



# Conversion Guideline

## Opel Vivaro [X82]

Part 1 - Chapter 1 - 3



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## Conversion Guideline - Part 1

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## 1. GENERAL VEHICLES INFORMATION

### 1.1. BODYWORK RANGE

	Vivaro		L1		L2	
			Body side panels	Rear openings	Body side panels	Rear openings
F	2 or 3 seats	LCV H1 / H2	0/1/2 PLC T / V CS / T / V	PBT / PBV / H	0/1/2 PLC T / V CS / T / V	PBT / PBV / H
	2 or 6 seats	LCV / H1 CABAPRO	1/2 PLC / V CS / T	PBT / PBV / H	1/2 PLC / V CS / T	PBT / PBV / H
J	5 to 9 seats	VP / M1 H1	1/2 PLC / V CS / V	PBV / H	1/2 PLC / V CS / V	PBV / H
	2 to 6 seats	LCV / N1 H1	1 PLC / V CS / V	PBV / H	1 PLC / V CS / V	PBV / H
E	2 to 3 seats	LCV H1			without	without

#### Explanation:

F	Panel van
J	Combi
E	Platform Cab
CABAPRO	Crew Cab
CST / V	Body side, with or without window
CS / T	Body side, without window
CS / V	Body side, with window
H	Tailgate (glazed)
H1	roof normal
H2	roof high
LCV	Light Commercial Vehicle
N1	Homologation as a truck
M1	Homologation as a passenger car
PLC T / V	Sliding Side Door, with or without window
PLC / V	Sliding Side Door, with window
PBT	Solid Hinged Doors
PBV	Glazed Hinged Doors

## 1.2. ENGINE-GEARBOX RANGE

Engine	DIESEL ENGINE (1,6 DCI)					
		GEN1				GEN2
	Level	D1	D2			D3
	Emissions control standard	Euro 05R	Euro 04A	Euro 05R	Euro 05R	Euro 05R
	Engine suffix	R9M*408	R9M*450	R9M*408	R9M*450	R9M*450
	Power rating	66kW	85kW	85kW	85kW	103kW
Gearbox	Gearbox suffix	PF6, MT	PF6, MT	PF6, MT	PF6, MTA	PF6, MT
Body	Variants concerned	F – L1 / L2 J – L1 / L2 E – L2				

### Explanation:

F	Panel van
J	Combi
E	Platform cab
GEN1	Engine generation 1
GEN2	Engine generation 2
L1	Wheelbase normal
L2	Wheelbase long
MT	manual transmission, 6-speed
MTA	man/auto transmission, 6-speed (Easytronic 6-speed)

1.3. VEHICLE IDENTIFICATION (VIN, oval plate)

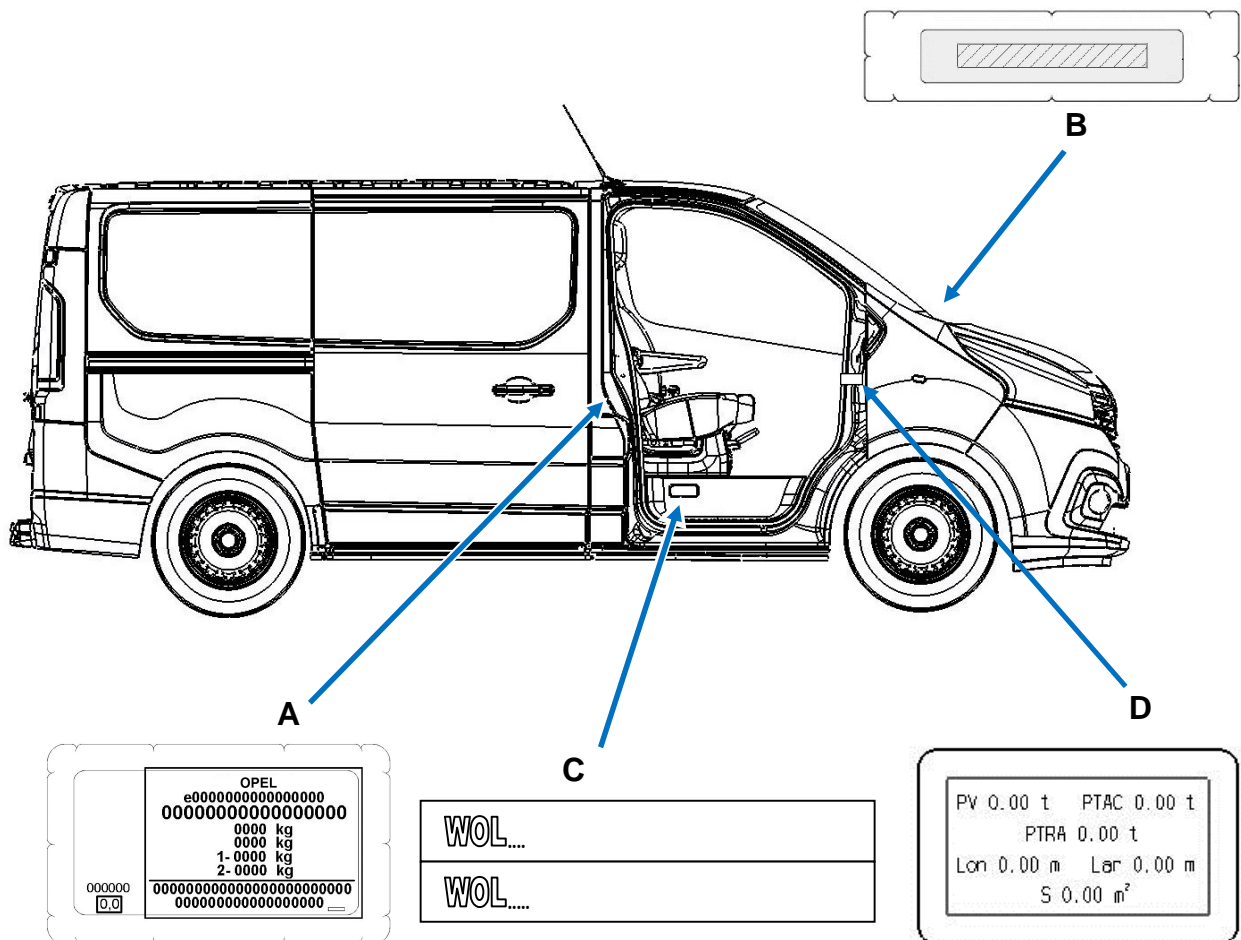
POSITION OF MARKINGS AND PLATES

The manufacturer's plate is located on the cab right-hand door frame, on the B-pillar (A).

The weights and dimensions label is located on the front right-hand wing panel (D).

The VIN number label is located at the base of the windscreen (B).

The chassis number marking can be seen by using a tool (e.g. screwdriver) to lift the viewing window located at the top of the cab right-hand step. (C).

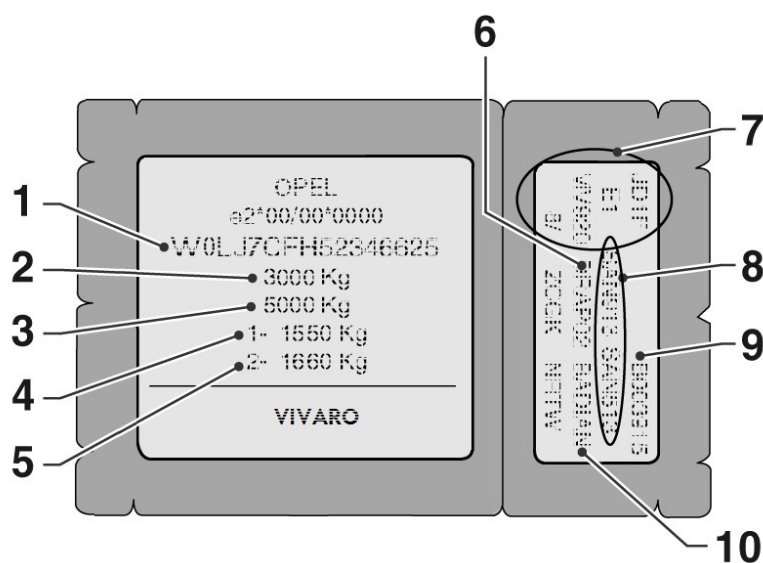


The vehicle manufacturer's plate must be replaced if it is damaged or moved, which is inevitable during conversion. This means you will have to order a new plate.

This request should be sent to the Quality/Service/After-Sales Service departments of the particular country.

#### DETAILS OF INSCRIPTIONS

##### A) MANUFACTURER'S PLATE



Information on identification plate<sup>1)</sup>:

- 1: Vehicle identification number
- 2: Permissible gross vehicle weight rating
- 3: Permissible gross combination weight
- 4: Maximum permissible front axle load
- 5: Maximum permissible rear axle load
- 6: Trim code
- 7: Technical specifications of vehicle, including: Vehicle paint code, equipment level and vehicle type
- 8: Additional equipment specification
- 9: Fabrication number
- 10: Interior trim code

<sup>1)</sup> The VIN plate on your vehicle may differ from the illustration shown.

B) VIN label on windscreen



The Vehicle Identification Number is visible through the windscreen.

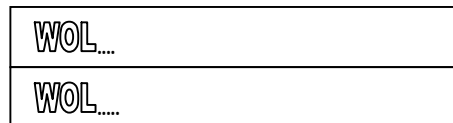


The VIN is also displayed behind a removable plastic cover on the right hand side door step.

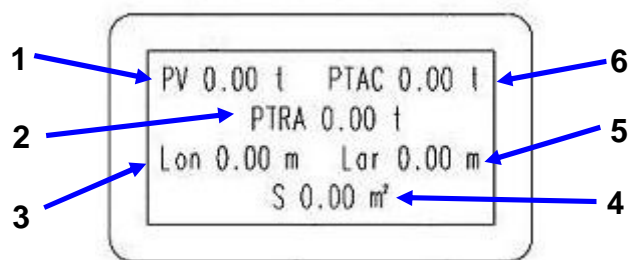
C) VIN MARKING

Main VIN engraving

Emergency VIN engraving



D) WEIGHTS AND DIMENSIONS LABEL



- 1: Kerb weight (kg)
- 2: Gross train weight (GTW)
- 3: Vehicle length
- 4: Vehicle surface area
- 5: Vehicle width
- 6: Maximum permissible laden weight (GVW)

#### 1.4. CAB SEPARATING PARTITIONS

Panel vans may be fitted with different separating partitions, as standard or as an option depending on the vehicle equipment level.

There is only one height for the H1 type partition, which is solid with or without a window and with or without a hatch.

If a partition is to be built, refer chapter 1.5 "Sliding side door accessibility" for the construction constraints (rail volume and driver's seat travel).

There are two types of solid or glazed partitions.

These solid partitions are not sealed but comply with standard DIN 75410-3 (anti-intrusion) and other country requirements.

The partitions are attached to the body using bolts and two rivets to make them theft-resistant.

Their rigidity is provided by three welded reinforcements. Two reinforcements welded onto the upper partition and one reinforcement welded onto the lower partition.

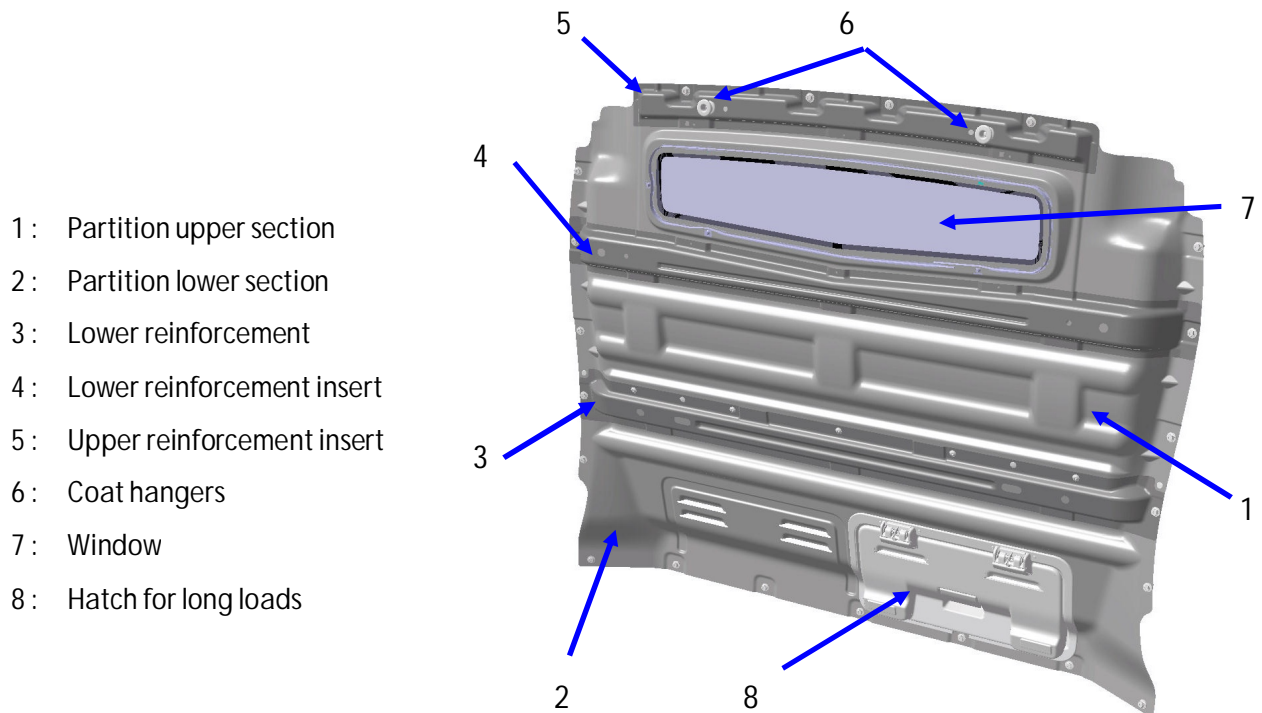
These partitions are available with a window (as an option) onto which a protective grille can be fitted. They may be fitted (as an option) with a hatch in the bottom section for loading long objects.

There are two coat hangers located on the loading side of the partition.

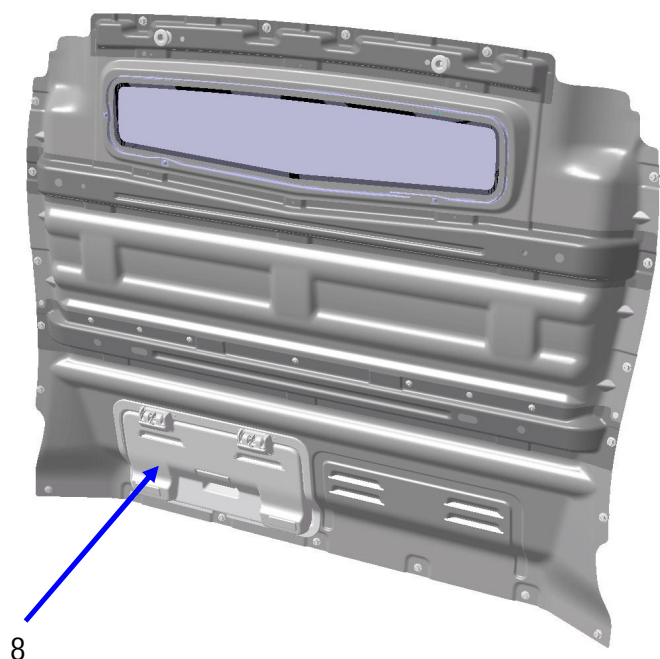




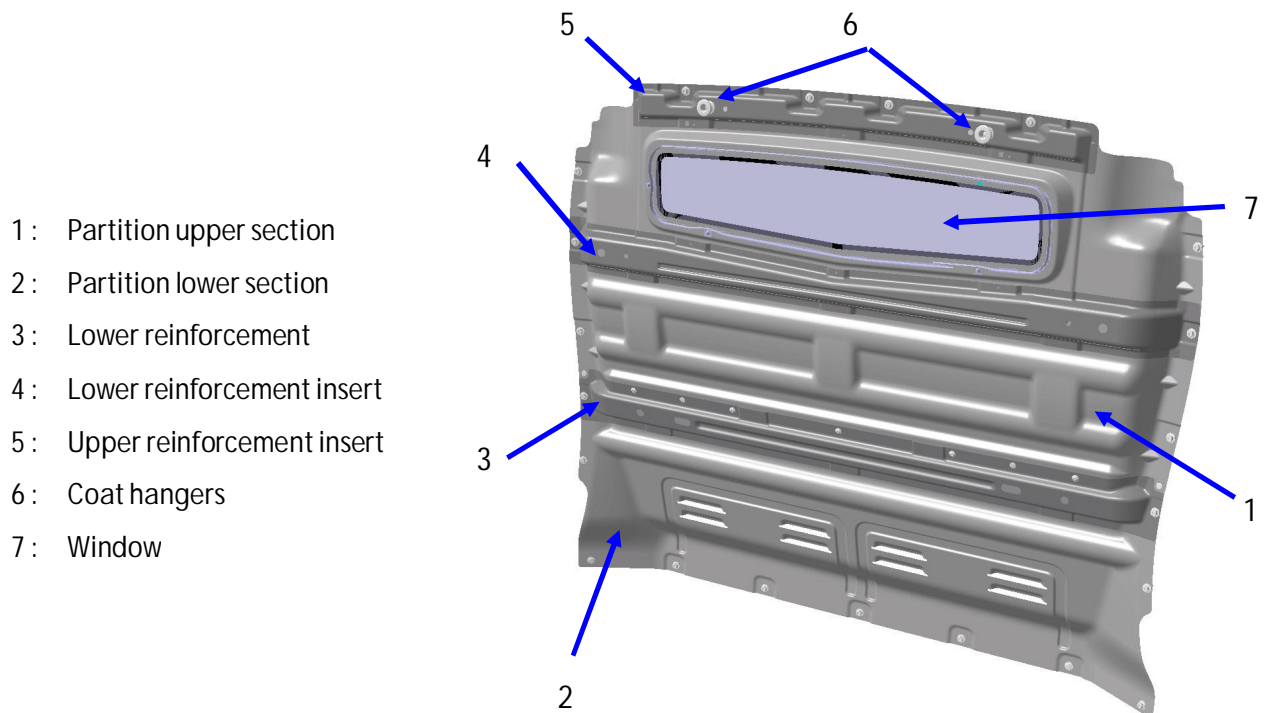
GLAZED PARTITION WITH HATCH, LEFT-HAND DRIVE



GLAZED PARTITION WITH HATCH, RIGHT-HAND DRIVE



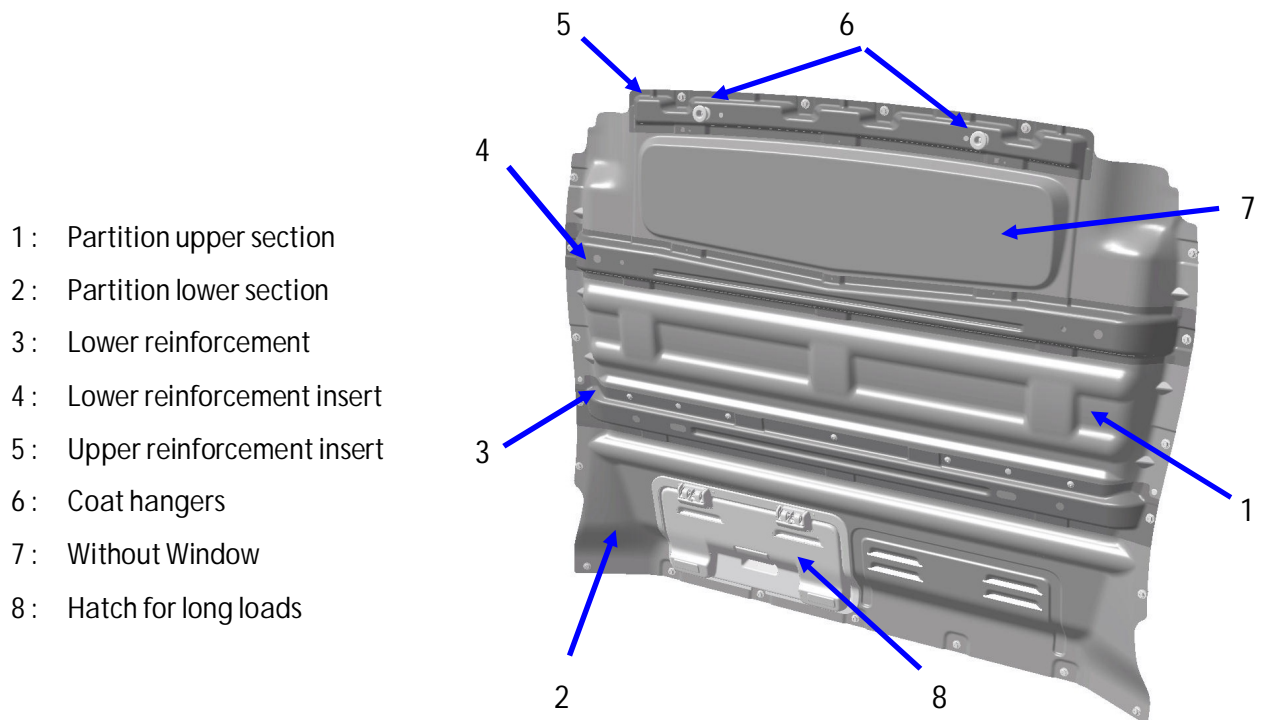
GLAZED PARTITION WITHOUT HATCH, LEFT-HAND DRIVE/RIGHT-HAND DRIVE



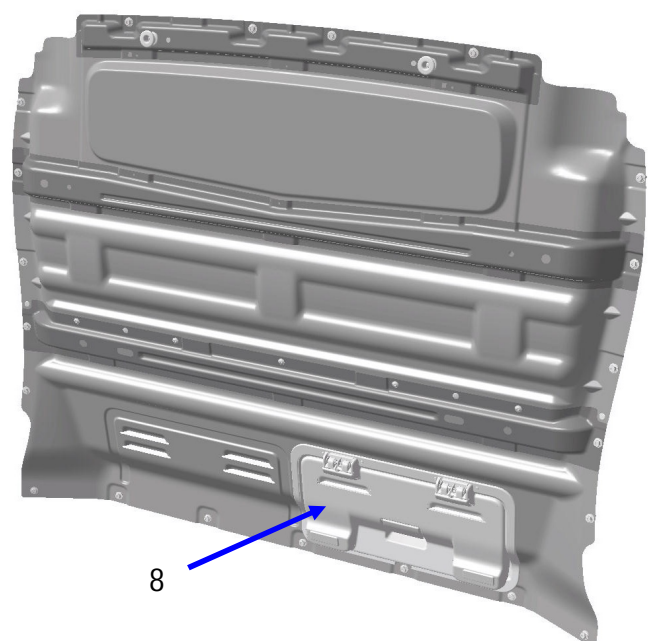
SOLID PARTITION WITHOUT HATCH, LEFT-HAND DRIVE/RIGHT-HAND DRIVE



SOLID PARTITION WITH HATCH, RIGHT-HAND DRIVE



SOLID PARTITION WITH HATCH, LEFT-HAND DRIVE

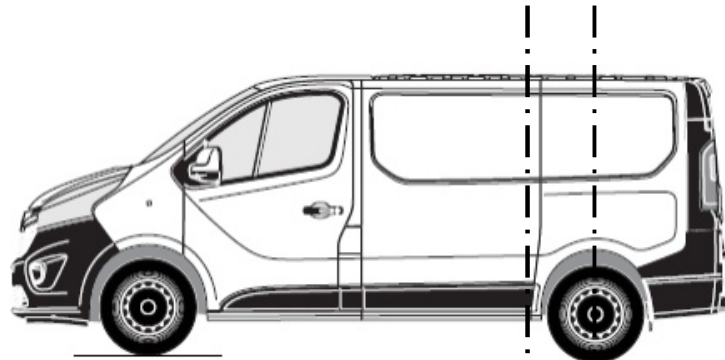


## 1.5. LOADING AREA / OPENING ELEMENTS ACCESSIBILITY

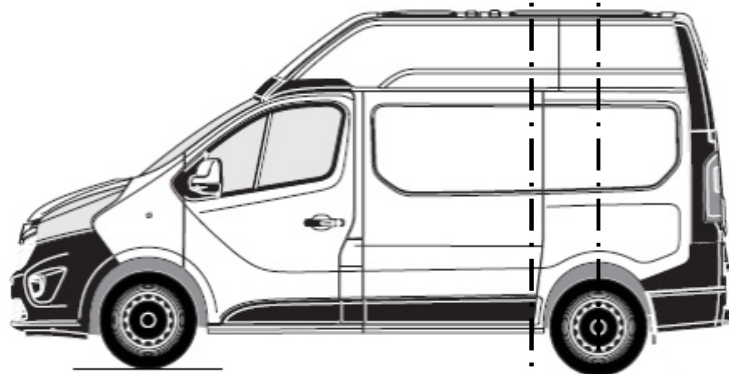
### 1.5.1. LOADING AREA SECTIONS

The main dimensions of the loading area (heights H1 and H2) are given in the form of superimposed sections. Details of the wheel arches are also given.

Panel Van H1



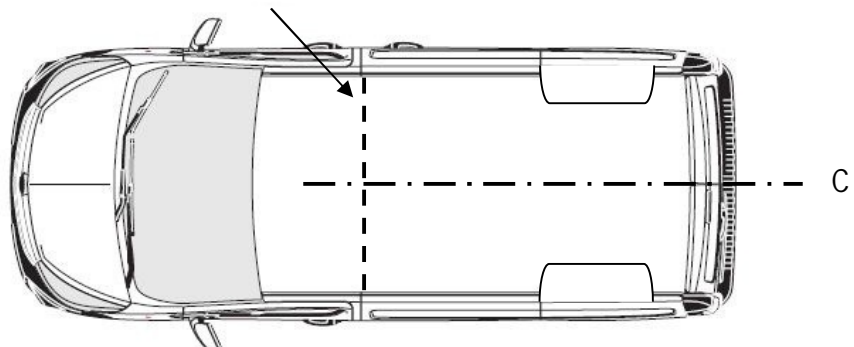
Panel Van H2



- A : Section Y loading area in front of the wheel arches
- B : Section Y loading area between the wheel arches

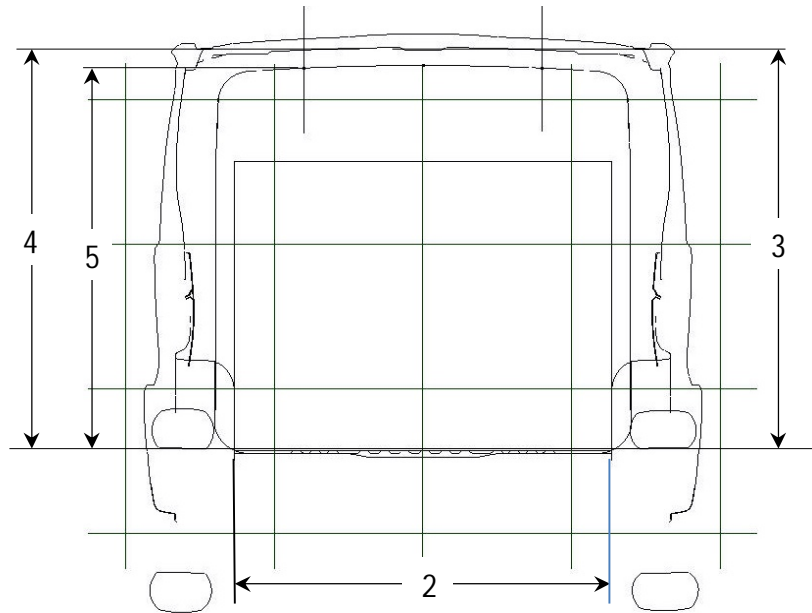
A B

Partition wall

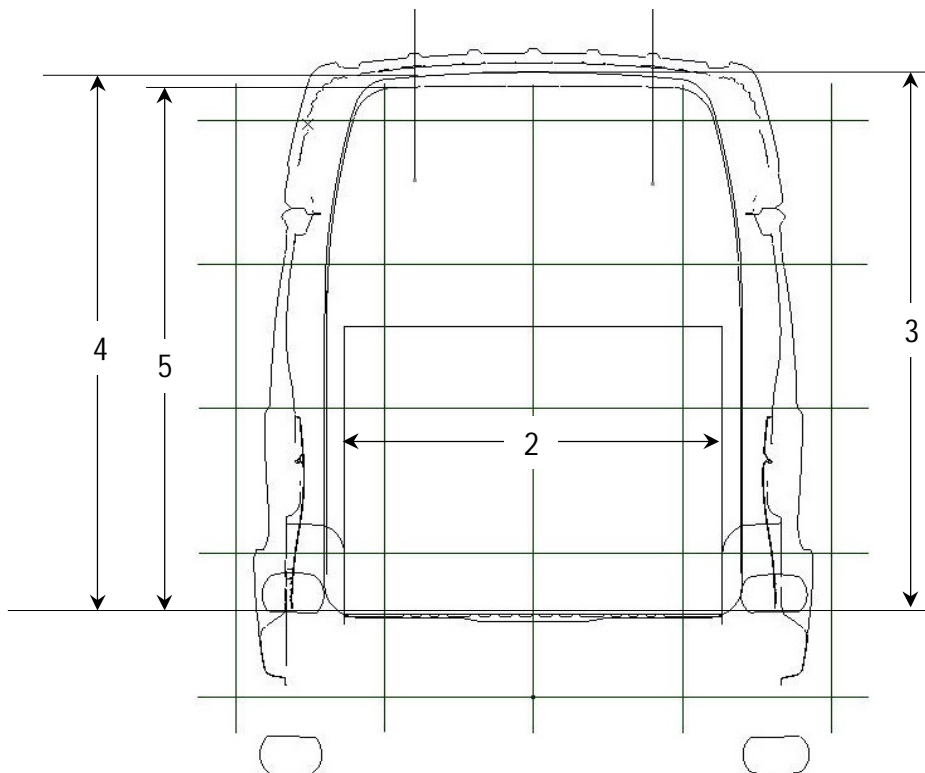


- C : Section longitudinal of the loading area

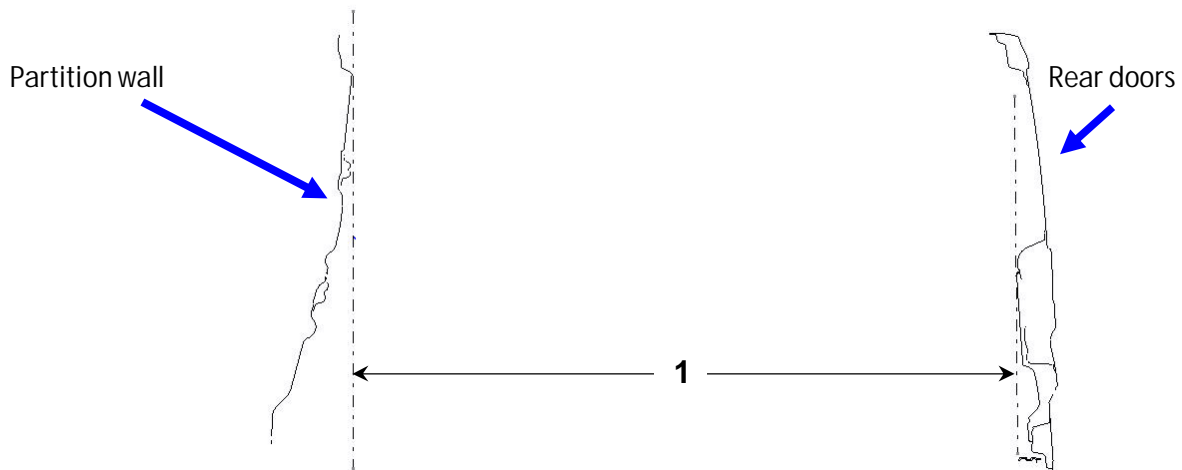
Section A and B - Y loading area  
Transverse section H1



Transverse section H2



Section C - longitudinal



Vehicle Type	Item	Dimension details	Position dimensions	Dimensions (mm)
USEFUL LOADING LENGTH				
L1	1	Partition/rear doors	Y+/- 400	2210
L2				2610
USEFUL LOADING WIDTH				
All	2	Between wheel arches	Rear wheel shaft	1268
USEFUL LOADING HEIGHT				
H1	3	Floor panel / Roof cross member	Cross member / Y0	1386
H2				1912
H1	4	Floor panel / Roof cross member	Cross member / Y+/- 400	1386
H2				1896
H1	5	Loading entry	Y+/- 400	1320
H2				1829

### 1.5.2. ACCESSIBILITY BY OPENING

Access via the sliding side door, its clearance and its position along the side of the body are given as overall dimensions.

Side door dimensions

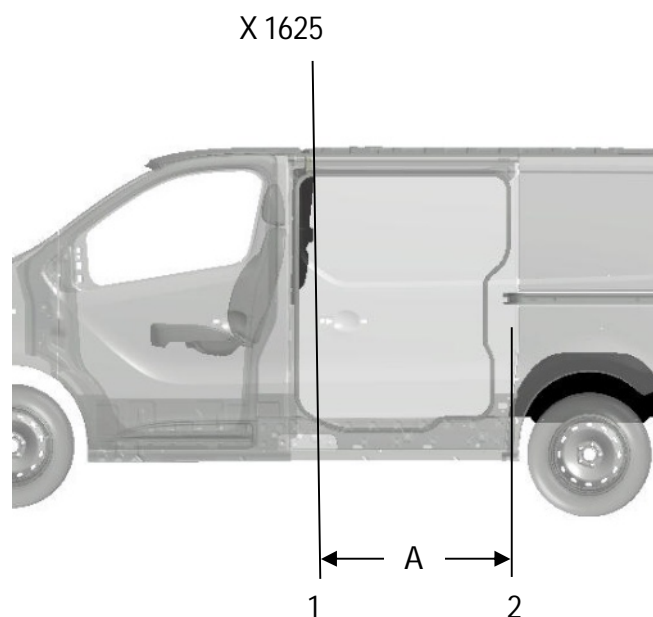


Where a partition is fitted, the diagram below defines the longitudinal travel of the driver's seat. It should be noted that this partition should comply with legislation in the country where the vehicle is marketed.

