



INVESTOR IN PEOPLE



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Mr Andrew Bush
Ford Motor Company Limited

VCA job number: ESN269730

Test report number: ESN269730

Date: 26 November 2013

Dear Sirs,

1. The vehicle type described on the attached approval has been tested and meets the requirements of the ECE Regulation displayed on the approval certificate. I enclose a set of approval documents, comprising, as appropriate, the approval certificate, test report and your documentation duly authenticated.

2. If you think there are any errors in the enclosed package, please contact Ian Woodruff, telephone 0117 9524164, e-mail ian.woodruff@vca.gov.uk immediately.

Please be aware that from the date of issue we have a three week holding period, any corrections required after this time will need to be corrected via an extension, index revision or correction 1 certificate, as appropriate.

ROAD TRAFFIC ACT 1988 - SECTION 80

3. The Secretary of State for Transport authorises, under section 80 of the Road Traffic Act 1988, the stated manufacturer or accredited agent to apply to the motor vehicle type / part specified, the appropriate mark designated in the Motor Vehicles (Designation of Approval Marks) Regulations 1979, as amended. The conditions attached to this authorisation are set out overleaf.

4. If this approval results in a change being required to a vehicle information document issued under either a National or European Whole Vehicle approval you should notify the issuing authority to arrange for the approval to be updated.

5. VCA is continually scrutinising the quality of the service it provides to customers, in order to discover more ways in which the standard can be improved. If you have a specific complaint concerning the way this job has been dealt with, our customer services leaflet gives guidance on the best approach. If you would like a copy, please contact the above.

Yours sincerely,

Gemma Attwell

European Operations Branch

1. CONDITIONS

1.1 This Approval may be withdrawn at any time and while held is subject to the following conditions.

2. CONDITIONS OF MOTOR VEHICLE PARTS

2.1 The holder of this approval shall put the approval mark described in the Motor Vehicles (Designation of Approval Marks) Regulations 1979 as amended only on Motor Vehicle Parts that:

- a. Have been manufactured, assembled or completed in factories under his control and
- b. Conform in all material respects with the samples, which were tested before this approval was issued.

2.2 The holder of this approval shall mark his products in the manner set out in the relevant Regulation / Directive as given in the Motor Vehicles (Designation of Approval Marks) Regulations 1979 as amended together with:

- a. The approval number allocated by the Secretary of State for Transport.
- b. His name or trademark
- c. Any other markings specified in the appropriate international Regulation

2.3 The holder of this approval shall be prepared at any time to satisfy Department for Transport officials or agents of the Department, that the quality of the part being produced and marked or intended to be by him with the approval marking conforms in all material respects with that of the samples tested as the International Regulation requires.

2.4 The holder of this approval undertakes to admit duly authorised officials or agents of the Department at all reasonable times to any premises in which parts marked or intended to be marked are being manufactured, assembled or stored and to permit any such official or agent to inspect parts and all records relating to them and their production processes.

2.5 This approval may be suspended or withdrawn by the Secretary of State for Transport at any time without any particular length of notice being given and in the event of that being done the holder will absolve the Secretary of State from any claim for damages or compensation.

3. CONDITIONS FOR MOTOR VEHICLES

3.1 The holder of this approval shall put the approval mark described in the Motor Vehicles (Designation of Approval Marks) Regulation 1979 as amended only on Motor Vehicles fitted with Motor Vehicle parts which Motor Vehicles as fitted with such parts conform with the type of Motor Vehicle approved by as on behalf of the Secretary of State for Transport and only on Motor Vehicles that:

- a. Have been manufactured, assembled or completed in factories under his control and
- b. Conform in all material respects with the type of Motor Vehicle, which was tested before an approval certificate was issued.

3.2 The holder of this approval shall mark motor vehicles of the type approved. In the matter set out in the relevant Regulation / Directive using the authorised approval mark as given in the Motor Vehicles (Designation of Approval Marks) Regulation 1979 as amended together with the approval number allocated by the Secretary of State for Transport.

3.3 The holder of this approval shall mark Motor Vehicles of the type approved in the manner set out in the relevant Regulation annexed to the United Nations agreement of 1958 as amended using the authorised approval mark which comprises a capital letter E followed by the number 11 within a circle together with the approval number allocated by the Secretary of State for Transport.

3.4 The holder of this approval shall be prepared at any time to satisfy Department for Transport officials or agents of the Department that Motor Vehicles of the type approved which have been produced and marked or that are intended to be marked by him conform in all material respects with the type of vehicle approved.

3.5 The holder of this approval undertakes to admit duly authorised officials or agents of the Department at all reasonable times to any premises in which the Motor Vehicles of the type approved which have been or are intended to be marked are manufactured, assembled or stored and to permit any such official or agent to inspect the Motor Vehicles and all records relating to them and their production processes.

3.6 This approval may be suspended or withdrawn by the Secretary of State for Transport at any time without any particular length of notice given and in the event of that being done the holder will absolve the Secretary of State from any claim for damages or compensation.



THE UNITED KINGDOM VEHICLE APPROVAL AUTHORITY

COMMUNICATION CONCERNING THE APPROVAL GRANTED ⁽⁴⁾/~~APPROVAL EXTENDED ⁽⁴⁾/~~
~~APPROVAL REFUSED ⁽⁴⁾/~~ ~~APPROVAL WITHDRAWN ⁽⁴⁾/~~ ~~PRODUCTION DEFINITELY~~
~~DISCONTINUED ⁽⁴⁾~~ OF A TYPE OF A VEHICLE/~~COMPONENT/SEPARATE TECHNICAL UNIT ⁽⁴⁾~~
WITH REGARD TO REGULATION NO. 107.05



Approval No: 107BR-051056

Extension No: Not applicable

SECTION I

1. Make (trade name of manufacturer): FORD
2. Type: R107-FD
3. Means of identification of type if marked on the vehicle: Not applicable
 - 3.1. Location of that marking: Not applicable
4. Category of vehicle ^{(1) (3)}: M2
5. Name and address of manufacturer:
Ford-Werke GmbH
50725 Köln
Germany
6. In the case of components and separate technical units, location and method of affixing of the type-approval mark: Not applicable

7. Address(es) of assembly plant(s):

Ford Sollers Elabuga LLC
 423600, Tatarstan,
 Elabuga municipal district, Elabuga
 Territory of Special Economic Zone
 "Alabuga"
 Ul. Sh-2, building 1/1
 Russian Federation

Ford Otomotiv Sanayi A.S.
 Denizevler Mahallesi Ali Ucar Caddesi
 No:53
 Golcuk/KOCAELI
 Turkey

SECTION II

1. Additional information (where applicable): See Addendum
2. Technical Service responsible for carrying out the tests: Vehicle Certification Agency
3. Date of test report: 25 October 2013
4. Number of test report: ESN269730
5. Any remarks: Approval to Supplement 2
 See Addendum
6. Place: BRISTOL
7. Date: 25 OCTOBER 2013
8. Signature:  A W STENNING
 Head of Technical and Quality Support Group
9. The index to the information package lodged with the Approval Authority, which may be obtained on request, is attached.

ADDENDUM

to type-approval certificate no. E11 107BR-051056

concerning the type-approval of a vehicle with regard to regulation no. 107.05

1. Additional information

1.1. Category of vehicle (M_2 , M_3): M2

1.2. Bodywork concept (single/double-deck, articulated, low-floor): single deck, minibus

1.3. Technically permissible maximum mass (kg): 3500 - 4600

1.4. Length (overall): 5531 – 6704 mm

1.5. Width (overall): 2059 – 2126 mm

1.6. Height (overall): 2494 – 2763 mm

1.7. Number of passengers (seated and standing):

1.7.1. Total (N): 10 - 17

1.7.2. Upper deck (Na): Not applicable

1.7.3. Lower deck (Nb): 10 – 17

1.7.4. Number of passengers seated:

1.7.4.1. Total (A): 10 – 17

1.7.4.2. Upper deck (Aa): Not applicable

1.7.4.3. Lower deck (Ab): 10 – 17

1.8. Volume of baggage compartments (m^3): Not applicable

1.9. Area for baggage transportation on the roof (m^2): Not applicable

1.10. Technical devices facilitating access to vehicles (ramp, lifting platform, kneeling-system): None

1.11. Position of centre of gravity of the laden vehicle in the longitudinal, transverse and vertical directions: Not applicable – not approved to ECE Regulation 66

2. Remarks: None

- (1) Delete where not applicable.
- (2) If the means of identification of type contains characters not relevant to describe the vehicle, component or separate technical unit types covered by this type-approval certificate such characters shall be represented in the documentation by the symbol: "?" (e.g. ABC??123??).
- (3) As defined in the Consolidated Resolution on the Construction of Vehicles (R.E.3) document TRANS/WP.29/78/Rev.1/Amend.2, as last amended by Amend.4.
- (4) In the case of an articulated vehicle, specify the number of seats in each rigid section.
- (5) If the vehicle is equipped to carry wheelchairs, indicate here the maximum number to be carried. If passenger capacity is dependent on the number of wheelchairs to be carried, indicate permissible combinations of seated, standing and wheelchair passengers.





Information Folder No. : R107-FD

INFORMATION FOLDER

providing all required information
in accordance with Annex I of Council Directive 2007/46/EC relating to EC-Type-
approval of a vehicle type and with regard to the

Special provisions for vehicles used for the carriage of passengers comprising more than eight seats (Regulation ECE-R 107.05)

- (1) Ford-Werke GmbH E11 107BR-051056
- (2) Ford Otomotiv Sanayi A.S. E11 107BR-051057



Information Folder No. : R107-FD

Index to Information Folder

Description	Page(s)	Drawing-No.	Issue date	Date of revision
Cover Sheet Information Folder	1-1	--	30-Jul-2013	
Index of Information Folder	2-2	--	30-Jul-2013	
Information Document	3-11	--	30-Jul-2013	
<hr/>				
Attachment to item 1.1.	--	HL-DK31-000056-100	22-Jan-2013	
	--	HL-DK31-000056-101	22-Jan-2013	
	--	HL-DK31-000056-102	22-Jan-2013	
	--	HL-DK31-000056-103	22-Jan-2013	
	--	HL-DK31-000056-104	22-Jan-2013	
	--	HL-DK31-000056-105	22-Jan-2013	
<hr/>				
Attachment to item 1.2.	--	HL-DK31-000056-100	22-Jan-2013	
	--	HL-DK31-000056-101	22-Jan-2013	
	--	HL-DK31-000056-102	22-Jan-2013	
	--	HL-DK31-000056-103	22-Jan-2013	
	--	HL-DK31-000056-104	22-Jan-2013	
	--	HL-DK31-000056-105	22-Jan-2013	



Information Folder No. : R107-FD

0. GENERAL

- 0.1. Make (trade name of manufacturer):
FORD
- 0.2. Type:
R107-FD
- 0.2.0.1. Chassis:
Not applicable
- 0.2.0.2. Bodywork/complete vehicle:
Not applicable
- 0.3. Means of identification of type, if marked on the vehicle:
Not applicable
- 0.3.0.1. Chassis:
Not applicable
- 0.3.0.2. Bodywork/complete vehicle:
Not applicable
- 0.3.1. Location of that marking:
Not applicable
- 0.3.1.1. Chassis:
Not applicable
- 0.3.1.2. Bodywork/complete vehicle:
Not applicable
- 0.4. Category of vehicle:
M2
- 0.5. Company name and address of manufacturer:
(1) Ford-Werke GmbH
50725 Koeln
Germany
(2) Ford Otomotiv Sanayi A.S.
Akpinar Mah. Hasan Basri Cad.No:2 Sancaktepe
34885
Istanbul, Turkey



Information Folder No. : R107-FD

0.8. Name(s) and address(es) of assembly
plant(s):

- (1), (2) Ford Otomotiv Sanayi A.S.
Denizevler Mahallesi Ali Ucar Caddesi No:53
Golcuk / KOCAELI
Turkey
- (1) Ford Sollers Elabuga LLC
423600, Tatarstan, Elabuga municipal district, Elabuga
Territory of Special Economic Zone "Alabuga"
ul. Sh-2, building 1/1
Russian Federation



Information Folder No. : R107-FD

1. GENERAL CONSTRUCTION CHARACTERISTICS OF THE VEHICLE

- 1.1. Photographs and/or drawings of a representative vehicle:
See attachment
- 1.2. Dimensional drawing of the whole vehicle:
See attachment
- 1.3. Number of axles and wheels:
Axles: 2
Wheels: 4 or 6
- 1.3.1. Number and position of axles with twin wheels:
Number: 1
Position: Axle 2
- 1.4. Chassis (if any) (overall drawing):
Not applicable
- 1.5. Material used for the side-members:
Steel
- 1.6. Position and arrangement of the engine:
Front , Longitudinal
- 1.7. Driving cab (forward control or bonneted):
Bonneted
- 1.8. Hand of drive:
Left or Right hand drive
- 1.8.1. Vehicle **is** equipped to be driven in right/left hand traffic

Information Folder No. : R107-FD

2. MASSES AND DIMENSIONS
(in kg and mm) (Refer to drawing where applicable)

2.1. Wheelbase(s) (fully loaded)

2.1.1. Two-axle vehicles: 3300, 3750

2.4. Range of vehicle dimensions (overall)

2.4.1. For chassis without bodywork

2.4.2. For chassis with bodywork

2.4.2.1. Length:

Seats	Length
12	5531
15	5981
18	6704

2.4.2.2. Width:

Seats	Width
12	2059
15	2059
18	2126

2.4.2.3. Height (for suspensions adjustable for height, indicate normal running position):

Seats	Height
12	2494
15	2524 to 2763
18	2746

2.4.2.9. Position of centre of gravity of the vehicle (M2 and M3) at its technically permissible maximum laden mass in the longitudinal, transverse and vertical directions:

Seats	Trim level	in longitudinal (x)	in transverse (y)	in vertical (z)
12	Medium Roof	3713	-15	903
15	Medium Roof	4229	-16	912
	High Roof	4239	-16	940
18	High Roof	4502	-18	947

2.6. Mass in running order:

(a) minimum and maximum for each variant:

2525 to 3257



Information Folder No. : R107-FD

- 2.6.1. Distribution of this mass among the axles and, in the case of a semi-trailer, centre-axle trailer or rigid drawbar trailer, the mass on the coupling point:
- (a) maximum and minimum for each variant:
- | | |
|---------|--------------|
| Axle 1: | 1277 to 1544 |
| Axle 2: | 1229 to 1831 |
- 2.8. Technically permissible maximum laden mass:
- 3500 to 4600
- 2.8.1. Distribution of this mass among the axles and, in the case of a semi-trailer, centre-axle trailer or rigid drawbar trailer, load on the coupling point:
- | | |
|---------|--------------|
| Axle 1: | 1400 to 1850 |
| Axle 2: | 1650 to 3120 |
- 2.9. Technically permissible maximum mass on each axle:
- | | |
|---------|------|
| Axle 1: | 1850 |
| Axle 2: | 3120 |



Information Folder No. : R107-FD

9. BODYWORK

9.1. Type of bodywork using the codes
defined in Part C of Annex II:

CA Single-deck vehicle

9.2. Materials used and methods of
construction:

Pressed sheet metal welded construction.



Information Folder No. : R107-FD

13. SPECIAL PROVISIONS FOR BUSES AND COACHES

13.1. Class of vehicle:

Class B

13.2. Area for passengers (m²)

13.2.1. Total:

Seats	Total
12	4.80 m ²
15	5.60 m ²
18	6.70 m ²

13.2.2. Upper deck:

Not applicable

13.2.3. Lower deck:

Seats	Lower Deck
12	4.80 m ²
15	5.60 m ²
18	6.70 m ²

13.2.4. For standing passengers:

Not applicable

13.3. Number of passengers (seated and standing)

13.3.1. Total:

Seats	Total
12	10 or 11
15	13 or 14
18	16 or 17

13.3.2. Upper deck:

Not applicable

13.3.3. Lower deck:

Seats	Lower Deck
12	10 or 11
15	13 or 14
18	16 or 17

13.4. Number of passengers (seated)

13.4.1. Total:

Seats	Total
12	10 or 11
15	13 or 14
18	16 or 17

13.4.2. Upper deck:

Not applicable

Information Folder No. : R107-FD

13.4.3. Lower deck:

Seats	Lower Deck
12	10 or 11
15	13 or 14
18	16 or 17

13.5. Number of service doors:

Seats	No. Of Service Doors
12	2
15	2
18	2

13.6. Number of emergency exits (doors, windows, escape hatches, intercommunication staircase and half staircase)

13.6.1. Total:

5

13.6.3. Lower deck:

5

13.7. Volume of luggage compartment [m³]:0.00 m³

13.8. Area for luggage transportation on the roof:

0.00 m²

13.9. Technical devices facilitating the access to vehicles (e.g. ramp, lifting platform, kneeling system), if fitted:

None

13.10. Strength of superstructure

13.10.1. Type-approval number, if available:

Not applicable

13.10.2. For superstructures not yet approved

13.10.2.1. Detailed description of the superstructure of the vehicle type including its dimensions, configuration and constituent materials and its attachment to any chassis frame:

Not applicable

13.10.2.2. Drawings of the vehicle and those parts of its interior arrangement which have an influence on the strength of the superstructure or on the residual space:

Not applicable



Information Folder No. : R107-FD

13.10.2.3. Position of centre of gravity of the vehicle
in running order in the longitudinal,
transverse and vertical directions:

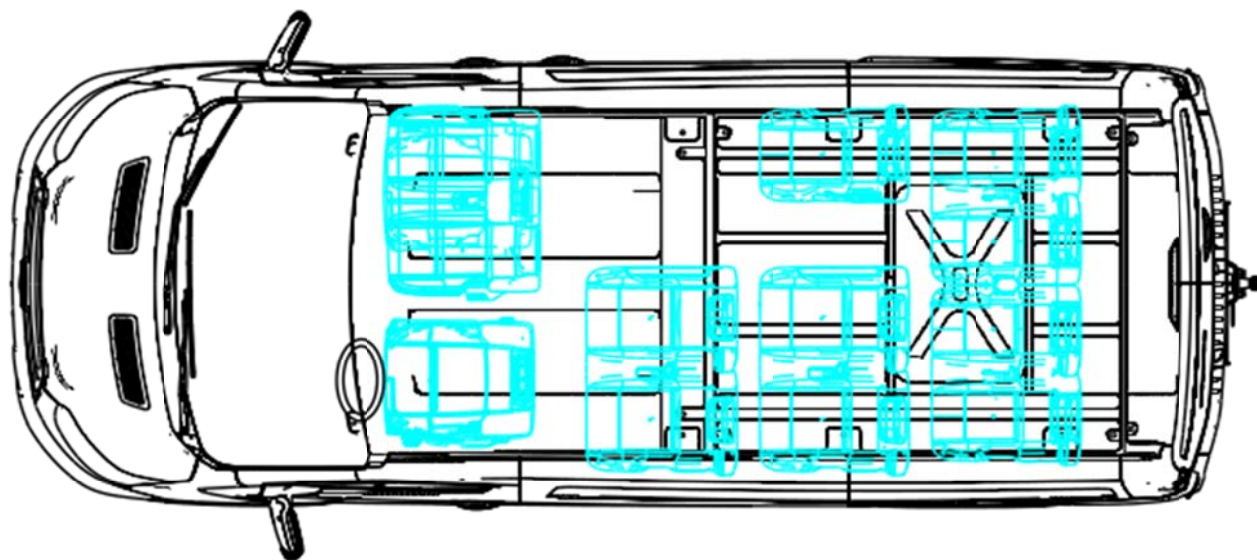
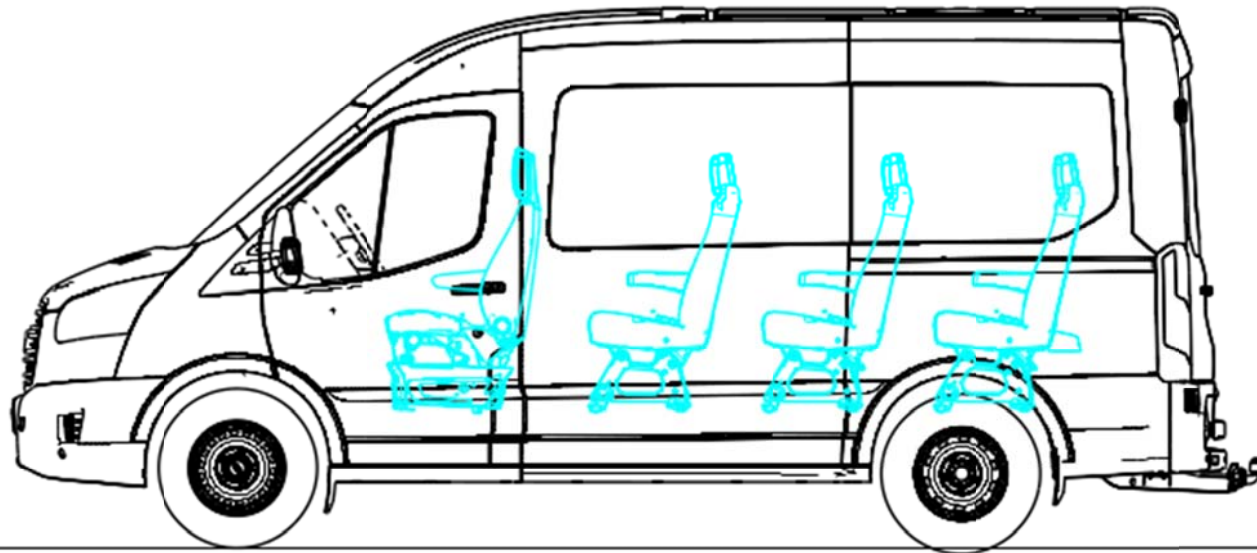
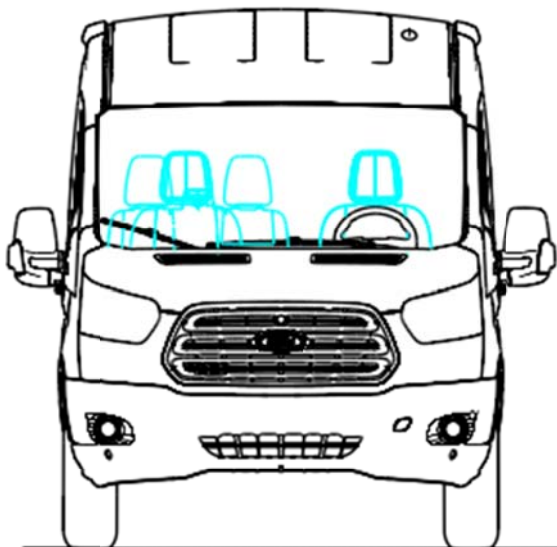
Not applicable

13.10.2.4. Maximum distance between the centre
lines of the outboard passenger seats:

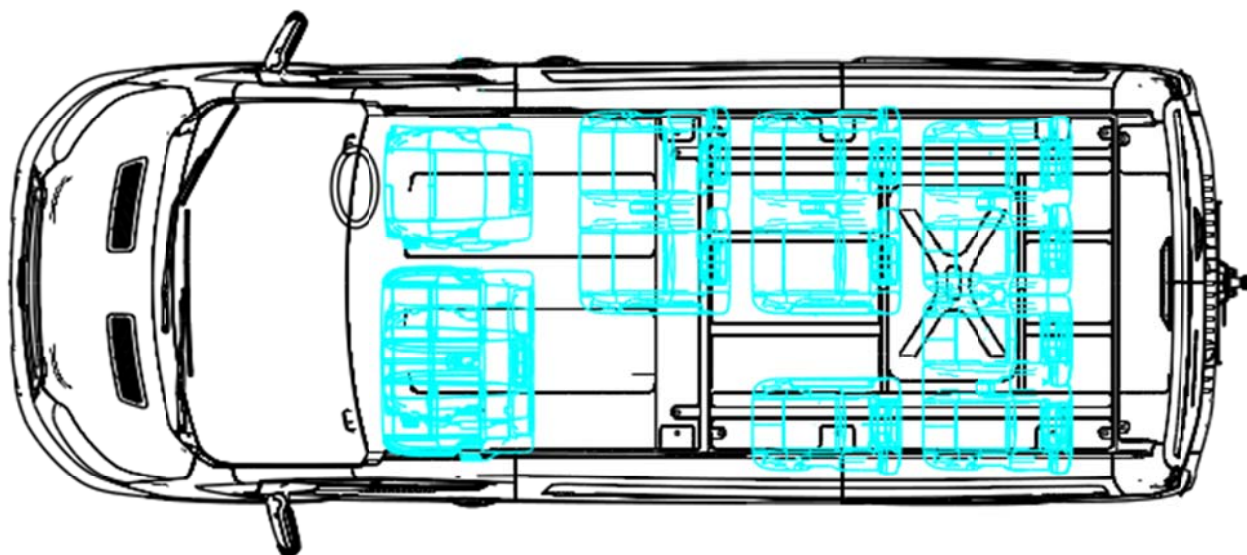
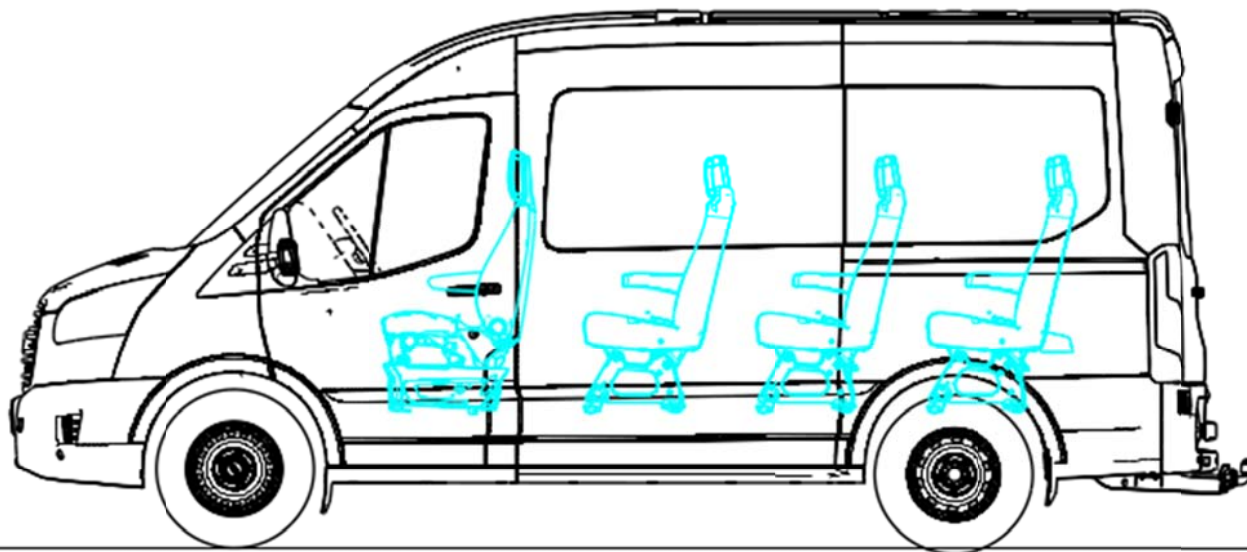
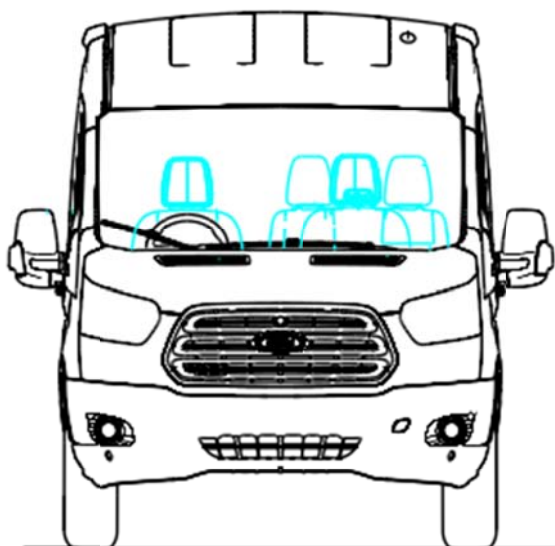
Not applicable

NOTE CONCERNING ATTACHMENTS

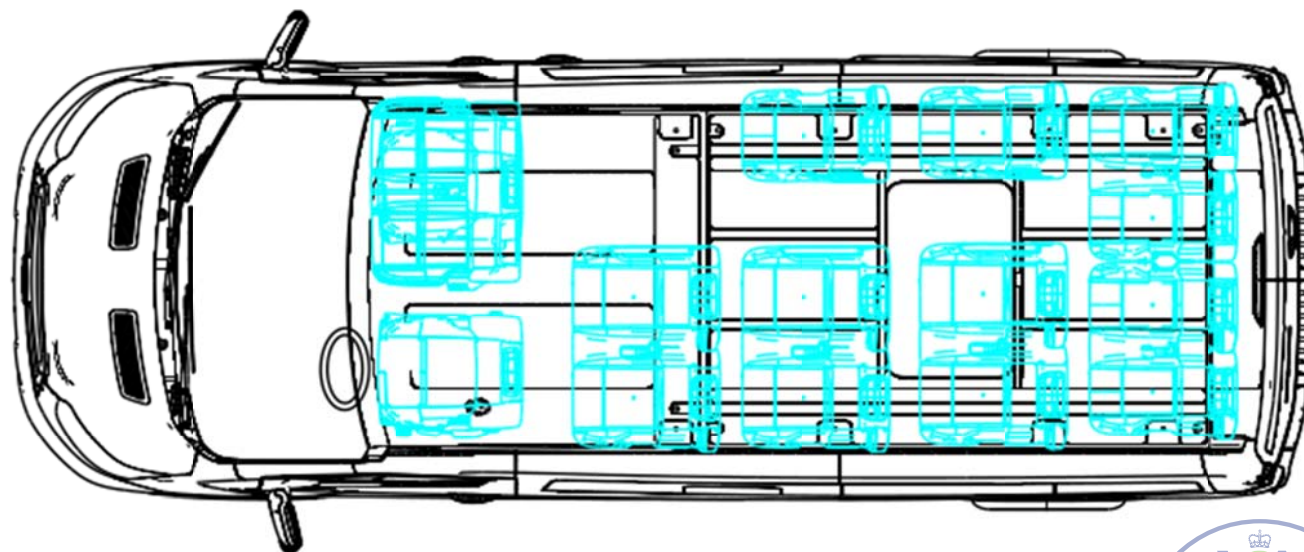
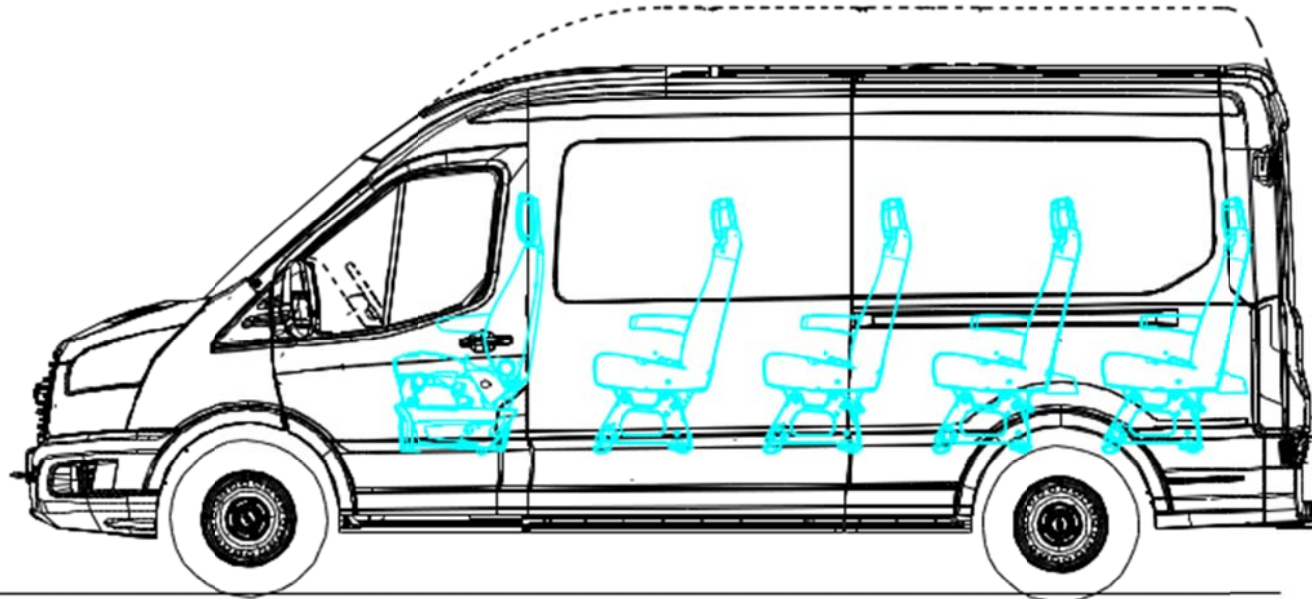
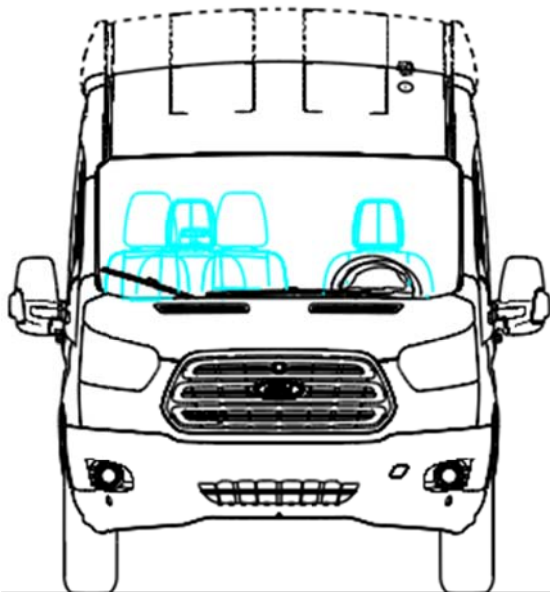
Design, material and arrangement of the parts or
part numbers of the vehicle may deviate from the
representation on schematics, drawings and
photographs, as far as these deviations do not have
any influence on the approved certification and are
not in contradiction to the other information.



Reference		Issue Date	Revision Date	Title	Attachment Number
	FORD	22-Jan-2013		MWB M2 Bus - 11/12 Seats LHD	HL-DK21-000056-100

