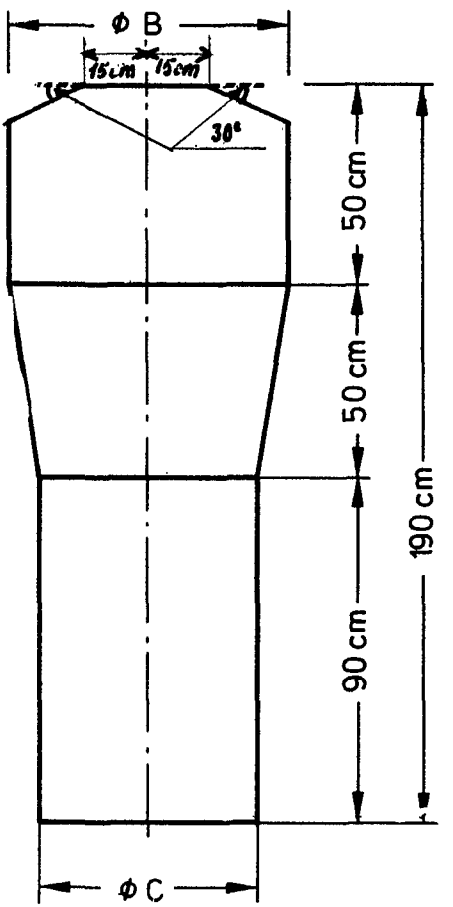


Figure 3

GANGWAYS
(see paragraph 5.7.5.)

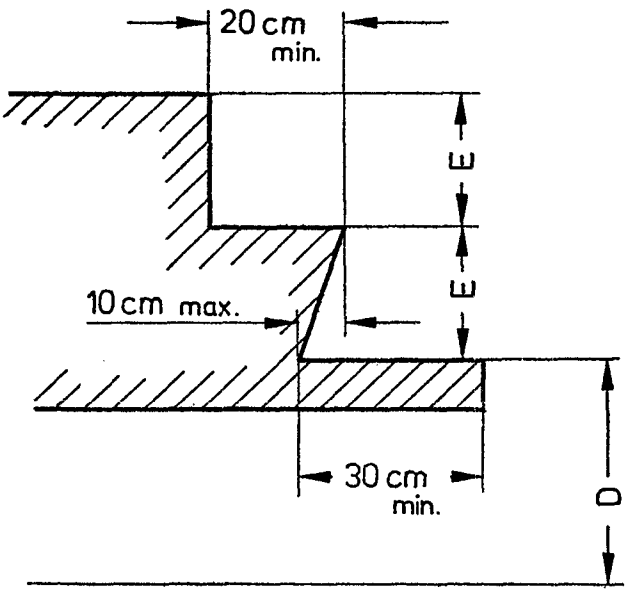


	B (cm)	*C (cm)*
Class I	55	45
Class II	55	35
Class III	45	30 (22 in the case of laterally-movable seats)

Figure 4

STEPS AT SERVICE DOORS

(see paragraph 5.7.7.)



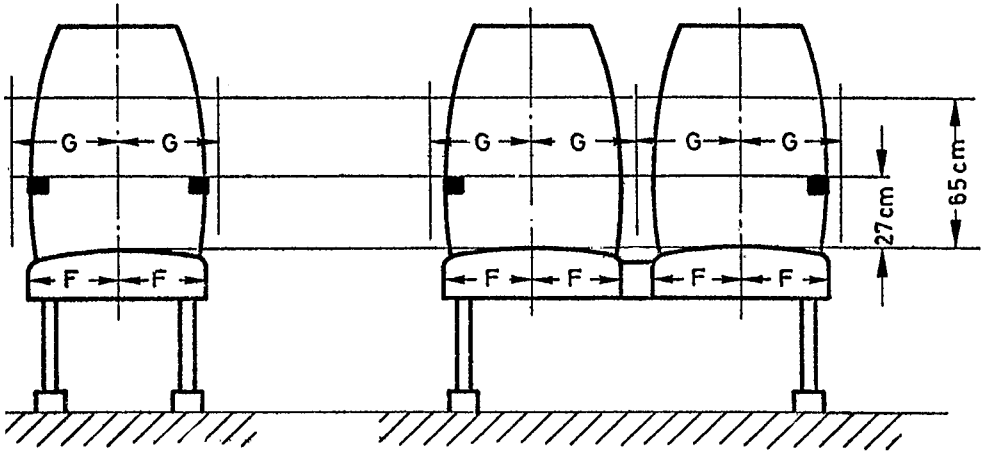
Height above ground level, vehicle unladen

