5213

Mercedes EQS Sedan and EQS SUV - Full EV Platforms



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WTI WORLDPAC Training Institute. STX 2024 SUPPLIER & TRAINING EXPO

EQA



EQB



EQC



EQE SUV



EQE Sedan



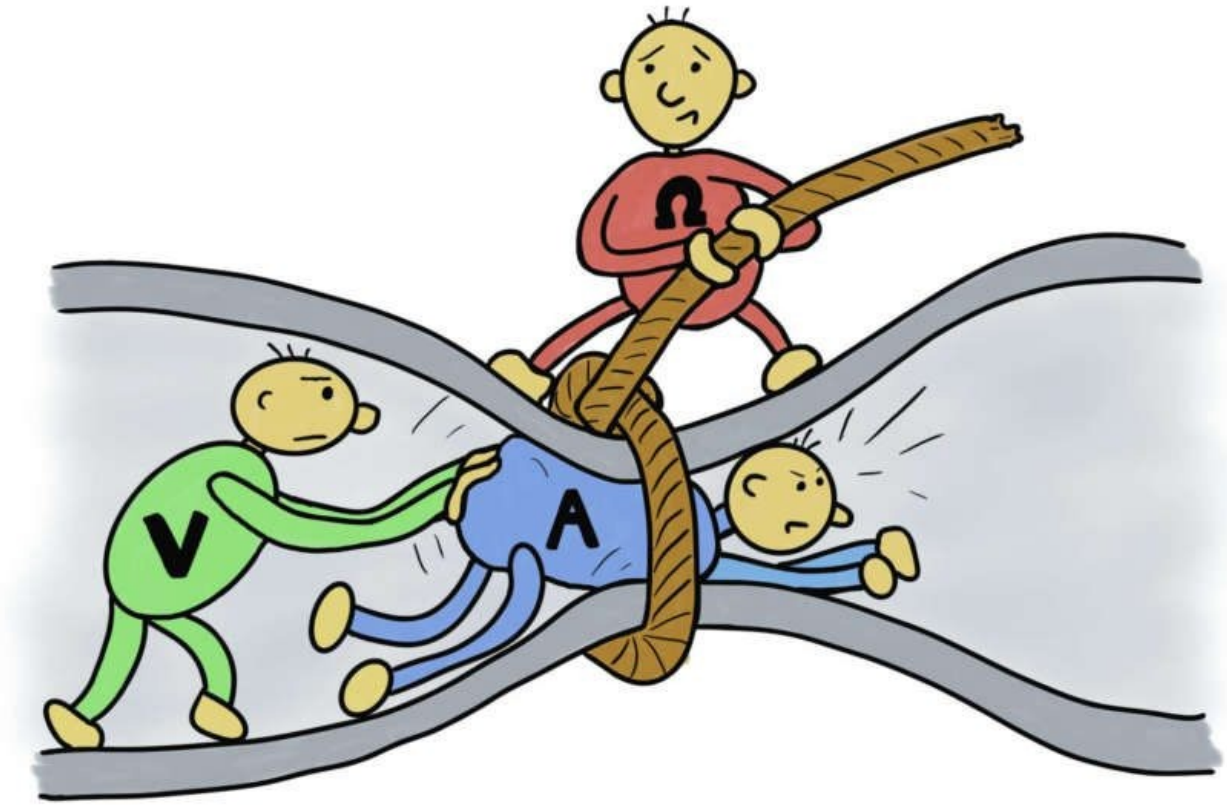
EQS SUV



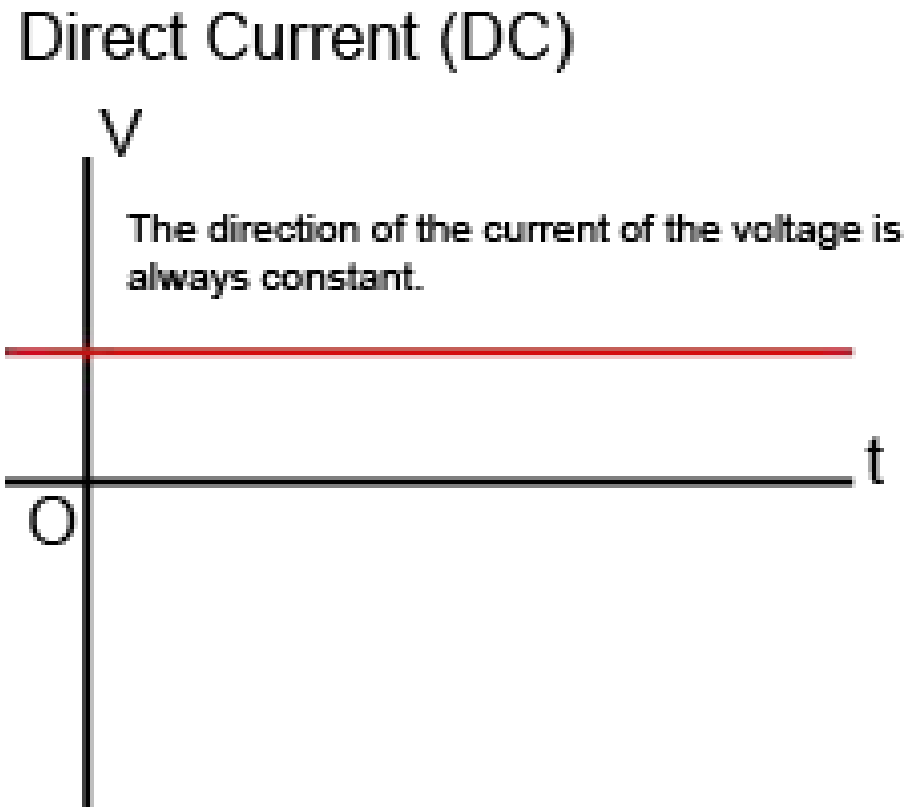
EQS Sedan



Electrical Fundamentals

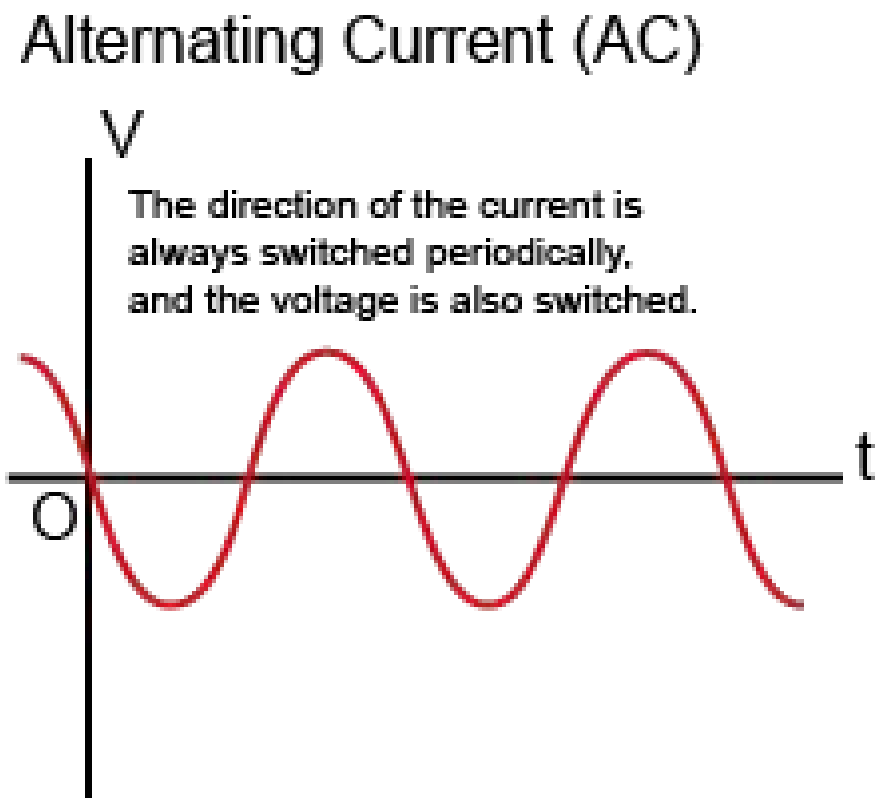


DC Voltage


Direct Current (DC)
V
The direction of the current of the voltage is always constant.
t
O

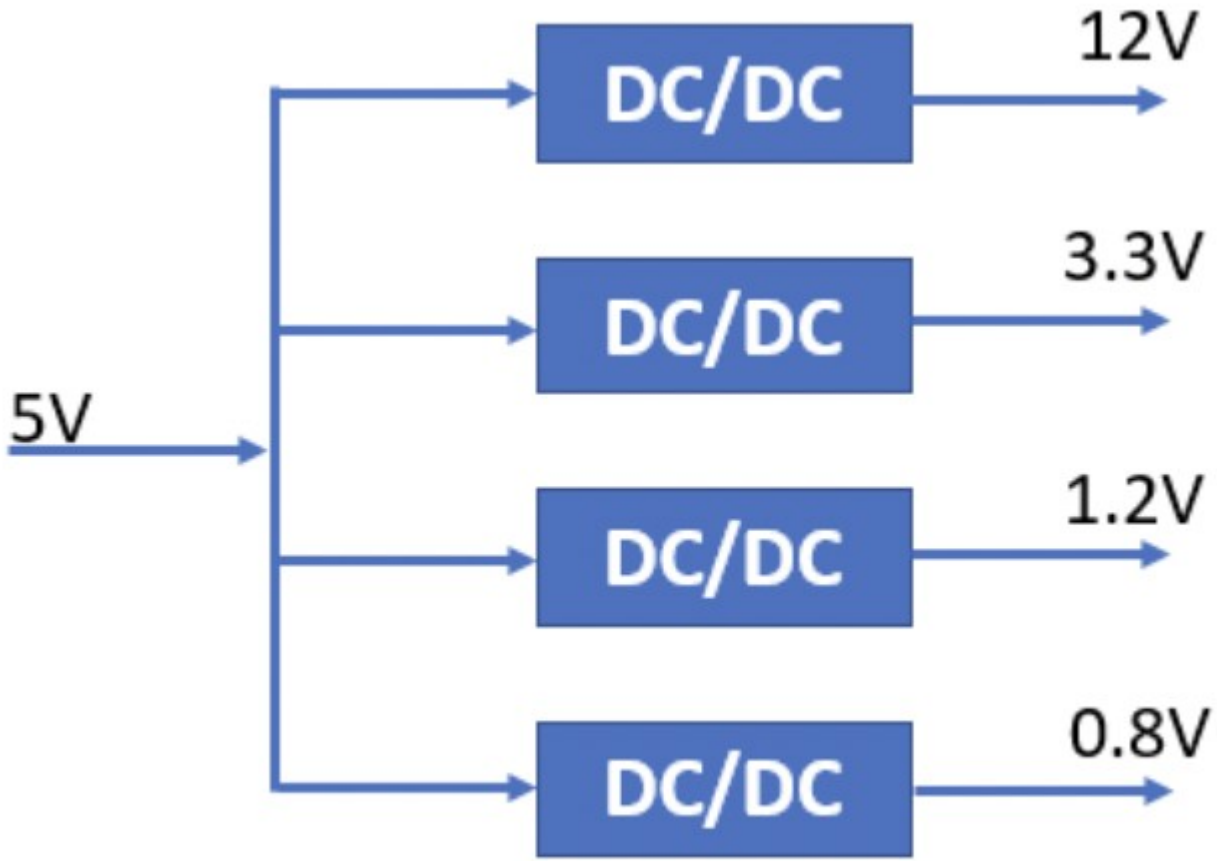

FLUKE
12.50
OFF
A
mA µA
COM
RPM

AC Voltage


Alternating Current (AC)
V
The direction of the current is always switched periodically, and the voltage is also switched.
t
O

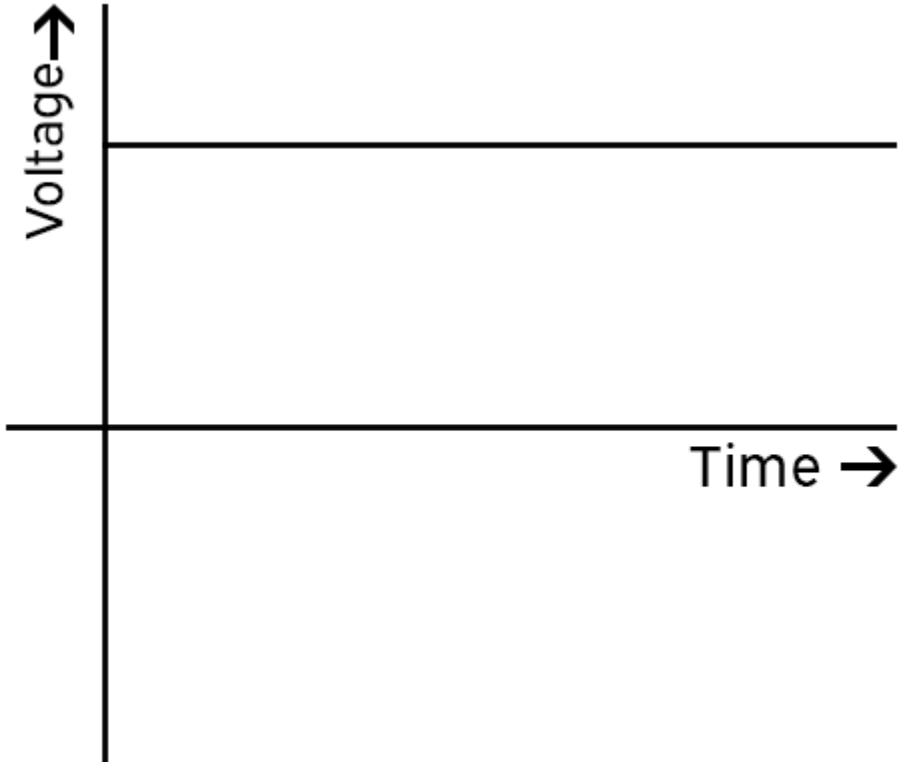

FLUKE 177 TRUE RMS MULTIMETER
1000
V AC
0 Auto Range 1000
AutoHOLD
HOLD
MINMAX
RANGE
OFF
400 mA
10A
FUSED
600V CAT IV
1000V CAT III
COM

Voltage Conversion

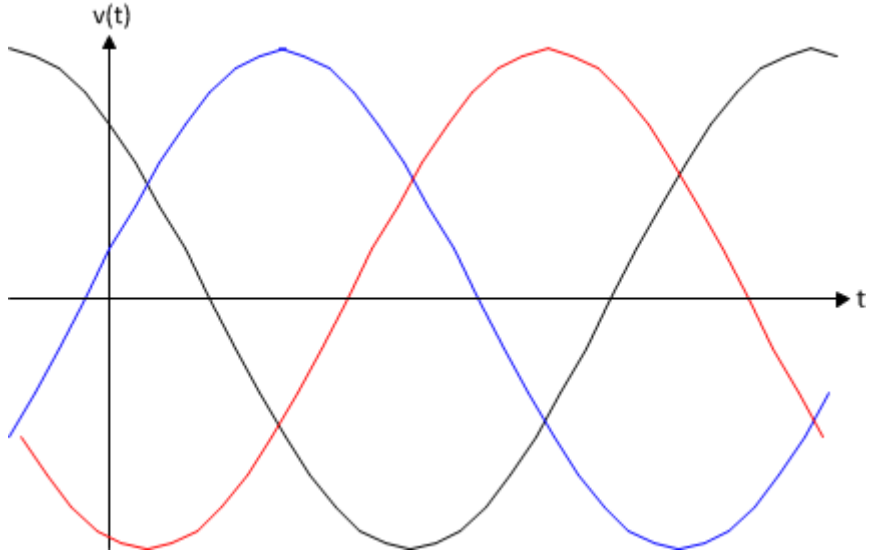


Voltage Inversion

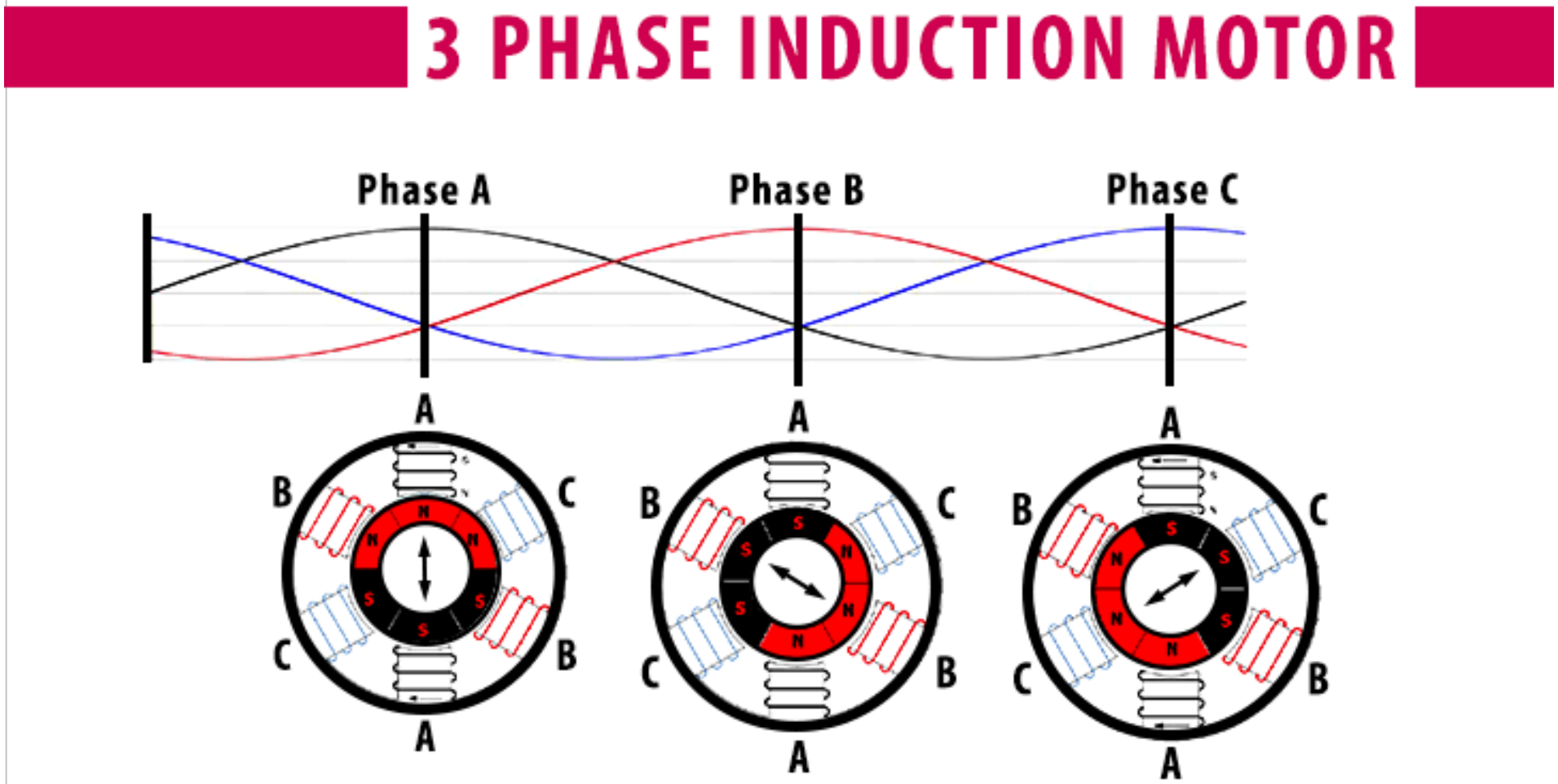
DC Voltage

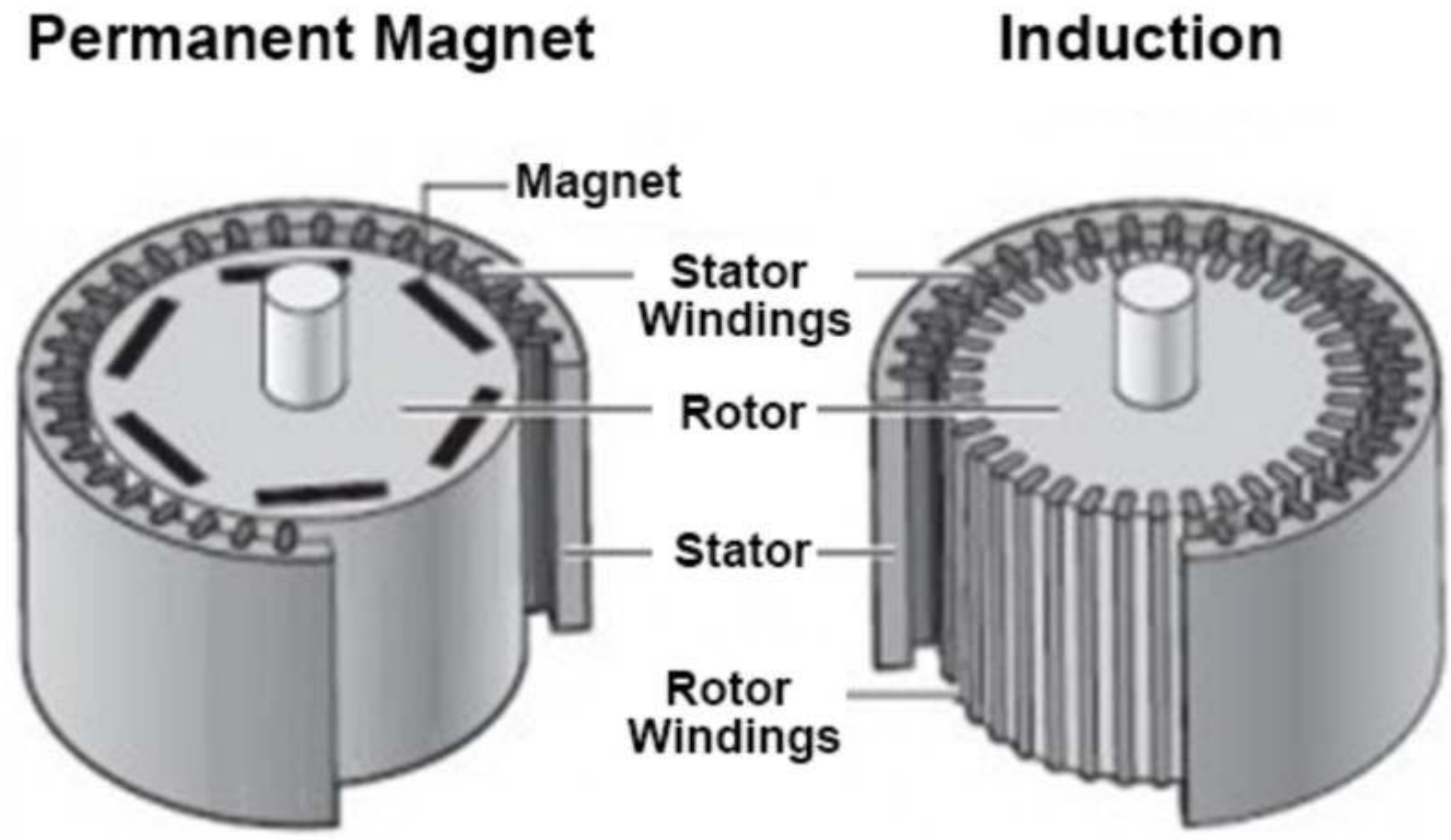


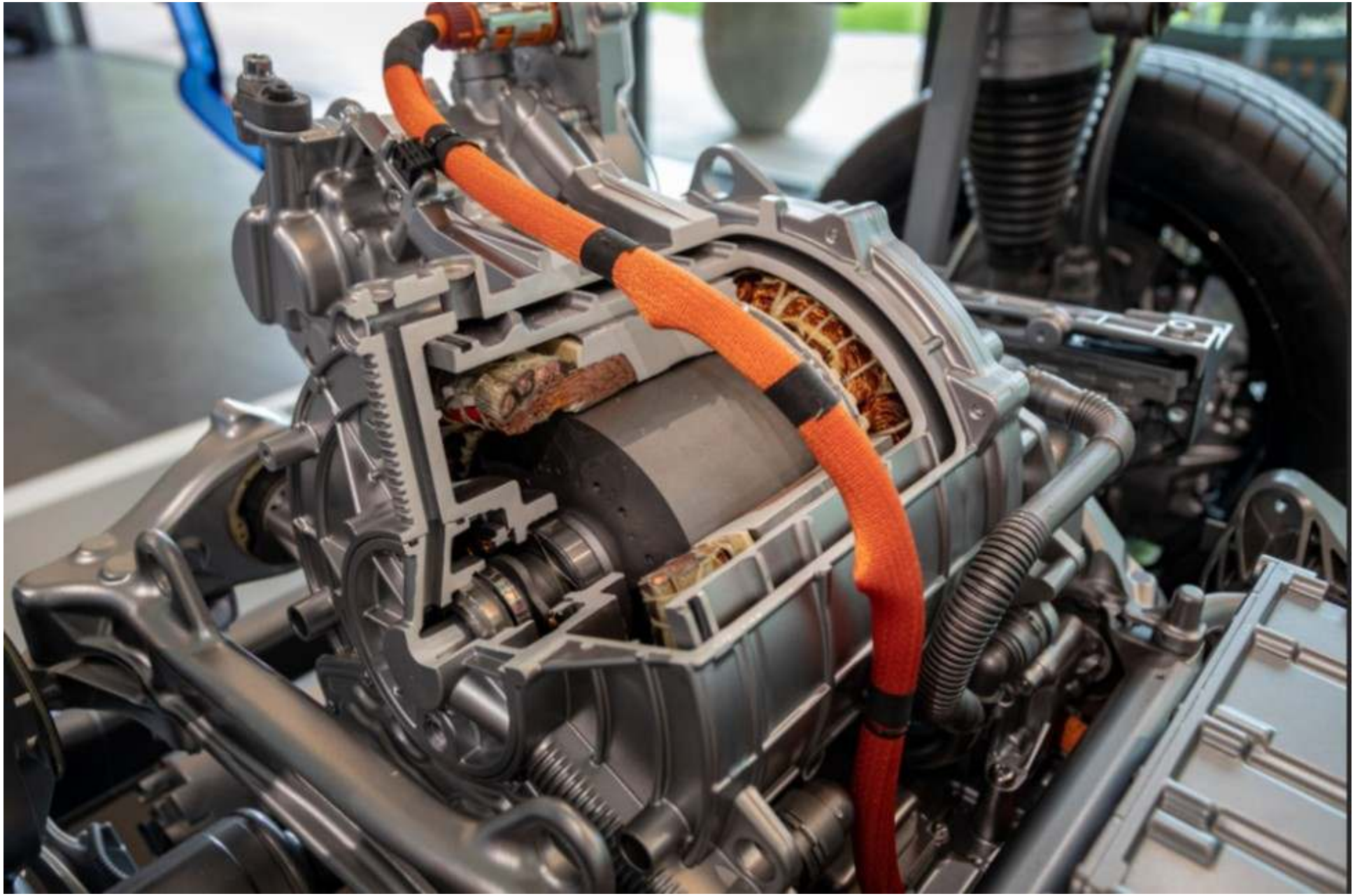
3 Phase AC Voltage



3 Phase AC Motors



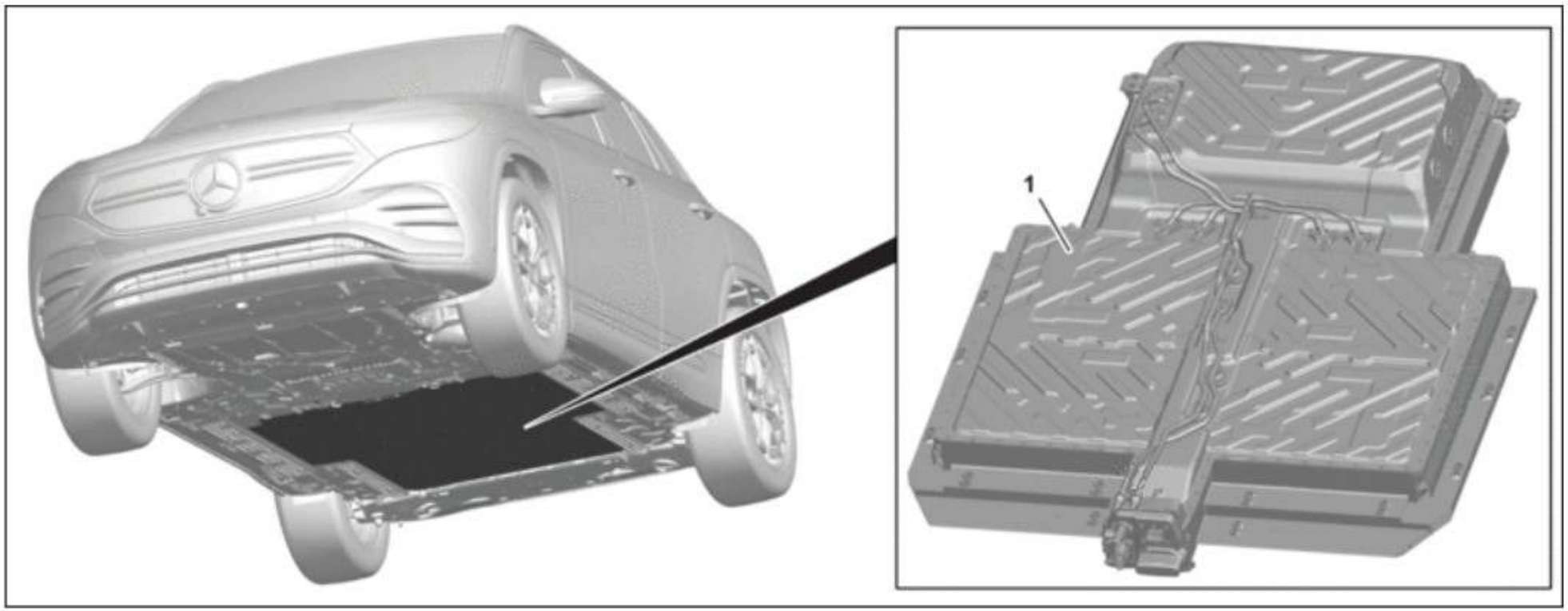

Permanent Magnet
Induction
Magnet
Stator Windings
Rotor
Stator
Rotor Windings



High voltage battery



In all vehicles the high voltage battery is mounted on the floor



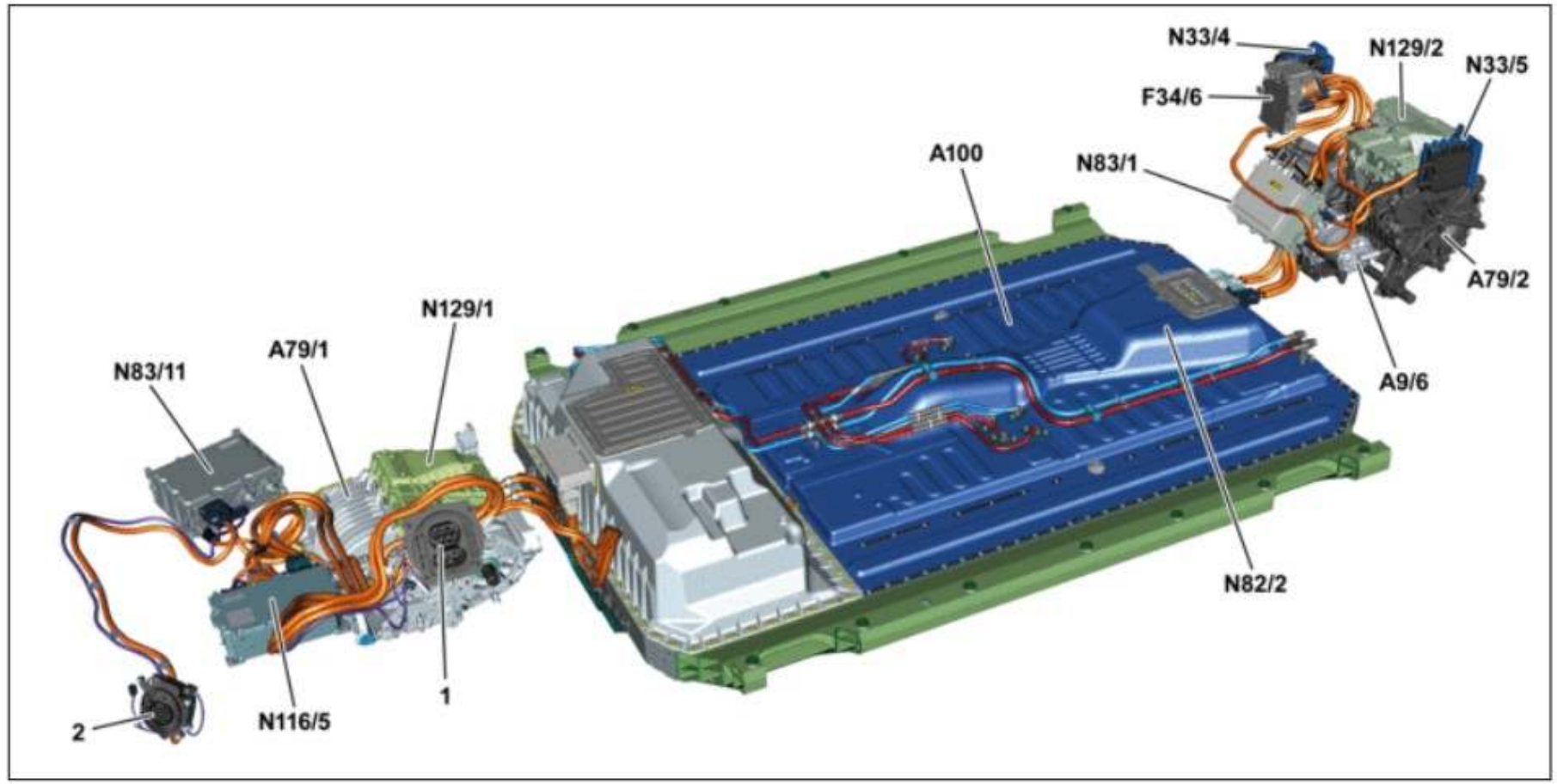
P54.10-A171-78

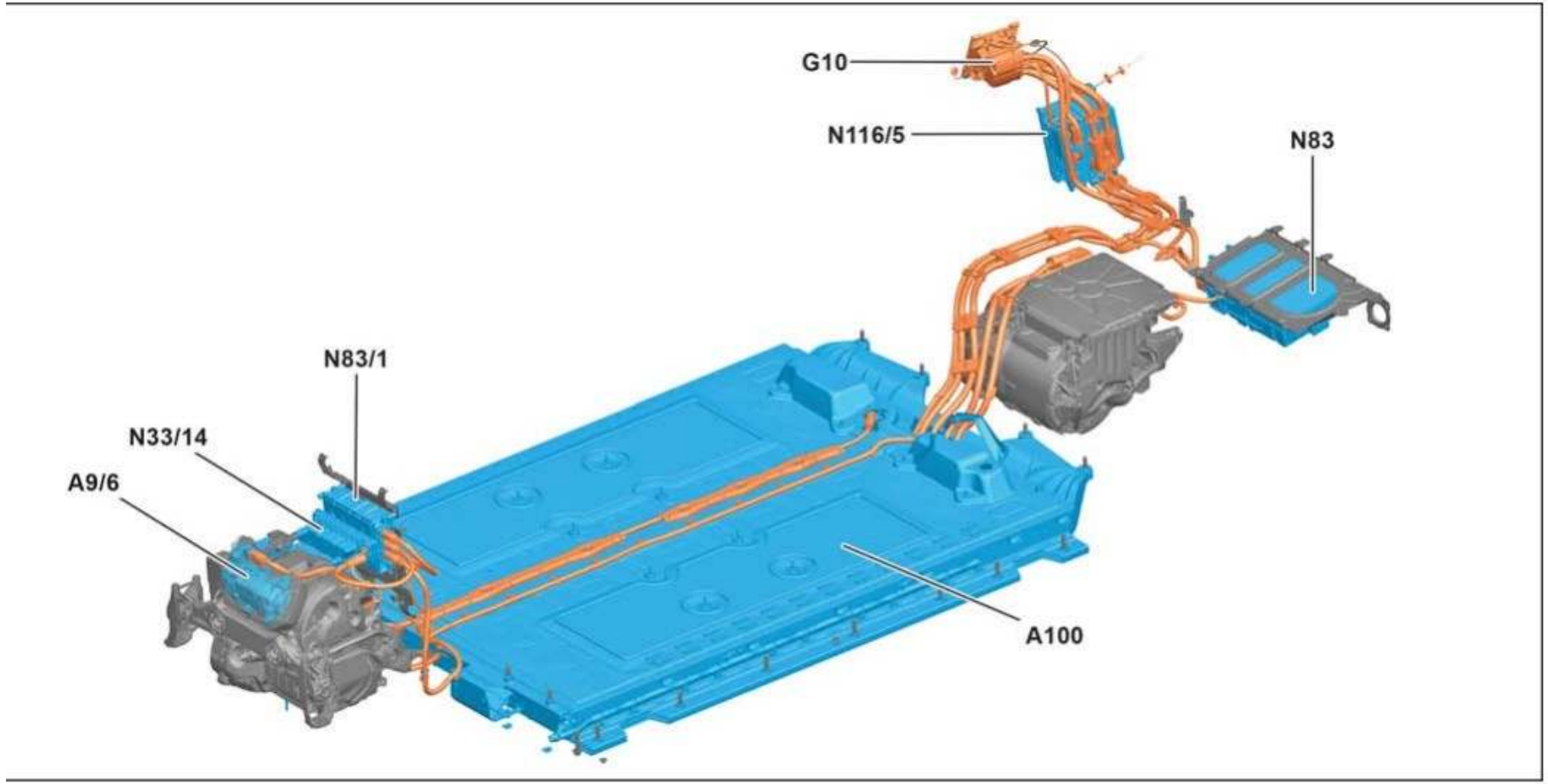
Installation position

1 High-voltage battery module

Overview of the high-voltage components

1	*Vehicle socket DC charging/AC charging (except Japan/China) or vehicle socket DC charging (Japan/China), shown on combo 2 socket (except Japan/China)*
2	*AC charging vehicle socket (Japan/China)*
A9/6	*Electric refrigerant compressor*
A79/1	*Electrical machine 1*
A79/2	*Electrical machine 2*
A100	*High-voltage battery module*
F34/6	*High-voltage power distributor*
N33/4	*High voltage PTC heater (vehicle interior)*
N33/5	*High voltage PTC heater (high-voltage battery)*
N82/2	*Battery management system gateway control unit*
N83/1	*DC/DC converter control unit*
N83/11	*Alternating current charger for high-voltage battery*
N116/5	*Direct current charge connection unit*
N129/1	*Electric machine 1 power electronics control unit*
N129/2	*Electric machine 2 power electronics control unit*





P47.70-A310-79

Overview of high-voltage components, shown on EQE SUV model with code M005 (Vehicles with 4MATIC/all-wheel drive)

A9/6	Refrigerant compressor	N33/14	Low-temperature circuit PTC heater booster 1	N83/1	DC/DC converter control unit
A100	High-voltage battery module	N83	Alternating current charger for high-	N116/5	DC charge-connection unit

PTC Heater Booster





Charging

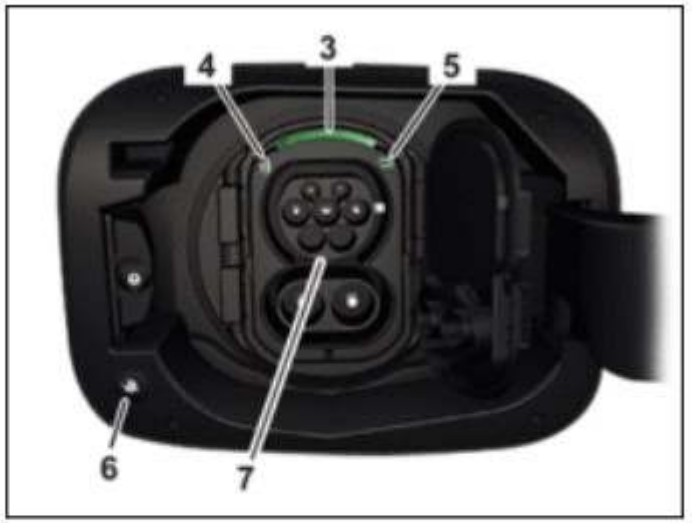




The charging port

DC/AC charging vehicle socket, shown on Combo-2 socket

3 Status indication
4 Locking status indicator lamp
5 Charging process indicator lamp
6 Abort charge button
7 AC charging/DC charging vehicle socket (except Japan/China)



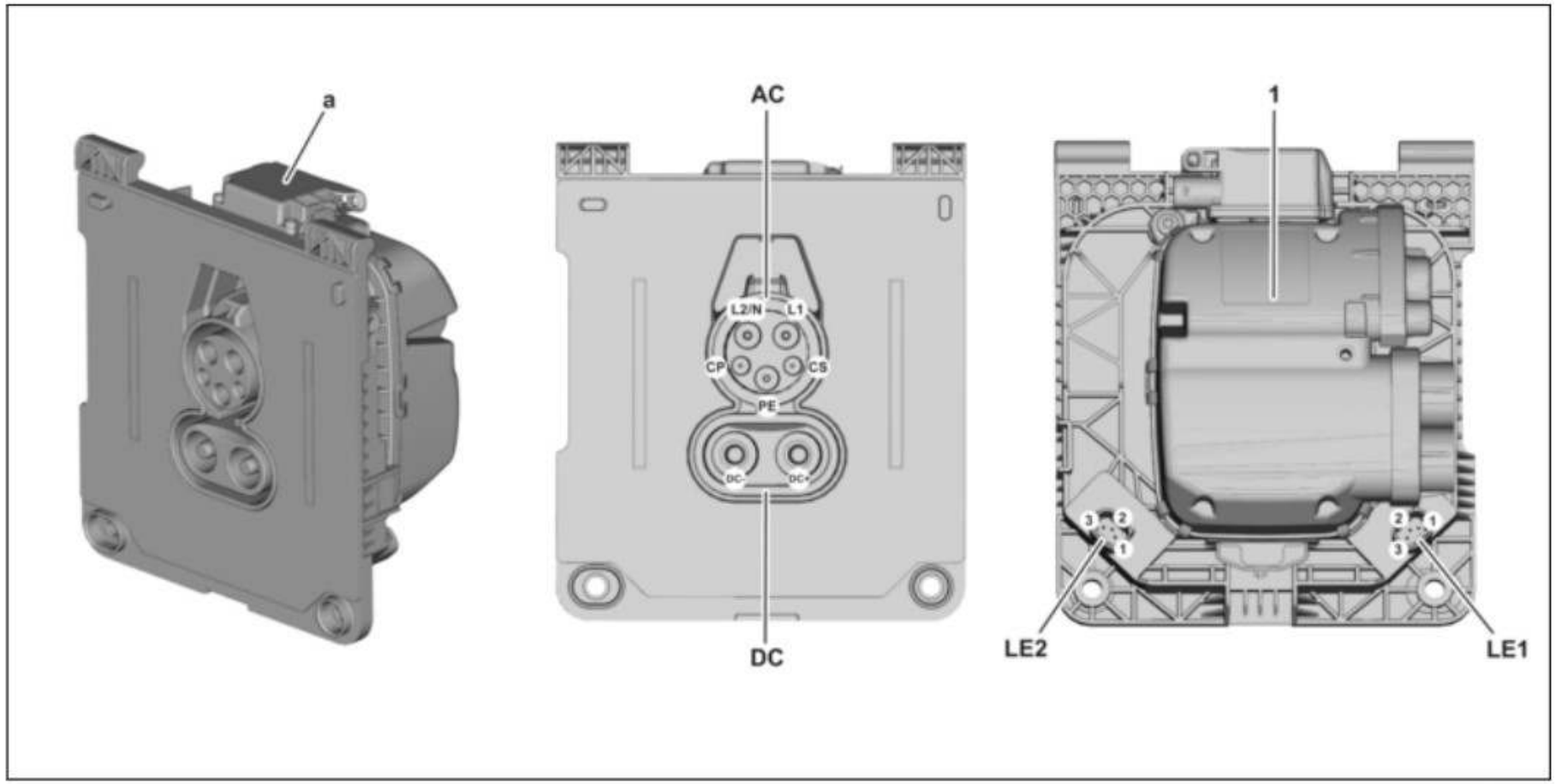
P54.10-A243-71

AC charging/DC charging vehicle socket indicator lamps (except Japan/China)

Permanent illumination of the locking status indicator lamp (4) in white shows that the AC charging/DC charging vehicle socket is unlocked. If the locking status (4) indicator lamp flashes white, that means there is fault during locking or unlocking.



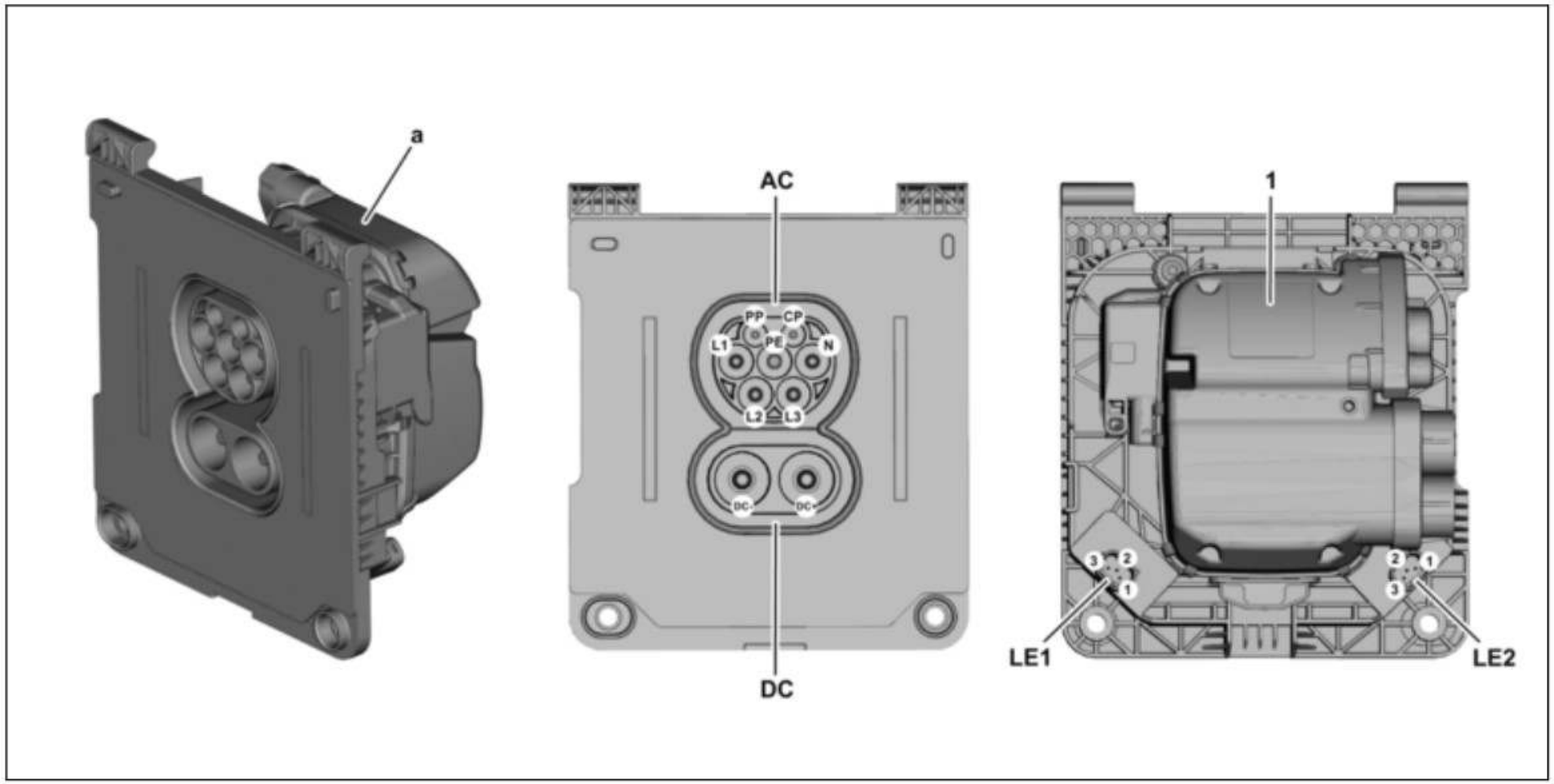
The socket used in North America is the Combo1



P47.70-A279-09

Shown on the Combo-1 socket

a	DC/AC charging vehicle socket	DC	Direct current electrical connection
1	Slot designation	LE1	Charging process indicator lamp 1 electrical connection
AC	Alternating current electrical connection	LE2	Charging process indicator lamp 2 electrical



P47.70-A277-09

Shown on a Combo 2 socket

a	DC/AC charging vehicle socket	LE1	Charging process indicator lamp 1 electrical connection
AC	Alternating current electrical connection	LE2	Charging process indicator lamp 2 electrical connection
DC	Direct current electrical connection		



An example Combo1 charger



An example Combo2 charger



Example AC Charging Cable

Charging cable for household socket with cable inspection box (mode 2)





P54.10-A372-76

A resistor is used to indicate the charging capacity of the cable

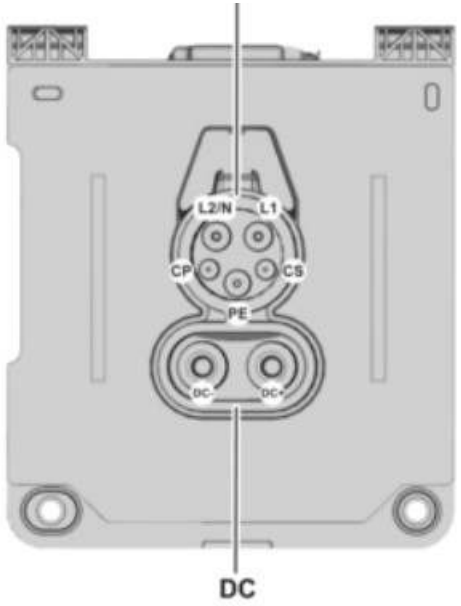
The charging socket contains contacts for three phase AC: L1, L2, L3, N, and PE as well as DC: DC+ and DC-

It also includes a control pilot (CP) contact for communication with the charging station and a Proximity Pilot (PP) contact which helps determine if the vehicle is plugged in.

Coding of max current load capacity of the charging cable is done via a resistor

If the LED, (#3) is steady the DC/AC charge socket is unlocked
If the LED, (#3) is flashing, there is a fault with the lock/release.