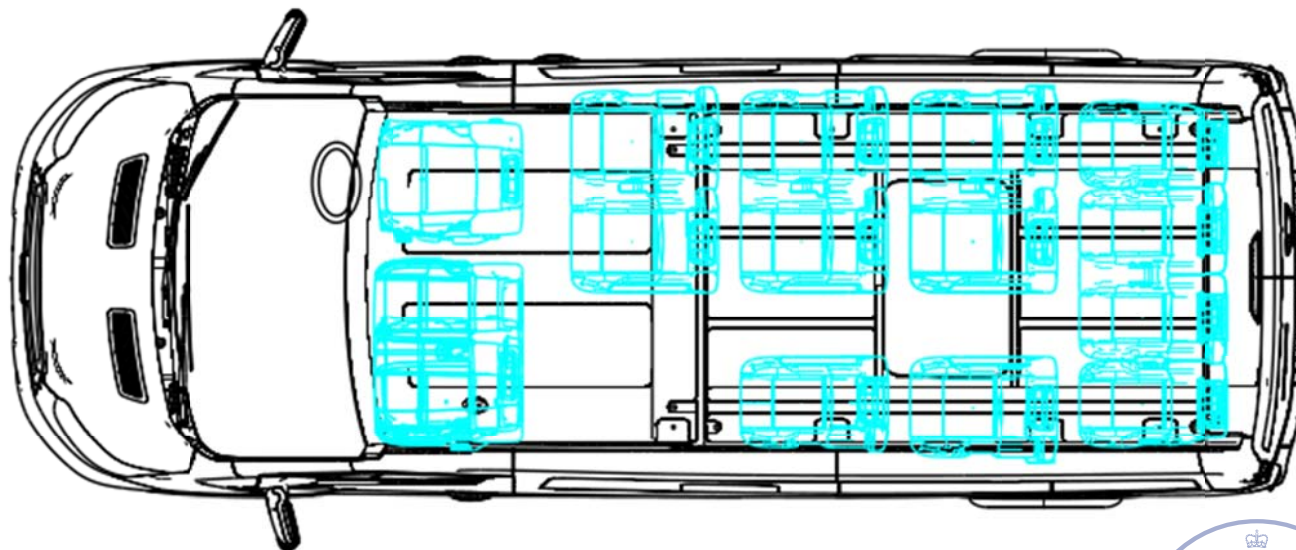
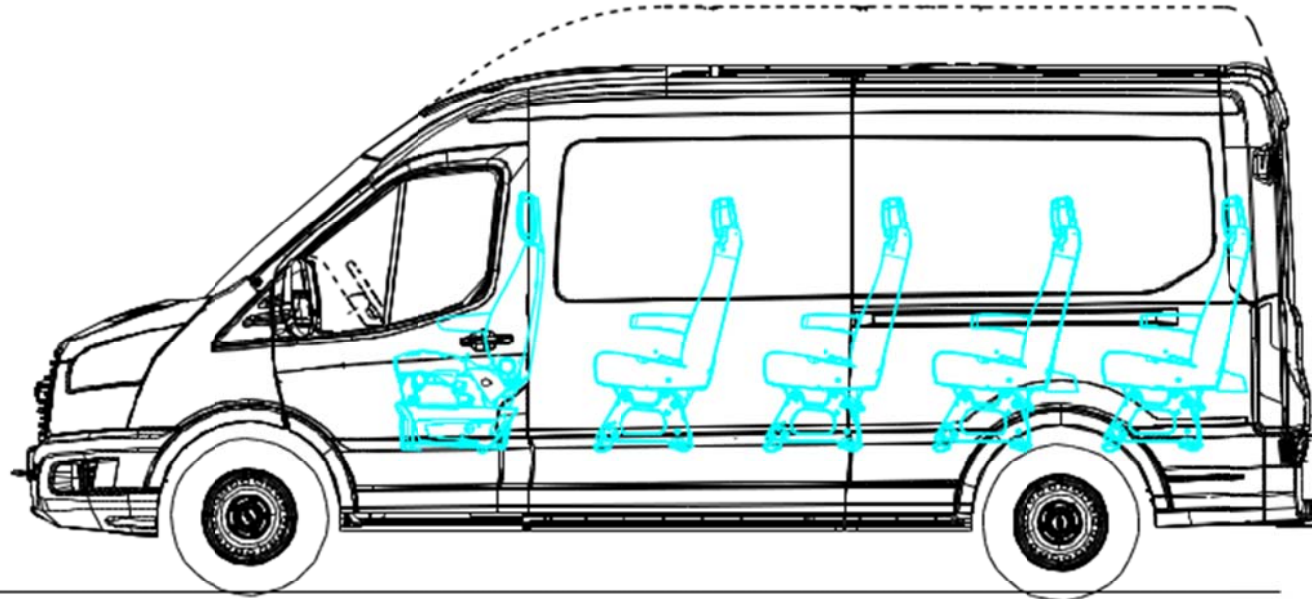
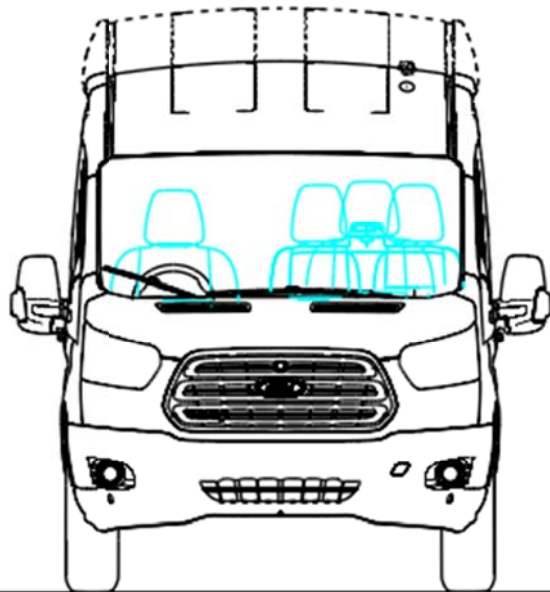


Reference	FORD	Issue Date 22-Jan-2013	Revision Date	Title MWB M2 Bus - 11/12 Seats RHD	Attachment Number HL-DK21-000056-101
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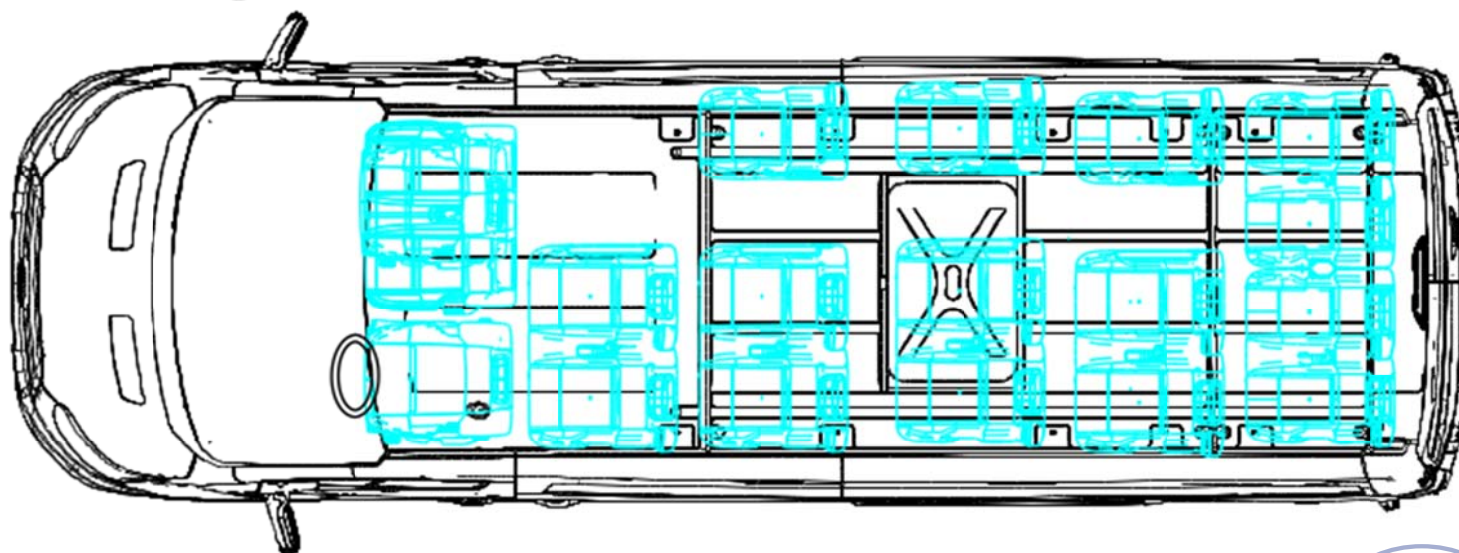
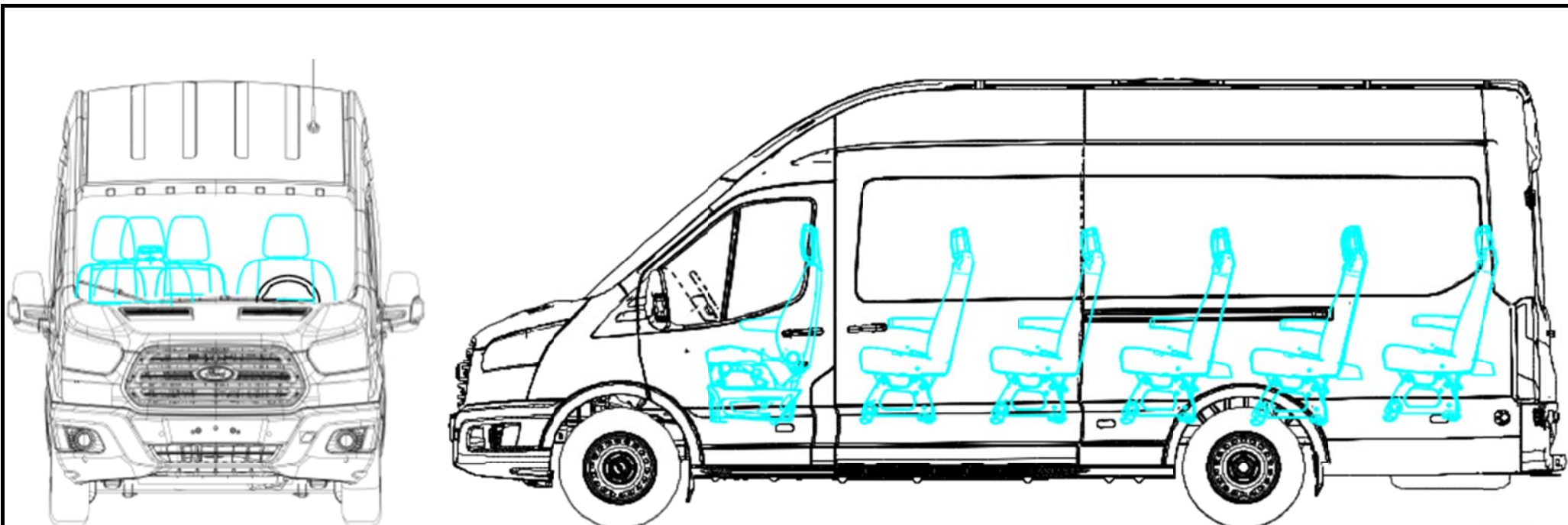


Reference	Issue Date	Revision Date	Title	Attachment Number
FORD	22-Jan-2013		LWB M2 Bus - 14/15 Seats LHD	HL-DK21-000056-102



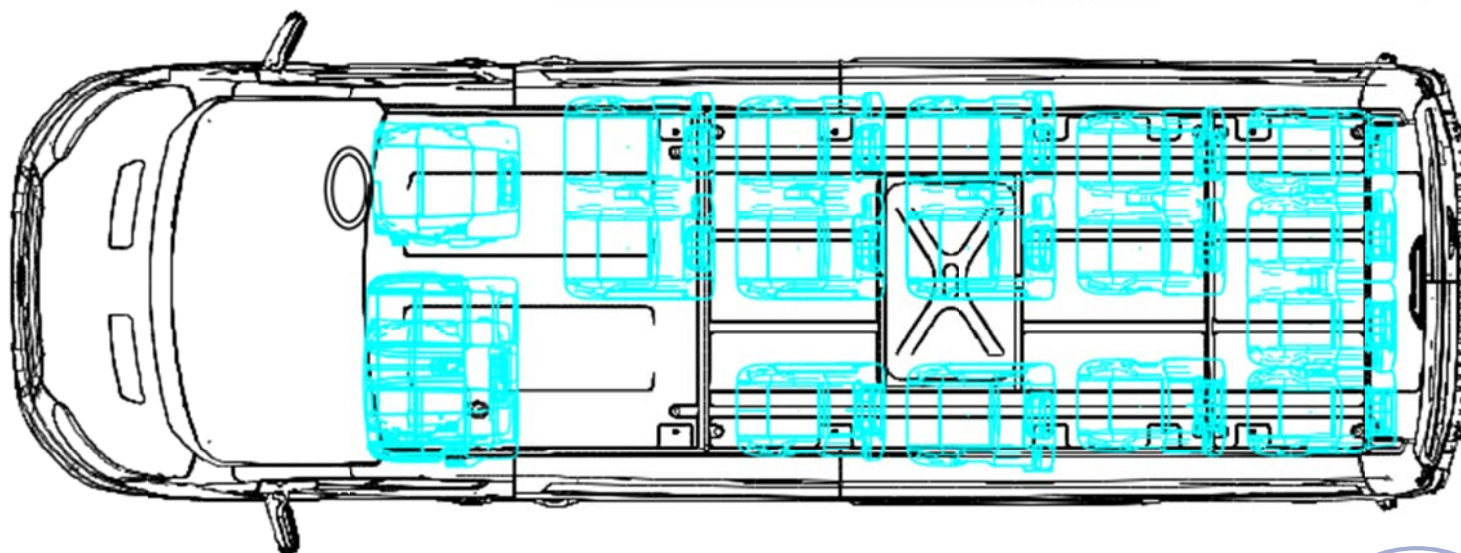
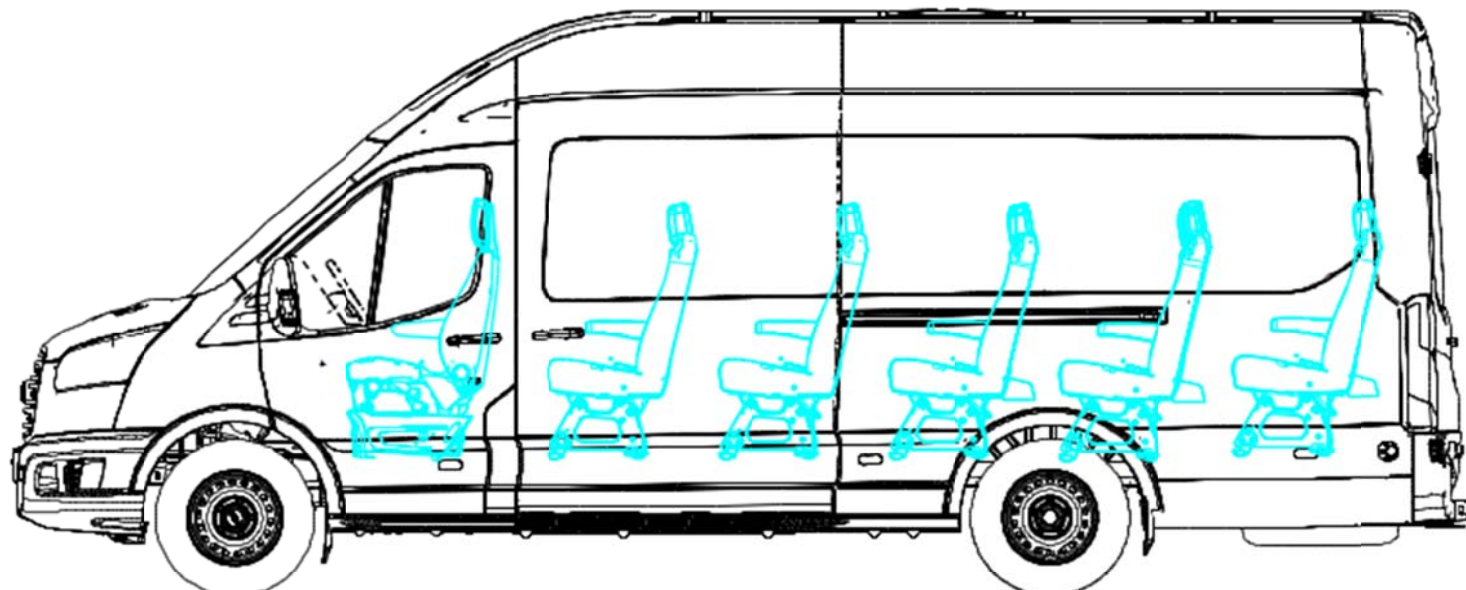
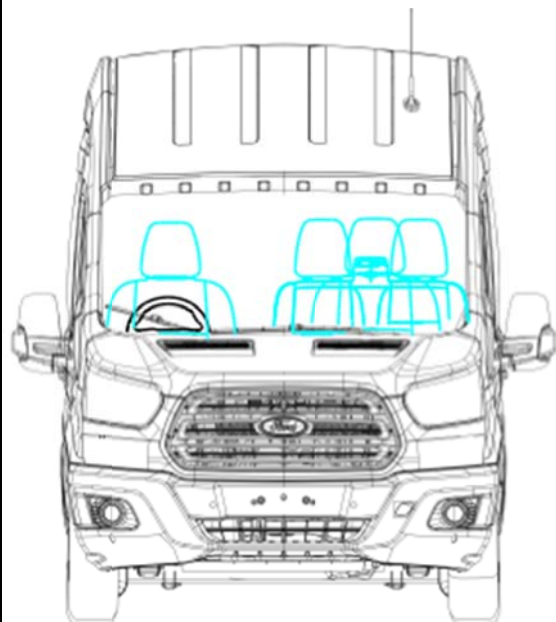


Reference	Issue Date	Revision Date	Title	Attachment Number
FORD	22-Jan-2013		LWB M2 Bus - 14/15 Seats RHD	HL-DK21-000056-103



Reference		Issue Date	Revision Date	Title	Attachment Number
	FORD	22-Jan-2013		LWB M2 Bus - 17/18 Seats LHD	HL-DK21-000056-104





Reference	Issue Date	Revision Date	Title	Attachment Number
FORD	22-Jan-2013		LWB M2 Bus - 17/18 Seats RHD	HL-DK21-000056-105



Vehicle Certification Agency
1 The Eastgate Office Centre
Eastgate Road
Bristol
BS5 6XX
United Kingdom

Telephone: +44 (0) 117 951 5151

Fax: +44 (0) 117 952 4103

Email: enquiries@vca.gov.uk

www.dft.gov.uk/vca/

TEST REPORT: BUS CONSTRUCTION

ECE Regulation 107.05

REPORT/JOB NUMBER:	ESN269730
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TEST DETAILS

Location of Test	Ford, Dunton, UK and Ford, Kocaeli, Turkey
Date of Test	3 July 2013 and 10 – 11 September 2013
VCA Representative(s)	Chris McCabe and Gareth Jones
Manufacturer's Representative(s)	Peter Niemeier
Reason for Test	New approval

MANUFACTURER DETAILS

Manufacturer's Name	a) Ford Werke GmbH b) Ford Otomotiv Sanayi A.S
Manufacturer's Address	a) 50725, Köln, Germany b) Alpina Mah. Hasan Basri Cad. No. 2, Sancaktepe 34885, Turkey
Model Type & description	R107-FD (Ford Transit V363)
Category	M2 Class B

CONCLUSION

The above mentioned vehicle was tested in accordance with the above mentioned Regulation and was found to comply in all respects

Signature:

Name: Gareth Jones

Position: Chief Engineer

Date: 25 October 2013



Vehicle Certification Agency
1 The Eastgate Office Centre
Eastgate Road
Bristol
BS5 6XX
United Kingdom

Telephone: +44 (0) 117 951 5151

Fax: +44 (0) 117 952 4103

Email: enquiries@vca.gov.uk

www.dft.gov.uk/vca/

TEST REPORT: BUS CONSTRUCTION

ECE Regulation 107.05

LIST OF ANNEXES		
ANN	No of PAGES	SUBJECT
1	6	VCA Test Report ESN269730-Tilt for Stability Test
2	17	Retractable step deflection test report
3		
4		



TEST REPORT: BUS CONSTRUCTION

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Paragraph	Requirement	Complies (Yes, No, N/A)
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TEST SPECIFICATION AND WORST CASE RATIONALE

Test vehicles:

WF0HXXTTGHDR82526 – LWB extended frame vehicle - 18 seats (1 driver, 17 passengers), all seated, no standees or wheelchair space. Class B vehicle.

WF0HXXTTGHDR82529 – MWB vehicle – 12 seats (1 driver, 11 passengers), all seated, no standees or wheelchair space. Class B vehicle.

These 2 test vehicles are inspected and can be used to cover all other vehicles in the range. Annex 8 is not applied to this vehicle.

The vehicle is equipped with a double service door, emergency windows and an escape hatch. Annex 7 is applied to the vehicle where appropriate.

ESN269715 – Mass and Dimensions test report.