It is highly recommended, in case of attack or impact from the rear loading area, to add protection to the partition glazed area.

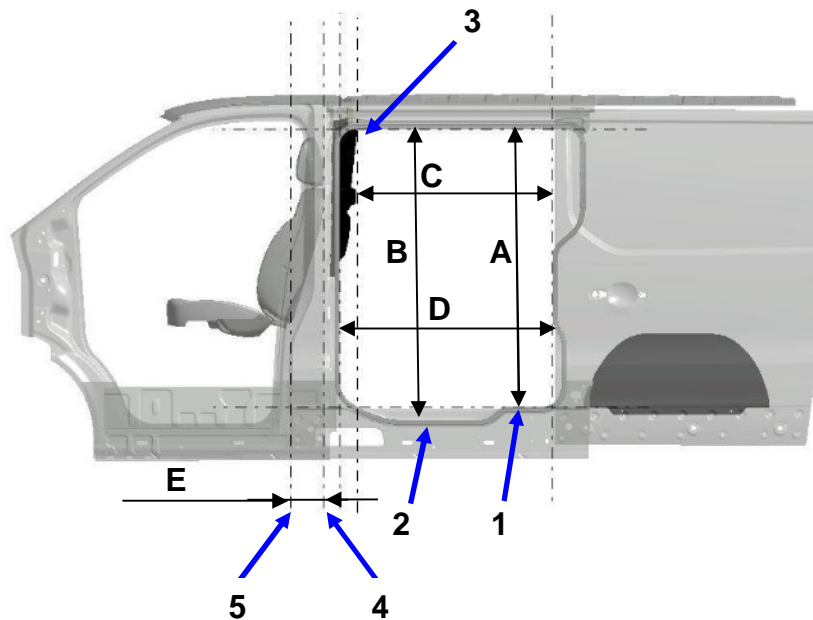
"Piano" dimension

Minimum distance between cab partition (1) and the front of the rear wheel arch (2).



Wheelbase (mm)	A (mm)
L1	1070
L2	1470

Sliding door opening



Item	Detail	(mm)
A :	Useful height of sliding side door entry	1284
B :	Useful height of sliding side door entry with step	1340
C :	Useful width of sliding side door entry	907
D :	Useful width of sliding side door entry at 1100 mm / Floor panel	988
E :	Maximum offset of seat backrest/Seat rear mounting	152

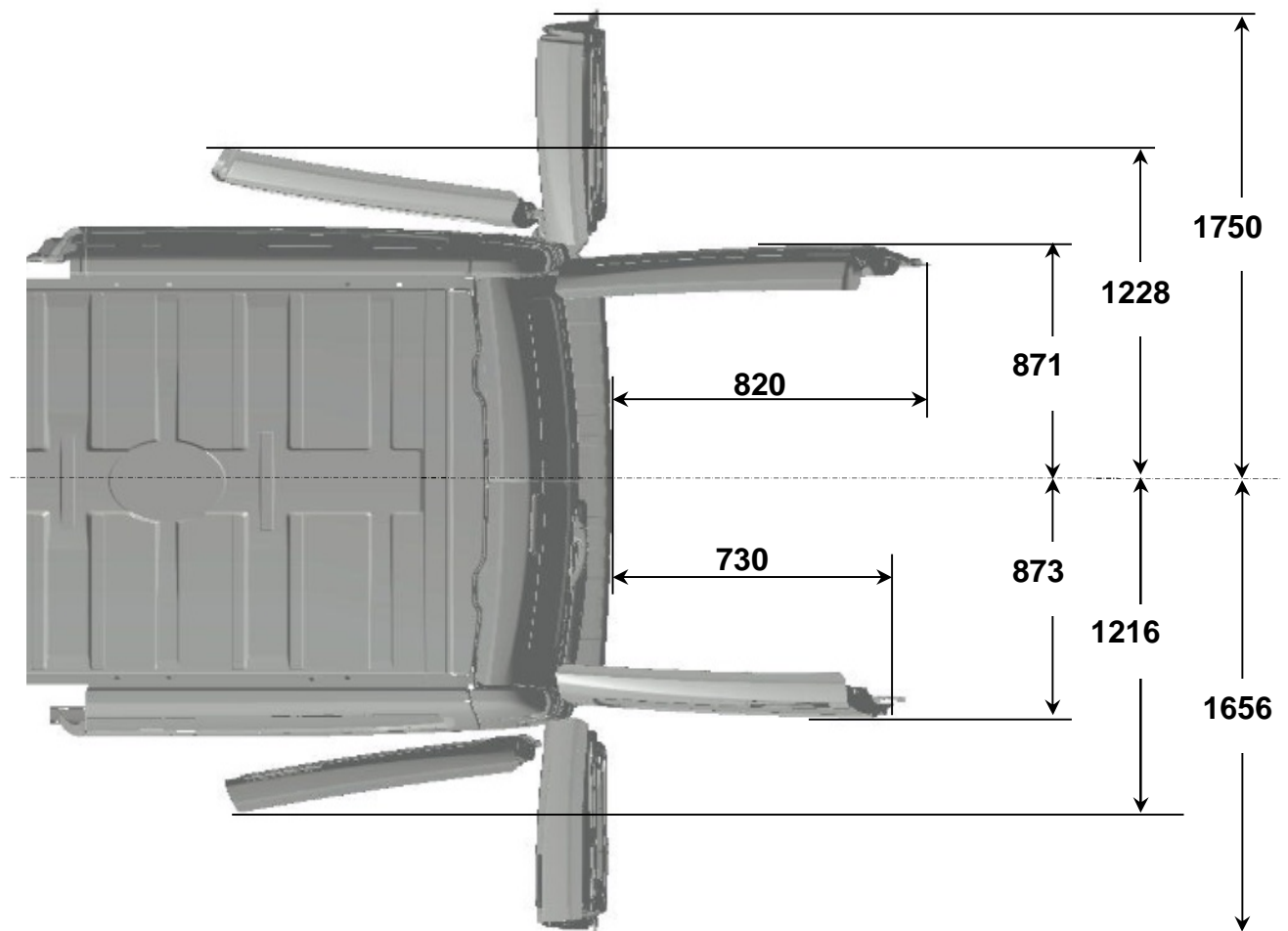
1 :	Loading floor
2 :	Door entry with step
3 :	Solid partition
4 :	Position of seat backrest as far back as possible
5 :	Rear seat mounting



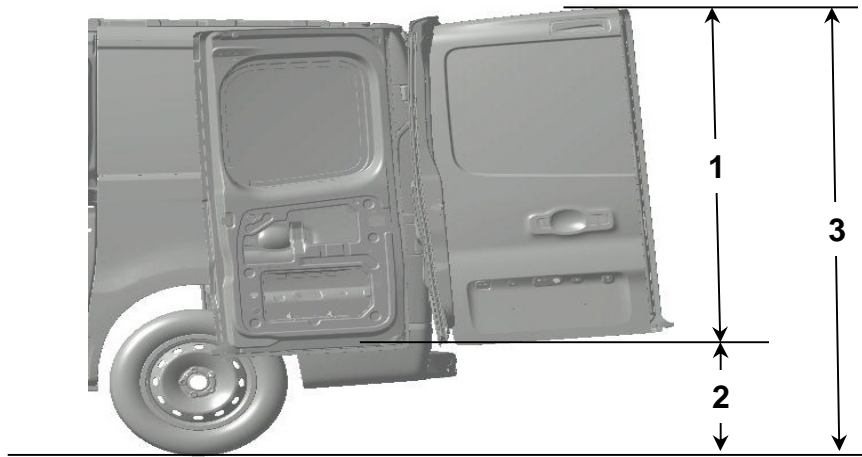
### Swivelling range and dimensions of rear doors

The Swivelling range and position along the side of the body are given as overall dimensions and at different heights.

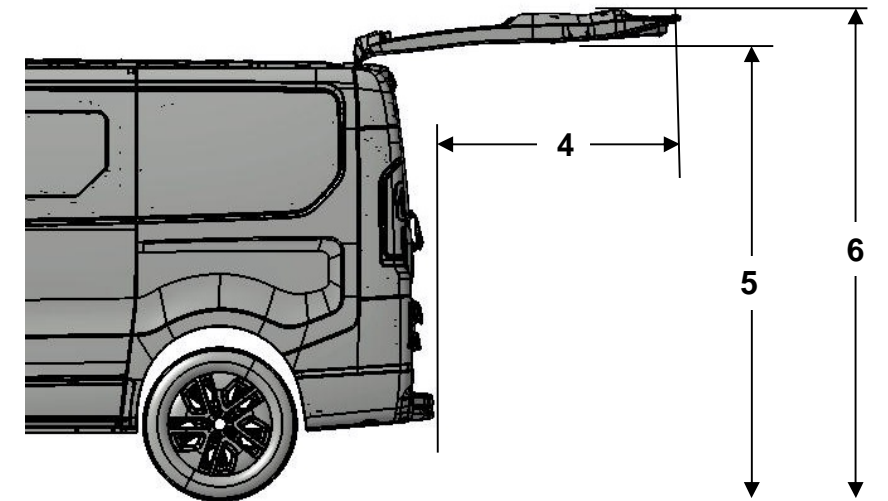
The door opening angle is 90° on the first notch and 178° on the second notch. With door opening option to 255°.



Dimensions of rear doors

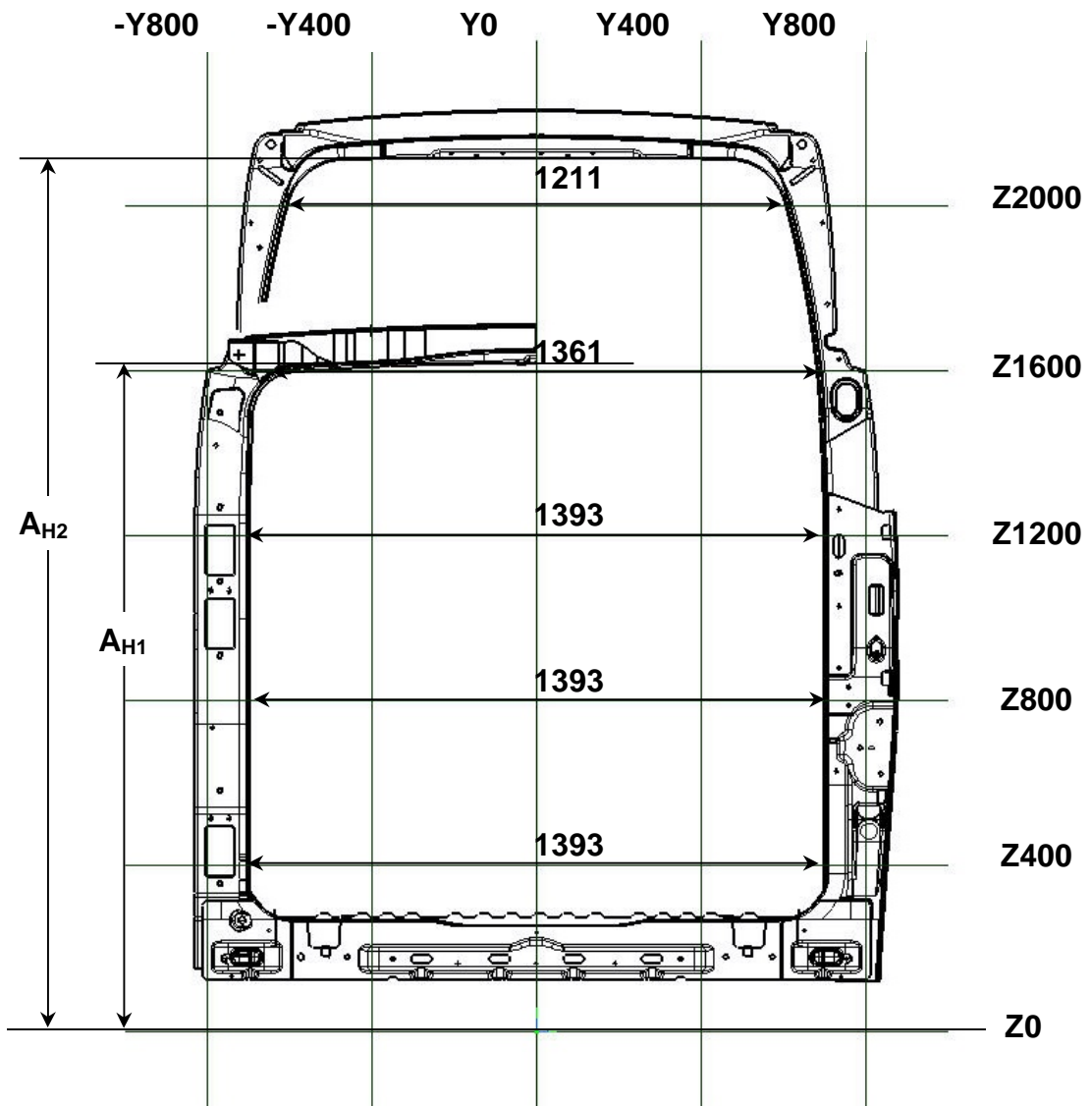


Tailgate dimensions



		L1H1		L1H2	L2H1	L2H2
	Payload	1000	1200			
	Maximum permissible laden weight (GVW)	2740	2900	2920	2970	2980
1:	Door height	1536		2163	1536	2163
2:	Min. height at GVW	373			431	
3:	Max. height at kerb weight	2053		2568	2046	2568
4:	Tailgate exterior offset	1130		--	1130	--
5:	Min. height at GVW	2093		--	2088	--
6:	Max. height at kerb weight	2182		--	2180	--

Access via the rear attachment ring from the origin of the reference guide



	Panel Van H1	Panel Van H2
A :	1619	2124

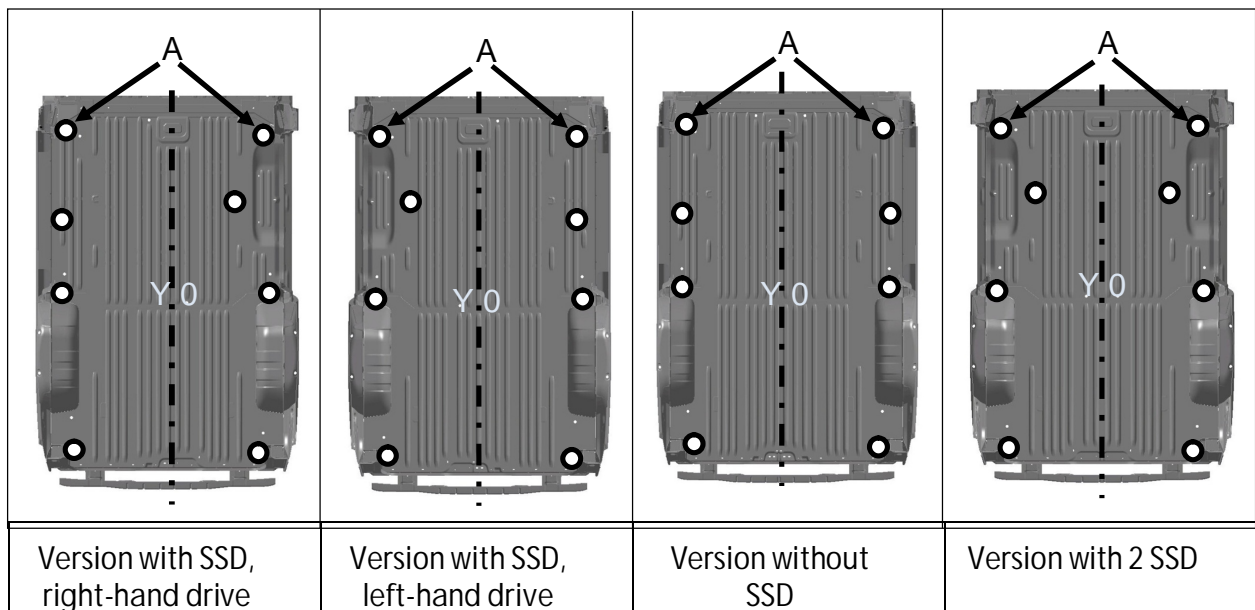
## 1.6 LOAD-SECURING POINTS / ANCHORAGE POINTS IN LOADING AREA

### 1.6.1. LOAD-SECURING POINTS ON FLOOR

On the panel van version, the number of load-securing points varies:

- Eight tie-down points ( ) on the floor panel and bottom area of the body side for van lengths 1 (L1). See points A to D, in area 1.
- Ten tie-down points on the floor panel and bottom area of the body side for van lengths 2 (L2). See points A to F, in area 1.
- As an option, it is possible to have 10 tie-down points on the body sides regardless of the vehicle length. See points J to N, in area 2.

Their positioning is symmetrical to the body axis (Y = 0). Only the tie-down point between the B-pillar and C-pillar differs depending on whether or not there is a sliding side door (SSD). Their distribution on version L1 is as follows:



On the combi version, there are six tie-down points on the floor panel on L1 wheelbase and eight tie-down points on L2 wheelbase.

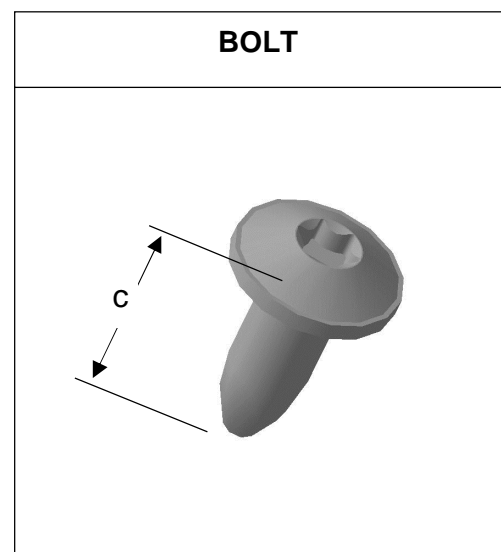
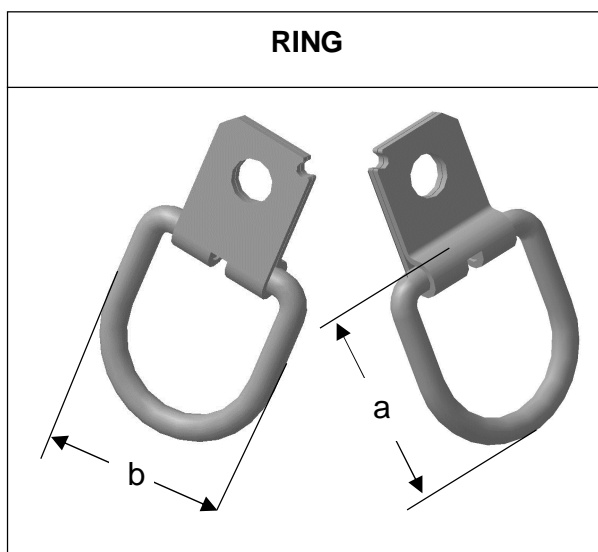
The rings are attached to the body using M8x125 mounting bolts ( ). The tightening torque is 21 Nm.

These tie-down points comply with the requirements of standard DIN 75410. Any conversion of the assembly is likely to affect this compliance.

**Note:** *A panel van length L2 = a panel van length L1+400 mm.  
A Combi still has at least one sliding side door on the right-hand side.  
Tie-down point (A) will serve as the reference for the location of the other points.*

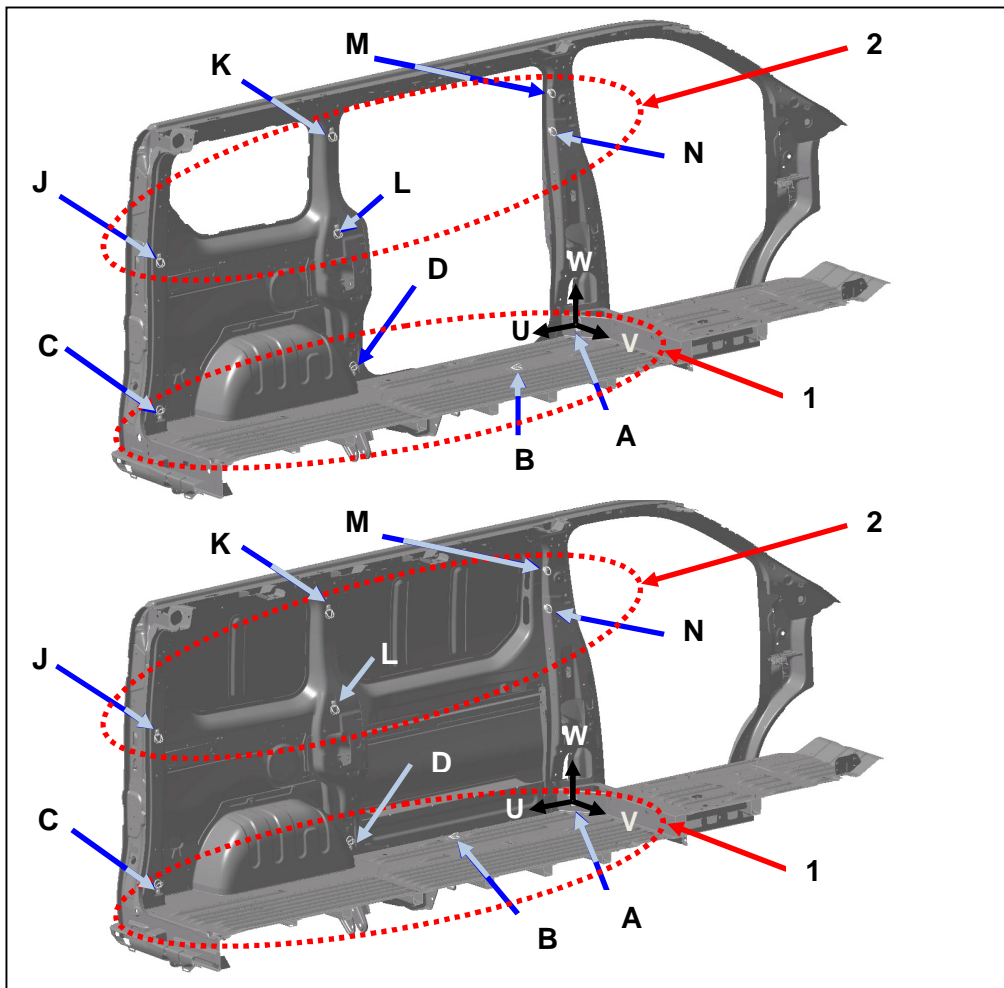
Details of attachments and tie-down points

	Bottom area (1)	Top area (2)
Ring		
Bolts	Vis RLX M8x125-26.5	
Resistance	500 daN	50 daN
a (mm)	43	
b (mm)	40	
c (mm)	26.5	



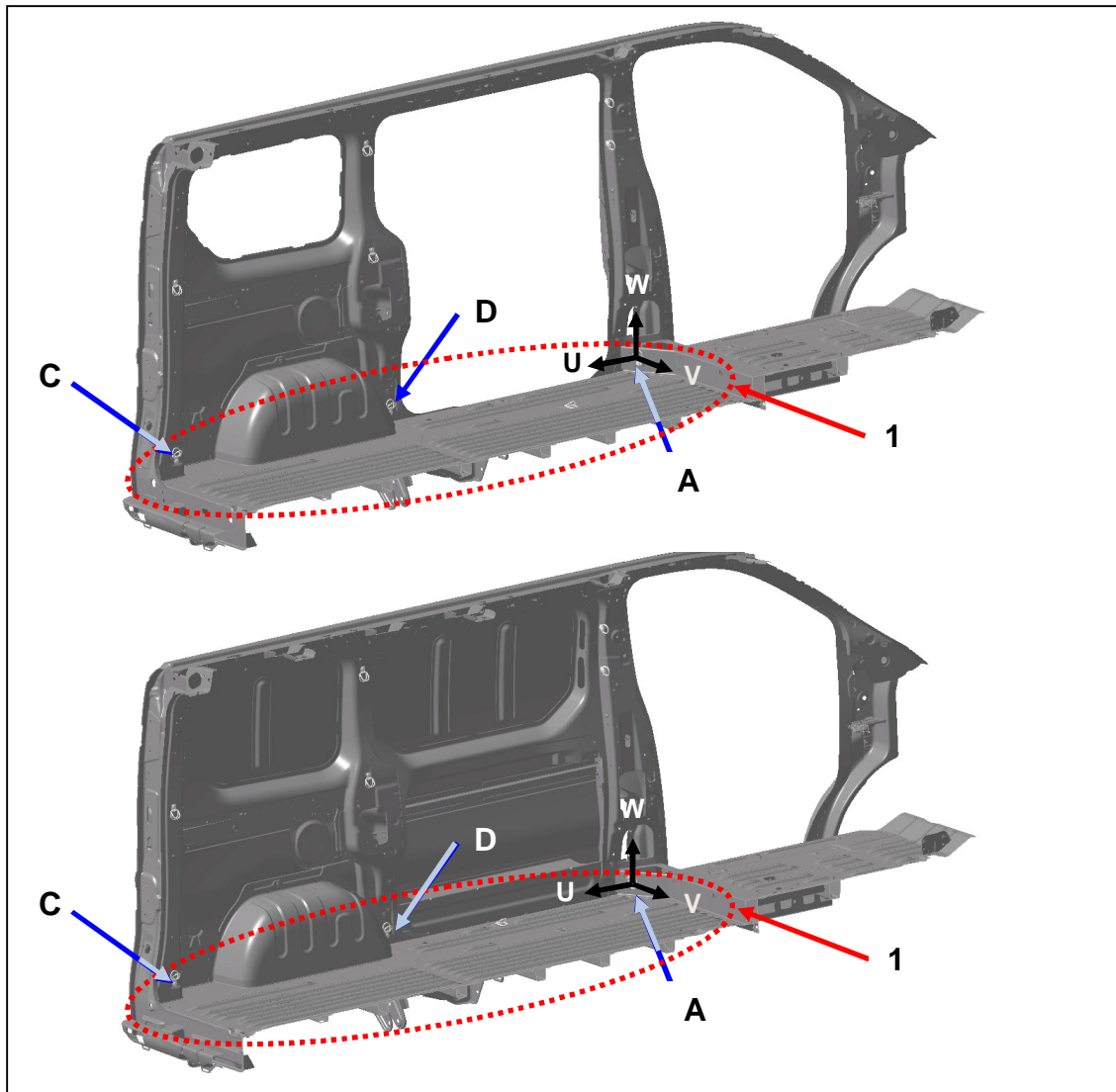
### 1.6.2. LOAD-SECURING POINTS AT SIDE PANELS

Panel van version L1 with and without sliding side door



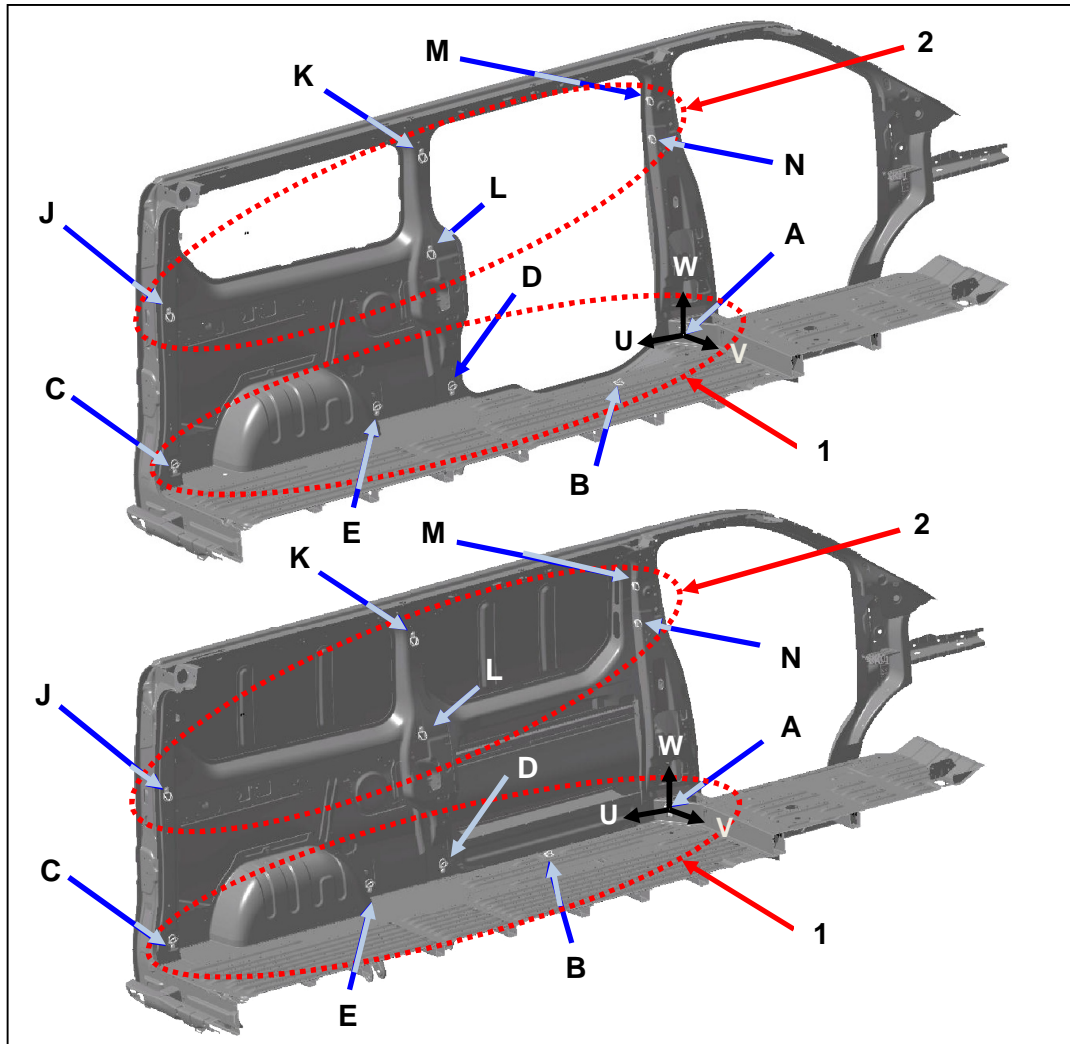
	Pts	U	V	W	Observation
1	A	0	0	0	Version with/without sliding side door
	B	532.8	250	40	Version with sliding side door
		675.8	-11	40	Version without sliding side door
	C	2353.8	56.5	30	Version with/without sliding side door
	D	1197.2	-70.5	-4	Version with/without sliding side door
2	J	2326.7	63.5	789	Version with/without sliding side door
	K	1272.8	-55.8	1162.8	Version with/without sliding side door
	L	1279.1	-45.3	708.6	Version with/without sliding side door
	M	72.6	-44.8	1121.2	Version with/without sliding side door
	N	71.6	-53.8	937	Version with/without sliding side door

Combi L1 version with 1 or 2 sliding side doors



	Pts	U	V	W	Observation
1	A	0	0	0	Version with/without sliding side door
	C	2353.8	56.5	30	Version with/without sliding side door
	D	1197.2	-70.5	-4	Version with/without sliding side door

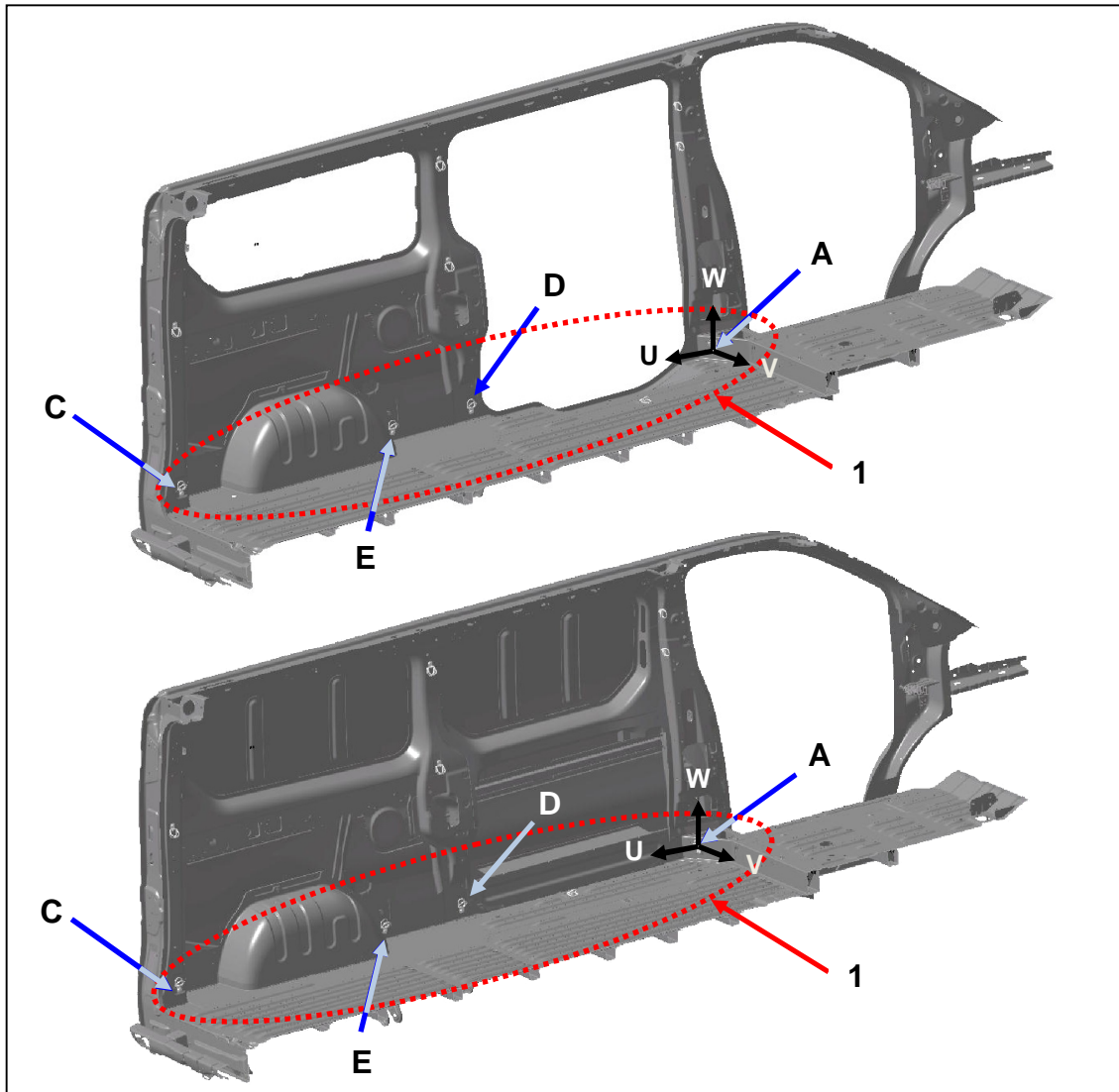
Panel van version L2 with and without sliding side door