The charging process

When the charging cable is connected the alternating current charging unit communicates with the cable

Information on the performance of the power supply equipment is relayed to the charger

The alternating current charger adapts to the conditions and begins charging

With AC charging a max of about 10 kW is possible, with DC charging 110 kW is possible

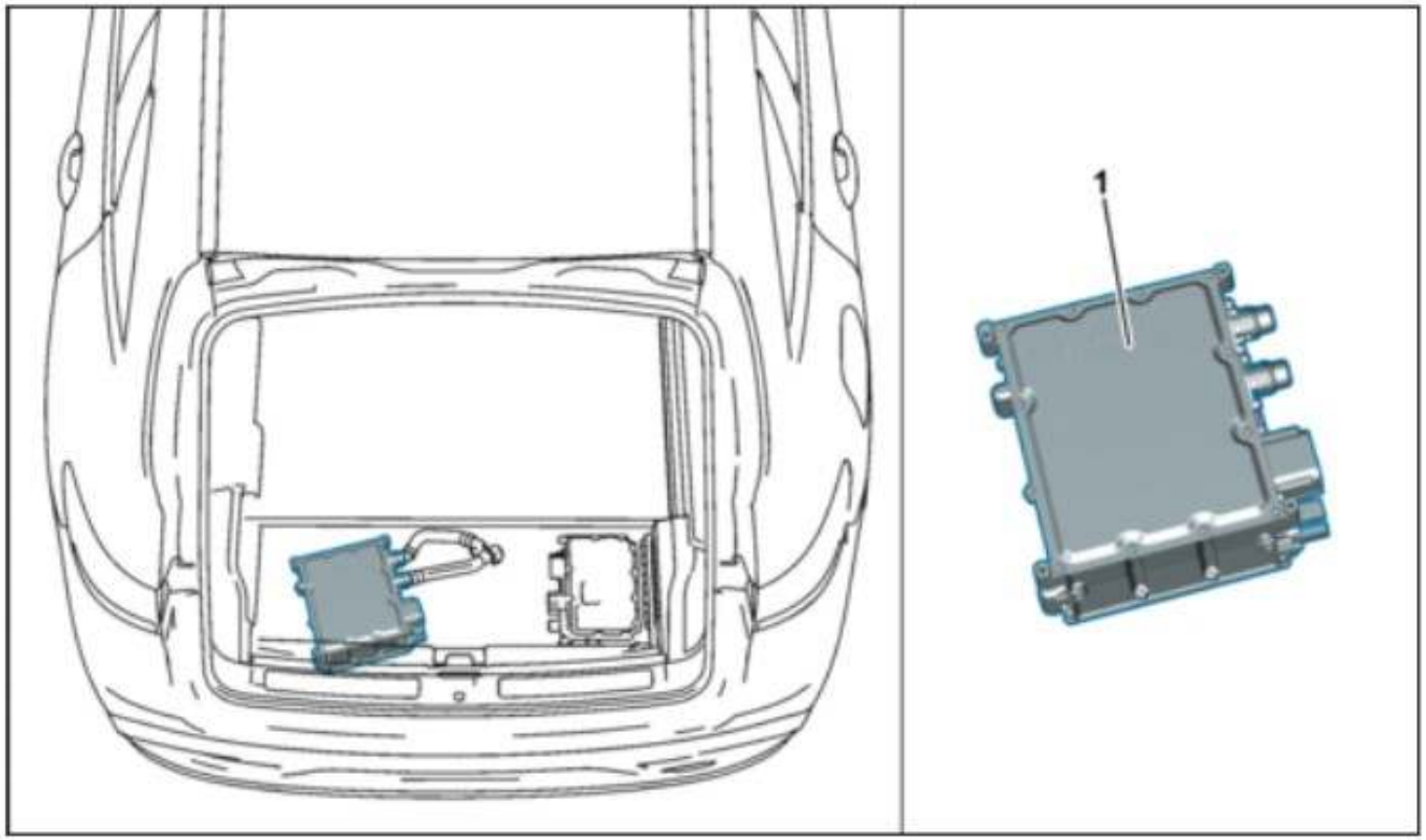
With direct charging in approximately 45 minutes, you can go from 10% SOC to 80% SOC



Alternating current charger

Installation position

1 Alternating current charger for high-voltage battery



Alternating current charger for high-voltage battery, connections

1 Alternating current charger for high-voltage battery

2 DC current charge-connection unit high-voltage connection

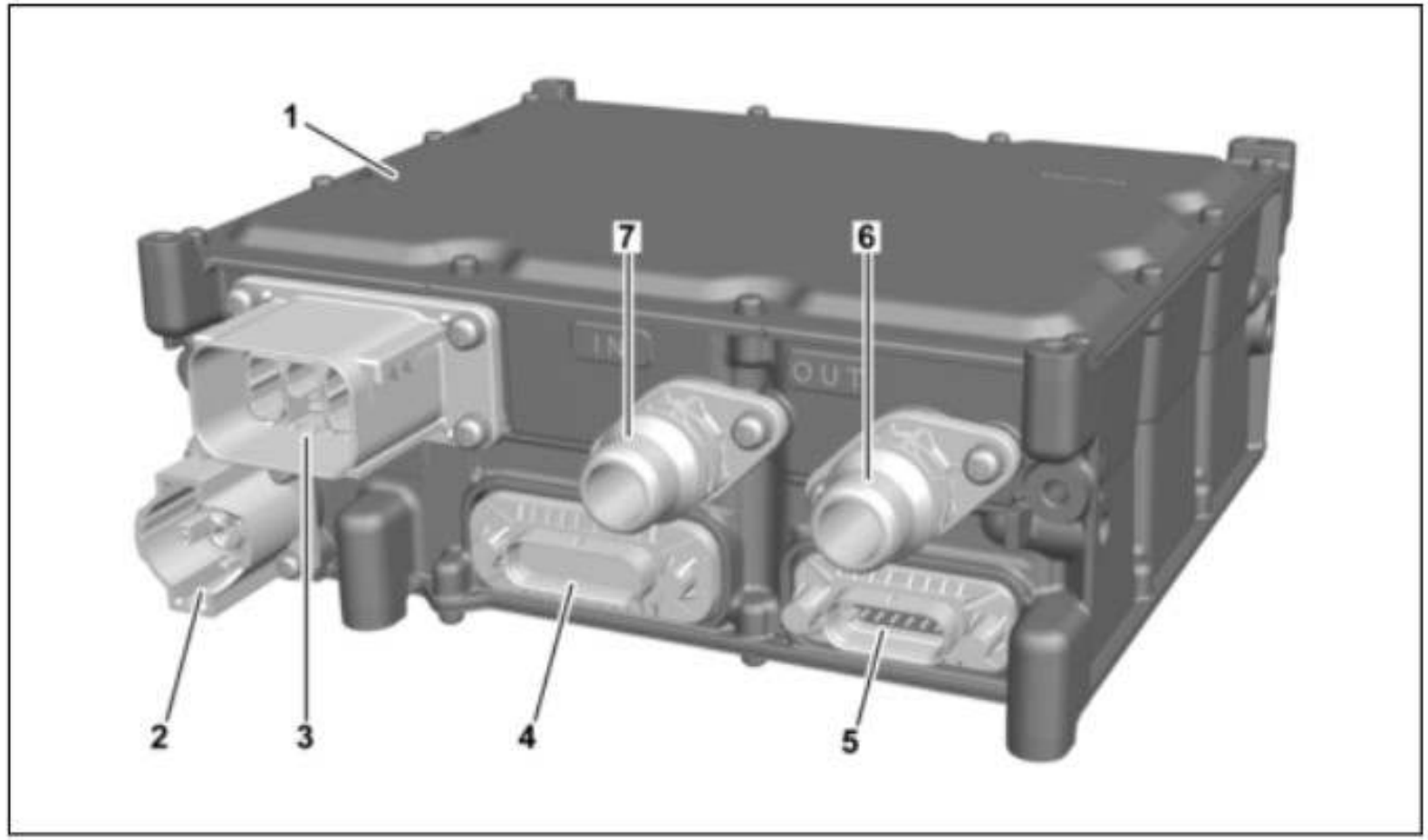
3 DC charging/AC charging vehicle socket high-voltage connection

4 Not assigned

5 Connection to on-board electronics

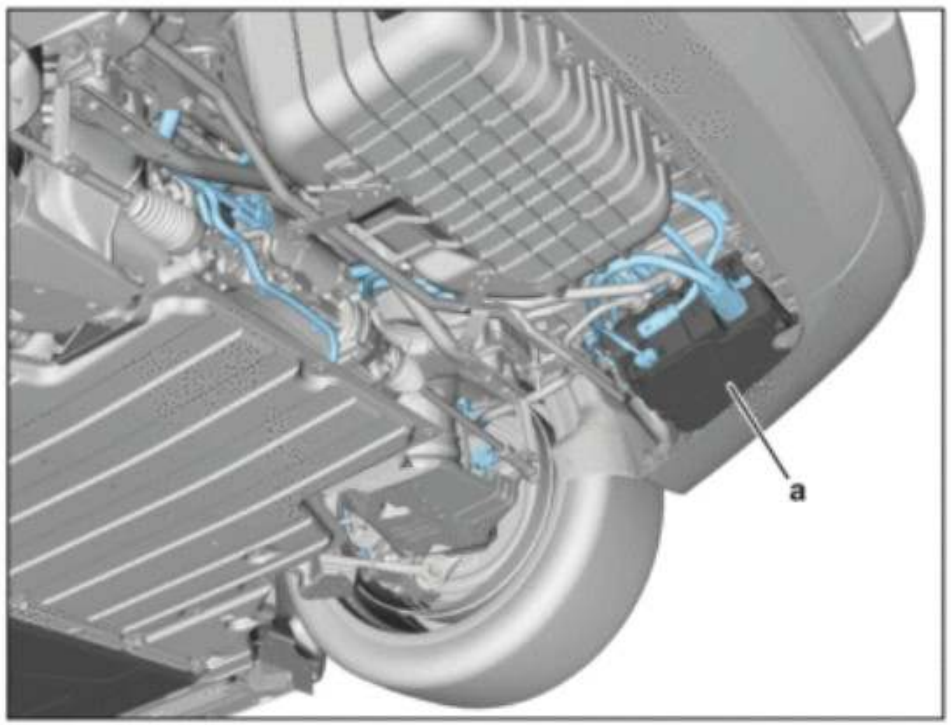
6 Coolant return flow

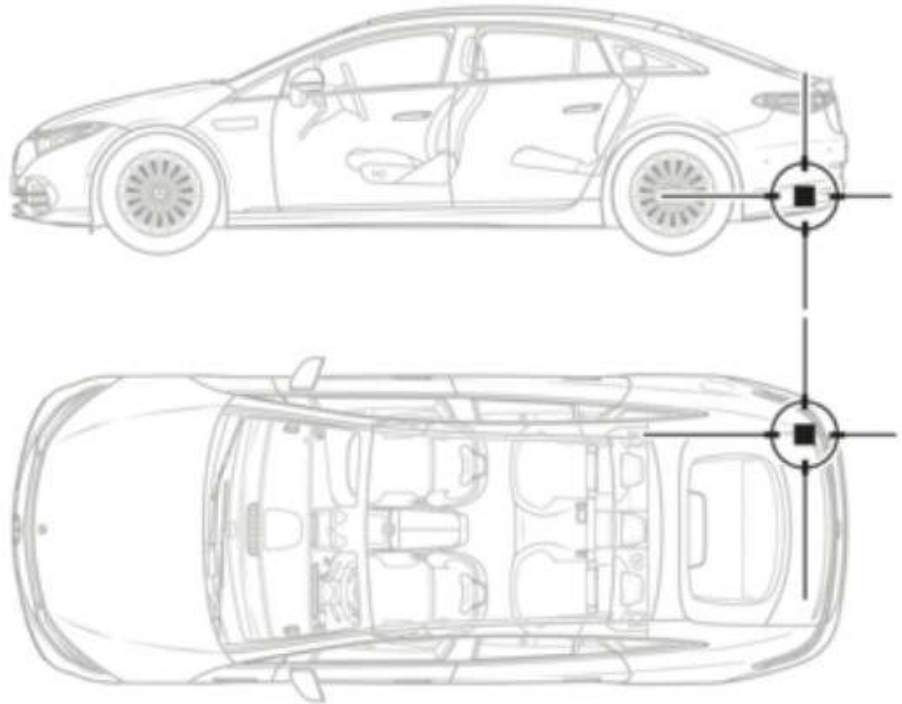
7 Coolant feed point



Alternating current charger for high-voltage battery

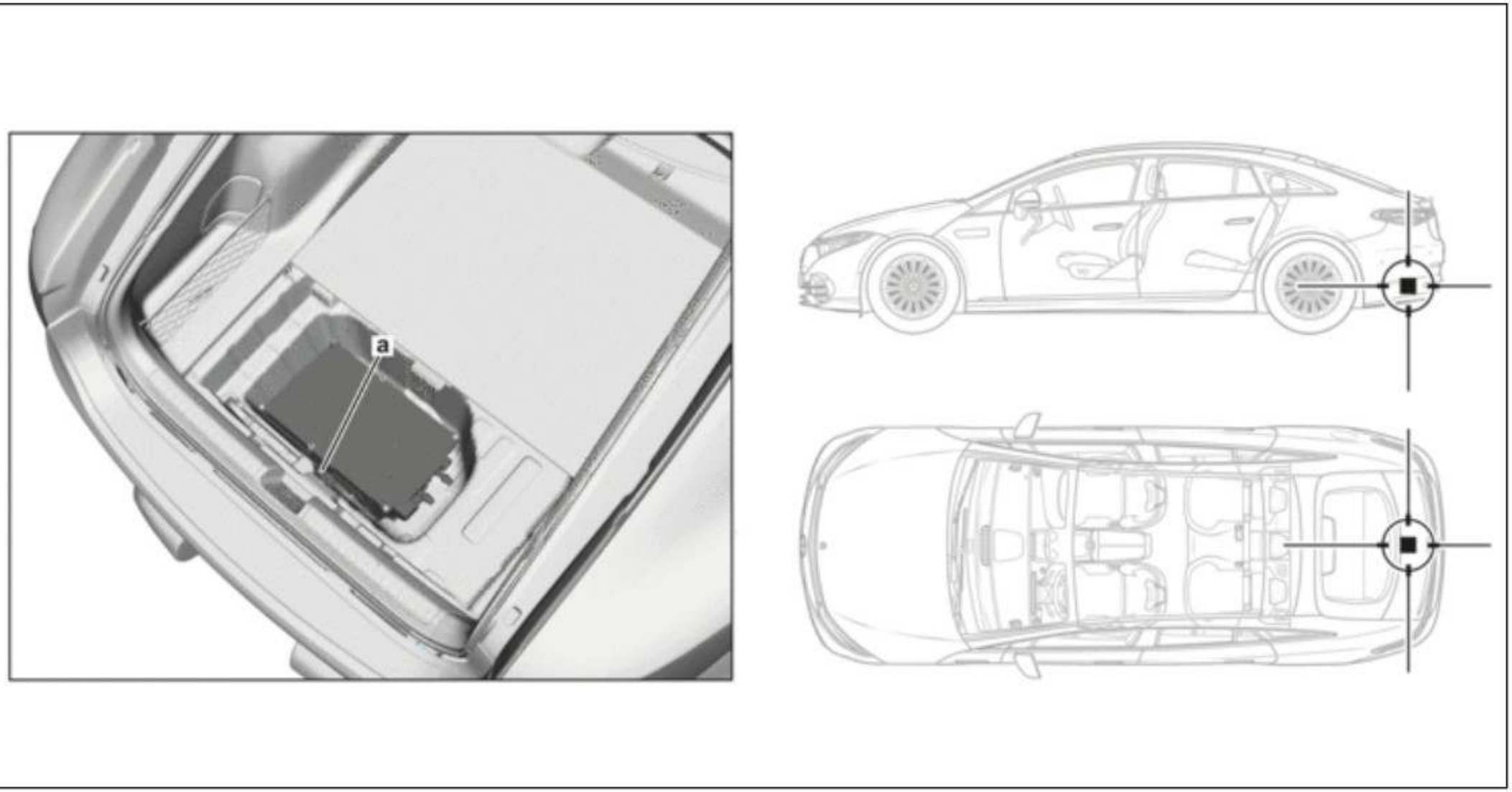
The AC charger for the high-voltage battery converts the alternating voltage of an external voltage source, e.g. charging station, into direct voltage. The AC charger for the high-voltage battery is water-cooled and integrated in low-temperature circuit 2.





Shown on location for chargers with 9.6 and/or 11 kW

a Alternating current charger for high-voltage battery

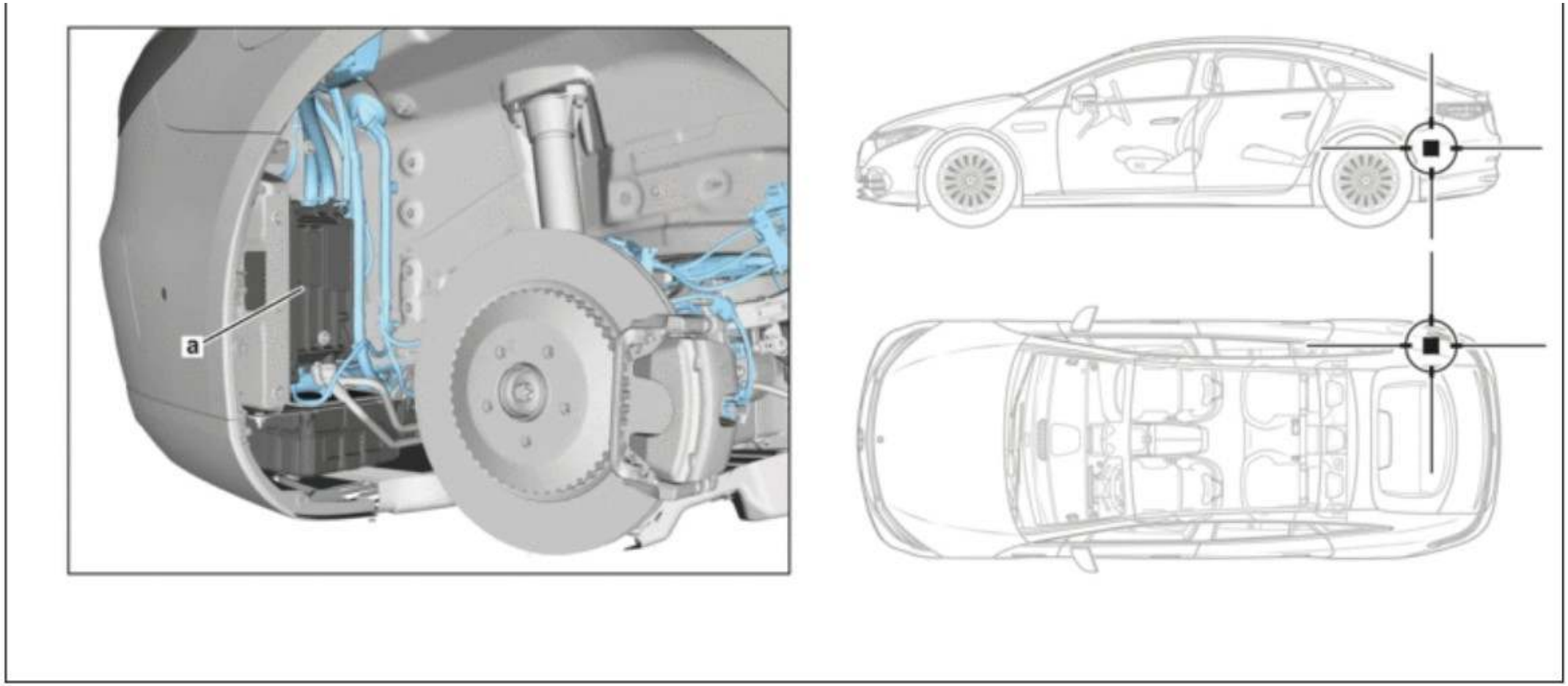


P47.70-A264-79

Shown on location for charger with 22 kW

a Alternating current charger for high-voltage battery

For DC Charging there is a separate control module



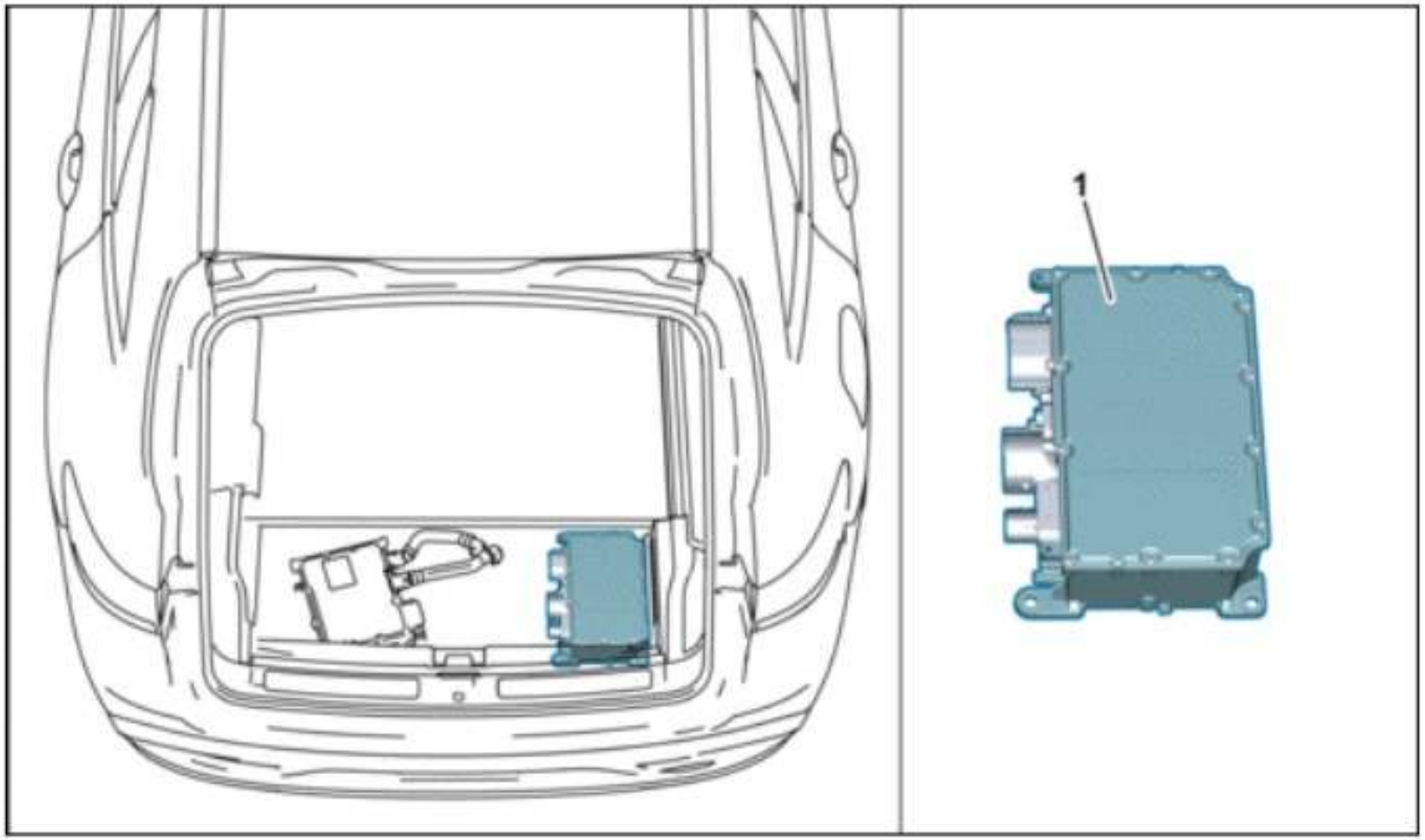
P47.70-A275-79

a Direct current charge connection unit

DC Charging

Installation position

1 Direct current charge connection unit



DC charge-connection unit, connections

1 Charger feed-in socket high-voltage connection

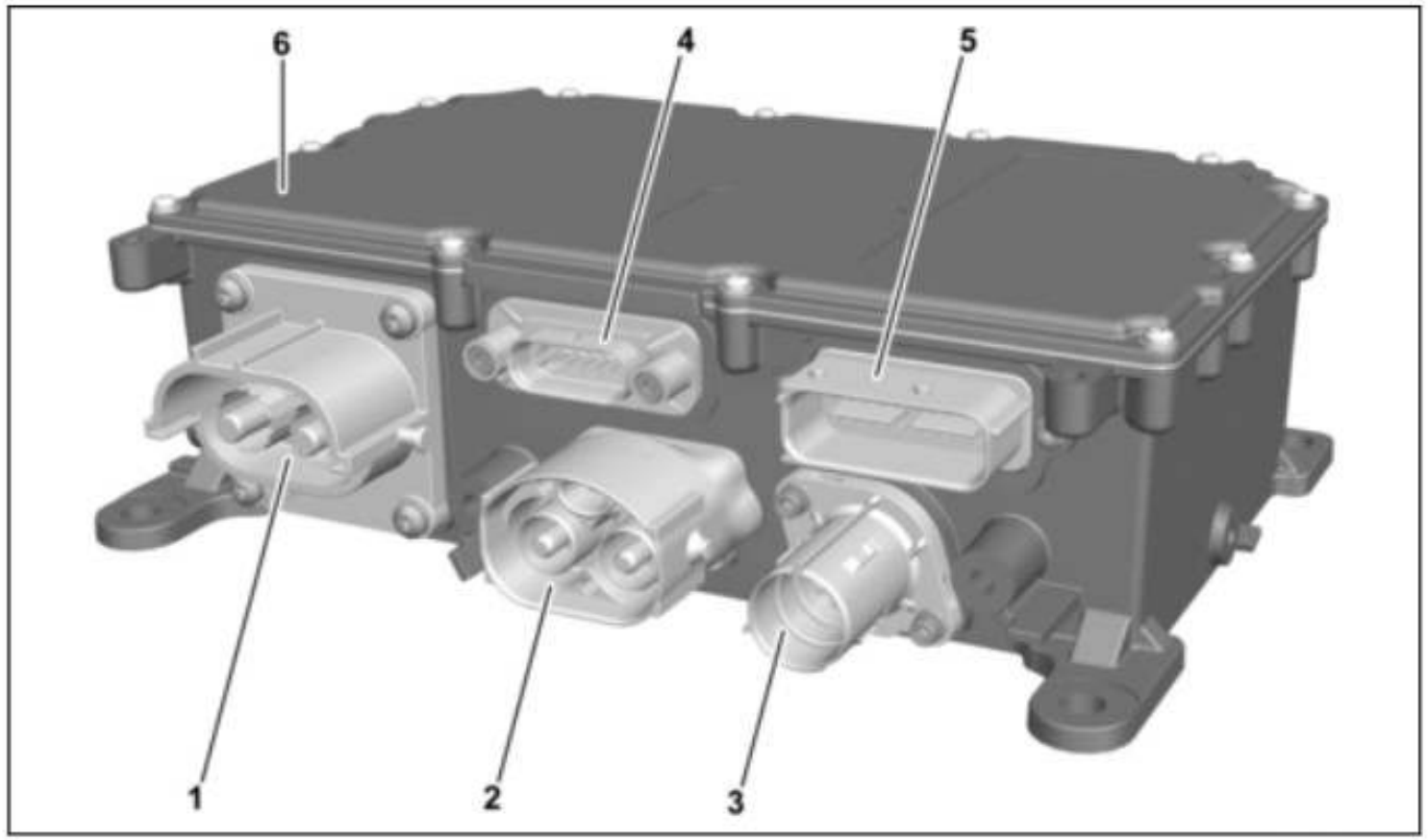
2 High-voltage battery high-voltage connection

3 AC charger for high-voltage battery high-voltage connection

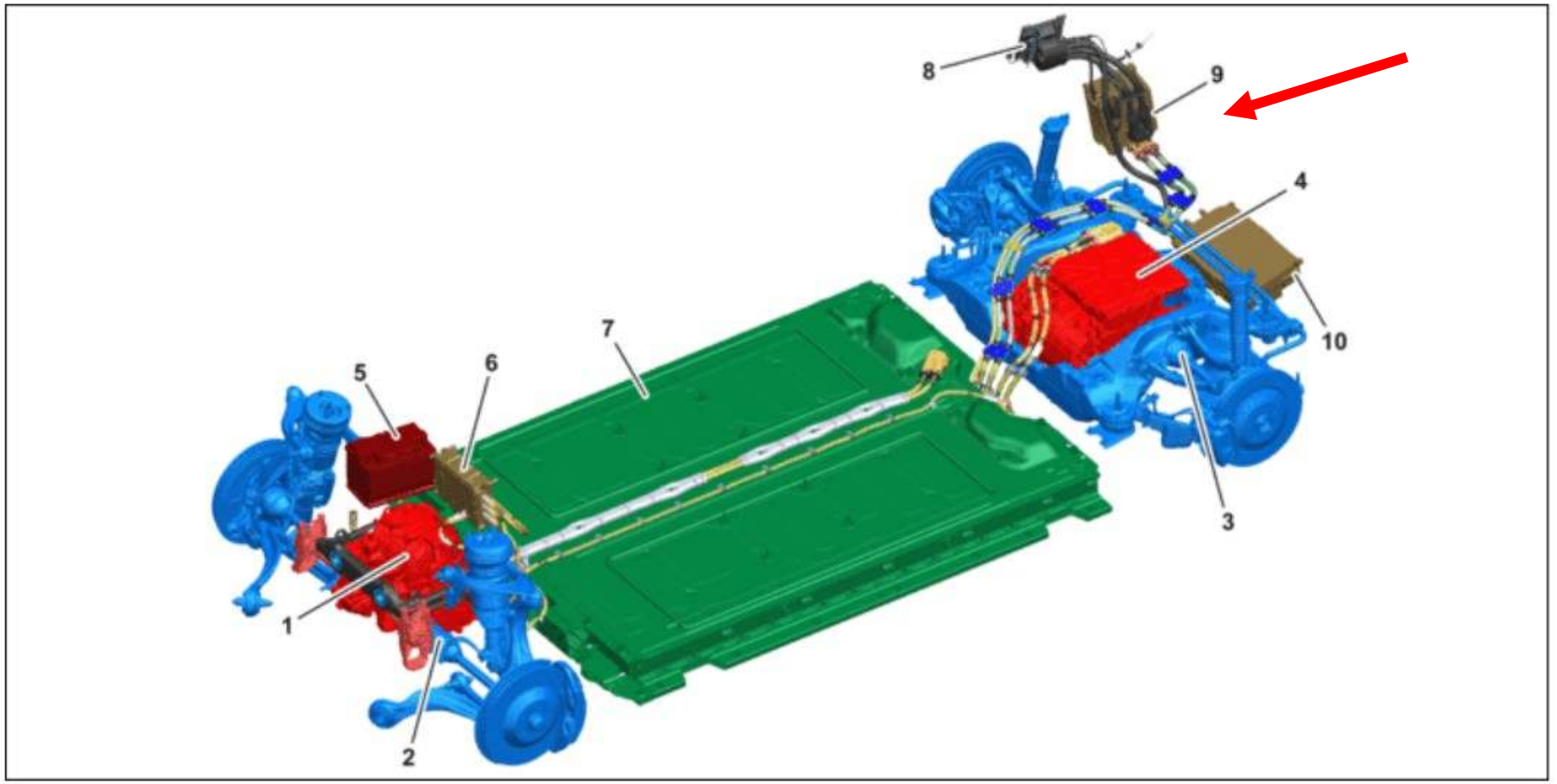
4 Connection to on-board electronics

5 Connection to the DC charging/AC charging vehicle socket and locking motors (socket flap and charging cable connector)

6 Direct current charge connection unit



P54.10-A241-05



P47.70-A436-79

Overview of drive components in the EQE

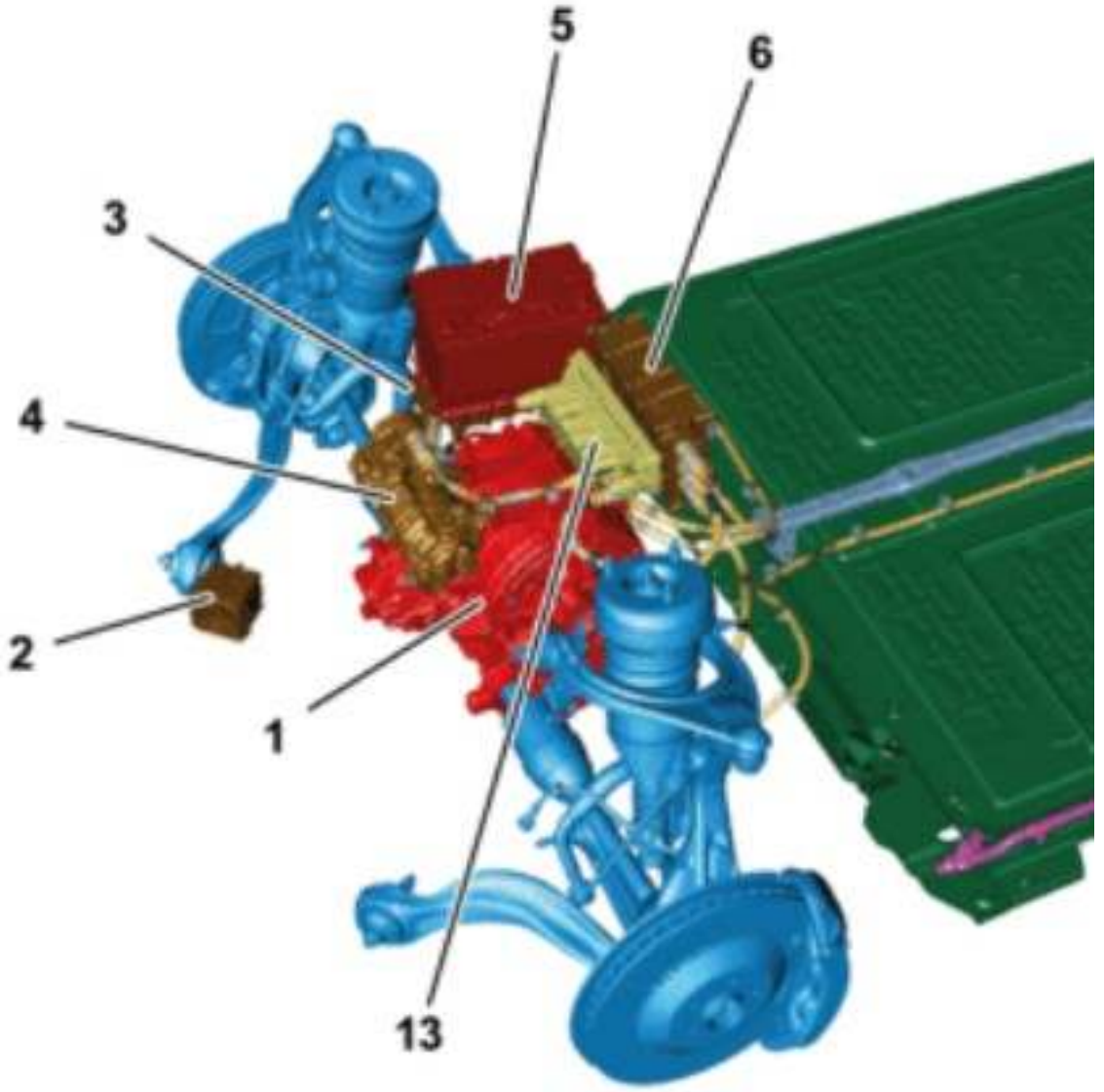
1	Front electric drive unit (Only in 4MATIC)	6	DC/DC converter control unit
2	Front axle drive shaft	7	High-voltage battery module
3	Rear axle drive shaft	8	DC/AC charging vehicle socket
4	Rear electric drive unit	9	Direct current charge connection unit
5	12 V battery	10	AC charger for high-voltage battery (9.6 and/or 11 kW)

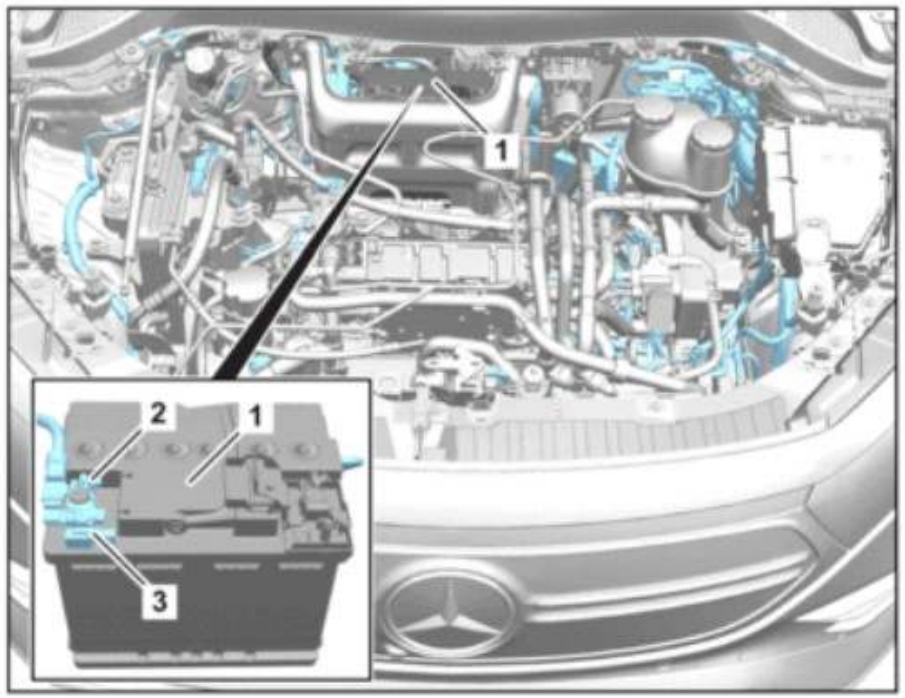
Direct current charging



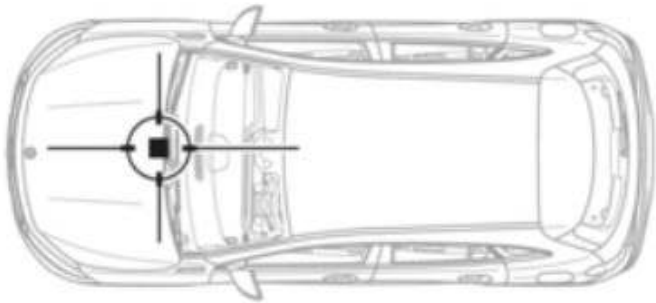
12 Volt Battery

1. **Front Electric Drive Unit (code Moo5)**
2. **Front sound generator**
3. **High Voltage PTC heater (high voltage battery)**
4. **Electric Refrigerant Compressor**
5. **12V Battery**
6. **DC/Dc converter control unit**









P54.10-A248-79

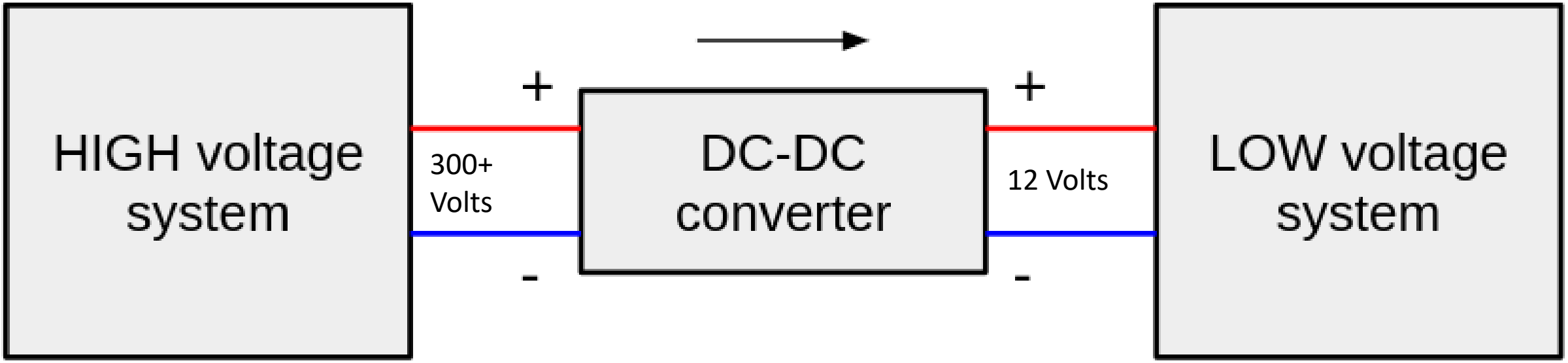
Installation position

1 On-board electrical system battery

2 Nut for negative pole

3 Ground cable

DC/DC Power Converter



DC/DC Converter operation

DC charge-connection unit, connections

1 Charger feed-in socket high-voltage connection

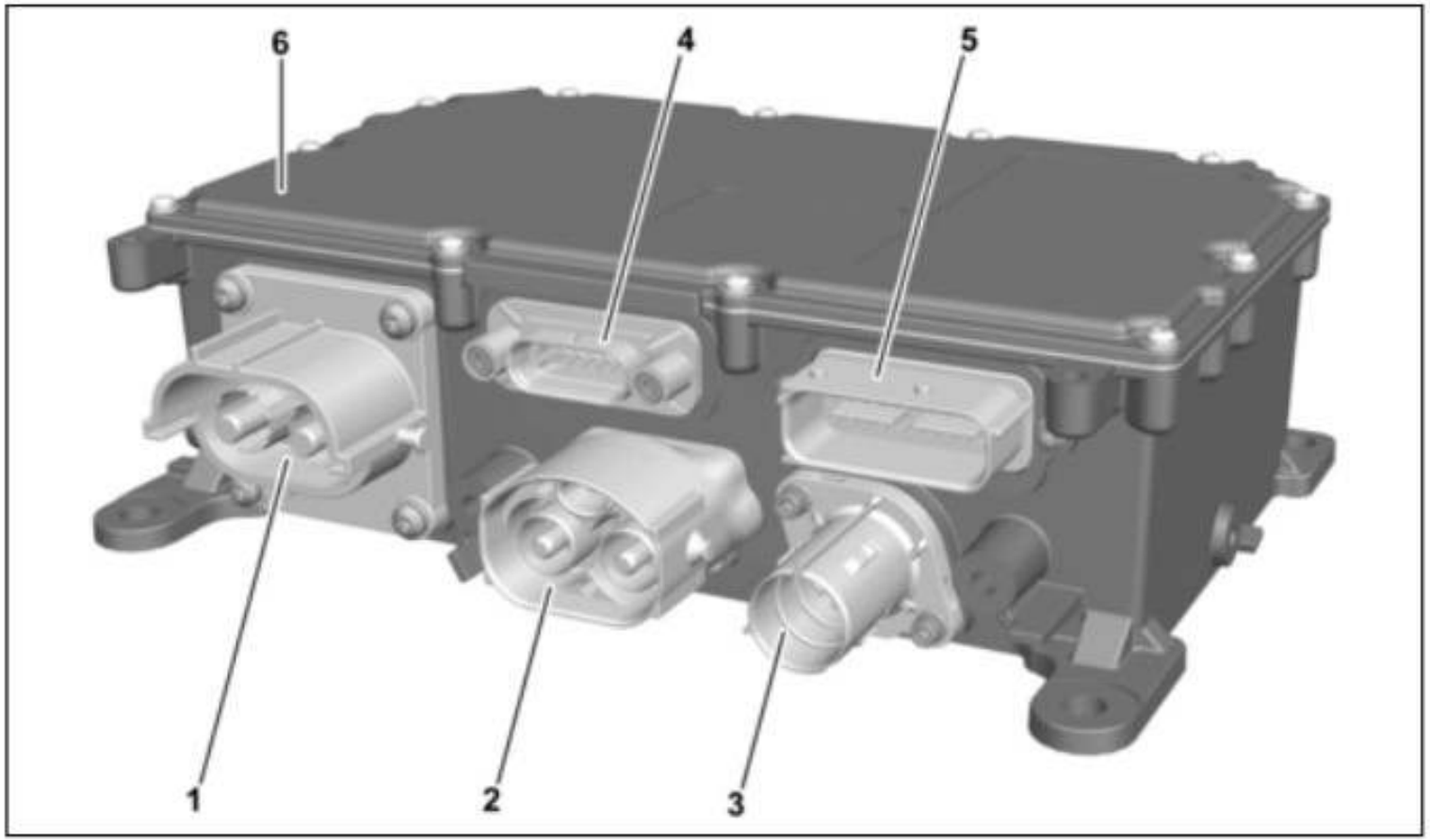
2 High-voltage battery high-voltage connection

3 AC charger for high-voltage battery high-voltage connection

4 Connection to on-board electronics

5 Connection to the DC charging/AC charging vehicle socket and locking motors (socket flap and charging cable connector)

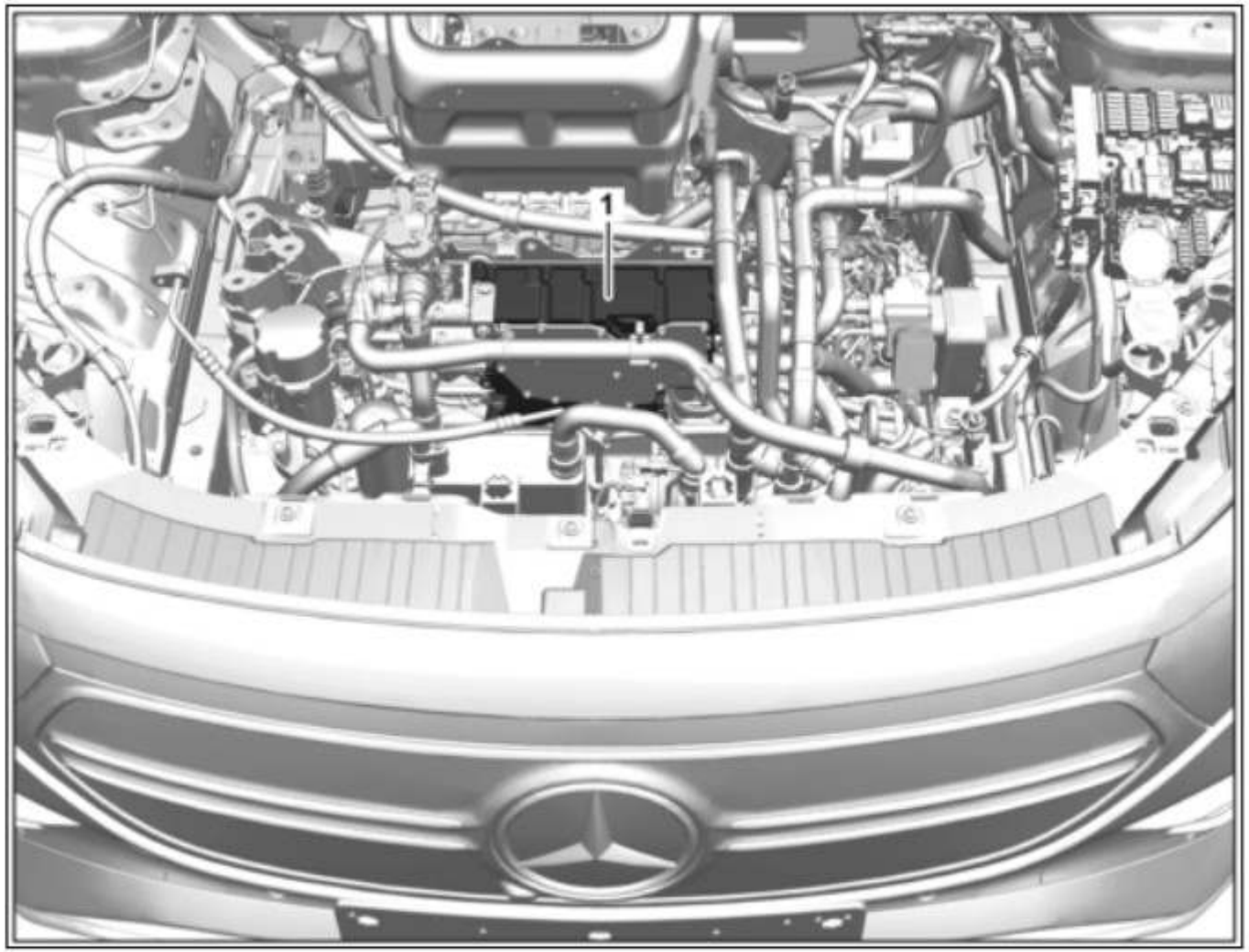
6 Direct current charge connection unit



P54.10-A241-05

Installation position

1 High-voltage power distributor



Electric Machines (Drive units)

Electrical system

Power electronics

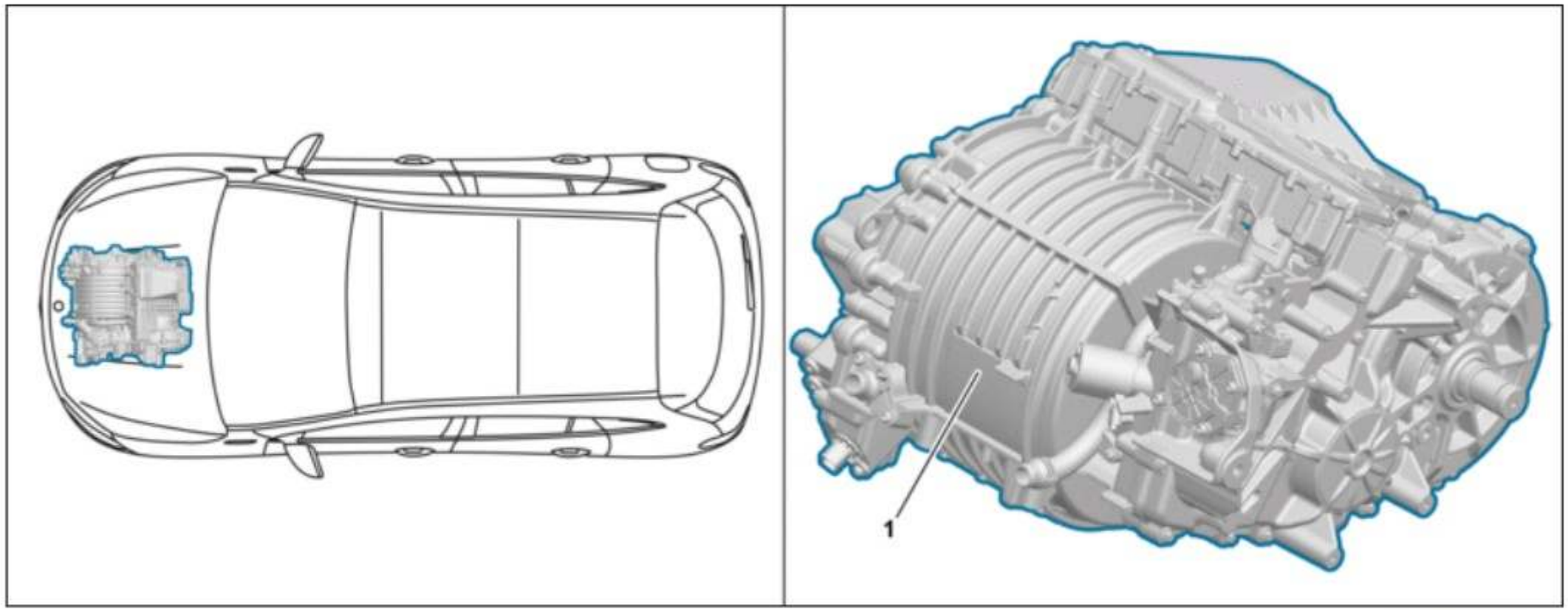
The power electronics are integrated in the drive system and connected directly to the high-voltage battery module and coolant circuit. Its tasks are as follows:

- Voltage supply
- Control of the electric machine
- Monitoring of the temperature and position of the electrical machine
- Creating diagnoses and forecasts of the available torque for the powertrain control unit

If the electric machine is operated in overrun mode as an alternator, the power electronics converts the induced alternating voltage into a direct voltage and thus supplies the high-voltage on-board electrical system.



