

R.107: EXITS

Task:

The question to be resolved by the Expert Group is related to the use of the driver's door (and a door for passengers seated alongside the driver) as an emergency door for the main passenger compartment and to help understand the problem I have examined the text of R.52, R.36 & R.107. It should be remembered that the basis of R.107.01 was the Bus & Coach Directive 2001/85/EC.

Regulatory texts:

R.52.00 entered into force on 1 November 1982 and only required 3 emergency exits, excluding escape hatches in the roof. Contracting Parties were able to require or to prohibit the installation of roof hatches (paragraph 6). The driver's door and the door for 1 passenger alongside the driver were allowed to be an emergency door for the main passenger compartment without any limit on the number of passengers.

R.52.01 entered into force on 12 September 1995 and required 3 emergency exits for up to 16 passengers and 4 exits for over 16 passengers. Escape hatches were optional for up to 16 passengers and mandatory for over 16 passengers. The driver's door and the door for 1 passenger alongside the driver were allowed to be an emergency door for the main passenger compartment without any limit on the number of passengers.

Supplement 7 to R52.01 entered into force on 13 November 2004 and introduced test requirements for verifying the required access (space) from the gangway to the driver's door.

Directive 2001/85/EC & R.107.01/.02 require 2 emergency exits for 1-8 passengers, 3 emergency exits for 9-16 passengers & 4 emergency exits for 17-30 passengers. One escape hatch is required in Class II & III vehicles having up to 50 passengers and 2 hatches for more than 50 passengers. Class B vehicles must be fitted with at least 1 escape hatch. The driver's door is allowed to be an emergency door for the main passenger compartment without any limit on the number of passengers.

Facts:

Since R.52 entered into force in 1982, the driver's door and a door for 1 passenger alongside the driver of vehicles of Class A & B could be used as an emergency door for the main passenger compartment (up to 22 passengers).

The EU Directive 2001/85/EC allows the driver's door to be used as an emergency door for the main passenger compartment under the same conditions as R.52.01, Supplement 7 (ie: up to 22 passengers). However, it does not foresee the use of a door for passengers alongside the driver as an emergency door for

the main passenger compartment. After R.52.01, Supplement 7 was agreed the European Commission issued a letter to the TAAM recommending that the type approval authorities apply the provisions of Supplement 7 when approving vehicles to Directive 2001/85/EC.

The Class B vehicle involved in the accident in Poland was not fitted with an escape hatch as required for new vehicle types since February 2004 for EU and since November 2004 for ECE.

As stated during the meeting of the Expert Group in Warsaw, I believe that the text of R.107 could be improved to make it better understandable.

Conclusion:

- The existing requirements relative to the use of the driver's door as the passenger emergency door have been in force since 1982 and we have seen no justification to modify them. Any proposal to modify them should be the results of a cost/benefit analysis.
- R.107 should be modified to improve the text relative to exits and to introduce the possibility of a door for 1 passenger seated alongside the driver to be used as an emergency door for the main passenger compartment.

Proposal:

The text of R.107 is very complicated as it covers all vehicles of categories M2 & M3 with a vast variety of driver and passenger compartment layouts requiring different exits. When considering the exits we have to take into account the different types of vehicles in which:

- the driver's compartment is or is not "accessible" to the passenger compartment;
- alongside the driver's seat there may be passenger seats with or without an adjacent passenger door . These passenger seats may or may not be accessible to the passenger compartment;
- an additional five passenger seats can be installed in a compartment incorporating the driver's compartment, when the driver's compartment is not accessible to the passengers

The following pages compare (side by side) as near as possible the requirements of R.107, R.36 & R.52 for exits. From this I have tried to make the text of R.107 better understandable.