Tests required (if more than one is applicable)

- Markings
- Stability
- Fire risks
- Wiring and electrics
- Fire extinguishers and first aid
- Exits and doors
- Accessibility
- ~~Mobility~~
- Masses and Dimensions

MANUFACTURER'S DOCUMENTATION

Manufacturer's documentation is complete and reflects the agreed specification for the component tested and covers all variants and versions agreed in the worst case rationale

Yes



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FACILITY AND EQUIPMENT CHECKS

- | | | | | |
|---|---|--------------------------------------|--|---|
| 1 | Generic Risk assessment followed | <i>Insert RA
identifier here</i> | <div style="border: 1px solid black; background-color: #d4edda; padding: 2px 5px; display: inline-block;">PCRAF001</div> | <div style="border: 1px solid black; background-color: #d4edda; padding: 2px 5px; display: inline-block;">Yes</div> |
| | OR | | | |
| | Specific Risk assessment completed and stored in electronic job folder | | | <div style="border: 1px solid black; background-color: #d4edda; padding: 2px 5px; display: inline-block;">N/A</div> |
| 2 | Facilities and test equipment are appropriate | | | <div style="border: 1px solid black; background-color: #d4edda; padding: 2px 5px; display: inline-block;">Yes</div> |
| | Brief description of test equipment:
No specific test equipment required for most checks – see Annexes for specific information | | | |
| 3 | Calibration certificates checked and valid, recorded in the following table | | | <div style="border: 1px solid black; background-color: #d4edda; padding: 2px 5px; display: inline-block;">N/A</div> |

<u>Equipment</u>	<u>Serial No.</u>	<u>Calibration data</u>



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TEST REQUIREMENTS

Regulation

Ann 3 7.2.1	The vehicle shall comply with the requirements of Annex 11 (Masses & Dimensions)	Yes
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VEHICLE DETAILS - WF0HXTTGHDR82526

Value

	Rigid or articulated		Rigid
	Class of vehicle		B
	Total volume of baggage compartments, in m ³ :	V =	0
	Total mass of baggage in baggage compartments, in kg:	B =	0
	Total surface area available for the carriage of baggage on the roof, in m ² :	VX =	0
	Total mass of baggage that can be placed on roof, in kg:	BX =	0
Ann 3, 7.2.2.1	Horizontal projection of total surface area intended for seated and standing passengers, in m ² :	S ₀ =	5.6 / 6.7
7.2.2.2	Horizontal projection of the total surface area intended for standing passengers, in m ² : (Classes A, I and II only)	S ₁ =	N/A
	Total number of passenger and crew seats:	A =	15 / 18
7.2.2.3	Declared number of seating places:	P =	14 / 17
	Declared total number of passengers:	N =	14 / 17

Ann 3,
7.2.2.3

PASSENGER CAPACITY

All seating places (P) conform to requirements of 7.7.8

Yes

For Class I vehicles, $P \geq 0.9 S_0$

N/A

For Class II vehicles, $P \geq 1.0 S_0$

N/A

(Note: S_0 is rounded down to nearest whole number)



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VEHICLE EQUIPPED WITH VARIABLE SEATING CAPACITY

Ann 3,
7.2.2.4

In the case of a vehicle equipped with a variable seating capacity the area available for standing passengers (S_1) and the provisions of paragraph 3.3.1. of Annex 11 shall be determined for each of the following conditions as applicable

Ann 3, 7.2.2.4.1.	with all possible seats occupied followed by the remaining area for standing passengers and, if space remains, any wheelchair spaces occupied;	N/A
Ann 3, 7.2.2.4.2.	with all possible standing areas occupied followed by the remaining seats available for seated passengers and, if space remains, any wheelchair spaces occupied;	N/A
Ann 3, 7.2.2.4.3.	with all possible wheelchair spaces occupied followed by the remaining area for standing passengers and then the remaining seats available for use occupied.	N/A

Ann 3, 7.2.3

MARKING OF VEHICLES

Ann 3,
7.2.3.1

Vehicle clearly marked inside near the front door with the markings provided for in paragraph 3.3 of Annex 11:

Location of marking is opposite service door, facing passengers as they enter vehicle.

Ann 3, 7.2.3.1.1	The maximum number of seating places which the vehicle is designed to carry (P)	Yes
Ann 3, 7.2.3.1.2	The maximum number of standing passengers which the vehicle is designed to carry	Yes
Ann 3, 7.2.3.1.3	The maximum number of Wheelchairs which the vehicle is designed to carry	Yes
Ann 3, 7.2.3.3.1	Space provided in driver's area for markings for maximum mass of baggage that may be carried when vehicle is loaded with maximum numbers of passengers and crew	Yes

Ann 3,
7.3

STRENGTH OF SUPERSTRUCTURE

7.3.1	All single-deck Class II and III vehicles superstructures comply with the requirements of ECE Regulation 66	N/A
---	Vehicle complies with the requirements of Annex 4 (Explanatory	N/A



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Paragraph	Requirement	Complies (Yes, No, N/A)
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	diagrams)	
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Ann 3, 7.4

STABILITY TEST

Ann 3, 7.4.1	Vehicle loaded according to specifications in 7.4 and tilted to angle of 28°	Yes
	Vehicle does not overturn	Yes
Ann 3, 7.4.5	Calculation method use as alternative to full test	N/A
	VCA Test Report attached at Annex 1	Yes

Ann 3 7.5

PROTECTION AGAINST FIRE RISKS

Ann 3 7.5.1.1	All flammable sound-proofing material or material liable to become impregnated with fuel or lubricant used in the engine compartment covered by impermeable sheet	Yes
Ann 3 7.5.1.2	Precautions taken to avoid as far as possible the accumulation of fuel or lubricating oil in engine compartment	Yes
7.5.1.3	Partition of heat resistant material fitted between engine compartment or any other source of heat (e.g. retarder) and the vehicle, except heaters using warm-water circulation	Yes
7.5.1.4.	Heating device operating other than by hot water may be provided in the passenger compartment if it is encased in material designed to resist the temperatures generated by the device, emits no toxic fumes and is positioned such that no passenger is likely to come into contact with any hot surface	N/A
7.5.1.5	In the case of vehicles having the engine located to the rear of the driver's compartment, the compartment shall be equipped with an alarm system providing the driver with both an acoustic and a visual signal in the event of excess temperature in the engine compartment and each compartment where a combustion heater is located	N/A
7.5.1.5.1	The alarm system shall be designed so as to detect a temperature in the engine compartment, and each compartment where a combustion heater is located in excess of the temperature occurring during normal operation.	N/A
7.5.1.5.2	Paragraph 7.5.1.5.1. is considered to be satisfied if the following areas	



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Paragraph	Requirement	Complies (Yes, No, N/A)
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	of the engine compartment, and each compartment where a combustion heater is located, are monitored regarding excess temperature:	
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7.5.1.5.2.1	Areas in which, in case of leakage, flammable fluids (liquid or gas) may come into contact with exposed components, e.g. the supercharger or the exhaust-system, including engine mounted components, whose working temperature is equal to or greater than the ignition temperature of the flammable fluids (liquid or gas); and	N/A
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7.5.1.5.2.2	Areas in which, in case of leakage, flammable fluids (liquid or gas) may come into contact with shielded components, e.g. an independent heating device, whose working temperature is equal to or greater than the ignition temperature of the flammable fluids (liquid or gas); and	N/A
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7.5.1.5.2.3	Areas in which, in case of leakage, flammable fluids (liquid or gas) may come into contact with components, e.g. the alternator, whose temperature, in case of failure, may be equal to or greater than the ignition temperature of the flammable fluids (liquid or gas).	N/A
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7.5.1.5.3	The alarm system shall be operational whenever the engine start device is operated, until the engine stop device is operated, regardless of the vehicles attitude	N/A
-----------	---	-----

Ann 3
Section 7.5.2

ELECTRICAL EQUIPMENT AND WIRING

Ann 3 7.5.2.1	All cables insulated and all cables and electrical equipment able to withstand the environmental conditions to which they are exposed	Yes
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Ann 3 7.5.2.2	All cables carry current below their rated maximum	Yes
------------------	--	-----

Ann 3 7.5.2.3	All electrical circuits (except for starter, ignition system, glow plugs, engine stopping device, battery charger and battery) include fuses or circuit breakers	Yes
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	In the case of multiplexing, the manufacturer shall give all the relevant technical information at the request of VCA	N/A
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Ann 3 7.5.2.4	All cables well protected and held securely in position so they cannot be damaged by cutting, abrasion or chafing	Yes
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Ann 3 7.5.2.5	If more than 100 volts (RMS) in any electrical circuit, manually operated isolating switch is provided which isolates all poles of the supplies not connected to earth (except for the mandatory external vehicle lights circuit) and is located inside the vehicle and readily accessible to the driver	N/A
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Paragraph	Requirement	Complies (Yes, No, N/A)
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List of circuits: N/A

Ann 3 7.5.2.6	No electrical cable can contact any fuel line or exhaust system or be subjected to excessive heat	Yes
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Ann 3 7.5.3 BATTERIES

Ann 3 7.5.3.1	All batteries well secured and easily accessible Battery located underneath driver's seat	Yes
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Ann 3 7.5.3.2	Battery compartment separated from both passengers' and driver's compartment and vented to outside air Battery in a sealed box, with a ventilation pipe to the outside	Yes
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Ann 3 7.5.3.3	Battery terminals protected against the risk of short circuit Positive and negative terminals covered with sealed units	Yes
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Ann 3 7.5.4 FIRE EXTINGUISHERS AND FIRST AID EQUIPMENT

3 possible locations for fire extinguisher:

- In front of outboard front passenger seat (when a double front seat is fitted)
- Underneath the centre front passenger seat (when a double seat is fitted) – in this case a label is provided showing location
- In between driver and outboard seat (when a single front seat is fitted)

Ann 3 7.5.4.1	Space for one or more fire extinguishers, with one located near the driver's seat, of at least 15 dm ³ for Class I, II and III, 8dm ³ for class A and B	Yes
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	Double-deck vehicles have additional space on the upper deck	N/A
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Ann 3 7.5.4.2	Space for one or more first aid kits. This space shall be at least 7 dm ³ and have a minimum dimension of 80 mm Located in front parcel shelf above windscreen	Yes
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Ann 3 7.5.4.3	Fire extinguishers and first-aid kits may be secured against theft or vandalism (e.g. in an internal locker or behind breakable glass), provided that the locations of these items are clearly marked and means are provided for persons to extract them easily in an emergency	N/A
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Ann 3 7.5.5 MATERIALS



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Paragraph	Requirement	Complies (Yes, No, N/A)
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	No flammable material permitted within 10 cm of the exhaust pipe unless effectively shielded	Yes
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Ann 3 7.5.6

FIRE DETECTION

7.5.6.1	Vehicle must be equipped with alarm system detecting either excess temperature or smoke in toilet compartments, driver sleeping compartments and other separate compartments	N/A
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7.5.6.2	System provides both acoustic and visual signal in driver's compartment	N/A
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7.5.6.2	Alarm system at least operational from whenever the engine start device is operated until such a time the engine stop device is operated	N/A
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Ann 3

Section 7.6

EXITS

Ann 3 7.6.1.1	Minimum number of service doors to meet the requirements	Yes
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Number of service doors fitted:

1 double service door fitted

Ann 3 7.6.1.2	At least 1 service door in each rigid section of an articulated bus or coach, except for Class I which shall have 2 in the front section	N/A
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Ann 3 7.6.1.3	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	N/A
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Ann 3 7.6.1.4	Minimum number of emergency exits to meet the requirements Requirement: Minimum 4 for 18 seat (1 driver, 17 seat)	Yes
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Type and number of exits:

1 double service door

2 emergency windows (1 on each side)

1 escape hatch

Ann 3 7.6.1.5	Each rigid section of articulated vehicle meets 7.6.1.4	N/A
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Ann 3 7.6.1.6	A double service door shall count as two doors and a double or multiple window as two emergency windows	N/A
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Ann 3 7.6.1.7	If driver's compartment separate from passenger compartment, then two exits provided which are not in the same lateral wall and they meet dimensional requirements	Yes
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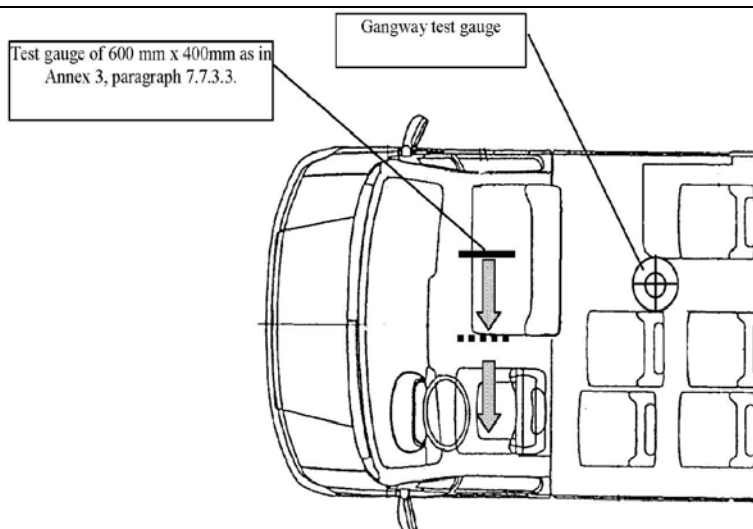
ECE Regulation 107.05

Paragraph	Requirement	Complies (Yes, No, N/A)
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Ann 3 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. and 7.6.8. for emergency windows	Yes
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Ann 3 7.6.1.7.2	<p>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.</p> <p>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).</p> <p>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.</p> <p>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.</p> <p>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.</p>	Yes
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Annex 4
Figure 27



Ann 3 7.6.1.7.3	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	Yes
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Paragraph	Requirement	Complies (Yes, No, N/A)
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	paragraphs 7.6.1.7.1. and 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.	
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<i>Ann 3</i> 7.6.1.8.	If the driver's compartment and 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 required from the driver's compartment	N/A
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<i>Ann 3</i> 7.6.1.9.	If the 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 an exit for passengers provided:	
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<i>Ann 3</i> 7.6.1.9.1.	It satisfies the requirements relating to the dimensions of emergency doors indicated in paragraph 7.6.3.1	N/A
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AND

<i>Ann 3</i> 7.6.1.9.2.	It fulfils the requirements of 7.6.1.7.2	N/A
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AND

<i>Ann 3</i> 7.6.1.9.3.	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 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 panel described in paragraph 7.6.1.7.2. 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.	N/A
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<i>Ann 3</i> 7.6.1.10.	Barrier may be installed between the driver's seat and the passenger compartment, provided that this barrier can be released quickly by the driver in an emergency	N/A
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<i>Ann 3</i> 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). Except as provided in paragraph 7.6.1.12., they may also be fitted in the case of Class I and A vehicles. There shall not be any escape hatches fitted in the roof of a trolleybus. The minimum number of hatches shall be: ≤ 50 = 1 ≥ 50 = 2.	Yes
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Number of escape hatches:

<i>Ann 3</i> 7.6.1.12	Vehicles of Class I and A shall not have escape hatches fitted where technical components are installed which present possible dangers to passengers using the escape hatches (e.g. high voltage systems, systems containing dangerous liquids and/or gas, etc.)	N/A
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<i>Ann 3</i> 7.6.1.13	Intercommunication staircase is considered exit from upper deck	N/A
<i>Ann 3</i> 7.6.1.14	All persons in lower deck have access to exterior of vehicle without having to enter upper deck	N/A
<i>Ann 3</i> 7.6.1.15	Gangway of upper deck connected by one or more staircases to access passage of a service door or to the lower deck gangway within 3m of a service door:	N/A
<i>Ann 3</i> 7.6.1.15.1	2 or at least 1½ staircases for Class I and II with more than 50 passengers on the upper deck	N/A
<i>Ann 3</i> 7.6.1.15.2	2 or at least 1½ staircases for Class III with more than 30 passengers on the upper deck	N/A
<i>Ann 3</i> 7.6.1.16	If vehicle has no roof, exits on the upper deck shall be as to fulfil those prescriptions that are not incompatible with the absence of the roof	N/A

Ann 3
Section 7.6.2

SITING OF EXITS:

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.

Vehicle complies with Annex 7, paragraph 1.2

<i>Ann 3</i> 7.6.2.1	Service doors located on nearside of vehicle and at least one in forward half of vehicle: This does not preclude:	N/A
<i>Ann 3</i> 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	N/A
<i>Ann 3</i> 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	N/A
<i>Ann 3</i> 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	N/A



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Paragraph	Requirement	Complies (Yes, No, N/A)
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	doors which are not currently in use, or	
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<i>Ann 3</i> 7.6.2.1.4	The provision of a service door in the rear face of a Class A or B vehicle.	N/A
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<i>Ann 3</i> 7.6.2.2 & 7.6.2.2.1	<p>If the passenger's compartment has an area S_0 equal or greater than 10 m² 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>40% of overall length of passenger compartment</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 door this distance shall be measured between the two doors which are furthest apart.</p>	N/A
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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.	N/A
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<i>Ann 3</i> 7.6.2.3 <i>Ann 3</i> 7.6.2.5	Exits placed such that their number on the two sides of the vehicle is substantially the same and suitably spaced along the length of the vehicle	N/A
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<i>Ann 3</i> 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 and A vehicles and for vehicles with a rear part permanently closed off from the passenger compartment, this provision is fulfilled if an escape hatch is fitted, or, if paragraph 7.6.1.12. applies, an additional exit to those specified in paragraph 7.6.1., is fitted on each side of the vehicle. For double-deck vehicles this requirement shall apply only to the upper deck.	N/A
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<i>Ann 3</i> 7.6.2.6	No service door in the rear face	N/A
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<i>Ann 3</i> 7.6.2.7	Positioning of escape hatches meets requirements	N/A
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Paragraph	Requirement	Complies (Yes, No, N/A)
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Ann 3
7.6.3

MINIMUM DIMENSIONS

All exits meet minimum dimensions:

Service doors (See Annex 4 figure I)

Emergency doors

At least: (Height 1250mm Width: 550mm)

Emergency windows (minimum area of 400,000 mm² & Rectangle 500mm x 700mm)

Escape hatches (minimum area of 400,000 mm² & Rectangle 500mm x 700mm)

Yes

N/A

Yes

Yes

7.6.3.2	Vehicles of Class A or B may meet either the requirements shown in paragraph 7.6.3.1. (Class A meeting Class I requirements and Class B meeting Class II and III requirements) or those contained in Annex 7, paragraph 1.1.	Yes – Annex 7, para 1.1
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Ann 3 7.6.4

TECHNICAL REQUIREMENTS FOR SERVICE DOORS

Ann 3 7.6.4.1	Every service door capable of being opened from inside and outside when the vehicle is stationary	Yes
	If door can be locked from the outside, door can still be opened from the inside	Yes
Ann 3 7.6.4.2	Service door controls located on the outside between 1000mm and 1500mm above the ground and not more than 500mm from the door	Yes
	Service door controls located on the inside (where provided) between 1000mm and 1500mm from the upper surface of the floor or step nearest the control and not more than 500mm from the door	Yes
Ann 3 7.6.4.3	One-piece manually operated service doors have tendency to close if it comes into contact with a stationary object while the vehicle is moving forward	Yes
Ann 3 7.6.4.4	If manually-operated service door has slam lock, it is of the two-stage type	Yes
Ann 3 7.6.4.5	No device fitted to inside of service doors intended to cover inside steps	Yes
Ann 3 7.6.4.6	For all non-automatic service doors, driver has optical or other devices to detect presence of passengers in the immediate interior and exterior vicinity, if his direct view is not adequate	Yes