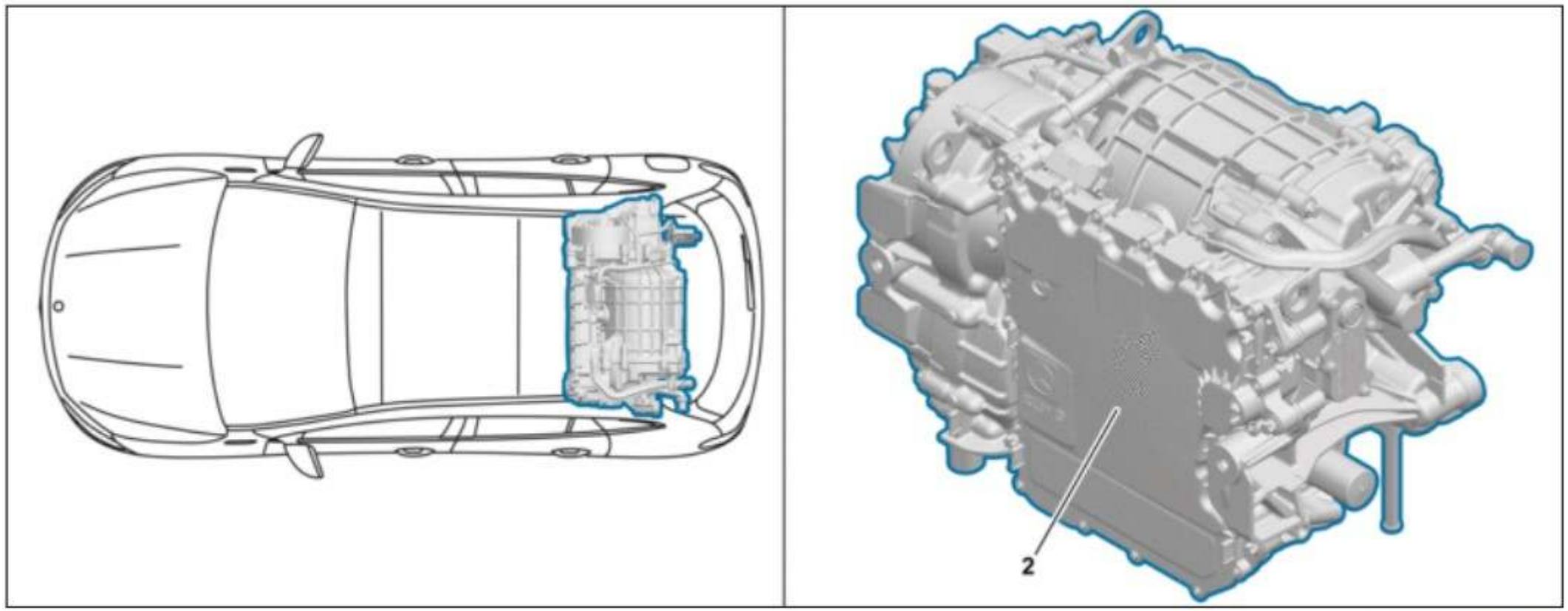
In vehicles with two electric machines, there is one power electronics control unit for each machine.



P08.10-A058-78

Installation position

1 Electric machine 1 (front)



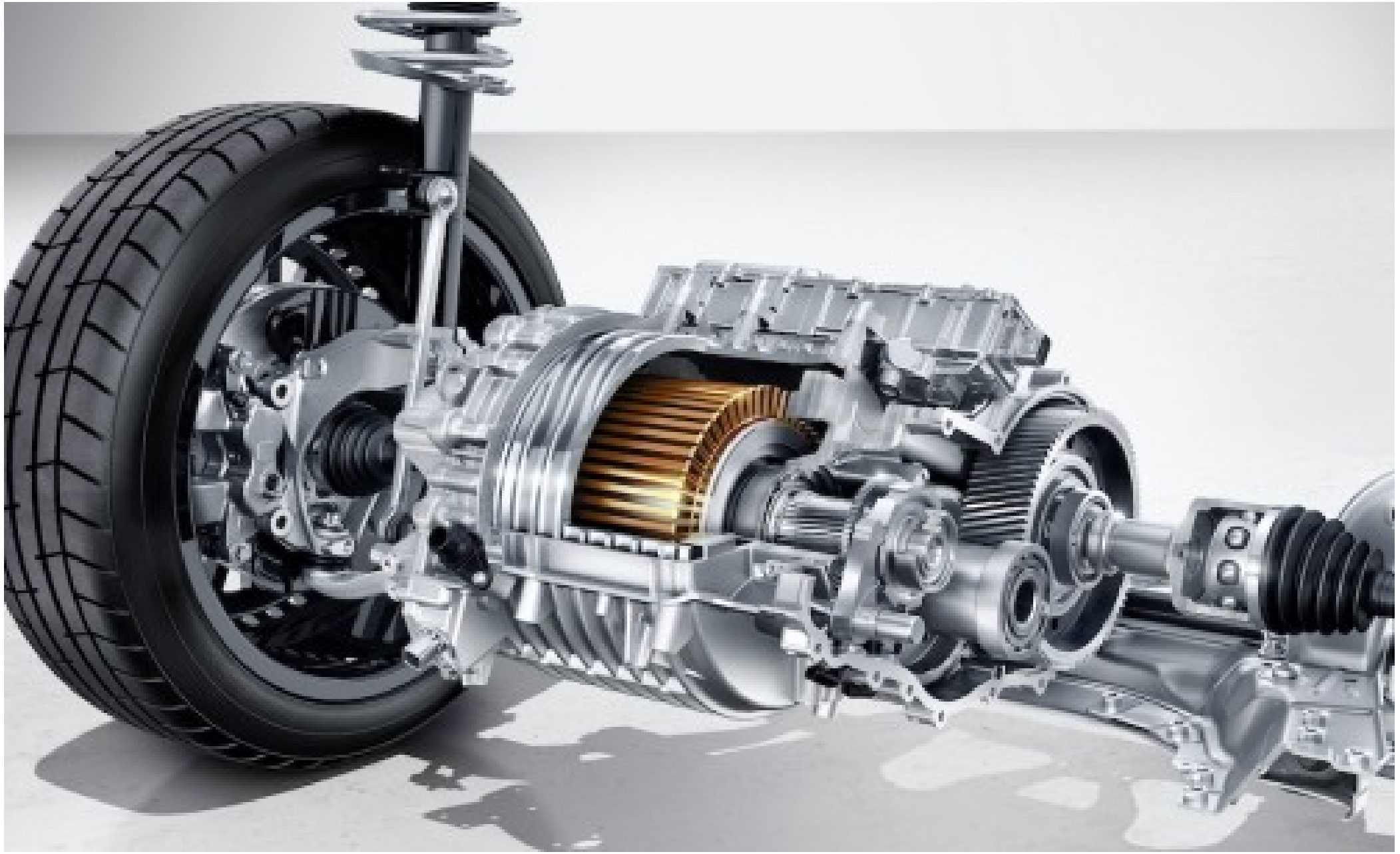
P08.10-A059-78

Installation position

2 Electric machine 2 (rear)



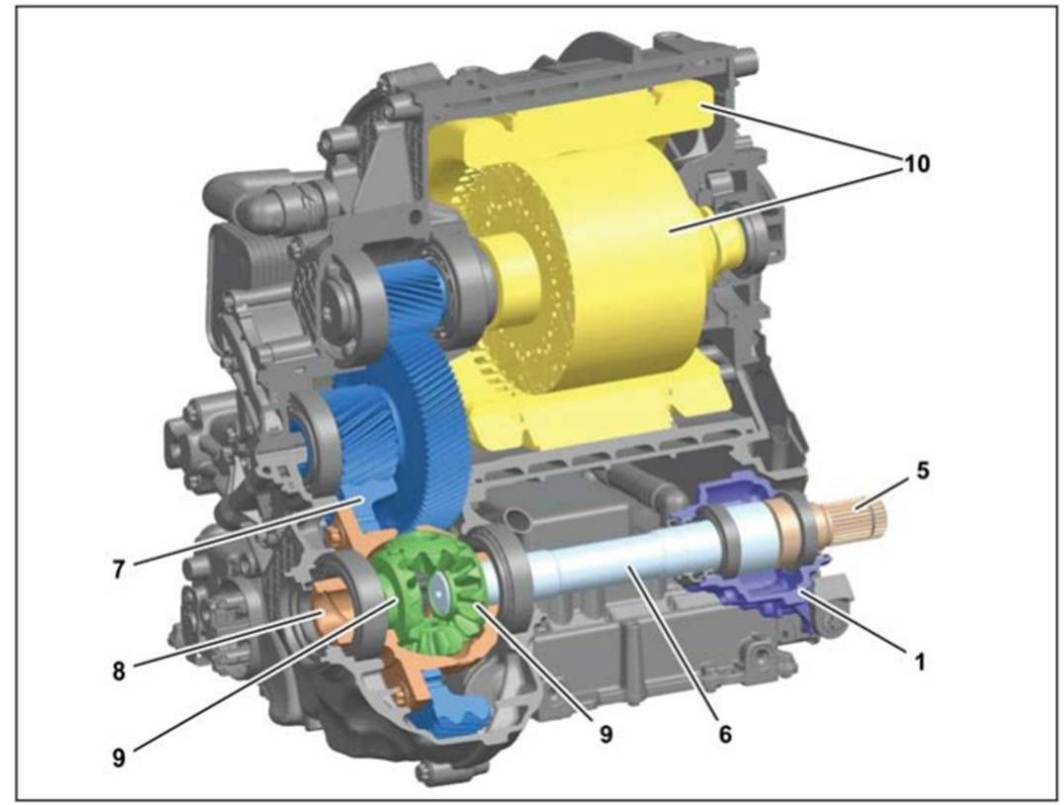

Charging options
Consumption
Energy flow
Vehicle
Owner
11:00
Electrical consumption
Recuperation
50
40
30
20
10
0
10
20
kWh/100km
10
20
30 min
Average 20.9 kWh/100km
30 min
START STOP

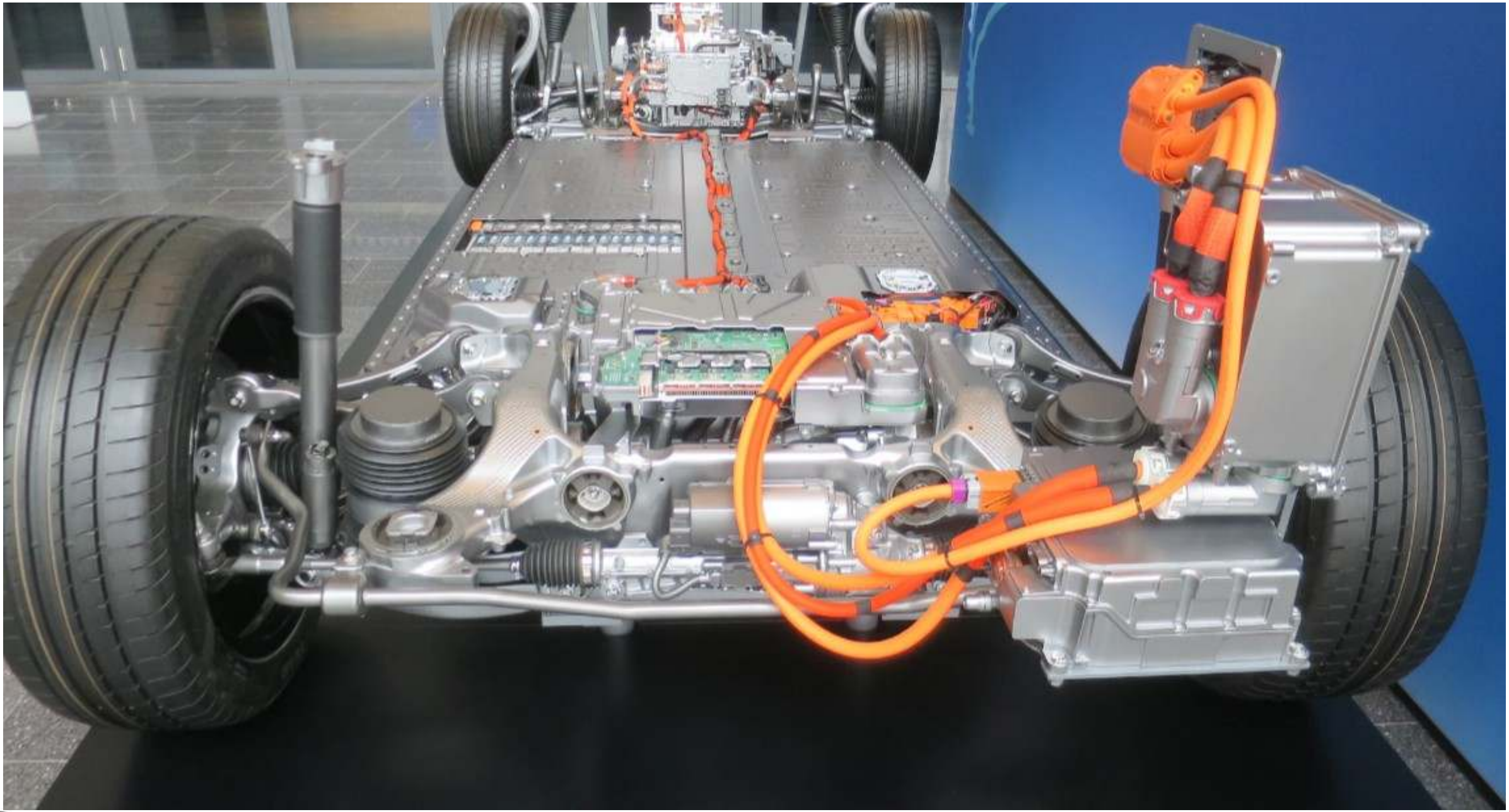


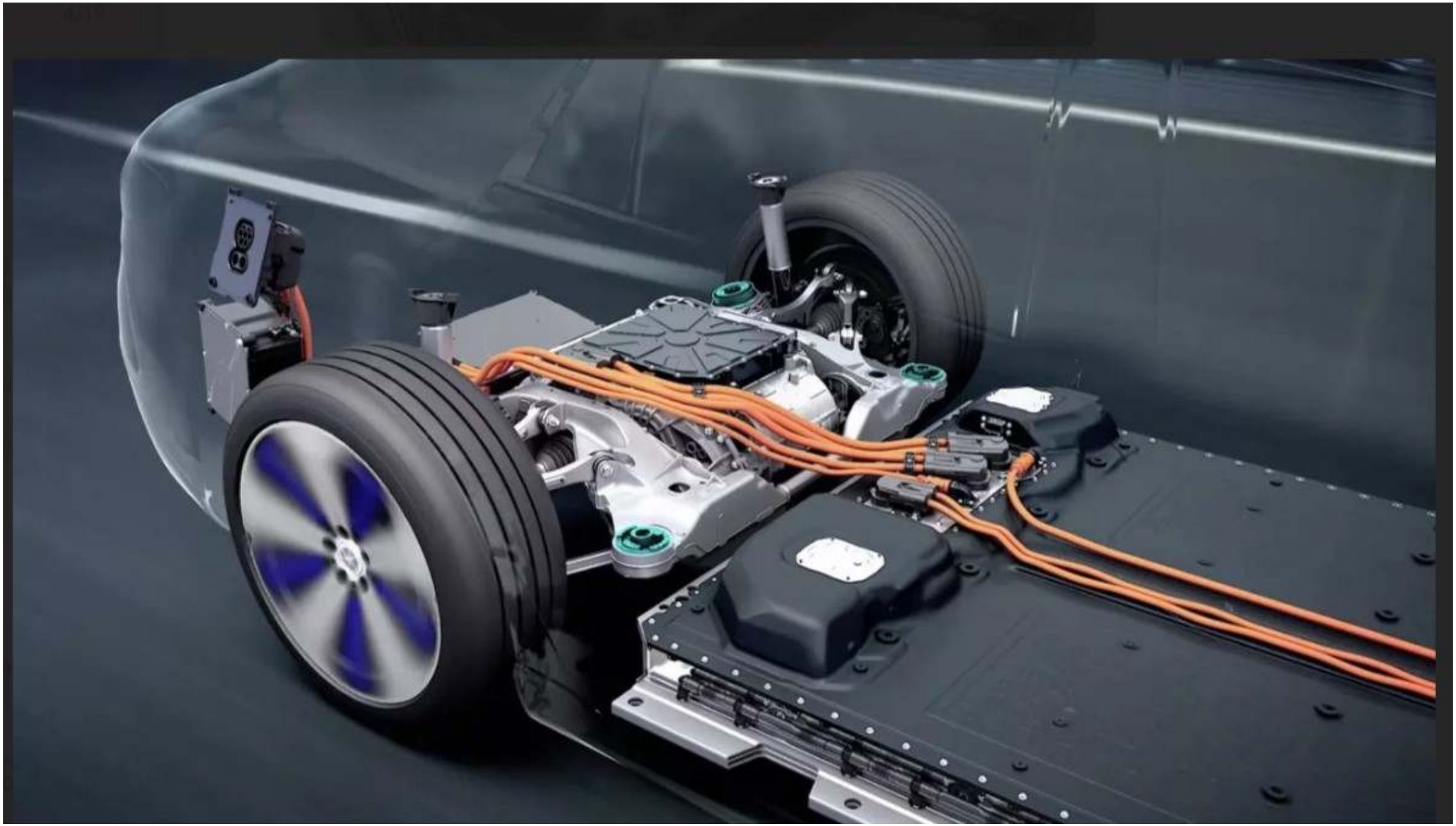


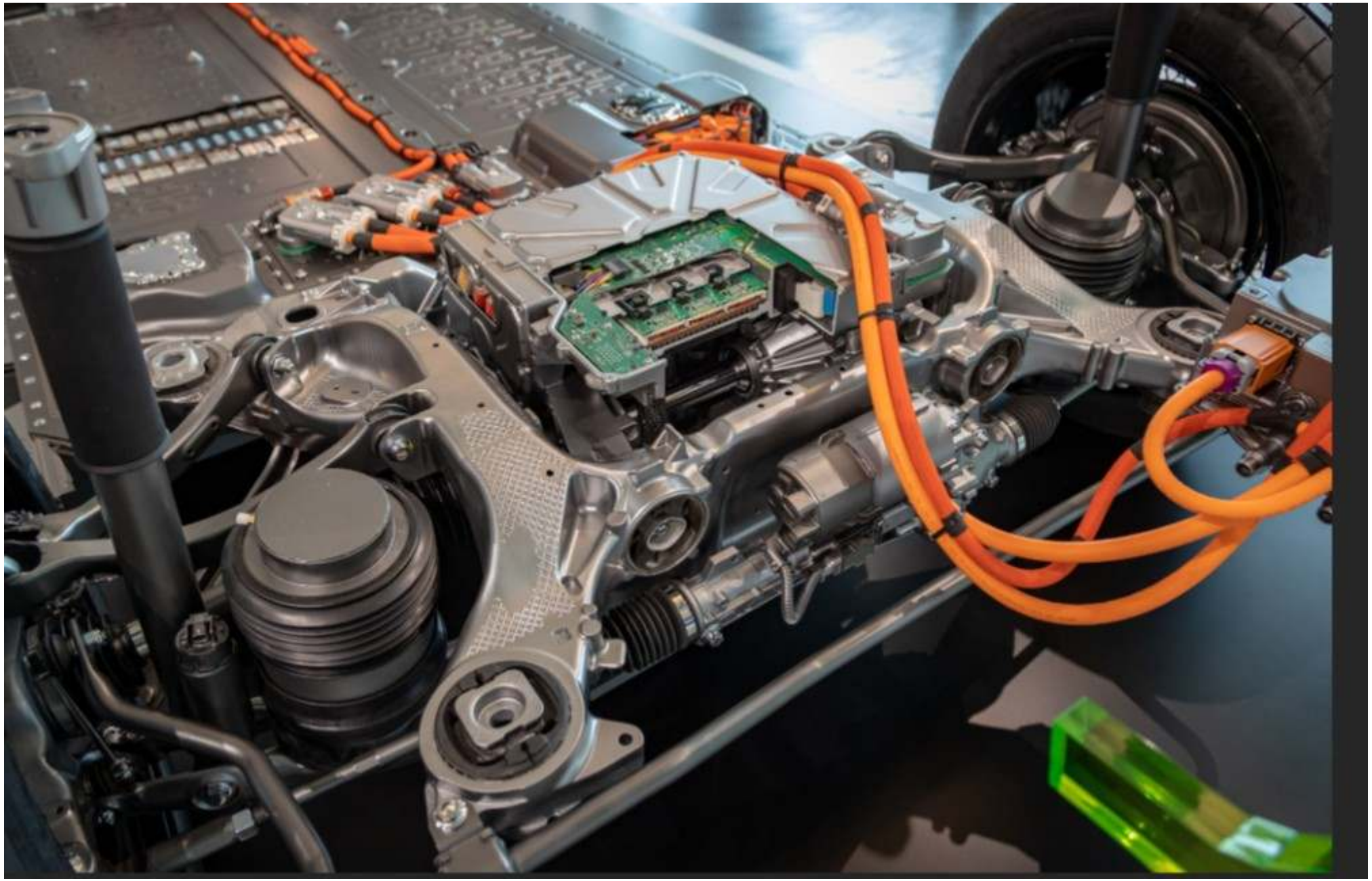
Front drive unit, design with electric transmission decoupler, sectional drawing

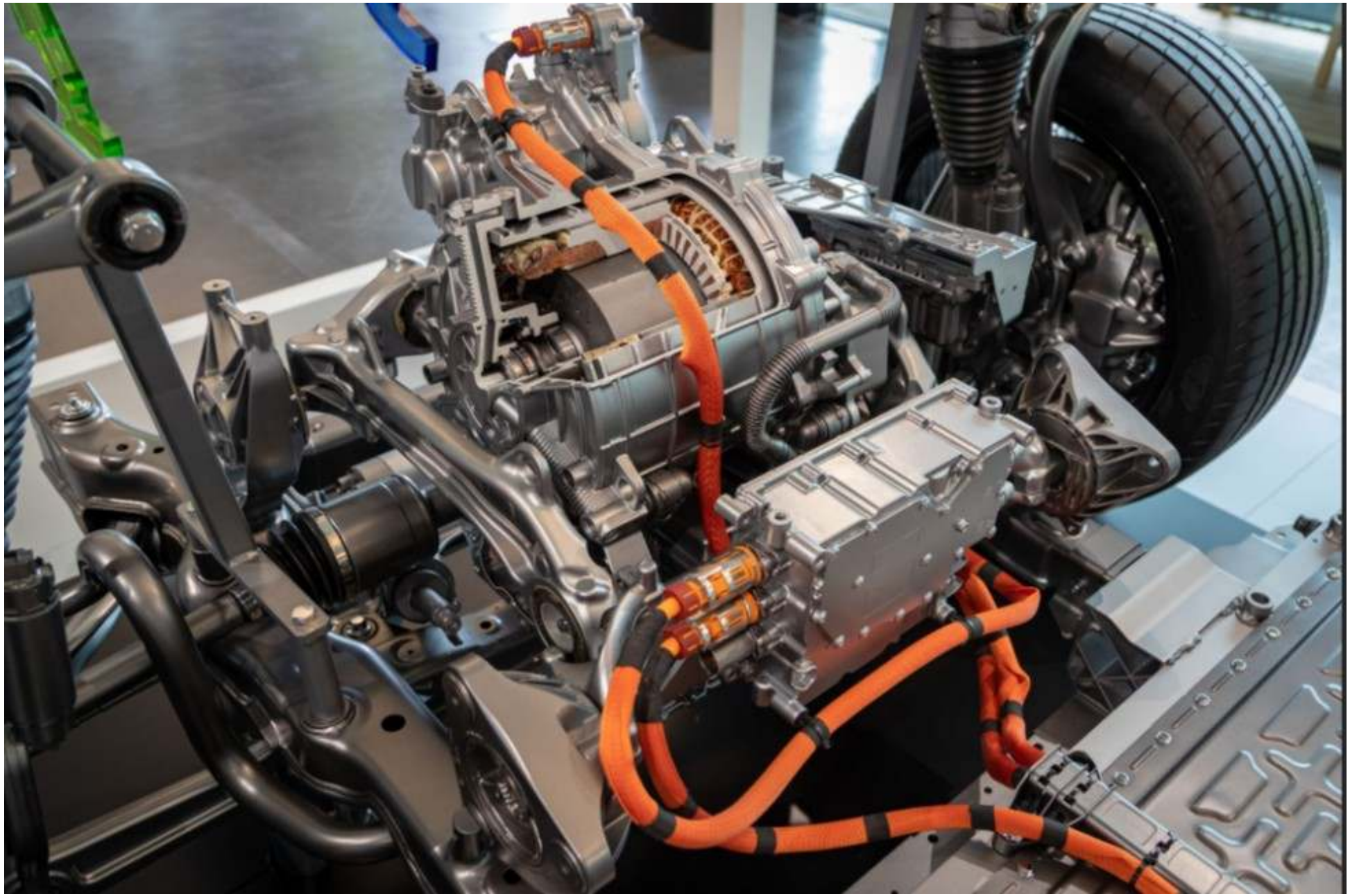
1	Electric transmission decoupler
5	Left drive shaft
6	Intermediate shaft
7	Crown wheel
8	Right drive shaft
9	Bevel gears
10	Front axle electric machine

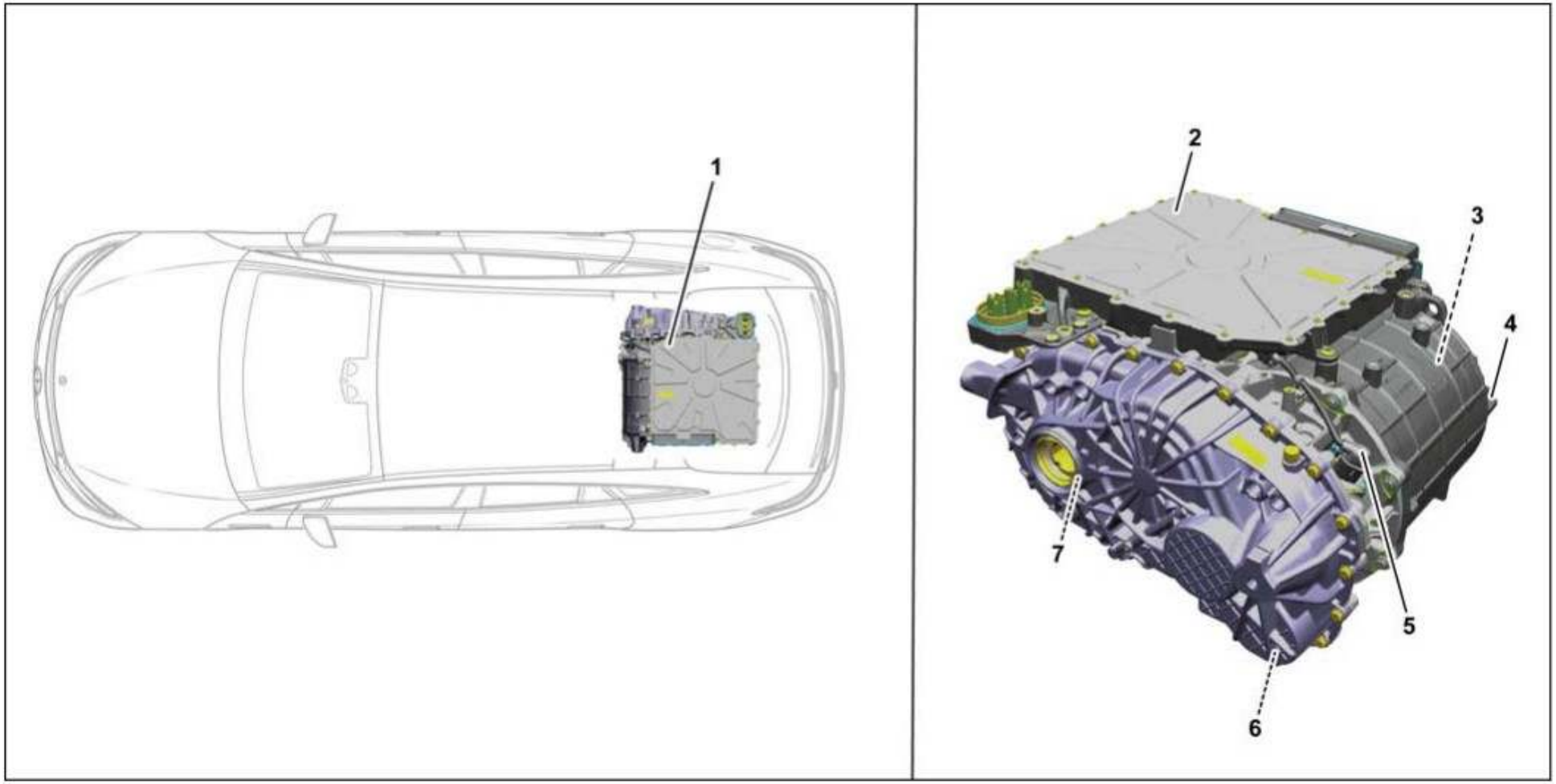








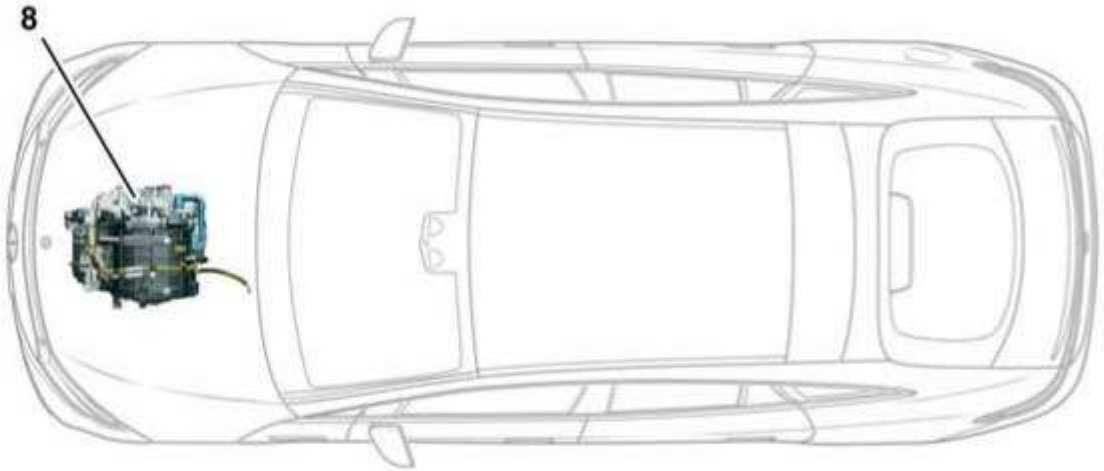


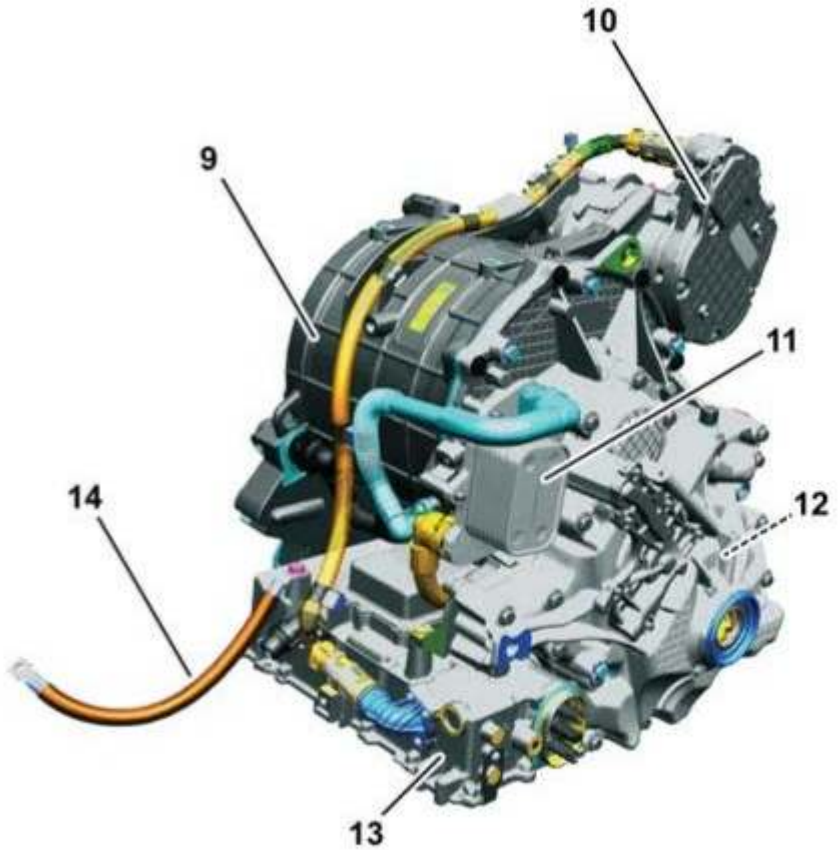


P08.10-A093-79

Rear-axle electric drive unit, shown on model 297

1	Rear axle electric drive unit	5	Position sensor
2	Rear axle power electronics control unit	6	Park pawl
3	Rear axle electric machine	7	Transmission
4	Power output to vehicle		



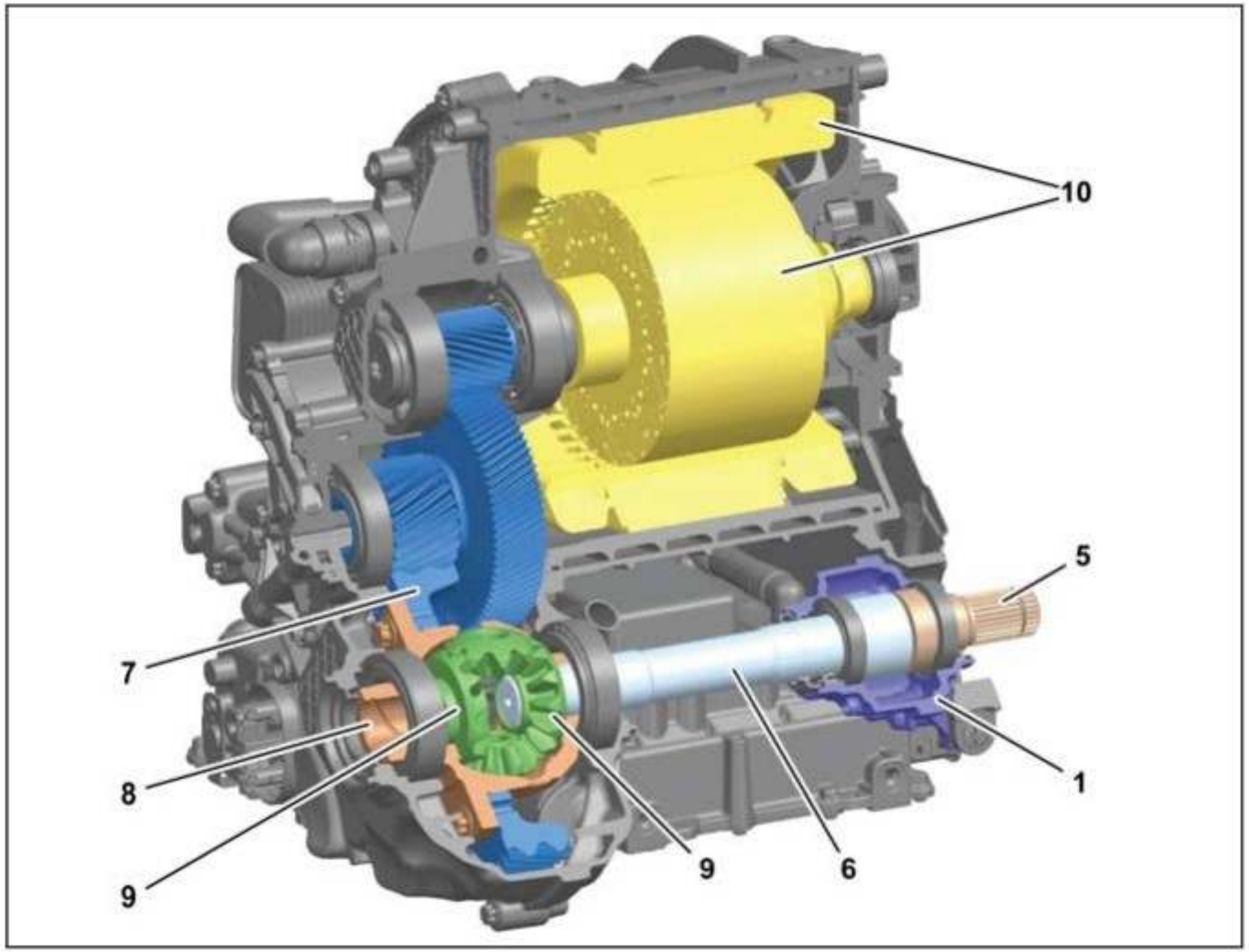


Front-axle electric drive unit, shown on model 297 with all-wheel drive

8	Front axle electric drive unit	12	Transmission
9	Front axle electric machine	13	Front axle power electronics control unit
10	Electric refrigerant compressor	14	Equipotential bonding line
11	Heat exchanger		

Front drive unit, design with electric transmission decoupler, sectional drawing

1	Electric transmission decoupler
5	Left drive shaft
6	Intermediate shaft
7	Crown wheel
8	Right drive shaft
9	Bevel gears
10	Front axle electric machine



Vehicle: C297124 (C297_FV)
EQS 450 4MATIC

Model designation

PC > EQS 450 4MATIC > Vehicle: C297124 > C297_FV > Electric motor: D780600 > D78060_BE1 > 08 Electric drive/hybrid drive > 015 Electric drive

Vehicle | High-voltage battery | Electric motor

Main groups

08 Electric drive/hybrid drive

10 A 297 340 03 02 Quantity: 1
AXLE DRIVE MODULE
Complete
Code: EMQ;
Replaced by: A 297 340 58 02
Replaced by: A 297 340 59 02
Replaced by: A 297 340 54 03

10 A 297 340 58 02 Quantity: 1
AXLE DRIVE MODULE
Complete
Code: EMQ;
Replaced by: A 297 340 59 02
Replaced by: A 297 340 54 03
Replaces: A 297 340 03 02

20 A 297 340 69 01 Quantity: 1
* ELECTRIC DRIVE
Without damping mats
Code: EMQ+F294+MED2;
Replaced by: A 297 340 48 01
+1 A 297 343 92 00 DAMPING MAT
+1 A 297 343 91 00 DAMPING MAT
+1 A 000 991 68 02 RETAINING CLAMP
Replaced by: A 297 340 35 02
+1 A 000 991 68 02 RETAINING CLAMP
+1 A 297 343 91 00 DAMPING MAT
+1 A 297 343 92 00 DAMPING MAT
Replaced by: A 297 340 55 03

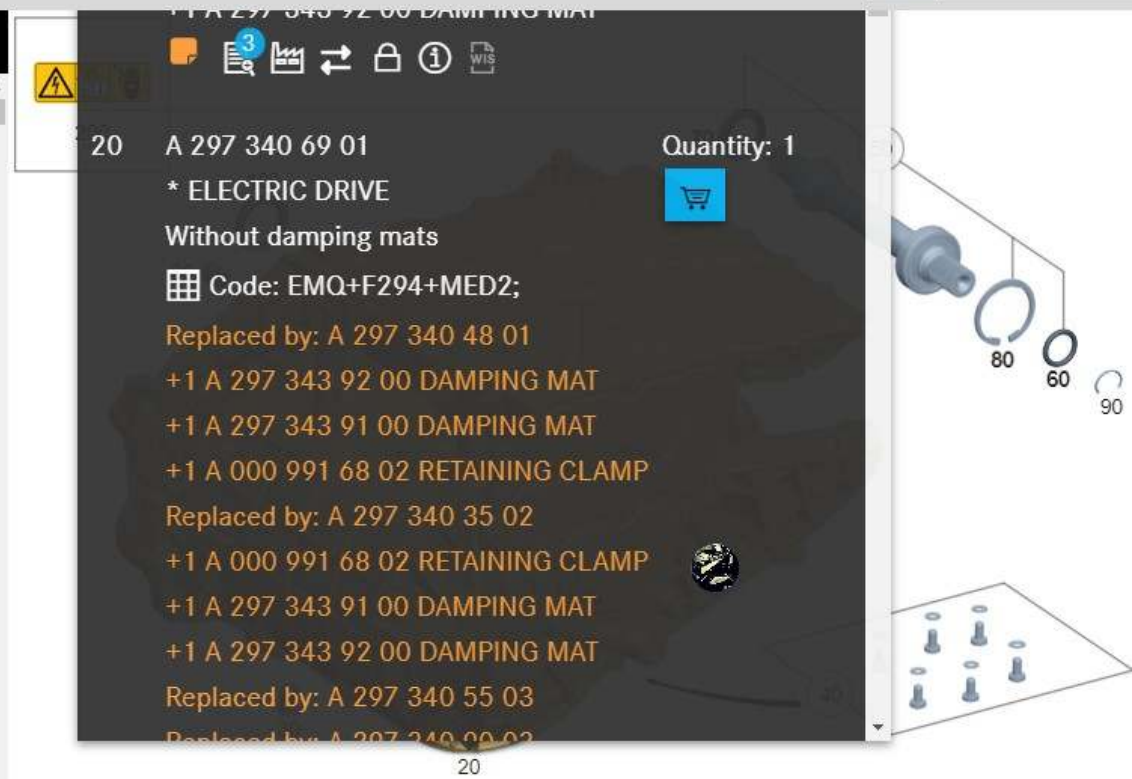


Image ID: drawing_PV000.010.099.229_version_011_usage_SVG

Vehicle: C297124 (C297_FV)
EQS 450 4MATIC

Model designation

PC > EQS 450 4MATIC > Vehicle: C297124 > C297_FV > Electric motor: D780600 > D78060_BE1 > 08 Electric drive/hybrid drive > 015 Electric drive

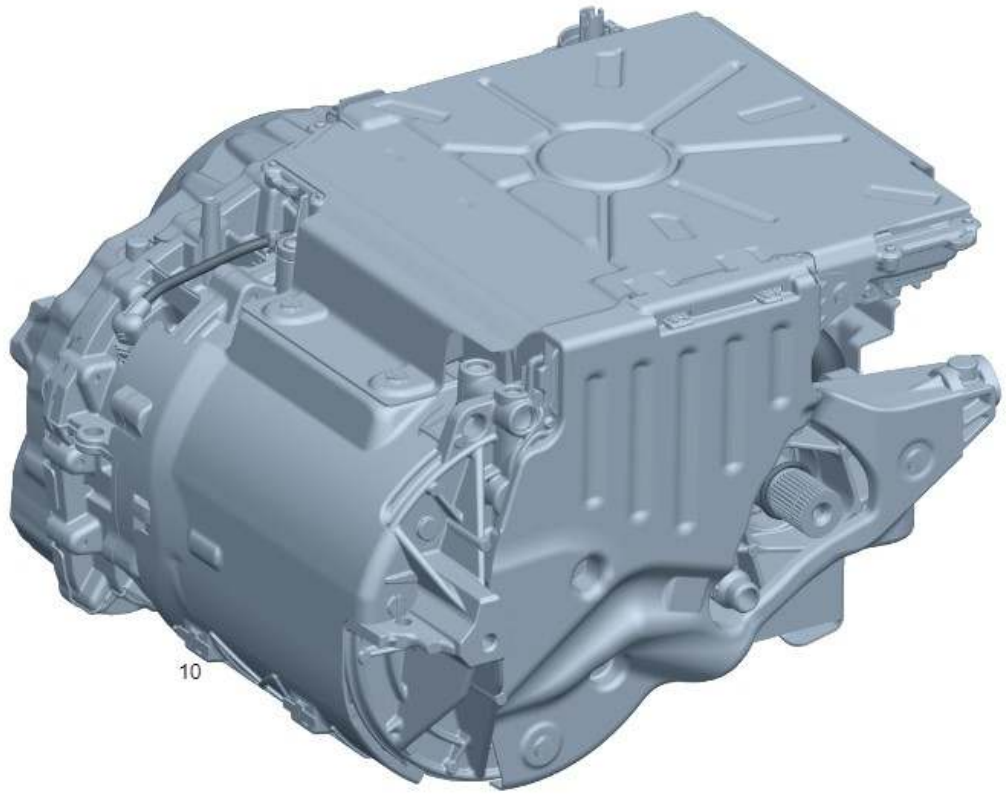
Vehicle | High-voltage battery | Electric motor

Main groups

08 Electric drive/hybrid drive

10 A 297 340 03 02 Quantity: 1
AXLE DRIVE MODULE
Complete
Code: EMQ;
Replaced by: A 297 340 58 02
Replaced by: A 297 340 59 02
Replaced by: A 297 340 54 03

10 A 297 340 58 02 Quantity: 1
AXLE DRIVE MODULE
Complete
Code: EMQ;
Replaced by: A 297 340 59 02
Replaced by: A 297 340 54 03
Replaces: A 297 340 03 02



PC > EQS 450 4MATIC > Vehicle: C297124 > C297_FV > Electric motor: D780600 > D78060_BE1 > 08 Electric drive/hybrid drive > 180 Engine carrier and detachable parts

Vehicle | High-voltage battery | Electric motor

Main groups

08 Electric drive/hybrid drive

10	A 297 343 74 00 DAMPING MAT Replaced by: A 297 343 92 00 +6 A 000 991 68 02 RETAINING CLAMP	Quantity: 1
10	A 297 343 92 00 DAMPING MAT Replaces: A 297 343 74 00 +6 A 000 991 68 02 RETAINING CLAMP	Quantity: 1
20	A 000 991 68 02 * RETAINING CLAMP	Quantity: 8
50	A 297 343 73 00	Quantity: 1

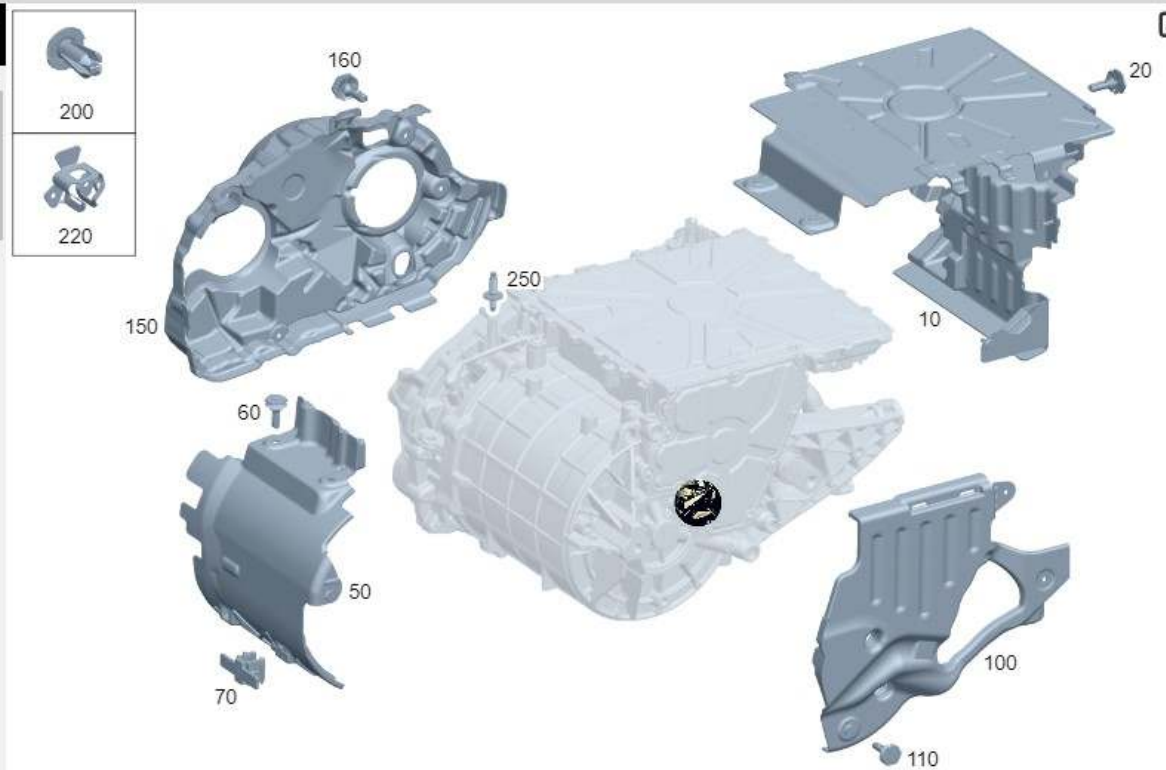


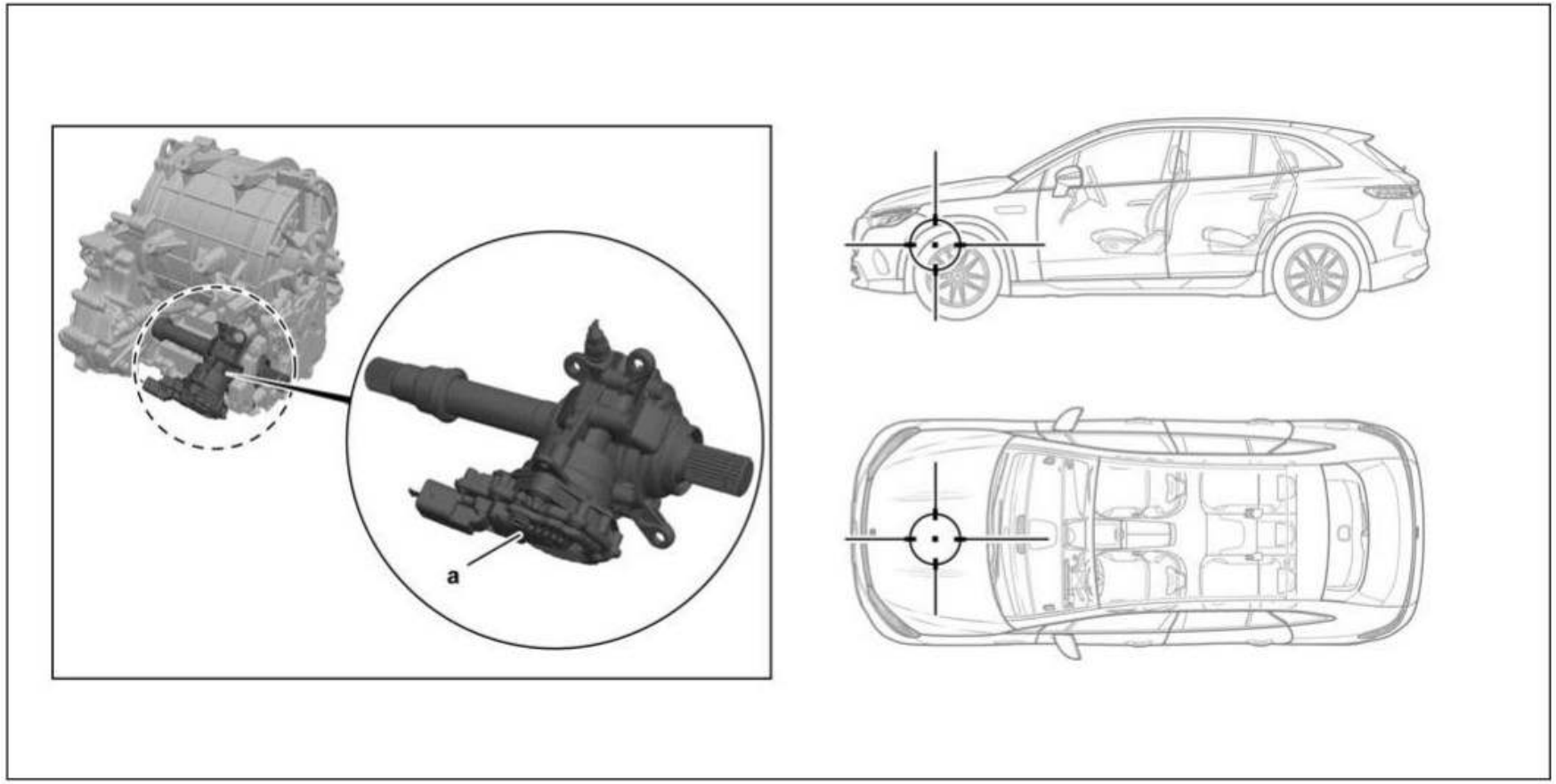
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Torque Decoupler



P08.10-A157-79

Location

a Electric transmission decoupler at front drive unit

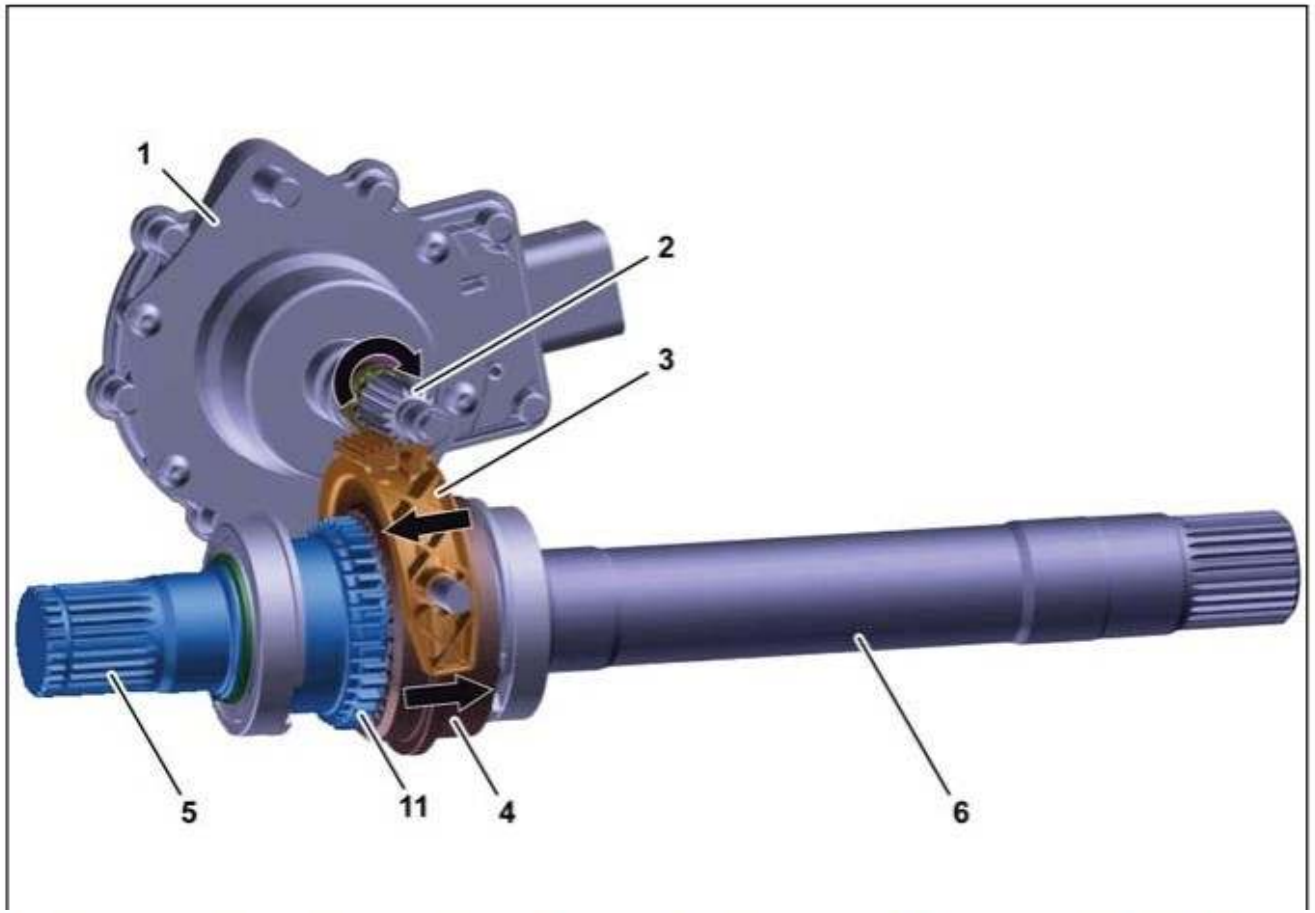
Function

Design and function of the electric transmission decoupler

The electric transmission decoupler consists of an actuator motor (1) and a drive pinion (2). Via shift fork (3), drive pinion (2) drives sliding sleeve (4) that is installed on intermediate shaft (6). In the process, sliding sleeve (4) is pushed axially towards dog clutch (11) of drive shaft (5) and the frictional connection between intermediate shaft (6) and drive shaft (5) is established.