At the end of the document is an explanation of the proposed modifications

R107	R36	R52
<p>7.6. <u>Exits</u></p> <p>7.6.1. <u>Number of exits</u></p> <p>7.6.1.1. The minimum number of doors in a vehicle shall be two, either two service doors or one service door and one emergency door. Every double-deck vehicle shall have two doors on the lower deck (see also paragraph 7.6.2.2.). The minimum number of service doors required is as follows:</p> <p>7.6.1.2. The minimum number of service doors in each rigid section of an articulated vehicle shall be one except that this minimum number shall be two in the case of front section of an articulated vehicle of Class I.</p> <p>7.6.1.3. For the purpose of this requirement, service doors equipped with a power-operated control system shall not be deemed to be emergency doors unless they can be readily opened by hand, once the control prescribed in paragraph 7.6.5.1. has been actuated, if necessary.</p> <p>7.6.1.4. The minimum number of emergency exits shall be such that the total number of exits in a separate compartment is as follows:</p> <p>1-8 = 2; 9-16 = 3; 17-30 = 4</p> <p>The number of exits for each separate deck (in the case of a double-deck vehicle) and each separate compartment must be determined separately. Toilet compartments or galleys are not considered to be separate compartments for the purposes of defining the number of emergency exits. Escape hatches can only count as one of the above-mentioned number of emergency exits.</p>	<p>5.6. Exits</p> <p>5.6.1. Number</p> <p>5.6.1.1. The minimum number of service doors required is as follows:</p> <p>5.6.1.3. The minimum number of doors in a vehicle shall be two, either two service doors or one service door and one emergency door.</p> <p>5.6.1.2. The minimum number of service doors in each rigid section of an articulated vehicle shall be one except that this minimum number shall be two in the case of the front section of an articulated vehicle of Class I.</p> <p>5.6.1.4. For the purpose of this requirement, service doors equipped with a power operated control system shall not be deemed to be exits unless they can be readily opened by hand, once the control prescribed in paragraph 5.6.5.1. has been actuated if necessary.</p> <p>5.6.1.5. The minimum number of emergency exits shall be such that the total number of exits is as follows:</p> <p>23-40 = 4</p> <p>Escape hatches can only count as one of the above-mentioned number of emergency exits.</p>	<p>5.6. <u>Exits</u></p> <p>5.6.1. <u>Number</u></p> <p>5.6.1.1. Every vehicle shall have at least two doors, i.e. either one service door and one emergency door or two service doors.</p> <p>5.6.1.2. For the purpose of this requirement, service doors equipped with a power-operated control system shall not be deemed to be exits unless they can be readily opened by hand once the control prescribed in paragraph 5.6.5.1. has been actuated, if necessary.</p> <p>5.6.1.3. The minimum number of emergency exits shall be such that the total number of exits and of escape hatches is as follows:</p> <p>≤ 16 = 3; > 16 = 4 (includes 1 hatch: ≤ 16 passengers; optional, >16 passengers; mandatory)</p>