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<i>Ann 3</i> 7.6.4.6	In the case of a service door in the rear face of the vehicle not exceeding 22 passengers, this requirement is satisfied if the driver is able to detect the presence of a person 1.3 m tall standing 1 m behind the vehicle.	N/A
<i>Ann 3</i> 7.6.4.6	For Class 1 double-deck vehicles, this also applies to interior of all service doors and to immediate vicinity of each intercommunication staircase	N/A
<i>Ann 3</i> 7.6.4.6	For doors in the rear of an articulated section, mirrors are not deemed to be a sufficient optical device	N/A
<i>Ann 3</i> 7.6.4.7	Every inward opening door so constructed that its movement not likely to cause injury to passengers	N/A
<i>Ann 3</i> 7.6.4.8	If service door located adjacent to toilet or other internal compartment door, service door proofed against unintentional operation	N/A
<i>Ann 3</i> 7.6.4.9	In the case of vehicles having a capacity not exceeding 22 passengers, the service doors of which are in the rear face of the vehicle, the leaves shall not be capable of being opened more than 115° nor less than 85° and, when open, shall be capable of being held automatically in that position. This does not preclude the ability to override that stop and open the door beyond that angle when it is safe to do so; for example, to enable reversing against a high platform for loading or to open the doors through 270° to allow a clear loading area behind the vehicle.	N/A

Ann 3
Section 7.6.5

ADDITIONAL TECHNICAL REQUIREMENTS FOR POWER-OPERATED SERVICE DOORS

<i>Ann 3</i> 7.6.5.1	Every power-operated service door has an emergency control on the inside and the outside which:	N/A
<i>Ann 3</i> 7.6.5.1.1	Overrides all other door controls	N/A
<i>Ann 3</i> 7.6.5.1.2	The inside control is not less than 1600mm above the first step and within 300mm of the door	N/A
<i>Ann 3</i> 7.6.5.1.3	Can be easily seen and identified, and if applicable is marked accordingly	N/A
<i>Ann 3</i> 7.6.5.1.4	Can be operated by one person standing immediately in front of the door	N/A
<i>Ann 3</i> 7.6.5.1.5	May activate a starting prevention device	N/A



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Paragraph	Requirement	Complies (Yes, No, N/A)
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<i>Ann 3</i> 7.6.5.1.6	Causes the door to open to a width that the gauging device can pass through within 8 seconds of operation of the control, or enables the door to be opened easily by hand to a width that the gauging device can pass through within 8 seconds of operation of the control	N/A
<i>Ann 3</i> 7.6.5.1.7	May be protected by a device. Operation of the control, or removal of a protective cover is indicated to the driver both audibly and visually	N/A
<i>Ann 3</i> 7.6.5.1.8	All driver-operated doors, except for doors which meet 7.6.5.6.2, remain open until driver operates a closing control, after emergency controls have been reset	N/A
<i>Ann 3</i> 7.6.5.1.9	Doors prevented from opening if the vehicle is moving at a speed higher than 5 km/h	N/A
<i>Ann 3</i> 7.6.5.2	A device may be provided which is operated by the driver from the driving seat to deactivate the outside emergency controls in order to lock the service doors from outside. Following deactivation of the outside emergency controls, reactivation is automatic either by starting the engine or before the vehicle reaches 20km/h	N/A
	Subsequent deactivation is not automatic	N/A
<i>Ann 3</i> 7.6.5.3	All driver-operated service doors operated by the driver from his seat by controls which are clearly marked	N/A
<i>Ann 3</i> 7.6.5.4	All power-operated service doors activate visual tell-tale to warn when door is not fully closed	N/A
	Tell-tale operates when door is between fully open and a point 30mm from fully closed position	N/A
	No tell-tale fitted to door which does not comply with 7.6.5.6.1.1 and 7.6.5.6.1.2	N/A
<i>Ann 3</i> 7.6.5.5	Driver's controls allow immediate reversing of any power-operated door opening and closing process	N/A
<i>Ann 3</i> 7.6.5.6	Construction and control system of power-operated service doors adequate	N/A
This requirement shall be considered satisfied if the following two requirements are met:		
<i>Ann 3</i> 7.6.5.6.1.1	Clamping force of power-operated service door does not exceed 150N and door opens automatically to its fullest extent	N/A



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Paragraph	Requirement	Complies (Yes, No, N/A)
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<i>Ann 3</i> 7.6.5.6.1.2	Peak force: (Requirement: < 150N and < 300N for short time) When doors are closed onto wrist or fingers, either: And	N/A
<i>Ann 3</i> 7.6.5.6.1.2.1	Door reopens automatically to fullest extent	N/A
OR		
<i>Ann 3</i> 7.6.5.6.1.2.2	wrist or fingers or test bar can be extracted from doors without risk of injury	N/A
OR		
<i>Ann 3</i> 7.6.5.6.1.2.3	door is maintained at a position to allow free passage of test bar	N/A
<i>Ann 3</i> 7.6.5.6.2	Front service door either meets 7.6.5.6.1 or is fitted with soft edges these shall not, however be so soft that if the doors are closed on the test bar mentioned in paragraph 7.6.5.6.1.1. the rigid structure of the doors will reach the fully closed position.	N/A
<i>Ann 3</i> 7.6.5.7	Power-operated service door held closed by continued application of power supply has driver visual tell-tale to indicate loss of power	N/A
<i>Ann 3</i> 7.6.5.8	If starting prevention device is fitted, it is only effective up to 5 km/h and is disabled above that speed	N/A
<i>Ann 3</i> 7.6.5.9	If starting prevention device not fitted, driver audible warning is activated when any power-operated service door is not closed and vehicle is moving	N/A
	If door meets 7.6.5.6.1.2.3, then audible warning is activated at speeds greater than 5 km/h	N/A

Ann 3
Section 7.6.6

ADDITIONAL REQUIREMENTS FOR AUTOMATICALLY OPERATED SERVICE DOORS

<i>Ann 3</i> 7.6.6.1.1	Opening controls are only capable of being activated and deactivated by driver	N/A
<i>Ann 3</i> 7.6.6.1.3	Activation of opening controls is indicated adjacent to the particular door on the inside and, where appropriate, on the outside	N/A
<i>Ann 3</i> 7.6.6.1.4	Functional state of the system indicated to driver	N/A
<i>Ann 3</i> 7.6.6.2.1	After activation of controls by driver, passengers able to open the door as follows:	N/A
<i>Ann 3</i>	From inside (for example by pressing a button or passing a light barrier)	N/A



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ECE Regulation 107.05

Paragraph	Requirement	Complies (Yes, No, N/A)
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7.6.6.2.1.1		
Ann 3 7.6.6.2.1.2	From outside except for an 'exit only' door (for example by pressing a button)	N/A
Ann 3 7.6.6.3.1	Door closes after a time interval and if a passenger enters or leaves, a safety device ensures sufficient extension of the time interval	N/A
Ann 3 7.6.6.3.2	If passenger enters or leaves whilst the door is closing, the door returns to its fully open position	N/A
Ann 3 7.6.6.3.3	If door has closed according to 7.6.6.3.1, door can be re-opened by passenger if controls are still activated	N/A
Ann 3 7.6.6.3.4	Upon deactivation of passenger controls, all remaining open doors close automatically	N/A
Ann 3 7.6.6.4.1	Doors marked for special service have inhibitor for automatic closing process which can be activated by the driver and passengers	N/A
Ann 3 7.6.6.4.2	Inhibition of closing process is indicated to driver	N/A

Ann 3 7.6.7

TECHNICAL REQUIREMENTS FOR EMERGENCY DOORS

Ann 3 7.6.7.1	Every emergency door capable of being opened from inside and outside when the vehicle is stationary	N/A
	If door can be locked from the outside, door can still be opened from the inside using the normal opening mechanism	N/A
Ann 3 7.6.7.2	Power-operated emergency doors only close once the emergency control has been returned to its normal position and the driver operates a closing control	N/A
	Activation of the control causes the door to open to a width that the gauging device can pass through within 8 seconds of operation of the control, or enables the door to be opened easily by hand to a width that the gauging device can pass through within 8 seconds of operation of the control	N/A
	Emergency doors are not of the sliding type	N/A
Ann 3 7.6.7.3	Emergency door controls located on the outside between 1000mm and 1500mm above the ground and not more than 500mm from the door	N/A



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Paragraph	Requirement	Complies (Yes, No, N/A)
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	Emergency door controls located on the inside between 1000mm and 1500mm from the upper surface of the floor or step nearest the control and not more than 500mm from the door	N/A
Ann 3 7.6.7.4	Hinged emergency doors have hinges on the forward edge and open outwards	N/A
	Opening angle at least 100°, or permit free passage of access gauge	N/A
Ann 3 7.6.7.5	Emergency doors proofed against unintentional operation, or lock automatically at speeds exceeding 5 km/h	N/A
Ann 3 7.6.7.6	All emergency doors provided with audible device to warn driver when not securely closed	N/A
	Warning device operates by movement of door catch or handle	N/A

Ann 3 7.6.8

TECHNICAL REQUIREMENTS FOR EMERGENCY WINDOWS

Ann 3 7.6.8.1	All hinged or ejectable windows open outwards	N/A
	All ejectable windows do not become detached from vehicle when operated and inadvertent ejection is prevented	N/A
Ann 3 7.6.8.2	Every emergency window is either	
Ann 3 7.6.8.2.1	Capable of being easily and instantaneously operated from inside and outside	N/A
	OR	
Ann 3 7.6.8.2.2	Made from readily breakable safety glass. A device must be provided on the inside adjacent to each emergency window	Yes
	For a rear window, the device shall be positioned either centrally above or below the emergency window or alternatively, a device at each end of the window	N/A
Ann 3 7.6.8.3	If emergency window can be locked from the outside, it can still be opened from the inside	N/A
Ann 3 7.6.8.4	If emergency window is hinged at top edge, device is provided to hold it fully open	N/A
Ann 3 7.6.8.5	Height of lower edge of every emergency window not more than 1200mm nor less than 650mm (if hinged) or 500mm (if breakable glass) from the vehicle floor	Yes



TEST REPORT: BUS CONSTRUCTION

ECE Regulation 107.05

Paragraph	Requirement	Complies (Yes, No, N/A)
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Ann 3 7.6.8.6	Hinged emergency windows not clearly visible from driver's seat are fitted with audible warning device to indicate when not fully closed	N/A
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	Warning devices operates on window lock	N/A
--	---	-----

Ann 3 7.6.9

TECHNICAL REQUIREMENTS FOR ESCAPE HATCHES

Ann 3 7.6.9.1	Every escape hatch operates so as not to obstruct the clear passage from inside or outside the vehicle	Yes
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Ann 3 7.6.9.2	Roof hatches are either ejectable or hinged type or made of breakable glass	Yes
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	Floor hatches are either hinged or ejectable and are fitted with an audible warning device to indicate when not securely closed	N/A
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	Warning device operates on hatch lock	N/A
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	Floor hatch proofed against unintentional operation, or lock automatically at speeds exceeding 5 km/h	N/A
--	---	-----

Ann 3 7.6.9.3	All ejectable escape hatches do not become detached from vehicle when operated and inadvertent operation is prevented	Yes
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	Floor hatches eject into passenger compartment	N/A
--	--	-----

Ann 3 7.6.9.4	Hinged escape hatches are hinged along front or rear edge and opening angle is at least 100°	N/A
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	Floor hatches hinge into passenger compartment	N/A
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Ann 3 7.6.9.5	If breakable glass type, device is provided adjacent to every hatch to ensure hatch can be broken	Yes
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TEST REPORT: BUS CONSTRUCTION

ECE Regulation 107.05

Paragraph	Requirement	Complies (Yes, No, N/A)
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Ann 3
7.6.10

TECHNICAL REQUIREMENTS FOR RETRACTABLE STEPS

Ann 3 7.6.10.1	Operation of retractable steps may be synchronised with that of the corresponding service or emergency door	Yes
Ann 3 7.6.10.2	Retractable step project no more than 10mm beyond adjacent line of bodywork	Yes
Ann 3 7.6.10.3	Surface area is acceptable when in operating condition	Yes
Ann 3 7.6.10.4	If power-operated step, vehicle cannot move from rest when step is in extended position Engine stops when any gear is selected and step is in extended position	Yes
	If manually-operated step, audible warning indicating step is not fully retracted is given to driver	N/A
Ann 3 7.6.10.5	Power-operated step cannot extend whilst vehicle in motion	Yes
Ann 3 7.6.10.6	Corresponding door does not close when 15kg mass place on retractable step (Not applicable for doors within driver's direct field of view)	Yes
---	Movement of the retractable step is not liable to cause any bodily harm either to passengers or to persons waiting at bus stops	Yes
Ann 3 7.6.10.8	Forward and rearward facing corners rounded to a 5mm radius, edges rounded to a 2.5mm radius	Yes
Ann 3 7.6.10.9	Deflection when loaded within limits See Annex 2 for test details	Yes

Ann 3
7.6.11

MARKINGS

Ann 3 7.6.11.1	All emergency exits marked inside and outside	Yes
Ann 3 7.6.11.2 Ann 3	Emergency controls of service doors and emergency exits are marked and clear instructions concerning method of operation provided	Yes



TEST REPORT: BUS CONSTRUCTION

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Paragraph	Requirement	Complies (Yes, No, N/A)
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7.6.11.3		
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Ann 3
7.6.12

SERVICE-DOOR LIGHTING

Ann
7.6.12.1

Service door lighting may be provided such that:

Ann 3 7.6.12.2.1	It is of white colour	N/A
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Ann 3 7.6.12.2.2	It illuminates a flat, horizontal portion of the ground having a width of 2m	N/A
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Ann 3 7.6.12.2.3	It has a limited dazzle zone according to the requirements	N/A
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Ann 3 7.6.12.2.4	If the lower edge of the lighting device is less than 2m from the ground, it does not project more than 50mm from the overall width of the vehicle and has radii of curvature of not less than 2.5mm	N/A
---------------------	--	-----

Ann 3 7.6.12.2.5	It can be activated and deactivated by a separate switch	N/A
---------------------	--	-----

Ann 3 7.6.12.2.6	It is installed so the device can only be switched on when a service door and the vehicle speed does not exceed 5km/h and is switched off automatically before the vehicle reaches a speed exceeding 5km/h	N/A
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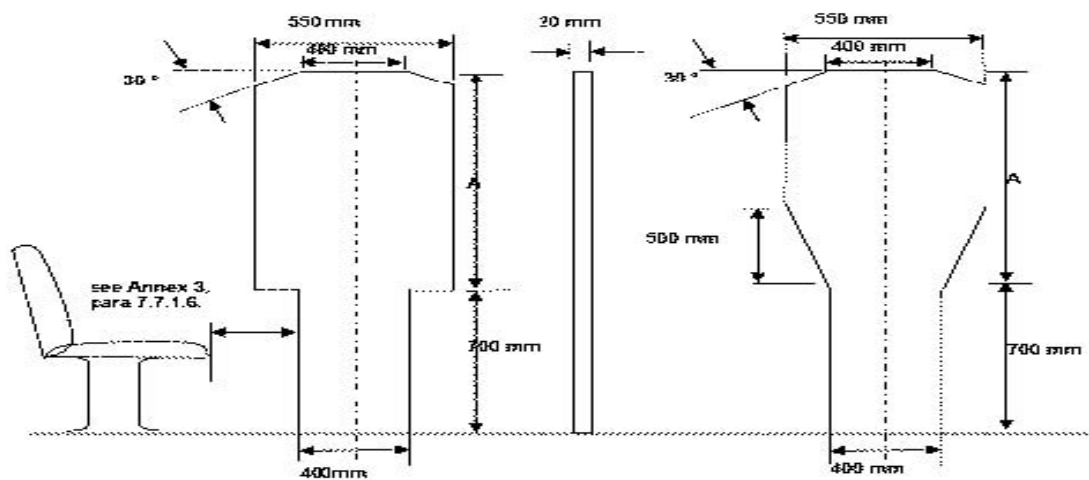
Paragraph	Requirement	Complies (Yes, No, N/A)
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Ann 3 7.7 INTERIOR ARRANGEMENTS

Ann 3 7.7.1 ACCESS TO SERVICE DOORS

Ann 3 7.7.1.1 Ann 3 7.7.1.2 Ann 3 7.7.1.3	Free space from service door through access passage to gangway permits movement of the specified dual-panel gauges for a distance of 300mm from outermost edge of door aperture	Yes
--	---	-----

Figure 1 ACCESS TO SERVICE DOORS (see Annex 3, paragraph 7.7.1.)



Vehicle class	Height of the upper panel (mm) (Dimension "A" figure 1)	
	Test gauge 1	Test gauge 2
Class A	950 */	950
Class B	700 */	950
Class I	1,100	1,100
Class II	950	1,100
Class III	850	1,100



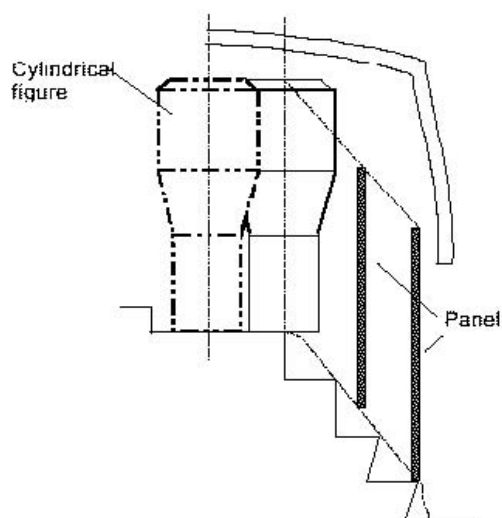
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ECE Regulation 107.05

Paragraph	Requirement	Complies (Yes, No, N/A)
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Ann 3 7.7.1.4	Cylindrical 'gangway-man' moved from gangway in probable direction of someone leaving vehicle to a position either at the top step or touching the dual-panel	Yes
------------------	---	-----

Figure 2 ACCESS TO SERVICE DOORS (see Annex 3, paragraph 7.7.1.4.)



Ann 3 7.7.1.5	Free space between dual-panel and cylinder allowing free passage of further dual-panel of dimensions equal to cylinder	Yes
Ann 3 7.7.1.6 Ann 3 7.7.1.7	Free passage clearance above does not include any defined space in front of seats, including folding seats in their position of use	Yes

Figure 25 PASSENGER FOOT SPACE (see Annex 3, paragraph 7.7.1.6.)