Electric transmission decoupler with drive components

1	Actuator motor
2	Drive pinion
3	Shift fork
4	Sliding sleeve
5	Drive shaft
6	Intermediate shaft
11	Dog-type shift mechanism



Internal functional principle of the electric transmission decoupler

When electric transmission decoupler (1) is opened at the front axle, the connection to left drive shaft (5) is interrupted. As a result, there is no force flux from the left front wheel to intermediate shaft (6) and crown wheel (7). In driving operation, the right front wheel drives bevel gears (9) in the differential housing via right drive shaft (8). Consequently, intermediate shaft (6) and corresponding bevel gear (9) turn in the opposite direction to right drive shaft (8). At the same time, the differential with crown wheel (7) and front axle electric machine (10) do not rotate.

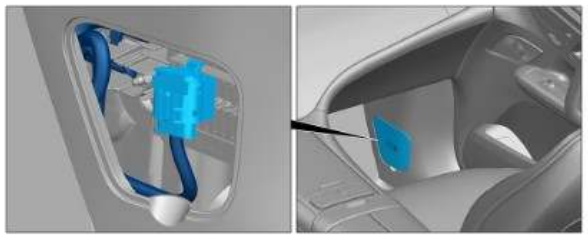
The high-voltage system is automatically switched off in the event of accidents in which the airbags and seat belt pretensioners trigger.



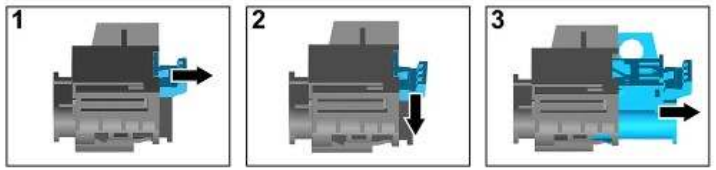
In all other cases, the high-voltage system should be deactivated as follows:

Option 1:
High-voltage disconnect





The high-voltage disconnect is located at the base of the A pillar on the passenger side.

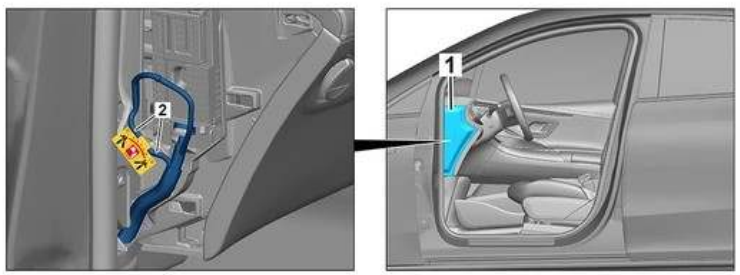


(1) Pull the release
(2) Push the release down
(3) Pull out the switch

Option 2:
Alternative high-voltage disconnect



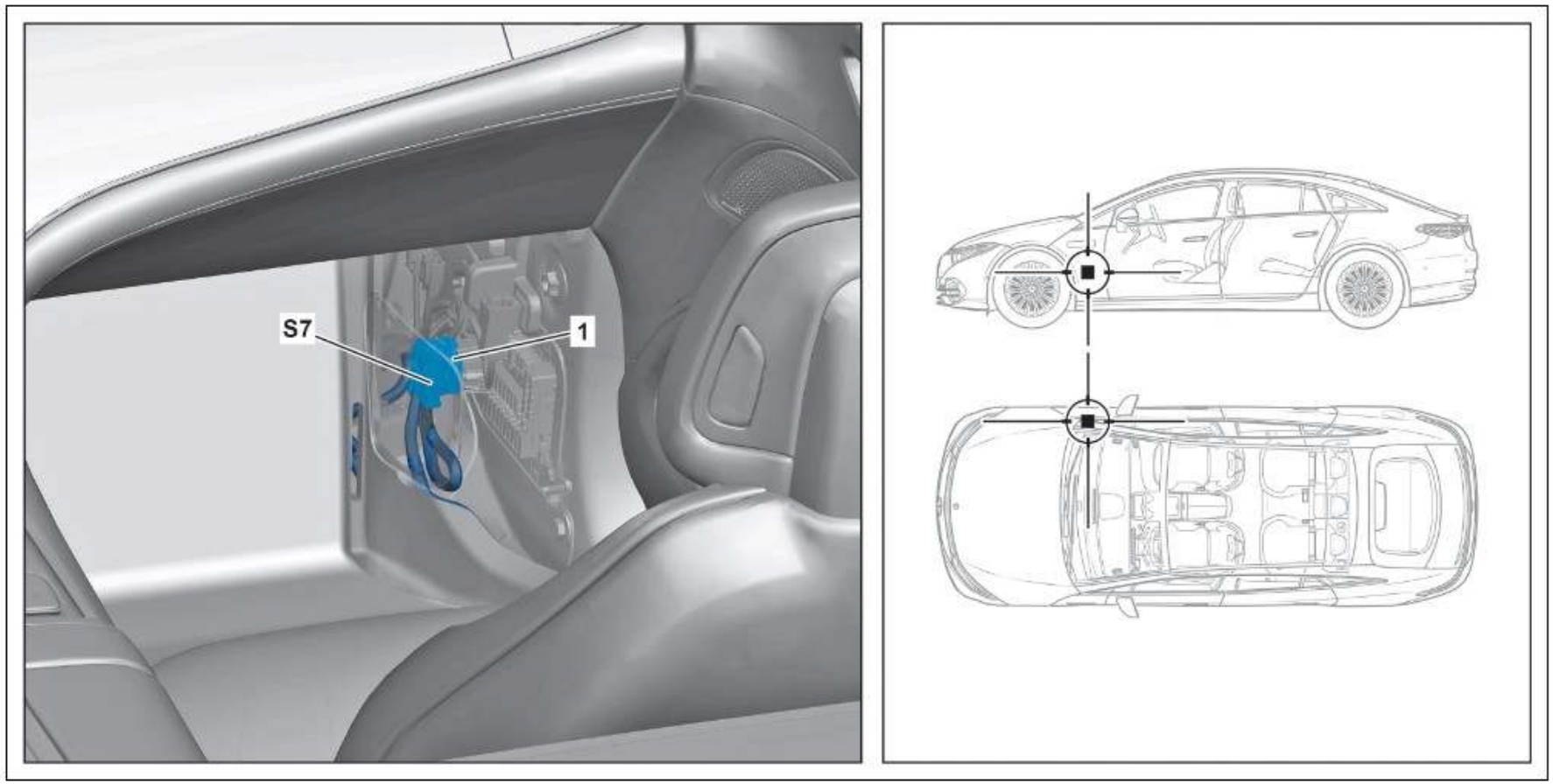
The alternative high-voltage disconnect is located under the cover of the fuse box in the cockpit on the driver's side. It is indicated with a sign.



Remove the cover (1). Cut the cable at the marked point (2).

AR47.70-P-1000EQS	Deenergize high-voltage on-board electrical system/put high-voltage on-board electrical system into operation	18.11.2022

Model *294, 295, 296, 297*



P47.70-A452-79

⚠ Danger	**Risk of death** when working on component parts and systems with U >= 30 V alternating voltage (AC) or U >= 60 V direct voltage (DC)	Do not touch damaged or defective live component parts and lines or non-insulated electrical connections and lines.	AS00.00-Z-0035-01A
⚠ Warning	**Risk of injury** caused by fingers being jammed or pinched when removing, installing or aligning hoods, doors, trunk lid/rear-end door or sliding roof.	No parts of the body or limbs should be within the operating area when the components are moving.	AS00.00-Z-0011-01A
Notice	General information on vehicles with high-voltage on-board electrical system and/or lithium-ion battery and/or gaseous-fuel drive system as well as personal protective equipment		AH00.00-Z-0300-01A
Notice	Information on preventing damage to electronic components due to electrostatic discharge		AH54.00-P-0001-01A
	Notes on safety-relevant components		AH00.00-Z-0019-01A
	Power disable		
1	Unplug charging cable from vehicle socket for charging the high-voltage battery.	If the charging cable is connected.	
2	Remove cover from footwell trim on front passenger side.		
3 AD	Connect diagnostic system.		AD00.00-P-2000-06FR

4 AD	Perform power disconnect of high-voltage on-board electrical system.		AR47.70-P-0045-01EQS AD00.00-P-2000-06FR
		i Fully execute the work procedure specified in the vehicle diagnosis system for the power disable. To do so, select following menu items: Control unit entry menu → Drive type → Powertrain control unit (N127) → High-voltage on-board electrical system tab → Create high-voltage on-board electrical system power disable event log.	
		Warning label If power disable cannot be performed with diagnostic system ↓ Perform manual power disabling for high-voltage on-board electrical system.	451 589 08 63 00
		Model 294, 295, 297 with code BAB (EB4XY battery (M))	AR47.70-P-1010EQU
		Models 296, 297 with code BAC (EB4XY battery (L))	AR47.70-P-1010EQS
5	Print out power disable event log and sign.		

	Initial startup		
	Check		
6	Check jumper plug (1) and bushing of high-voltage disconnect device (S7) for damage.	If there is a problem, ↓ Replace bushing of high-voltage disconnect device (S7) with contact sockets and jumper plug (1). Model 294, 296, 297 New passenger car wiring harness repair kit Unlocker with ejector MLK 1.2_plug Wiring harness repair kit, basic	 AR47.70-P-1000-01EQ 220 589 04 99 00 220 589 01 99 25 000 589 13 99 00
7 AD	Perform initial startup of high voltage on-board electrical system.	Fully execute the work procedure specified in the vehicle diagnosis system for the commissioning. To do so, select following menu items: Control unit entry menu → Drive type → Powertrain control unit (N127) → High-voltage on-board electrical system tab → Create high-voltage on-board electrical system commissioning event log.	AD00.00-P-2000-06FR
8	Print out commissioning event log and sign.		
9	Place commissioning event log and power disable event log in order folder.		
10 AD	Perform quick test, clear fault memory, and disconnect diagnostic system.		AD00.00-P-2000-06FR
11	Install cover in the footwell trim on front passenger side.		

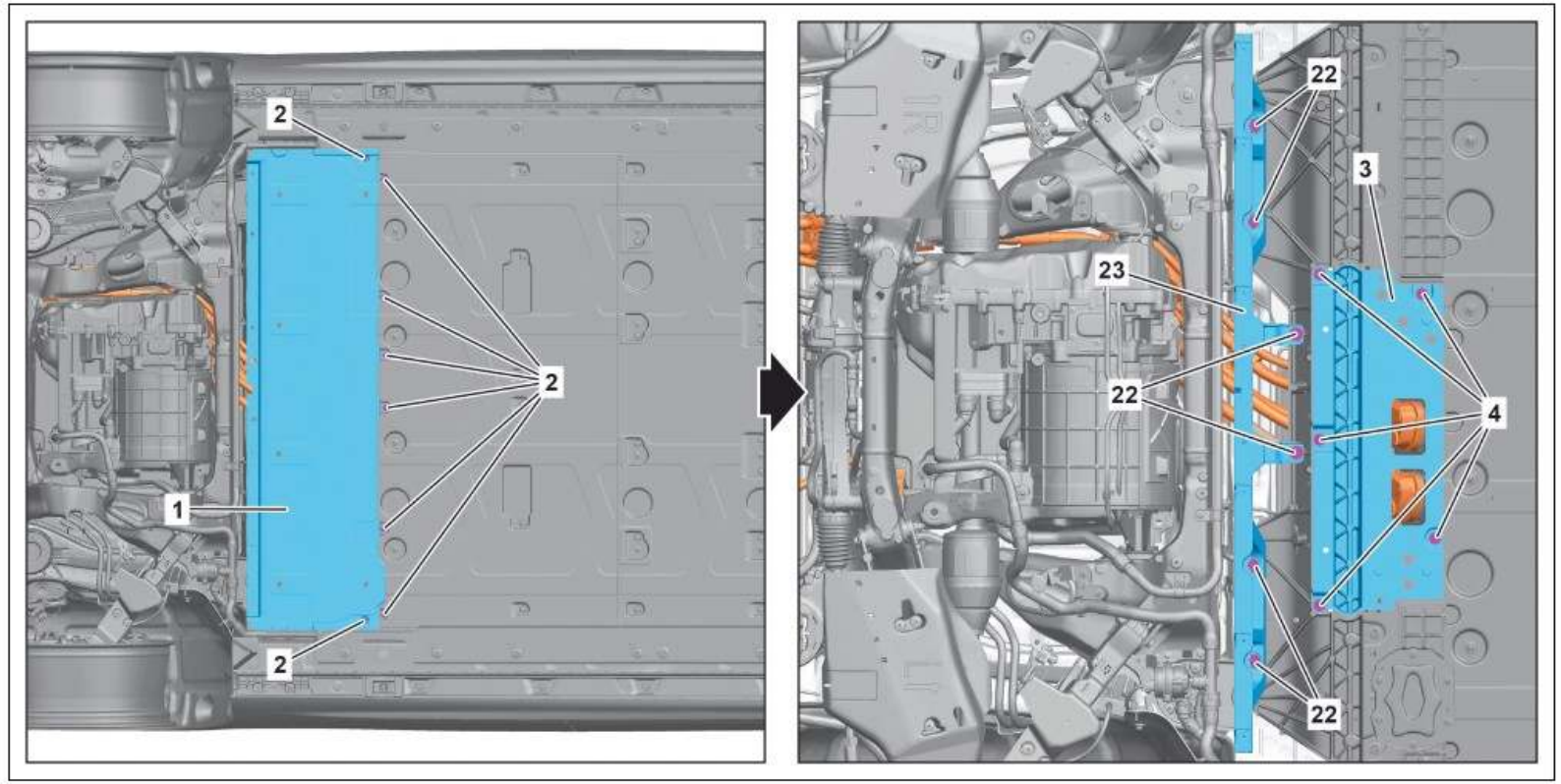
AR47.70-P-1010EQU	Manually deenergize high-voltage on-board electrical system	20.07.2023

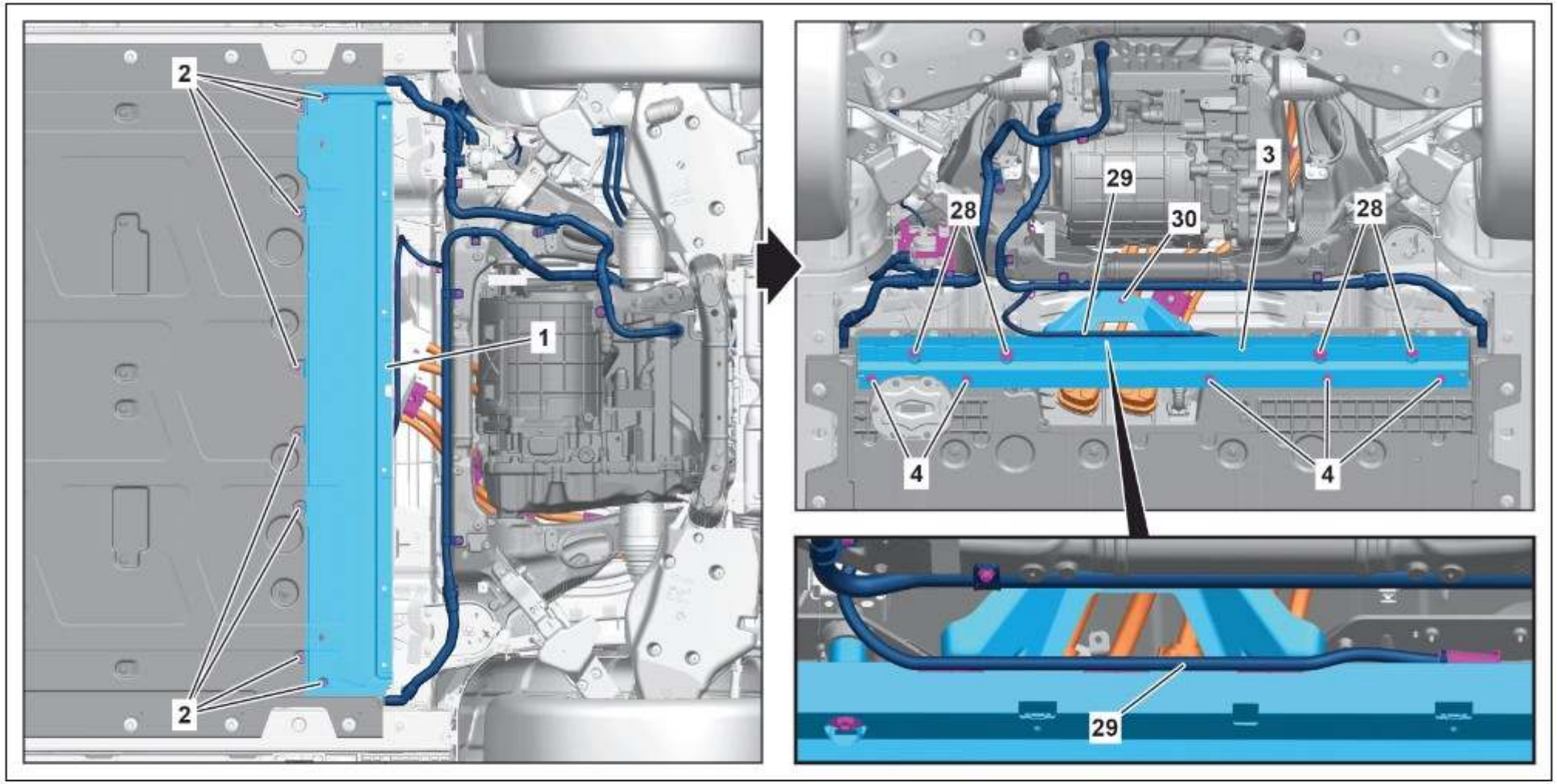
Model ***294, 295, 297***

with code BAB (EB4XY battery (M))

Modification notes

04.05.2023	Operation step variant 41.2 added.		





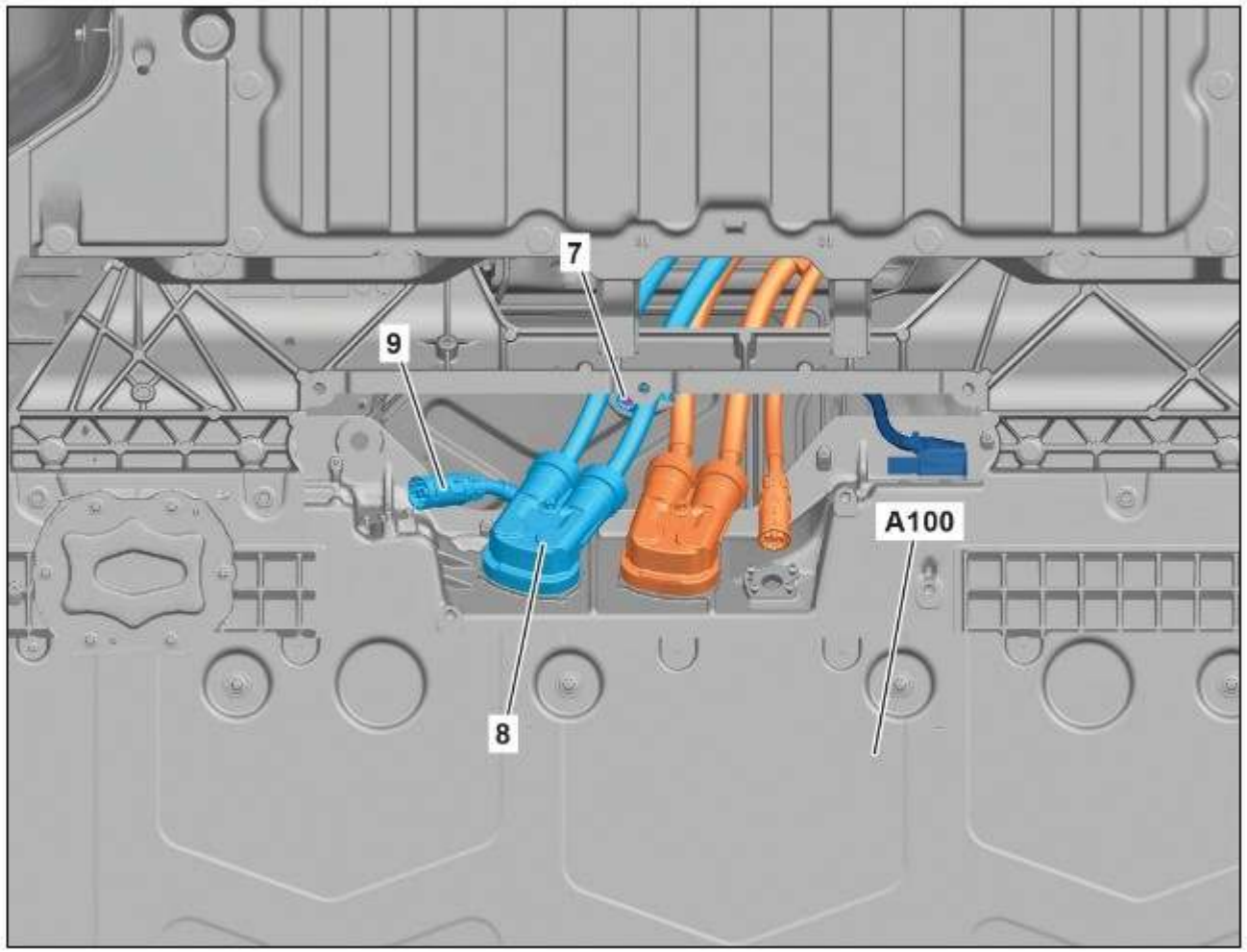
P47.70-A508-79

Shown on model 295

1	*Underfloor paneling*	*4*	*Bolts*	*29*	*Electric line*
2	*Bolts*	*28*	*Bolts*	*30*	*Nut*
3	*Crossmember*				

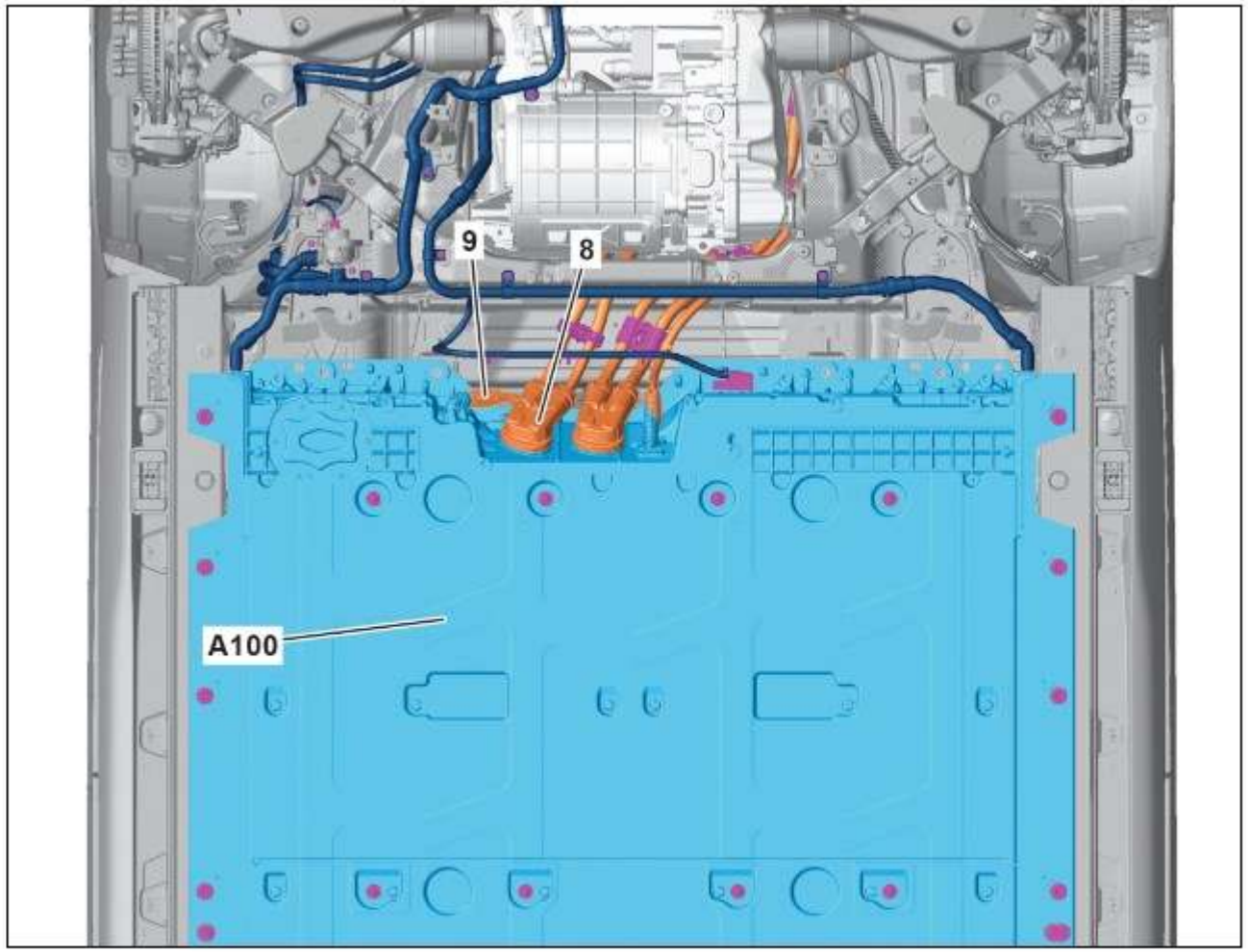
Shown on model 297 with code BAB (EB400 battery (2P2P90S, M-Bat.))

7	*Screw*
8	*High-voltage plug*
9	*High-voltage plug*
A100	*High-voltage battery module*



Shown on model 295

8	*High-voltage plug*
9	*High-voltage plug*
A100	*High-voltage battery module*



P47.70-A509-76

Danger	**Risk of fire**/risk of explosion due to short circuit and escaping oxyhydrogen gas. Risk of (burn) injury caused by caustic burns to eyes, skin and mucous membranes from battery electrolyte/mist, short circuit and arcing. **Risk of poisoning** caused by swallowing battery electrolyte or absorption of lead through the skin or body orifices. **Risk of death** due to voltage U >= 30 V AC and U >= 60 V DC.	No fires, sparks, open flames, or smoking. Wear acid-resistant gloves, clothing, and glasses. Pour battery acid only into suitable and appropriately marked containers.	AS54.10-Z-0001-01A
Danger	**Risk of death** when working on component parts and systems with U >= 30 V alternating voltage (AC) or U >= 60 V direct voltage (DC)	Do not touch damaged or defective live component parts and lines or non-insulated electrical connections and lines.	AS00.00-Z-0035-01A
Notice	Notes on technical cleanliness when working on high-voltage on-board electrical system		AH54.00-P-0004-01RFW
Notice	Information on preventing damage to electronic components due to electrostatic discharge		AH54.00-P-0001-01A
Notice	General information on vehicles with high-voltage on-board electrical system and/or lithium-ion battery and/or gaseous-fuel drive system as well as personal protective equipment		AH00.00-Z-0300-01A
	Notes on safety-relevant components		AH00.00-Z-0019-01A
	Preparatory tasks		
1 OF	Print out test log (form). Manually deenergize high-voltage on-board electrical system, form	Fill out test log (form) step-by-step during the following test.	OF47.70-P-3005-01EQS
2	Switch off ignition.	No-one must be located in or on the vehicle throughout the entire power disable procedure.	
3	Remove charger for maintaining 12 V on-board electrical system voltage.	If a 12-volt charger is connected.	AR54.10-P-1127EQS
4	Unplug charging cable at vehicle socket for charging high-voltage battery module (A100).	If the charging cable is connected.	
5	Close socket flap for vehicle socket and use the warning sign to secure it against plugs being inserted again.	Warning label	451 589 08 63 00
6	Open hood.		AR88.40-P-1000EQS

6	Open hood.		AR88.40-P-1000EQS
7	Remove cover from footwell trim on front passenger side.		
8	Release, pull out high-voltage disconnect device and secure with a padlock against restart procedure.	i Store padlock key separately and so that it is only accessible to authorized persons.	AR47.70-P-0045-01EQS
9	Perform visual check of high-voltage components for activity.	i No high voltage components may be active. Refrigerant compressor (A9/6) and heaters may not be active. If high voltage components are active, ↓ cancel manual test of absence of voltage and inform the responsible market support.	
10	Perform a visual check of the high-voltage components, electrical connectors and electric lines for damage.	If damage is present: ↓ cancel manual test of absence of voltage and inform the responsible market support.	
11	Remove underfloor panels.	Model 294 Model 295, 297	AR61.30-P-1001EQU AR61.30-P-1001EQS
12	Remove screws (2) .		
13	Remove underfloor paneling (1).		
14	Remove electric line (29) from crossmember (3).	Model 294, 295 with code BAB (EB4XY battery (M)) Clip remover	 452 589 01 63 00
15	Remove screws/bolts (22).	Model 297 with code BAB (EB4XY battery (M))	

15	Remove screws/bolts (22).	Model 297 with code BAB (EB4XY battery (M))	
16	Remove bracket (23).	Model 297 with code BAB (EB4XY battery (M))	
17	Remove screws (4).		
18	Remove nut (30).	Model 295 with code BAB (EB4XY battery (M))	
19	Unscrew the screws (28).	Model 294, 295 with code BAB (EB4XY battery (M))	
20	Remove crossmember (3).		
	Check		
21 WS	Check measuring instrument for proper operation and damage according to the manufacturer's specifications. 000 588 07 19 00 Measuring instrument	i The proper function must be ensured before the start of inspection work through a function check in accordance with the manufacturer's specifications and a visual check for external damage. If there is a problem, ↓ replace measuring instrument.	WS47.00-Z-0046KOP
22	Check test adapter and safety plug for damage by means of a visual check.	i The proper function must be ensured before the start of the inspection work through a visual check for external damage. Safety plug Test adapter If there is a problem, ↓ replace test adapter and/or safety plug.	000 589 56 98 00 000 589 94 63 00
23	Switch on ignition.	i Ignition must be switched on during voltage measurements.	

23	Switch on ignition.	Ignition must be switched on during voltage measurements.	
24	Wear personal protective equipment (arc-resistant jacket, face mask, electrical protective gloves, etc.).	Personal protective equipment must always be worn when performing the following operation steps. Observe safety regulations of corresponding country. These vary depending on the country concerned.	
25	Remove high-voltage plug (9) from high-voltage battery module (A100).	Ensure utmost care and cleanliness. Otherwise, damage to the high voltage components may occur.	AR47.70-P-0005-01EQ
26	Seal high-voltage plug (9) with protective hood.	Set of protective covers	001 589 01 91 00
27	Connect test adapter to high-voltage battery module (A100).	Ensure utmost care and cleanliness. Otherwise, damage to the high voltage components may occur. Test adapter	 000 589 94 63 00
28 WS	Manually check high-voltage on-board electrical system at high-voltage battery module (A100) for absence of voltage. 000 588 07 19 00 Measuring instrument	Ignition must be switched on during voltage measurements. If a voltage of ≤ 60 V DC is measured for all voltage measurements the measurement is considered to be OK. Absence of voltage is then given. Test adapter If the absence of voltage is not determined, ↓ cancel manual test of absence of voltage and inform the responsible market support.	AR47.70-P-1010-02EQ WS47.00-Z-0046KOP 000 589 94 63 00

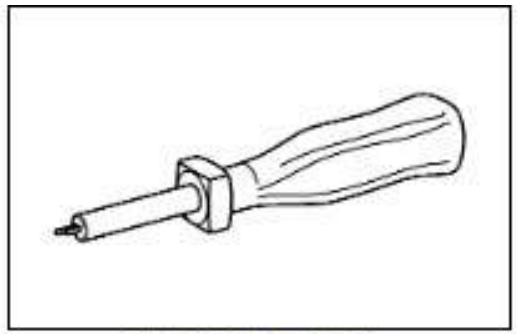
Document section:

		inform the responsible market support.	
29	Remove test adapter.		
30	Remove protective cover from high-voltage plug (9).		
31	Attach high-voltage plug (9) to the high-voltage battery module (A100).	Ensure utmost care and cleanliness. Otherwise, damage to the high voltage components may occur.	AR47.70-P-0005-01EQ
32	Unscrew screw (7).		
33	Remove high-voltage plug (8) from high-voltage battery module (A100).	Ensure utmost care and cleanliness. Otherwise, damage to the high voltage components may occur.	AR47.70-P-0005-01EQ
34	Seal the high-voltage plug (8) with protective cover.	Set of protective caps	001 589 02 91 00
35	Attach safety plug to high-voltage battery module (A100).	Ensure utmost care and cleanliness. Otherwise, damage to the high voltage components may occur. Safety plug	000 589 56 98 00

36 WS	Manually check high-voltage on-board electrical system at high-voltage battery module (A100) for absence of voltage. 000 588 07 19 00 Measuring instrument	i Ignition must be switched on during voltage measurements. i If a voltage ≤ 60 V DC is measured for all voltage measurements, the high-voltage on-board electrical system is considered de-energized. Absence of voltage is then given. Safety plug If the absence of voltage is not determined, ↓ cancel manual test of absence of voltage and inform the responsible market support.	AR47.70-P-1010-02EQ WS47.00-Z-0046KOP 000 589 56 98 00
37	Remove safety plug.		
38	Remove protective cover from high-voltage plug (8).		
39	Attach high-voltage plug (8) to the high-voltage battery module (A100).	Align high-voltage plug (8) vertically above connection at the high-voltage component and do not tilt. Carefully connect electrical connector. Otherwise, the connection of the high-voltage components will be damaged. Nm Screw, high-voltage line voltage reduction to holder Nm Screw, high-voltage plug to high-voltage battery/DC	AR47.70-P-0005-01EQ BA47.70-P-1022-01E BA47.70-P-1010-01E
40	Screw in screw/bolt (7).	Nm Screw, high-voltage line voltage reduction to holder	BA47.70-P-1022-01E

41.1	Remove all high-voltage plugs from high-voltage battery module (A100).	For fault codes (P292900, P292D00, P0AA100, P0AA400). Ensure utmost care and cleanliness. Otherwise, damage to the high voltage components may occur. Set of protective covers If one of these fault codes (P292900/P292D00/P0AA100 or P0AA400) is present: ↓ Do not carry out any other activities on the vehicle, complete the test log (form), seal the connections on the high-voltage battery module (A100) using suitable means, and replace the high-voltage battery module (A100).	AR47.70-P-0005-01EQ 001 589 06 91 00
41.2	Remove all high-voltage plugs from high-voltage battery module (A100).	In case of a note in XENTRY Diagnosis indicating that the fault detection of the protection status is "not active." Ensure utmost care and cleanliness. Otherwise, damage to the high voltage components may occur. Set of protective covers If the note in XENTRY Diagnosis indicating that the fault detection of the protection status is "not active" is shown: ↓ Complete the test log (form), seal the connections on the high-voltage battery module (A100) using suitable means, and continue with the repair scope.	AR47.70-P-0005-01EQ 001 589 06 91 00

42	Remove personal protective equipment.		
43	Switch off ignition and store transmitter key outside of transmission range (min. 2 m).		
	Concluding tasks		
44	Check clip fasteners on crossmember (3) for damage.	If damage is present: ↓ Replace corresponding clip fasteners.	
45	Install the crossmember (3).		
46	Screw in screws (28).	Model 294, 295 with code BAB (EB4XY battery (M)) Nm Screw/bolt, high-voltage battery to body	BA47.70-P-1002-01E
47	Attach nut (30).	Model 295 with code BAB (EB4XY battery (M)) Nm Nut, high-voltage line strain-relief clamp to body/holder	BA47.70-P-1025-01E
48	Screw in bolts (4) .	Nm Screw, center high-voltage battery crossmember to body/high-voltage battery	BA47.70-P-1001-01E
49	Install bracket (23).	Model 297 with code BAB (EB4XY battery (M))	
50	Screw in screws/bolts (22).	Model 297 with code BAB (EB4XY battery (M))	
51	Attach electric line (29) to crossmember (3).	Model 294, 295 with code BAB (EB4XY battery (M))	
52	Install underfloor paneling (1).		
53	Screw in screw/bolts (2).		
54	Install underfloor paneling.	Model 294 Model 295, 297	AR61.30-P-1001EQU AR61.30-P-1001EQS
55	Complete entries in the test log (form) and place in the vehicle behind the windshield.		



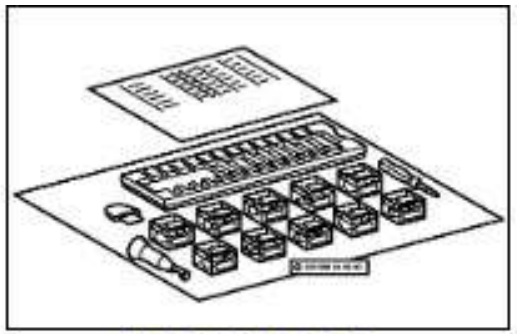
220 589 01 99 25

Unlocker with ejector MLK 1.2_plug



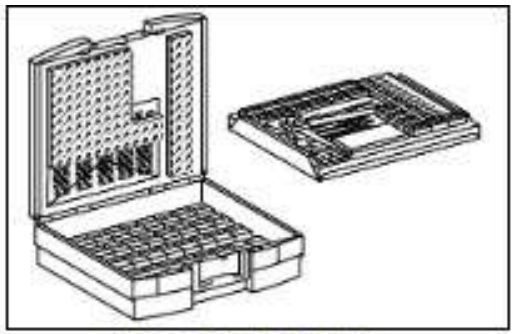
451 589 08 63 00

Warning label



220 589 04 99 00

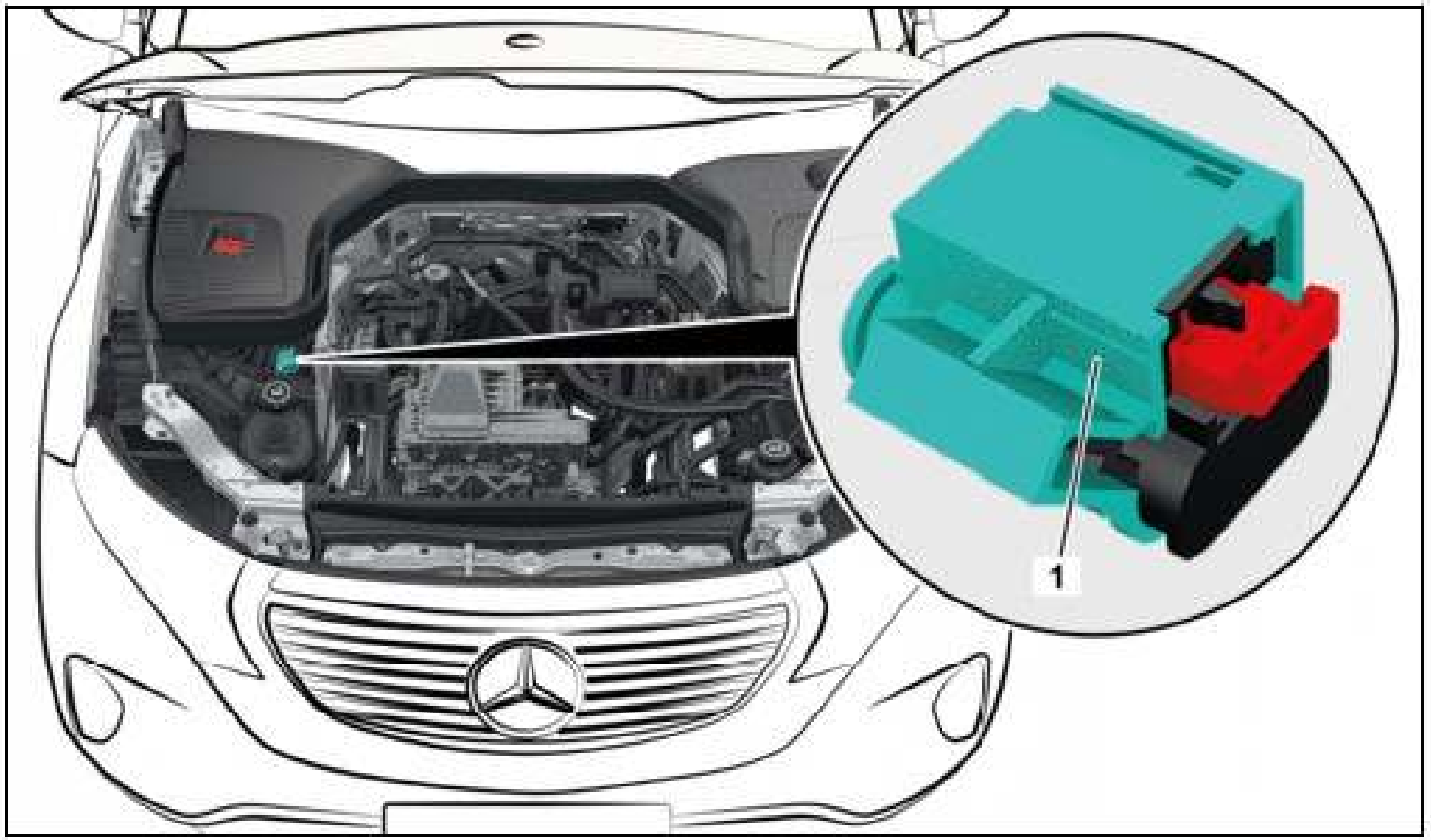
New passenger car wiring harness repair kit



000 589 13 99 00

Wiring harness repair kit, basic

1 *High-voltage disconnect device*



P54.10-A059-75

Diagnosis

The EQE diagnosis is carried out as usual with XENTRY Diagnosis. This enables the vehicle to be identified with all its equipment features as well as an accurate fault assessment, fault rectification and evaluation of vehicle-specific values and parameters to be made. When conducting diagnosis activities on high voltage vehicles and their high-voltage components, special qualification measures are required. People without this qualification must not perform any diagnoses.

i

Specially trained workshop personnel (experts in working on the HV intrinsically-safe series production vehicle, model series EQE model 295) may perform the diagnosis-based power disconnect and work on the high-voltage on-board electrical system. Please also observe the WIS document "De-energize/commission high-voltage on-board electrical system" AR47.70-P-1000EQS.