	D (cm) max	*E (cm) max*
Class I	40	30
Class II	40	35
mechanical suspension	43	
Class III	40	35
mechanical suspension	43	

Figure 5

DIMENSIONS OF PASSENGER SEATS

(see paragraph 5.7.8.1.)



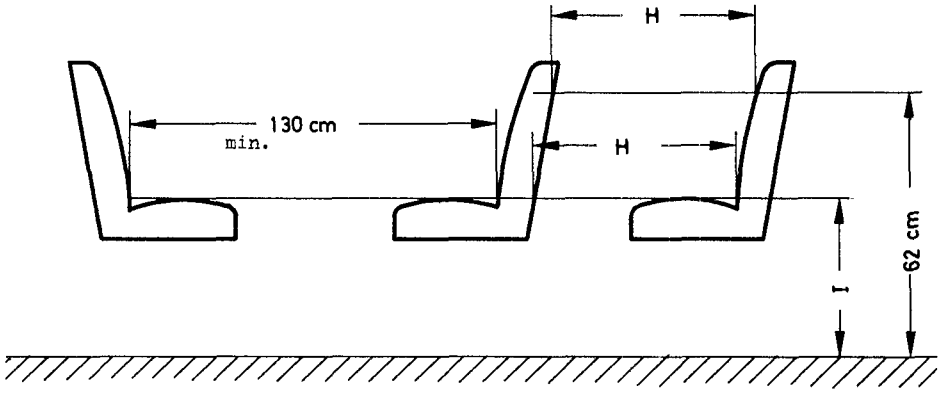
Individual seat Continuous seat

	F (cm) min	*G (cm) min*	
		continuous seats	*individual seats*
Class I	20	22.5	25
Class II	20	22.5	25
Class III	22.5	22.5	25

Figure 6

SEAT SPACING

(see paragraph 5.7.8.2.)

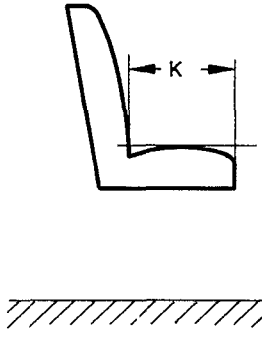


	H (cm)	*I (cm)*
Class I	65 min.	40 50
Class II	68 min.	(35 at wheel arches)
Class III	75 min.	

Figure 7

SEAT-CUSHION DEPTH

(see paragraph 5.7.8.1.)

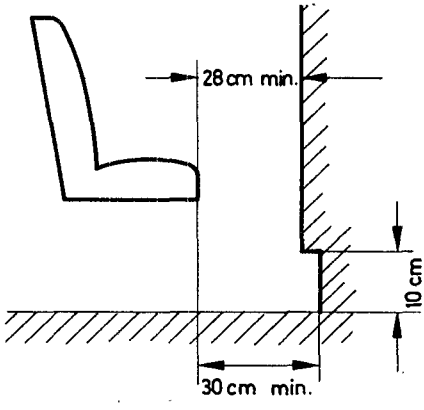


	K (cm)
Class I	35 min.
Class II	40 min.
Class III	40 min.

Figure 8

SEATS FACING A SOLID PARTITION

(see paragraph 5.7.8.2.4.)



ANNEX 4

MANOEUVRABILITY

(see paragraph 5.10.)