<p>7.6.1.5. Each rigid section of an articulated vehicle shall be treated as a separate vehicle for the purpose of determining the minimum number and the position of exits. The connecting passage between them shall not be considered as an exit. Toilet compartments or galleys are not considered to be separate compartments for the purposes of defining the number of emergency exits. The number of passengers shall be determined for each rigid section. The plane, which contains the horizontal axis of the hinge between conjoined rigid sections of the vehicle, and perpendicular to the longitudinal axis of a vehicle, when it moves straight, shall be considered as the border between sections.</p> <p>7.6.1.6. A double service door shall count as two doors and a double or multiple window as two emergency windows.</p> <p>7.6.1.7. If the driver's compartment does not provide access to the passenger compartment by means of a passageway complying with one of the conditions described in paragraph 7.7.5.1.1.1., 7.7.5.1.1. the following conditions shall be met:</p> <p>7.6.1.7.1. The driver's compartment shall have two exits, which shall not both be in the same lateral wall; when one of the exits is a window, it shall comply with the requirements set out in paragraphs 7.6.3.1.3. 7.6.3.1. and 7.6.8. for emergency windows.</p>	<p>5.6.1.6. Each rigid section of an articulated vehicle shall be treated as a separate vehicle for the purpose of determining the minimum number and the position of exits. The connecting passage between them shall not be considered as an exit. The number of passengers shall be determined for each rigid section. The plane, which lies through the geometric centre of the turning section floor, and perpendicular to the longitudinal axis of a vehicle, when it moves straight, shall be considered as the border between sections.</p> <p>5.6.1.8. A double service door shall count as two doors and a double window as two emergency windows.</p> <p>5.6.1.7. If the driver's or a separate crew 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. 8 for emergency windows.</p>	<p>5.6.1.5. A double service door shall count as two doors and a double window as two emergency windows.</p> <p>5.6.1.4. Where 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 paragraphs 5.6.3.1., 5.6.8.1. and 5.6.8.2. for emergency windows.</p> <p>5.6.2.5. If the space reserved for the driver's seat and the passenger's seats beside the driver's seat does not communicate with the main passengers' compartment by means of a suitable passageway;</p>
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7.6.1.7.2. One or two seats are permitted alongside the driver for additional people, in which case both of the exits referred to in paragraph 7.6.1.7.1. shall be doors.

The driver's door shall be accepted as the emergency door for the occupants of those seats, provided that it is possible to move a test gauge from the occupants' seats to the exterior of the vehicle through the driver's door (see Annex 4, figure 27).

Verification of the access to the driver's door shall be subject to the requirements of paragraph 7.7.3.2., by using the test gauge having a dimension of 600 x 400 mm, as described in paragraph 7.7.3.3.

The door provided for the passengers shall be in the side of the vehicle opposite to that containing the driver's door and shall be accepted as the emergency door for the driver.

~~Up to five additional seats may be fitted in a compartment incorporating the driver's compartment, provided that the additional seats and the space for these seats comply with all requirements of this Regulation and at least one door giving access to the passenger compartment complies with the requirements of paragraph 7.6.3. for emergency doors.~~

7.6.1.7.3. **The exits provided under paragraphs 7.6.1.7.1. and 7.6.1.7.2. shall not count as one of the doors required by paragraphs 7.6.1.1. to 7.6.1.2., nor as one of the exits required by paragraph 7.6.1.4. for the passenger compartment. Paragraphs from 7.6.3. to 7.6.7., 7.7.1., 7.7.2. and 7.7.7. shall not apply to such exits.**

5.6.2.5.1. the main compartment reserved for passengers shall contain exits satisfying the requirement of paragraph 5.6.1 with respect to number and those of paragraphs 5.6.2.1., 5.6.2.2. and 5.6.2.3. above with respect to siting;

5.6.2.5.2. The driver's door shall be accepted as the emergency door for the occupants of the seats situated beside the driver's seat provided that it is possible to move a test gauge from the occupants' seats to the exterior of the vehicle through the driver's door (see Annex 3, figure 21).

Verification of the access to the driver's door shall be subject to the requirements of paragraph 5.7.3.2., by using the test gauge having a dimension of 600x400 mm, as described in paragraph 5.7.3.3. The service door provided for the passengers shall be in the side of the vehicle opposite to that containing the driver's door and shall be accepted as the emergency door for the driver;

5.6.2.5.3. the doors referred to in paragraph 5.6.2.5.2. shall not be subject to the requirements of paragraphs 5.6.3., 5.7.1., 5.7.2., 5.7.7. and 5.10.1.