	Pts	U	V	W	Observation
1	A	0	0	0	Version with/without sliding side door
	B	532.8	250	40	Version with sliding side door
		675.8	-11	40	Version without sliding side door
	C	2753.8	56.5	30	Version with/without sliding side door
	D	1197.2	-70.5	-4	Version with/without sliding side door
E	1597.2	-70.5	-4	Version with/without sliding side door	
2	J	2726.7	63.5	789	Version with/without sliding side door
	K	1272.8	-55.8	1162.8	Version with/without sliding side door
	L	1279.1	-45.3	708.6	Version with/without sliding side door
	M	72.6	-44.8	1121.2	Version with/without sliding side door
N	71.6	-53.8	937	Version with/without sliding side door	



Combi version L2 with and without sliding side door

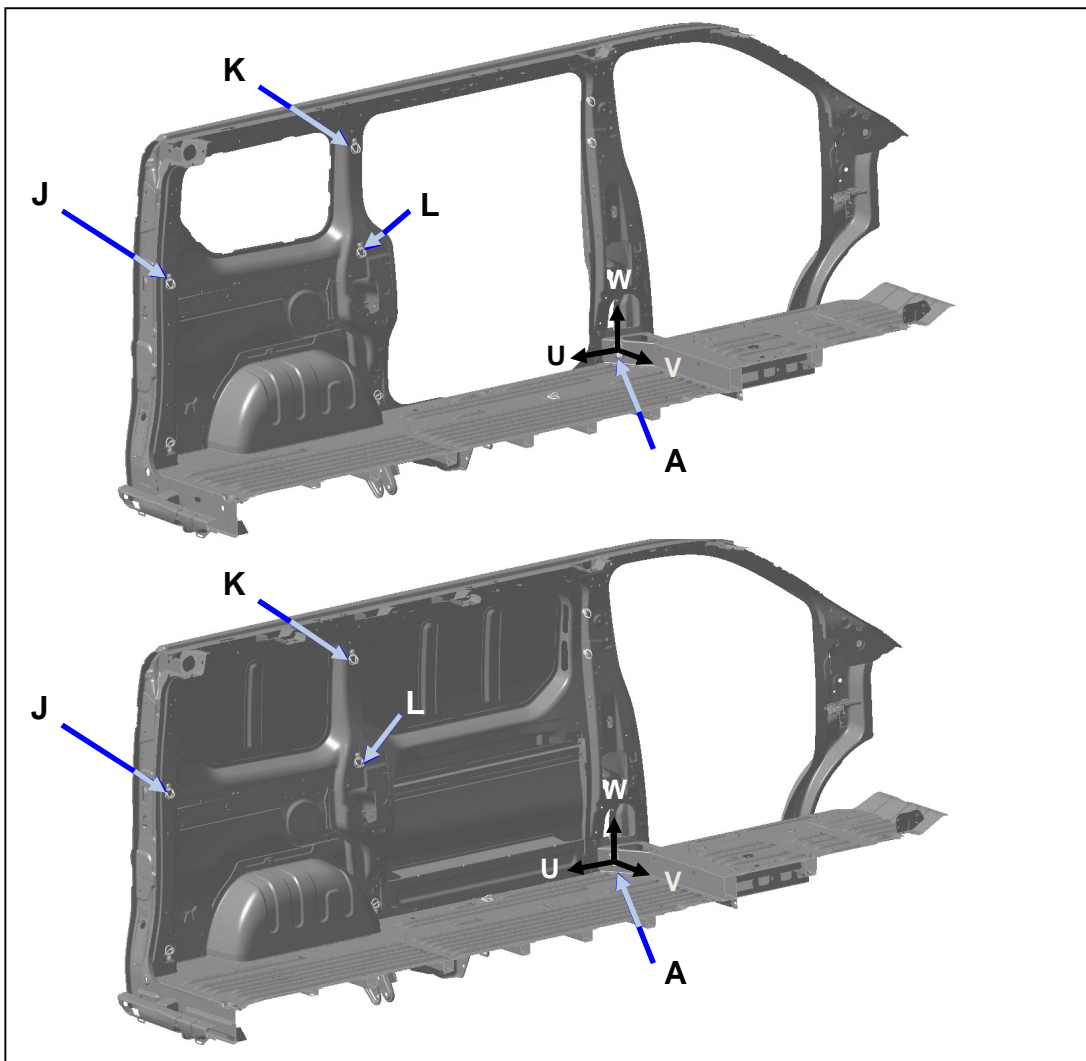


	Pts	U	V	W	Observation
1	A	0	0	0	Version with/without sliding side door
	C	2753.8	56.5	30	Version with/without sliding side door
	D	1197.2	-70.5	-4	Version with/without sliding side door
	E	1597.2	-70.5	-4	Version with/without sliding side door

### 1.6.3. ANCHORAGE POINT IN LOADING AREA

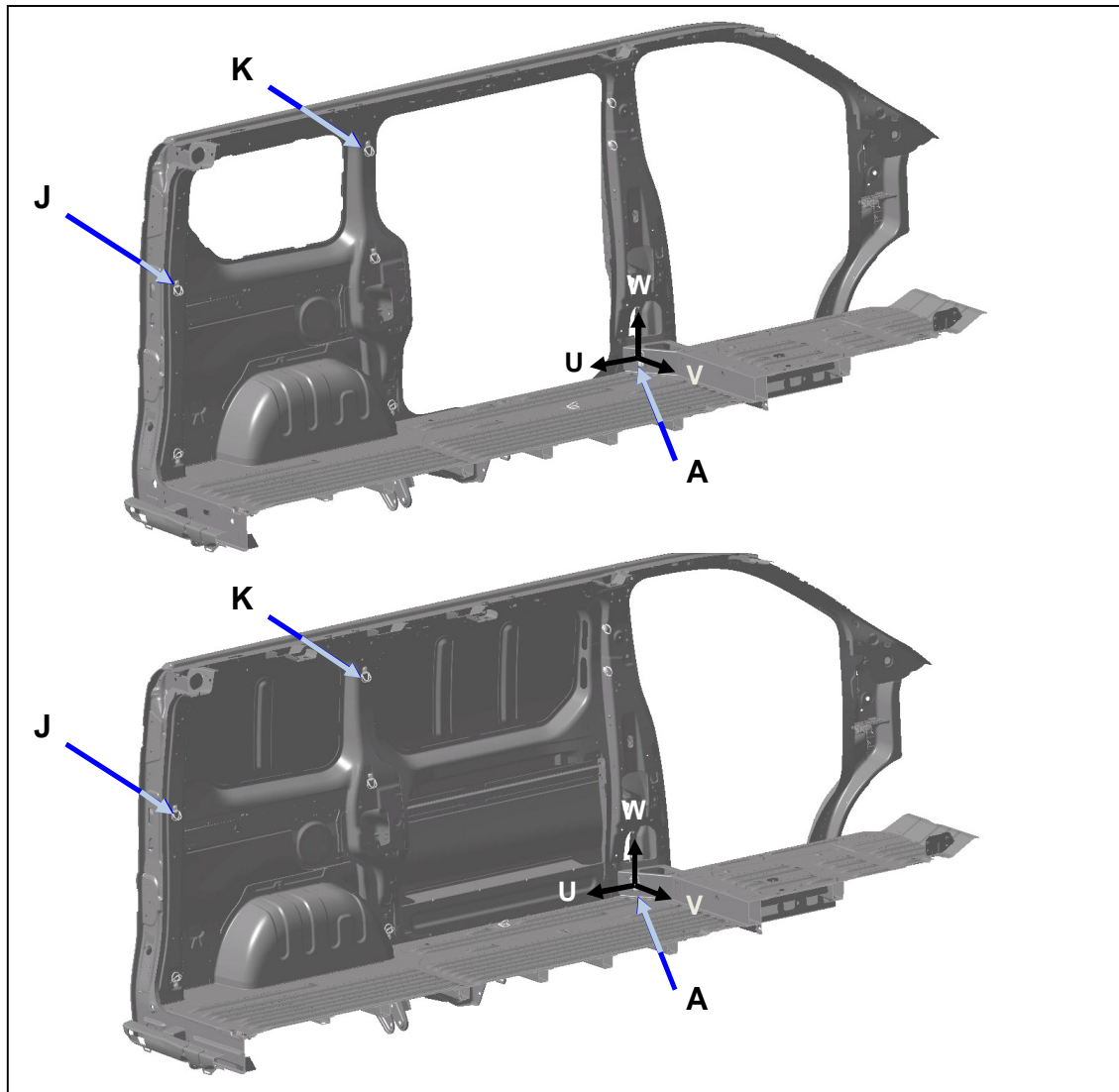
It is possible to use the welded nuts (M8x125) originally provided to attach the optional tie-down points. There are six of these (3 per side) on the panel van and four (1 per side) on the Combi. The maximum force to be applied is 50 daN

Panel van version L1 with and without sliding side door



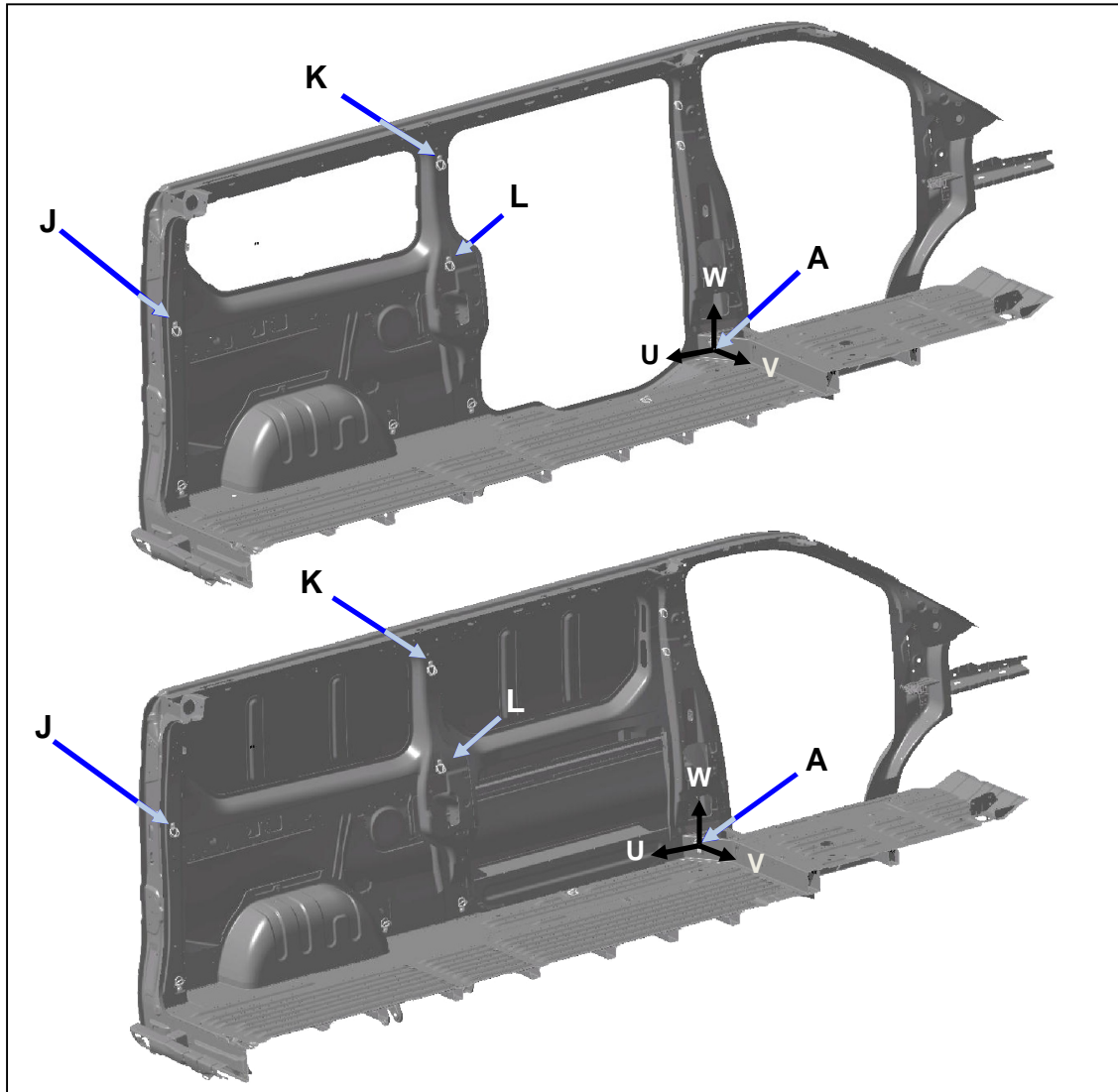
Pts	U	V	W	Observation
A	0	0	0	Reference guide
J	2326.7	63.5	789	Version with/without sliding side door
K	1272.8	-55.8	1162.8	Version with/without sliding side door
L	1279.1	-45.3	708.6	Version with/without sliding side door

Combi version L1 with and without sliding side door



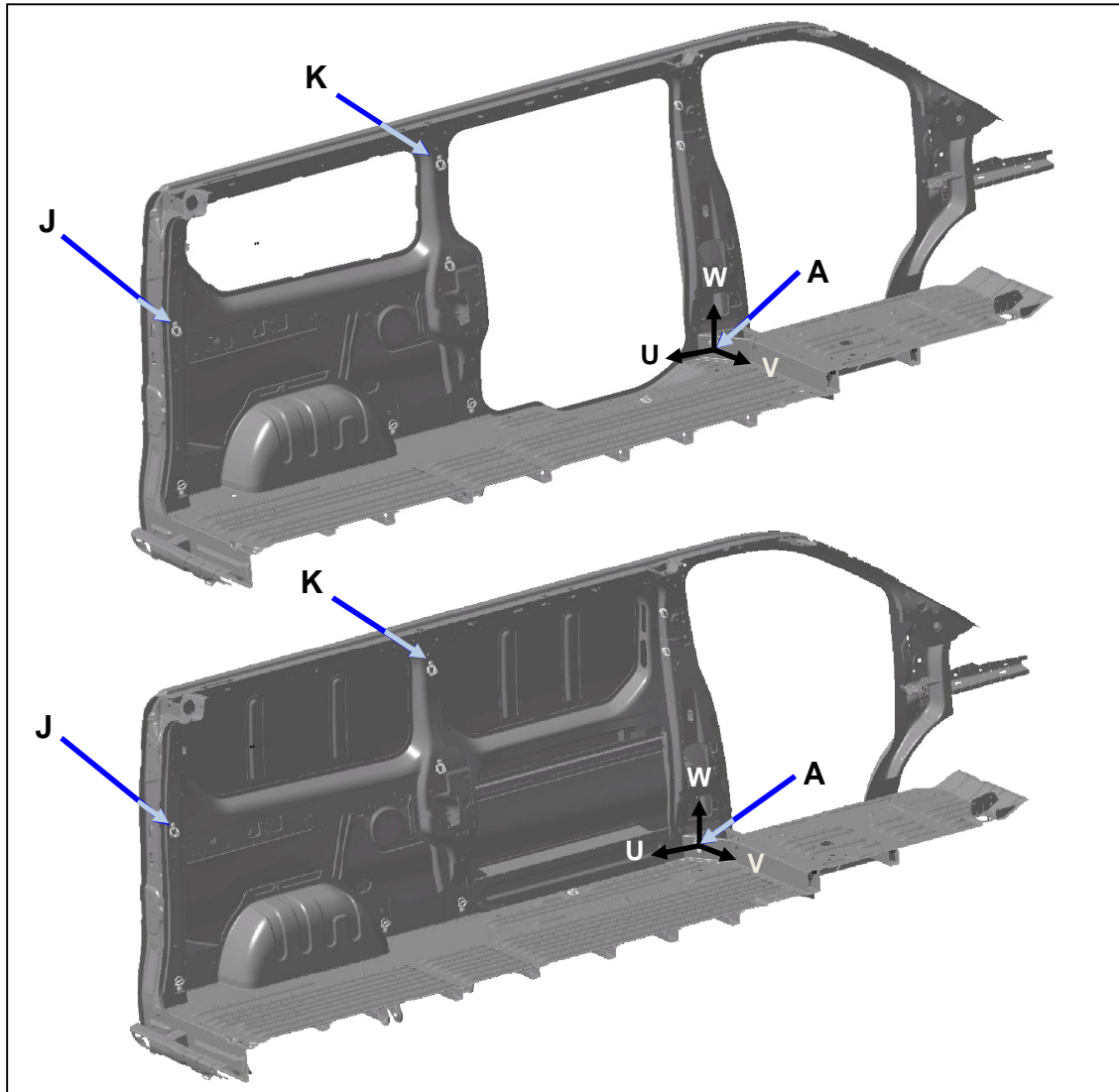
Pts	U	V	W	Observation
A	0	0	0	Reference guide
J	2326.7	63.5	789	Version with/without sliding side door
K	1272.8	-55.8	1162.8	Version with/without sliding side door

Panel van version L2 with and without sliding side door (SSD)



Pts	U	V	W	Observation
A	0	0	0	Reference guide
J	2726.7	63.5	789	Version with/without sliding side door
K	1272.8	-55.8	1162.8	Version with/without sliding side door
L	1279.1	-45.3	708.6	Version with/without sliding side door

Combi version L2 with and without sliding side door



Pts	U	V	W	Observation
A	0	0	0	Reference guide
J	2726.7	63.5	789	Version with/without sliding side door
K	1272.8	-55.8	1162.8	Version with/without sliding side door

### 1.7. ROOF RACK AND ROOF BARS / LADDERS ON HINGED DOORS

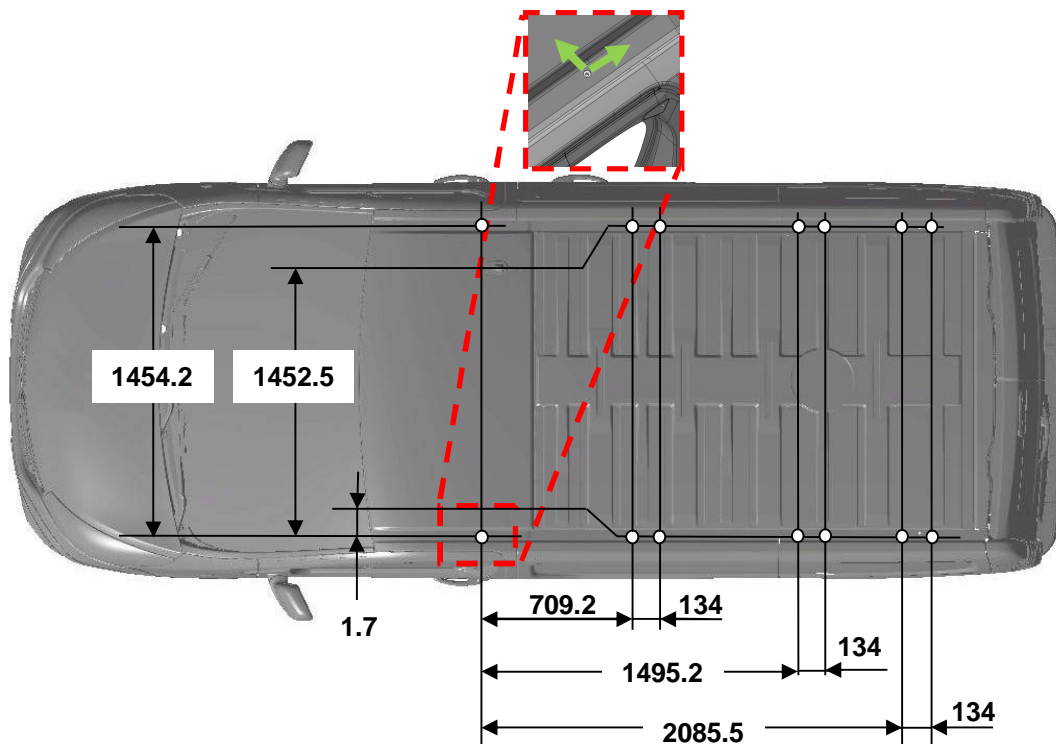
For safety reasons and to avoid damage to the roof, the vehicle approved roof rack system is recommended. Follow the installation instructions and remove the roof rack when not in use. Driving with a roof load increases the sensitivity of the vehicle to cross-winds and has a detrimental effect on vehicle handling due to the vehicle's higher centre of gravity. Distribute the load evenly and secure it properly with retaining straps. Adjust the tyre pressure and vehicle speed according to the load conditions.

**N.B:** For passenger transport vehicles fitted with emergency exits in the roof, it is forbidden to block or even partially obstruct these openings when installing roof racks or roof bars.

#### 1.7.1. ROOF RACK AND ROOF BARS

PANEL VAN L1 H1

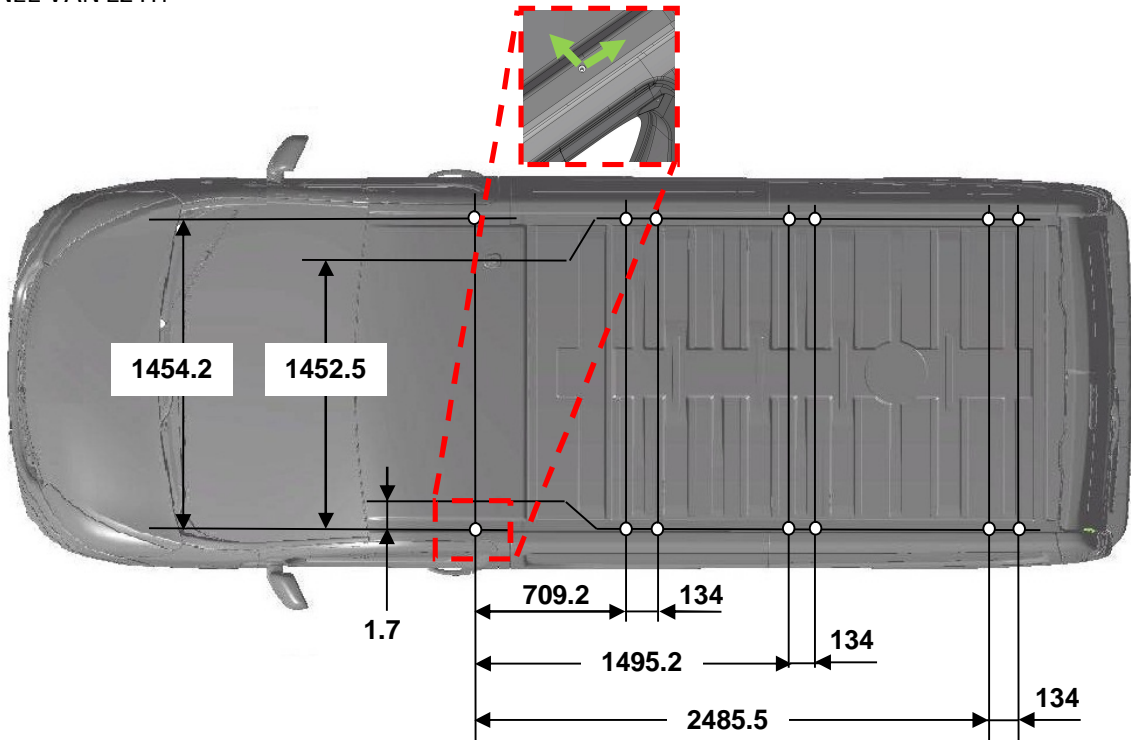
Mounting: 14 x M6 nuts welded or crimped onto the roof panel.



OPEL VIVARO (X82)  
 1.7 – ROOF RACK AND ROOF BARS / LADDERS ON HINGED DOORS

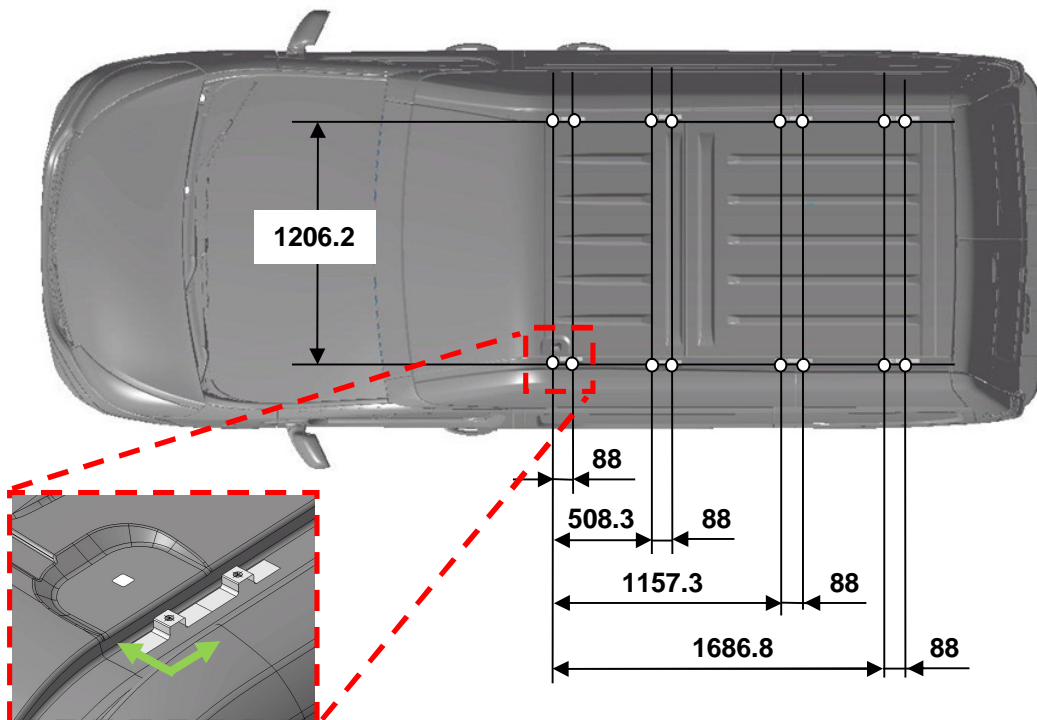


PANEL VAN L2 H1

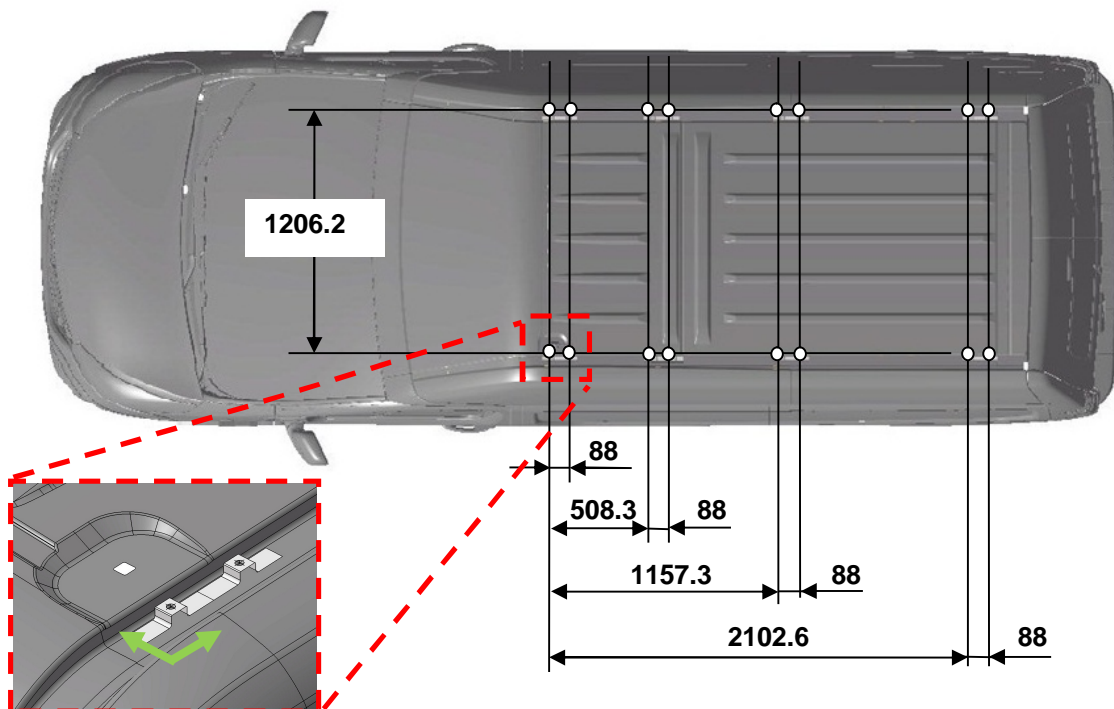


PANEL VAN L1 H2

Mounting: 16 x M6 panel nuts to slide into 8 x body brackets welded onto the roof panel.



PANEL VAN L2 H2



Summary of roof racks

- The maximum permissible weight including roof rack.
  - on the H1 roof is 200 kg.
  - on the H2 roof is 150 kg.

Summary of roof bars

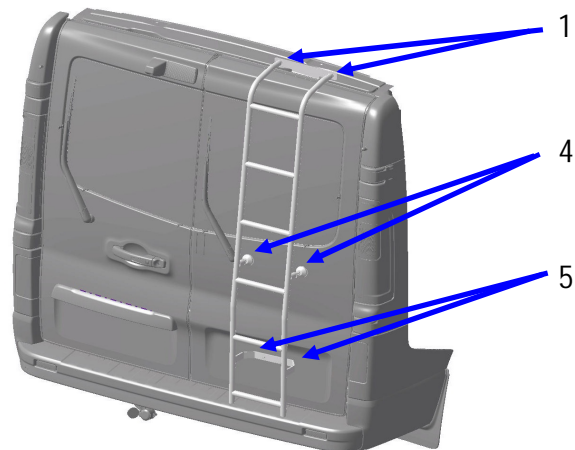
- The maximum permissible weight per bar on the roof is 50 kg.
- The maximum permissible weight including roof bar.
  - on the H1 roof is 200 kg.
  - on the H2 roof is 150 kg.



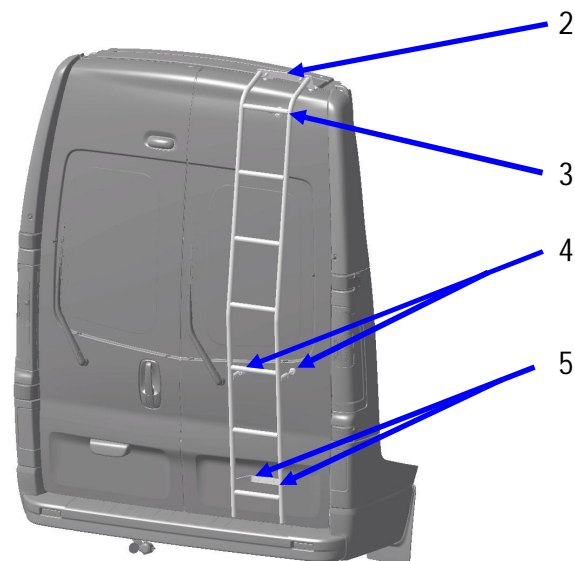
### 1.7.2. LADDER ON HINGED DOOR

A ladder for access to the roof can be fitted to the roof rack.

Version H1



Version H2



1:	2 x M8 upper mountings
2:	1 x upper hook
3:	1 x upper support
4:	2 x lower supports
5:	2 x M8 lower mountings

## 1.8. TOW BAR

The vehicles are capable of towing a 750 kg unbraked trailer and a 2000 kg braked trailer.  
The mounting positions are shown below. These mounting points must be used.

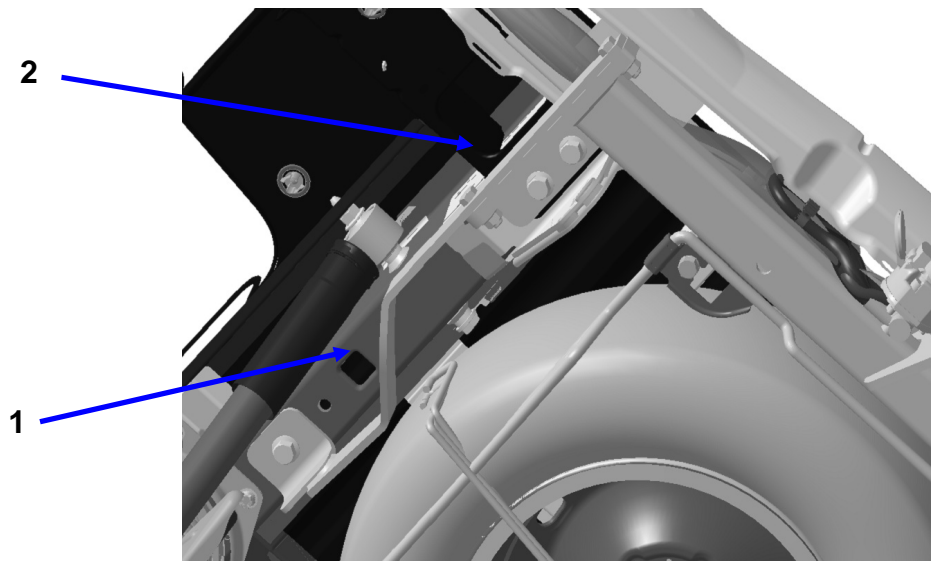
A tow bar is available as an option for all versions. A tow bar can also be obtained as an accessory through the OPEL / VAUXHALL sales network. These tow bars have the advantage of the TSA function (trailer stability assistance). Any other tow bar will not benefit from this.