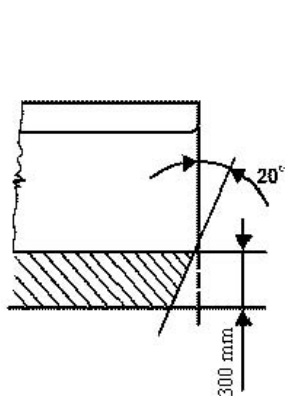


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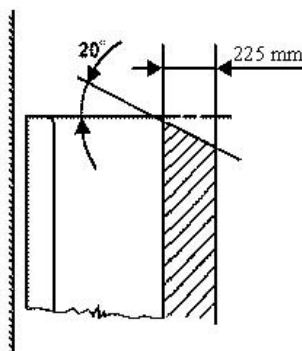
ECE Regulation 107.05

Paragraph	Requirement	Complies (Yes, No, N/A)
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Transverse seat



Longitudinal seat



Ann 3 7.7.1.8	Folding seat for crew use may obstruct passage, provided that:	
Ann 3 7.7.1.8.1	It is clearly marked on vehicle and approval certificate that it is for crew use only	N/A
Ann 3 7.7.1.8.2	The seat folds automatically to allow compliance with 7.7.1.1 to 7.7.1.5	N/A
Ann 3 7.7.1.8.3	The door is not a mandatory exit for the purpose of 7.6.1.4 (minimum number of emergency exits)	N/A
Ann 3 7.7.1.8.4	When seat is in position of use and when stowed, no part of it is 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	N/A
Ann 3 7.7.1.9	In the case of vehicles having a capacity not exceeding 22 passengers a doorway and the route by which passengers gain access to it shall be considered unobstructed if they have:	N/A

Figure 3 DETERMINATION OF UNOBSTRUCTED ACCESS TO DOOR (see Annex 3, paragraph 7.7.1.9.1.)



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Paragraph	Requirement	Complies (Yes, No, N/A)
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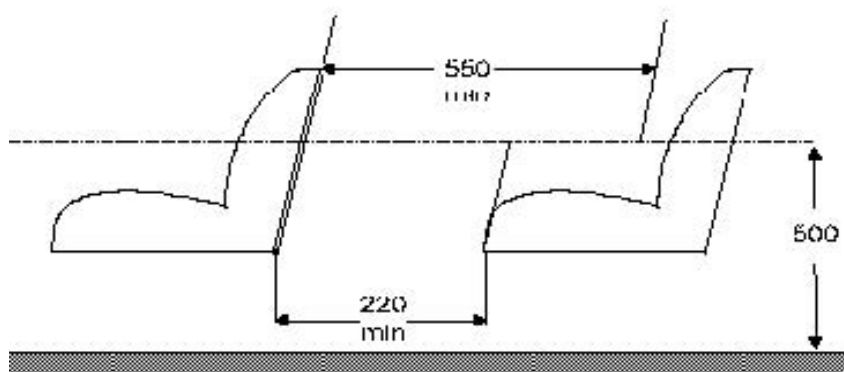
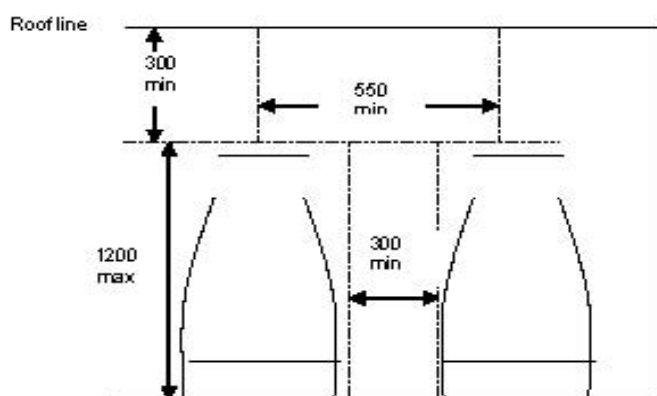


Figure 4 DETERMINATION OF UNOBSTRUCTED ACCESS TO DOOR (see Annex 3, paragraph 7.7.1.9.2.)



Ann 3 7.7.1.10	The service door and emergency door dimensions in paragraph 7.6.3.1. and the requirements of paragraphs 7.7.1.1. to 7.7.1.7., 7.7.2.1. to 7.7.2.3., 7.7.5.1. and shall not apply to a vehicle of class B with a technically permissible maximum mass not exceeding 3.5 tonnes and up to 12 passenger seats in which each seat has unobstructed access to at least two doors.	N/A
Ann 3 7.7.1.11 and 7.7.1.12	Floor slope in access passages does not exceed 5% in any direction and be slip resistant	Yes



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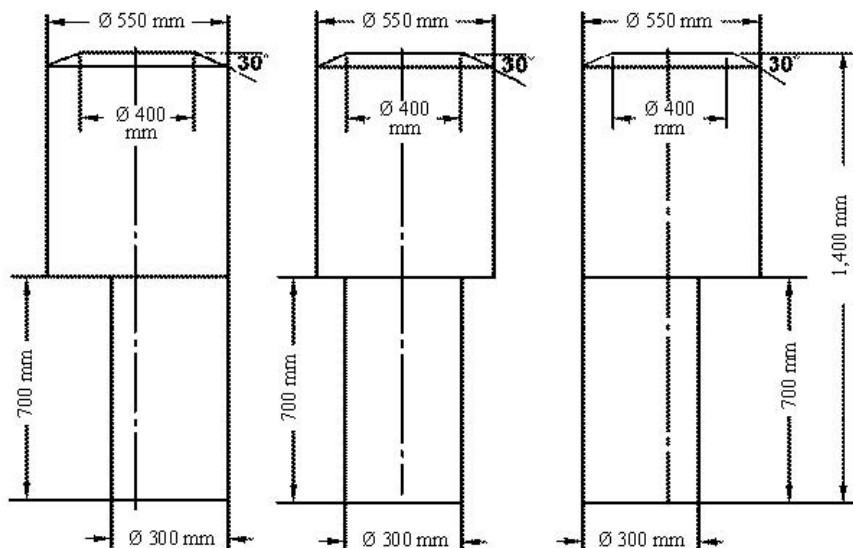
ECE Regulation 107.05

Paragraph	Requirement	Complies (Yes, No, N/A)
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Ann 3 7.7.2 ACCESS TO EMERGENCY DOORS

Ann 3 7.7.2.1	Free space between gangway and emergency door apertures permits movement of specified gauges	N/A
Ann 3 7.7.2.4	As an alternative to the dual cylinder, the gauging device described in paragraph 7.7.5.1. may be used (see Annex 4, Figure 6).	N/A

Figure 5 ACCESS TO EMERGENCY DOORS (see Annex 3, paragraph 7.7.2.)



7.7.3	ACCESS TO EMERGENCY WINDOWS	
Ann 3 7.7.3.1	Test gauge can be moved from gangway to exterior of vehicle through every emergency window	Yes
Ann 3 7.7.3.2	Test gauge moved in probable direction of evacuation and kept perpendicular to direction of movement	Yes

Ann 3 7.7.4 ACCESS TO ESCAPE HATCHES

Ann 3 7.7.4.1.1	Specified pyramid contacts escape hatches in the roof and part of seat or other support	Yes
Ann 3 7.7.4.1.1	NOTE: CAN NOT BE A REMOVABLE SEAT OR WHEELCHAIR	

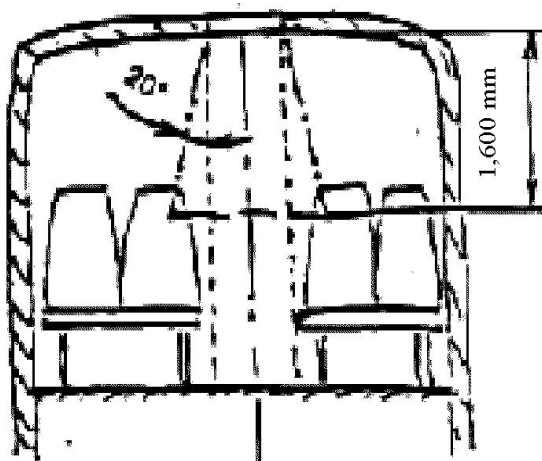


TEST REPORT: BUS CONSTRUCTION

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Paragraph	Requirement	Complies (Yes, No, N/A)
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Figure 26 ROOF ESCAPE HATCH ACCESS (see Annex 3, paragraph 7.7.4.1.1.)



Ann 3 7.7.4.2	Escape hatches in the floor	N/A
------------------	-----------------------------	-----

	All heat sources and movable components are at least 500mm from any part of the floor aperture	N/A
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	Test gauge can be moved from height of 1m above the floor to the ground outside the vehicle through escape hatches in the floor	N/A
--	---	-----

Ann 3
7.7.5

GANGWAYS Figure 6 GANGWAY MANNEQUIN.

Ann 3 7.7.5.1	Test gauge can be moved freely along gangways	Yes
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	In vehicles of Class 1 and A, the test gauge does not contact any monitor or display device mounted from the ceiling above the gangway	N/A
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	In vehicles of Class 2, 3 and B the test gauge may contact a monitor or display device provided the maximum force necessary to move any such device out of the way does not exceed 20 N.	N/A
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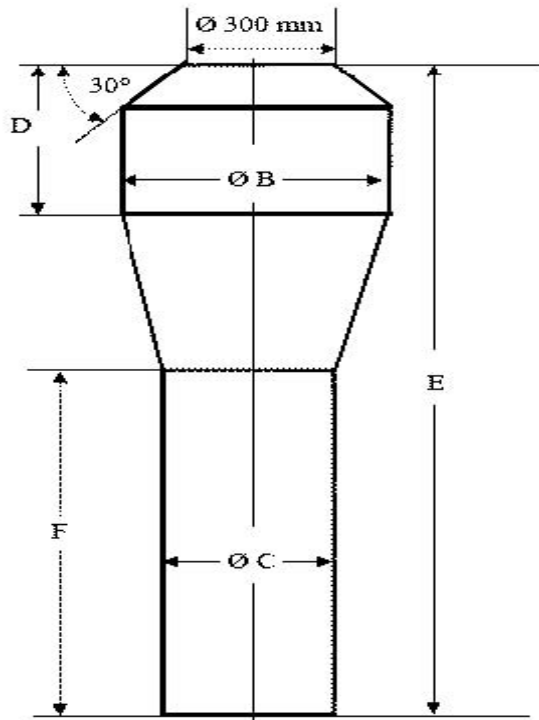
	After applying the 20 N force, the device remains in the retracted position	N/A
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TEST REPORT: BUS CONSTRUCTION

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Paragraph	Requirement	Complies (Yes, No, N/A)
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Single Deck

Class	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)
A	550	350	500 4/	1,900 4/	900
B	450	300	300	1,500	900
I	550	450 3/	500 4/	1,900 4/	900
II	550	350	500 4/	1,900 4/	900
II	450	300 2/	500 4/	1,900 4/ 5/	900 5/

Double Deck

		B (mm)	C (mm)	D (mm)	E (mm)	F (mm)
I	LD	550	450 3/	500	1,800 1/	1,020 1/
	UD	550	450 3/	500	1,680	900
II	LD	550	350	500	1,800 1/	1,020 1/
	UD	550	350	500	1,680	900
III	LD	450	300 2/	500	1,800 1/	1,020 1/
	UD	450	300 2/	500	1,680	900



TEST REPORT: BUS CONSTRUCTION

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Paragraph	Requirement	Complies (Yes, No, N/A)
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<i>Ann 3</i> 7.7.5.1.1	If there is no exit forward of a seat or row of seats, test gauge can be moved according to defined specifications	N/A
<i>Ann 3</i> 7.7.5.3	For Class III vehicles with laterally sliding seats, gangway may be reduced, subject to operation of controls of seats allowing movement to give gangway minimum of 300mm	N/A
<i>Ann 3</i> 7.7.5.4	Test gauge can be moved freely through articulated section of articulated vehicle	N/A
	No projection of any parts into gangway in articulated section	N/A
<i>Ann 3</i> 7.7.5.5	For steps fitted in gangway, width of steps not less than width of gangway at top of steps	N/A
<i>Ann 3</i> 7.7.5.6	No folding seats fitted in gangway	Yes
<i>Ann 3</i> 7.7.5.7	No laterally sliding seats which encroach in gangway	Yes
7.7.5.8	In the case of vehicles to which paragraph 7.7.1.9. applies, a gangway shall not be necessary provided the access dimensions specified in that paragraph are respected.	N/A
<i>Ann 3</i> 7.7.5.9	Surface of gangways and access passages covered in slip resistant material	Yes
<i>Ann 3</i> 7.7.6	Slope of gangways do not exceed maximums specified 8 per cent in the case of a vehicle of Class I, II or A, or 12.5 per cent in the case of a vehicle of Class III and B, and In the transversal direction, 5 per cent for all classes.	Yes

Ann 3 7.7.7 **STEPS**

<i>Ann 3</i> 7.7.7.1	All steps meet dimensional requirements	Yes
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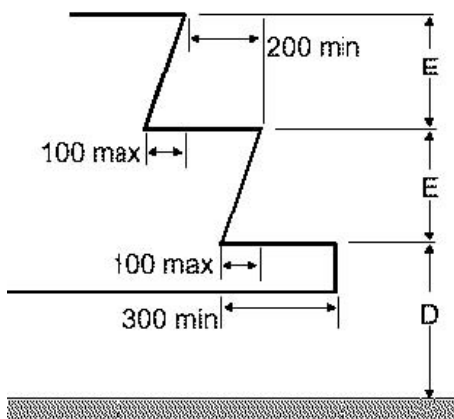
Figure 8 STEPS FOR PASSENGERS



TEST REPORT: BUS CONSTRUCTION

ECE Regulation 107.05

Paragraph	Requirement	Complies (Yes, No, N/A)
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Classes			
First step from ground "D"	Max. height (mm)	340 <u>1/</u>	380 <u>1/ 2/ 5/</u>
	Min. depth (mm)	300 <u>*/</u>	
Other steps "E"	Max. height (mm)	250 <u>3/</u>	350 <u>4/</u>
	Min. height (mm)	120	
	Min. depth (mm)	200	

*/ 230 mm for vehicles having a capacity not exceeding 22 passengers.

1/ **700 mm in the case of an emergency door.** 1,500 mm in the case of an emergency door in the upper deck of a double-deck vehicle. 850 mm maximum in the case of an emergency door in the lower deck of a double-deck vehicle.

2/ 430 mm in the case of a vehicle with solely mechanical suspension.

3/ 300 mm in the case of steps at a door behind the rearmost axle.

4/ 250 mm in gangways for vehicles having a capacity not exceeding 22 passengers.

5/ For at least one service door; 400 mm for other service doors.

<i>Ann 3</i> 7.7.7.4	Any vertical projections of one step over another step meet dimensional requirements	Yes
	All step nosings designed to minimise risk of tripping and are in contrasting colour	Yes
<i>Ann 3</i> 7.7.7.5	Area of steps allows prescribed rectangle to be placed onto the step with no more than 5% overhang	Yes
<i>Ann 3</i> 7.7.7.6	Steps fitted with slip resistant surface	Yes



TEST REPORT: BUS CONSTRUCTION

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Paragraph	Requirement	Complies (Yes, No, N/A)
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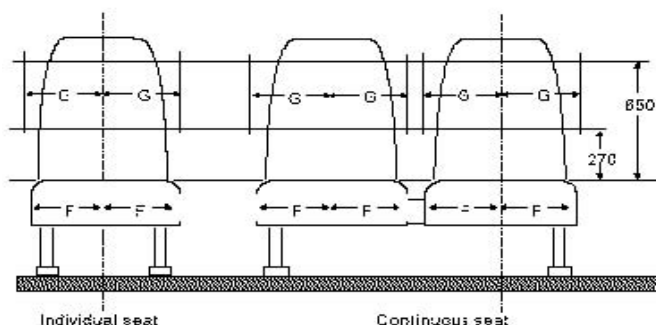
Ann 3 7.7.7.7	Slope of steps does not exceed 5% in any direction	Yes
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Ann 3 7.7.8

PASSENGER SEATS AND SPACE FOR SEATED PASSENGERS

Ann 3 7.7.8.1.1	Minimum width of all passenger seat cushions exceeds 400mm (Class A,B, I and II) or 450mm (Class III)	Yes
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Figure 9 WIDTH OF PASSENGER SEATS



	G (mm) minimum	
F (mm) min	Continuous seats	Individual seats
200 * / (225mm if class 3)	225	250

Ann 3 7.7.8.1.2	Width of available space, measured between 270mm and 650mm above seat cushion, exceeds minimum specified	Yes
--------------------	--	-----

Ann 3 7.7.8.1.3	Derogation on available width applied in case of vehicles less than 2.35m	N/A
--------------------	---	-----

7.7.8.1.4	For vehicles having a capacity not exceeding 22 passengers, in the case of seats adjacent to the wall of the vehicle, the available space does not include, in its upper part, a triangular area 20 mm wide by 100 mm high (see Annex 4, figure 10). In addition, the space needed for safety belts and their anchorages and for the sun visor should be considered as exempted	Yes
-----------	--	-----

Ann 3 7.7.8.1.5	In measuring the gangway width, no account shall be taken of whether or not the available space defined above protrudes into the gangway.	Yes
--------------------	---	-----

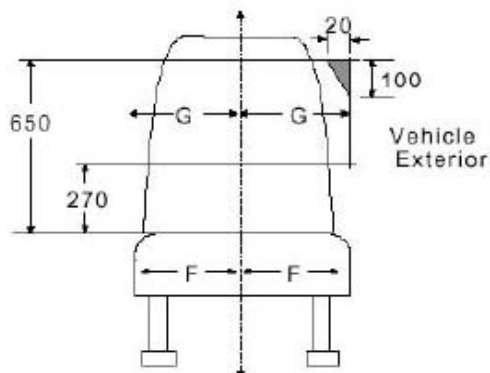


TEST REPORT: BUS CONSTRUCTION

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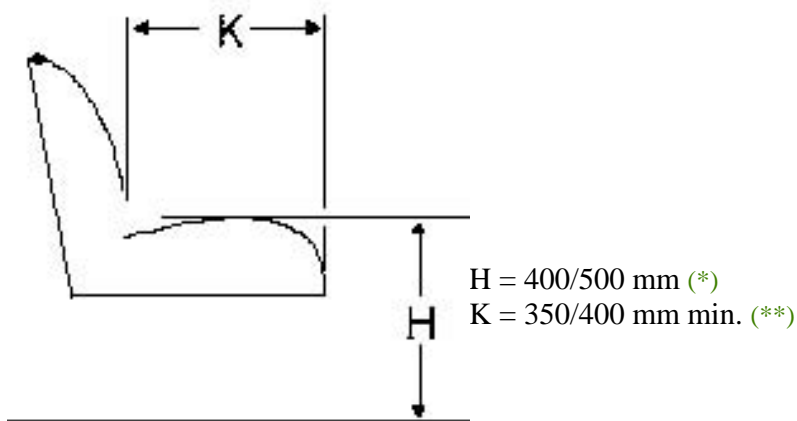
Paragraph	Requirement	Complies (Yes, No, N/A)
-----------	-------------	----------------------------