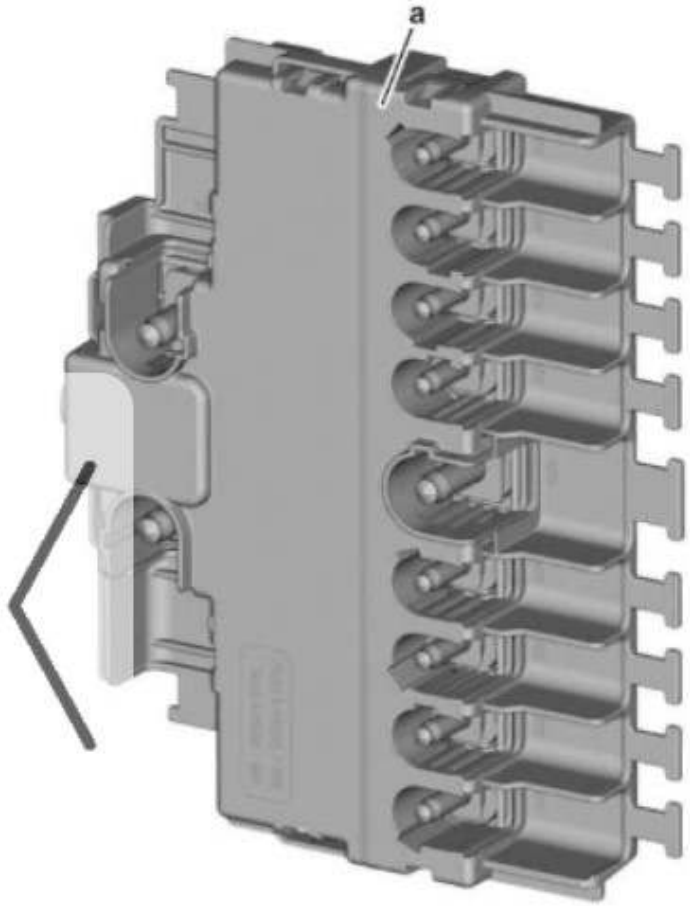
Cooling circuit

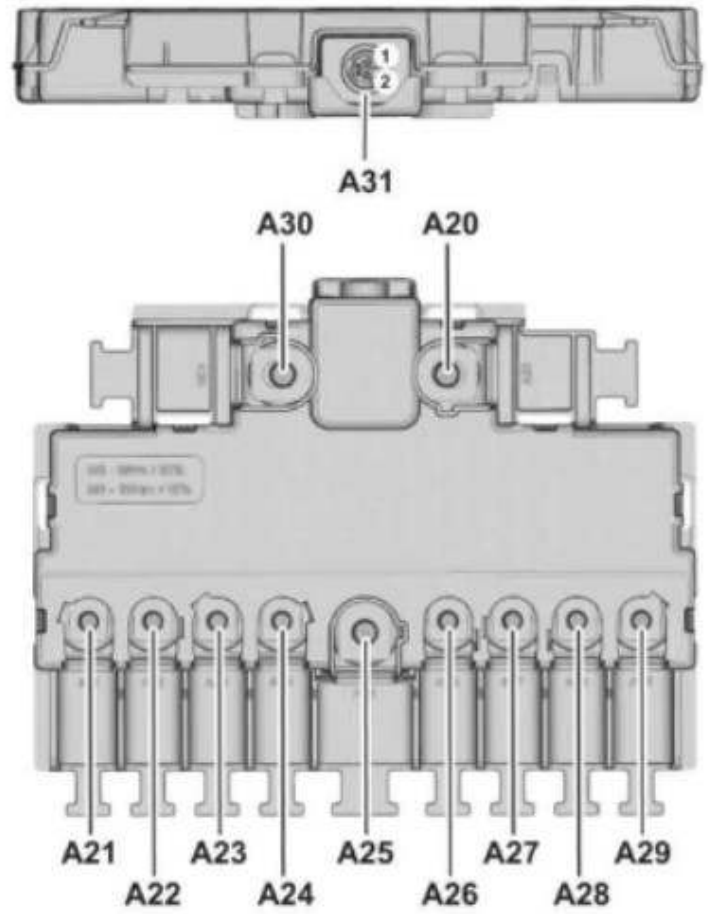
i

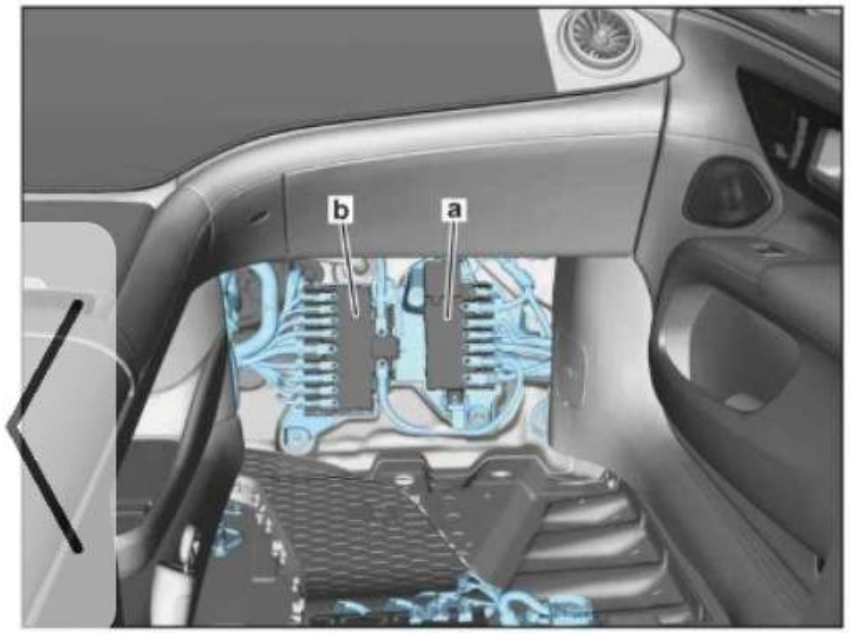
Always bleed the vehicle using the bleeding routine with diagnostic device. The following WIS documents must be observed during filling and bleeding both cooling circuits:

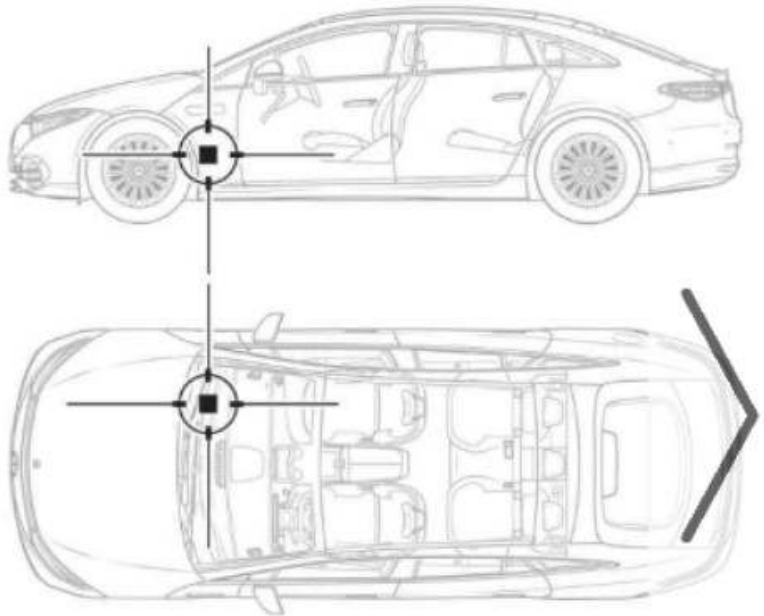
- "Drain, fill low-temperature circuit coolant of cooling system for electric motor, bleed system" AR20.00-P-1150EQS
- "Drain, fill low-temperature circuit coolant of high-voltage battery cooling system, bleed system" AR20.00-P-1151EQS

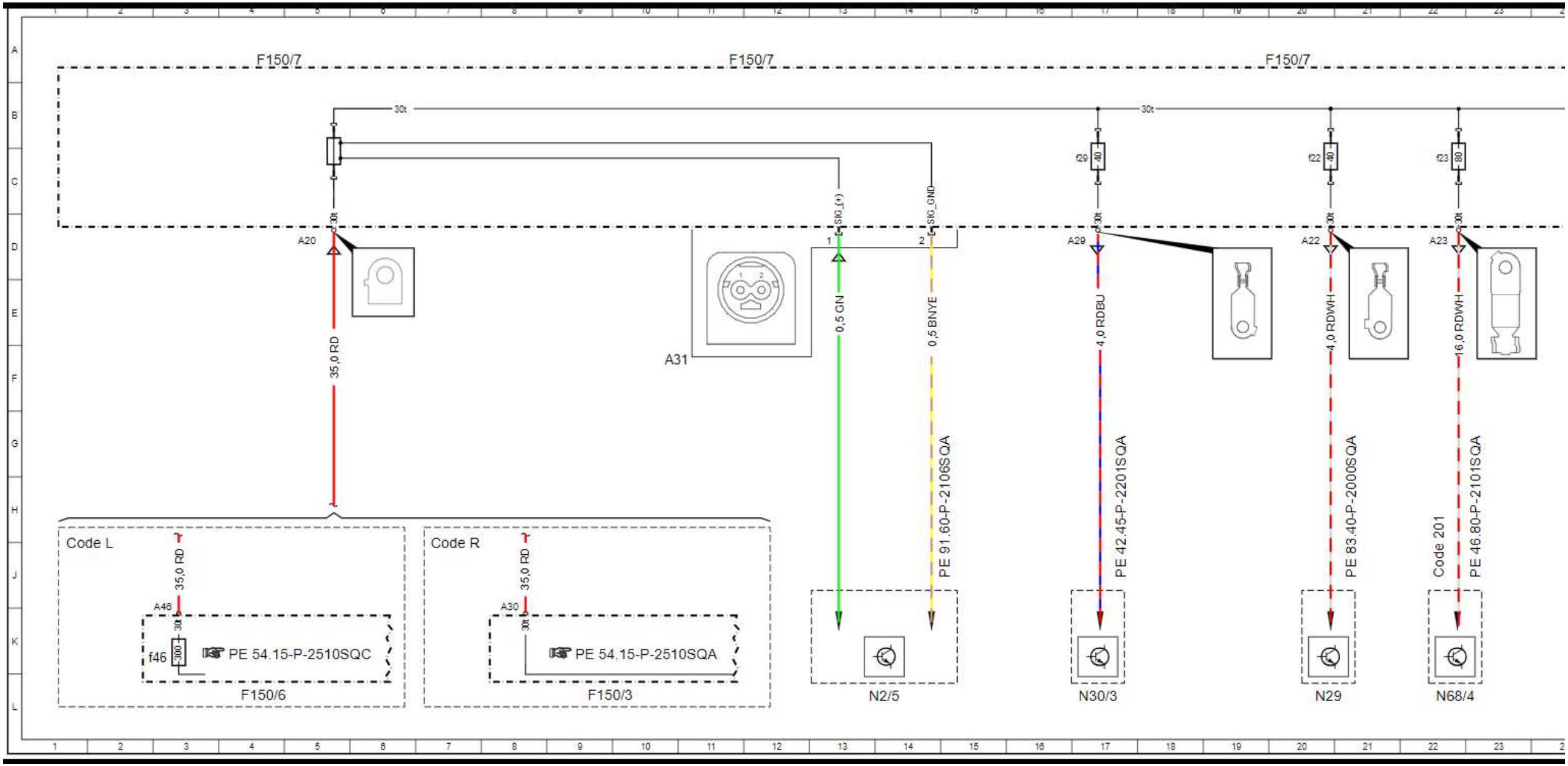



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A29


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F150/7
F150/7
F150/7
30t
f29 40
f22 40
f23 80
A20
A31
A29
A22
A23
SIG_(+)
SIG_GND
0,5 GN
0,5 BNYE
4,0 RDBU
4,0 RDWH
16,0 RDWH
35,0 RD
PE 91.60-P-2106SQA
PE 42.45-P-2201SQA
PE 83.40-P-2000SQA
PE 46.80-P-2101SQA
Code 201
Code L
Code R
A46
A30
f46 300
PE 54.15-P-2510SQC
PE 54.15-P-2510SQA
F150/6
F150/3
N2/5
N30/3
N29
N68/4





https://www.youtube.com/watch?v=IMVvLjzvPdg



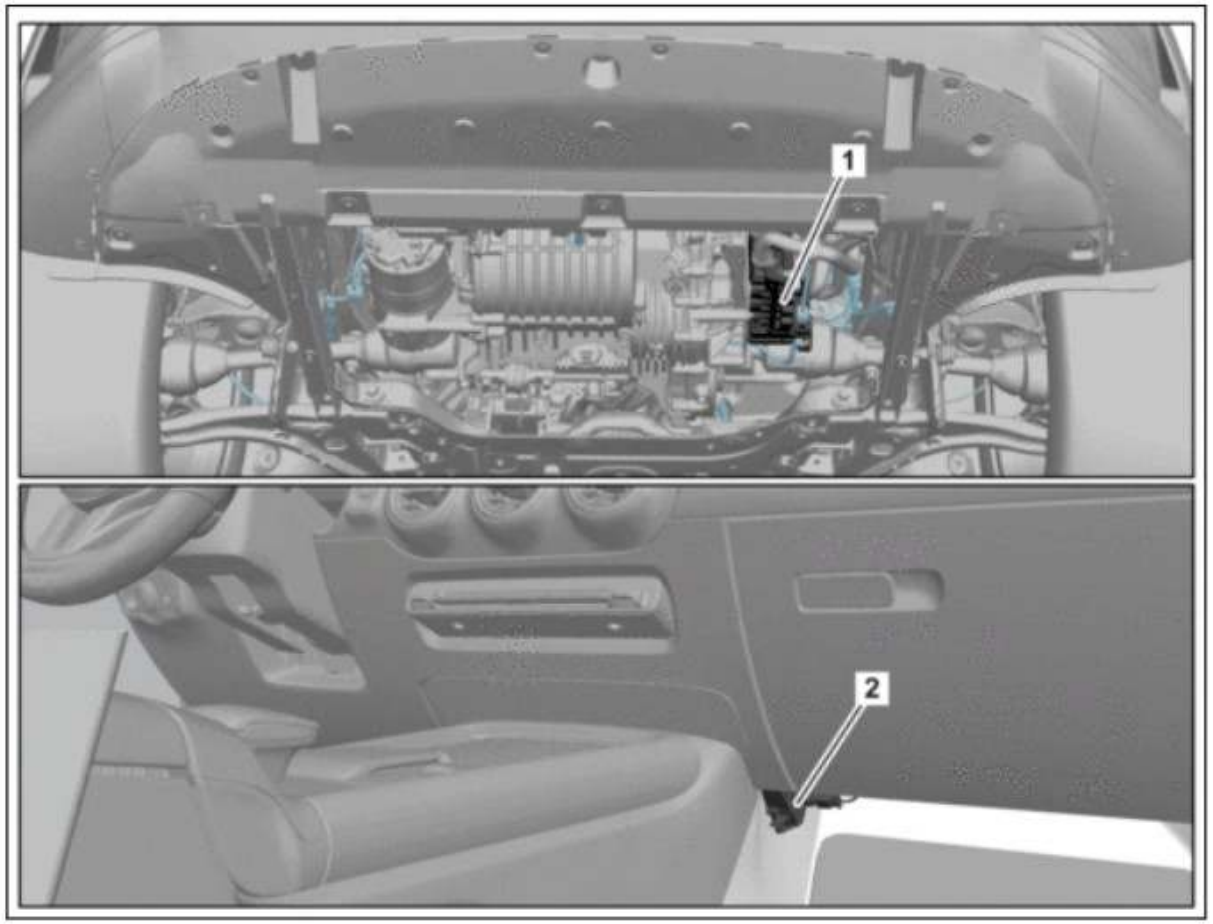
https://www.youtube.com/watch?v=FLAUKf3pmKs

PTC Heater

Installation position

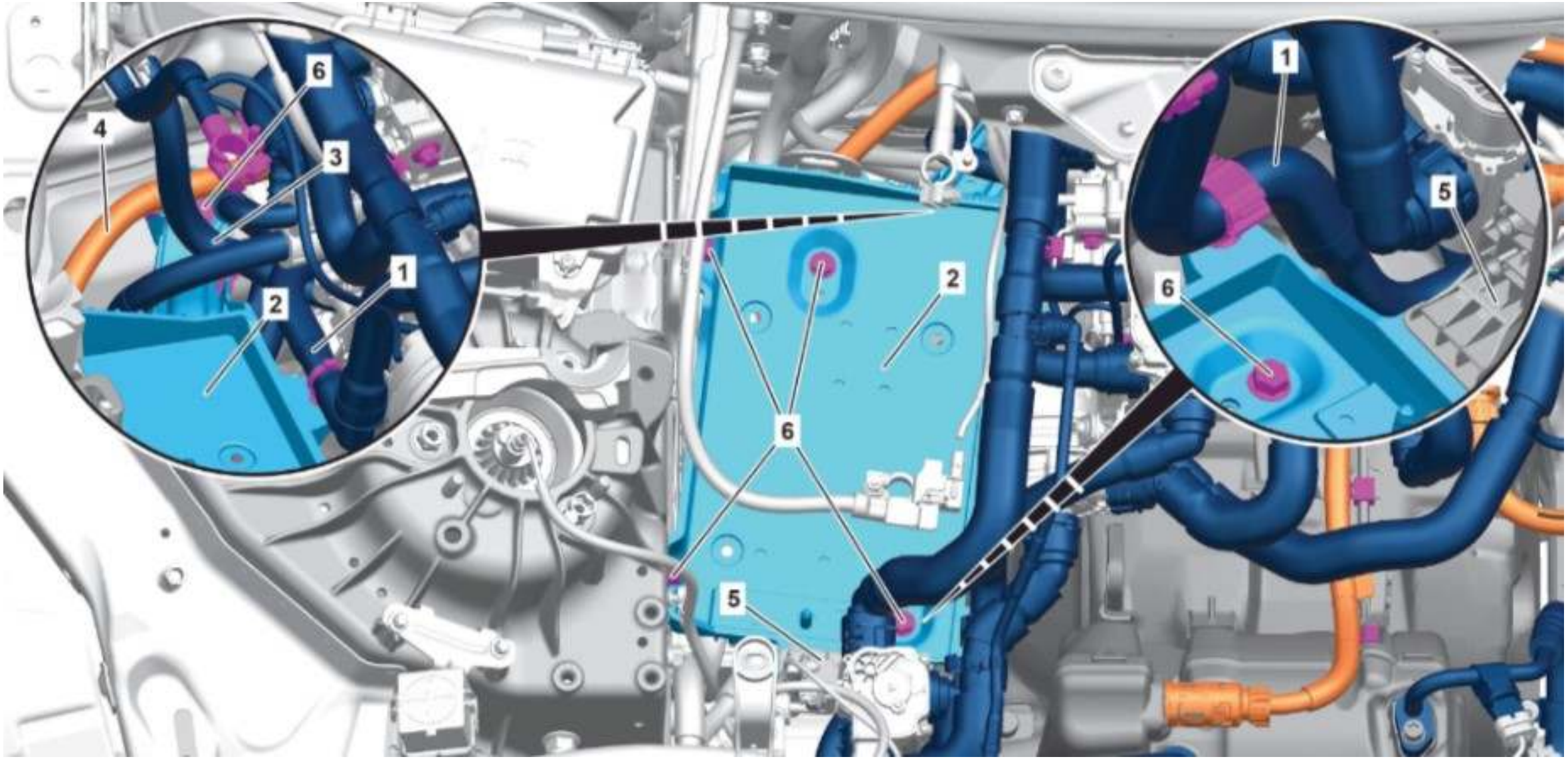
1 High-voltage PTC heater (high-voltage battery)

2 Air conditioner housing PTC heater booster



The high voltage PTC heater heats the battery and vehicle interior when it is cold outside

PTC Heater



Cold Temperatures



A/C Refrigerant/Coolant Heat Exchanger



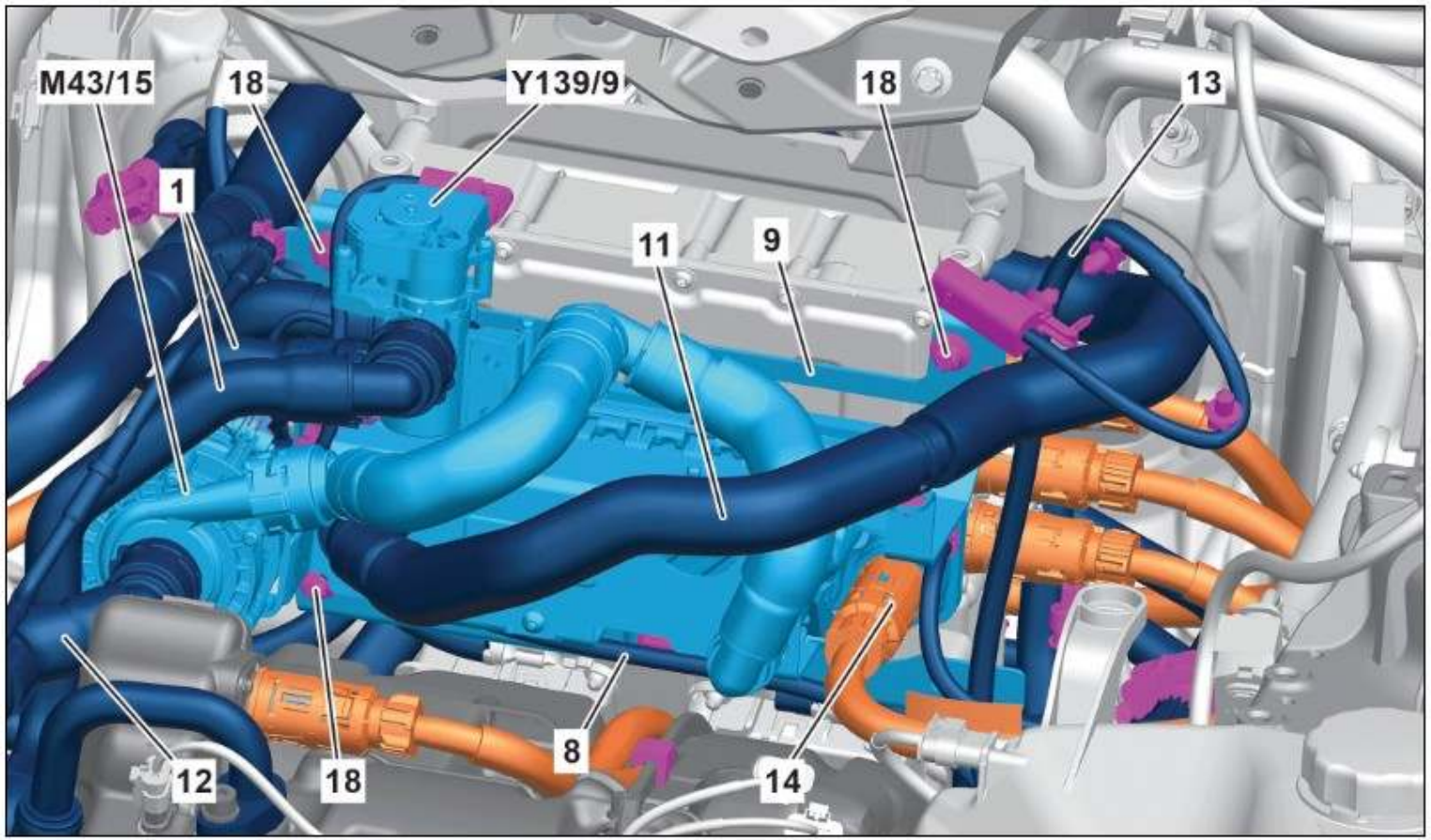
PTC Heater



PTC Heater

Shown on model 297 with code M005 (Vehicles with 4MATIC/all-wheel drive)

1	*Coolant lines*
8	*Electrical wiring harness*
9	*Bracket*
11	*Coolant line*
12	*Coolant line*
13	*Electrical line*
14	*High-voltage plug*
18	*Screw*
M43/15	*Low-temperature circuit coolant pump 2*
Y139/9	*Low-temperature circuit coolant pump regulation valve*

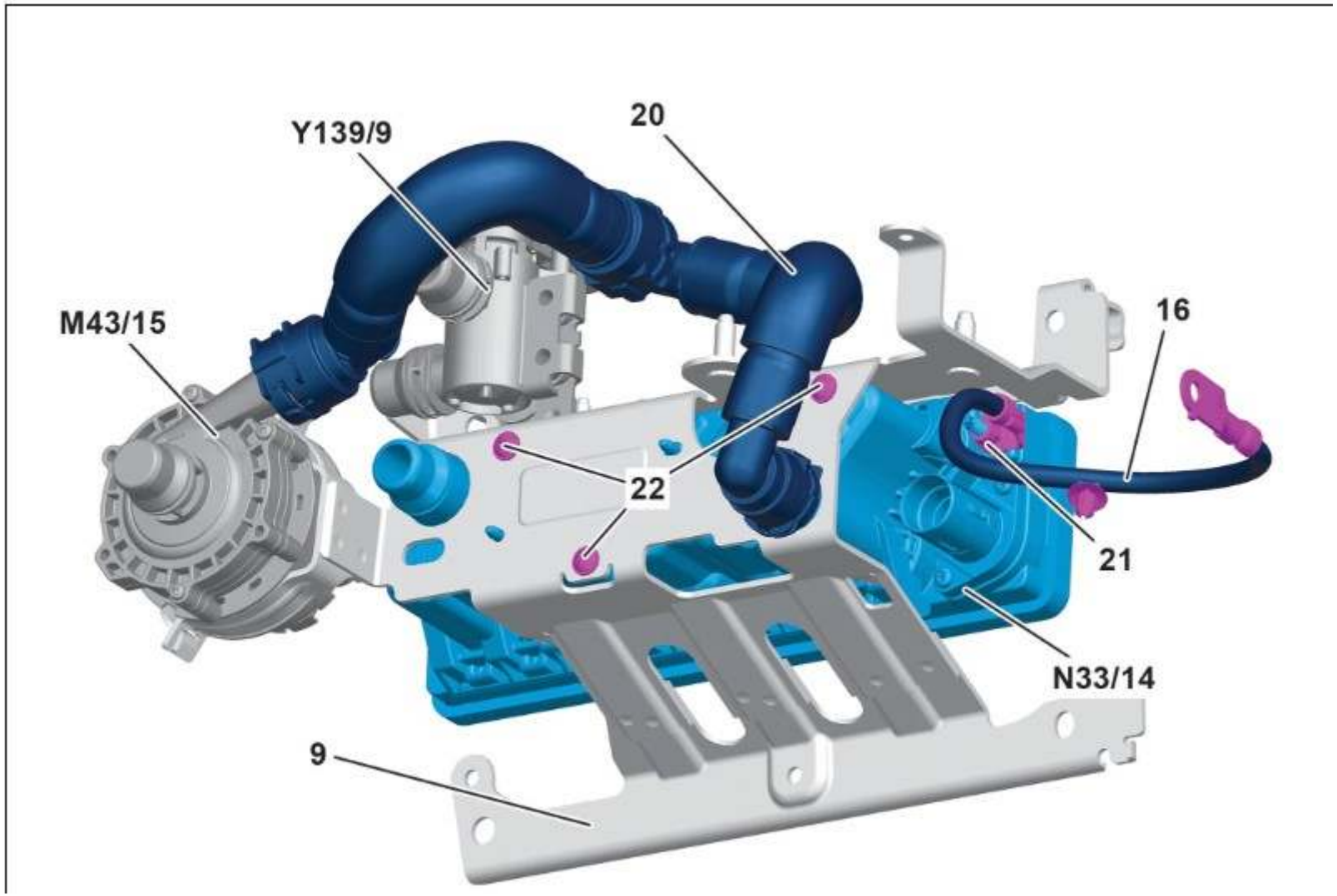


P20.00-A225-75

PTC Heater

Shown on model 297 with code M005 (Vehicles with 4MATIC/all-wheel drive)

9	*Bracket*
16	*Equipotential bonding line*
20	*Coolant line*
21	*Nut*
22	*Bolts*
M43/15	*Low-temperature circuit coolant pump 2*
N33/14	*Low-temperature circuit PTC heater booster 1*
Y139/9	*Low-temperature circuit coolant pump regulation valve*



Vehicle: 297121 | Engine: 780600 | Model code: 22 EQS 350 (789.084) | Vehicle Type: Passenger car | Family: 9E 297 EQS Sedan

Search for operation item via text or number ...

Define Construction group/Construction Subgroup | Select Operation items

Filter by description or number ...

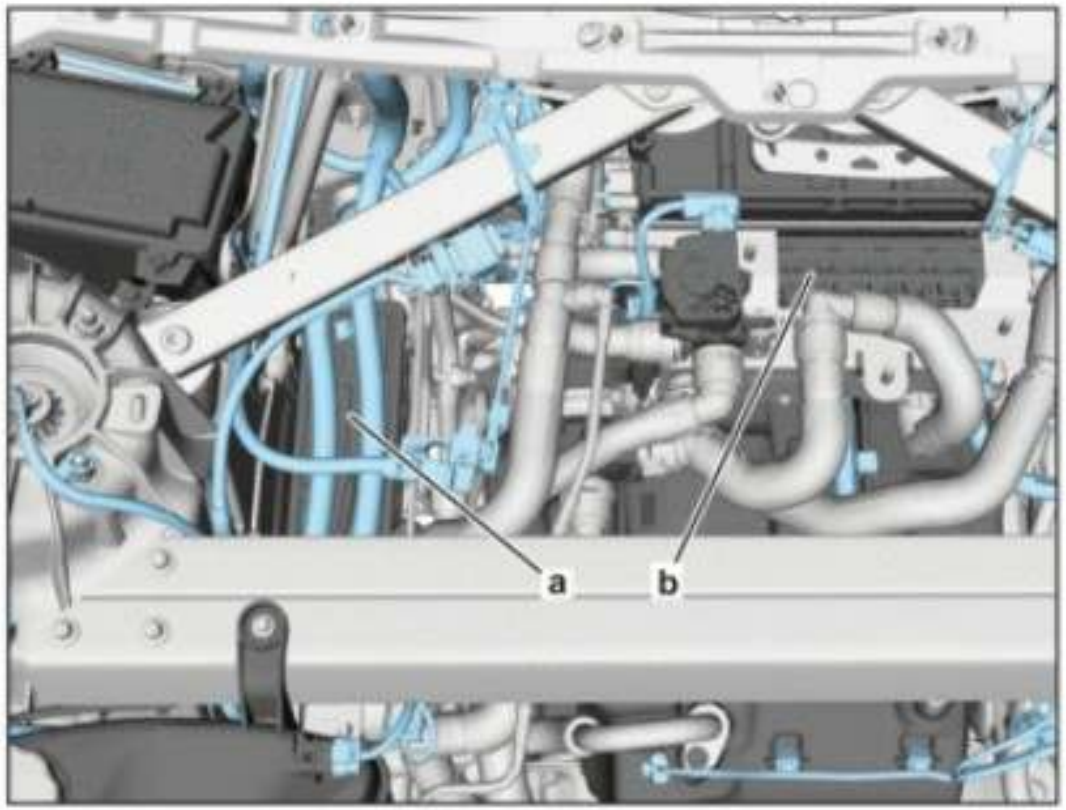
Type	No	Duration	Description
G	83-4512	0.1 H	Replace side air vent on driver's side
G	83-4585	0.4 H	Replace rear air vent on center console
V	83-5262	2.2 H	Electrical heater booster Remove/install and, if necessary, replace (After check)
V	83-5263	1.7 H	Replace high-voltage PTC heater (After check)
V	83-5270	1.6 H	High-voltage PTC heater Remove/install (After check)
V	83-5272	1.7 H	Remove/install high-voltage PTC heater (after check) on veh. with code 583
V	83-5273	1.9 H	Replace high-voltage PTC heater (after check) on veh. with code 583
V	83-6513	2.6 H	Remove/install expansion valve, replace if necessary (System drained)

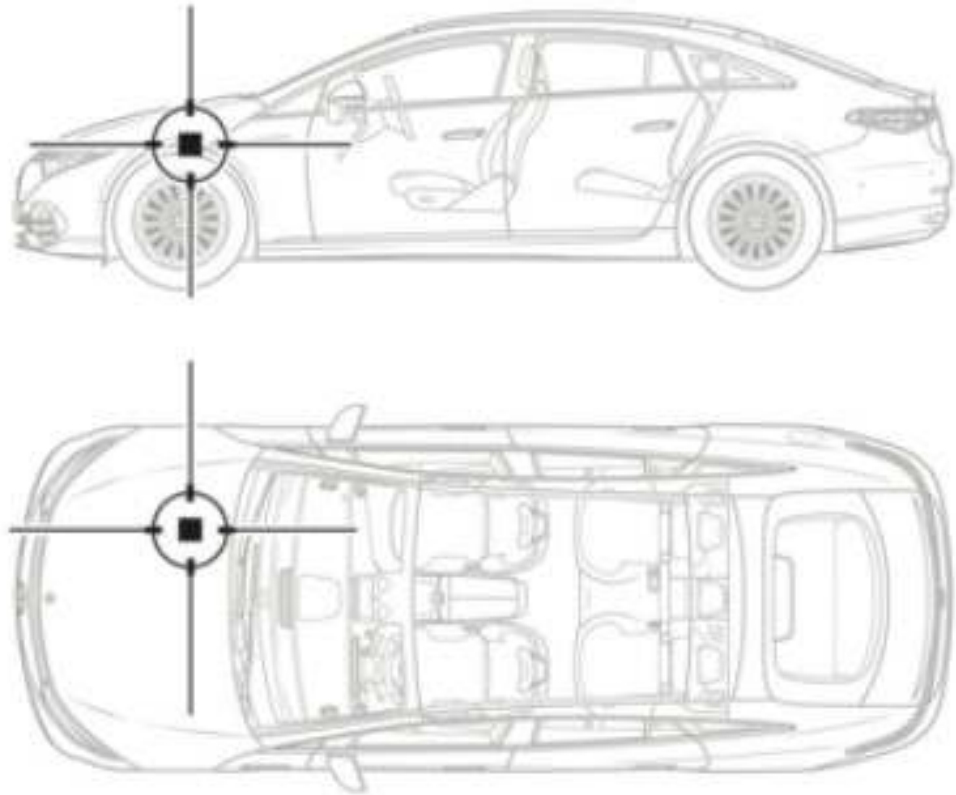
Why a PTC Heater?

Heating the high voltage battery at outside temperatures below -25*C

Heating the high voltage battery for a possible quick charging at temperatures below 10*C





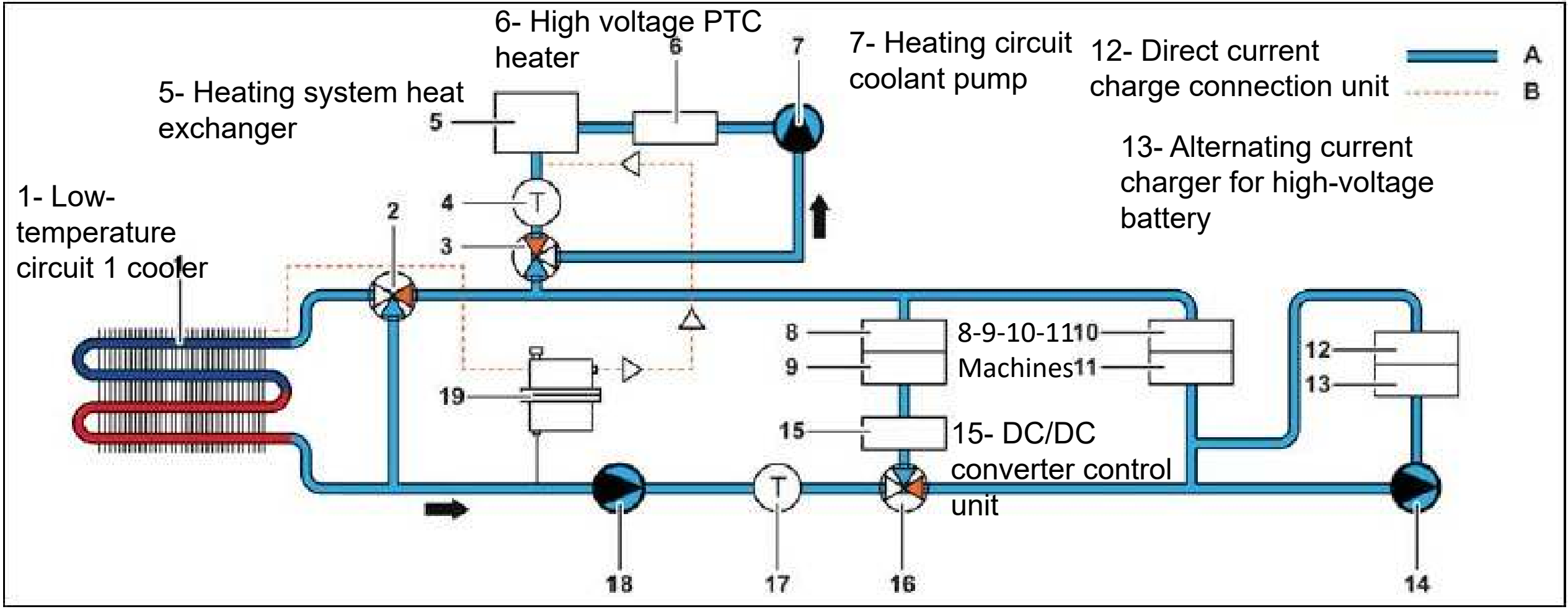


P83.70-A085-79

a High voltage PTC heater (high-voltage battery)

b High voltage PTC heater (vehicle interior)

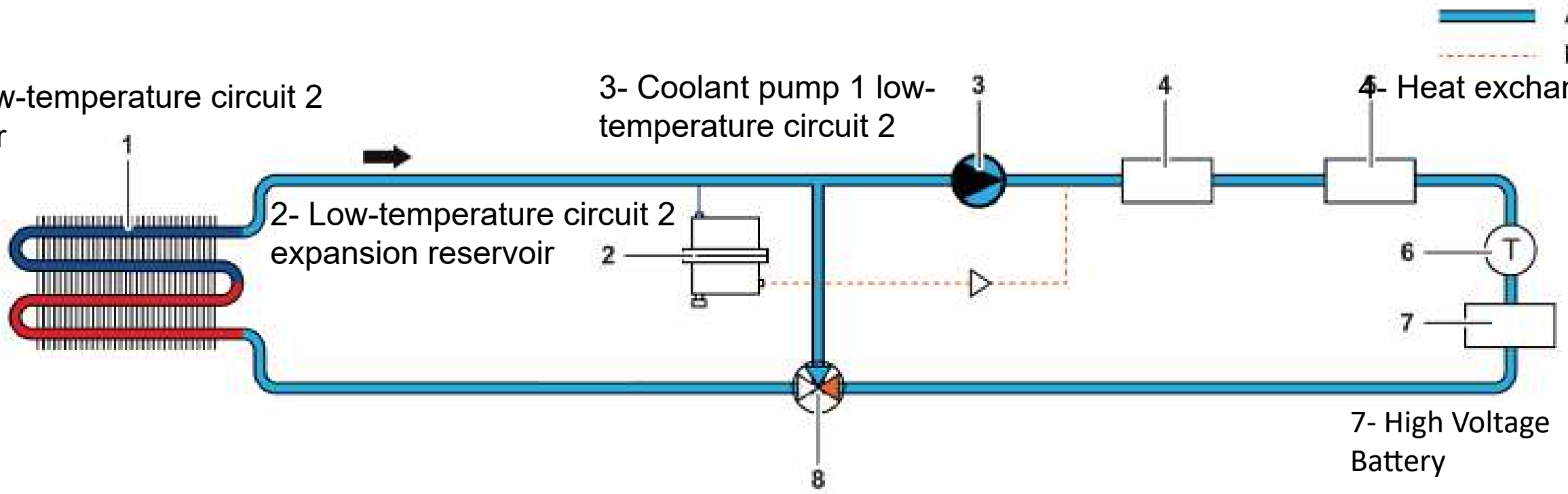
Cooling Low Temp Circuit 1



Coolant Low Temp Circuit cools the components of the electric drive.

Cooling Low Temp Circuit 2

5- High voltage PTC heater



1- Low-temperature circuit 2 cooler

2- Low-temperature circuit 2 expansion reservoir

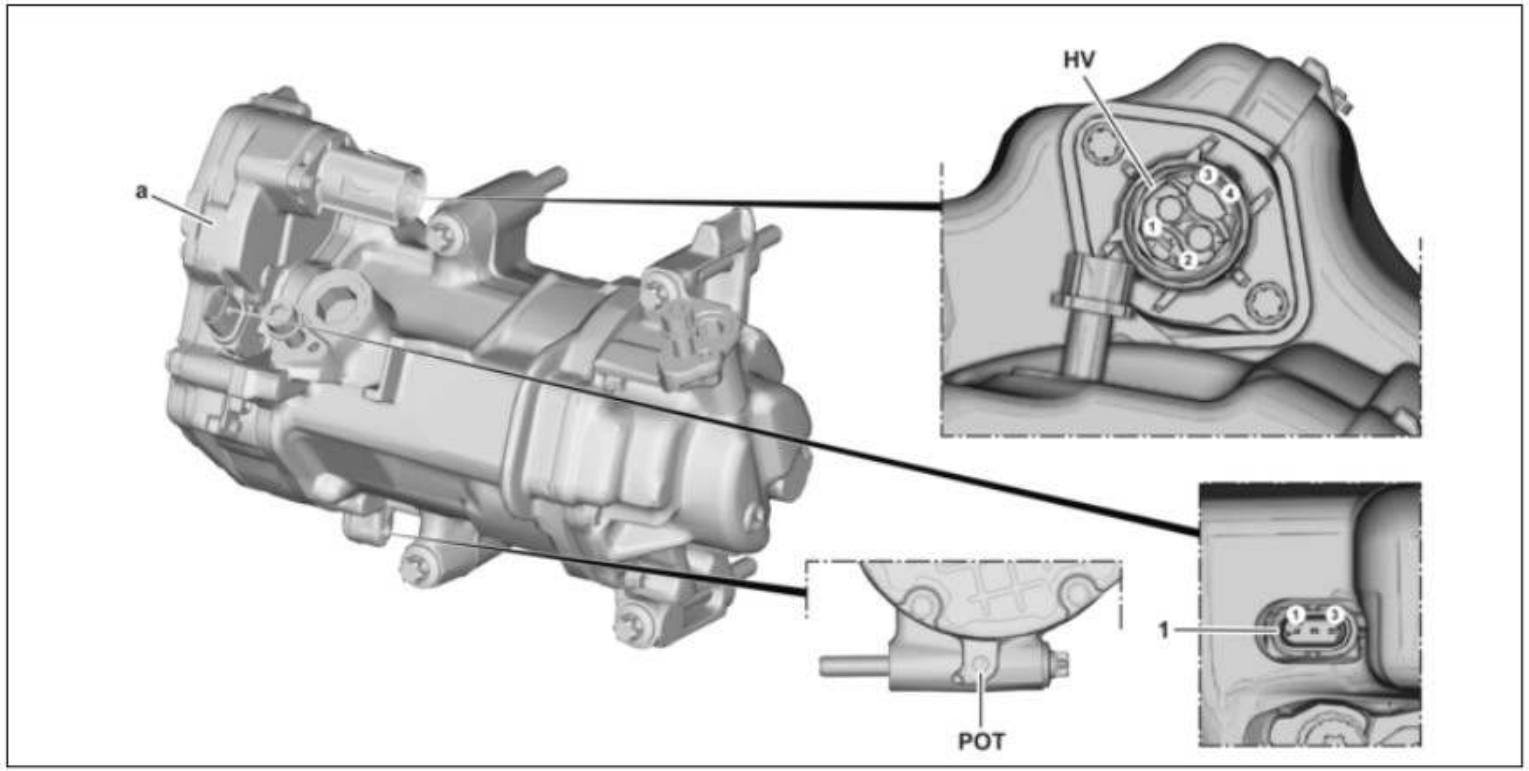
3- Coolant pump 1 low-temperature circuit 2

4- Heat exchanger

7- High Voltage Battery

The low-temperature circuit 2 cools and heats the high-voltage battery

Refrigerant compressor

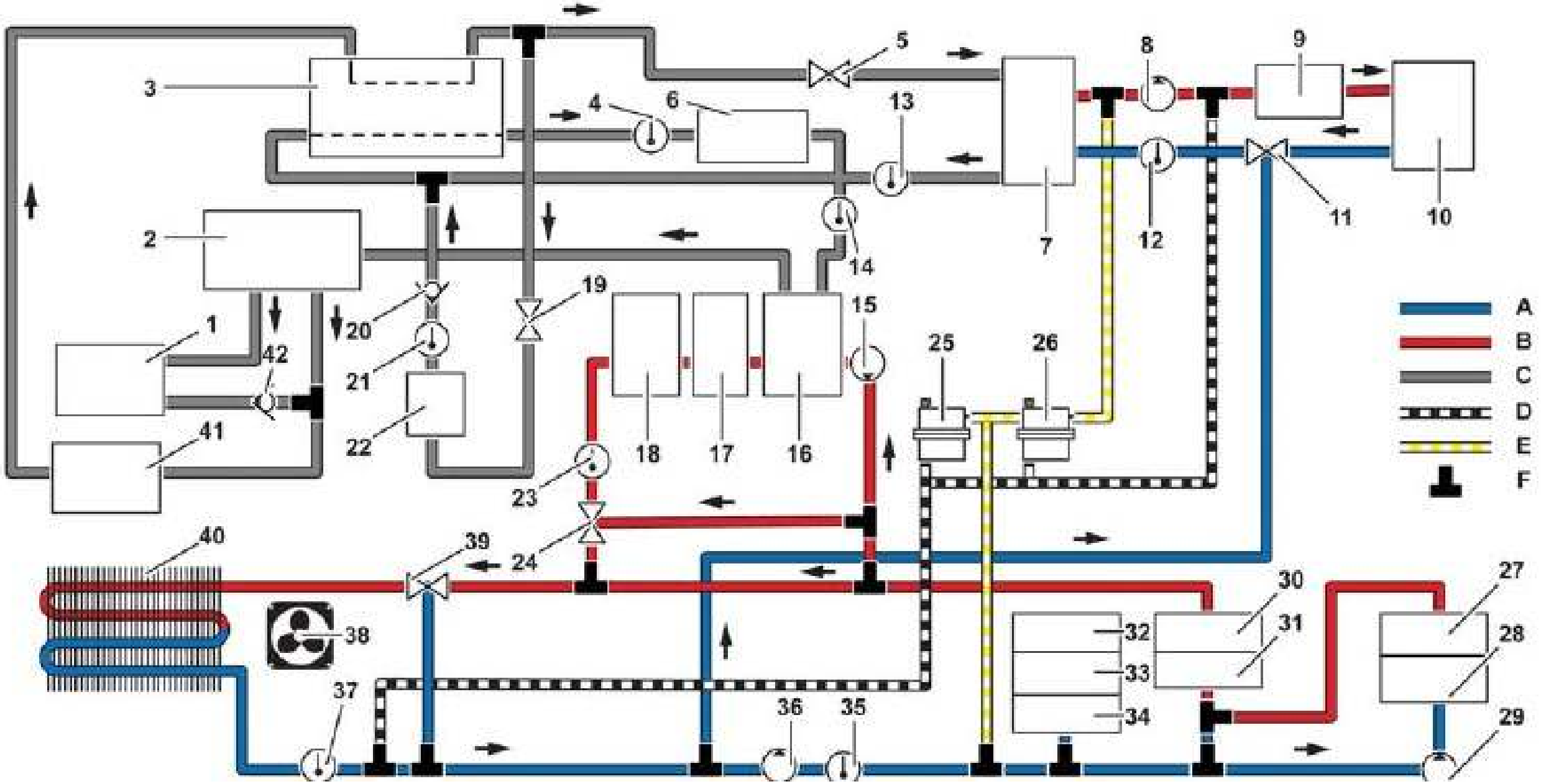


P83.55-A054-09

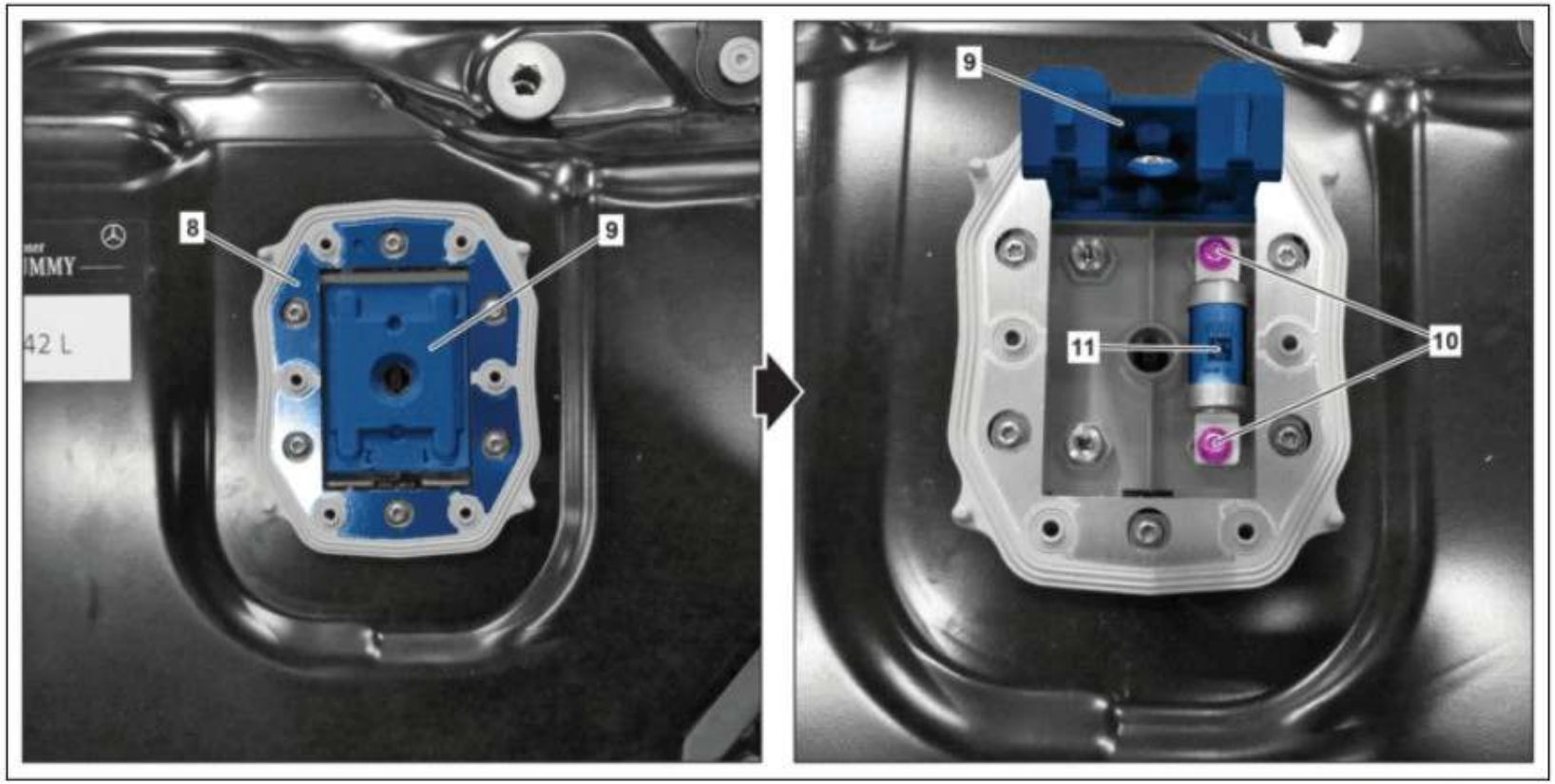
a	Electric refrigerant compressor	HV	Battery management system control unit or power electronics control unit high-voltage electric slot for code M005
1	12 V on-board electrical system battery connection electric slot	POT	Equipotential bonding


four models




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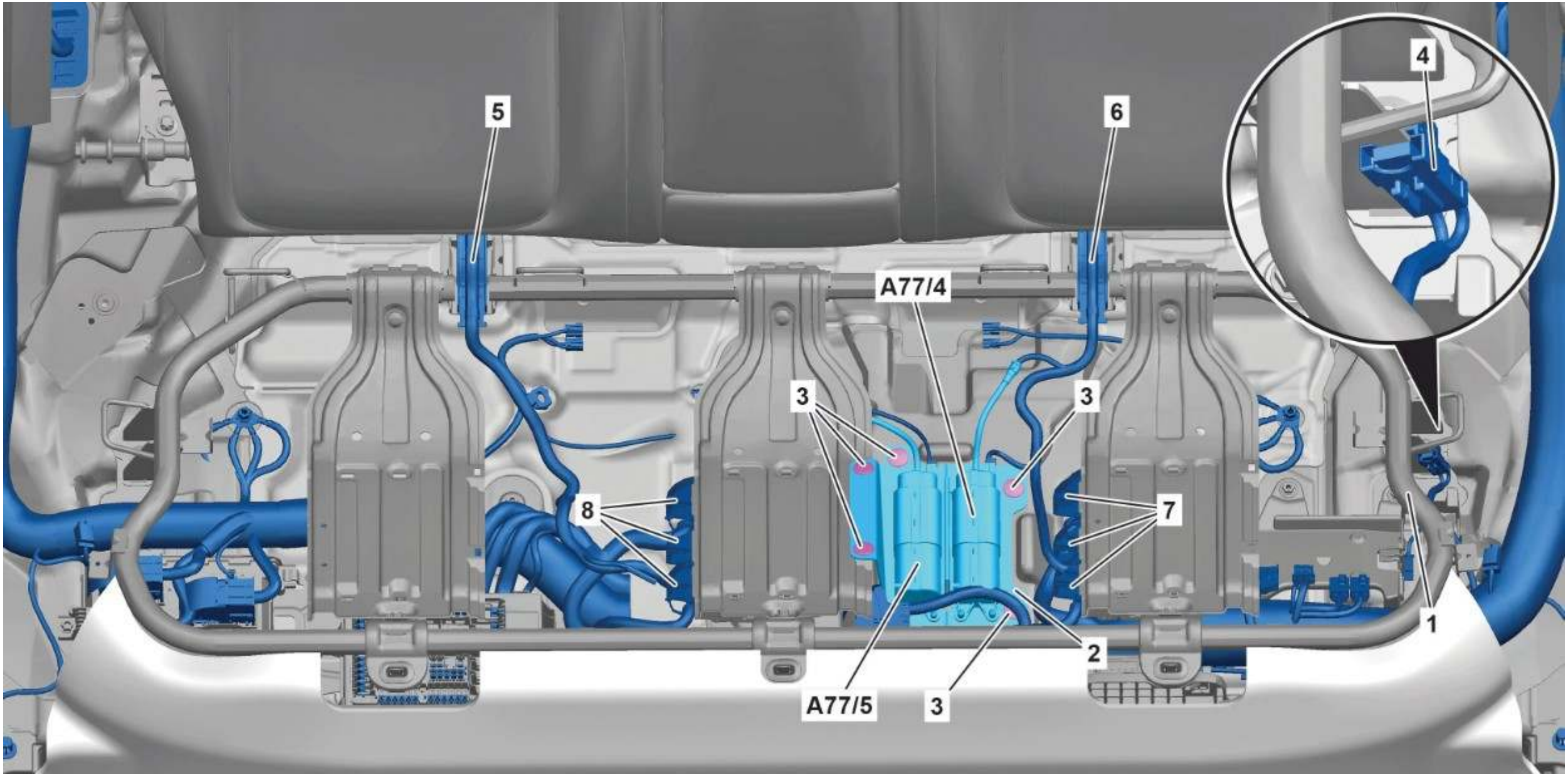
For vehicles without code M005 (Vehicles with 4MATIC/ all-wheel drive), the power supply of the electric refrigerant compressor is protected via a fuse in the high-voltage battery. The fuse can be accessed and replaced via the high-voltage battery maintenance flap.