<p>In the circumstances described in paragraphs 7.6.1.7.1. and 7.6.1.7.2., the exits provided for the driver's compartment shall not count as one of the doors required by paragraphs 7.6.1.1. to 7.6.1.2., nor as one of the exits required by paragraph 7.6.1.4., except in the case mentioned in paragraphs 7.6.1.7.1. and 7.6.1.7.2. Paragraphs from 7.6.3. to 7.6.7., 7.7.1., 7.7.2. and 7.7.7. shall not apply to such exits.</p> <p>7.6.1.7.4. Up to five additional seats may be fitted in a compartment incorporating the driver's compartment and any seats alongside the driver, provided that the additional seats and the space for these seats comply with all requirements of this Regulation and at least one of the emergency exits required by paragraph 7.6.1.4. is a door giving access to the passenger compartment complies with the requirements of paragraph 7.6.3.1.2. 7.6.3. for emergency doors.</p> <p>7.6.1.8. If the driver's compartment and any seats adjacent to it are accessible from the main passenger compartment by means of a passageway complying with one of the conditions described in paragraph 7.7.5.1.1., no external exit is required from the driver's compartment.</p> <p>7.6.1.9. If a driver's door or other exit from the compartment is provided in the circumstances described in paragraph 7.6.1.8. it may only count as one of the required exits for passengers in vehicles of Class A or B provided:</p> <p>7.6.1.9.1. it satisfies the requirements relating to the dimensions of emergency door indicated in paragraph 7.6.3.1.2. 7.6.3.1.;</p> <p>7.6.1.9.2. it fulfils the requirements indicated in paragraph 7.6.1.7.2.;</p> <p>7.6.1.9.3. the space reserved for the driver's seat shall</p>		<p>5.7.2.4. For the driver's door to be accepted as an emergency door for the main passengers' compartment, it shall:</p> <p>5.7.2.4.1. either satisfy all the requirements as to dimensions of the door aperture and accessibility, or</p> <p>5.7.2.4.2. satisfy the requirements relating to the dimensions of emergency doors indicated in paragraph 5.6.3.1., fulfil the requirements indicated in paragraph 5.6.2.5.2. and that the space reserved for the driver's seat shall communicate with the main passengers' compartment through an appropriate passage; such requirement shall be deemed to be fulfilled</p>
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<p>communicate with the main passengers' compartment through an appropriate passage; such requirement shall be deemed to be fulfilled if the test gauge described in paragraph 7.7.5.1. can move unobstructed from the gangway, until the front end of the gauge reaches the vertical plane tangential to the foremost point of the driver's seat back (this seat being situated in its rearmost longitudinal position) and, from this plane, the test gauge panel described in paragraph 7.6.1.7.2. can could be moved to the emergency door in the direction established by such paragraph (see Annex 4, figure 28) with seat and steering wheel adjustment in their mid position.</p> <p>7.6.1.9.4. If there is a door opposite the driver's door, the provisions of paragraph 7.6.1.9. shall apply to it, provided that there is not more than one passenger's seat beside the driver.</p> <p>7.6.1.10. Paragraphs 7.6.1.8. and 7.6.1.9. do not preclude there being a door or other barrier between the driver's seat and the passenger compartment provided that this barrier can be released quickly by the driver in an emergency. A driver's door in a compartment protected by such a barrier shall not be counted as an exit for passengers.</p> <p>7.6.1.11. Escape hatches, additional to the emergency doors and windows, shall be fitted in vehicles of Class II, III and B (in the upper deck roof in the case of double-deck vehicles). They may also be fitted in the case of Class I and A vehicles. The minimum number of hatches shall be: ≤ 50 passengers = 1 > 50 passengers = 2</p> <p>7.6.1.12. Each intercommunication staircase shall be considered to be an exit from the upper deck of a double-deck vehicle.</p> <p>7.6.1.13. All persons accommodated in the lower deck of a double-deck vehicle must in an emergency</p>	<p>5.6.1.9. Escape hatches, additional to the emergency doors and windows, shall be fitted in Class II and Class III vehicles. They may also be fitted in the case of Class I vehicles. There should not be any escape hatches fitted in the roof of any trolleybus. The minimum number of hatches shall be: ≤ 50 passengers = 1 > 50 passengers = 2</p>	<p>if the test gauge described in paragraph 5.7.5.1. can move unobstructed from the gangway, until the front end of the gauge reaches the vertical plane tangential to the foremost point of the driver's seat back (this seat situated in its rearmost longitudinal position) and, from this plane, the panel described in paragraph 5.6.2.5.2. could be moved to the emergency door in the direction established by such paragraph (see Annex 3, figure 22) with seat and steering wheel adjustment in their mid position.</p> <p>5.7.2.5. If there is a door opposite the driver's door, the provisions of paragraph 5.7.2.4. shall apply to it, provided that there is not more than one passenger's seat beside the driver.</p> <p>5.7.2.6. In the case of a vehicle to which paragraph 5.7.1.9. applies, access to the doors shall be provided in accordance with that paragraph.</p> <p>(From paragraph 5.6.1.3. 1 hatch: ≤ 16 passengers optional, > 16 passengers mandatory)</p>