The wiring diagram for these tow bars is given by way of information in the "Electrics" section. The "VR2" option (tow bar) requires the "AAM" unit to be fitted under the "KC6" criterion.

The maximum nose weight is 80 kg (permissible vertical force on the towing ball/towing system).

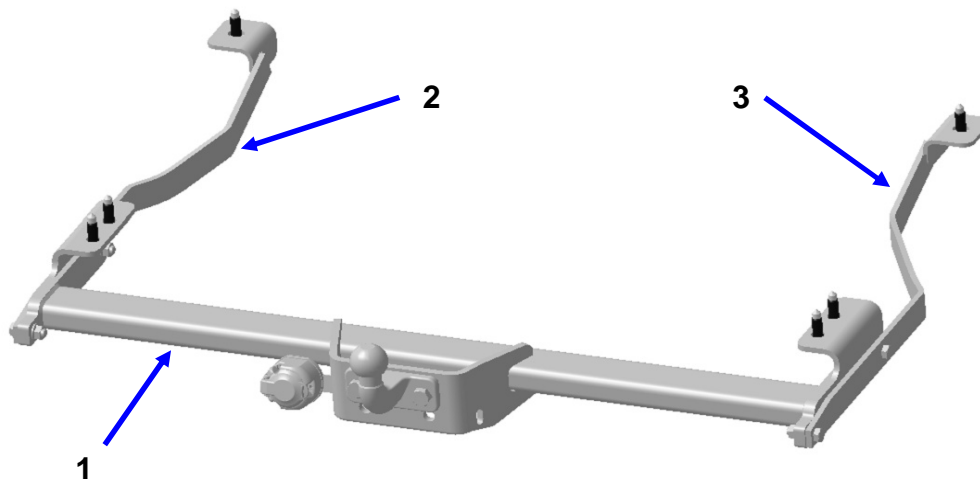
The fitted tow bar must comply with Standard 94/20

Tow bar mountings on the vehicle



- 1: Rear side member
- 2: Towing ring reinforcement

Tow bar assembly available as an option



- 1 : Tow bar
- 2 : Left-hand strut
- 3 : Right-hand strut

#### Electrical currents available for the rear lights

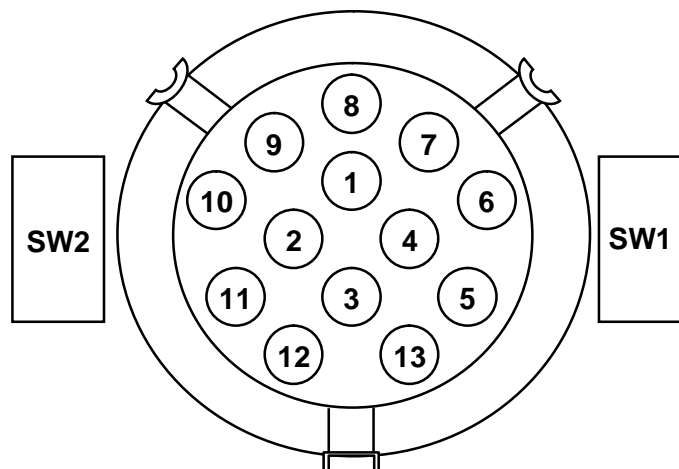
- Vehicles with towing socket: each of these connections must be used to control a single relay (no power available).
- Vehicles without towing socket: to each of the connections it is possible to connect a consumer unit whose power is equal to the bulbs on the hitched device, i.e.:
  - Left-hand position light connection: 1 x 5 W consumer
  - Right-hand position light: 1 x 5 W consumer
  - Brake light connection: 2 x 21 W (or 1 x 42 W) consumers
  - Reversing light connection: 1 x 21 W consumer
  - Left-hand direction indicator 1 x 21 W consumer
  - Right-hand direction indicator 1 x 21 W consumer
  - Fog light: 1 x 21 W consumer

## Tow bar socket specifications

The tow bar electrical socket, supplied as first-fit is a 13-pin socket (see below). This plug is also available in after-sales.

Two electrical switches are built into the socket. These are activated when opening and closing the cover of the tow bar socket.

### ASSIGNMENT OF CONNECTOR TRACKS



Way N°	Assignment
Way 1	Left-hand direction indicator
Way 2	Rear fog light
Way 3	Earth (Max. 10 A)
Way 4	Right-hand direction indicator
Way 5	Right-hand position light
Way 6	Brake lights
Way 7	Left-hand position light
Way 8	Reversing light
Way 9	Not wired
Way 10	Not wired
Way 11	Not wired
Way 12	Not wired
Way 13	Not wired (Max. 10 A earth)
SW1	Trailer present
SW2	Rear fog light disconnection

## OPEL VIVARO (X82)

### 1.9 – TYRES & TURNING CIRCLE DIAMETER / SPARE WHEEL



## 1.9. TYRES / TURNING CIRCLE DIAMETER / SPARE WHEEL

### 1.9.1. TYRES

*ESP on the basic vehicle is not compatible with a modification to the tyre sizes. (see chapter 3 - VEHICLE CONVERSION LIMITS AND CALCULATIONS)*

The list of recommended tyres is given in the following table:

Vehicle	Description	Tire size	Load index	Speed index	Comment
X82 – L1H1 & X82 – L2H1	MICHELIN	215/65 R16	106/104	T	STEEL rim
	GOODYEAR	205/65 R16	107/105	T	
		215/65 R16	106/104	T	
	CONTINENTAL	205/65 R16	107/105	T	All-weather tyre
		215/65 R16	109/107	R	
	GOODYEAR (CARGO VECTOR 2)	205/65 R16	107/105	T	
GOODYEAR	215/60 R17	109/107	T	ALLOY rim	
CONTINENTAL	195/75 R16	107/105	R	GEX tyres	

All tyres can be fitted with 12-inch snow chains except tyre dimension 215/60 R17 (17-inch ALLOY wheels).

### 1.9.2. TURNING CIRCLE DIAMETER

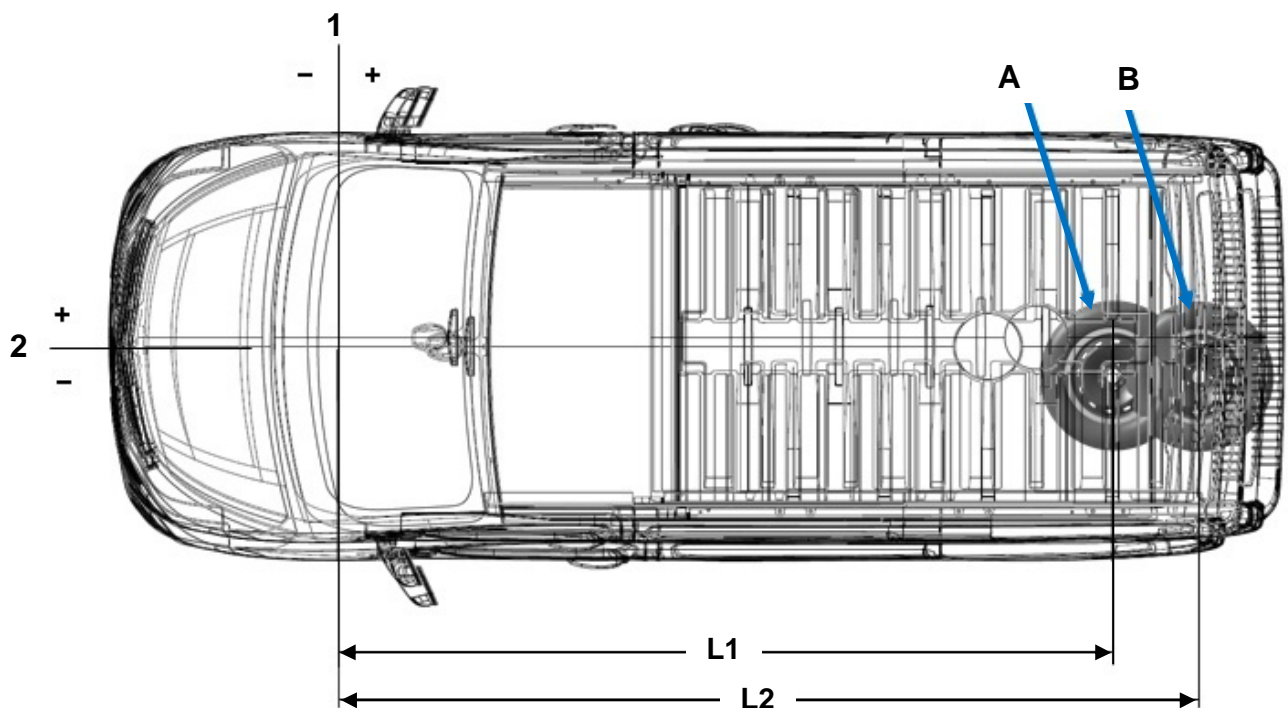
Distances between kerbs and between walls are given for both wheelbase versions L1 & L2 for turning manoeuvres.

	L1	L2
Wheelbase	3098 mm	3498 mm
Distance between kerbs	12,12 m	13,37 m
Distance between walls	12,82 m	13,97 m

### 1.9.3. SPARE WHEEL

#### Location of the spare wheel

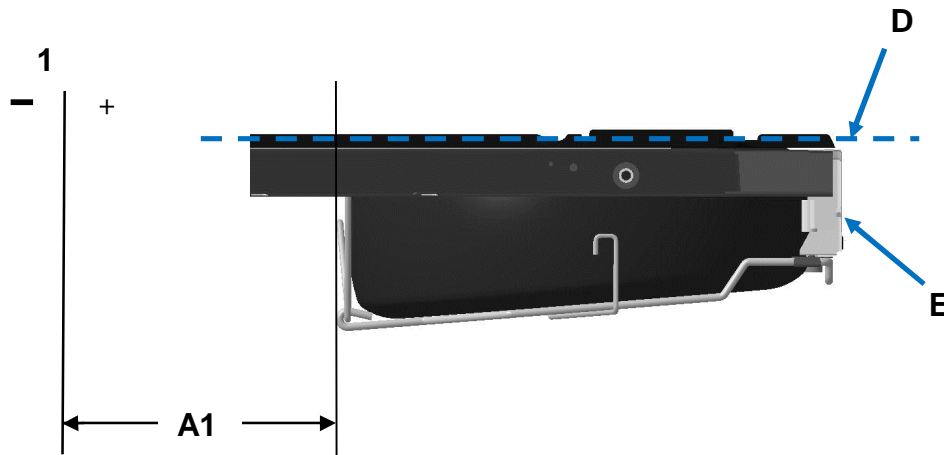
The spare wheel is located underneath the loading floor in a carrier designed for this purpose. In all cases where there is an extension or modification to the overhang, the spare wheel remains in this position.



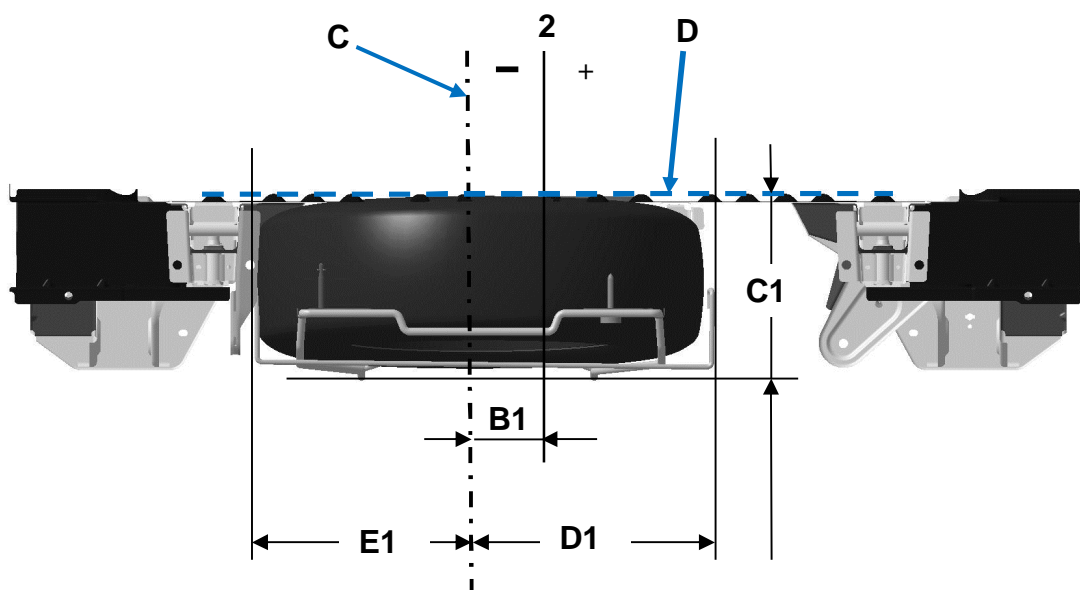
- 1 : Front wheel axle
- 2 : Body symmetrical axis

	Distance from Front wheel axle (1)	Distance from Body symmetrical axis (2)	Position spare wheel
L1 :	3495 mm	-107 mm	A
L2 :	3895 mm	-107 mm	B

Spare wheel dimensions - all types



View from rear of the vehicle



- C : Wheel centre
- D : Loading floor
- E : Rear floor end panel
- A1 : 3136 mm
- B1 : -107,3 mm
- C1 : 286 mm
- D1 : 363 mm
- E1 : 345 mm



## 1.10. FUEL SUPPLY SYSTEM / ADDITIONAL HEATER / AIR CONDITION / EXHAUST SYSTEMS

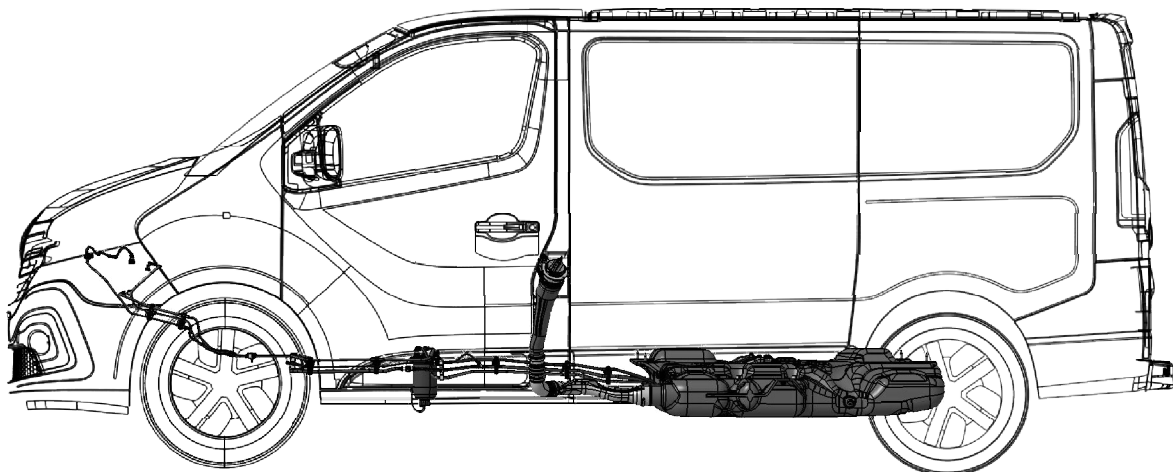
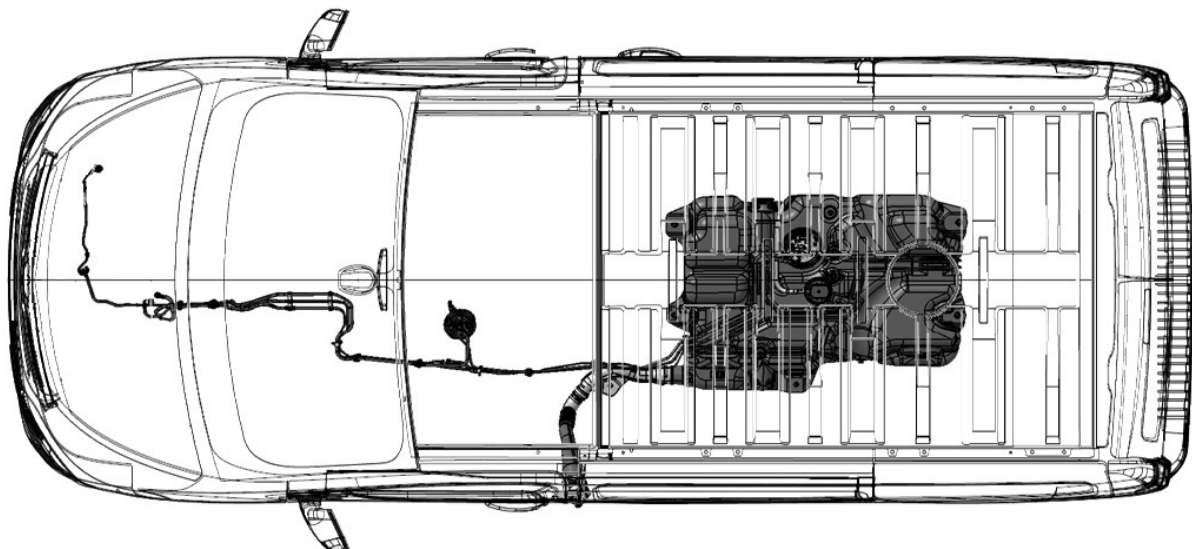
### 1.10.1. FUEL SUPPLY SYSTEM

#### Fuel tank

The standard production vehicle is supplied with one 80-litre fuel tank.

It is not possible to modify the fuel tank capacity.

Any modification to the fuel tank will require the bodybuilder to apply for a new type approval.

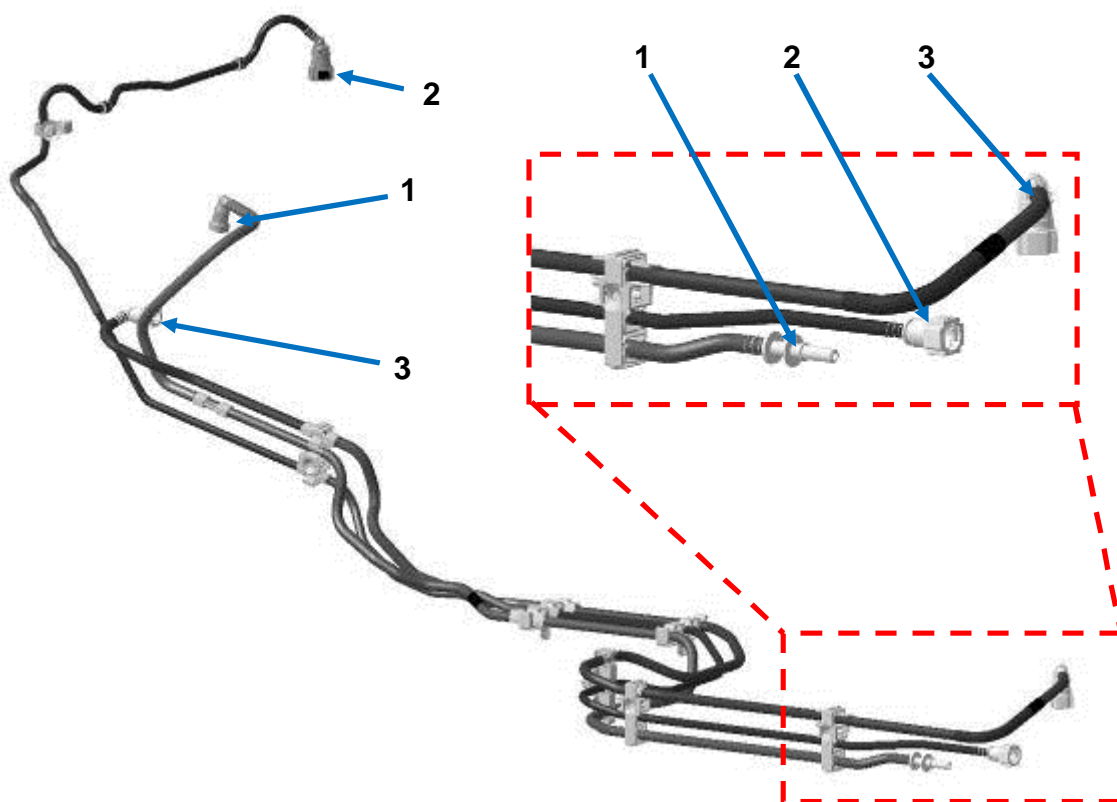






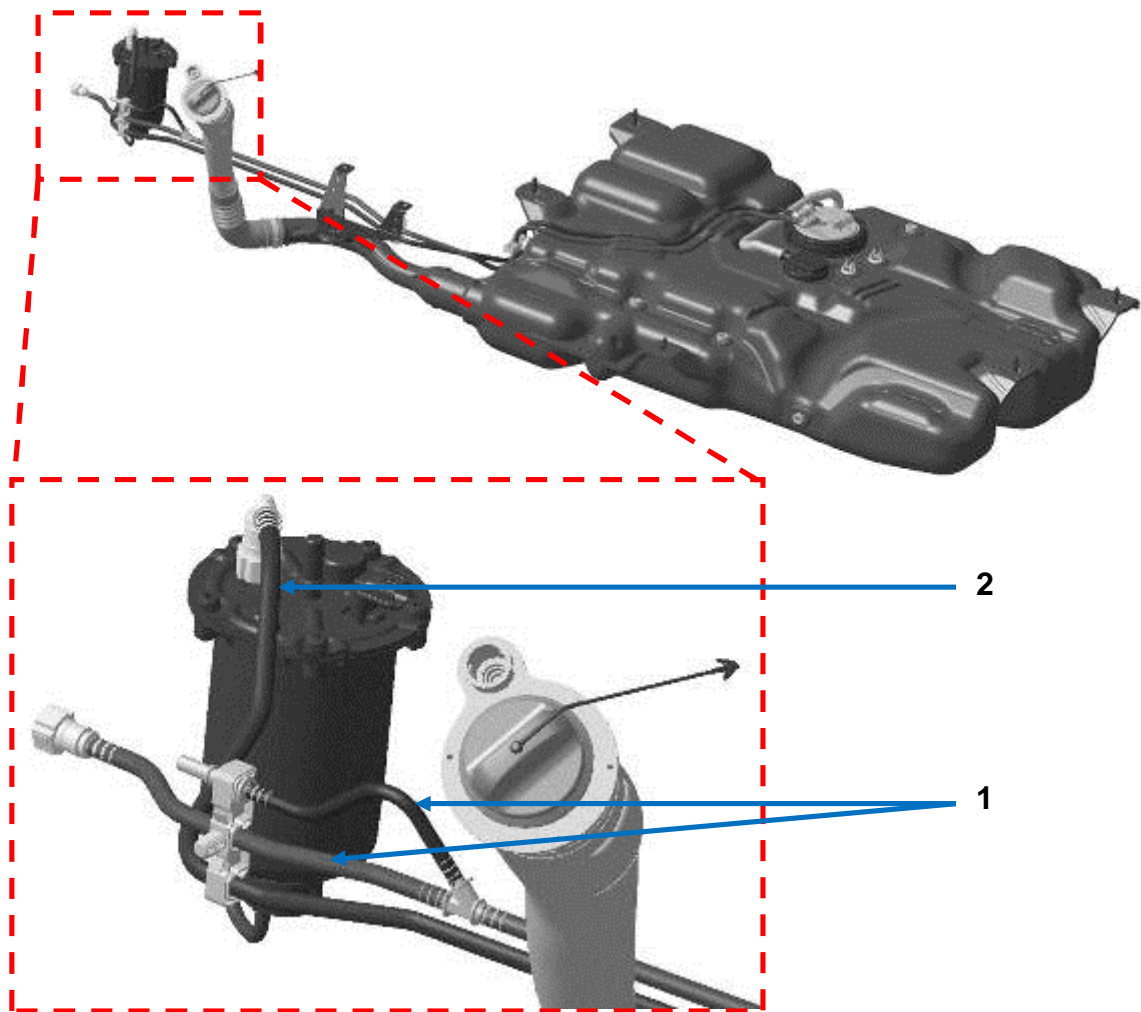
## Area details (A)

*The fuel system pipes for area (A) are identical for GEN 1 and GEN2 engines*



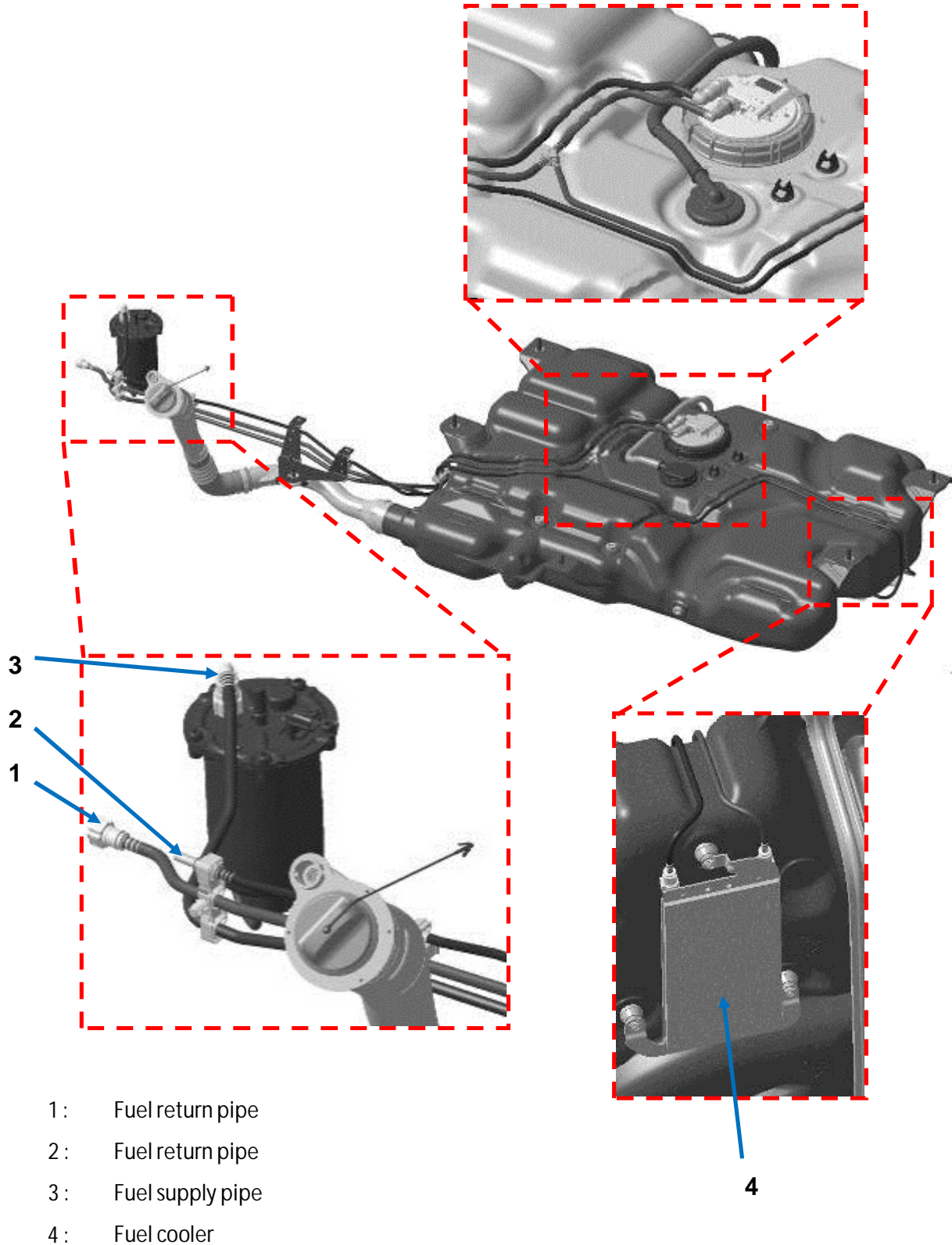
- 1: Fuel return pipe
- 2: Fuel return pipe
- 3: Fuel supply pipe

Area details (B) GEN1

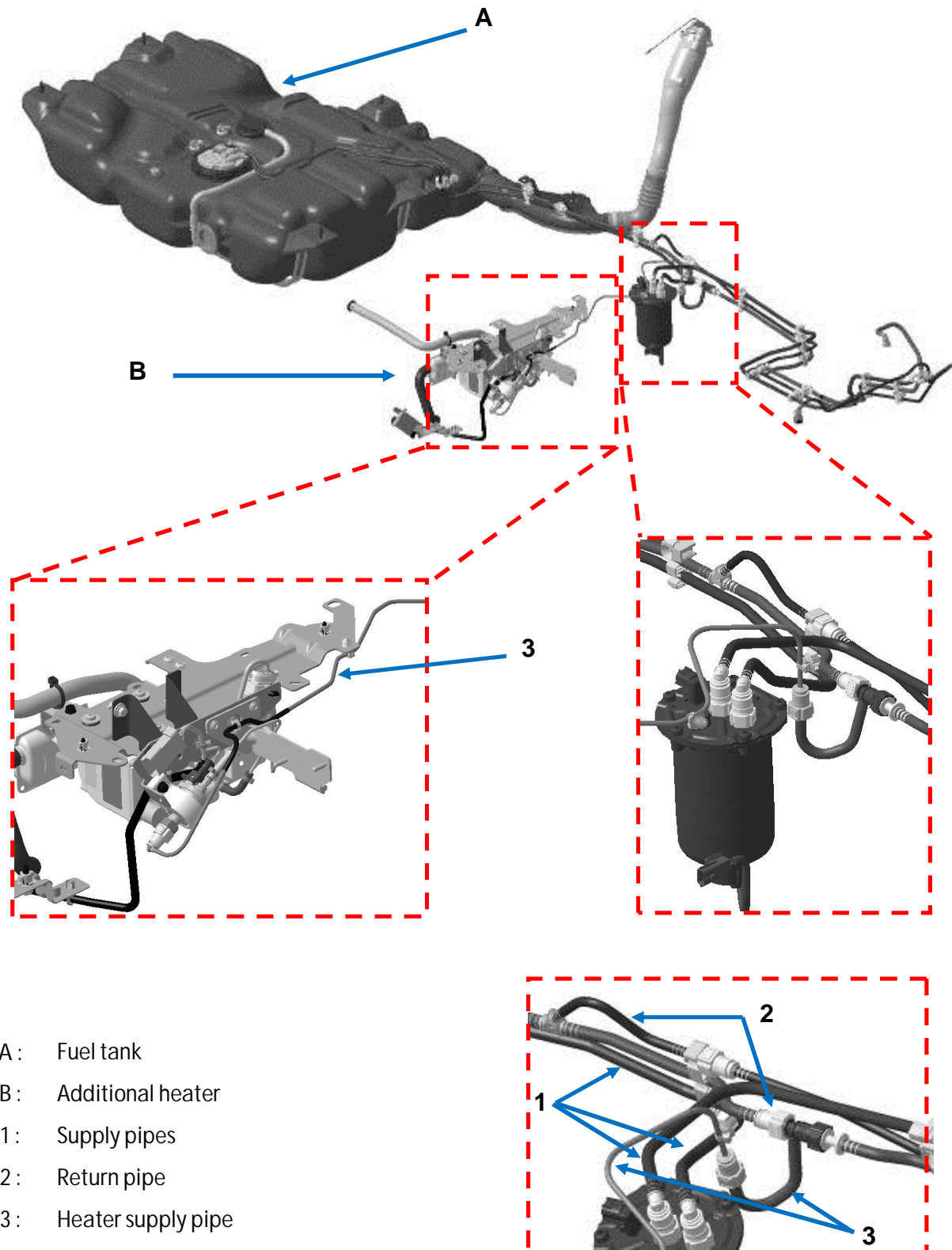


- 1: Fuel return pipe
- 2: Fuel supply pipe

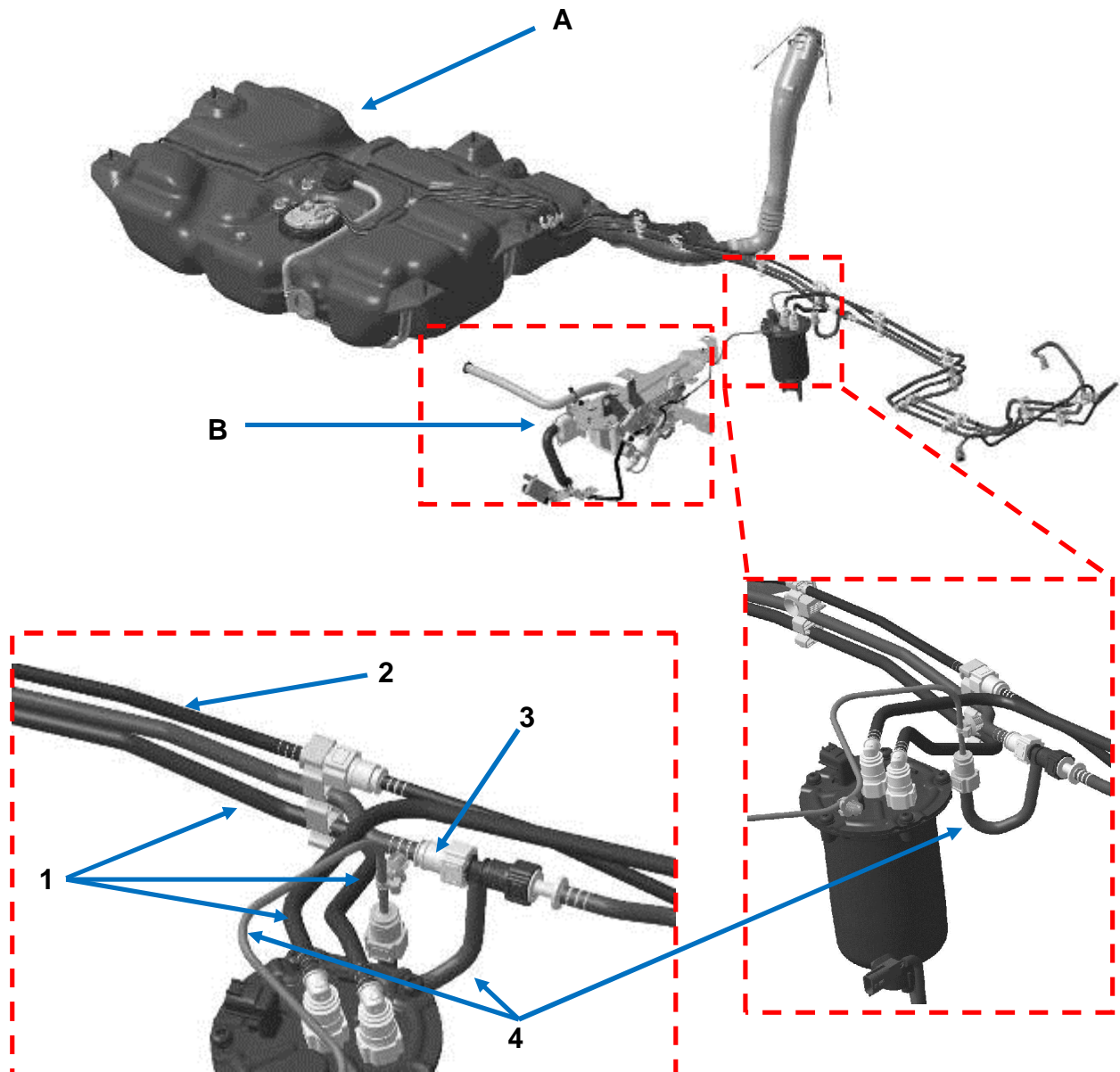
Area details (B) GEN2



### Fuel system with additional heater GEN1



### Fuel system with additional heater GEN2

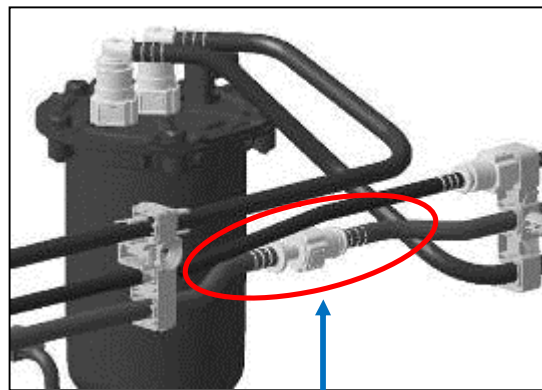


- A: Fuel tank
- B: Additional heater
- 1: Supply pipes
- 2: Return pipe
- 3: Heater supply pipe

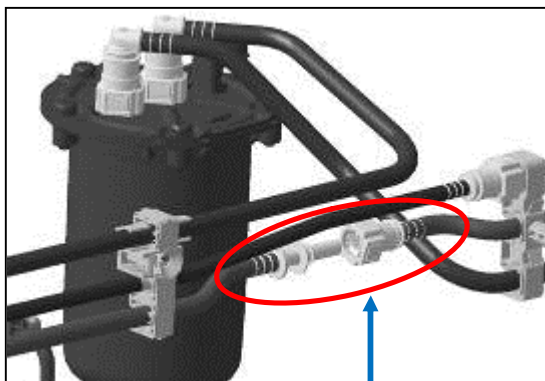
## 1.10.2. NON-STANDARD ADDITIONAL HEATER (BODYBUILDER)

### Fuel supply

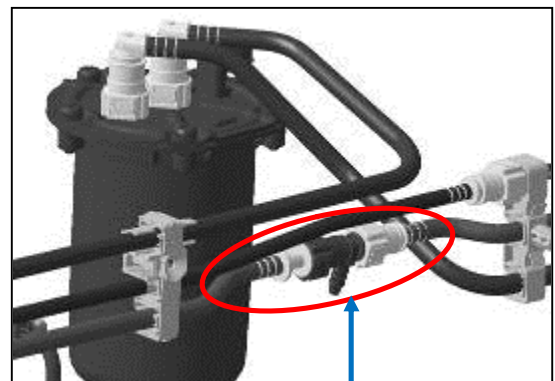
The heater supply is delivered via the fuel return connections (A) on the right-hand side of the fuel filter. Disconnect connections (B) and insert a T-piece connector (C).