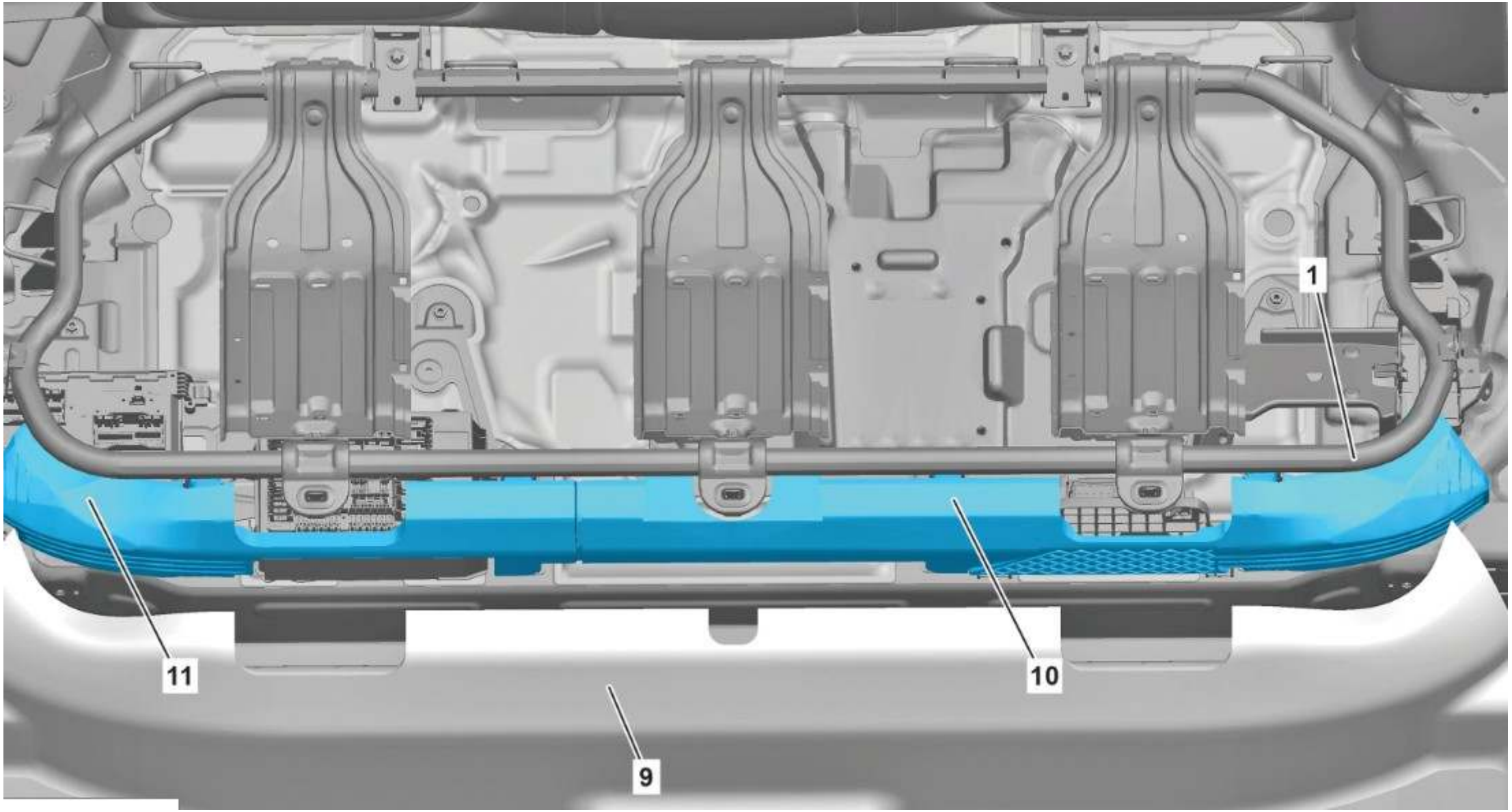


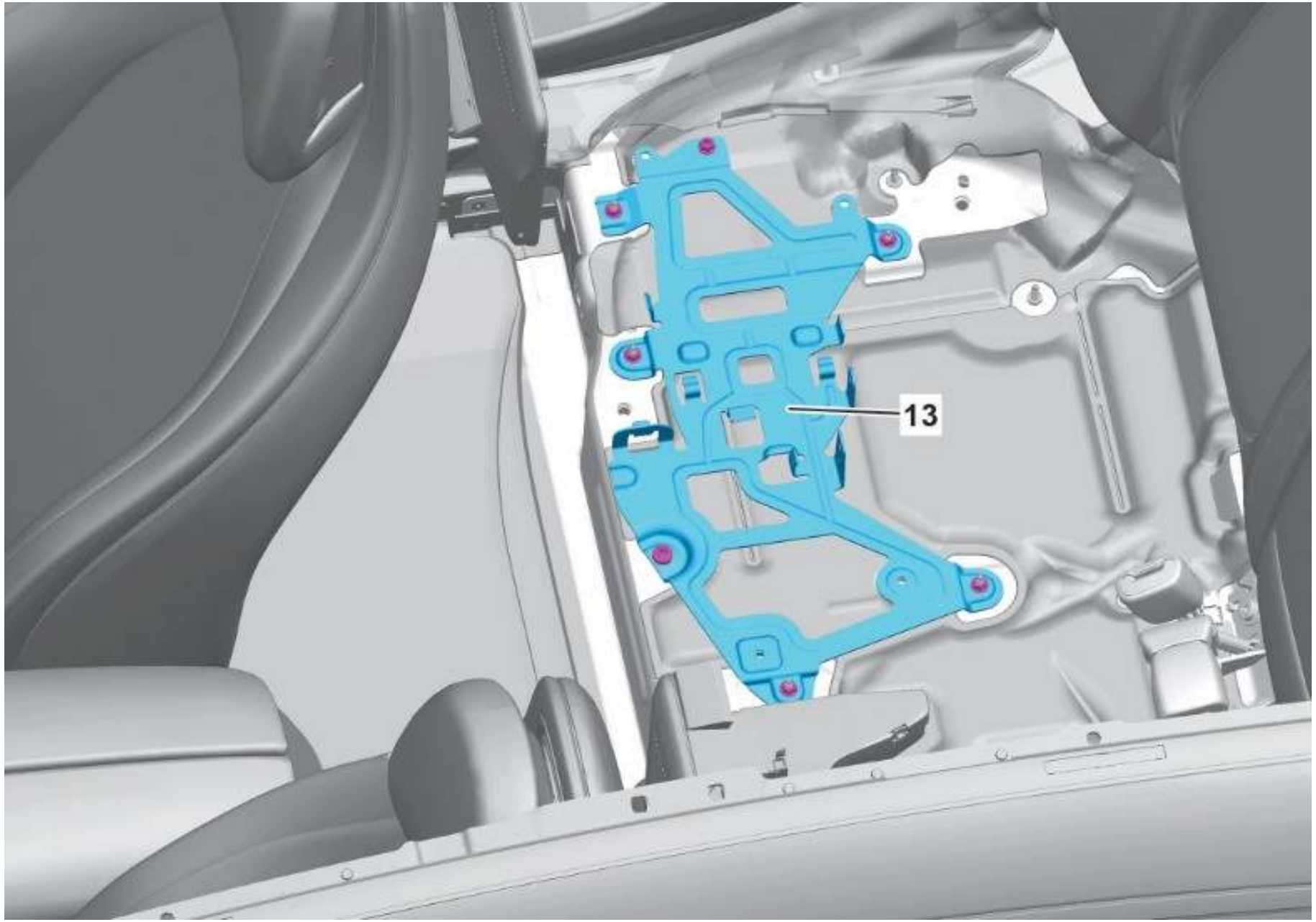
P47.70-A347-79

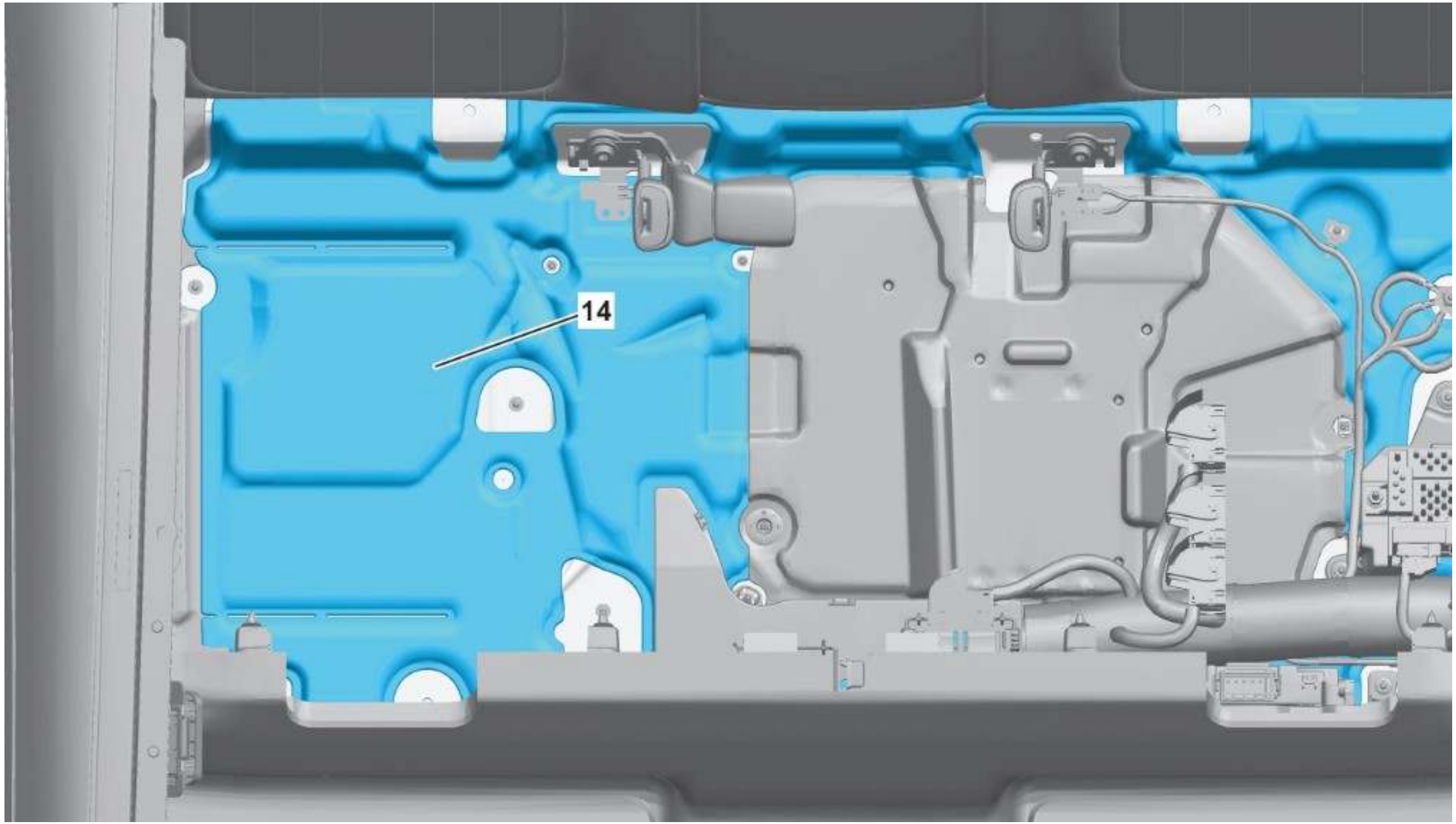
Electric refrigerant compressor fuse under high-voltage battery maintenance flap

8	Seal	10	Bolts
9	Maintenance flap	11	Fuse


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A77/4
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A77/5
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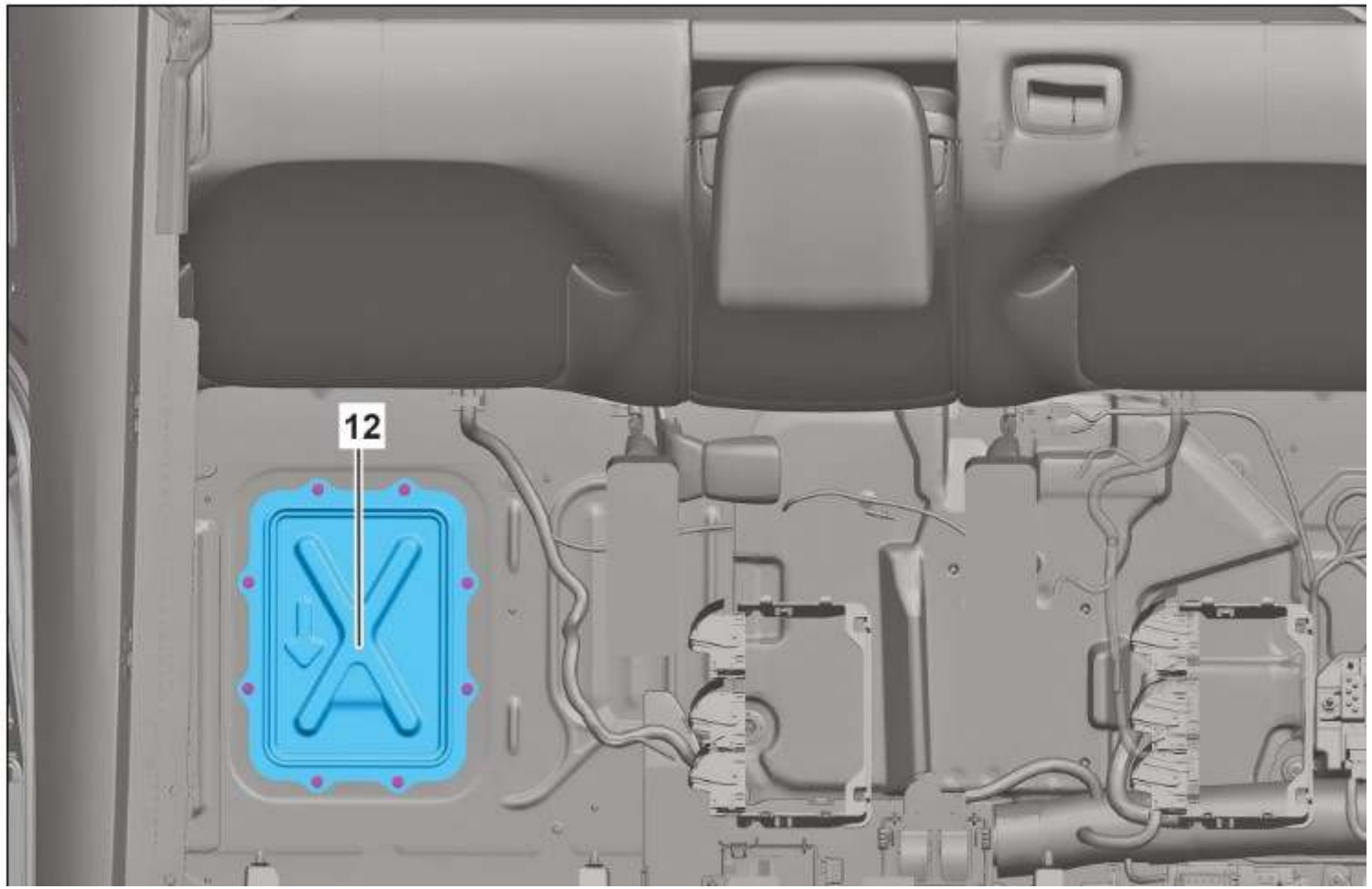

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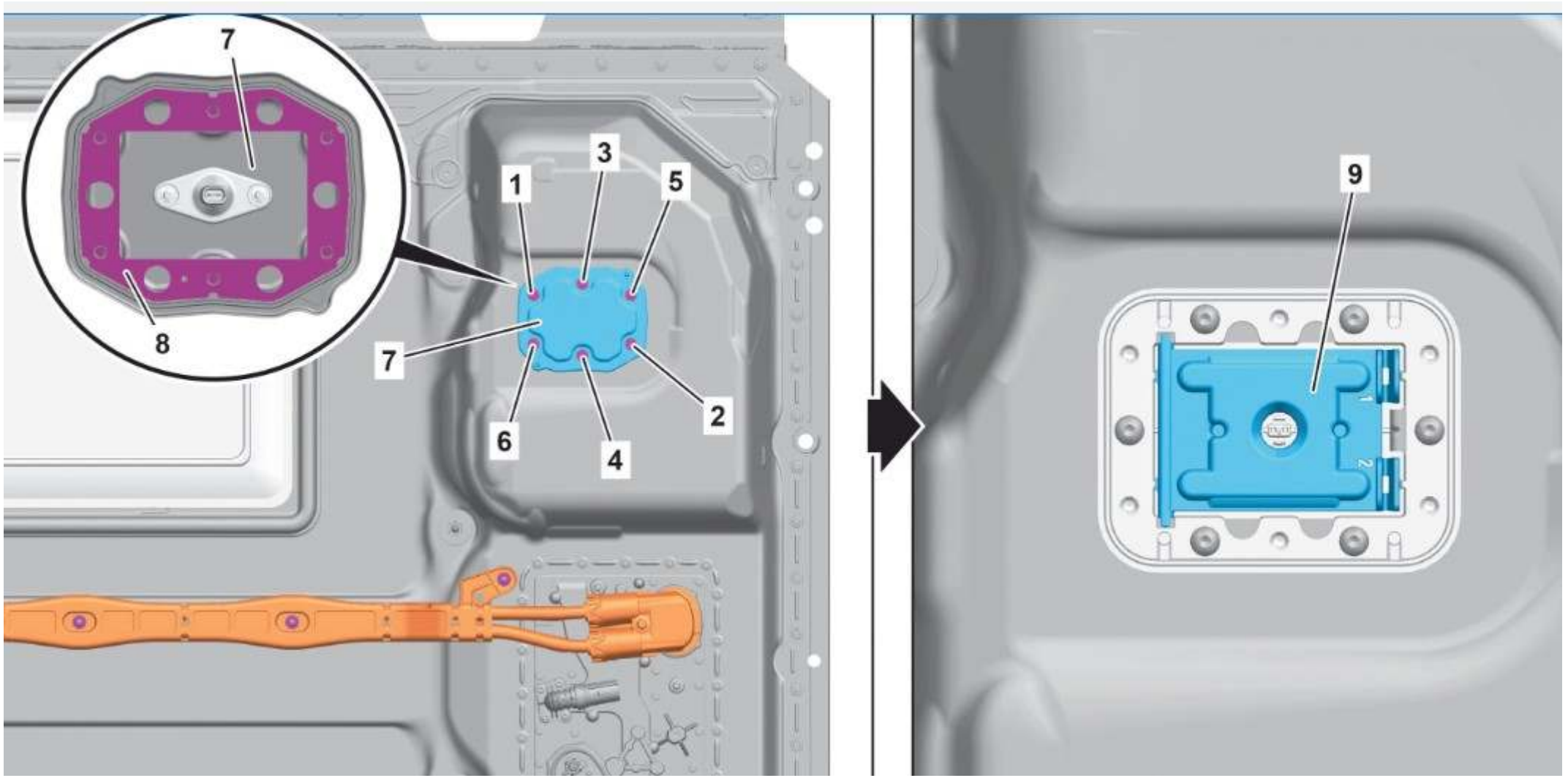

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Shown on model 297

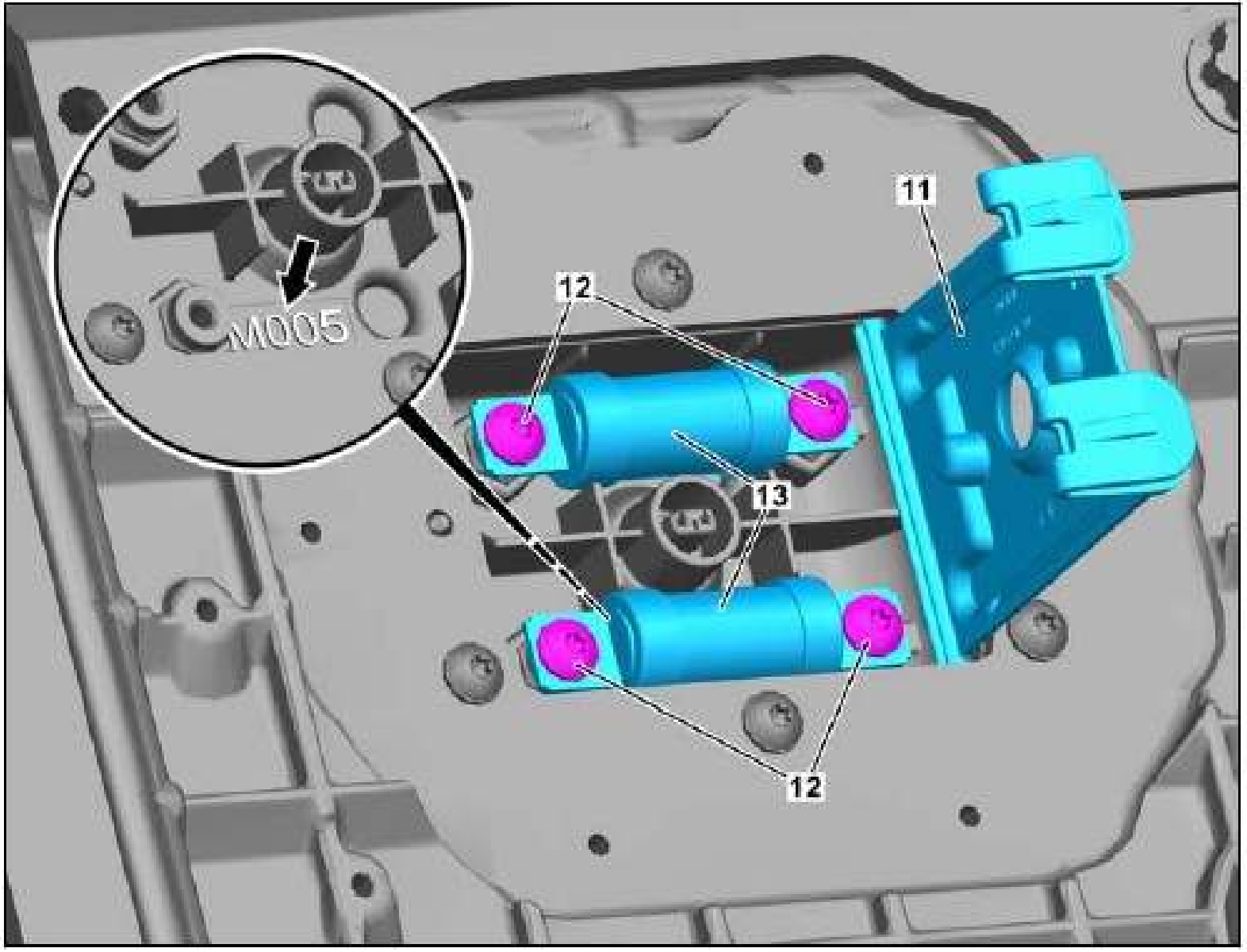
12 Maintenance flap




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Fuses beneath the high-voltage battery maintenance flap

11 Service cover
12 Bolts
13 Electrical fuses

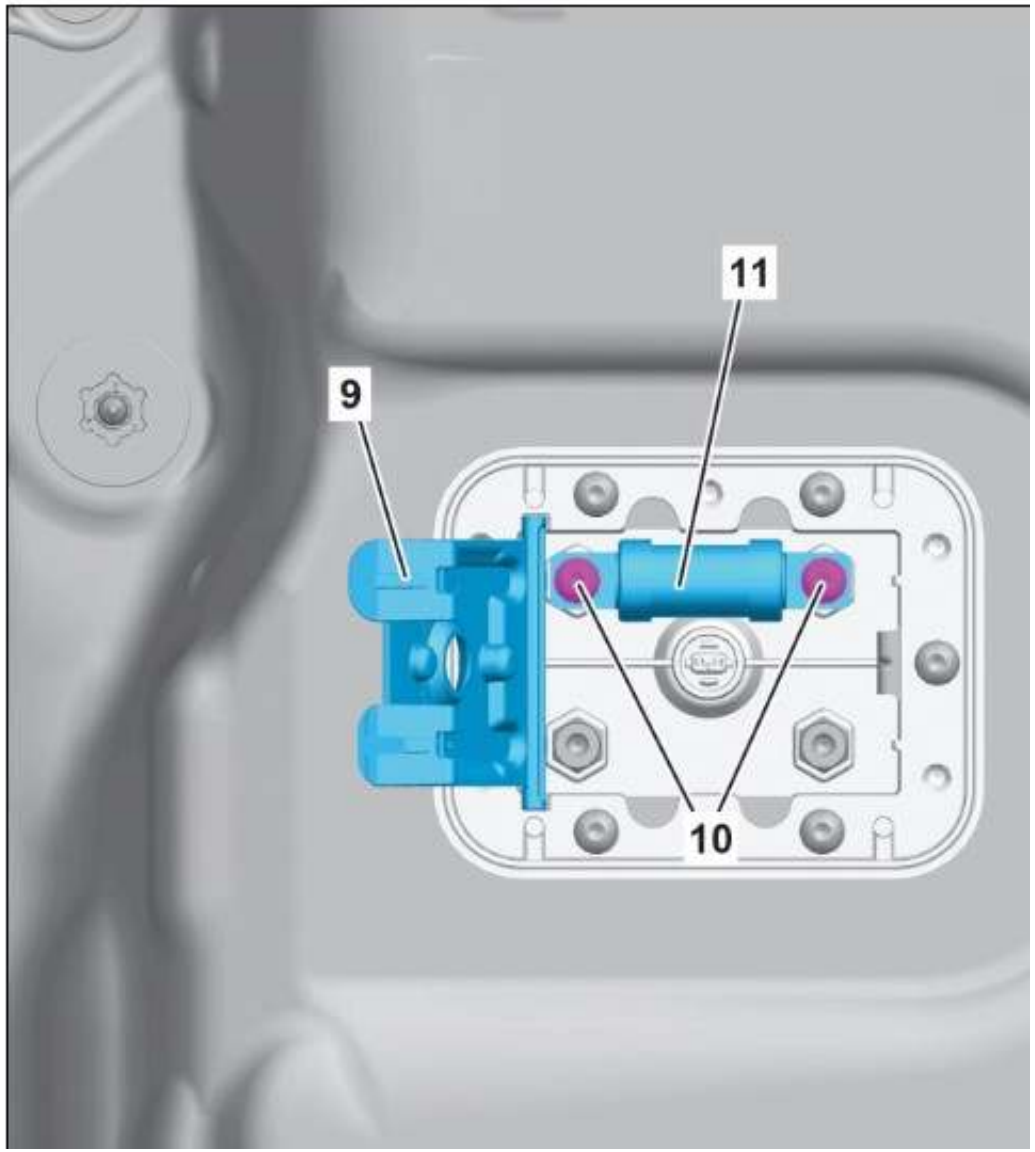


Shown on model 297 with code M005 (Vehicles with 4MATIC/all-wheel drive)

9 *Intermediate cover*

10 *Bolts*

11 *Electrical fuse*

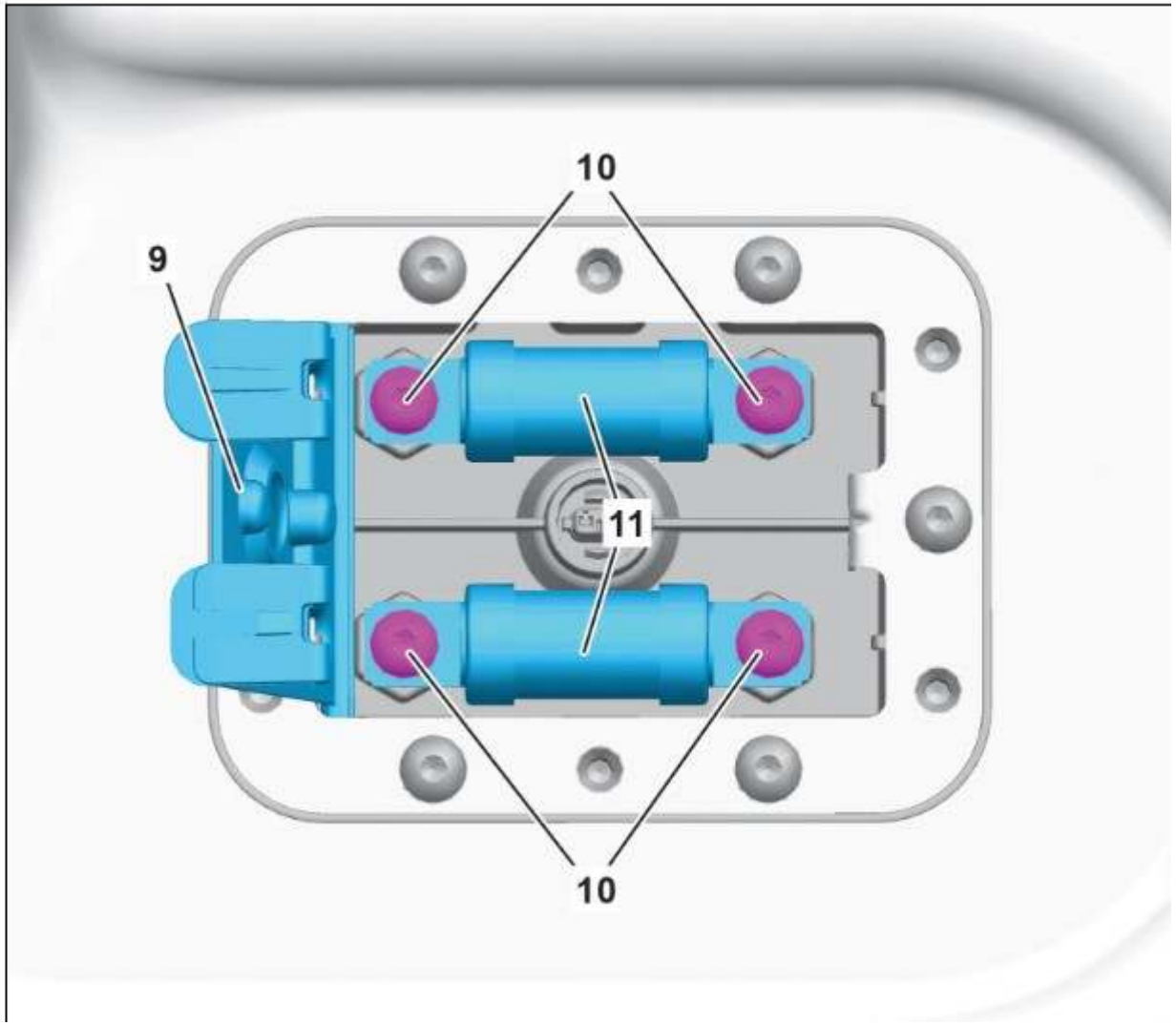


Shown on model 297 without code M005 (vehicles with 4MATIC/all-wheel drive)

9 *Intermediate cover*

10 *Bolts*

11 *Fuses*

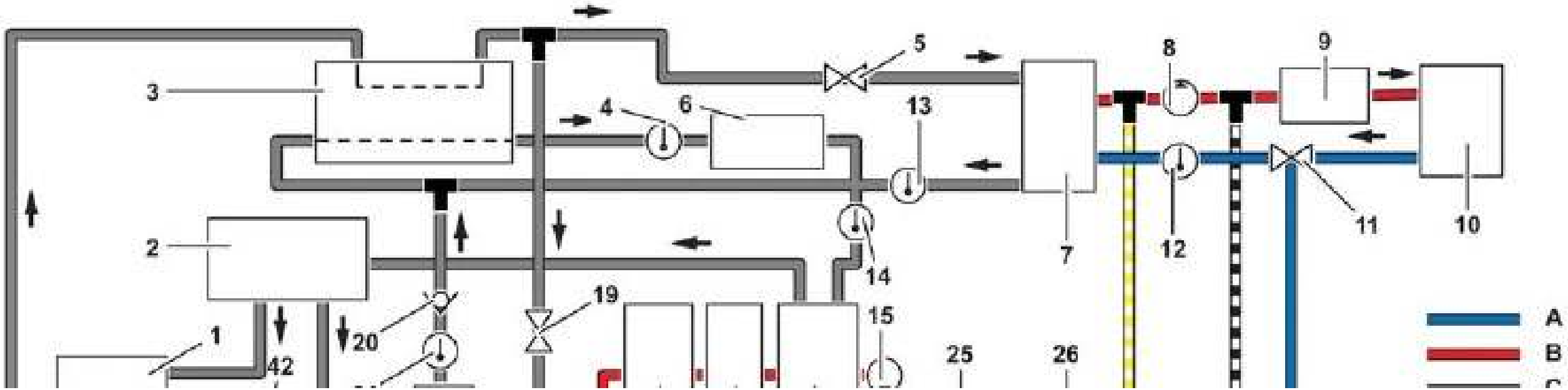


Shown on model 297

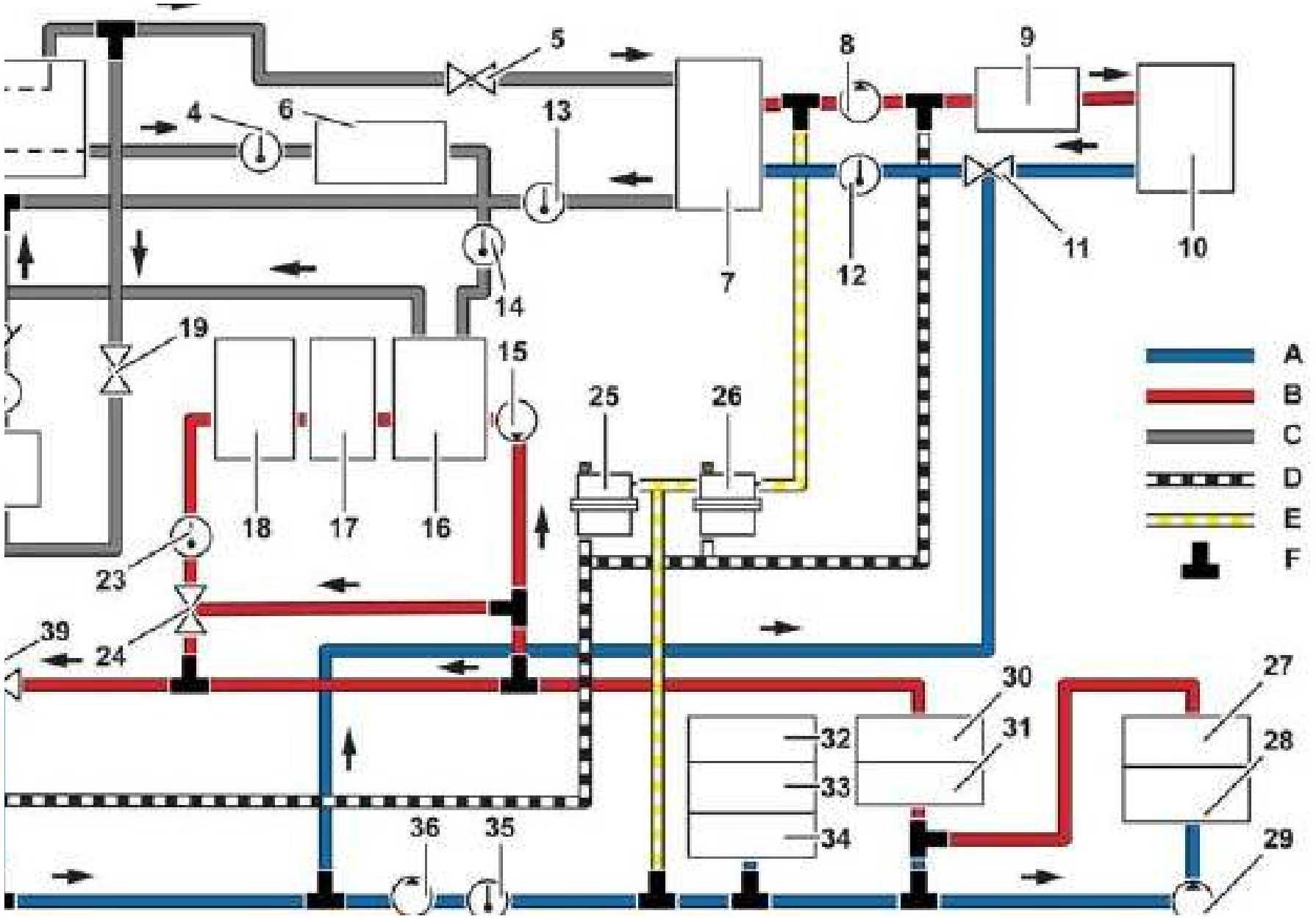


	Check		
1 AD	Connect vehicle diagnosis system and read out fault memory.	**Removal: The electrical fuses (11) may not be replaced in the following cases:** In the case of a defective main or charge fuse In the case of a non-disconnectable main contactor In the case of isolation faults in the system In the case of acute damage to the high-voltage battery module (A100) If one of the above-mentioned problems occurs: ↓ Replace high-voltage battery-module (A100). Model 297 with engine 780 with code BAC (EB4XY battery (L)) Model 296 with engine 780	AD00.00-P-2000-06FR AR47.70-P-0002EQS AR47.70-P-0002EQD
	Remove/install		
2	Perform power disconnect of high-voltage on-board electrical system.		AR47.70-P-1000EQS

Cooling



Heating


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Insufficient Heating Output Due To Broken Refrigerant Line Between Refrigerant Compressor And The condenser (Hot Gas Line)

Title | Complaint | Cause | Remedy | Parts | Symptoms | Operation numbers/damage codes | Control unit/fault code

Title

Topic number	LI83.20-P-076623
Version	1
Function group	83.20 Heating
Date	6/26/23, 2:03 PM
Validity	EQA (H243), EQB (X243)
Reason for change	Addition of German-language screenshots in the German version

loud "plopping" noise during the journey

Complaint

- Insufficient heating output in vehicle interior
- Customer describes a one-off, loud "plopping" noise

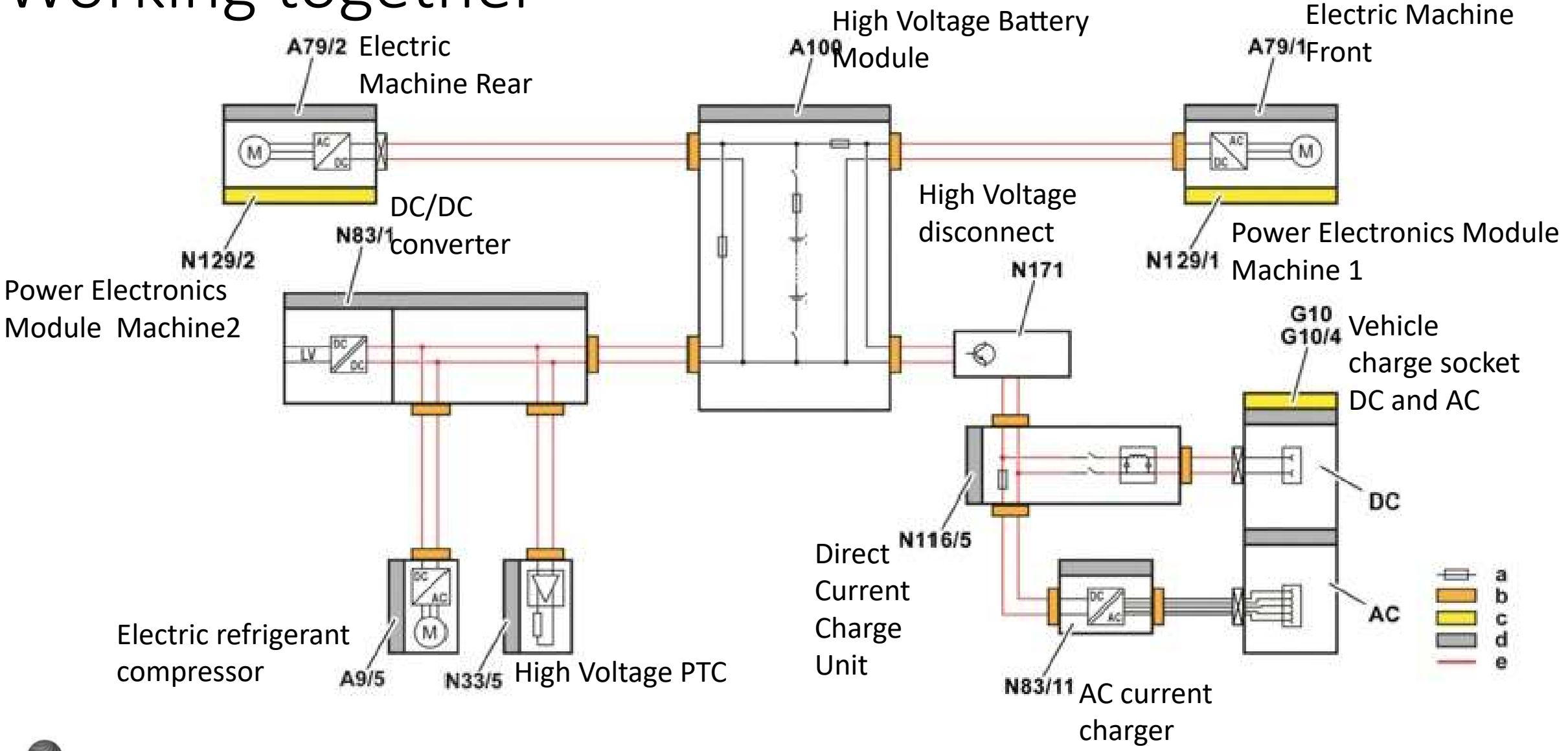
Regenerative Braking





https://www.youtube.com/watch?v=uh_FPLfyXXk

Working together



EQA



Design



P00.00-A080-79

Right front side view



P00.00-A081-79

Left rear view



P91.12-A054-78

Cockpit



P91.12-A056-78

Rear seats



Head-up display



Instrument cluster display, "Progressive" shown

It is possible to customize the display. The following display variants are available:

- "Modern Classic"
- "Sport"
- "Progressive"



Exterior lighting

Shown: LED High Performance headlamp



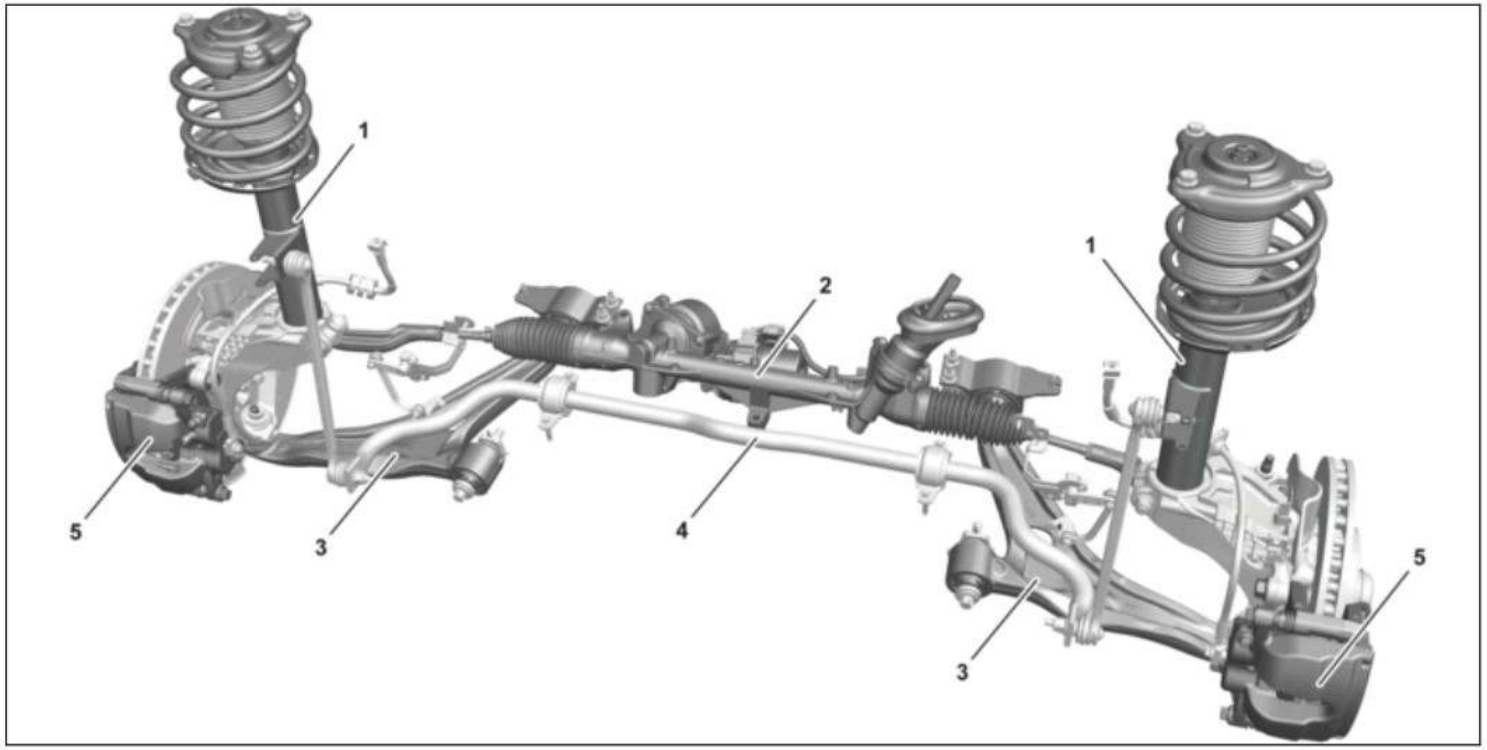

KT21 CRV


EQA 250

Interior lighting



Steering and suspension



P33.10-A052-79

MacPherson front suspension

1	*Suspension strut*	*3*	*Transverse control arm*	*5*	*Brake caliper*
2	*Steering gear*	*4*	*Stabilizer bar*		

Front axle

The front suspension is a MacPherson front suspension.

Like the GLB-Class, the new EQA features a MacPherson front suspension modified for a wider track width.

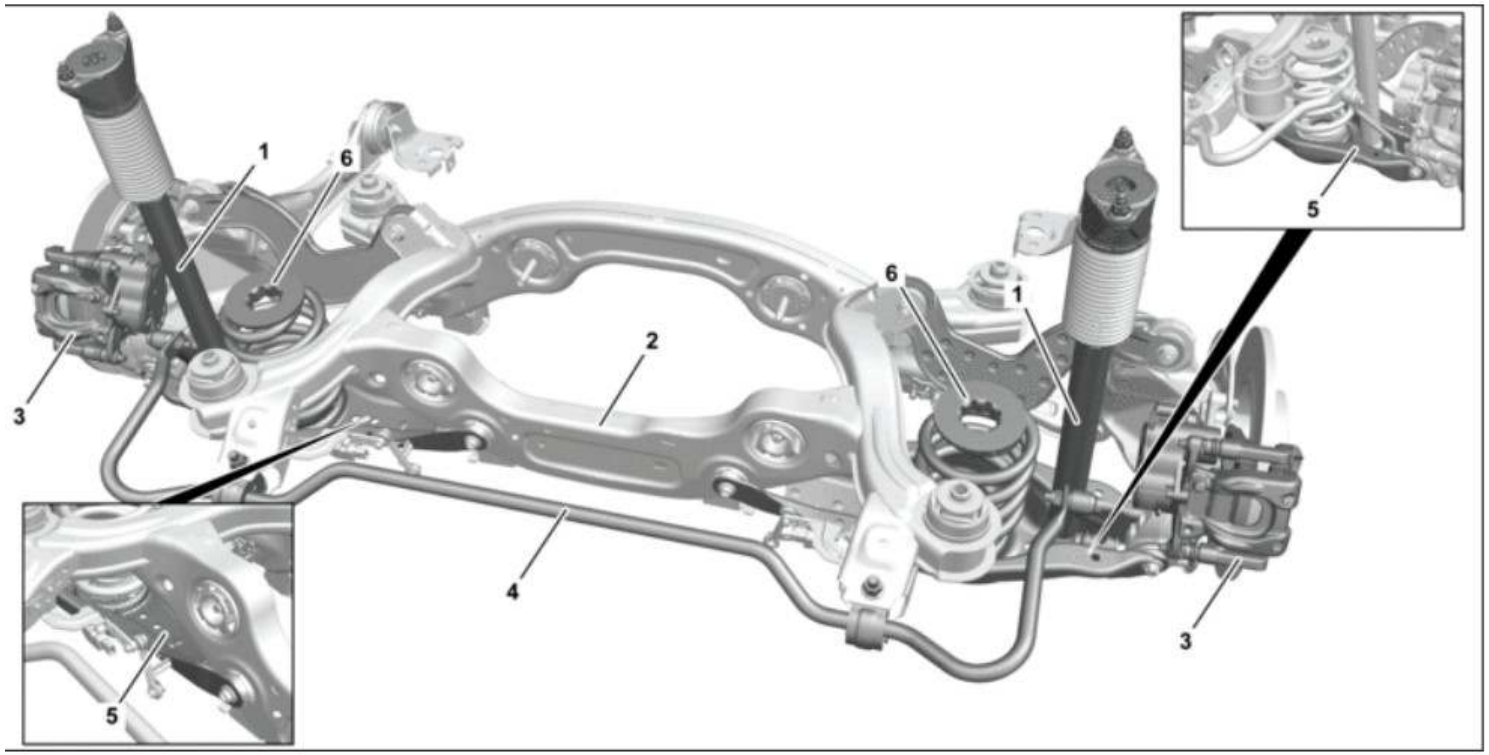
This tried-and-tested front axle construction is particularly well suited to use in compact vehicles with front wheel drive thanks to a low unsprung mass, a larger support base, small forces and the fact that it requires less space.

In the front-axle module of the new EQA, a wheel bearing unit is screwed onto a cast aluminum steering knuckle in each case. The wheel control takes over in each case one transverse control arm below the wheel center, one suspension strut and one tie rod.

The transverse control arm in the new EQA is a cast aluminum steering knuckle forging, which meant that both a weight saving and a reduction in unsprung masses could be achieved.

Front axle suspension

The front axle works with MacPherson suspension struts for wheel control, consisting of twin-tube gas-filled shock absorbers with auxiliary springs, coil springs optimized for transverse forces, and compact support bushings.



4-link rear axle

1	*Rear axle shock absorber*	*3*	*Brake caliper*	*5*	*Spring control arm*
2	*Rear axle carrier*	*4*	*Stabilizer bar*	*6*	*Upper spring bearing*

EQB



Design




S X7243E







Multifunction steering wheel

The control elements for the cruise control/limiter driver assistance systems and Active Distance Assist DISTRONIC are located on the multifunction steering wheel.

Acoustic feedback is provided for operations via the touch control (finger navigation pads). A speaker in the vehicle gives the acoustic operation feedback; it can be adjusted via the multimedia system.



Instrument cluster display, "Progressive" shown

It is possible to customize the display. The following display variants are available:

- "Modern Classic"
- "Sport"
- "Progressive"



Head-up display





Exterior lighting

High Performance LED

The exterior lighting of the EQB supports the desired visual differentiation from the vehicles with conventional drives on the one hand, and offers light technology and lighting functions that match the latest technology featured in other model series on the other.

The EQB is fitted with LED High Performance headlamps as standard equipment. The technology for the low beam uses a projection module. The high beam shines using reflection technology.

Luminescent band in the radiator grille

The radiator grille of the EQB has a luminescent band at the top end in the form of a transverse fibre-optic cable. This luminescent band is characteristic for the EQB and serves as a position light or, when the EQB is stationary, as a "Coming Home" light function.



Rear Lighting

Rear lamps

The rear lamps of the EQB have a three-piece design. One one-piece luminescent band, fully equipped with LEDs, is located between the two rear lamps, which are also completely equipped with LEDs.

The tail light and the rear fog light are set within the luminescent band. The brightness of the brake light and the turn signal indicator varies between day and night within the legal requirements (multi-level functionality).

Exterior light functions

If the vehicle is locked or unlocked via radio remote control, the Leaving Home or Coming Home function is activated, whereby the optical fibers dim up in red or white briefly.