Figure 10 PERMITTED INTRUSION AT SHOULDER HEIGHT



Ann 3 7.7.8.2	Depth of seat cushions exceed minimums specified	Yes
------------------	--	-----

Figure 11a SEAT-CUSHION DEPTH AND HEIGHT



Ann 3 7.7.8.3	Height of uncompressed seat cushions above the floor between 400mm and 500mm	Yes
------------------	--	-----

	Height of uncompressed seat cushions above the floor not less than 350mm at wheel arches and engine compartment.	Yes
--	--	-----

Ann 3 7.7.8.4.1	Distance between seat backs not less than 650mm (Class I, A and B) or 680mm (Classes II and III) at heights specified	Yes
--------------------	---	-----

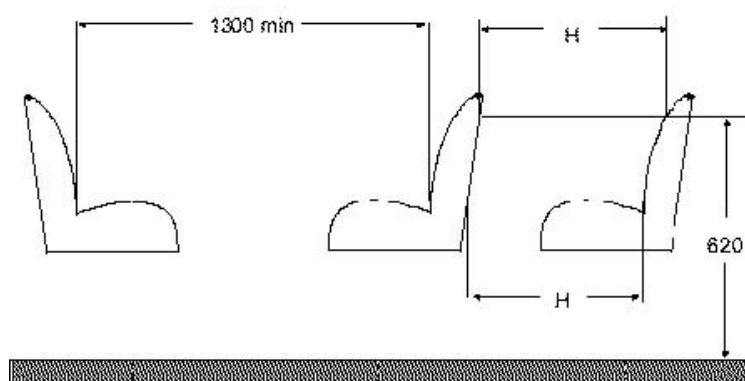


TEST REPORT: BUS CONSTRUCTION

ECE Regulation 107.05

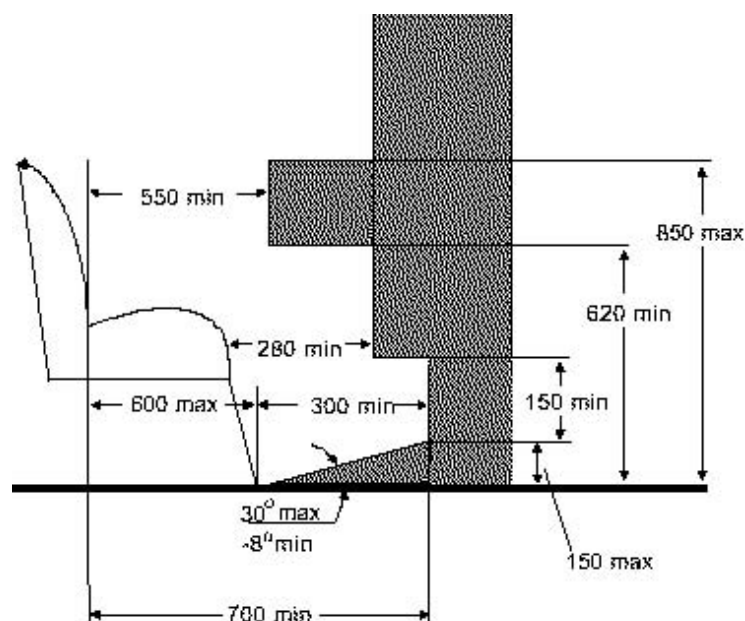
Paragraph	Requirement	Complies (Yes, No, N/A)
-----------	-------------	----------------------------

Figure 12 SEAT SPACING



Ann 3 7.7.8.4.3	Distance between face to face seats not less than 1300mm -	N/A
Ann 3 7.7.8.5.1	Specified minimum clear space in front of each passenger seat (Annex 4, figure 13)	N/A

Figure 13 SPACE FOR SEATED PASSENGERS BEHIND A PARTITION OR OTHER RIGID STRUCTURE OTHER THAN A SEAT





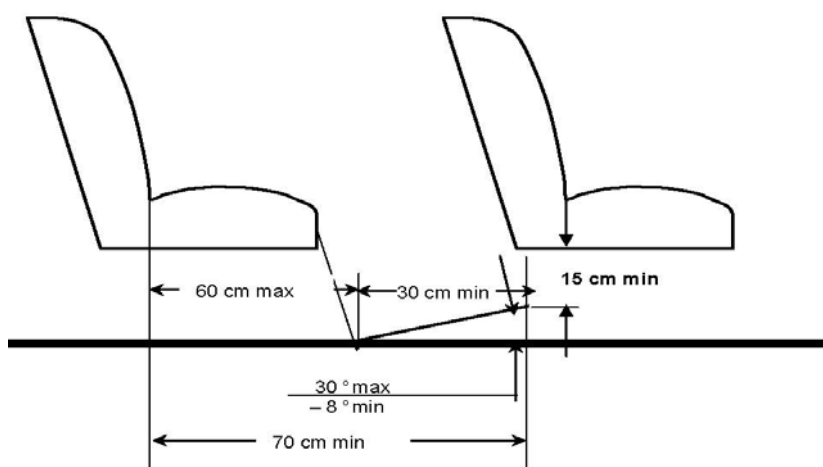
TEST REPORT: BUS CONSTRUCTION

ECE Regulation 107.05

Paragraph	Requirement	Complies (Yes, No, N/A)
-----------	-------------	----------------------------

Ann 3 7.7.8.5.2	For a seat behind a seat and/or facing the gangway, minimum clear foot space is provided (Annex 4, figure 11b)	Yes
--------------------	--	-----

Figure 11b SPACE FOR FEET OF SEATED PASSENGERS BEHIND A SEAT OR AT A SEAT FACING THE GANGWAY



Ann 3 7.7.8.5.3	The minimum number of priority seats complying with the requirements of Annex 8, paragraph 3.2. Shall be four in Class I, two in Class II and one in Class A. A seat that folds out of the way when not in use shall not be designated as a priority seat	N/A
Ann 3 7.7.8.5.3	Folding seats are not designated as priority seats and meet requirements of Annex 8, para 3.2	N/A

Figure 14 PERMITTED INTRUSION INTO SPACE ABOVE SEAT

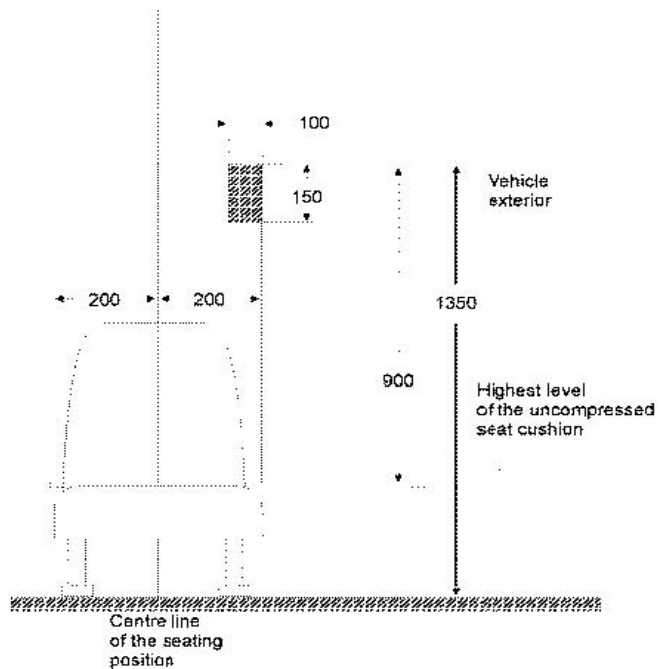
(see Annex 3, paragraph 7.7.8.6.3.1.)



TEST REPORT: BUS CONSTRUCTION

ECE Regulation 107.05

Paragraph	Requirement	Complies (Yes, No, N/A)
-----------	-------------	----------------------------



Ann 3 7.7.8.6	Free height over seating position and associated foot space, extending over defined area meets requirements	Yes
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TEST REPORT: BUS CONSTRUCTION

ECE Regulation 107.05

Paragraph	Requirement	Complies (Yes, No, N/A)
-----------	-------------	----------------------------

Figure 15 PERMITTED INTRUSION ABOVE A SEATING POSITION
(see Annex 3, paragraph 7.7.8.6.3.2.)

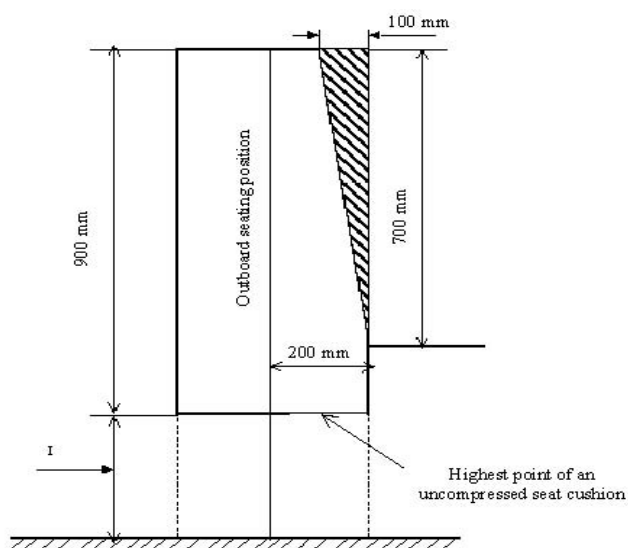
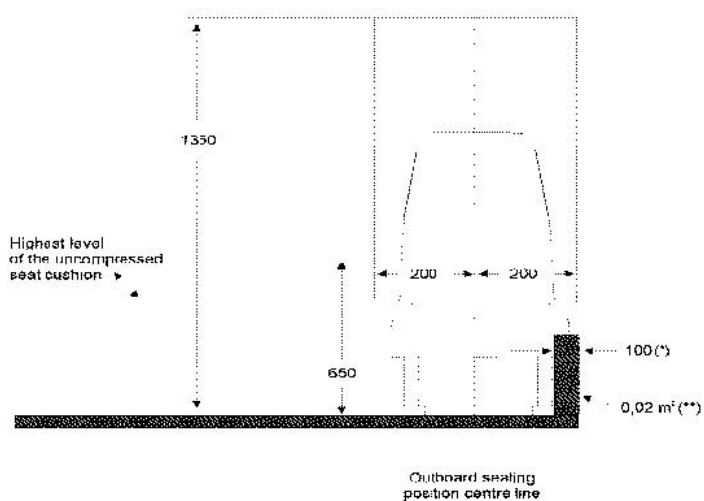


Figure 16 PERMITTED INTRUSION IN LOWER PART OF PASSENGER SPACE
(see Annex 3, paragraph 7.7.8.6.3.3.)





TEST REPORT: BUS CONSTRUCTION

ECE Regulation 107.05

Paragraph	Requirement	Complies (Yes, No, N/A)
-----------	-------------	----------------------------

Figure 17 PERMITTED INTRUSION AT REAR CORNER SEATS

View of the prescribed area of the seat (two side seats at the rear) (see Annex 3, paragraph 7.7.8.6.3.4.)

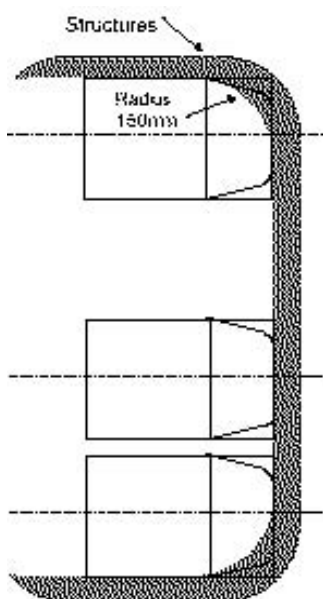
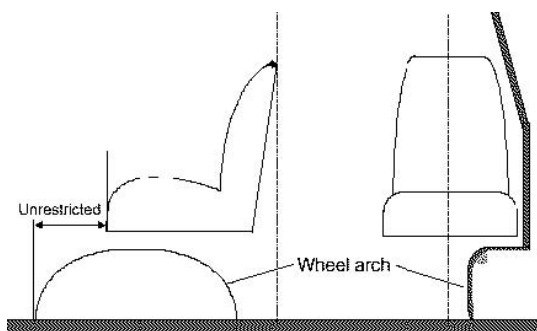


Figure 18 PERMITTED INTRUSION OF A WHEEL ARCH NOT EXTENDING BEYOND THE VERTICAL CENTRE LINE OF THE SIDE SEAT

(see Annex 3, paragraph 7.7.8.6.4.2.1.)



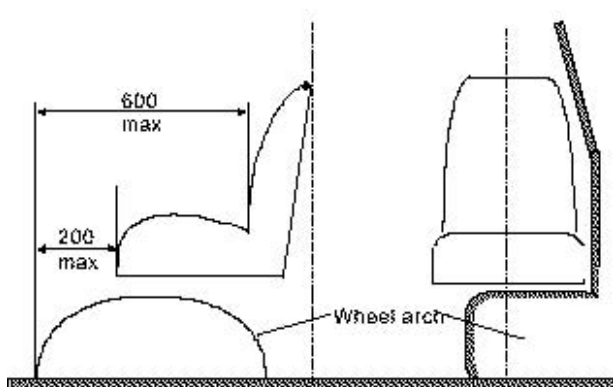


TEST REPORT: BUS CONSTRUCTION

ECE Regulation 107.05

Paragraph	Requirement	Complies (Yes, No, N/A)
-----------	-------------	----------------------------

Figure 19 PERMITTED INTRUSION OF A WHEEL ARCH EXTENDING BEYOND THE VERTICAL CENTRE LINE OF THE SIDE SEAT
(see Annex 3, paragraph 7.7.8.6.4.2.2.)



Ann 3 7.7.9 COMMUNICATION WITH DRIVER

Ann 3 7.7.9.1	Communication controls have protruding buttons and are no more than 1500mm from the floor (Class I, II & A only), and are colour contrasting	N/A
	Controls are distributed adequately and evenly throughout vehicle	N/A
	Activation of control illuminates signs on each deck and they remain illuminated until service door opens	N/A
Ann 3 7.7.9.2	If crew compartment is fitted without access to driver or passenger compartments, means of communication provided	N/A
Ann 3 7.7.9.3	Toilet compartments are fitted with a means of summoning assistance in an emergency	N/A

Ann 3 7.7.10 HOT DRINK MACHINES AND COOKING EQUIPMENT

Ann 3 7.7.10.1	Machines and equipment installed such that no hot drinks/food is likely to be spilled on passengers	N/A
Ann 3 7.7.10.2	If drinks/food equipment is fitted, all passenger seats have provision for setting drinks/food down whilst vehicle is in motion	N/A



TEST REPORT: BUS CONSTRUCTION

ECE Regulation 107.05

Paragraph	Requirement	Complies (Yes, No, N/A)
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Ann 3
7.7.11

DOORS TO INTERIOR COMPARTMENTS

All doors to toilets or other interior compartments:

Ann 3 7.7.11.1	Are self-closing and cannot be held open if it could obstruct passengers in an emergency	N/A
Ann 3 7.7.11.2	Do not conceal handles, controls, markings for service and emergency doors, emergency exits, fire extinguisher or first aid kit	N/A
Ann 3 7.7.11.3	Can be opened from the outside in an emergency	N/A
Ann 3 7.7.11.4	Cannot be locked from the outside unless it can be opened from the inside	N/A

Ann 3
7.7.12

INTERCOMMUNICATION STAIRCASES

Ann 3 7.7.12.1	Minimum width allows the free passage of the single door access template from the lower deck to the upper deck	N/A
Ann 3 7.7.12.2	Staircase is designed so that during heavy braking in the forward direction, there is no danger of a passenger being projected downwards. This is satisfied if at least 1 of the following is satisfied:	N/A
Ann 3 7.7.12.2.1	No part of the staircase is forward descending	N/A
Ann 3 7.7.12.2.2	Staircase is equipped with guards	N/A
Ann 3 7.7.12.2.3	There is an automatic device in the upper part which prevents the staircase being used whilst the vehicle is in motion	N/A
Ann 3 7.7.12.3	Access conditions using the gangway devices are adequate	N/A

Ann 3
7.7.13

DRIVERS COMPARTMENT

Ann 3 7.7.13.1	The driver shall be protected from standing passengers and from passengers seated immediately behind the driver's compartment if:	
Ann 3 7.7.13.1.1.	The rear of the driver's compartment is enclosed by a partition	N/A

OR

Ann 3 7.7.13.1.2	In the case of passenger seats located immediately behind the driver's compartment either a guard or, in the case of a vehicle of Class A or B,	Yes – seat belts fitted
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TEST REPORT: BUS CONSTRUCTION

ECE Regulation 107.05

Paragraph	Requirement	Complies (Yes, No, N/A)
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	a safety-belt is fitted. Where fitted, a guard shall comply with the requirements specified in paragraphs 7.7.13.1.2.1. to 7.7.13.1.2.3.	
--	--	--

<i>Ann 3</i> 7.7.13.1.2.1	The minimum height of the guard measured from the floor on which the passenger's feet rest shall be 800 mm	N/A
------------------------------	--	------------

<i>Ann 3</i> 7.7.13.1.2.2	The width of the guard shall extend inwards from the wall of the vehicle at least as far as 100 mm beyond the longitudinal centre line of the innermost relevant passenger seat, but in any case shall extend at least as far as the innermost point of the driver's seat.	N/A
------------------------------	--	------------

<i>Ann 3</i> 7.7.13.1.2.3.	The distance between the uppermost edge of an area destined to hold any object (e.g. a table) and the uppermost edge of a guard shall be at least 90 mm	N/A
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<i>Ann 3</i> 7.7.13.2	The driver's compartment shall be protected from objects liable to roll into it from the passenger area immediately behind the compartment in the case of heavy braking. This requirement shall be deemed to be satisfied when a ball of 50 mm diameter cannot roll into the driver's compartment from the passenger area immediately behind the compartment.	Yes
--------------------------	---	------------

<i>Ann 3</i> 7.7.13.3	The driver shall be protected from the sun and from the effects of glare and reflections caused by artificial interior lighting. Any lighting likely to affect adversely and significantly the driver's vision shall be capable of being operated only while the vehicle is at rest.	Yes
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<i>Ann 3</i> 7.7.13.4	The vehicle shall be provided with devices allowing defrosting and demisting of the windscreen	Yes
--------------------------	--	------------

Ann 3
Section
7.7.14.