A



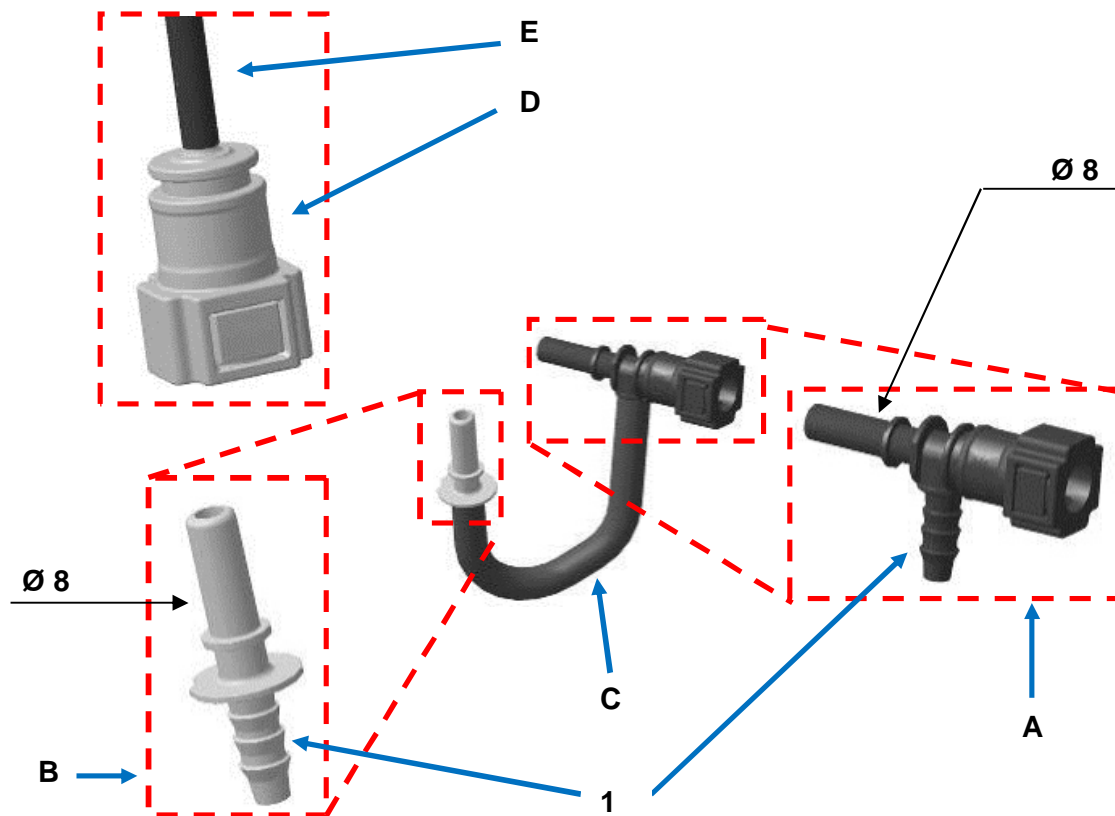
B



C

### Pipe and connections details

- Definition of the snap-fit T-piece connection (A) which is inserted between the front and rear pipes of the pump fuel return.
- Definition of the snap-fit straight connection (B) which is fitted onto the connection of the fuel supply pipe of the additional heater.
- Definition of the connecting pipe (C) between connections (A) and (B) via the "fir tree" fittings (1) (Ø10 x 8). (derived from the additional heater standard production option.)
- Items (B, C, D, E) are shown for information, they remain the initiative of the bodybuilder. (The pipe fitted with connections is standard for the additional heater option)



For information:

The various snap-fit connections used are from the companies RAYMOND or LEGRIS.

Fuel system.



*Fuel is sucked from the bottom of the fuel tank, so there is a risk of emptying the tank in stationary mode when on fuel reserve level.*

*With the engine running, the pressure inside the pump return system is high (about 0.5 bar), it may be necessary to add a pressure reduction device to the heater supply system (after the Tpiece connection).*

- It is prohibited to drill the fuel tank.
- Only connect to the return pipes designed for this purpose; see § 5.1
- For all types of connection, the bodybuilder must check that the device is able to withstand a pressure four times the operating pressure (or approximately 4 bar).
- The device must be able to withstand a temperature of between 70 and 80°.

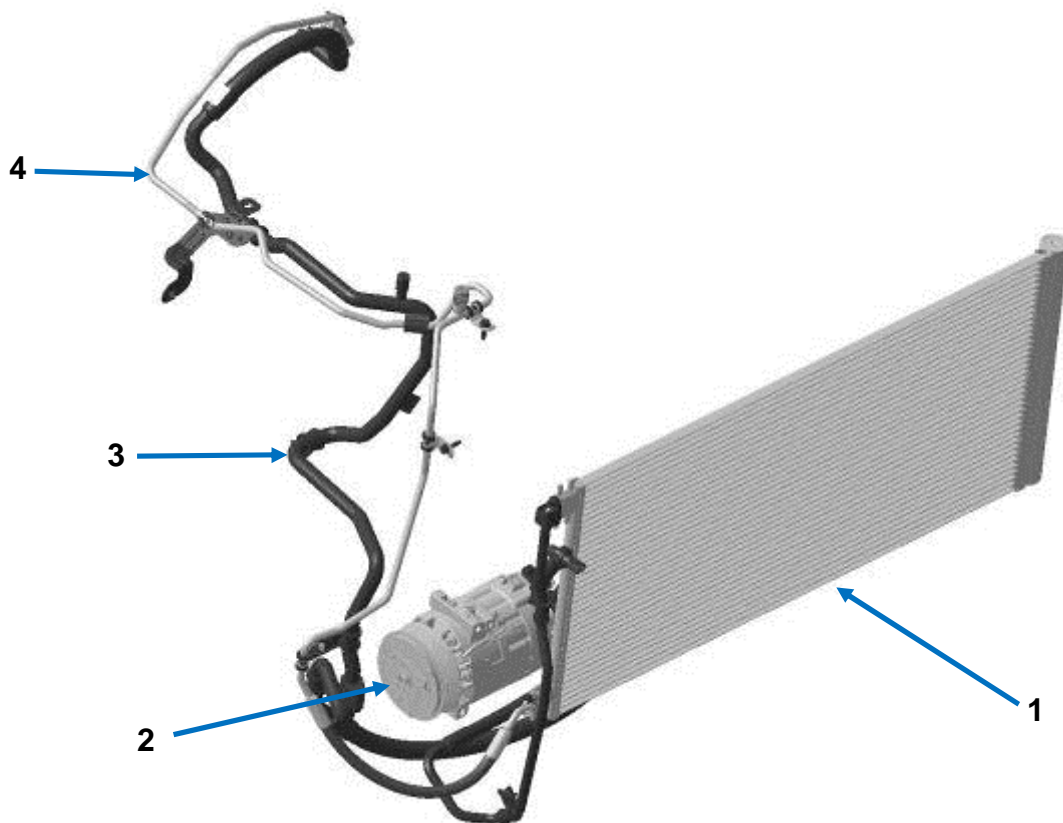


### 1.10.3. AIR CONDITIONING SYSTEM DIAGRAM

The vehicle range offers two types of air conditioning system depending on the vehicle. These are described below:

- Air conditioning system for Panel Van (F82)
- Air conditioning system for Combi (J82)

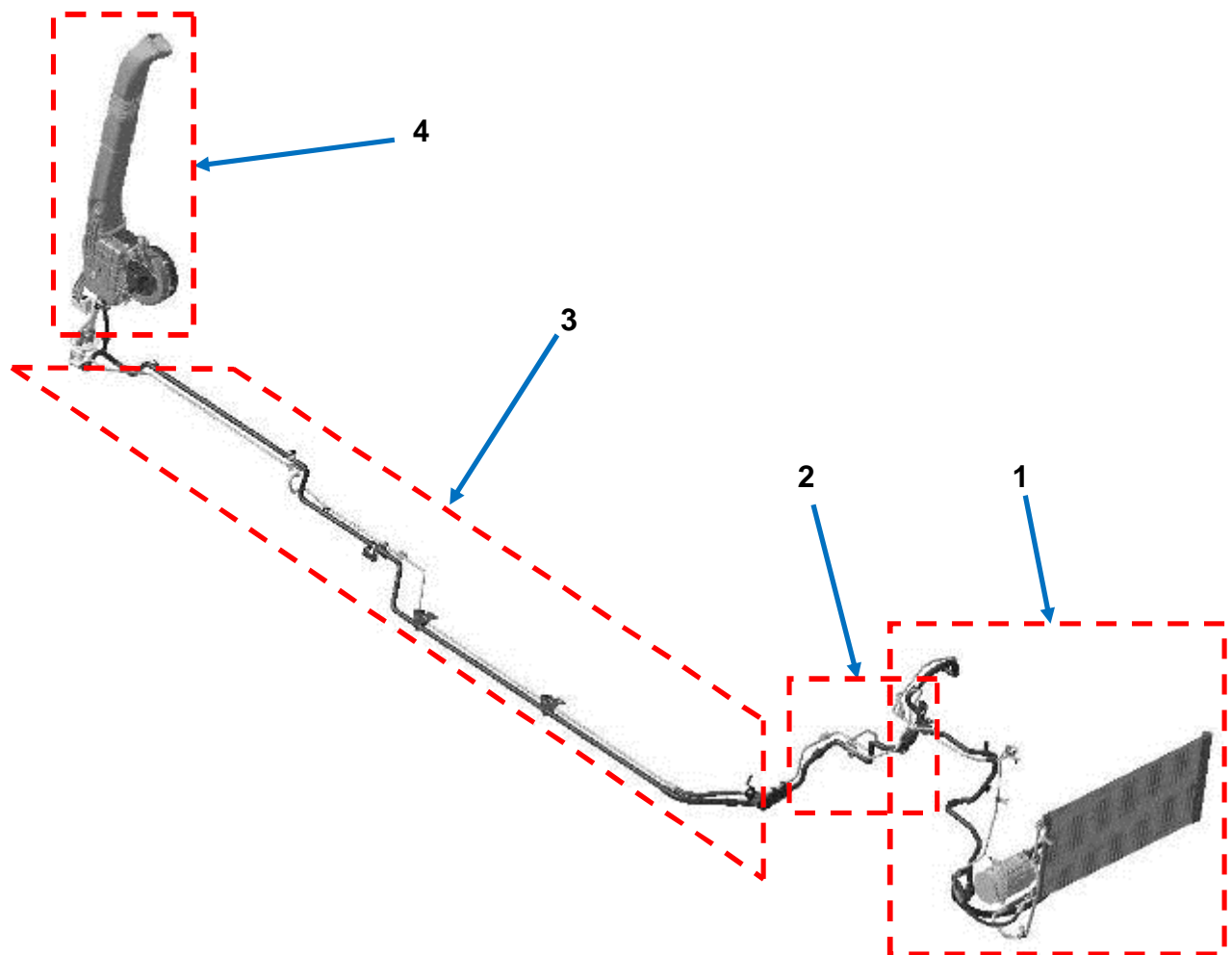
Panel van air conditioning system



- 1: Condenser  
2: Compressor  
3: Low-pressure pipe  
4: High-pressure pipe

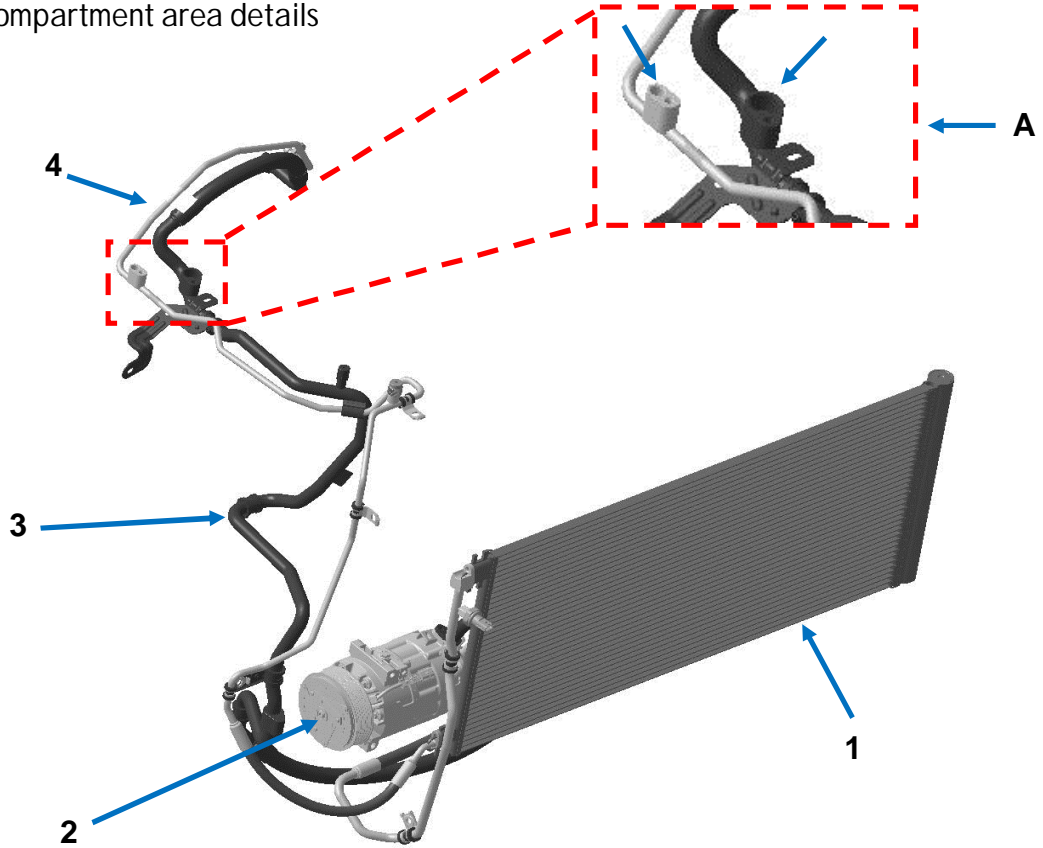
**Note:** *Option of fitting an additional air conditioning system using the Combi pipes from the engine compartment (see details of A below)*

### Combi additional air conditioning system



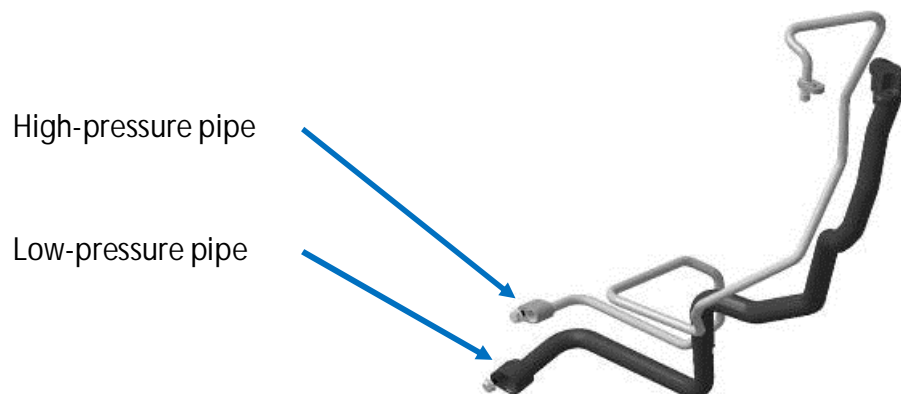
- 1: Engine compartment area
- 2: Engine compartment/underbody area
- 3: Underbody area
- 4: Rear attachment ring area

Engine compartment area details

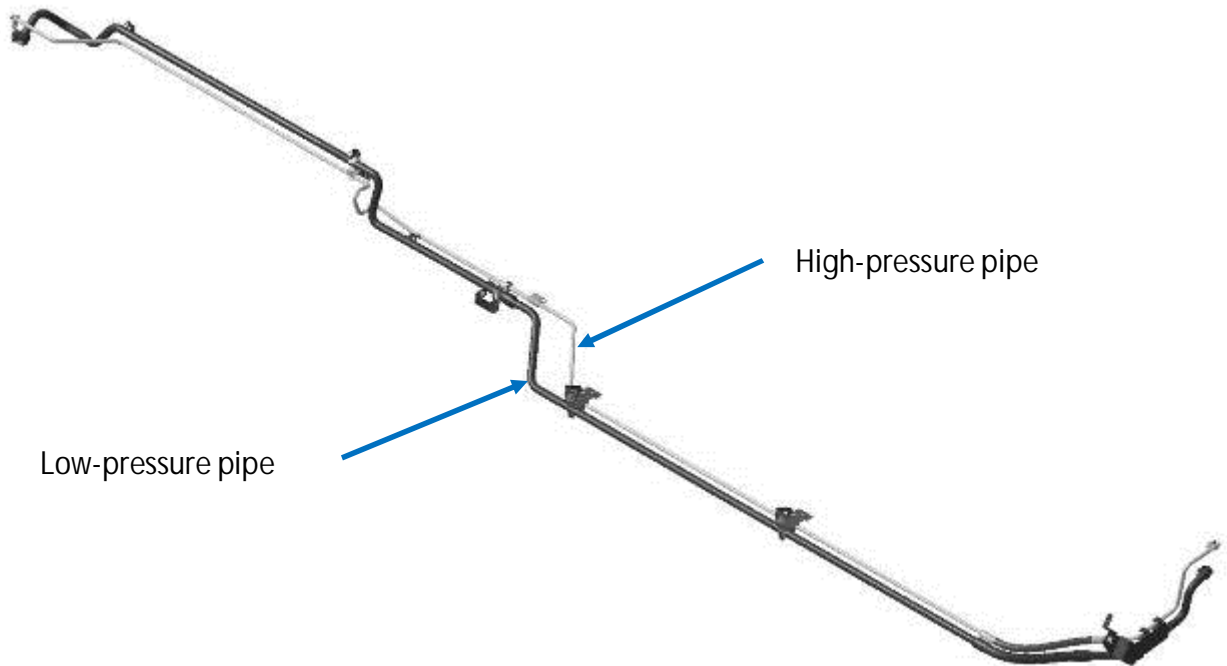


- 1: Condenser
- 2: Compressor
- 3: Low-pressure pipe
- 4: High-pressure pipe
- A: Additional air conditioning interfaces

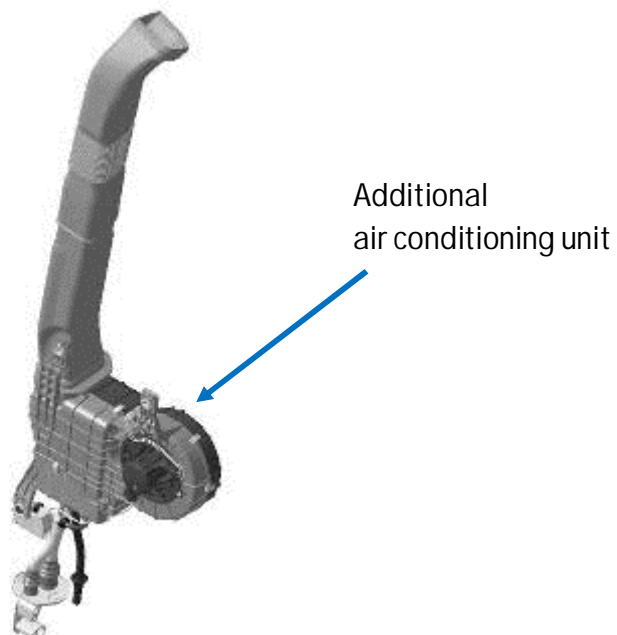
Engine compartment and underbody area details



### Underbody area details



### Rear attachment ring area details



#### 1.10.4. EXHAUST SYSTEMS

When dismantling an exhaust system, the fitting recommendations in the general guidelines (exhaust system) must be followed to avoid generating residual constraints detrimental to acoustics and reliability.

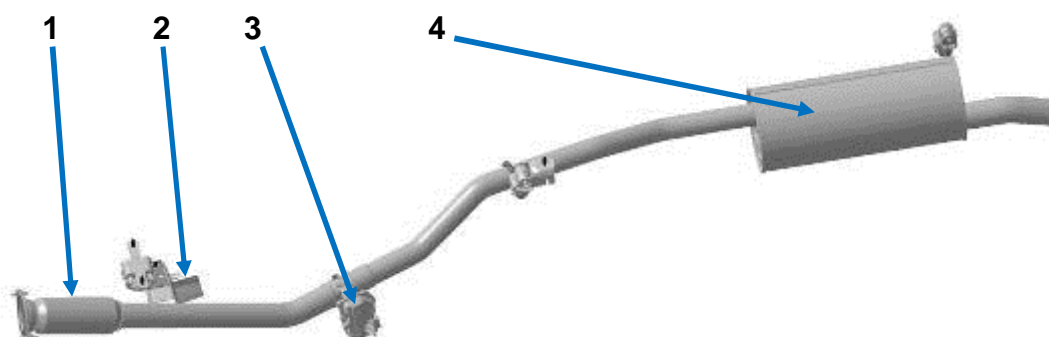
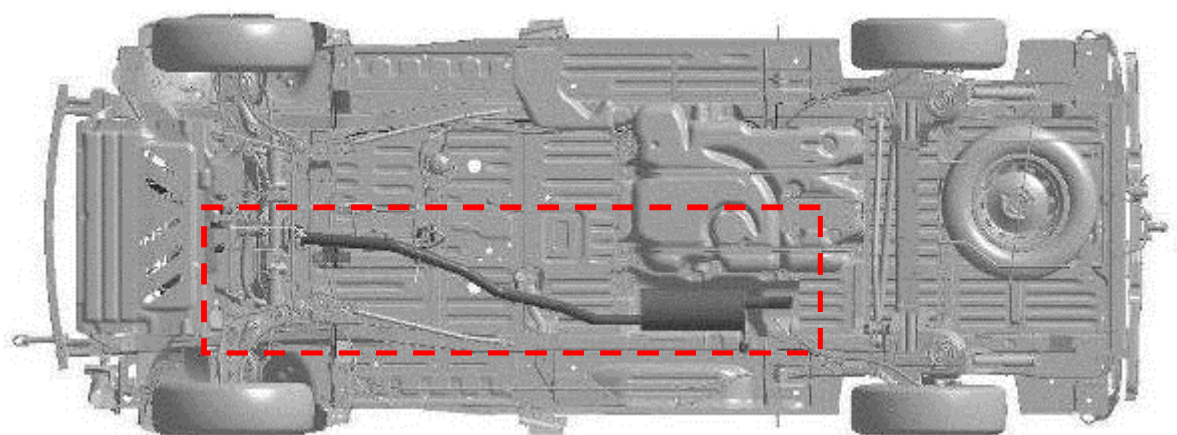
*Any modification may alter the vehicle type approval (engine power rating, noise or exhaust emissions). This action is taken at the sole responsibility of the bodybuilder*

##### General Information

The vehicle has two types of exhaust system, which can be identified as follows:

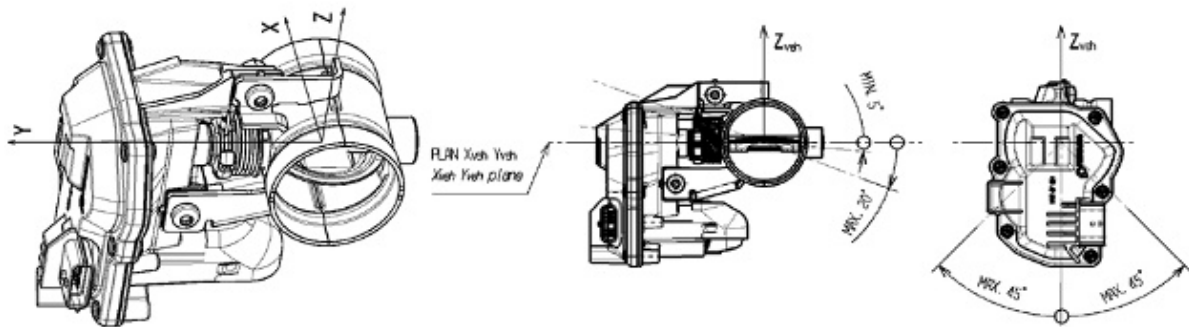
Generation 1 type exhaust: for engine suffix 408

The catalytic converter is built into the engine (single turbo) and is located in the engine compartment.



- 1: Flexible
- 2: Damper (with or without)
- 3: EGR valve
- 4: Silencer

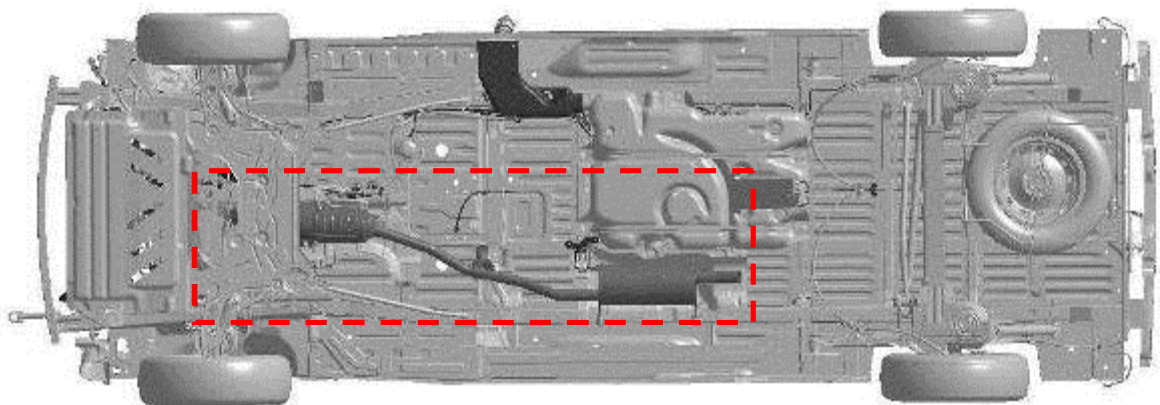
EGR valve (3) and damper (2)



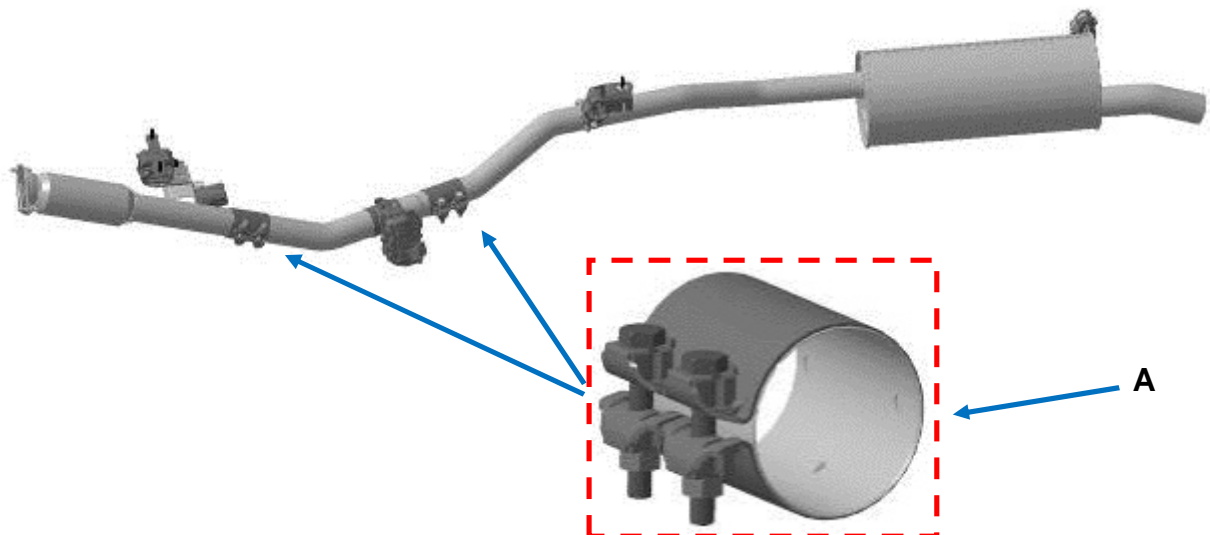
*Use in a configuration other than the preferred may cause operational damage. In such cases, the customer must obtain approval by means of vehicle testing specific to the application.*

Generation 2 type exhaust: engine suffix 450

The catalytic converter and particulate filter are suspended underneath the sub-frame (floor panel) of the vehicle (twin turbo engine).

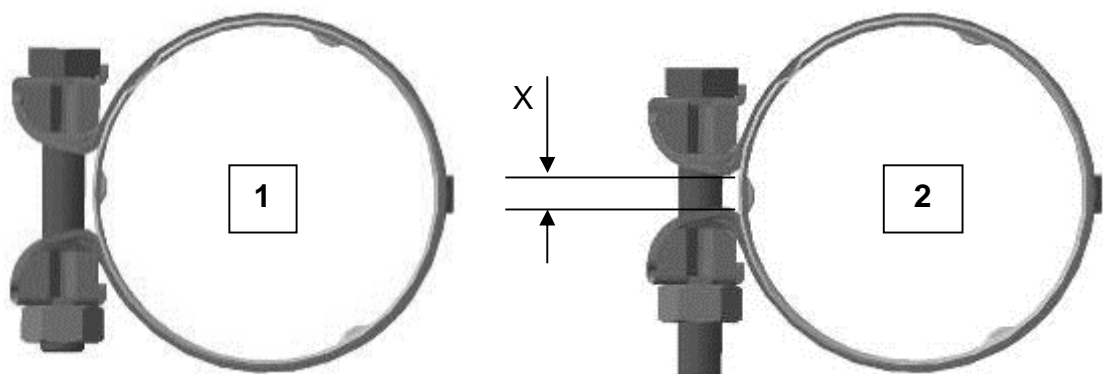


### Recommendation for exhaust pipe cutting



Use the exhaust clamp (A), available in After-Sales, when changing components on the exhaust system.

Apply the following procedure, depending on the tooling used to tighten the connection clamp:  
Use an automatic screwdriver (factory type tool and not impact), to torque tighten to 21 Nm. During manual tightening, this should be carried out as straight and as smoothly as possible.