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<p>situation, have access to the exterior of the vehicle without having to enter the upper deck.</p> <p>7.6.1.14. The upper deck gangway of a double-deck vehicle shall be connected by one or more intercommunication staircases to the access passageway of a service door or to the lower deck gangway within 3 m of a service door:</p> <p>7.6.1.14.1.two, or at least one and-one-half staircase, shall be provided in Class I and Class II vehicles if more than 50 passengers are carried on the upper deck;</p> <p>7.6.1.14.2.Two, or at least one and-one-half, staircases are to be provided in Class III vehicles if more than 30 passengers are carried on the upper deck.</p> <p>7.6.1.15. In the case of a vehicle without a roof, the exits on the deck without a roof shall be such as to fulfil those prescriptions that are not incompatible with the absence of the roof.</p> <p>7.6.2. <u>Siting of exits</u></p> <p>Vehicles having a capacity exceeding 22 passenger seats shall meet the requirements shown below. Vehicles having a capacity not exceeding 22 passengers may meet either the requirements shown below or those contained in Annex 7, paragraph 1.2.</p> <p>7.6.2.1. The service door(s) shall be situated on the side of the vehicle that is nearer to the side of the road corresponding to the direction of traffic in the country in which the vehicle is to be licensed for operation and at least one of them shall be in the forward half of the vehicle. This does not preclude:</p> <p>7.6.2.1.1. the provision of a specially designed door in the rear or side faces of a vehicle for use in place of a service door by wheelchair passengers, or</p>	<p>5.6.2. Siting of exits</p> <p>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 in the country in which the vehicle is licensed for operation, and at least one of them shall be in the forward half of the vehicle.</p>	<p>5.6.2. Siting of exits</p> <p>5.6.2.1. The service door(s) shall be situated on the side of the vehicle that is nearer to the side of the road corresponding to the direction of traffic (Footnote 4: in the country in which the vehicle is licensed for operation),</p>
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<p>7.6.2.1.2. the provision of an additional service door in the rear face of a vehicle principally for loading/unloading of goods or luggage, but which could be used by passengers where circumstances so require, or</p> <p>7.6.2.1.3. the provision of one or more additional service doors on the opposite side of the vehicles in the case of vehicles designed for use in circumstances which require loading/unloading on both sides. Examples of such circumstances include vehicles for airside use at airports, vehicles for use on multimodal transport systems using island platforms, or vehicles which cross borders to countries which do not drive on the same side of the road as the country in which the vehicle is to be licensed for operation. Vehicles so equipped shall be provided with control(s) which allow the driver to inhibit normal operation of the doors which are not currently in use, or</p> <p>7.6.2.1.4. the provision of a service door in the rear face of a Class A or B vehicle.</p> <p>7.6.2.2. Two of the doors referred to in paragraph 7.6.1.1. shall be separated such that the distance between transverse vertical planes through their centres of area is not less than:</p> <p>7.6.2.2.1. In the case of a single deck vehicle, 40 per cent of the overall length of the passenger compartment measured parallel to the longitudinal axis of the vehicle.</p> <p>In the case of an articulated vehicle, this requirement shall be fulfilled if two doors of the different sections are separated such that the distance between the doors is not less than 40 per cent of the overall length of the combined passenger compartment (all sections).</p> <p>If one of these two doors forms part of a double</p>	<p>5.6.2.2. Two of the doors shall be separated such that the distance between transverse vertical planes through their centres of area is not less than 40 per cent of the overall length of the passenger compartment measured parallel to the longitudinal axis of the vehicle.</p> <p>In the case of an articulated vehicle, this requirement shall be fulfilled if two doors of the different sections are separated such, that the distance between the doors is not less than 40 per cent of the overall length of the combined passenger compartment (all sections). In either case, if one of these doors forms part of a double door this distance shall be measured</p>	<p>or in the rear face of the vehicle.</p>