DRIVER'S SEAT

7.7.14.1	The driver's seat shall be independent of other seats.	Yes
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<i>Ann 3</i> 7.7.14.2	The seat back shall either be curved or the driver's area shall be provided with armrests positioned in such a way that the driver is neither constrained during vehicle manoeuvring operations, nor becomes unbalanced by transverse accelerations which can occur in service.	Yes
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<i>Ann 3</i> 7.7.14.3	The minimum width of the seat cushion, (dimension F, see annex 4, figure 9) measured from a vertical plane passing through the centre of the seat, shall be:	
--------------------------	--	--

<i>Ann 3</i> 7.7.14.3.1	200 mm in the case of Class A or B	Yes
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TEST REPORT: BUS CONSTRUCTION

ECE Regulation 107.05

Paragraph	Requirement	Complies (Yes, No, N/A)
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Ann 3 7.7.14.3.2	225 mm in the case of Class I, II or III.	N/A
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Ann 3 7.7.14.4	The minimum depth of the seat cushion, (dimension K, see annex 4, figure 11a) measured from a vertical plane passing through the centre of the seat, shall be:	
-------------------	--	--

Ann 3 7.7.14.4.1.	350 mm in the case of Class A or B	Yes
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Ann 3 7.7.14.4.2	400 mm in the case of Class I, II or III	N/A
---------------------	--	-----

Ann 3 7.7.14.5	The minimum overall width of the seat back measured up to a height of 250 mm above the horizontal plane tangential to the uppermost surface of the uncompressed seat cushion shall be 450 mm.	Yes
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Ann 3 7.7.14.6	The distance between armrests shall ensure a free space for the driver, as defined in paragraph 7.7.14.2., of not less than 450 mm.	Yes
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Ann 3 7.7.14.7	The seat shall be adjustable in its longitudinal and vertical positions and in its seat back inclination. It shall lock automatically in the selected position and, if fitted with a swivelling mechanism, it shall lock automatically when in the driving position. The seat shall be equipped with a suspension system	Yes
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Ann 3 7.7.14.7.1	The suspension system and the vertical position adjustment are not mandatory for vehicle of Class A or B.	Yes
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Ann 3
7.8

ARTIFICIAL LIGHTING

Ann 3
7.8.1

Internal electric lighting provided for:

Ann 3 7.8.1.1	All passenger, crew and toilet compartments and articulated section	Yes
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Ann 3 7.8.1.2	All steps	Yes
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Ann 3 7.8.1.3	Access to any exits and the area around the service doors	Yes
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Ann 3 7.8.1.4	Internal markings and controls of all exits	Yes
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TEST REPORT: BUS CONSTRUCTION

ECE Regulation 107.05

Paragraph	Requirement	Complies (Yes, No, N/A)
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<i>Ann 3</i> 7.8.1.5	All places where there are obstacles	N/A
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<i>Ann 3</i> 7.8.1.6	In the case of double-deck vehicles without a roof, at least 1 lighting device provided as near as practical to the top of every staircase	N/A
-------------------------	--	-----

<i>Ann 3</i> 7.8.2	Two separate internal lighting circuits installed such that failure of one does not affect the other	Yes
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<i>Ann 3</i> 7.8.4	Individual lights for each of the items in paragraph 7.8.1. are not required providing adequate illumination can be maintained during normal use.	Yes
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<i>Ann 3</i> 7.8.5	Control of mandatory lighting under the control of the driver or automatically controlled	Yes
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Ann 3 7.9 **ARTICULATED SECTION OF ARTICULATED VEHICLES**

<i>Ann 3</i> 7.9.1	Articulated section allows at least one rotary movement about at least one horizontal axis and at least one vertical axis	N/A
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<i>Ann 3</i> 7.9.2	When articulated vehicle is on a horizontal level surface, there is no uncovered gap between the floor of either section and the floor of the rotating base exceeding:	
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<i>Ann 3</i> 7.9.2.1	10mm when all wheels of the vehicle are on the same plane	N/A
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<i>Ann 3</i> 7.9.2.2	20mm when one axle next to the articulated section is raised 150mm	N/A
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<i>Ann 3</i> 7.9.3	Difference in level between floor of rigid portions and rotating base measured at the joint does not exceed	N/A
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<i>Ann 3</i> 7.9.3.1	20mm when all wheels of vehicle are on the same plane	N/A
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<i>Ann 3</i> 7.9.3.2	30mm when one axle next to the articulated section is raised 150mm	N/A
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<i>Ann 3</i> 7.9.4	Physical means to prevent passengers from entering non-compliant or dangerous areas	N/A
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Ann 3 7.10 **DIRECTION HOLDING OF ARTICULATED VEHICLES**



TEST REPORT: BUS CONSTRUCTION

ECE Regulation 107.05

Paragraph	Requirement	Complies (Yes, No, N/A)
-----------	-------------	----------------------------

	Sides of rigid sections of vehicle coincide and form a continuous plane without any deflection	N/A
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Ann 3
7.11

HANDRAILS AND HANDHOLDS

<i>Ann 3</i> <i>7.11.1.1</i> <i>Ann 3</i> <i>7.11.1.2</i>	Handrails and handholds are of adequate strength and present no risk of injury to passengers	Yes
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<i>Ann 3</i> <i>7.11.1.3</i>	Every handrail meets dimensional requirements	Yes
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<i>Ann 3</i> <i>7.11.1.4</i>	Clearance between handrails and vehicle body or wall meets requirements	Yes
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<i>Ann 3</i> <i>7.11.1.5</i>	All surfaces are colour contrasting and slip-resistant	Yes
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Ann 3
7.11.2

HANDRAILS FOR STANDING PASSENGERS

<i>Ann 3</i> <i>7.11.2.1</i>	Handrails/handholds provided in sufficient numbers	N/A
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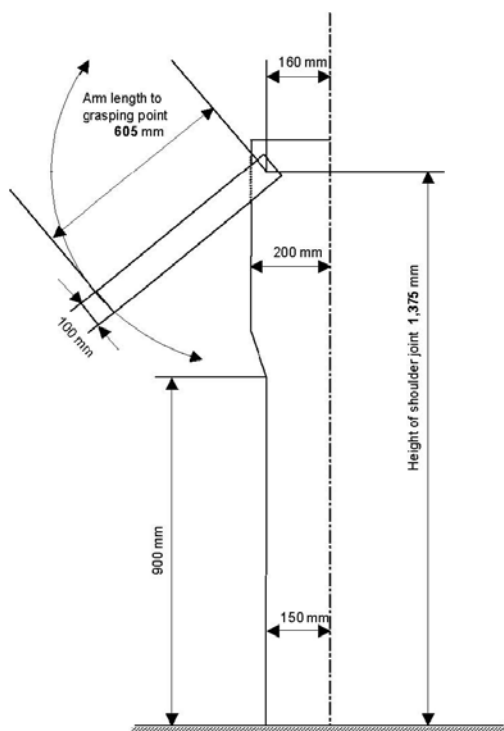
Figure 20 TESTING DEVICE FOR SITING OF HANDHOLDS



TEST REPORT: BUS CONSTRUCTION

ECE Regulation 107.05

Paragraph	Requirement	Complies (Yes, No, N/A)
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Ann 3 7.11.2.1 Ann 3 7.11.2.2	Testing device can contact at least two handrails/handholds and contact point between 800mm and 1950mm above the floor	N/A
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Ann 3 7.11.2.3	For standing passengers, at least one handrail is less than 1500mm above the level of the floor	N/A
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Ann 3 7.11.2.4	Standing areas adjacent to vehicle side or rear walls are provided with horizontal handrails at a height between 800mm and 1500mm above the floor	N/A
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Ann 3
7.11.3

HANDRAILS FOR SERVICE DOORS

Ann 3 7.11.3.1	Door apertures fitted with handrails on each side	Yes
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Ann 3 7.11.3.2	Handrails provided for service doors which meet dimensional requirements	Yes
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TEST REPORT: BUS CONSTRUCTION

ECE Regulation 107.05

Paragraph	Requirement	Complies (Yes, No, N/A)
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HANDRAILS FOR INTERCOMMUNICATION STAIRCASES

Ann 3 7.11.5.1	Handrails provided on each side of all staircases at a height of between 800mm and 1100mm	N/A
Ann 3 7.11.5.2	Handrails provided for which meet dimensional requirements	N/A

GUARDING OF STEP WELLS AND EXPOSED SEATS

Ann 3 7.12.1	Any guard needed to protect step wells meets dimensional requirements In the case of class A or B vehicle a safety belt shall be fitted where any seated passenger is likely to be thrown forward into a step well as a result of heavy braking	Yes
Ann 3 7.12.2	On the upper deck of double-deck vehicles, the intercommunication staircase wells have enclosed guard which meets minimum dimensions	N/A
Ann 3 7.12.3	Front windscreen ahead of passengers at the front of the upper deck provided with padded guard at a height between 800mm and 900mm above the floor	N/A
Ann 3 7.12.4	Riser of each step in a staircase is closed	N/A

Ann 3
7.13

BAGGAGE RACKS AND OCCUPANT PROTECTION

	Vehicle occupants protected from objects liable to fall from luggage racks	Yes
	Baggage compartments designed to prevent baggage from falling under sudden braking	Yes

Ann 3
7.14

TRAP DOORS

Ann 3 7.14.1	Trap doors are fitted and secured so that it cannot be opened without the use of tools or keys	N/A
Ann 3 7.14.1	Projection not more than 8mm above floor level and edges are rounded	N/A



TEST REPORT: BUS CONSTRUCTION

ECE Regulation 107.05

Paragraph	Requirement	Complies (Yes, No, N/A)
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*Ann 3
7.15*

VISUAL ENTERTAINMENT

<i>Ann 3 7.15.1</i>	All forms of visual entertainment located outside the driver's view	N/A
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*Ann 3
7.16*

TROLLEYBUSES

<i>Ann 3 7.16.1</i>	Trolleybuses meet the requirements of Annex 12	N/A
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*Ann 3
7.17*

VEHICLES WITHOUT A ROOF

<i>Ann 3 7.17.1</i>	Vehicle equipped with continuous front panel over the full width with a minimum height of at least 1400mm	N/A
<i>Ann 3 7.17.2</i>	Continuous protection around the side and rear provided that meets dimensional requirements	N/A
<i>Ann 3 7.18</i>	Visual aid for monitoring of passengers and intercommunication system provided	N/A

Ann 8

MOBILITY ANNEX

Not applicable to this vehicle.



TEST REPORT: STABILITY OF BUSES

Report/Job Number: ESN269730-Tilt

Page 1 of 6

TEST DETAILS

Subject	STABILITY OF BUSES
EC Directive	2001/85/EC
ECE Regulation	107 up to and including the 03 series of amendments
Location of Test	MIRA Proving Ground, UK
Date of Test	15 July 2013
VCA Representative	Gareth Jones
Manufacturer's Representative	Peter Niemeier
Reason for Test	New approval

MANUFACTURER DETAILS

Manufacturer's Name	a) Ford Werke GmbH b) Ford Otomotiv Sanayi A.S
Manufacturer's Address	a) 50725, Köln, Germany b) Alpina Mah. Hasan Basri Cad. No. 2, Sancaktepe 34885, Turkey
Model Type & description	R107-FD (Ford Transit V363)
Category	M2 Class B

CONCLUSION

The above mentioned vehicle was tested in accordance with the above legislation and was found to comply in all respects

Signature:

Name: Gareth Jones
Position: Chief Engineer
Date: 25 October 2013

LIST OF ANNEXES

ANNEX	No of PAGES	SUBJECT
1		
2		
3		
4		

TEST REPORT: STABILITY OF BUSES

Paragraph	Parameter	Complies
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Details of Vehicle

V363 Ford Transit – LWB EF (extended frame)

Chassis No WFODXXTTFDCC99964

Engine Make: Ford Type: 2.2/ diesel (Puma) No of Cylinders: 4

Overall Length (mm): 6703 Overall Width (mm): 2084 Wheelbase (mm): 3750

Height (mm): 2749 Front Overhang: 1023 mm Rear Overhang: 1930 mm

Height of deck from ground (mm): 709

Weight (kg) Fully Laden: 4600 MIRO: 3257 As tested: 4619

	1 st Axle	2 nd Axle	3 rd Axle
Mass in running order means the mass of the unladen vehicle with bodywork, and with coupling device in the case of a towing vehicle, (including coolant, oils, 90 % fuel, 100 % other liquids except used waters, tools, spare wheel and driver (75 kg), and, for buses and coaches, the mass of the crew member (75 kg) if there is a crew seat in the vehicle).	1464	1793	
Laden Mass means the mass in running order plus passenger weight (Q) for Classes I and A 68kg, Class II 71kg, Classes III and B 71kg, shall be placed on each seat. If the vehicle is intended for standees or with a crew member who is not seated, the centre of gravity of the loads Q or 75	1433	3186	

TEST REPORT: STABILITY OF BUSES

Paragraph	Parameter		Complies
	kg representing them, shall be uniformly distributed over the standee or crew area respectively, at a height of 875 mm. Plus for luggage carried on a roof rack any weight declared by the manufacturer, must exert a specific load of not less than 75 kg/m ² over the whole surface area of the roof equipped for the carriage of baggage. For wheelchair users the mass is 250kg at a height of 500mm.		
Track (mm) Between Tyre Centres	1728	1642	
Tyre Size and Indices Use Suffix (T) if Twin Tyres	195/75 R16	195/75 R16 (T)	
Suspension	Front – Coil/Strut	Rear - LEAF	
Shock Absorber Type	Gas Damper	Gas Damper	
Stabilisers/Anti-Roll (Diameter)	21 mm	31.8 mm	
Leaf - Spring Centre (transverse) (mm) Spring - Width of leaves - O/S (mm) - N/S (mm) - Number of leaves - O/S (mm) - N/S (mm) - 1 – Rating - (kg) - 3 – Rating - (kg)	____ N/A ____ N/A N/A N/A N/A	_____ 79.2 3 65 (N/mm) 140 (N/mm)	

	1 st Axle	2 nd Axle	3 rd Axle
Coil - Centre (transverse) (mm)	_____ 370	N/A	N/A
Springs - Dimensions (mm) - Rating (mm)	55	N/A	N/A
Air - Centre (mm) Bags - Rating (mm)	N/A	N/A	N/A

TEST REPORT: STABILITY OF BUSES

Paragraph	Parameter	Complies
Other Types and/or helpers (e.g. Aeons) <ul style="list-style-type: none"> - Make and type - Centres (transverse) (mm) - Dimensions (mm) - Ratings (kg) 		
N/A		
N/A		
N/A		
Suspension Trim Height (mm)	<u>left</u> <u>right</u>	<u>left</u> <u>right</u>
Measured vertically between wheel centre and underside of wheel arch. (Unladen Vehicle)	461	486

3 Seating/Standee Plans.

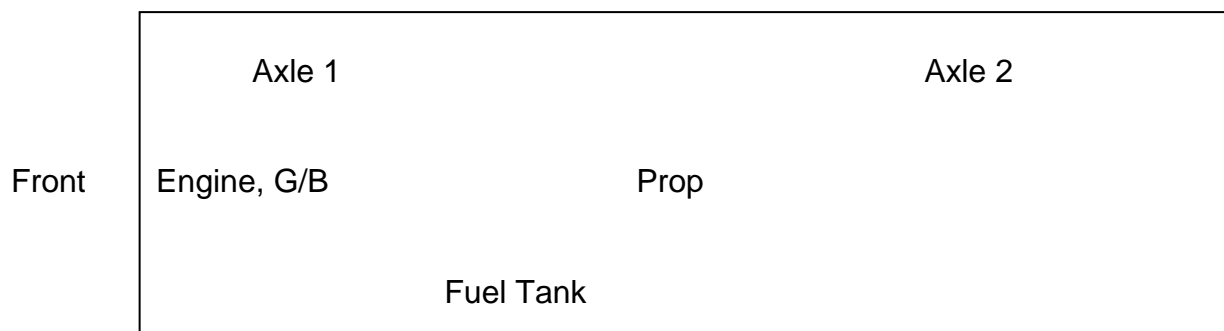
Lower Deck : Passenger seats: Driver plus 17 passengers Standing: 0

Front	Pass	1xP	1xP	1xP	
	Pass				4xP
		2xP	2xP	2xP	2xP
	Driver				

TEST REPORT: STABILITY OF BUSES

Paragraph	Parameter	Complies
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4 Chassis plan : Indicate position of engine, gearbox, axles, spare wheel(s), retarder, fuel tanks, waste tanks, battery(s) and luggage compartments wherever possible. See section 4.5.3.4.5 Paragraph 3 (g) for list of codes.



5) Report of Stability Test

Note

a) *The height of any step used to prevent a wheel of the vehicle from slipping sideways on a tilt test rig shall not be greater than two-thirds of the distance between the surface upon which the vehicle stands before it is tilted and that part of the rim of that wheel which is nearest to the surface when the vehicle is loaded.*

b) *During the test, no parts of the vehicle which are not intended to come into contact in normal use shall do so, nor shall any part become damaged or displaced.*

a) Successful Tilt @ 28 degree:	a) Body angle	Left: 30.4	Right: 30.2
	b) Wheel off Platform	Left: 33.3	Right: 35.0

Other Comments: -

TEST REPORT: STABILITY OF BUSES

Paragraph	Parameter	Complies
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6 Remarks

Include here details of any feature(s) of the vehicle (as tested) which could affect its stability and/or assist in future identification of type.
E.g. roof luggage rack, fuel tanks, air con, and any other special equipment, noting its size, position and loading.

FEATURES AFFECTING TILT PERFORMANCE

	YES	NO	COMMENTS
DOUBLE GLAZING		X	
SUSPENSION DUMP VALVES		X	
RETARDER		X	
NUMBER OF CREW SEATS		X	
AIR CONDITIONING (including its location on the vehicle)		X	Mass of aircon simulated with extra roof load of 115kg
ALLOY WHEELS		X	
COMBUSTION HEATER		X	
TV MONITORS		X	
SPARE WHEEL	X		
LOAD FOR ADDITIONAL SEATS	X		Extra load of 90kg for middle crew seat and passenger is added to roof as worst-case.
BALLAST		X	
OTHER		X	

INSTRUMENTATION



Ford		TRANSIT	
TREND			
GLOBAL PUMA 2.2 I4 Diesel			
135PS STG 5			
370L			
		G	
		UHR5	
3CC	B		
GZ	L		
AA	N		
ES			
Ford		000 "ФОРД СОЛЛЕРС ХОЛДИНГ"	
		×WF0HXXTTGHDR82529×	
		4100	kg
		5500	kg
		1850	kg
		2500	kg
W(mm)		L(mm)	a(mm)
C	3750	FBD	



