- 1: Open
- 2: Closed

Tightening stops when the clearance X between the ends of the clamp is between 3 to 9 mm (corresponding to a torque of about 18 Nm).

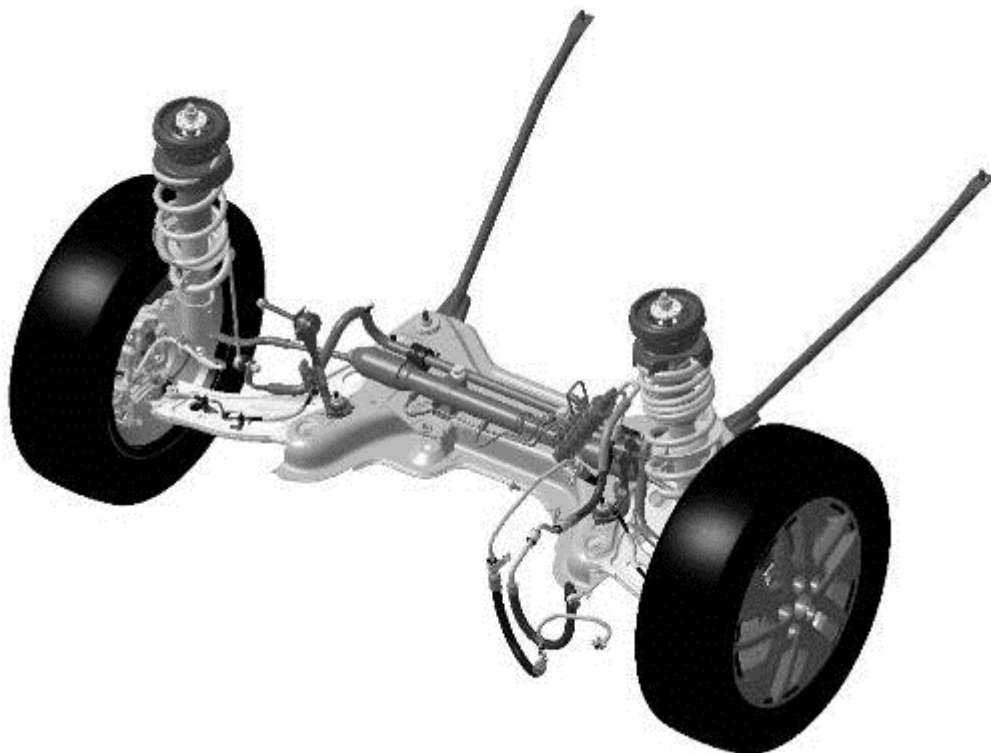
## 1.11. FRONT & REAR SUSPENSION / BRAKES / ELECTRONIC STABILITY CONTROL (ESP)

### 1.11.1. SUSPENSION

Note: *ESP on the basic vehicle is not compatible with a modification to the suspension. (see also chapter 3 - VEHICLE CONVERSION LIMITS AND CALCULATIONS)*

#### FRONT SUSPENSION

The front suspension is a Macpherson strut type suspension. It has an anti-roll bar. The coil-type spring stiffener varies according to the vehicle type and kerb weight. Several different springs are available based on their stiffness (45.6 to 64 N/mm.)



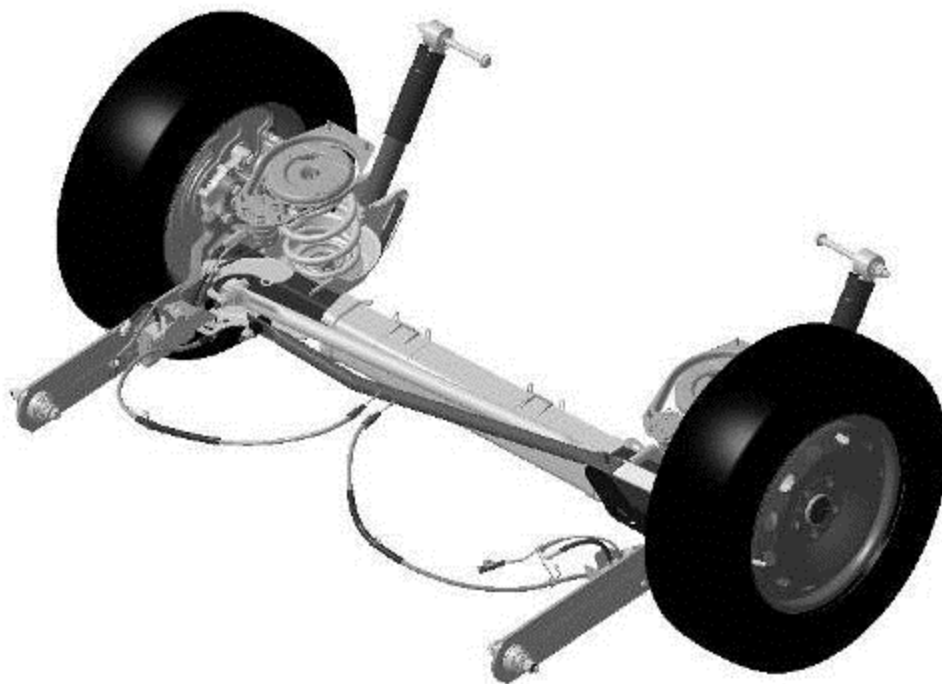


## REAR SUSPENSION

The rear suspension is a Panhard bar type.

Three different bi-tilt springs are available. Their stiffness varies depending on the vehicle:

- Panel van: 28-74,8 N/mm
- Combi : 31-70 N/mm
- Panel van L2 with reinforced suspension (criterion CMB, special build): 56-93.75 N/mm  
(See also chapter 2.2 – AXLE-LOAD DISTRIBUTION)



### 1.11.2. BRAKE SYSTEM DIAGRAM

The vehicles are all fitted with ABS and ESP as standard.

ABS: Anti-lock Braking System.

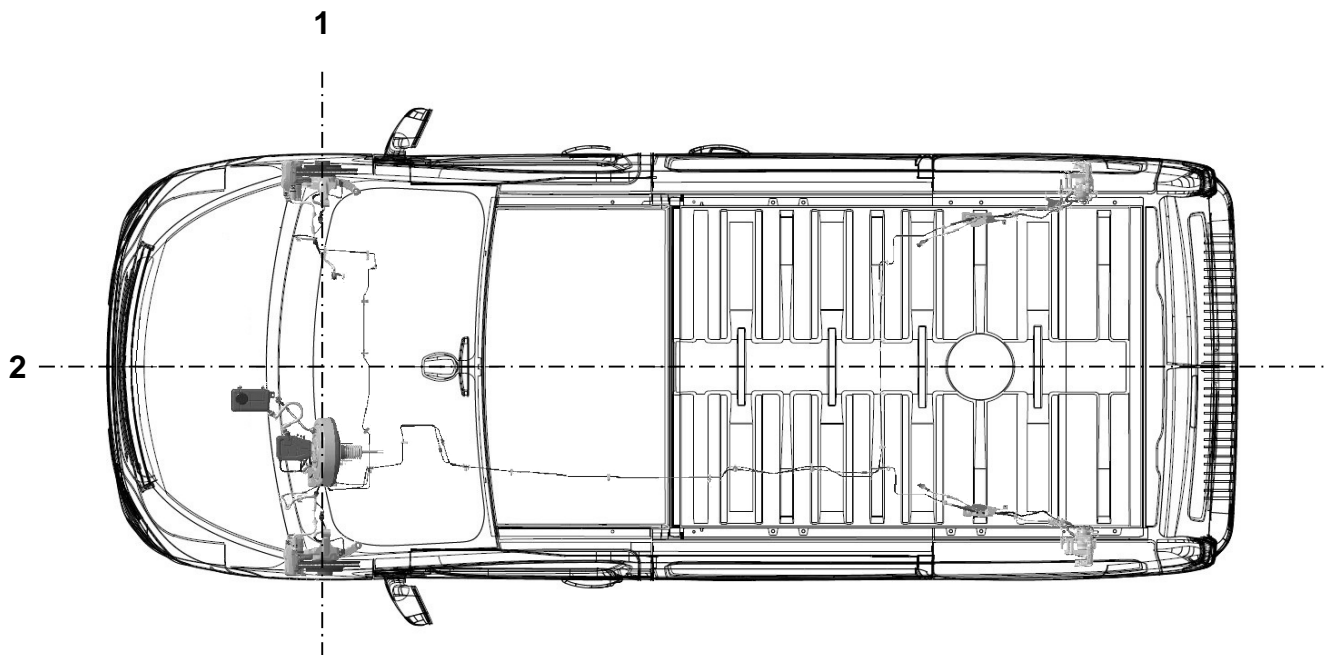
ESP: Electronic Stability Program (Traction control).

The brake servo remains located on the left-hand side of the vehicle, whether the vehicle is right hand drive or left-hand drive.

Note :

*ESP on the basic vehicle is not compatible with a modification to the brake system (see also chapter 3 - VEHICLE CONVERSION LIMITS AND CALCULATIONS).*

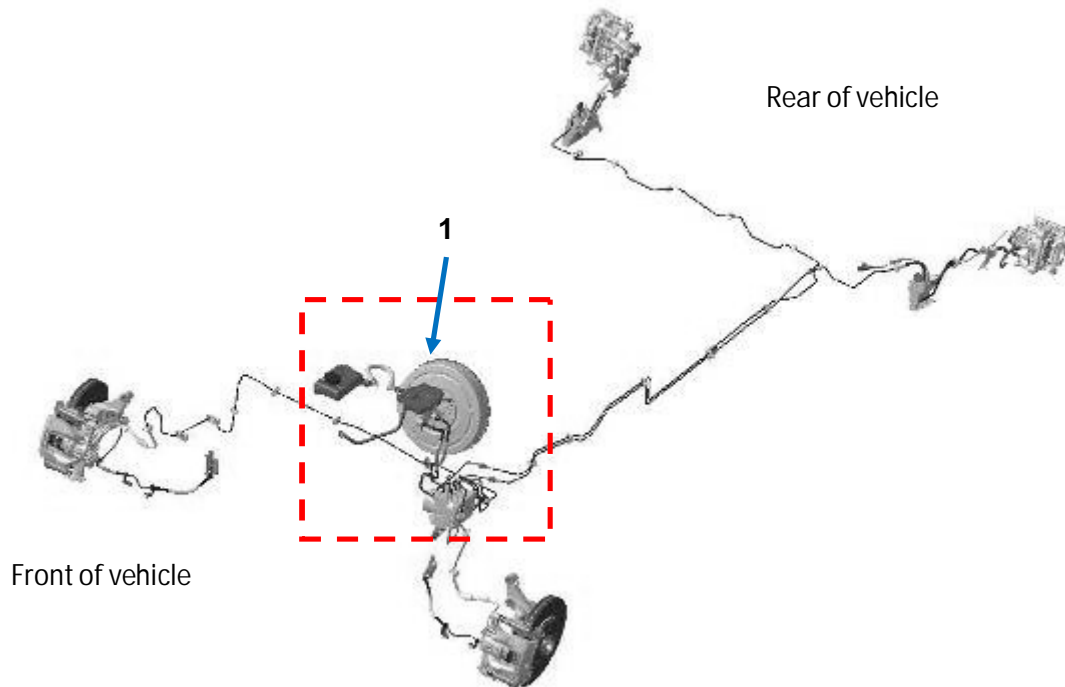
Brake system installation



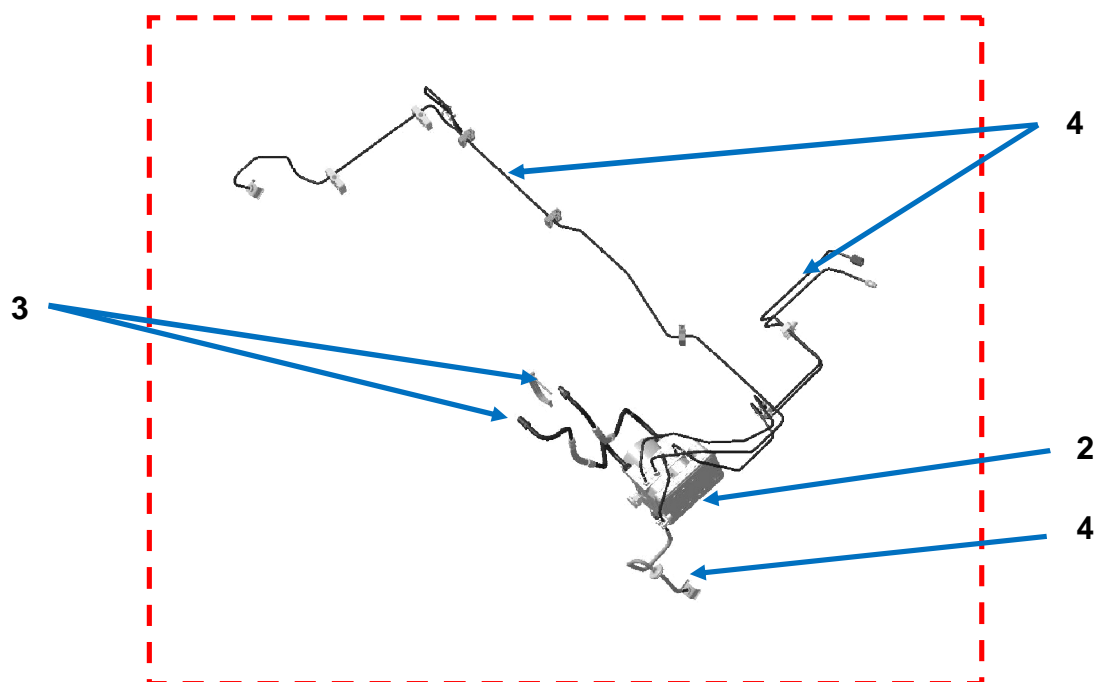
1: Front wheel shaft

2: Body axis

### Brake system details

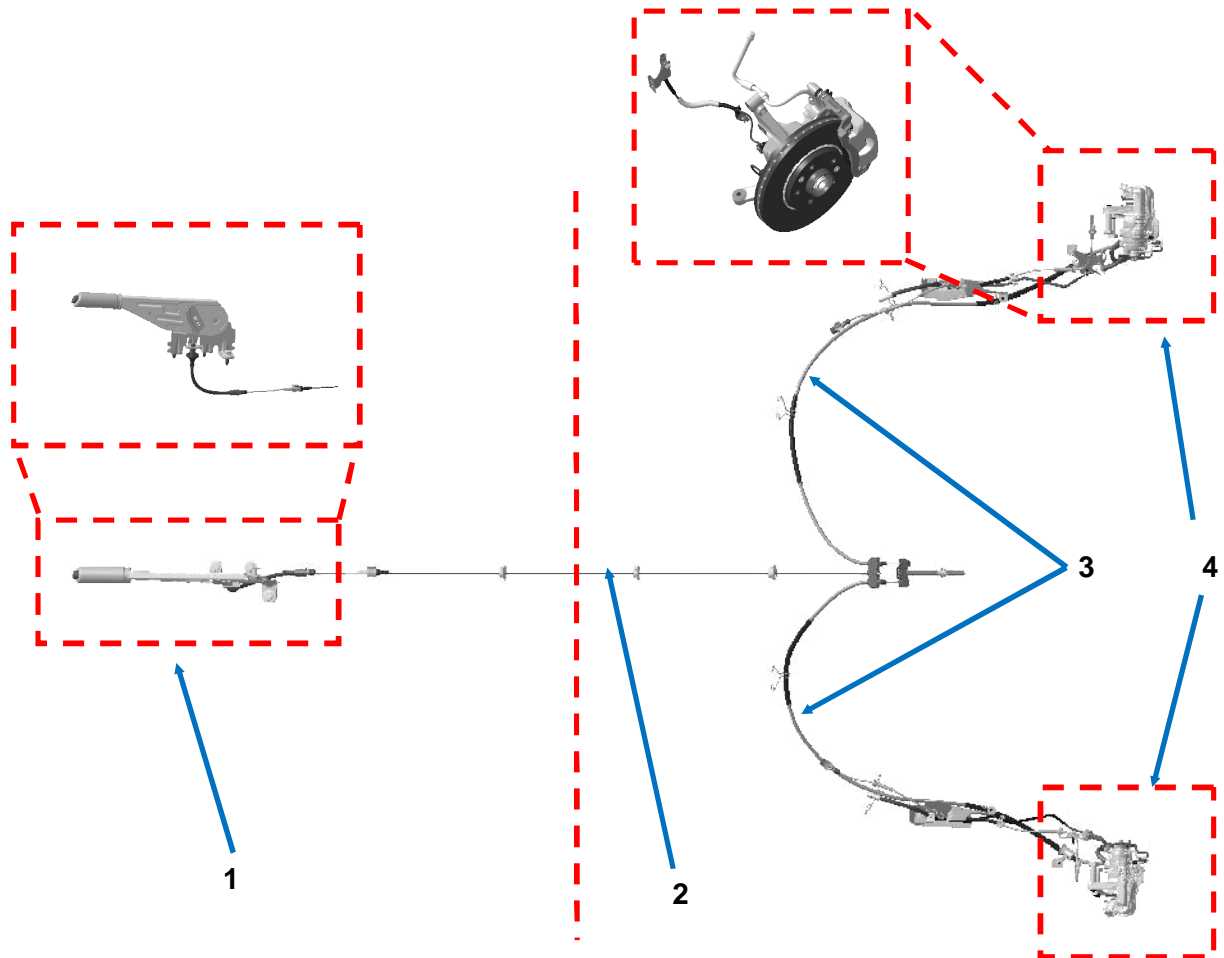


- 1: Brake servo
- 2: ABS/ASR/ESP hydraulic unit
- 3: ESP hybrid brake pipes
- 4: Rigid brake pipes



Depending on the vehicle length (L1, L2), only the length of the underbody pipes and underbody cable have changed.

Parking brake:



- 1: Hand brake lever
- 2: Parking brake primary cable
- 3: Parking brake secondary cables
- 4: Disc brakes

Attention:

*After any operations on the hand brake cable (modification of routing, extension, removal), it is essential to have the hand brake adjusted by a OPEL dealer*

### 1.11.3. ELECTRONIC STABILITY PROGRAM (ESP)

#### MODIFICATIONS AFFECTING THE OPERATION OF THE ESP

The table below details the modifications of parts or functions:

- \* the operation of the ESP is greatly affected by these types of conversion
- \*\* the operation of the ESP is likely to be affected if the corresponding comments are not complied with.

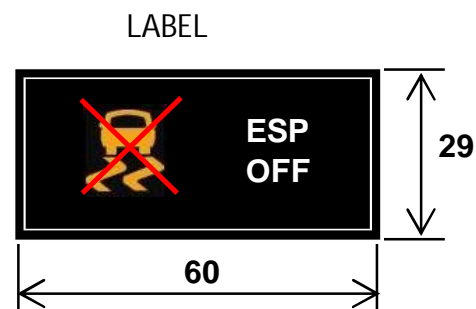
Modification	Detail	*	**	Comments
Structure	Wheelbase	X		
	Tracks	X		
Ground links	Suspension (springs, travel limit stops, anti-roll bars, shock absorbers)	X		Anything that changes the stiffness and/or elasto-kinematics of the suspension.
	Tyres (dimensions, stiffness, etc.)		X	Only tyres with specifications identical to standard production tyres (dimensions, load index, speed code) => Only if different from standard tyres
	Ratio of the steering wheel and wheels	X		
	Brake system		X	Seule une modification du parcours tuyauterie rigide est autorisée.
Power , train	Engine, gearbox	X		
Electromagnetic retarder		X		
The sensors connected to the ESP (steering-wheel angle, wheel speed, lateral acceleration, yaw angle)	Displacement and modification of the installation	X		
CAN Bus		X		
Roof rack			X	Comply with the permissible load on the standard production version

## DEACTIVATION OF THE ESP OPTION

Deactivation consists of removing the traction control and stability control functions.

It is essential to add an ESP deactivation warning label to the dashboard.

The label is to be designed and put in place by the bodybuilder.



## OPEL VIVARO (X82)

1.11 – FRONT & REAR SUSPENSION / BRAKES / ELECTRONIC STABILITY CONTROL



**VAUXHALL**



Wir leben Autos.

## 1.12. SEATS / SEAT BELTS

### 1.12.1. SEATS

When a conversion requires removal of the seat or seat belts, it is prohibited to fit other components into the original assembly during reassembly.

All the operations must be carried out with the ignition switched off, the battery disconnected and the airbag computer locked (using the diagnostic tool).

Any contact with the conductive parts of the pyrotechnical components should be avoided (airbag or seat belt pre-tensioners) due to static electricity.

The seats must be refitted using a torque wrench, in compliance with the tightening torque values given below.

The front and rear brackets of seats in rows 2 and 3 may be removed, but it is prohibited to dismantle the components of these seats.



*Note: For keyless vehicles with Start/Stop, the driver's seat has a seat pad designed to register entry and exit from the vehicle. If the driver's seat is changed, it is essential to re-use the same seat pad (company IEE) and to retain the seat belt fastening detection system.*

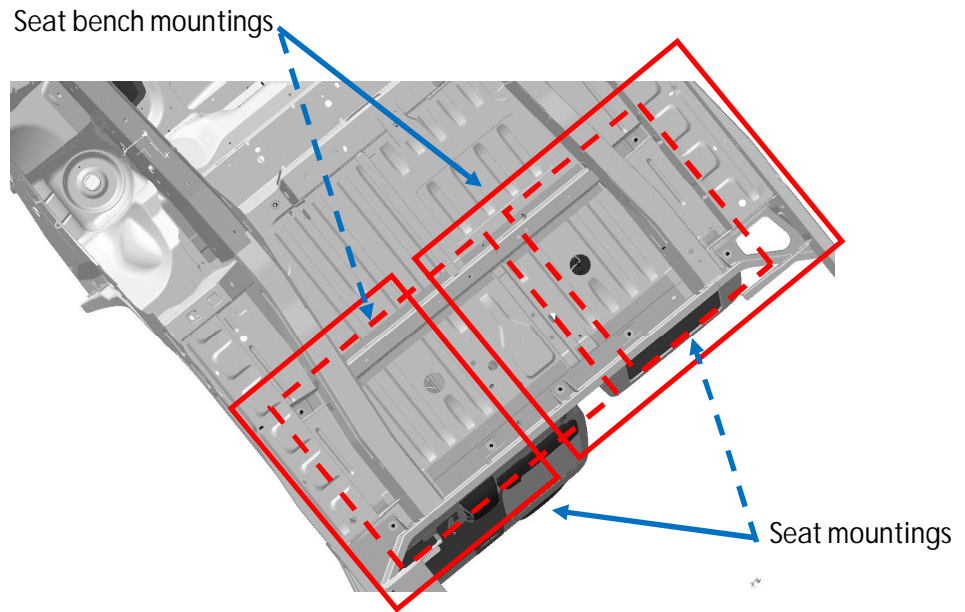
	<i>Company IEE</i>
<i>Occupant detection pad</i>	<i>004869</i>

*It is prohibited to use the bolts again once they have been removed. The bolts must be replaced with new bolts.*

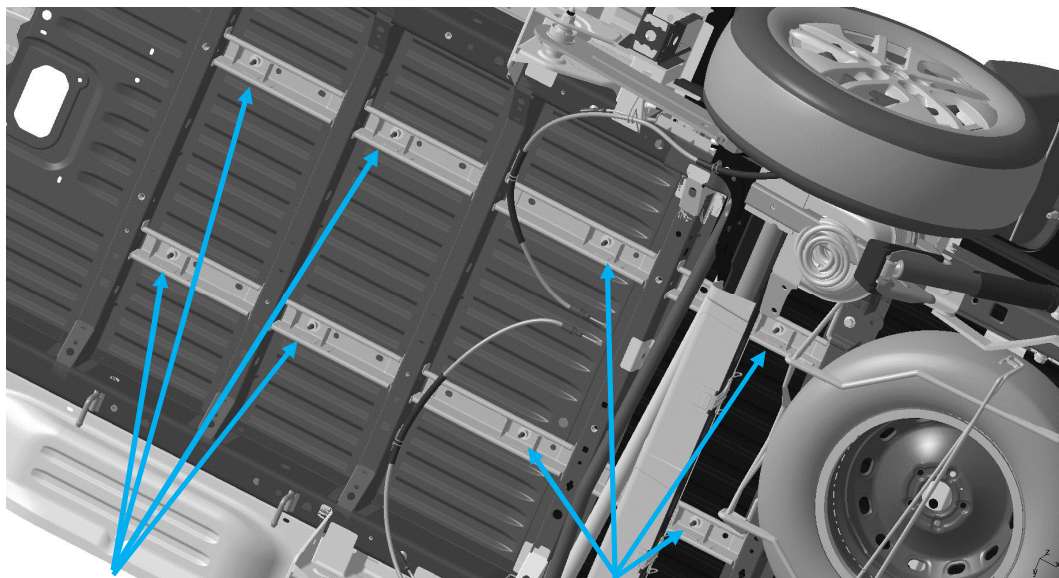


### Floor panel

The front floor panel is unique for all vehicle versions. In addition, a seat bench or seat can be fitted on the passenger side whether the vehicle is left-hand or right-hand drive.



On Combi, the centre and rear floor panels are specific. Seat bench can be fitted.



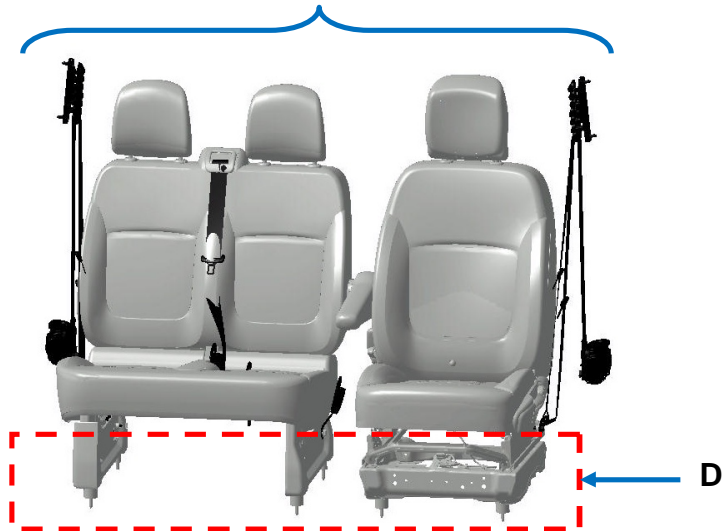
fixing part  
seat bench, 2<sup>nd</sup> row

fixing part  
seat bench, 3<sup>rd</sup> row

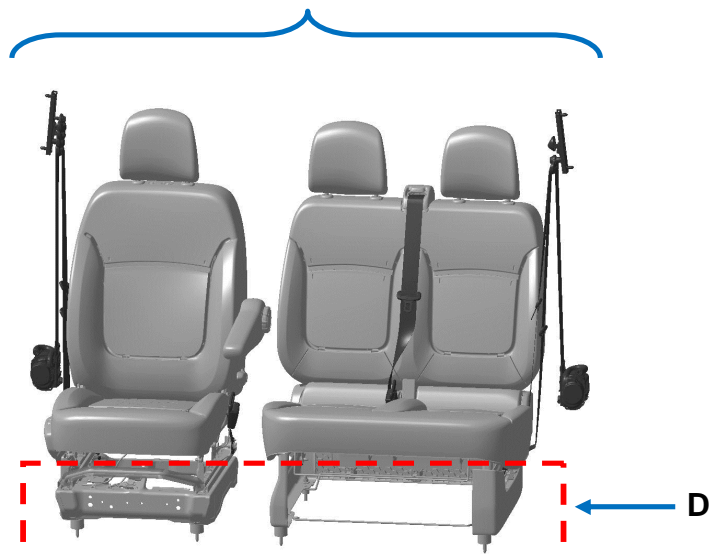
Version with seat ROW 1

Panel van and Combi (1 driver + 2 passengers)

Left-hand drive



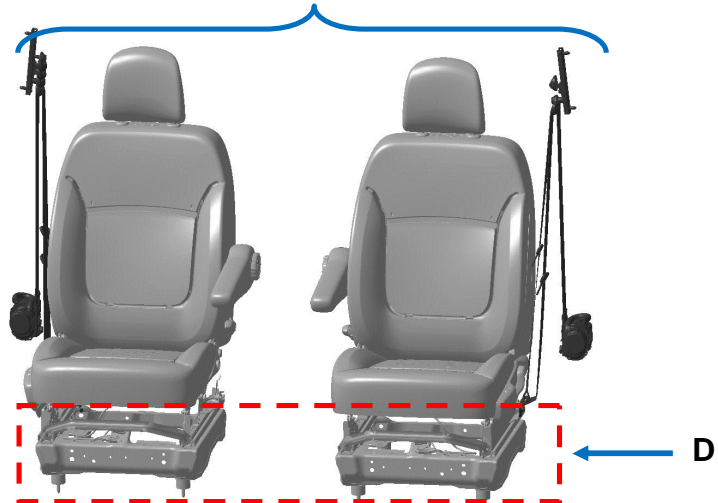
Right-hand drive



	Tightening torques (N.m)	Mounting part
D	44 Nm ± 15%	8 Vis H EMBASE RDL-M10x70-50

Panel van and Combi (1 driver + 1 passenger)

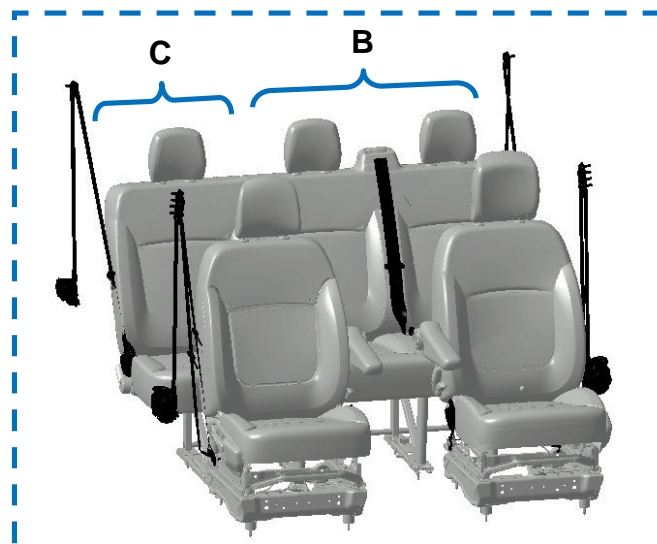
Left-hand drive and right-hand drive



	Tightening torques (N.m)	Mounting part
D	44 Nm ± 15%	8 Vis H EMBASE RDL-M10x70-50

Version with seat ROW 1 and 2

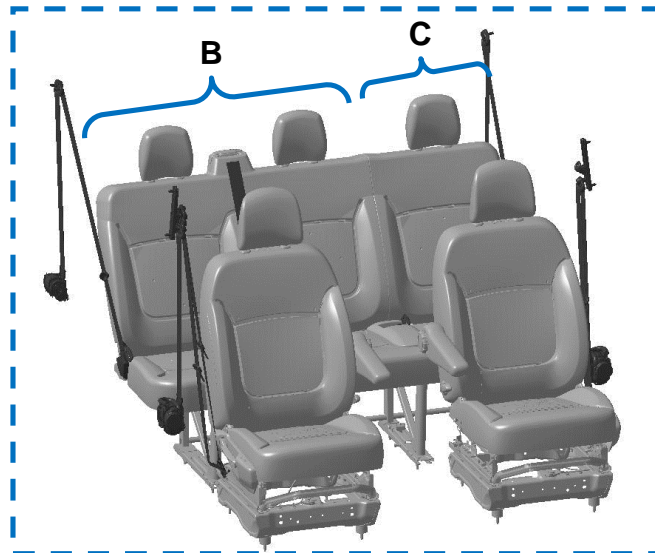
Left-hand drive



B: 2/3 seat bench

C: 1/3 seat bench

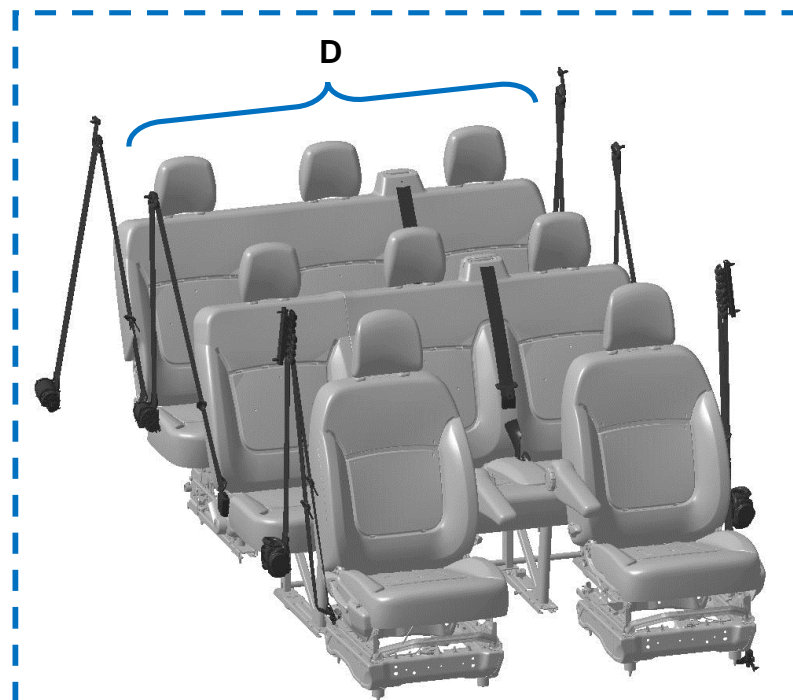
Right-hand drive



- B: 2/3 seat bench
- C: 1/3 seat bench

Version COMBI ROW 3

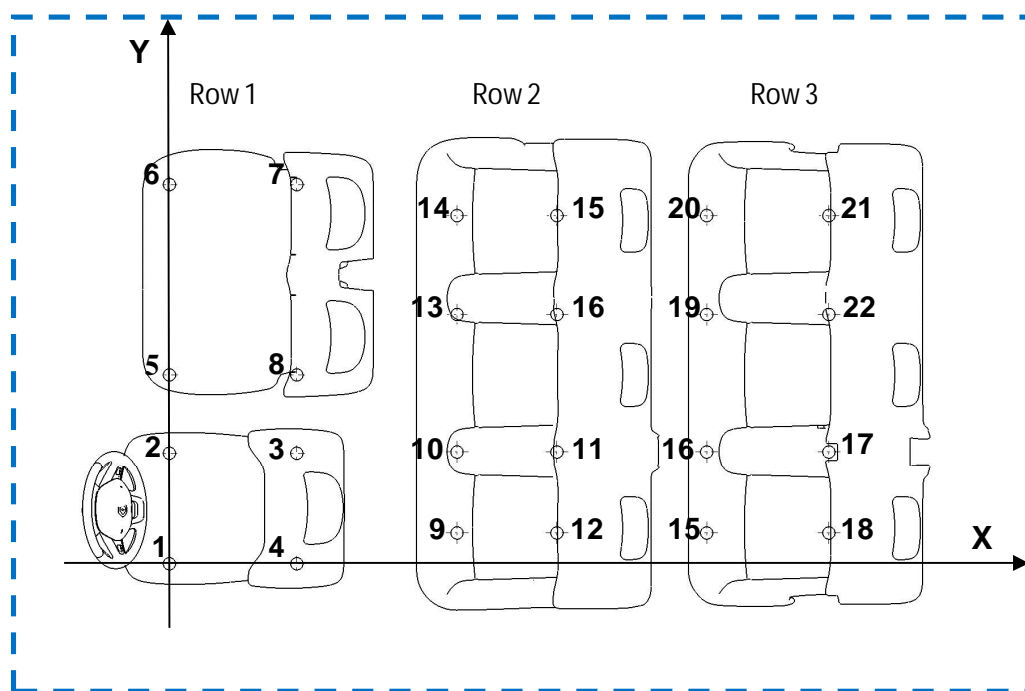
Left-hand drive and right-hand drive



- D: 3-place seat bench

## Seat and seat bench mountings

Left-hand drive (version with passenger bench seat in row 1)