Figure A

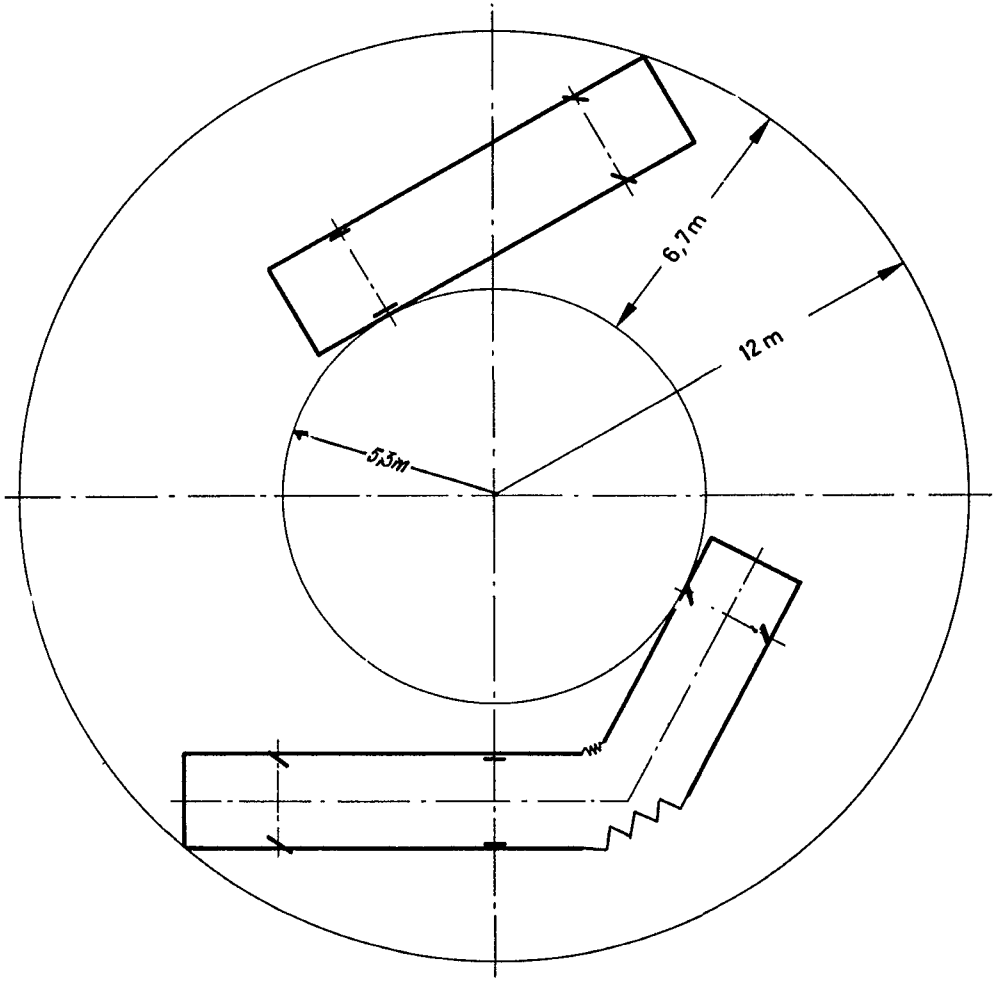


Figure B

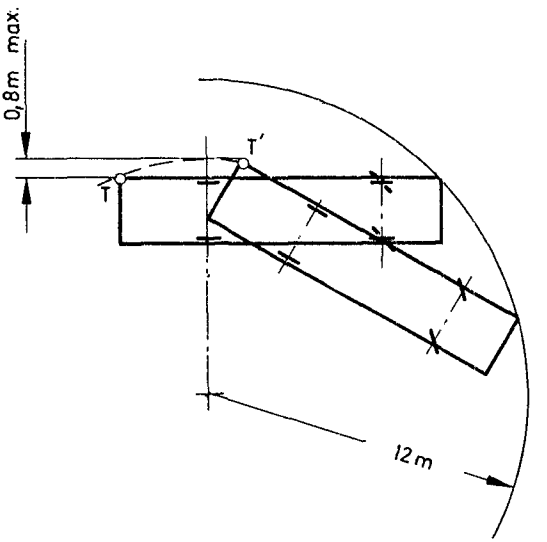
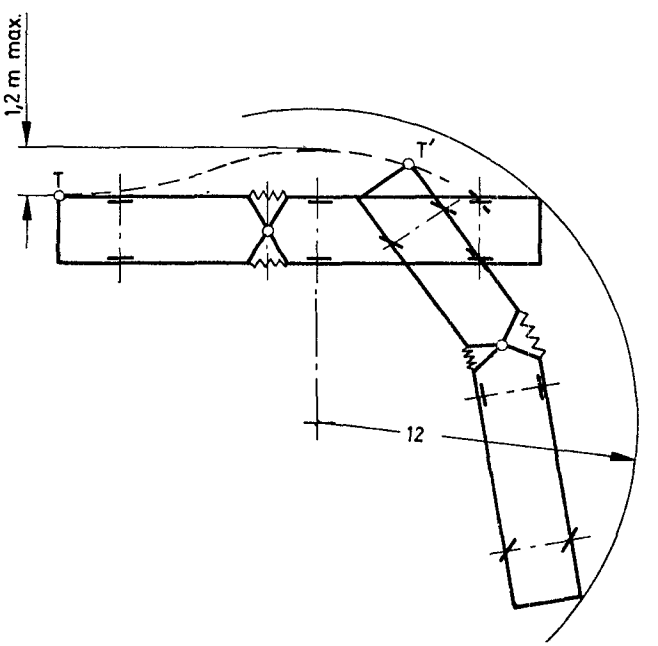
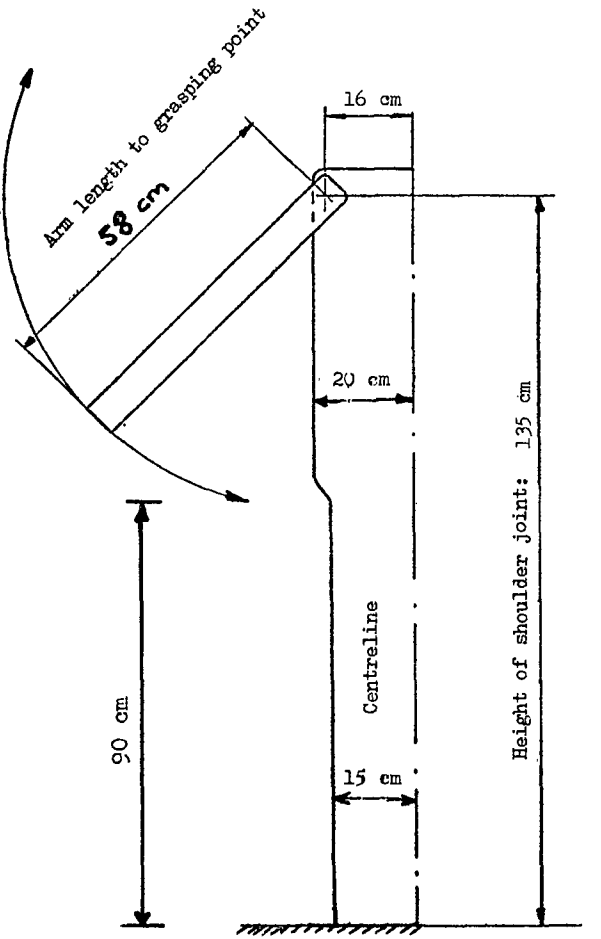


Figure C



ANNEX 5

TESTING DEVICE FOR SITING OF HAND-RAILS AND HAND-HOLDS



Authentic texts of the Regulation: English and French.
Registered ex officio *on 1 March 1976.*