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<p>door this distance shall be measured between the two doors which are furthest apart.</p> <p>7.6.2.2.2. In the case of a double-deck vehicle, two of the doors referred to in paragraph 7.6.1.1. shall be separated such that the distance between transverse vertical planes through their centres of area is not less than either 25 per cent of the overall length of the vehicle or 40 per cent of the overall length of the passenger compartment on the lower deck; this shall not apply if the two doors are on different sides of the vehicle. If one of these two doors forms part of a double door, this distance shall be measured between the two doors which are furthest apart.</p> <p>7.6.2.3. The exits (on each deck in the case of a double-deck vehicle) shall be placed in such a way that their number on each of the two sides of the vehicle is substantially the same. (This shall not imply the need to provide additional exits over and above the number specified in paragraph 7.6.1.). Any exits in excess of the required minimum number need not be substantially balanced on each of the two sides.</p> <p>7.6.2.4. At least one exit shall be situated either in the rear face or in the front face of the vehicle respectively. For Class I vehicles, and for vehicles with a rear part permanently closed off from the passenger compartment and for Class A or B vehicles, this provision is fulfilled if an escape hatch is fitted. For double-deck vehicles, this requirement shall apply only to the upper deck.</p> <p>7.6.2.5. The exits on the same side of the vehicle shall be suitably spaced out along the length of the vehicle.</p> <p>7.6.2.6. A door shall, provided that it is not a service door, be permitted in the rear face of the vehicle.</p>	<p>between the doors which are furthest apart.</p> <p>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.</p> <p>5.6.2.4. At least one emergency exit shall be situated either in the rear face or in the front face of the vehicle respectively. For Class I vehicles and for vehicles with a rear part permanently closed off from the passengers' compartment, this provision is fulfilled if an escape hatch is fitted.</p> <p>5.6.2.5. The exits on the same side of the vehicle shall be suitably spaced out along the length of the vehicle.</p> <p>5.6.2.6. A door shall, provided that it is not a service door, be permitted in the rear face of the vehicle.</p>	<p>5.6.2.4. At least one exit shall be situated either in the rear face or in the front face of the vehicle unless an escape hatch is fitted in the roof.</p> <p>5.6.2.2. The exits shall be placed in such a way that there is at least one exit on each side of the vehicle.</p> <p>5.6.2.3. The forward half and the rearward half of the passenger space shall each contain at least one exit.</p>
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<p>7.6.2.7. If escape hatches are fitted, they shall be positioned as follows: if there is only one hatch, it shall be situated in the middle third of the passenger compartment, if there are two hatches, they shall be separated by a distance of at least 2 m measured between the nearest edges of the apertures in a line parallel to the longitudinal axis of the vehicle.</p>	<p>5.6.2.7. If escape hatches are fitted, they shall be positioned as follows: If there is only one hatch, it shall be situated in the middle third of the vehicle; if there are two hatches, they shall be separated by a distance of at least 2m measured between the nearest edges of the apertures in a line parallel with the longitudinal axis of the vehicle.</p>	
<p>7.7.2. <u>Access to emergency doors</u> (see Annex 4, figure 5)</p> <p>The following requirements shall not apply to driver's doors or to the door provided for passengers alongside the driver used as emergency exits under the conditions of paragraphs 7.6.1.7.2. or 7.6.1.9. in vehicles of Class A or B having a capacity not exceeding 22 passengers.</p>	<p>5.7.2. Access to emergency doors (see annex 3, figure 2)</p>	<p>5.7.2. <u>Access to emergency doors</u> (see Annex 3, fig. 2)</p>
<p>7.7.2.1. Except as provided for in paragraph 7.7.2.4., the free space between the gangway and the emergency door aperture shall permit the free passage of a vertical cylinder 300 mm in diameter and 700 mm high from the floor and supporting a second vertical cylinder 550 mm in diameter, the aggregate height of the assembly being 1400 mm.</p> <p>The diameter of the upper cylinder may be reduced at the top to 400 mm when a chamfer not exceeding 30 degrees from the horizontal is included.</p>	<p>5.7.2.1. The free space between the gangway and the emergency door aperture 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 140 cm.</p>	<p>5.7.2.1. The free space between the gangway and the emergency door aperture 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 140 cm.</p>
<p>7.7.2.2. The base of the first cylinder shall be within the projection of the second cylinder.</p>	<p>5.7.2.2. The base of the first cylinder shall be within the projection of the second cylinder.</p>	<p>5.7.2.2. The base of the first cylinder shall be within the projection of the second cylinder.</p>
<p>7.7.2.3. 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 position for use.</p>	<p>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.</p>	<p>5.7.2.3. Where folding seats are installed alongside this passage, the free space for the cylinder shall be required to be determined with the seat in the opened position.</p>
<p>7.7.2.4. As an alternative to the dual cylinder, the gauging device described in paragraph 7.7.5.1.</p>		