Interior Lighting



Interior Lighting

The interior lighting is designed with an emphasis on being able to customize the colors and designs to create a pleasant atmosphere

With certain options the driver can select from key themes:

- Freshness
- Warmth
- Vitality
- Joy
- Well-being
- Power Nap
- Training
- Tips

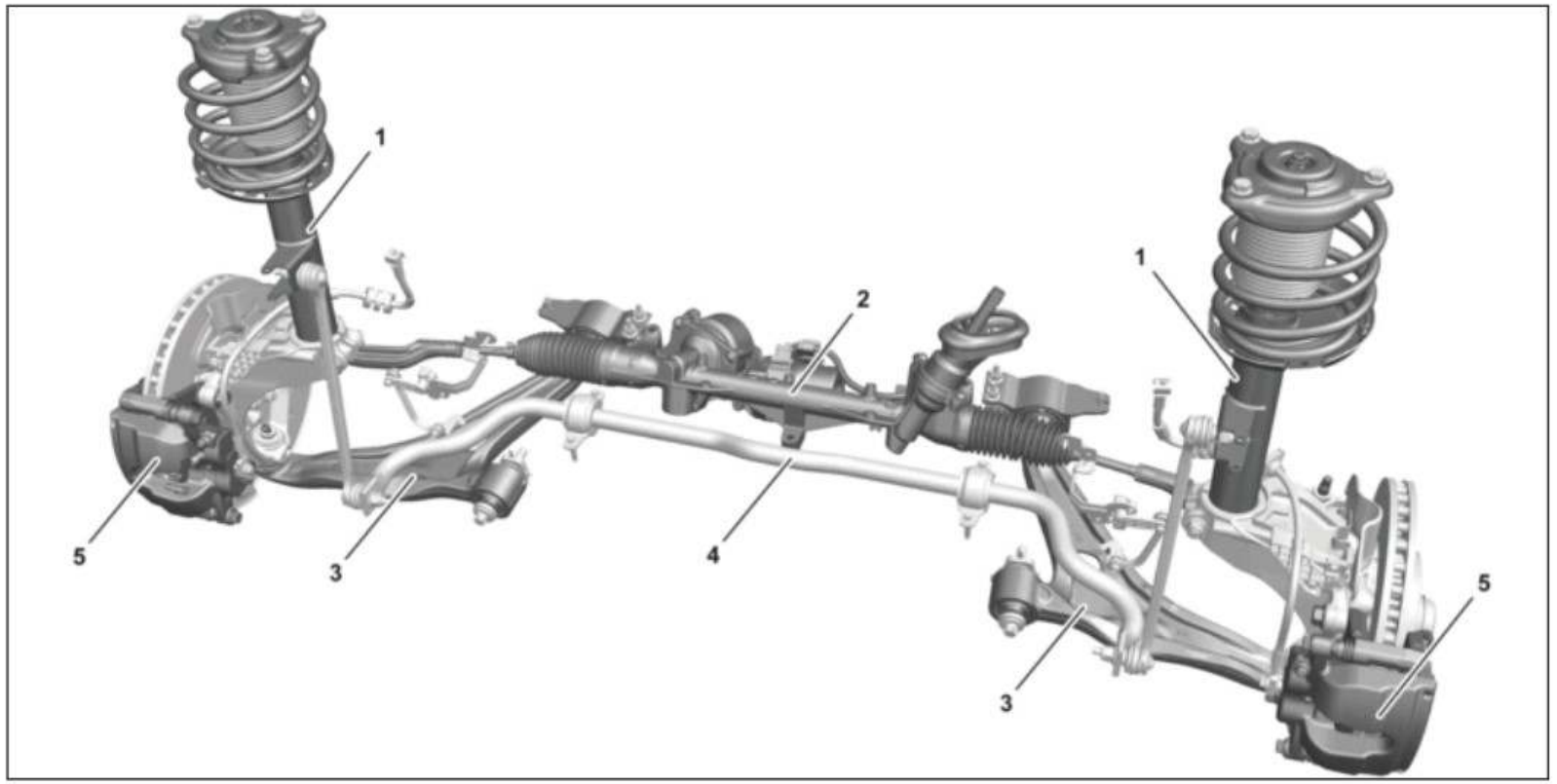
This can also be set via Voice Control



Who wants to see someone relaxing?



Steering and Suspension



P33.10-A052-79

MacPherson front suspension

1	Suspension strut	3	Transverse control arm	5	Brake caliper
2	Steering gear	4	Stabilizer bar		

Front axle

The front suspension is a MacPherson front suspension.

Like the GLB-Class, the new EQB features a MacPherson front suspension modified for a wider track width.

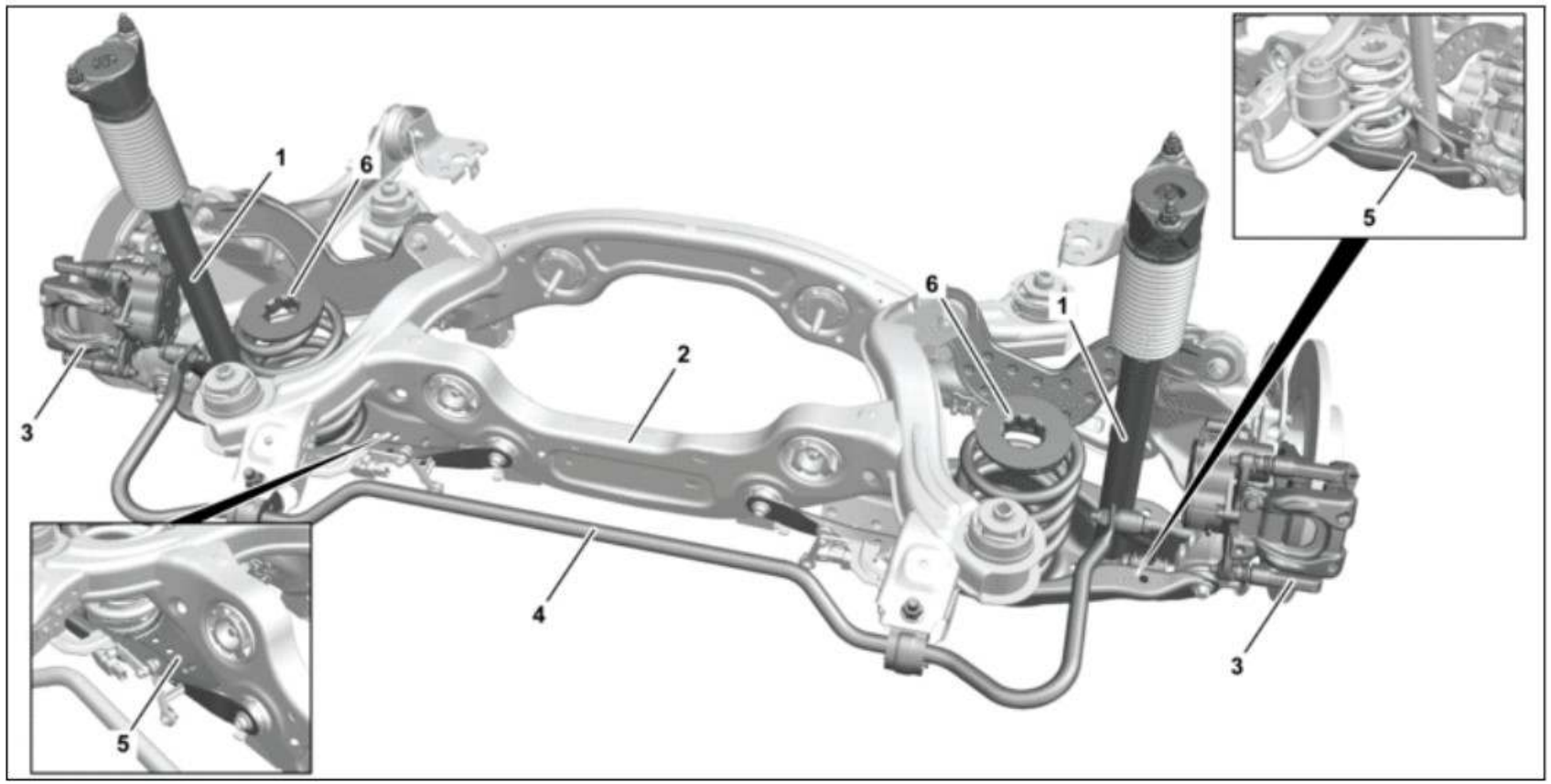
This tried-and-tested front axle construction is particularly well suited to use in compact vehicles with front wheel drive thanks to a low unsprung mass, a larger support base, small forces and the fact that it requires less space.

In the front-axle module of the new EQB, a wheel bearing unit is screwed onto a cast aluminum steering knuckle in each case. The wheel control takes over in each case one transverse control arm (3) below the wheel center, one suspension strut (1) and one tie rod.

The transverse control arm (3) in the new EQB is a cast aluminum steering knuckle forging, which meant that both a weight saving and a reduction in unsprung masses could be achieved.

Front axle suspension

The front axle works with MacPherson suspension struts for wheel control, consisting of twin-tube gas-filled shock absorbers with auxiliary springs, coil springs optimized for transverse forces, and compact support bushings.



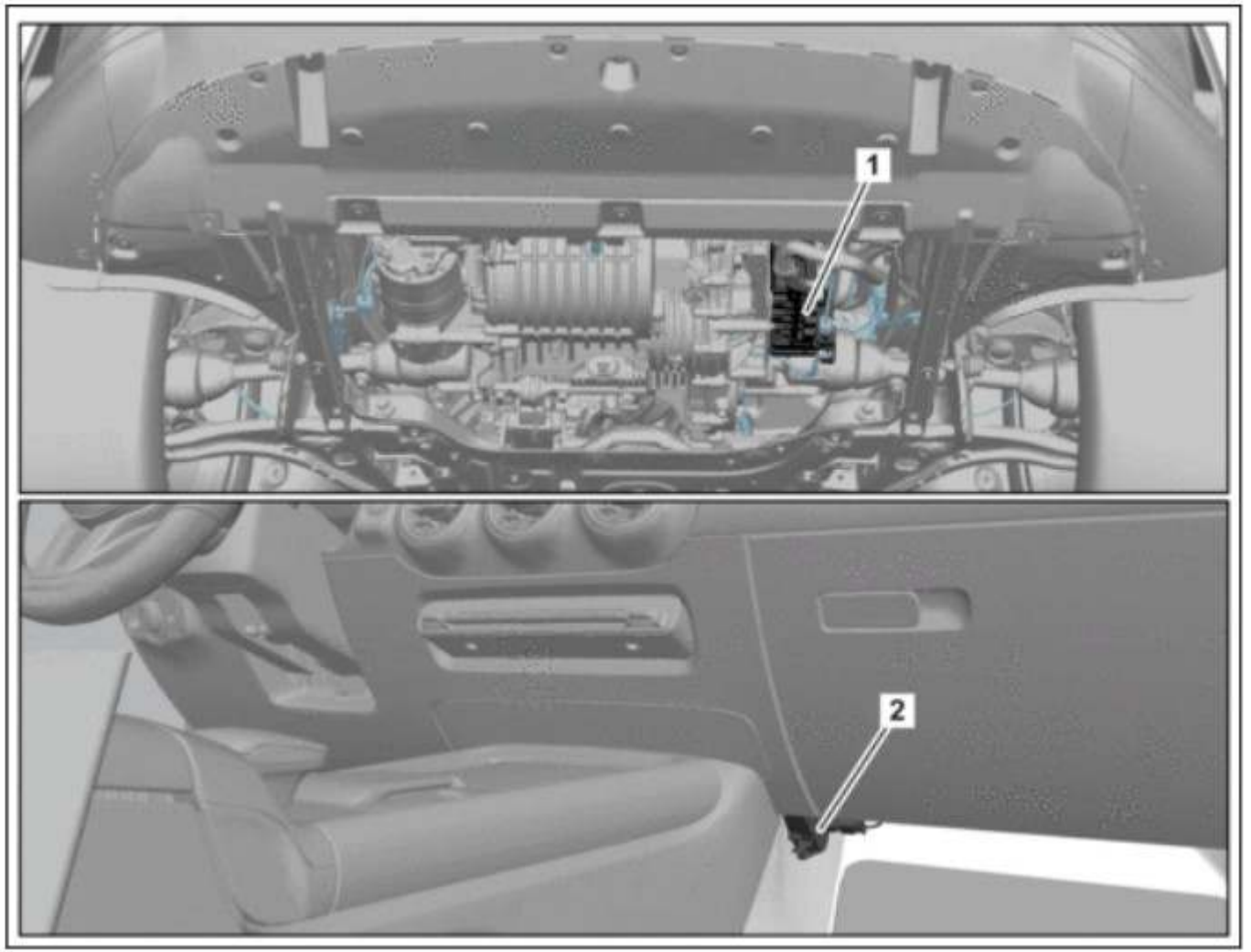
Component		Front axle	Rear axle
Brake disk	Type	internally ventilated	unventilated
	Diameter (in mm)	330	320
	Width (in mm)	30	12
Brake caliper	Type	2-component floating brake caliper	1-component floating brake caliper
	Piston diameter (in mm)	44	44

Air Conditioning

Installation position

1 High-voltage PTC heater (high-voltage battery)

2 Air conditioner housing PTC heater booster



The Freshness program literally brings a breath of fresh air to revitalize the occupants on long journeys whereby a strong airflow from the air conditioning has the greatest effect.

The driver senses a climate in the vehicle interior that is just like one experienced following a summer thunderstorm and rain and the program is rounded off by active seat ventilation.

The Vitality program stimulates the driver with suitable playlists of energetic rhythms, stored in the audio system.

Each of the seven programs also adjusts the lighting effects. The ambient lighting automatically sets the following colors: Freshness: Blue/Green
Vitality: Red
Training: Green/White
Warmth: Orange/Yellow
Joy: Yellow
Well-being: Lilac/Pink




11:04
Seat massage and sunny light settings
for a good mood and relaxed feeling.
ENERGIZING Comfort
Seat selection
Refresh
Warmth
Vitality
Joy
10:00
23°C
3
A/C ON
4
23°C


SOS
READY
3G
10:30
ENERGIZING Comfort
Seat selection
Refresh
Vitality
Training
Green-blue lighting and a cool, refreshing breeze
whisk you away to the coast.
20°C SYNC A/C ON
AUTO
AUTO
20°C
10:00

EQC



Design




S EQ2931E


S EQ2931E



Ambient lighting (with code 877)



Multifunction steering wheel



EQC 400 4MATIC, ARTICO
imitation leather in the interior




21.0°C
READY
10:10
49.1
km
654.0
0
km/h
20
0
315km
1/2
0
1
20
10
0
10
20
0
100
% POWER
EQ
R
N
D
P
C



P32.00-A006-79

Shown on suspension/steering EQC 400 4MATIC

Exterior lighting

The EQC has newly designed headlamps with the MULTIBEAM LED lighting system which allows continuous high beam usage with anti-glare functionality.

The lighting functions are implemented by adjusting both the light output and distribution.

The LED matrix consists of 24 individual LEDs in two rows.

The following additional functions are facilitated via the design: Active Highbeam Assist Plus, City light, Motorway light, Cornering illumination, Traffic circle / junction light.

The radiator grille has a transverse band made of a fiber optic cable and the Mercedes star is illuminated when the low beams switch on.



Shown on EQC 400 4MATIC rear lamps in LED technology with luminescent band, left side attachment



Rear lamps

The rear lamps of the EQC are in three parts. One one-piece luminescent band, completely fitted with LED, is located between the two rear lamps, which are also completely equipped with LED. The brake and turn signal light can be operated at different intensities depending on the driving condition and brightness of the environment (day/night) (multi-level functionality).

The luminescent band has the tail light and rear fog light functions integrated in it.

Interior lighting

The ambient illumination allows 64 different colors to be selected using LEDs.

There are additionally 10 so-called “color worlds” which are harmonious preset themes.

There are six different lighting effects that can be activated.

The brightness can be configured in two zones from 0 to 10.

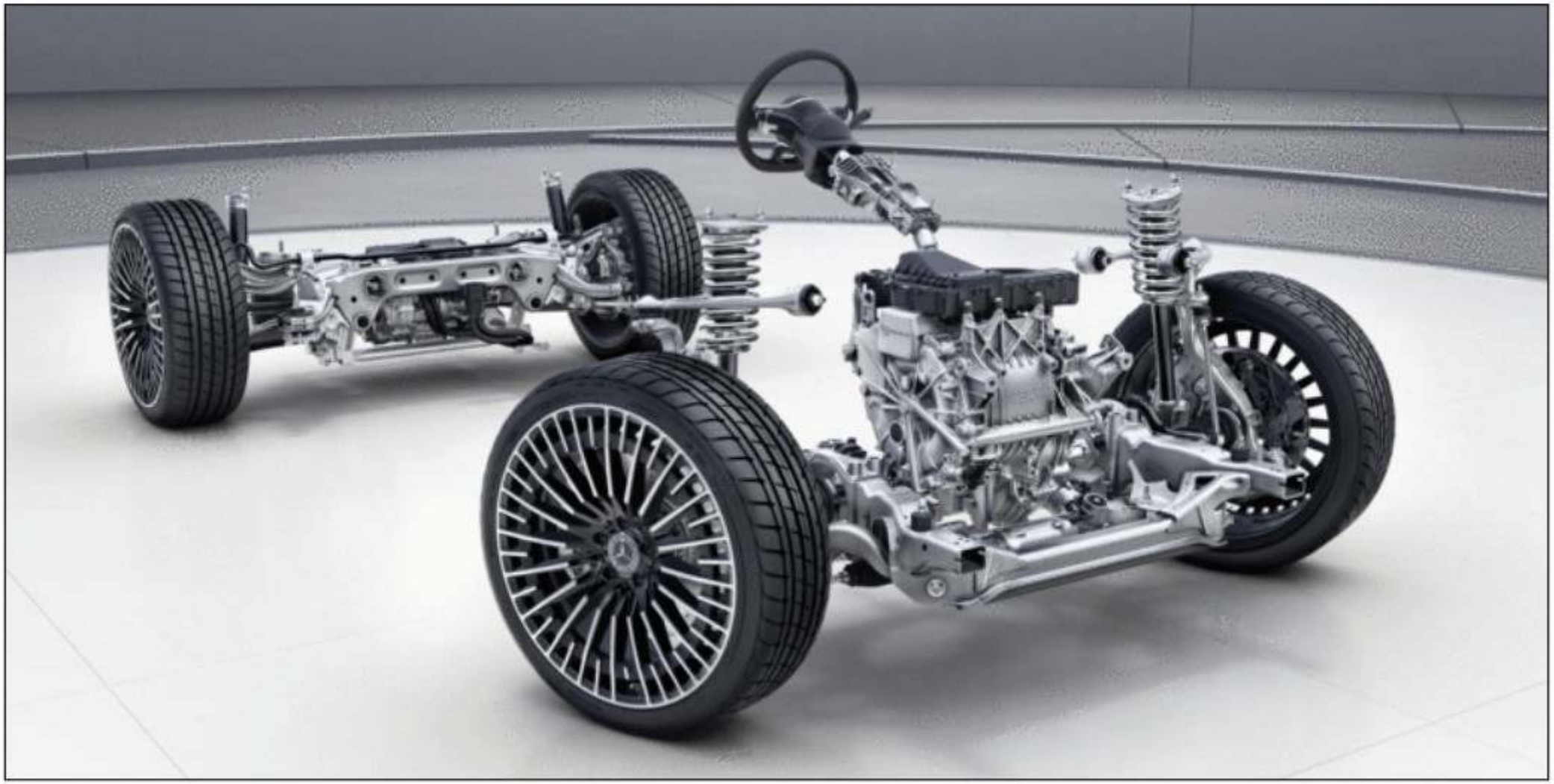


Axles and suspension



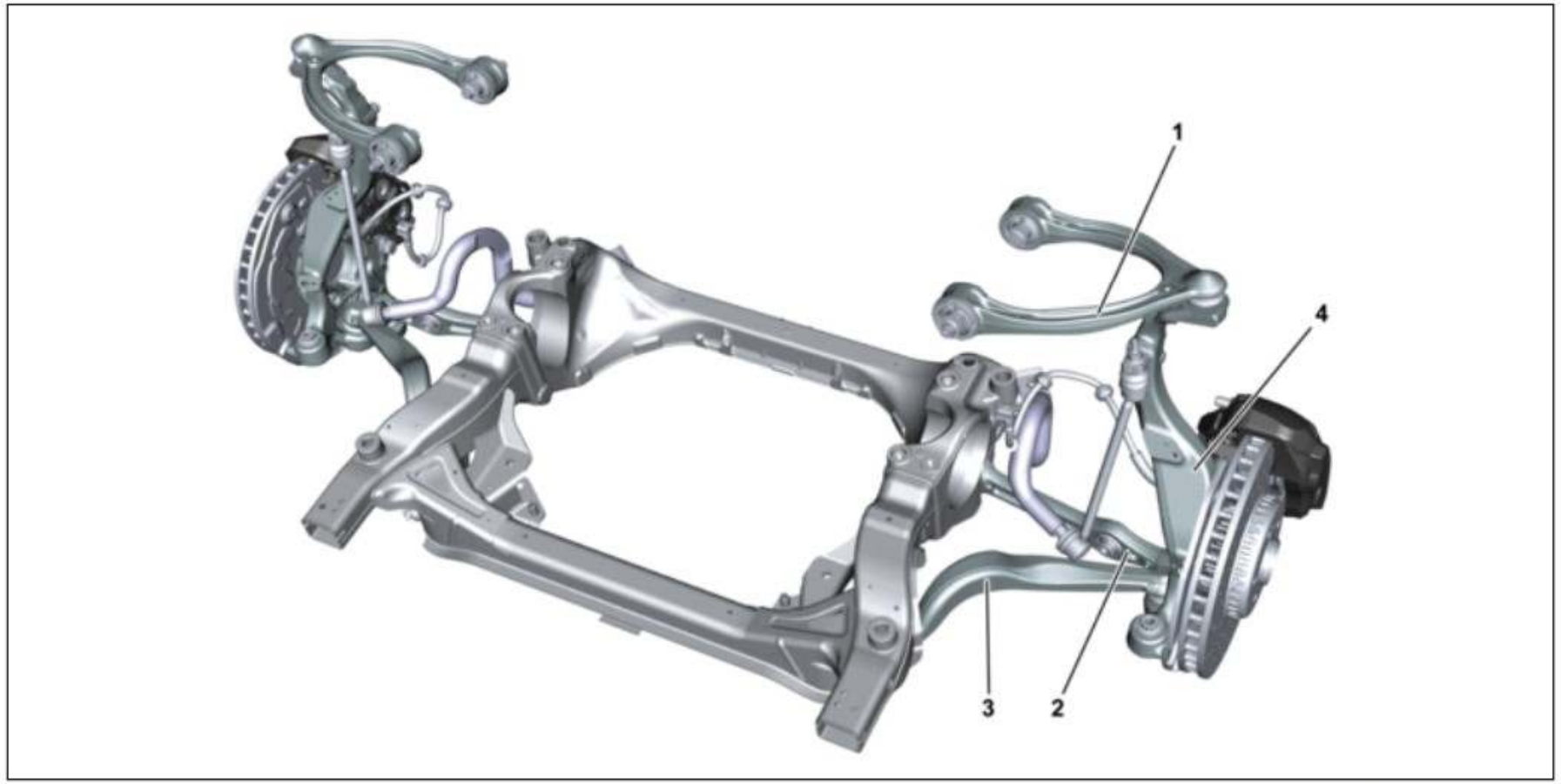
P32.00-A013-79

Shown: EQC 400 ATIC suspension and steering



P32.00-A006-79

Shown on suspension/steering EQC 400 4MATIC



P33.10-2546-79

A 4-link front axle is shown

1	*Upper transverse control arm*	*3*	*Strut rod*
2	*Spring control arm*	*4*	*Steering knuckle*

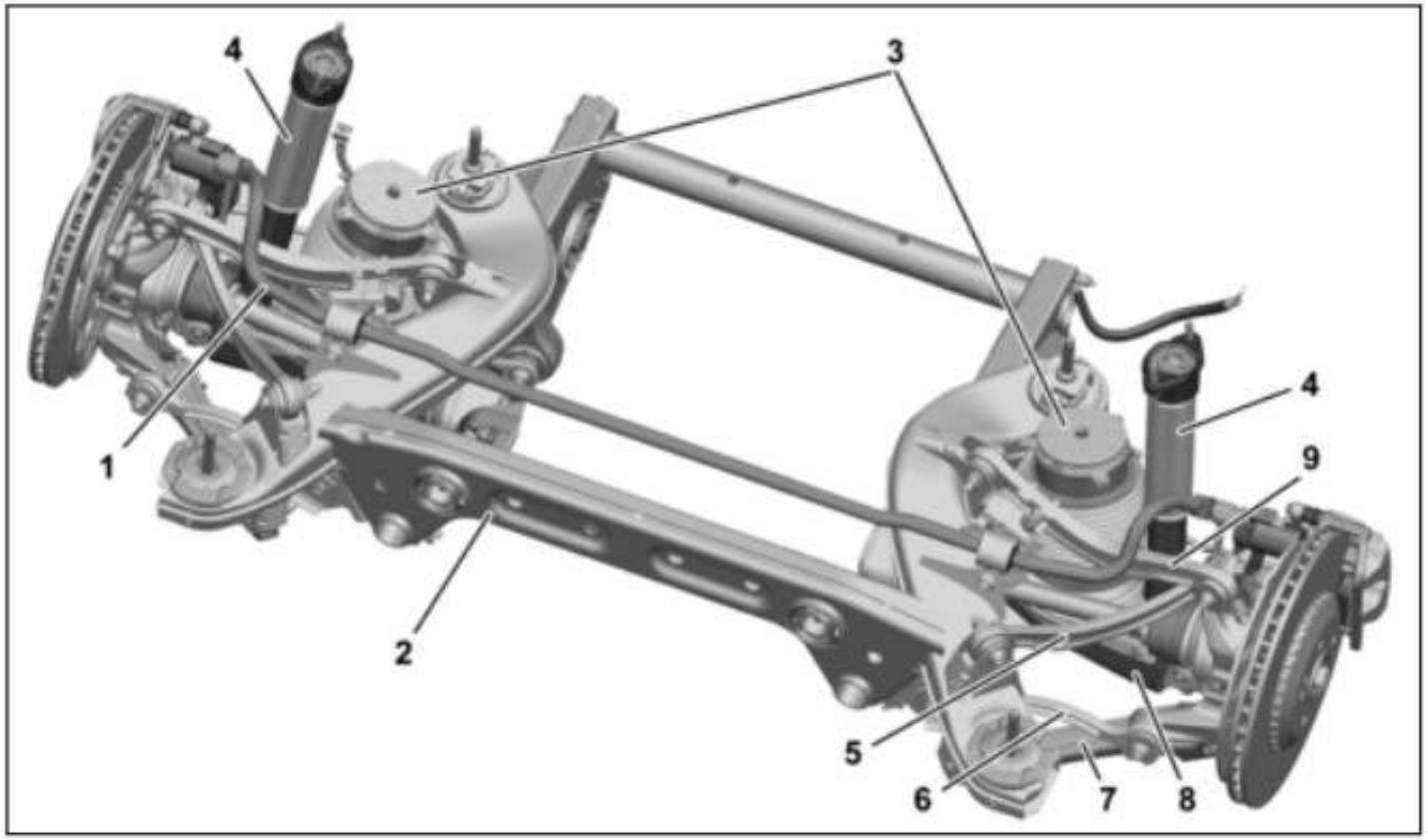
Front axle

The front suspension is from the current model series 253 and is designed as a 4-link front axle.

The electronic rear axle level control system monitors the rear axle level and is implemented with two air suspension bellows. Its objective is to keep the rear-axle level constant irrespective of the vehicle load and driving conditions.

A two-piece composite brake rotor design is used with a galvanic coating to prevent corrosion.

The EQC uses an electric parking brake and electric power steering familiar from other models 253 and 213



Rear axle

The rear axle is from the current model series 253 and is designed as a 5-link rear axle.

Suspension and damping

The EQC has, as standard, a conventional steel suspension at the front axle and a 1-chamber air

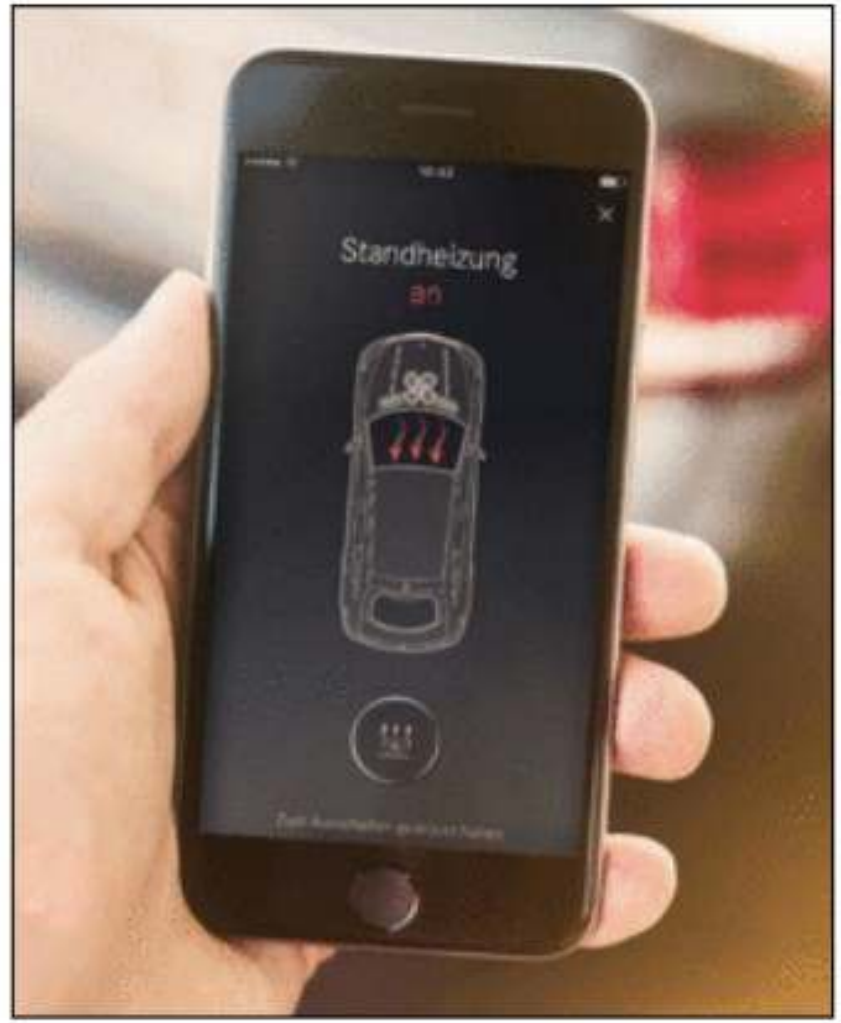
View of preconditioning of the vehicle via the App

Pre entry climate control is activated by

- Unlocking the vehicle
- A set departure time
- Via web browser or app with a smart phone, tablet, or PC

Pre-entry climate control takes care of the air conditioning, the mirror and rear window heating, and the seat heating.

Pre-entry functions are generally limited to 30 minutes



P82.90-A004-72

EQE Sedan



Design

Mercedes-AMG EQE 43 4MATIC, front right side view



Mercedes-AMG EQE 43 4MATIC, front left side view



EQE 350+, rear view at rear left



Mercedes-AMG EQE 43 4MATIC, front interior with special equipment high display package (Code PAG)



Steering wheel in the EQE with on-board computer/TEMPOMAT and Limiter/DISTRONIC operating group and the MBUX multimedia system operating group



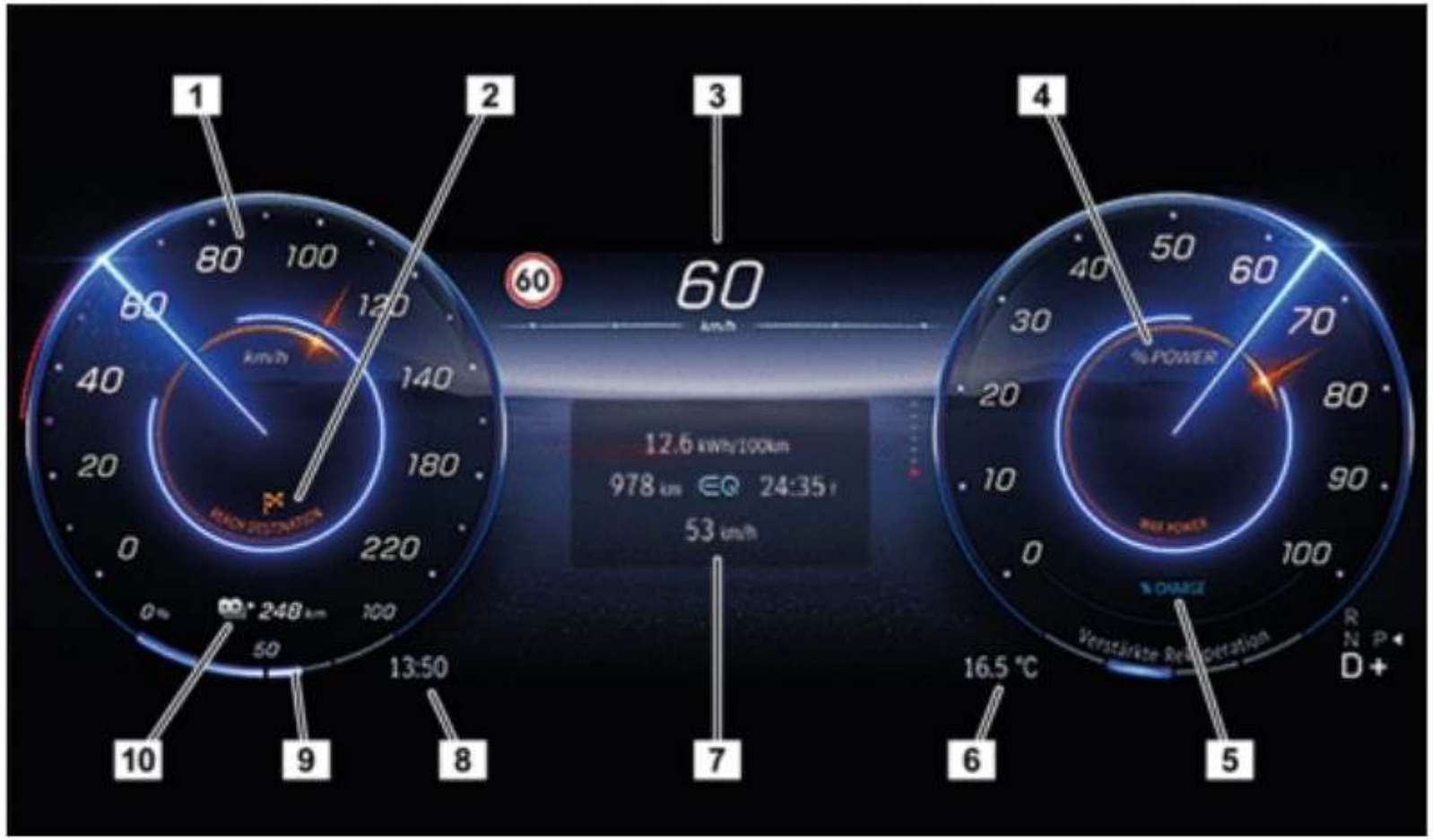
Driver's display with entry display package (code PAI), shown on the EQE

a Driver display



Display content in the "Classic" menu

1	Speedometer
2	Recommended max. speed for range monitoring and active route guidance
3	Digital speed display
4	Display area for operating energy input
5	Display area for recuperated power (recuperation)
6	Outside temperature
7	Center display content (for example trip computer)
8	Time
9	Charge indicator
10	Available range after standard consumption



P54.33-A030-75

EQE, front seats, neva gray leather



Central display with entry display package (code PAI), shown on the EQE

1 Central display



Shown in the EQE, ambient lighting with directly lit light lines with code 894



EQE, rear interior



EQE, rear seat with folded-down rear bench seat



EQE, stepless trunk floor



EQE with panoramic sliding sunroof (Code 413)





1 Rear air conditioning operating unit



Exterior lighting

In the EQE the static LED high performance headlamp system with Adaptive Highbeam Assist is standard equipment. The new lighting system DIGITAL LIGHT is available as special equipment with code PAX (Premium Light Package) and in combination with Digital LED or Projection headlamps.

Shown on the EQE 350+, static LED High Performance headlamp, driving light switched on, installed on the left



Shown on the EQE 350+, DIGITAL LIGHT LED High Performance headlamp, driving light switched on, installed on the left



Digital Lighting

The new light system DIGITAL LIGHT combines the familiar functions of the MULTIBEAM LED headlamp with an innovative high-resolution light technology.



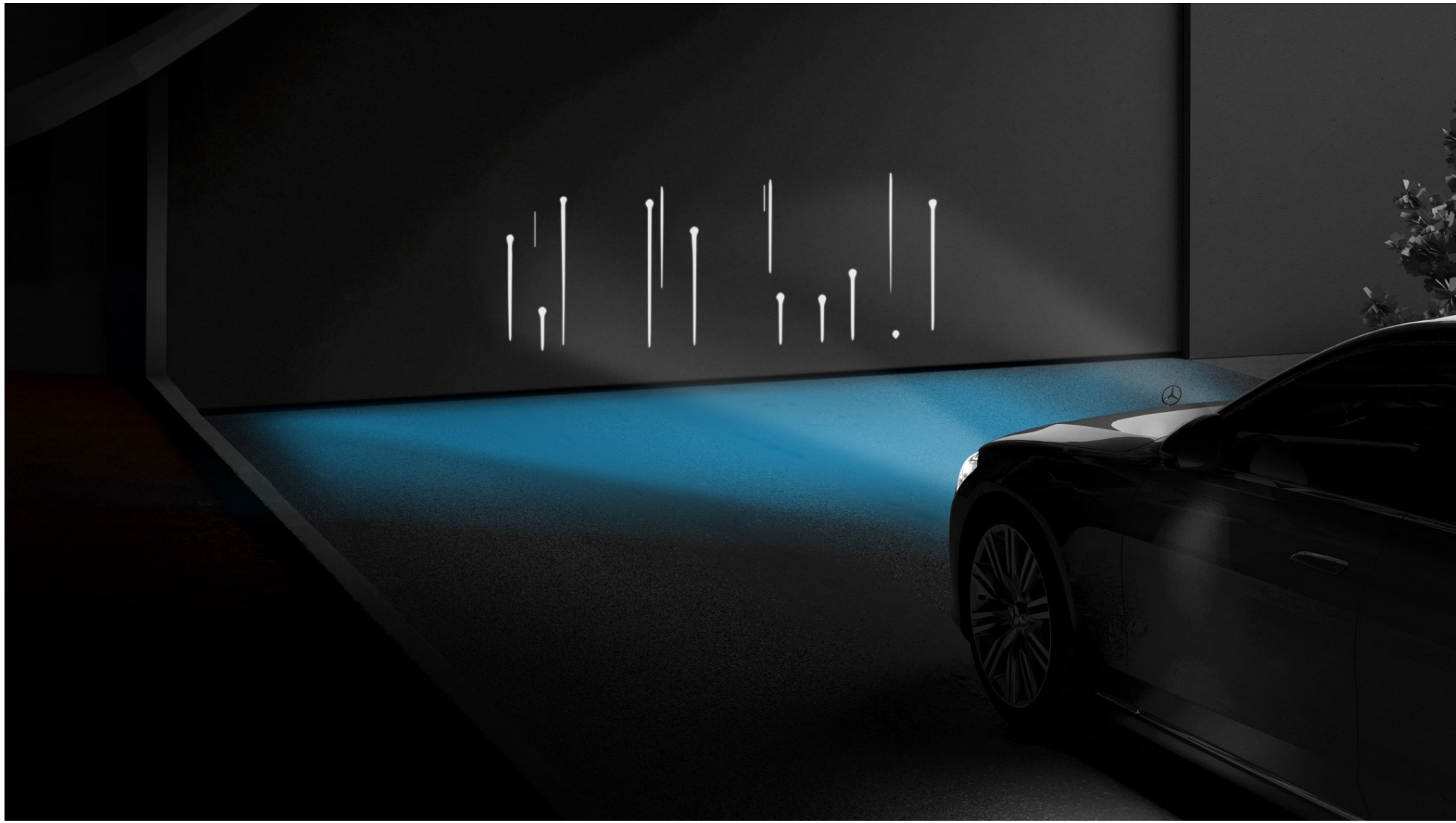
In addition to the MULTIBEAM LED technology, a micro mirror actuator is also integrated per headlamp. The micro mirror actuator is made up of approximately 1.3 million micro mirrors arranged in a matrix-shape that are tiltable through electronic control.



Three high performance light diodes illuminate the reflective surface and the light is, similar to the beamer principle, projected onto the roadway using the mobile mirrors.



The new special equipment DIGITAL LIGHT additionally improves the Adaptive Highbeam Assist Plus function. The now finer pixel structure hides the oncoming traffic or the traffic ahead even more precisely. Another innovation is the topographical compensation. Based on map data, height differences in the road way are detected and the headlamp range is kept near constant and the street is ideally illuminated.



The DIGITAL LIGHT headlamps also visually assist the driver as part of the driver assistance systems (ADAS). They enable additional light projections in HD quality. These are projected during driving in the field of view of the driver. The driver can be guided with targeted guidelines projected on the road. Other light projections are symbols and indications such as direction arrows or warnings.

Note: the symbols complement the visual information on the driver display they are not meant to replace it.

- Active Brake Assist
- Active Lane Keeping Assist
- Wrong-way warning function (if the driver is driving opposite the permitted direction of travel, for example on a freeway).
- Red traffic light warning function (if the driver is approaching a red traffic light and does not reduce his/her speed).
- Stop sign warning function (if the driver is approaching a stop sign and does not reduce his/her speed).
- Spot light (if, for example, a pedestrian is detected at the road shoulder).
- Guide lines (when driving through a construction site, two light beams are projected on your lane as a guide line).
- Construction site warning or construction site light (when driving into a construction site, this is pointed out to the driver via a projected symbol on the roadway).



https://www.youtube.com/watch?v=QLe6o_6GRI



https://www.youtube.com/watch?v=9hBhepCwzKY

Shown on the EQE 350+, rear lamps with LED technology and continuous reflector strip, installed on the left



- The rear lamps are completely LED

- The brake and turn signal light can be operated at different intensities depending on day or night conditions.
- The continuous light strip acts as a tail light, reversing light, and rear fog light.
- Both the brake light and turn signal indicator are formed by 8 indirectly illuminated individual reflectors,
- The brake and turn signal light are operated at different intensities depending on driving condition and the brightness of the environment.
- If the driver actuates the brake pedal at a red traffic light the brightness is automatically reduced so that the driver of the following vehicle is not dazzled.

Ambient lighting (code 891)

The "Premium" ambient lighting offers different color selections and scenarios. The "color worlds" can either be permanently set or a color variant that matches the selected color world can be selected via the "multi-colored lighting" mode.

Depending on the specific function, the ambient lighting functions can be controlled via either the central display or voice dialog system.

The new functions are:

- Extended ambient lighting
  - Center console
  - Doors
  - Seats
  - Footwell
- Integration in the ENERGIZING comfort control function (if available)
- Visual support with the active exit warning

Active ambient lighting (code 878)

The highlight of the interior lighting of the new EQE is the active ambient lighting with code 878. It functions with the help of approx. 250 LEDs that are distributed at a distance of 15 mm in the vehicle interior. The LEDs are therefore not perceived individually, but as a light strip.

Through a day-and-night mode, the active ambient lighting is independent from the ambient brightness and can be dimmed separately. Other additional functions include:

- Seat-specific operation via the voice dialog system.
- Increase of active security through visual support from the following driving assistance functions:
  - Active Blind Spot Assist
  - Active Lane Keeping Assist
  - Active Brake Assist
  - Parking or maneuvering function
- Display of electric mode and charging feedback

Shown in the EQE, ambient lighting with directly lit light lines with code 894



Steering and suspension

Suspension and damping

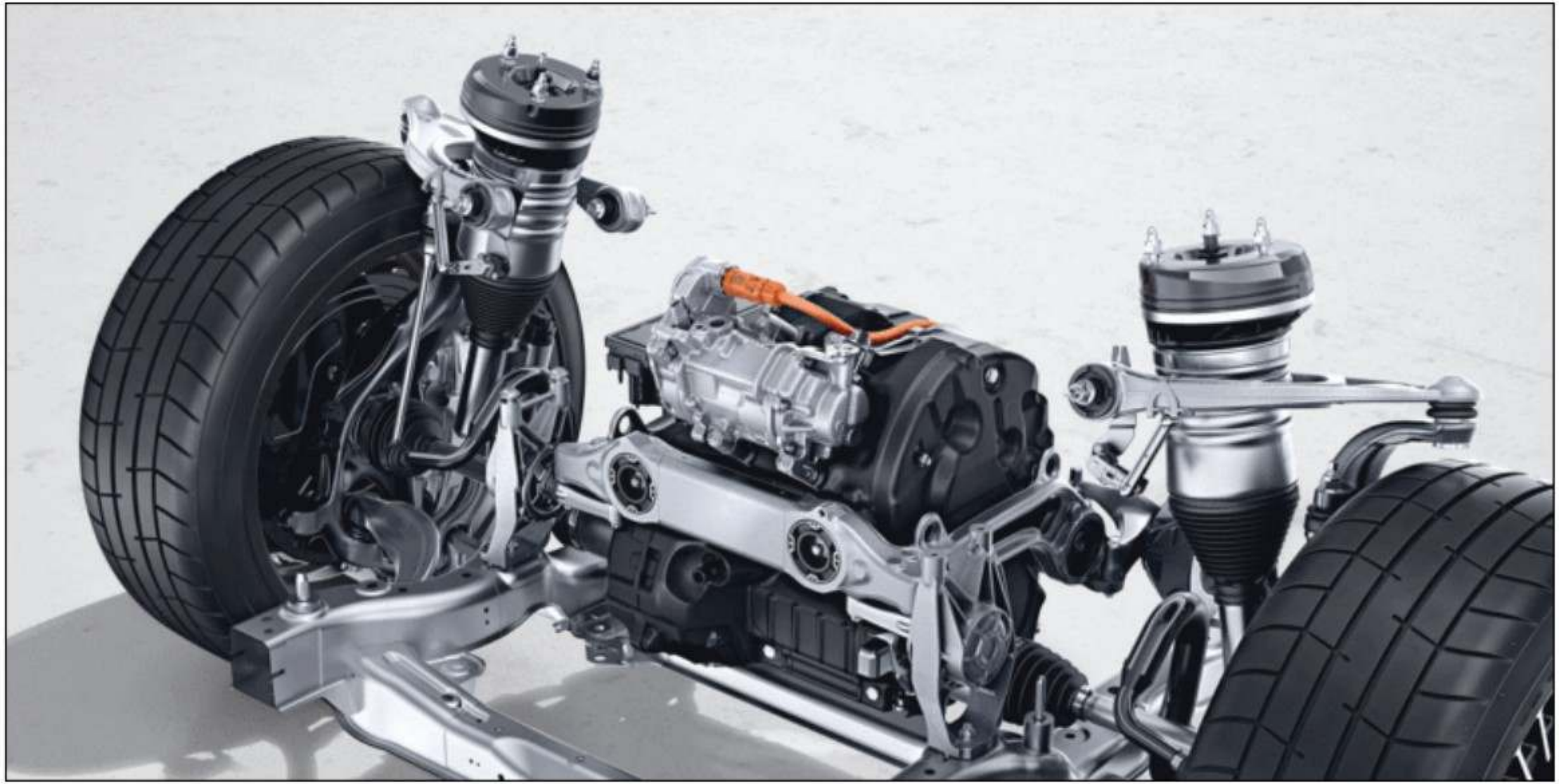
The following suspension and damping systems are available for the new EQE:

- The comfort suspension with steel springs with code 485 is offered as standard equipment.
- The AIRMATIC suspension and damping system with the Adaptive Damping System (ADS) is available as special equipment (Code 489).

AIRMATIC

The AIRMATIC suspension and damping system has the following optimized functions:

- The Adaptive Damping System (ADS) enables comfortable design.
- The optimized electrohydraulic controller unit improves noise behavior.
- Automatic lowering at higher speeds reduces the consumption of electrical energy.
- The adaptation of the damping characteristics in the "Sport" drive program increases vehicle dynamics.
- Setting an increased driving level up to 50 km/h enables ground clearance regardless of the load.



P32.50-A040-79

Shown on suspension with electric drivetrain EQS 450 4MATIC, front axle

Rear axle steering

The new EQE has electromechanical steering at the rear axle with Code 201 (standard equipment in AMG models) or with Code 216, with a large steering angle. The electromechanical steering at the rear axle ensures driving stability and comfort in various speed situations and reduces the turning circle when parking the vehicle.

Control is adopted by integrated vehicle dynamics control. Integrated vehicle dynamics control is

implemented in the ESP® control unit and initiates targeted individual wheel brake interventions as well as rear axle steering.

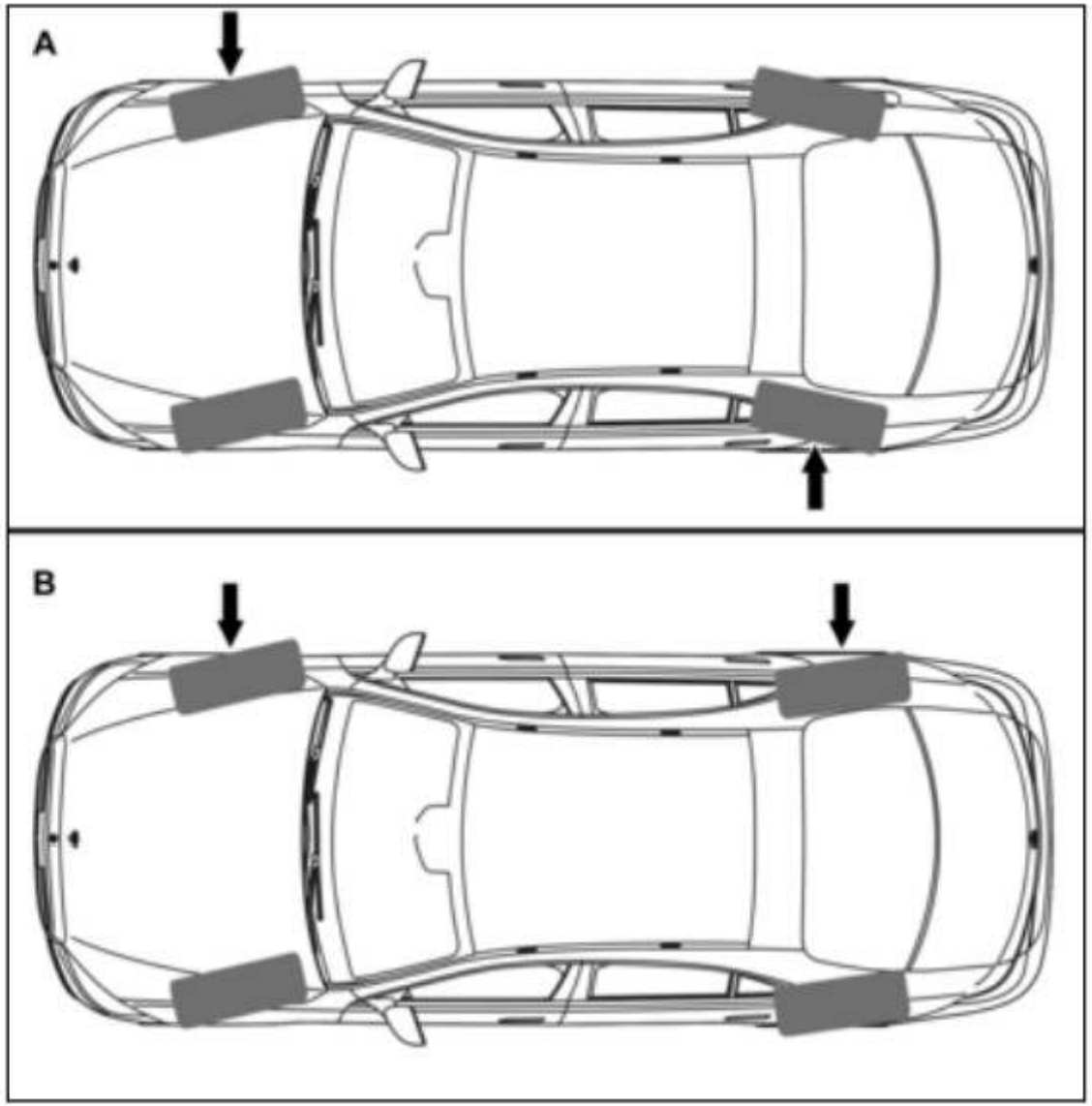
Depending on the driving situation, the rear wheels are steered either in the opposite direction of (A) or in the same direction as (B) the steer direction of the front wheels.