### Passengers 1<sup>st</sup> row

Pos	X	Y
1	0	0
2	0	362
3	414	0
4	414	362

Pos	X	Y
5	905	254
6	905	616
7	414	616
8	414	254

### Passengers 2<sup>nd</sup> row

9	935	100
10	935	366
11	1260	366
12	1260	100

13	935	558
14	935	882
15	1260	882
16	1260	558

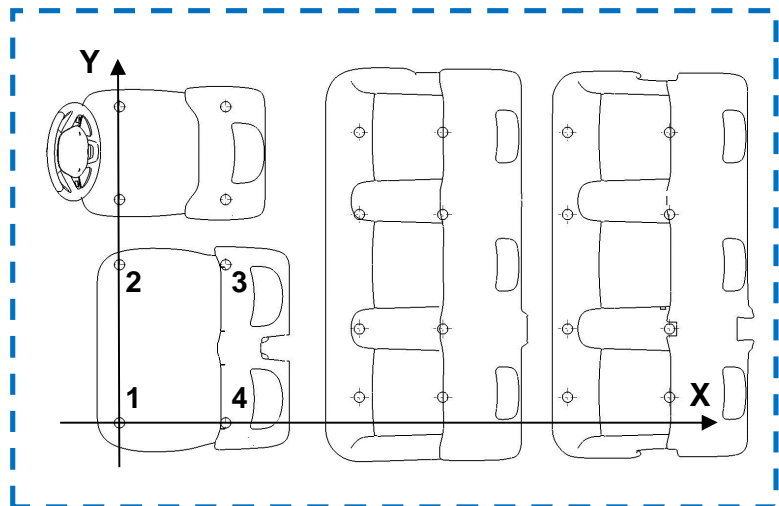
### Passengers 3<sup>rd</sup> row

17	1746,5	100
18	1746,5	366
19	2144	366
20	2144	100

21	1746,5	558
22	1746,5	882
23	2144	882
24	2144	558

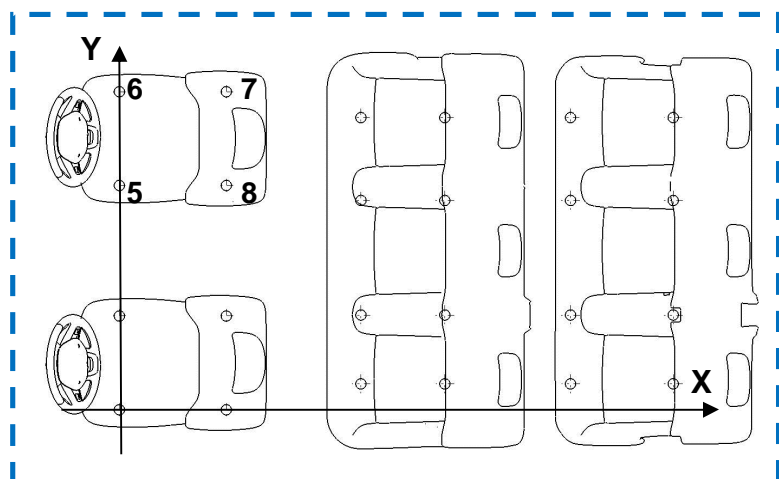
Right-hand drive (version with passenger bench seat in row 1)

Pos.	X	Y
1	0	0
2	0	616
3	414	616
4	414	0

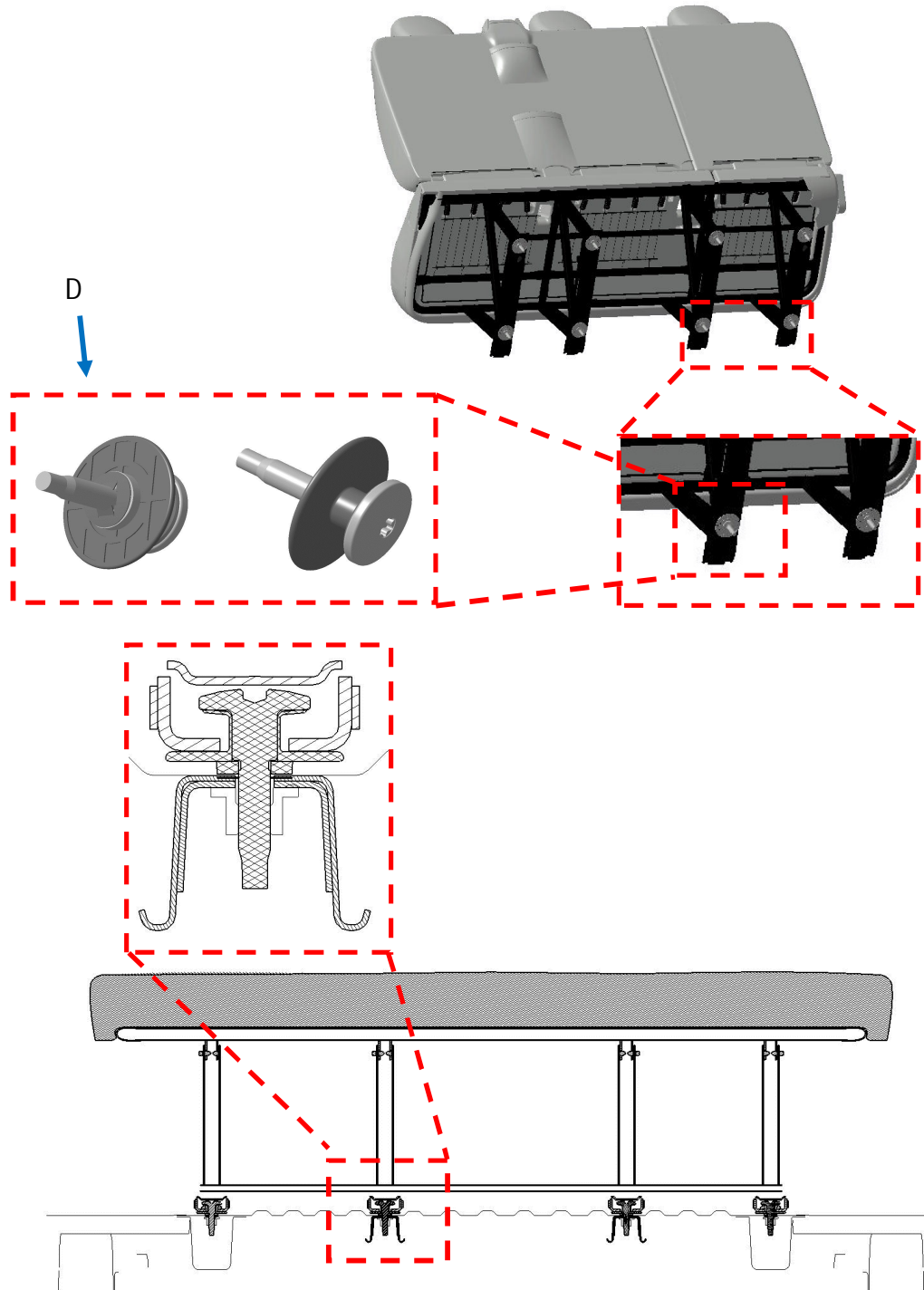


Left-hand drive and Right-hand drive (version with passenger single seat in row 1)

Pos.	X	Y
5	0	870
6	0	1232
7	414	1232
8	414	870



Seat bench mountings ROW 2 and 3



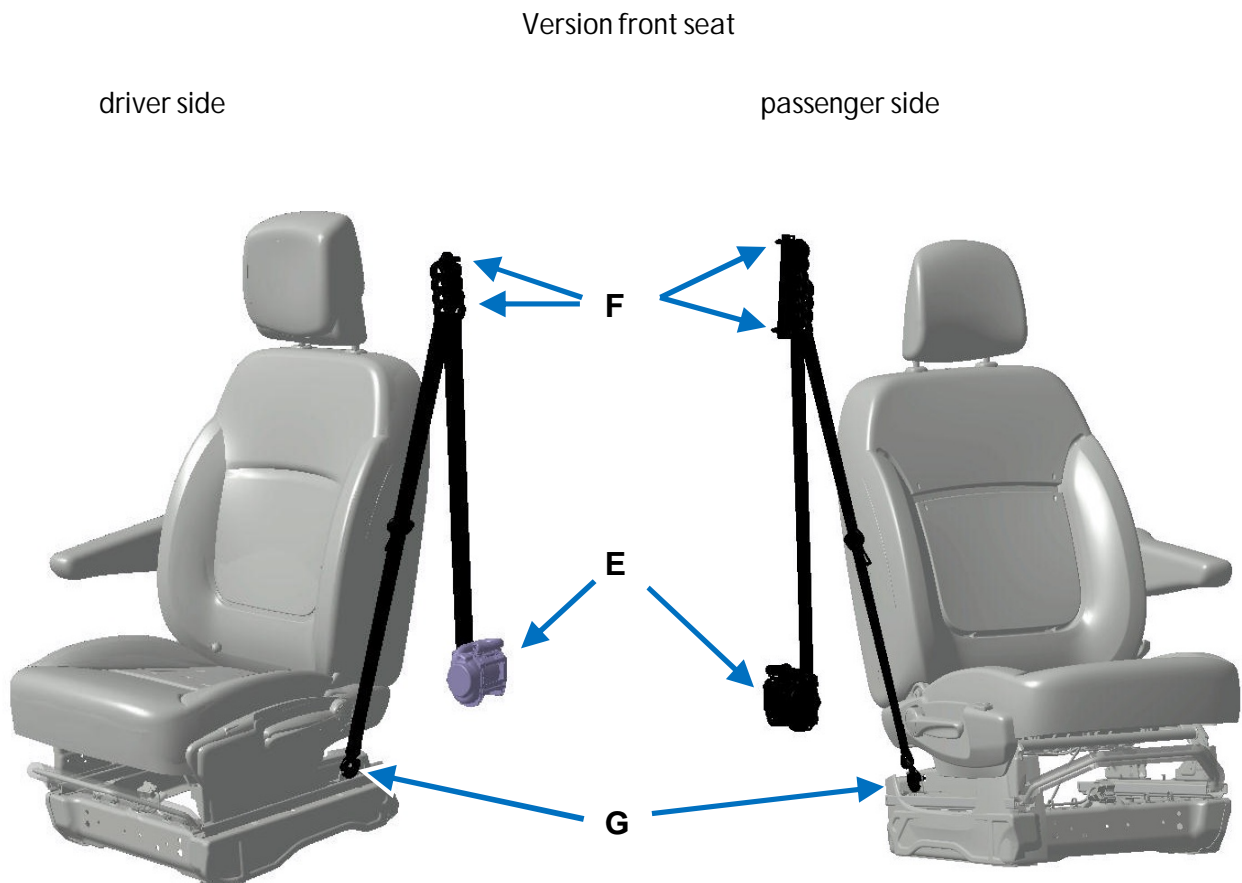
	Tightening torque	Mounting part
D	44 Nm ± 15%	8 bench seat mounting bolts

## 1.12.2. SEAT BELTS

No modification to the seat belt is permitted.

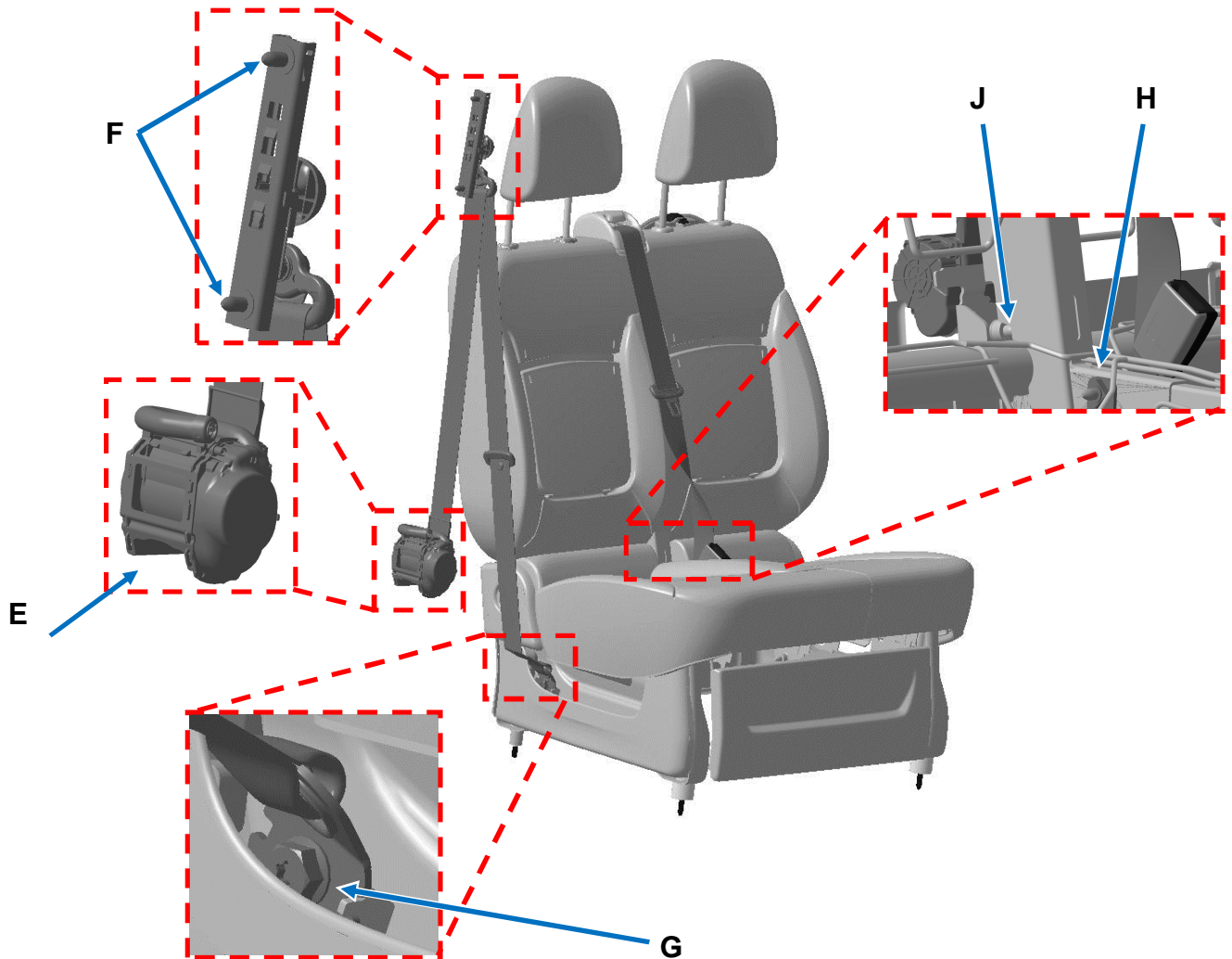
Recommendation for refitting the seat belt retractor.

- Check that the retractor indexing is in the correct position before attaching.
- Check that there is no twisting of the belt between the retractor and the final anchorage point.
- Check that no foreign body comes into contact with the belt.
- Do not alter the belt via the vehicle conversion.





Version with front passenger seat bench



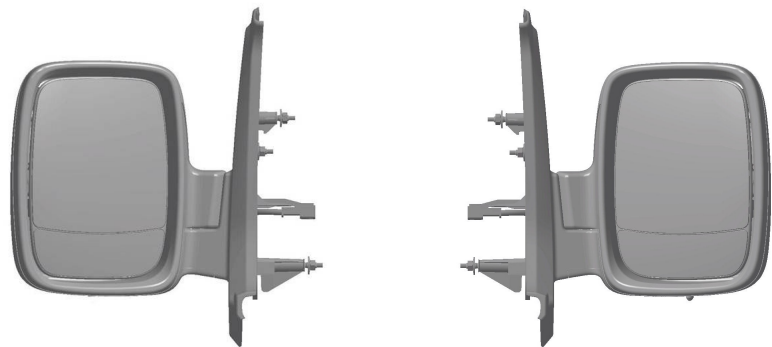
Tightening torque 21 Nm ± 15%			
E	Seat belt retractor on body.	H flange bolt M10X150-25	The bolt must not be used again once it is removed. It must be replaced by a new one.
F	Belt height adjusting mechanism on body.	It is not possible to change the bolt during assembly.	Bolt pre-assembled on the seat belt mechanism.
G	Anchorage fitting on seat.	H flange bolt M10X150-25	The bolt must not be used again once it is removed. It must be replaced by a new one.
H	Anchorage fitting on seat.	It is not possible to change the bolt during assembly.	
J	Seat belt retractor on seat.		

### 1.13. EXTERNAL REAR-VIEW MIRROR

The casing of the right-hand rear-view mirror is pre-equipped to receive a radio aerial wire. Panel vans and platform cabs are supplied with external rear-view mirrors as standard. On the platform cab, "long arm" rear-view mirrors can be ordered as an option.

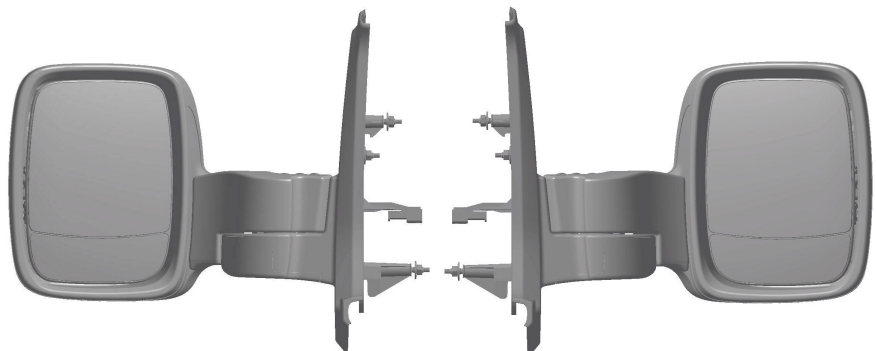
**Note:** For details of maximum body option widths with standard and long arm rear-view mirrors, see Section 2.1: "Main views and Dimensions"

#### Standard rear-view mirrors



TYPE	OPTION CODE
Manual without mirror heating	DBI
Electric with mirror heating	DL8

#### Long arm rear-view mirrors



TYPE	OPTION CODE
Manual without mirror heating	
Electric without mirror heating	DB5

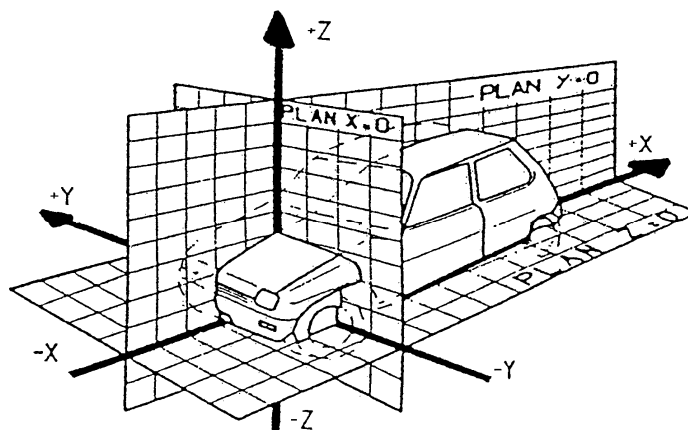
## 2. WEIGHTS AND DIMENSIONS

### 2.1. REFERENCE GUIDE/MAIN VIEWS AND USEFUL DIMENSIONS

#### 2.1.1. REFERENCE GUIDE

In general, dimensions are expressed as absolute (dimension between two points) and positions as relative (location in the OPEL / VAUXHALL reference guide). The origin of this reference guide is a point located on the front wheel shaft, at the centre of the vehicle, as illustrated in the view below.

The front wheel shaft is set at 3 mm along the X-axis, +/- 1 mm, between an unladen vehicle and a laden vehicle.

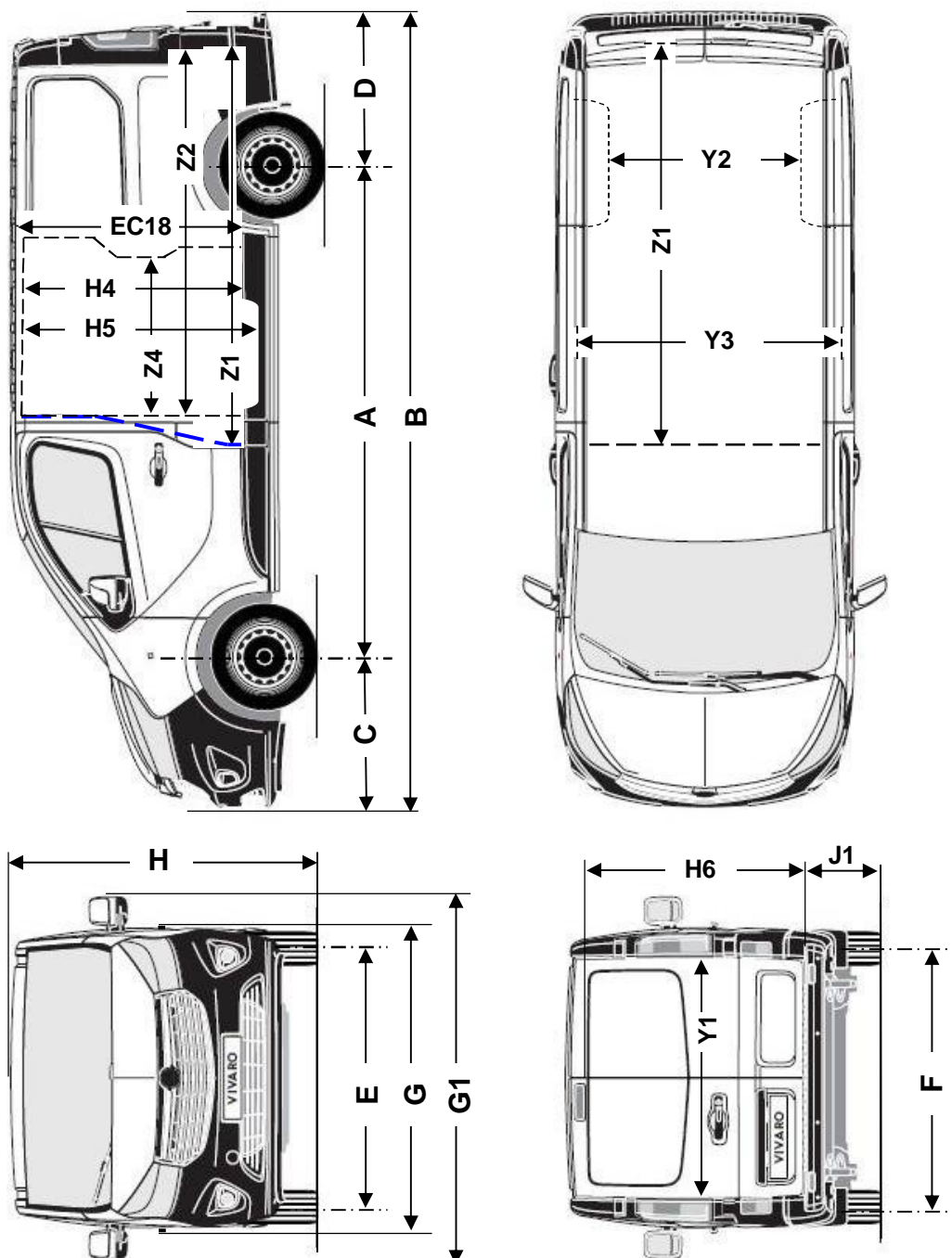


NORME N° 0100112

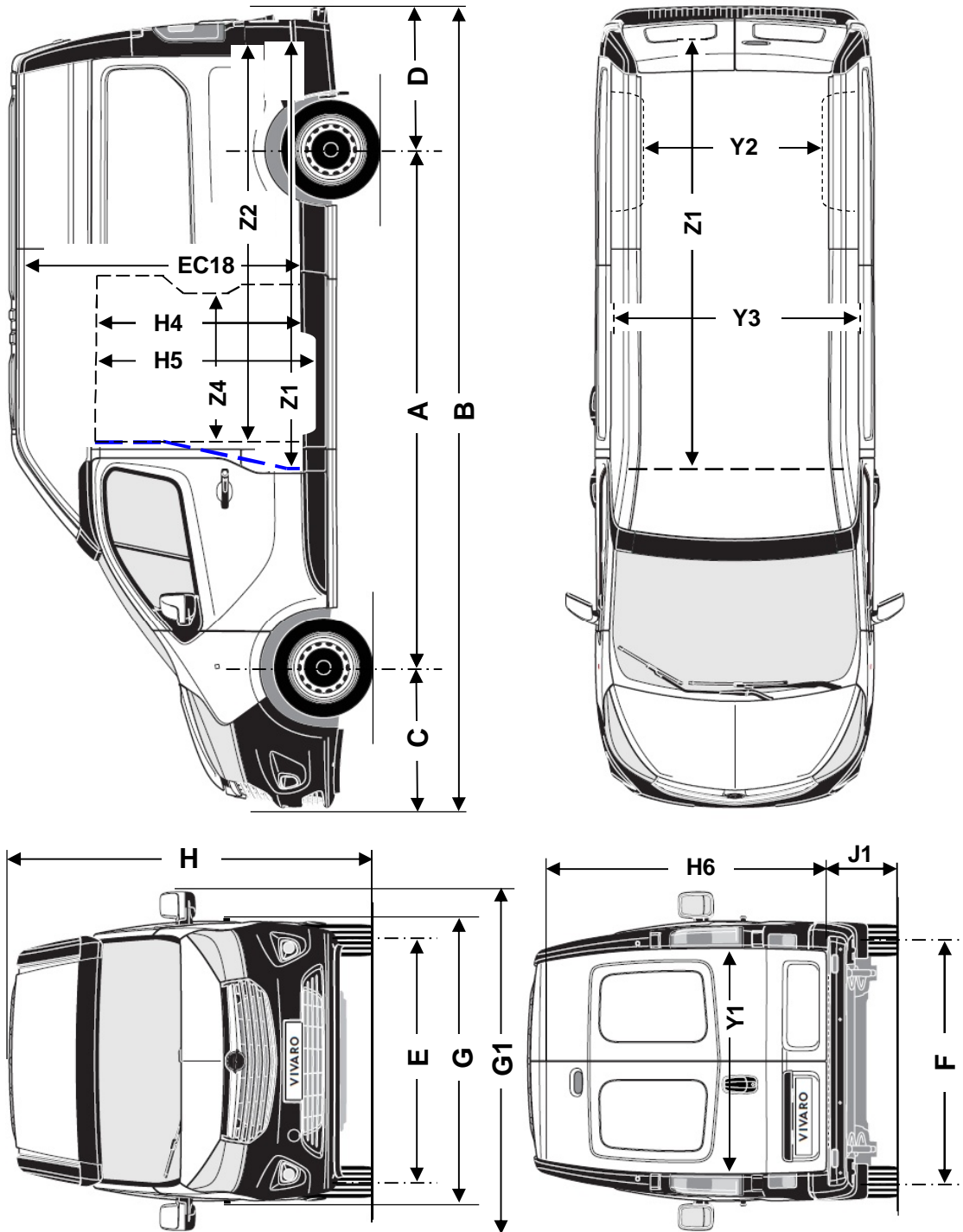
### 2.1.2. MAIN VIEWS AND USEFUL DIMENSIONS

The figures below show the different versions of the Vivaro.  
 The main dimensions are given in the tables.

#### Panel Van L1H1



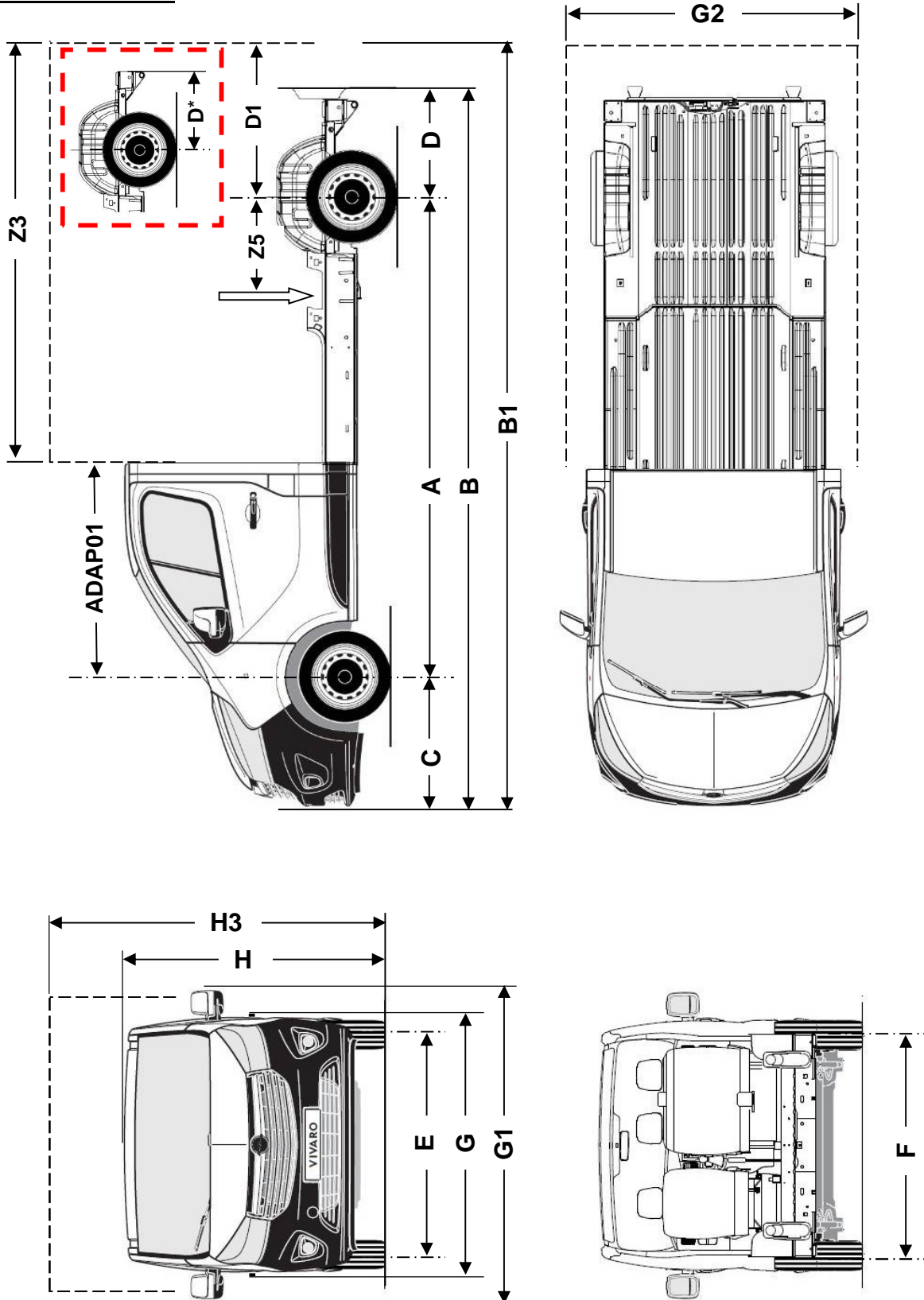
Panel Van L2H2



OPEL VIVARO (X82)  
2.1 – REFERENCE GUIDE/MAIN VIEWS AND USEFUL DIMENSIONS



Platform Cab L2H1



Note: Subject to errors and technical amendments. The electronic version of the body guidelines is the decisive source of up-to-date data on body guidelines (online body guidelines). Data status February 2014

OPEL VIVARO (X82)  
2.1 – REFERENCE GUIDE/MAIN VIEWS AND USEFUL DIMENSIONS



Version		Panel Van				Platform Cab
Wheelbase length		L1		L2		L2
Roof	H1 = standard H2 = high	H1	H2	H1	H2	H1
A		3098	3098	3498	3498	3498
B		4999	4999	5399	5399	5316
B1		-	-	-	-	N.A.
C		933	933	933	933	933
D / D*		968	968	968	968	882 / 817*
D1		-	-	-	-	N.A.
E		1615	1615	1615	1615	1615
F		1628	1628	1628	1628	1628
G		1956	1956	1956	1956	1956
G1	Min / Max	2283 / 2494	2283 / 2494	2283 / 2494	2283 / 2494	2283 / 2494
G2	Min / Max	-	-	-	-	N.A.
H	Kerb weight	1971	2493	1971	2493	1951
H3		-	-	-	-	N.A.
H4		1284	1284	1284	1284	-
H5		1340	1340	1340	1340	-
H6	Y +/- 400	1320	1829	1320	1829	-
J1	GVW	373	373	431	431	N.A.
K	GVW	N.A.	N.A.	N.A.	N.A.	N.A.
ADAP01		-	-	-	-	1615
EC18		1386	1896	1386	1896	-
V	** [m³]	(5,2)	(7,2)	(6,1)	(8,6)	-
Y1		1393	1393	1393	1393	-
Y2		1268	1268	1268	1268	1268
Y3	**	(1690)	(1690)	(1690)	(1690)	-
Y4		-	-	-	-	N.A.
Z1	**	(2500)	(2500)	(2900)	(2900)	-
Z2		2210	2210	2610	2610	-
Z3		-	-	-	-	N.A.
Z4		907	907	907	907	-
Z5		-	-	-	-	N.A.