<p>may be used (see Annex 4, figure 6).</p> <p>7.7.3. <u>Access to emergency windows</u></p> <p>7.7.3.1. It shall be possible to move a test gauge from the gangway to the exterior of the vehicle through every emergency window.</p> <p>7.7.3.2. The direction of motion of the test gauge shall be in the direction in which a passenger evacuating the vehicle would be expected to move. The test gauge shall be kept perpendicular to that direction of motion.</p> <p>7.7.3.3. The test gauge shall be in the form of a thin plate having a size of 600 mm x 400 mm with corners radiused by 200 mm. However, in the case of an emergency window in the rear face of the vehicle, the test gauge may alternatively have a size of 1400 mm x 350 mm with corners radiused by 175 mm.</p>	<p>5.7.3. Access to emergency windows</p> <p>5.7.3.1. It shall be possible to move a test gauge from the gangway to the exterior of the vehicle through every emergency window.</p> <p>5.7.3.2. The direction of motion of the test gauge shall be in the direction in which a passenger evacuating the vehicle would be expected to move. The test gauge shall be kept perpendicular to that direction of motion.</p> <p>5.7.3.3. The test gauge shall be in the form of a thin plate having a size of 60 x 40cm with corners radiused by 20 cm. However, in the case of an emergency window in the rear face of the vehicle, the test gauge may alternatively have a size of 140cm x 35cm with corners radiused by 17.5 cm.</p>	<p>5.7.3. <u>Access to emergency windows</u></p> <p>5.7.3.1. It shall be possible to move a test gauge from the gangway to the exterior of the vehicle through every emergency window.</p> <p>5.7.3.2. The direction of motion of the test gauge shall be in the direction in which a passenger evacuating the vehicle would be expected to move. The test gauge shall be kept perpendicular to that direction of motion.</p> <p>5.7.3.3. The test gauge shall be in the form of a thin plate having a size of 60 x 40 cm with corners radiused by 20 cm. However, in the case of an emergency window in the rear face of the vehicle, the test gauge may alternatively have a size of 140 cm x 35 cm with corners radiused by 17.5 cm.</p>
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Explanation of the proposed modifications:

Note: The whole of paragraph 7.6.1.7. (including its sub-paragraphs) applies to vehicles in which the driver's compartment does not provide an acceptable passageway to the passenger's compartment.

Paragraph 7.6.1.7.

Only the condition described in paragraph 7.7.5.1.1.1. is applicable. Paragraphs 7.7.5.1.1.2. & 7.7.5.1.1.3 apply to side facing and rearward facing seats. Hopefully, these are never the driver's seat!!!

Paragraph 7.6.1.7.1.

The requirements for emergency windows are specified in paragraph 7.6.3.1.3. so it is more precise to specify this paragraph rather than paragraph 7.6.3.1., which applies to all exits.

Paragraph 7.6.1.7.2.

I believe that it is clearer if this paragraph only deals with the driver's seat and seats alongside (without a passageway to the passenger's compartment) and to put the requirements for the five additional seats in a new paragraph (7.6.1.7.4.).

Paragraph 7.6.1.7.3.

The current text is virtually incomprehensible. The proposed modified text states that when there is not a passageway between the driver's and adjacent passenger seats and the main passenger compartment, then the driver's door/exit and the passenger's door on the opposite side of the vehicle are not accessible to passengers in the main passenger compartment and shall not be counted as exits for the passenger compartment. (The passenger compartment requires the exits as defined in paragraph 7.6.1.)

New Paragraph 7.6.1.7.4.

Moved from paragraph 7.6.1.7.2. and modified to make it clear :

- a) that the five additional seats are in addition to any passenger seats alongside the driver;
- b) that, as there is no passageway between the front seats (driver's and adjacent passenger's) and the five additional seats, the spaces for the additional seats must be considered as a separate compartment with the required number of exits, one of which must be an emergency door giving access to the passenger compartment.

Note: Paragraphs 7.6.1.8. & 7.6.1.9 are specific to vehicles in which there is an acceptable passageway from the driver's and adjacent passenger's seats to the main passenger compartment. Paragraph 7.6.1.8. says that in such vehicles an external exit is not required, but paragraph 7.6.1.9. says that if an exit is provided it can be counted as an exit for the passengers with no limit on the number of passengers.

Paragraph 7.6.1.9.

It should be made clear that when there is an acceptable passageway between the passenger's compartment and the driver's compartment, the driver's door and/or the front passenger's door can only be used for passengers in vehicles of Class A or B. This possibility came from R.52 and did not exist in R.36.

Paragraph 7.6.1.9.1.

The requirements for emergency doors are specified in paragraph 7.6.3.1.2. so it is more precise to specify this paragraph rather than paragraph 7.6.3.1., which applies to all exits.

Paragraph 7.6.1.9.3.

Paragraph 7.6.1.7.2. refers to a test gauge and not to a panel. The word "can" is more appropriate than "could".

Paragraph 7.6.1.9.4.

Paragraph 7.6.1.9.4. is introduced to allow a door for 1 passenger seated alongside the driver to be used as an emergency door for the main passenger compartment.

Paragraph 7.6.2.4.

I propose that for vehicles of class A or B where seats or luggage space MAY make the rear face inaccessible, an exit in that face is not necessary as long as the vehicle is fitted with an escape hatch. An escape hatch is already mandatory for Class B vehicles according to paragraph 7.6.1.11.

Paragraph 7.7.2.

The driver's door and the door for passengers alongside the driver in class A or B vehicles do not have to comply with the requirements for access to emergency doors specified in paragraph 7.7.2. if:

- a) those doors comply with the access requirements specified in paragraph 7.6.1.7.2.; or
- b) those doors are accessible to the passenger compartment and comply with the access requirements specified in paragraph 7.6.1.9.3.