\* Dimension for panel, without lighting, special feature for "camping-car" conversion.

\*\* The dimensions are not confirmed. Subject to change.

OPEL VIVARO (X82)  
2.1 – REFERENCE GUIDE/MAIN VIEWS AND USEFUL DIMENSIONS



Legend	
A	= Wheelbase
B	= Overall length
B1	= Maximum overall length of the vehicle ( $B1 = C+A+D1$ )
C	= Front overhang
D	= Rear overhang
D*	= Rear overhang without rear lamps (Platform Cab only)
D1	= Maximum extension of rear overhang
E	= Front Track
F	= Rear Track
G	= Overall width (without rear view mirrors)
G1	= Overall width with rear view mirrors standard arm / long arm (option)
G2	= Maximum overall cargo area width
H	= Overall height of the vehicle
H3	= Maximum overall height of the vehicle
H4	= Sliding door sill height
H5	= Sliding door sill height with step
H6	= Rear door sill height (reference guide at $Y = +/- 400$ )
J1	= Loading sill height (GVW)
K	= Ground clearance
ADAP01	= Horizontal distance between front wheel and rear panel of the Cabin
EC18	= Maximal headroom in cargo area
V	= Max. cargo volume [m <sup>3</sup> ]
Y1	= Rear door sill width
Y2	= Width between wheel arches
Y3	= Maximum Cargo area width
Z1	= Cargo area length on floor
Z2	= Minimum cargo area length between partition and rear doors
Z3	= Maximum overall conversion body length
Z4	= Sliding door sill width
Z5	= Distance Load application to rear axle



## 2.2. AXLE-LOAD DISTRIBUTION

### Panel Van L1H1

Wheelbase	3098								
Permissible load on Front axle	1585	1585	1585	1585	1585	1585	1585	1585	
Permissible load on Rear axle	1650	1650	1650	1650	1650	1650	1650	1650	
Number of seats	2	2	2	2	3	3	3	3	
Kerb weight Min. option	Front	1063	1063	1066	1064	1064	1064	1081	1081
	Rear	598	598	595	597	601	601	602	602
	Total	1661	1661	1661	1661	1665	1665	1683	1683
Kerb weight Max. option	Front	1156	1156	1174	1174	1160	1160	1176	1176
	Rear	774	774	775	775	769	769	779	779
	Total	1930	1930	1949	1949	1929	1929	1955	1955
GVW	Front	1355	1379	1370	1394	1395	1419	1410	1434
	Rear	1385	1521	1370	1506	1345	1481	1350	1486
	Total	2740	2900	2740	2900	2740	2900	2760	2920
Engine	R9M	R9M	R9M	R9M	R9M	R9M	R9M	R9M	
Engine code	408	408	450	450	408	408	450	450	
Gearbox	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	
Emission standard	EU5	EU5	EU4&5	EU4&5	EU5	EU5	EU4&5	EU4&5	
Payload	1000	1200	100	1200	1000	1200	1000	1200	

Panel Van L2H1

Wheelbase	3498 mm						
Permissible load on Front axle	1585	1585	1585	1585	1585	1585	
Permissible load on Rear axle	1650	1650	1735	1650	1650	1735	
Number of seats	2	2	2	3	3	3	
Kerb weight Min. option	Front	1085	1103	1103	1102	1120	1120
	Rear	606	607	607	615	616	616
	Total	1691	1710	1710	1717	1736	1736
Kerb weight Max. option	Front	1204	1207	1221	1208	1216	1216
	Rear	785	783	786	789	784	790
	Total	1989	2000	2007	1997	2000	2016
GVW	Front	1466	1483	1562	1510	1528	1565
	Rear	1494	1497	1448	1480	1481	1475
	Total	2960	2980	3010	2990	3010	3040
Engine	R9M	R9M	R9M	R9M	R9M	R9M	
Engine code	408	450	450	408	450	450	
Gearbox	PF14	PF15	PF16	PF17	PF18	PF19	
Emission standard	EU5	EU4&5	EU4&5	EU5	EU4&5	EU4&5	
Payload	1200	1200	>1200	1200	1200	>1200	
			*			*	

Note: for versions marked with \* (L2 reinforced rear drive axle): the rear axle weight must always be greater than 1100 kg; the vehicle leaving the factory is not complete.

### 3 VEHICLE CONVERSION LIMITS AND CALCULATIONS

#### 3.1. MAXIMUM DESIGN LIMITS AND CALCULATIONS

IN PREPARATION

#### 3.2. VEHICLE CONVERSION LIMITS INCLUDING ESP

IN PREPARATION

#### 3.3. OPENING ELEMENTS RECOMMENDATIONS

Sliding side door

*Any modifications to and conversion of the doors must not affect their kinematics*

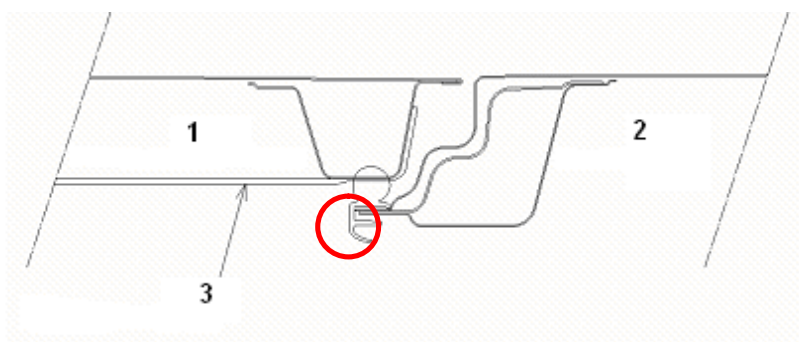
#### Body option recommendations

To ensure that the sliding side door operates correctly and has a sufficiently long lifetime, it is essential to comply with the following instructions:

- Do not remove the door to carry out the conversion. For situations where this is just not possible, it is mandatory, during refitting, to comply with the adjustments given in the workshop repair manual,
- Do not use the possible door adjustments for any purpose other than to adjust the panel alignment and to ensure that the door locks,
- No modification should come into contact with the internal part of the door seal. (minimum clearance: 3 mm). See section B-B
- Any modification to the original door seal and air gap/body is likely to have a detrimental effect on door closure and the life span of this function.

It is prohibited to modify the original mechanisms or to add stops to the inside of the rails. The original stop support areas must be retained

SECTION B- B (minimum clearance: 3mm)



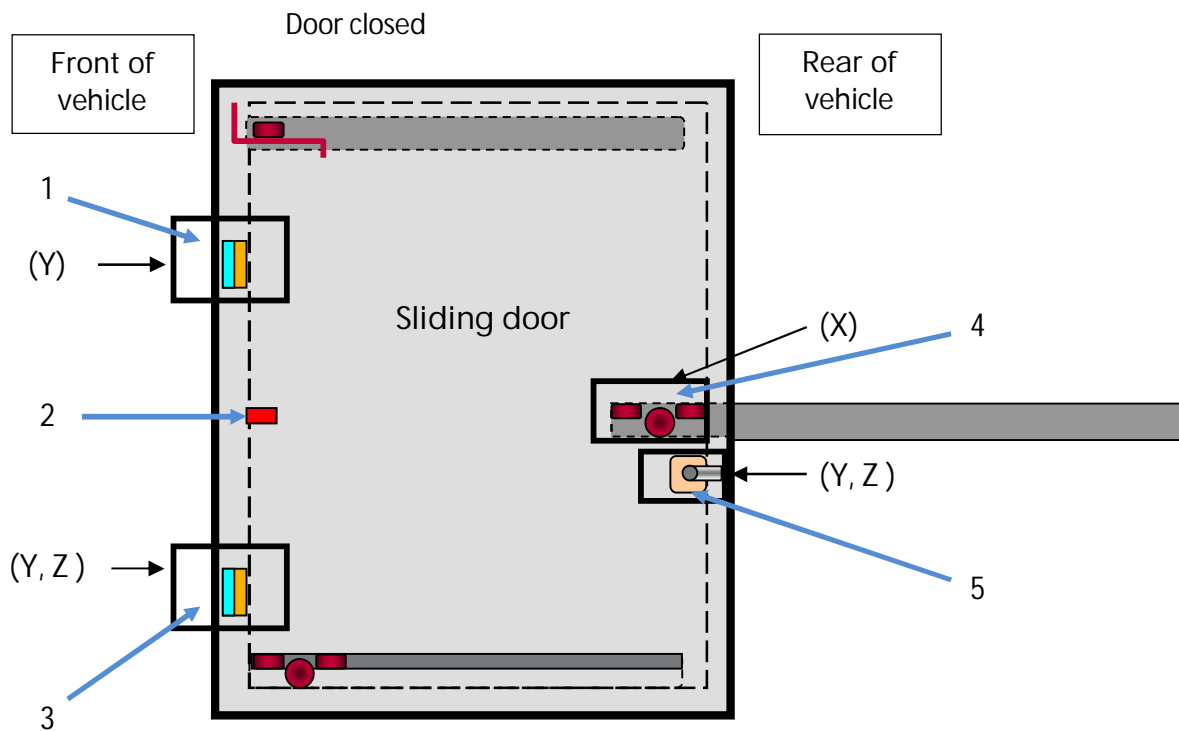
- 1 : Sliding side door
- 2 : Rear panel
- 3 : Insulated lining (for example)

Possible additional weight

- Up to 1.7 kg with glazed door with sliding side aperture subject to removal of the trims. No additional weight if the trims are retained
- Up to 4.3 kg if door with fixed window subject to removal of the trims. 2.6 kg if the trims are retained.
- Up to 6.3 kg if solid panel door subject to removal of the trims. 4.6 kg if the trims are retained.

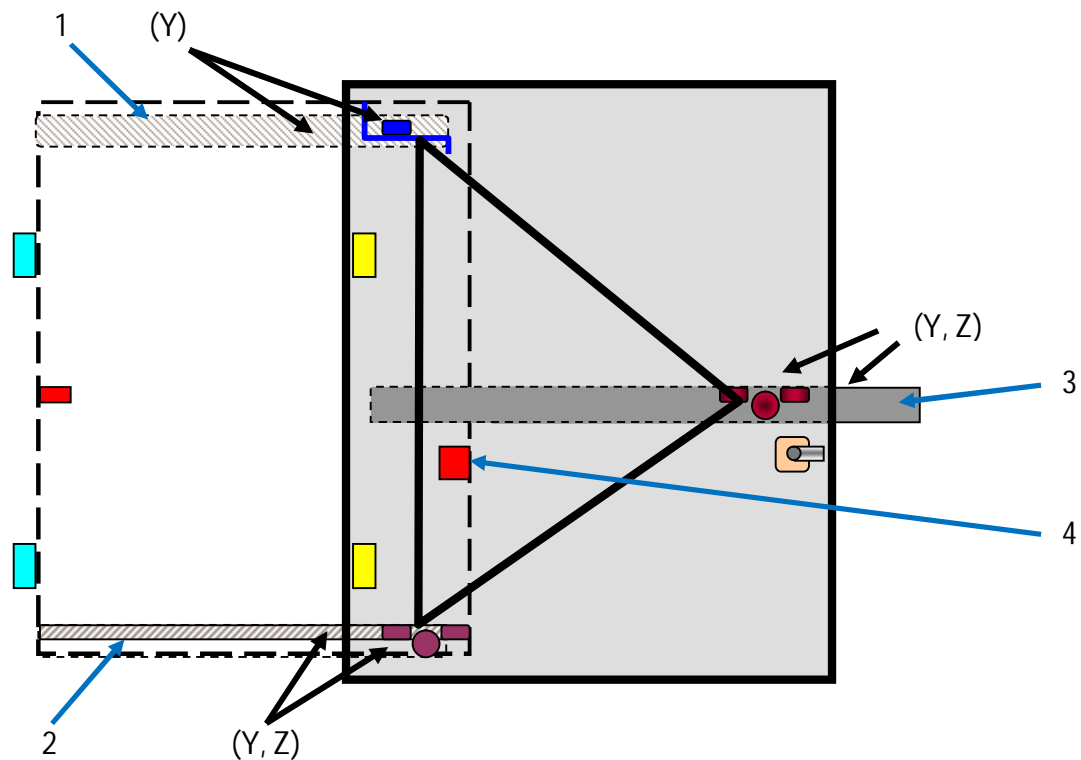
Geometry and kinematics

Alignment of the sliding side door depends on two isostatisms (vehicle marks X, Y, Z):



- 1: Upper centring device
- 2: Crash pin
- 3: Lower centring device
- 4: Centre carrier
- 5: Lock/Striker

Door open



- 1: Rail guide
- 2: Carrier rail and guide
- 3: Carrier rail and guide
- 4: Main stop

- Lower rail: centring device/rail/carrier (Y and Z; carrier and guide)
- Centre rail: lock/carrier/rail (Y and Z; carrier and guide)
- Upper rail: centring device/rail/carrier (Y; guide))

Function of the door stops



It is prohibited to add end of travel stops in the sliding side door rails.  
It is recommended to keep the stop support areas the same as the original.  
Otherwise, a complete study must be made (kinematics, sizing)

- No end of travel stop on the lower rail
- No end of travel stop on the upper rail

#### Crash pin

It is prohibited to remove the crash pin

#### Rear hinged doors

*Any modifications to and conversion of the doors must not affect their kinematics*

#### Body option recommendations

To ensure that the sliding side door operates correctly and has a sufficiently long lifetime, it is essential to comply with the following instructions:

- Do not remove the hinged doors to make modifications. For situations where this is just not possible, it is mandatory, during refitting, to comply with the adjustments given in the workshop repair manual,
- You must maintain free access for removing and adjusting the locks.
- Do not remove door mechanisms. The original geometry of the mechanisms must be retained (striker plate, end stop, latch) to ensure their correct operation.
- Keep the original seal on the rear attachment ring.

#### Possible additional weight

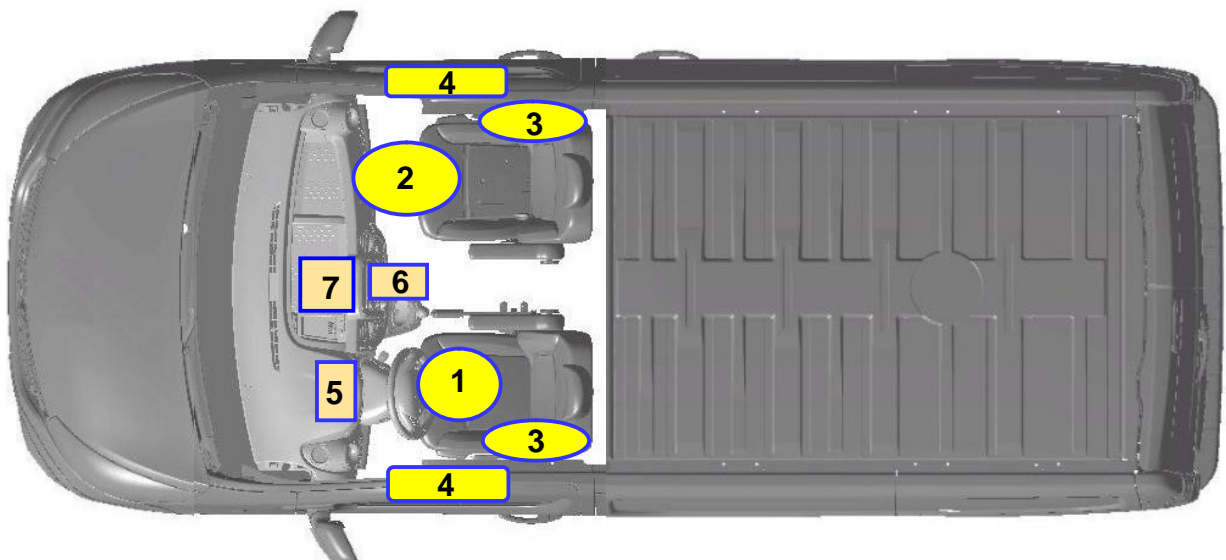
- Up to 3.8 kg on each solid panel hinged door subject to removal of the trims. 3 kg on each door if the trims are retained.
- Up to 1 kg on each glazed hinged door subject to removal of the trims; No additional weight if the trims are retained.

### 3.4. AIRBAG COMPATIBILITY

The type and number of airbags depends on the equipment level. The driver airbag is always standard. All other airbags (passenger, thorax and curtain airbags) are available as optional equipment. For the co-driver seat bench there is no thorax airbag available.

#### Attention:

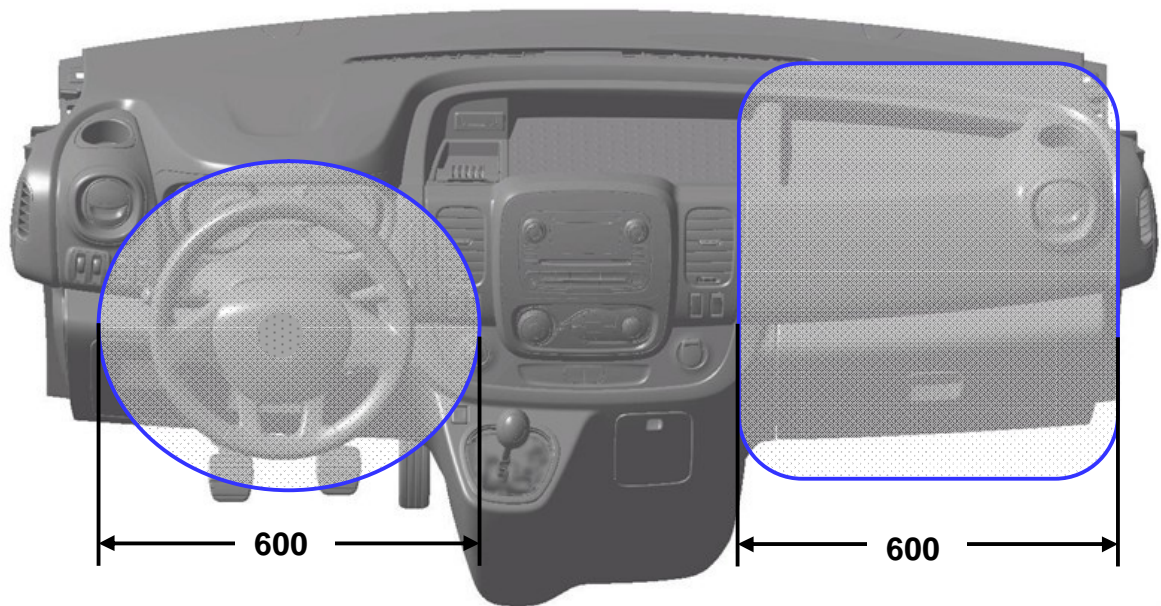
- Before carrying out any work on the airbag system or restraint system the safety regulations must be observed.
- It is essential to consult the workshop repair manual for all work to be carried on the airbags.
- If handled improperly the airbag systems can be triggered in an explosive manner.
- Keep the area in which the airbag inflates clear of obstructions. Do not stick anything on the airbag covers and do not cover them with other materials.
- On no account may any modifications be made to the airbag system or the belt tensioner system. Modifications to or work incorrectly carried out on a restraint system (seat belt and seat belt anchorages, belt tensioner or airbag) or its wiring, can cause the restraint systems to stop functioning correctly, e.g. the airbags or belt tensioners could be triggered inadvertently or could fail in accidents.
- Vehicle parts that create vibrations must not be secured in the proximity of the airbag control unit or sensor installation locations, nor may modifications be made to the floor structure in the proximity of the airbag control unit or the satellite sensors. Reliable operation of the front airbag, side airbag and belt tensioners is otherwise no longer guaranteed.
- The dimensions of deployed airbags are for guidance only.



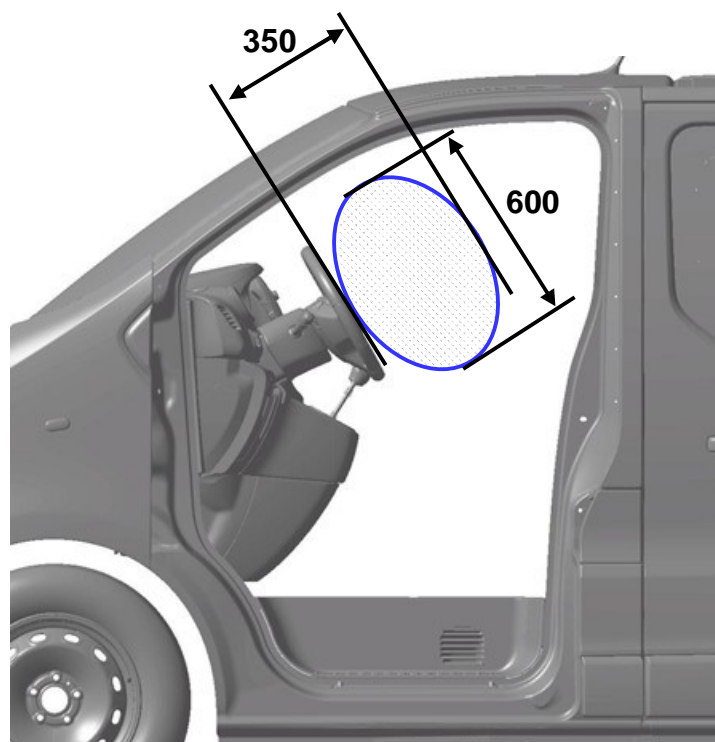
- 1: Driver's airbag in the steering wheel
- 2: Passenger airbag in the dashboard
- 3: Thorax airbag in the seats
- 4: Curtain airbag in the roof rails
- 5: Fault warning light on instrument panel
- 6: Air bag deactivation indicator light on roof
- 7: Airbag ECU console

## FRONT AIRBAGS

### DRIVER AND PASSENGER AIRBAGS

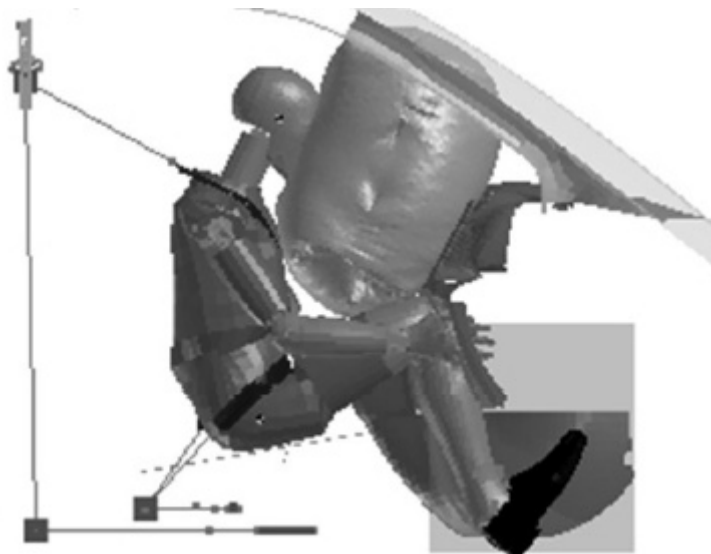
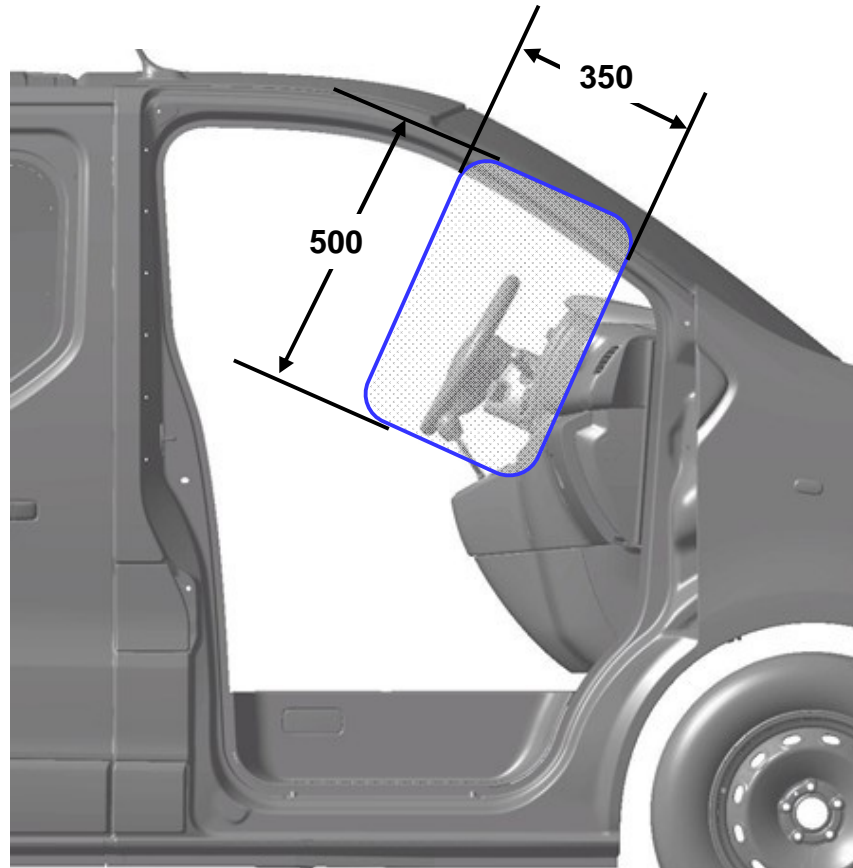


### DRIVER'S AIRBAG



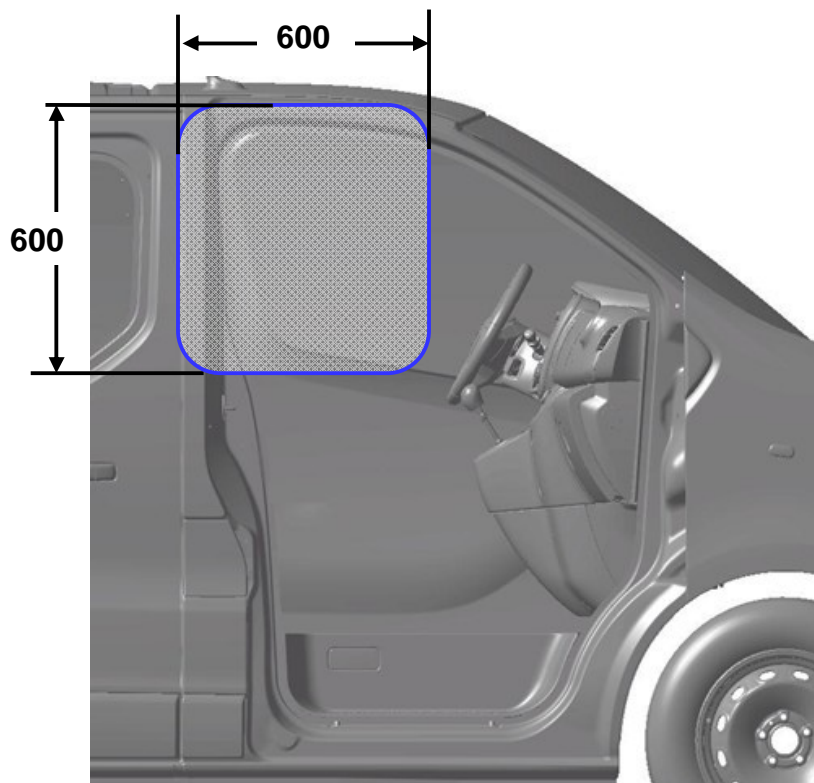
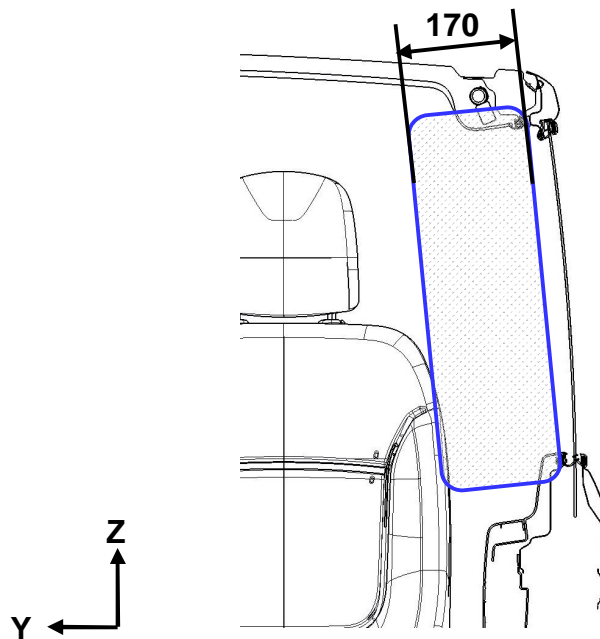


PASSENGER AIRBAG



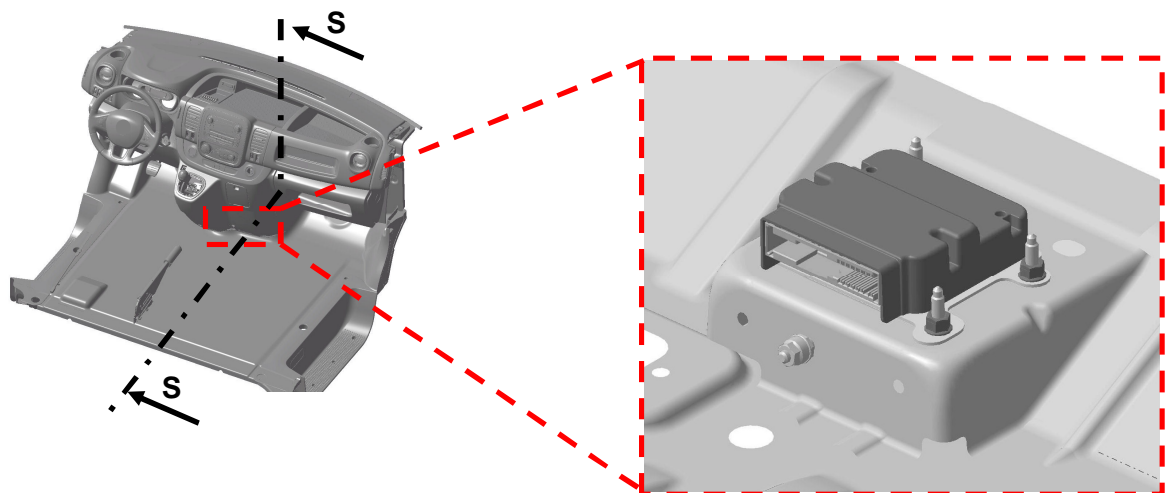
## CURTAIN AIRBAGS

### DRIVER AND PASSENGER CURTAIN AIRBAGS

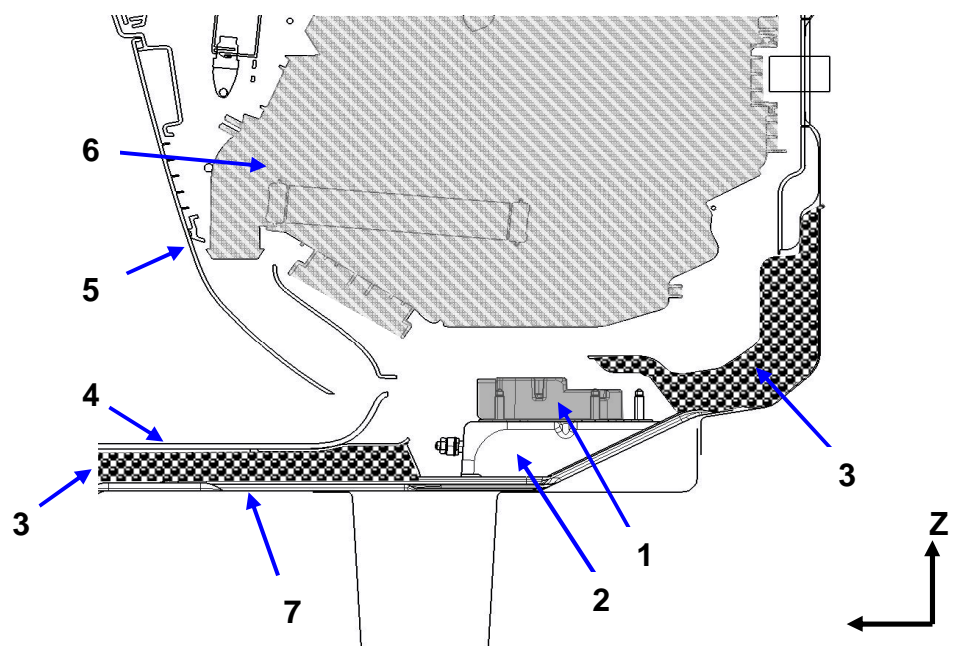


## AIRBAG ECU

The ECU is in the same position for both left- and right-hand drive vehicles



SECTION S-S



- 1: ECU
- 2: ECU bracket
- 3: Soundproofing
- 4: Floor mat
- 5: Gear lever console
- 6: HVAC : Heating Ventilation and Air-Conditioning
- 7: Floor panel