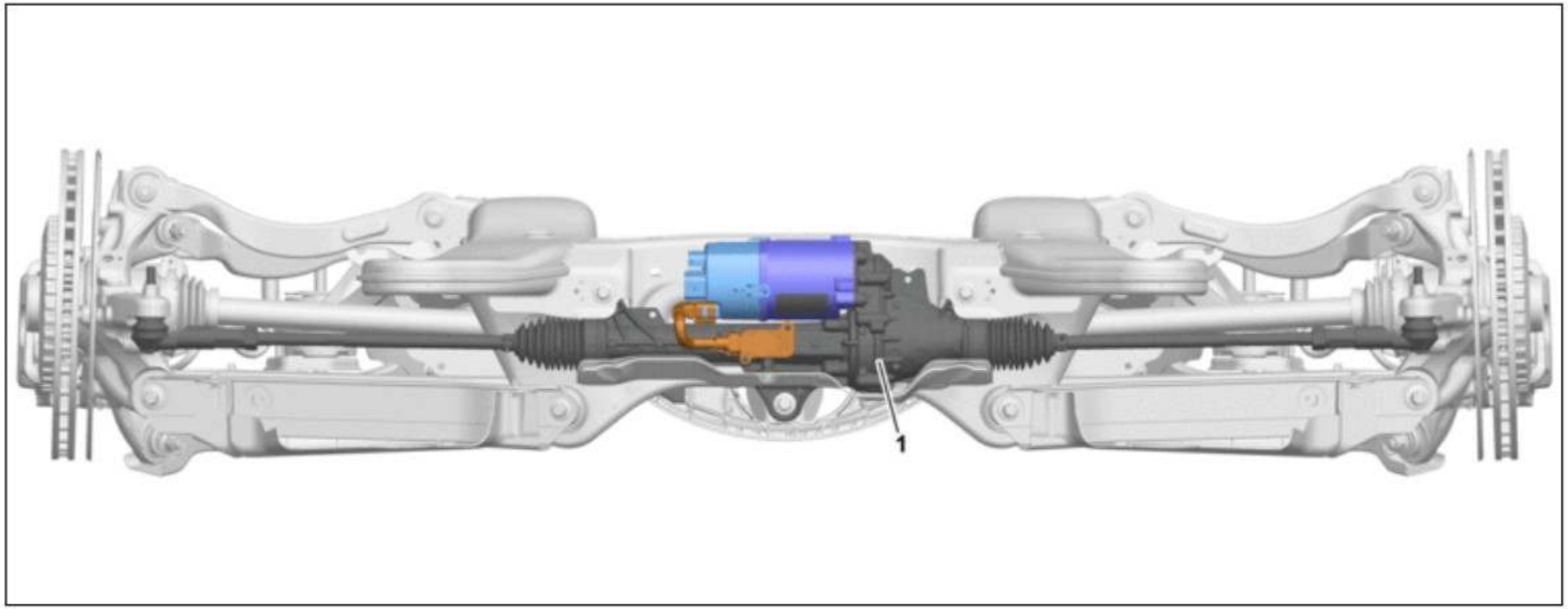


Shown on steer direction of rear axle steering

A Steering in opposite direction of front wheels

B Steering in same direction as front wheels

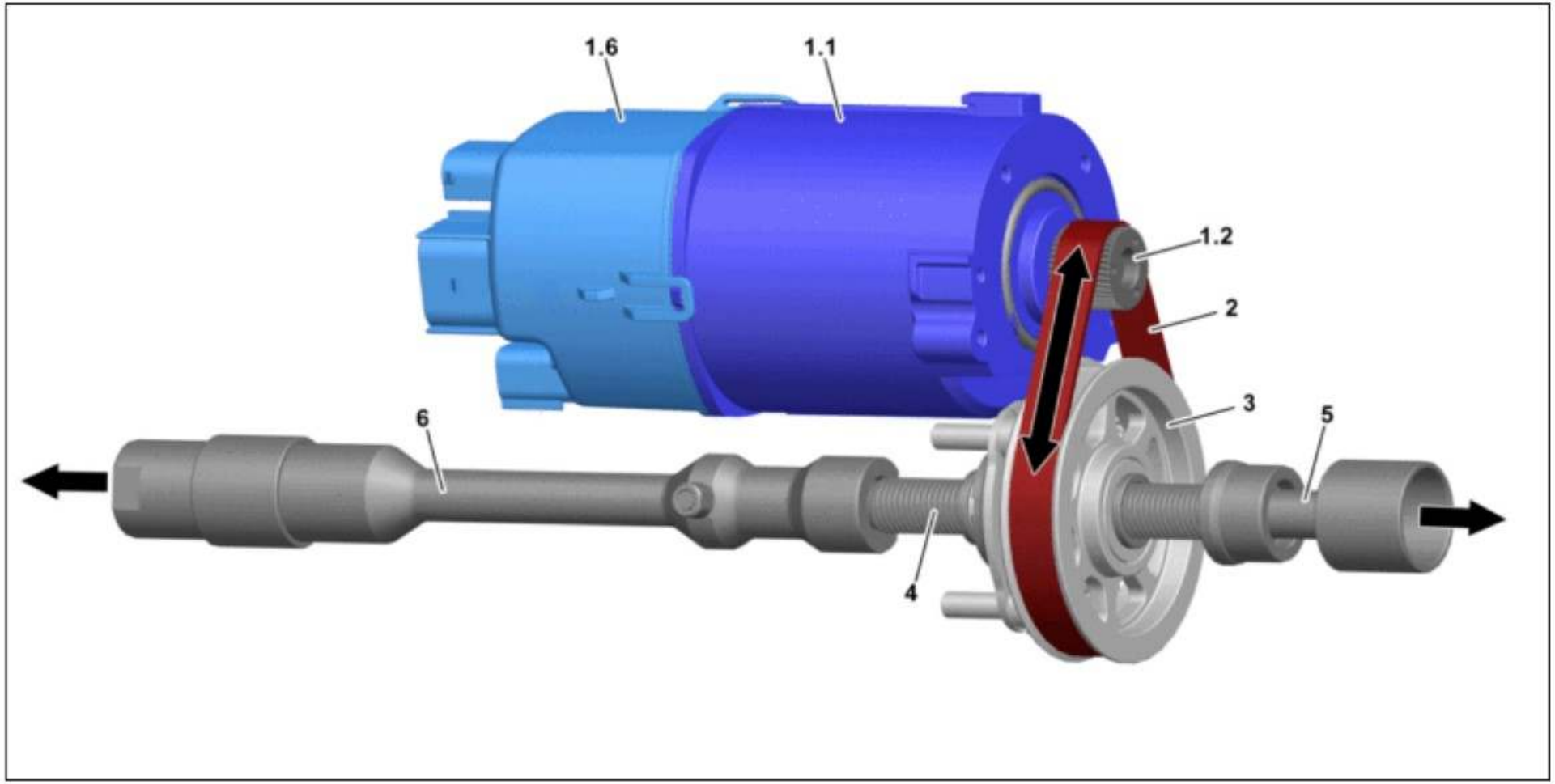




P46.20-A004-78

Shown on rear axle steering

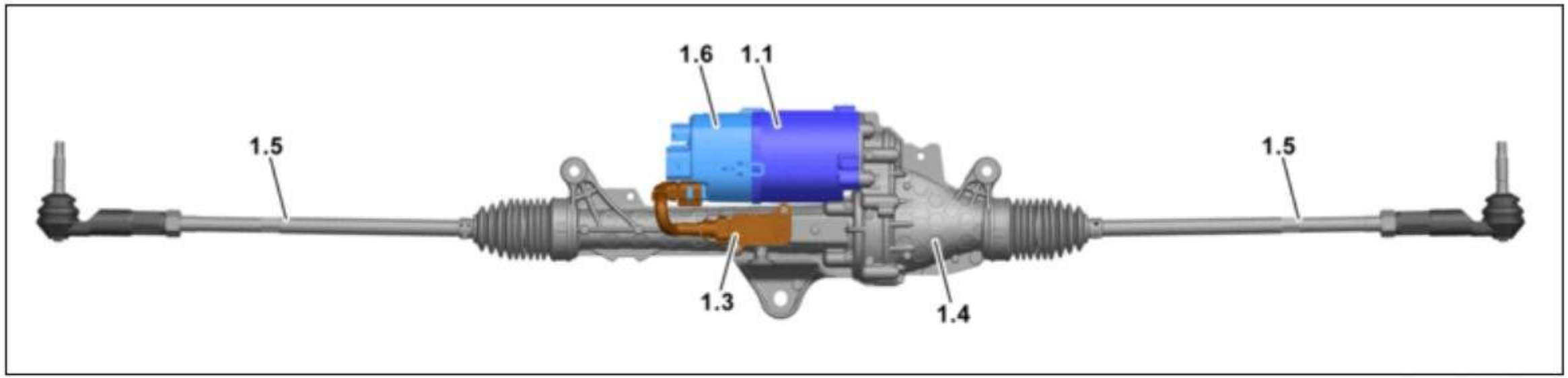
1 Rear axle steering



P46.30-A002-79

Detailed view of belt drive

1.1	Electric motor	3	Belt pulley
1.2	Motor pinion	4	Central spindle
1.6	Rear axle steering control unit	5	Short screw-on pin
2	Belt	6	Long screw-on pin



P46.30-A001-77

Shown on steering gear for rear axle steering

1.1	Electric motor	1.5	Tie rod
1.3	Position sensor	1.6	Rear axle steering control unit
1.4	Belt drive		

Vehicle speed	Steering strategy	Steer angle
< 60 km/h wheel angle against front axle	Park	Up to 10° steering angle
	Urban mobility	Up to 4.5° steering angle
> 60 km/h front axle wheel angle	Vehicle dynamics	Up to 2.5° steering angle
	High speed	Up to 2.5° steering angle

Snow chain mode:

If the function is active, the vehicle adjusts itself for installed snow chains. In this connection, the max. steering movement of the rear wheels is, among other things, restricted.

1 Rear air conditioning operating unit



P83.50-A029-76

EQS Sedan



Design



P00.00-A136-79

EQS 580 4MATIC, side view at front right



P00.00-A135-79

EQS 580 4MATIC, side view at front left



P00.00-A137-79

EQS 580 4MATIC, rear view at rear left



P00.00-A138-79

EQS 580 4MATIC, front interior with special equipment High display package (code PAG)



P00.00-A141-79

EQS 580 4MATIC, rear interior with folded forward rear bench seat with the special equipment Entry display package (code PAI)



P00.00-A140-79

EQS 580 4MATIC, rear interior



P82.20-A338-79

Active ambient lighting with code 878 and visual support of the Active Blind Spot Assist function on the front passenger side

Steering wheel in the EQS with on-board computer/TEMPOMAT and Limiter/DISTRONIC operating group and the MBUX multimedia system operating group





P91.12-A071-79

EQS, Premium rear armrest with code 326 and Touchscreen rear with code 447



P00.00-A140-79

EQS, rear seats with head area heating in rear with code 322



P77.21-A157-79

EQS 580 4MATIC with code 413 (Panoramic sliding sunroof)

Display content in the "Classic" menu

1 Speedometer

2 Recommended max. speed for range monitoring and active route guidance

3 Digital speed display

4 Display area for operating energy input

5 Display area for recuperated power (recuperation)

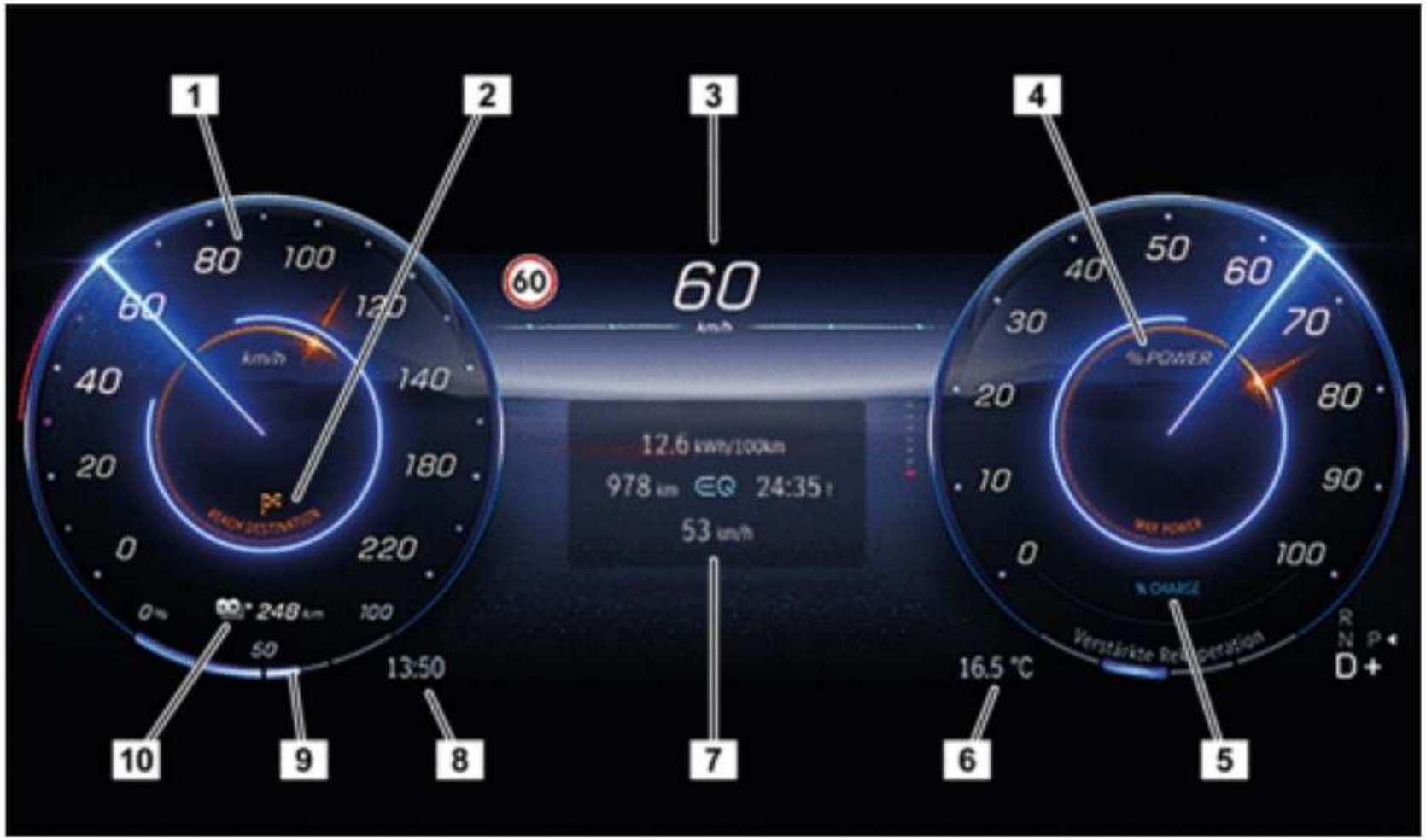
6 Outside temperature

7 Center display content (for example trip computer)

8 Time

9 Charge indicator

10 Available range after standard consumption



P54.33-A030-75



Exterior lighting

In the new EQS, the static LED High Performance headlamp system with Adaptive Highbeam Assist is available as standard equipment. The new lighting system DIGITAL LIGHT is available as special equipment with code PAX (Premium Light Package) and in combination with the following equipment:

- Code 316 (Digital LED headlamps, SAE, right-hand traffic)
- Code 317 (Digital LED headlamps, left-hand traffic)
- Code 318 (Digital LED headlamps, right-hand traffic)
- Code 30U (Projection function via headlamps - lines)
- Code 42U (Projection function via headlamps - symbols)
- Code 43U (Projection function via headlamps - animation)
- Code 324 (Front continuous light strip)



P82.10-A294-79

Shown on EQS 580 4MATIC, static full LED headlamp, driving light switched on, installed on left



Shown on EQS 580 4MATIC, full LED headlamp DIGITAL LIGHT, driving light switched on, installed on left



P82.10-A293-79

Shown on EQS 580 4MATIC rear lamps in LED technology with continuous light strip, installed on left



Steering and suspension

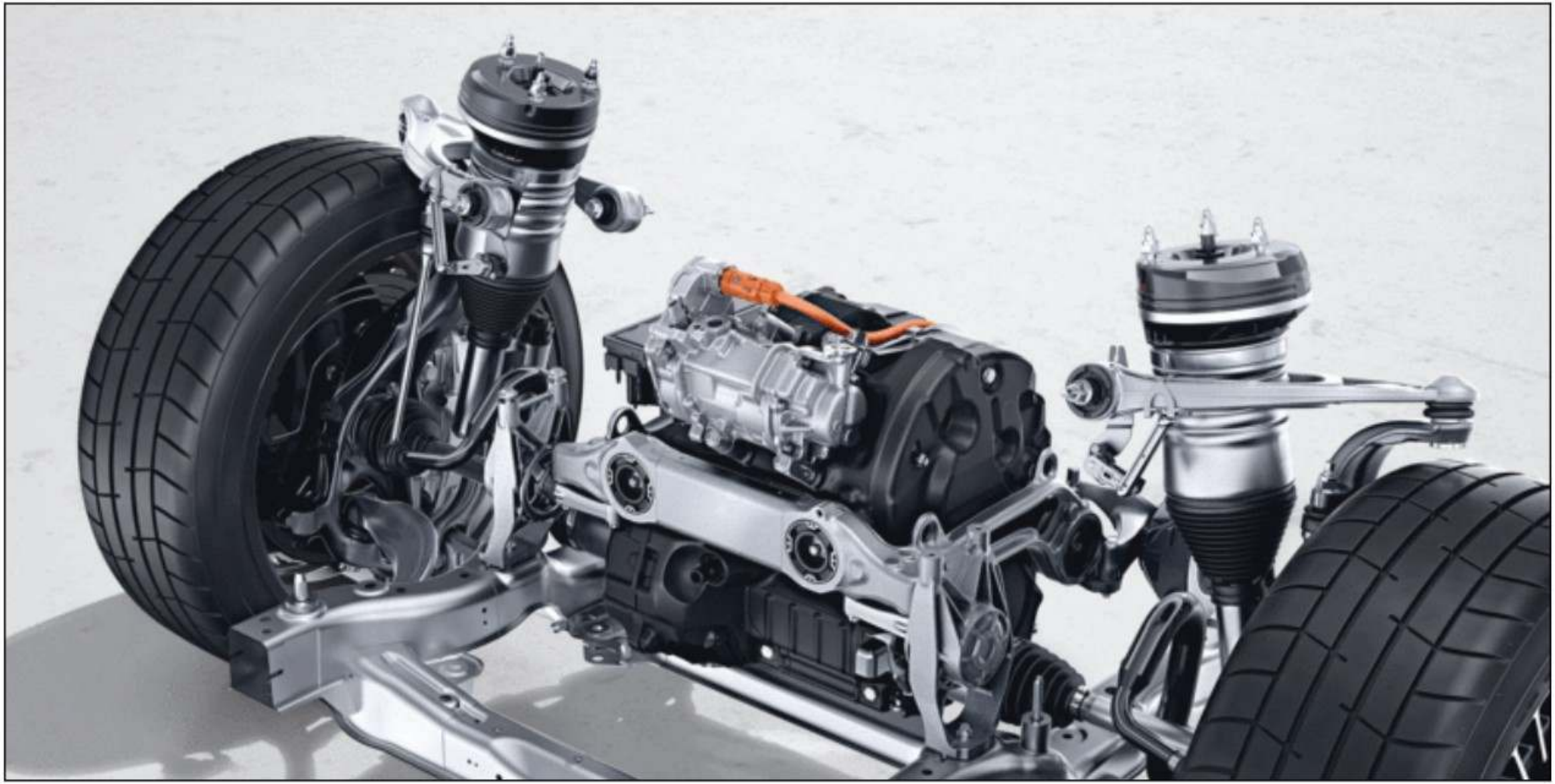
Suspension and damping

As standard, the new EQS is solely equipped with the suspension and damping system AIRMATIC with adaptive damping system (ADS+) with code 489.

AIRMATIC

AIRMATIC has the following new functions:

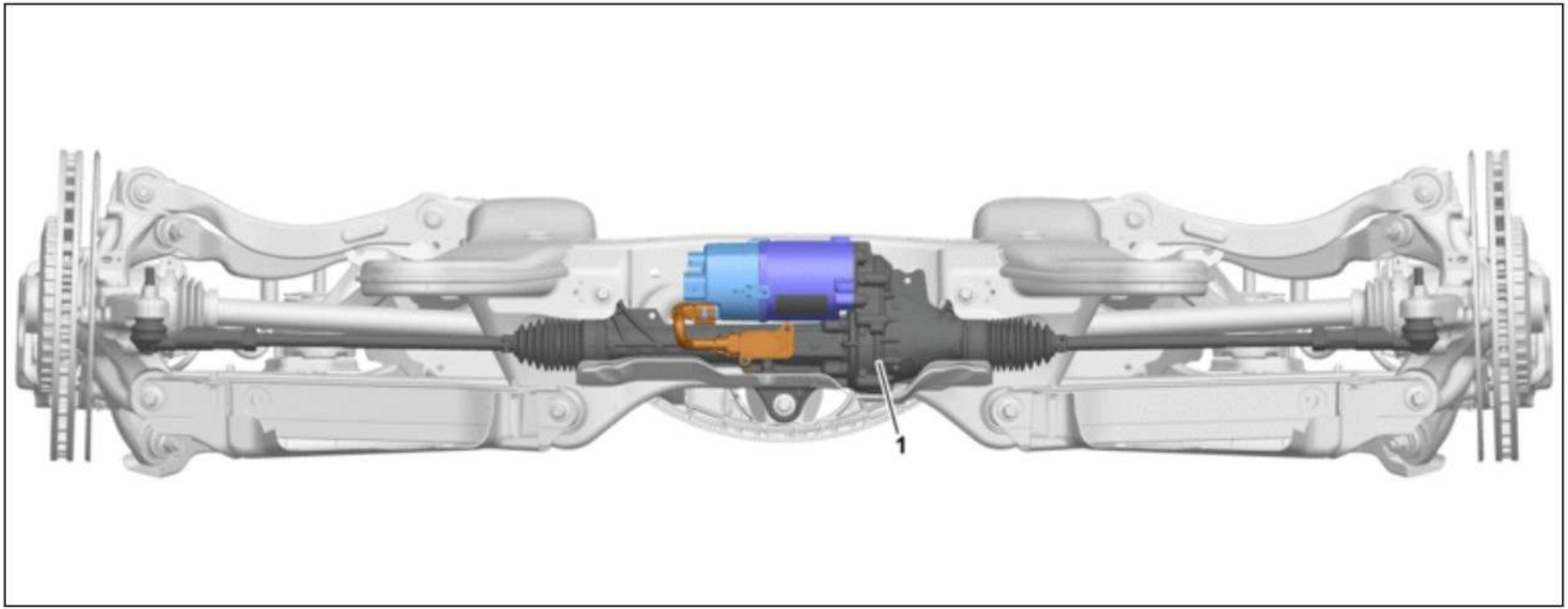
- Lowering and lifting via an open air supply and control of the new air suspension system in a controller unit.
- Automatic lowering at higher speeds, thus a reduction in the energy consumption.
- Level control also ensures in the case of a laden vehicle for the best-possible suspension and a uniform ground clearance.
- Greater vehicle dynamics due to an automatic lowering function in combination with the **"AIRMATIC Sport"** drive program.
- Option for setting a higher driving level up to 50 km/h (ground clearance irrespective of load).



P32.50-A040-79

Shown on suspension with electric drivetrain EQS 580 4MATIC, front axle

The EQS uses the same rear axle steering system as found in the EQE.



P46.20-A004-78

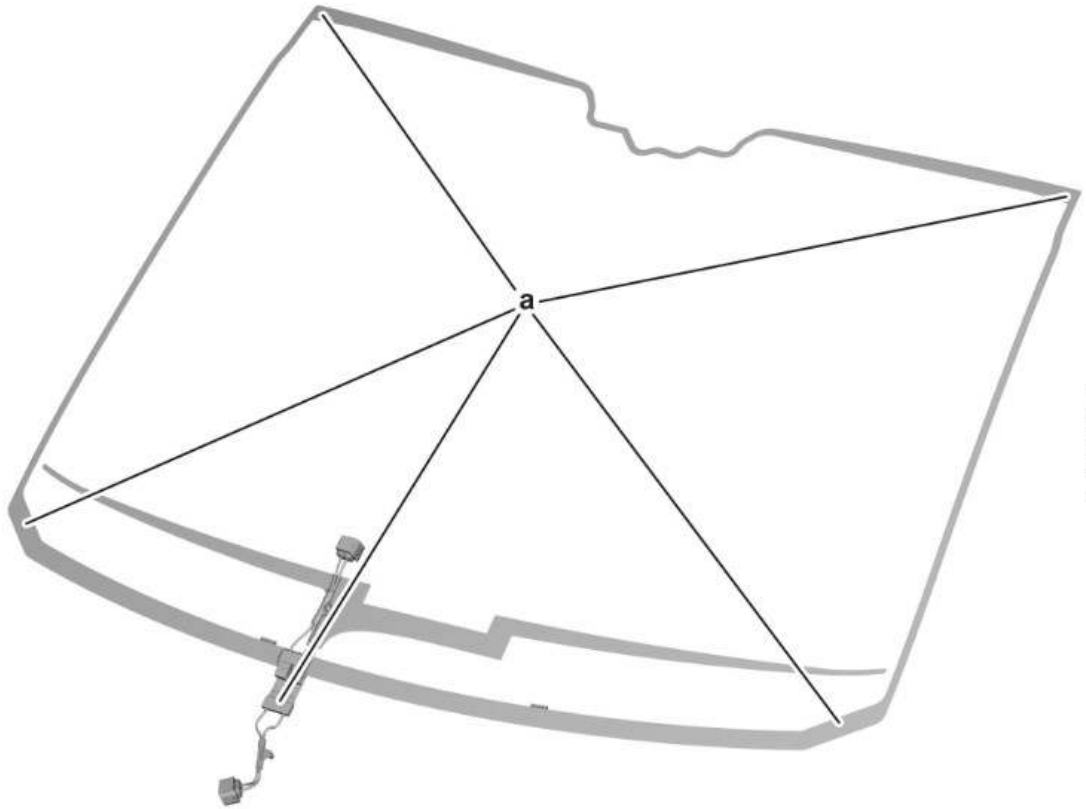
Shown on rear axle steering

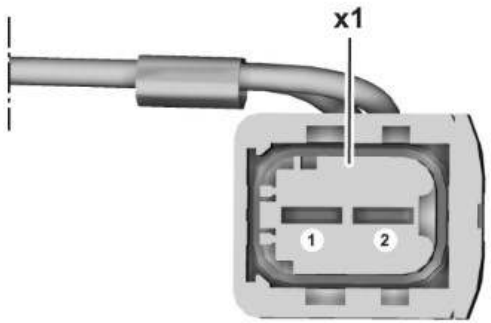
1 Rear axle steering

1 Rear air conditioning operating unit

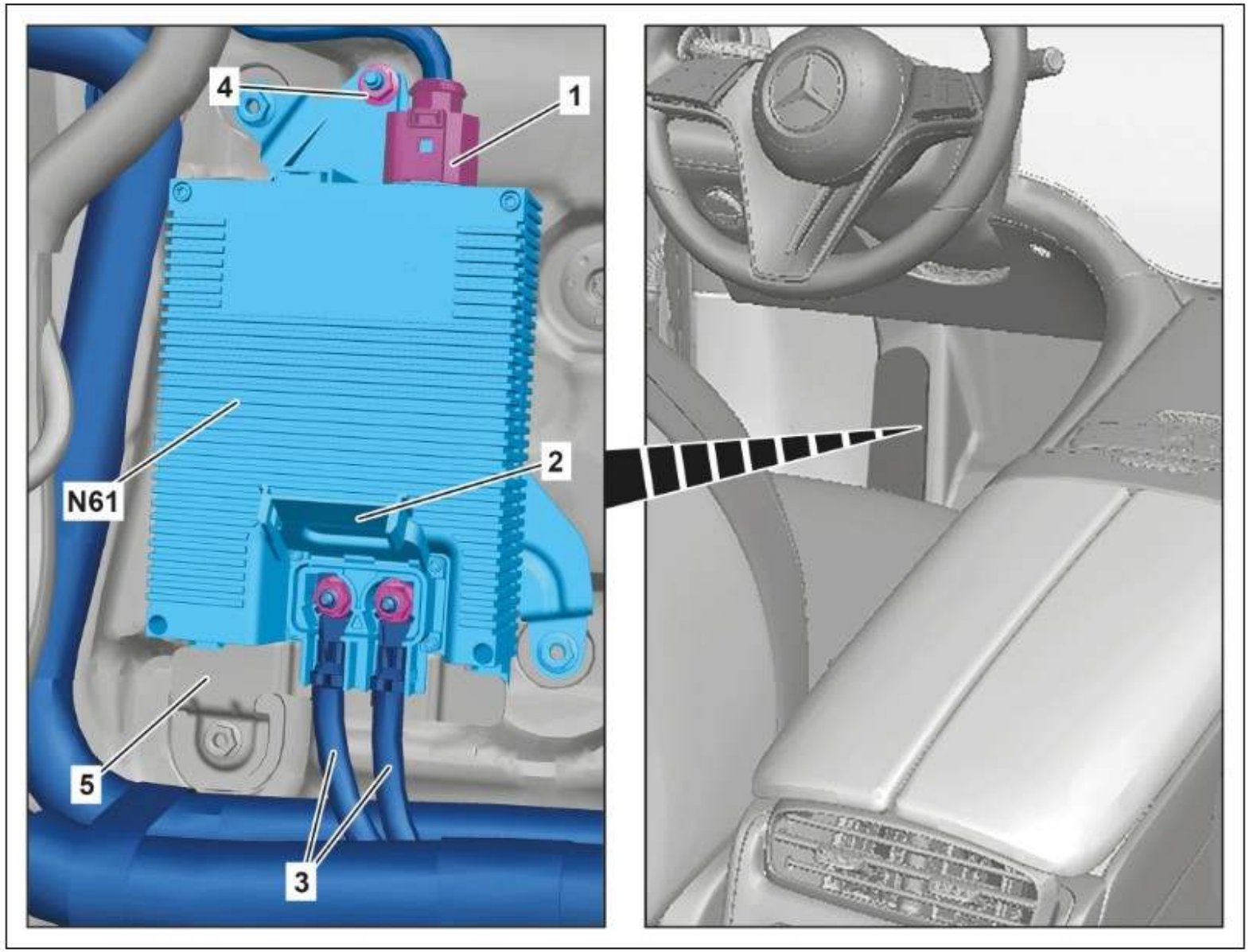


The EQS optionally (with code 597) has a special heated windshield which doesn't use a wire heating element but instead an almost invisible coating on the glass.

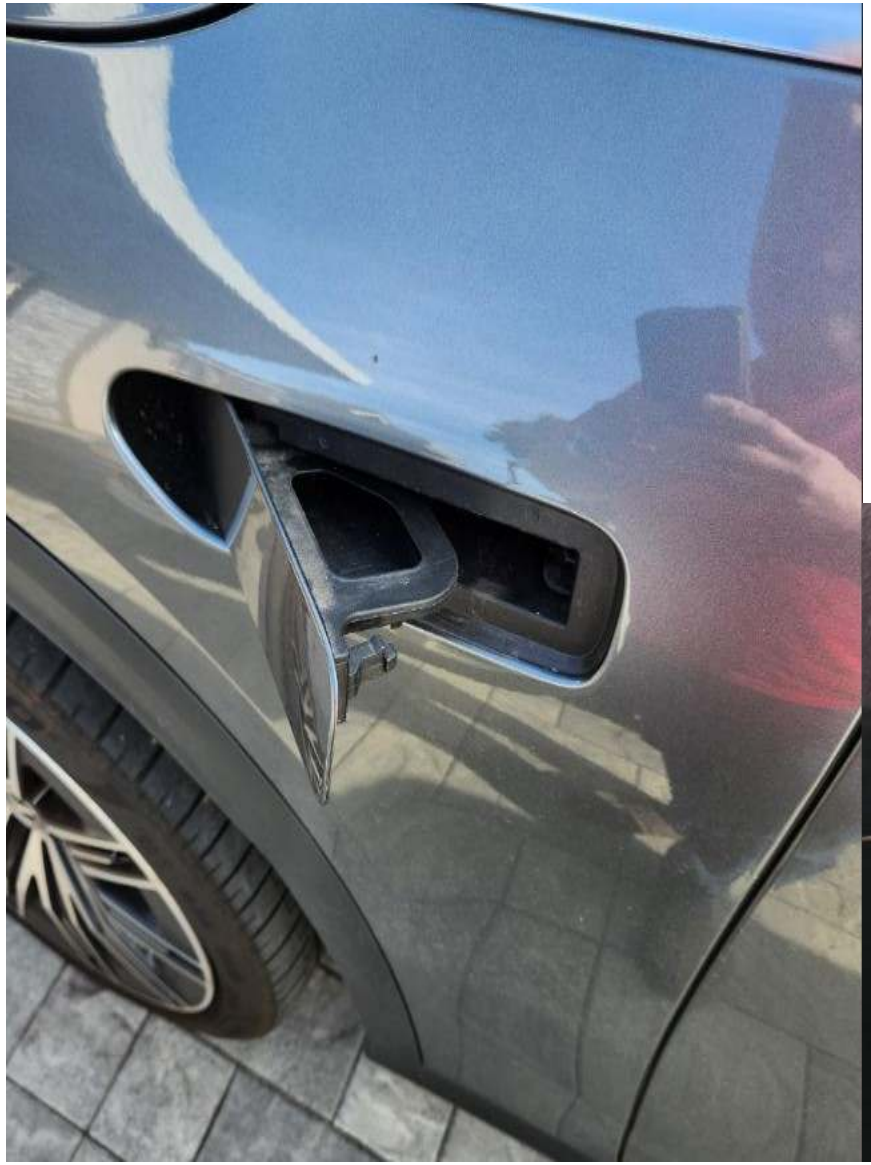




1	*Electrical connector*
2	*Cover*
3	*Electric lines*
4	*Nut*
5	*Bracket*
N61	*Windshield heater control unit*



Service













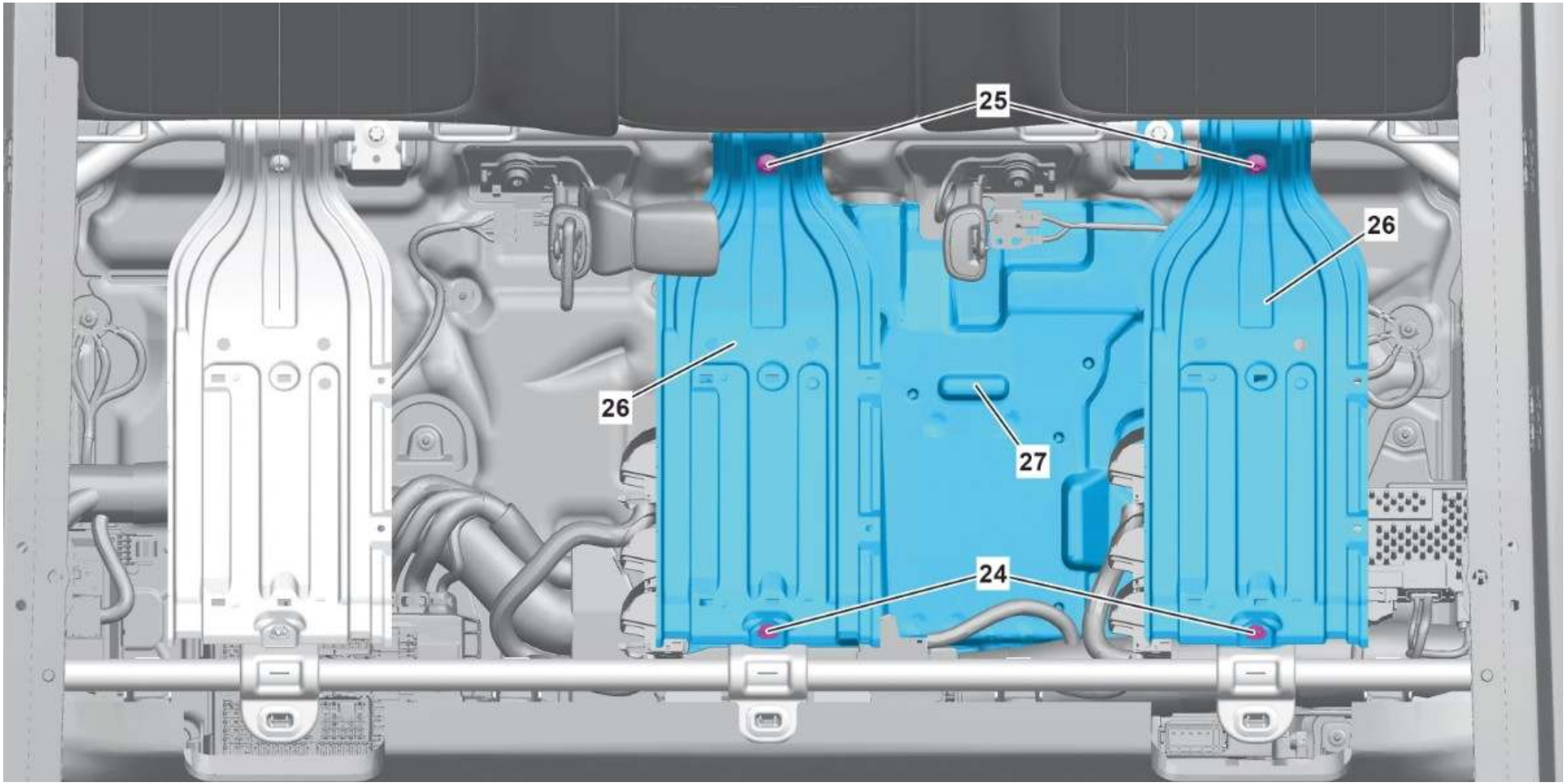


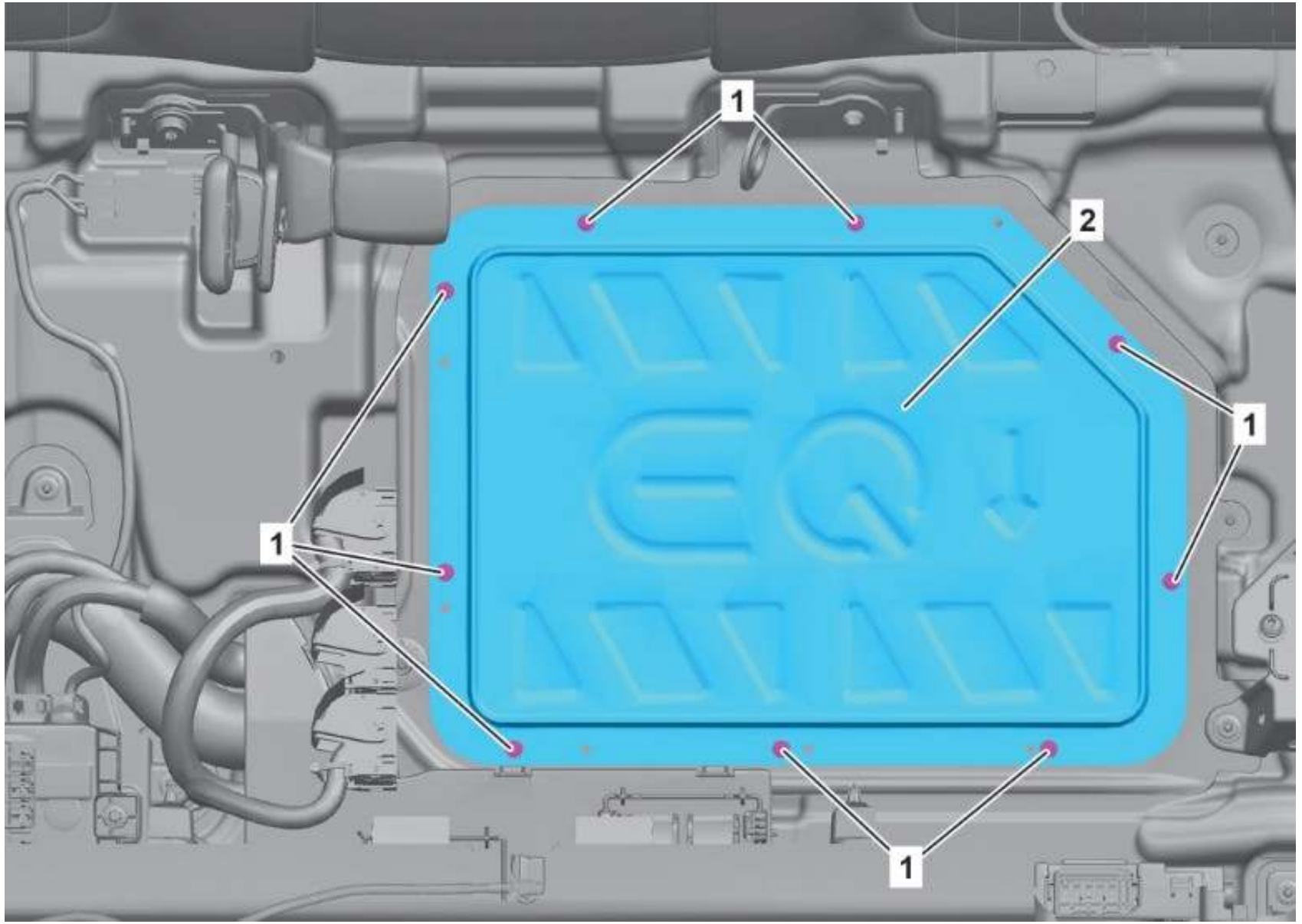

3480

High Voltage Battery Removal in Group 47

AR47.70-P-0002EQS	Remove/install high-voltage battery

Model ***297 with engine 780***
with code BAC (EB4XY battery (L))


25
26
26
27
24


1
2
1
1
1
1

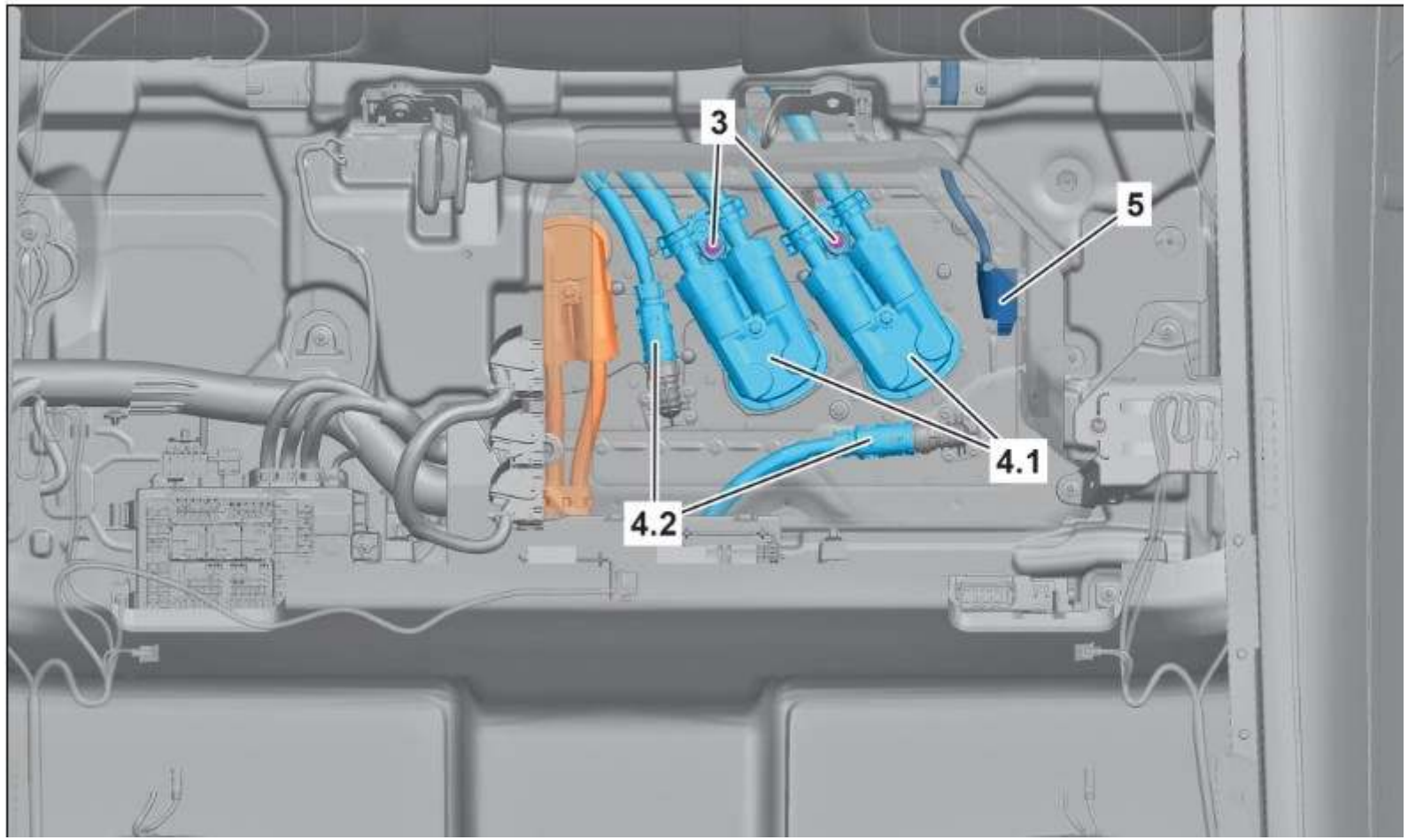
Shown on model 297 with code M005 (Vehicles with 4MATIC/all-wheel drive)

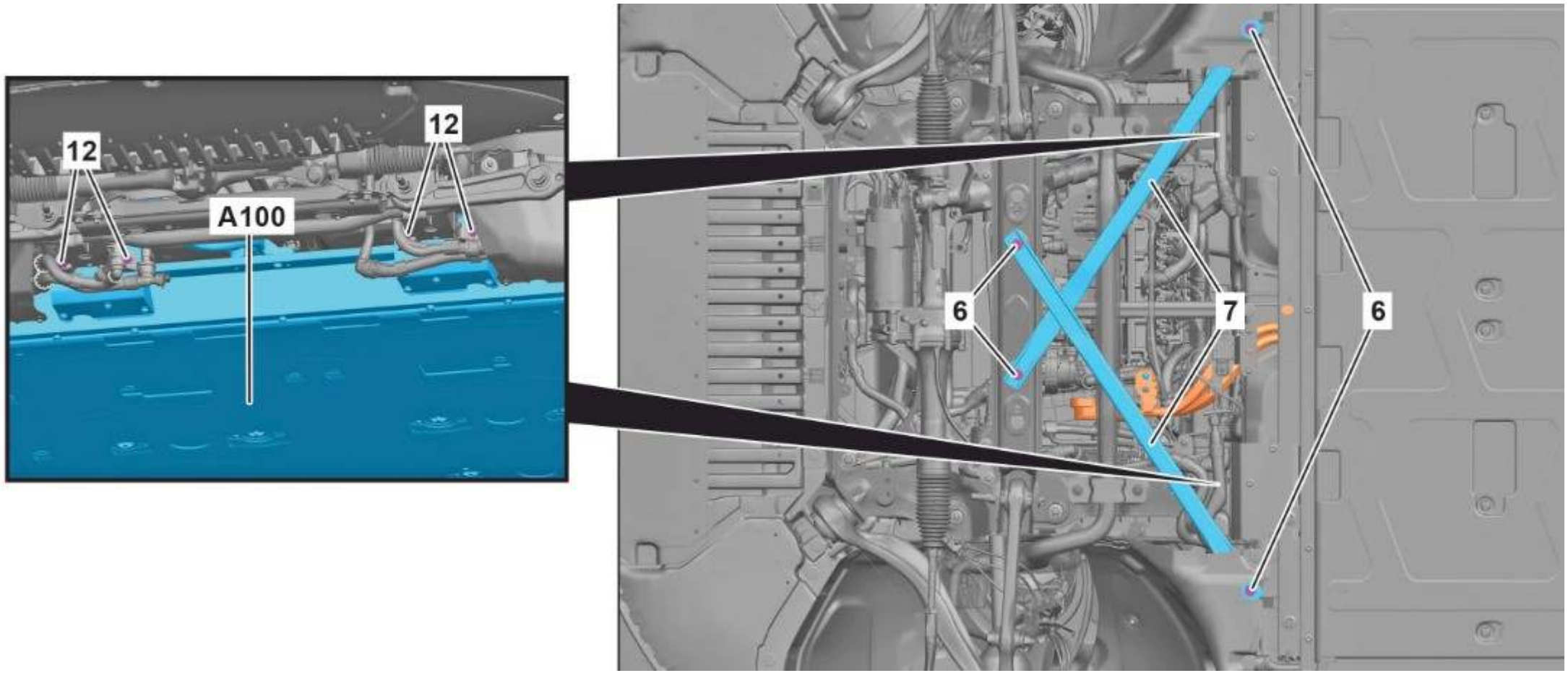
3 Bolts

4.1 High-voltage plug

4.2 High-voltage plug

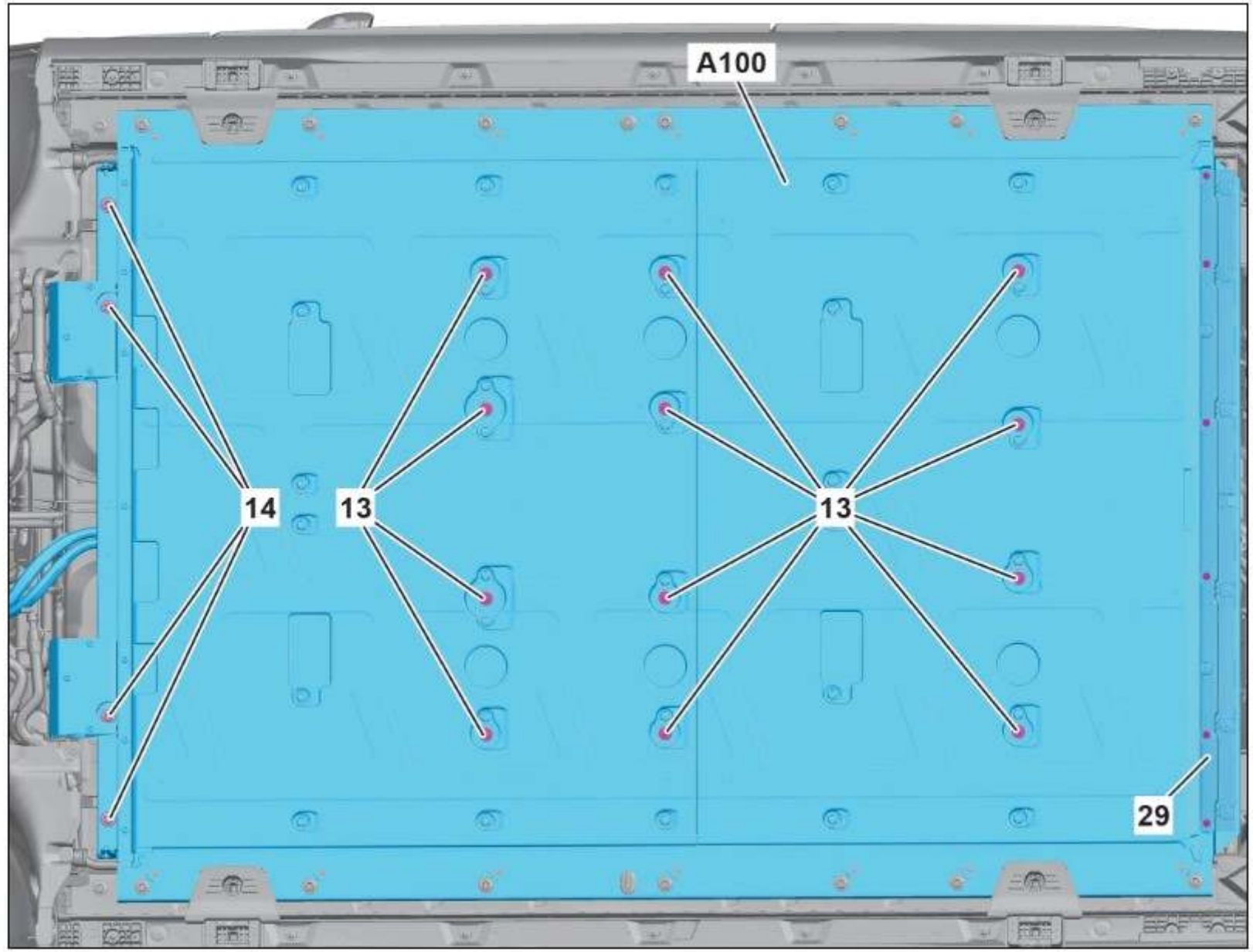
5 Electrical connector

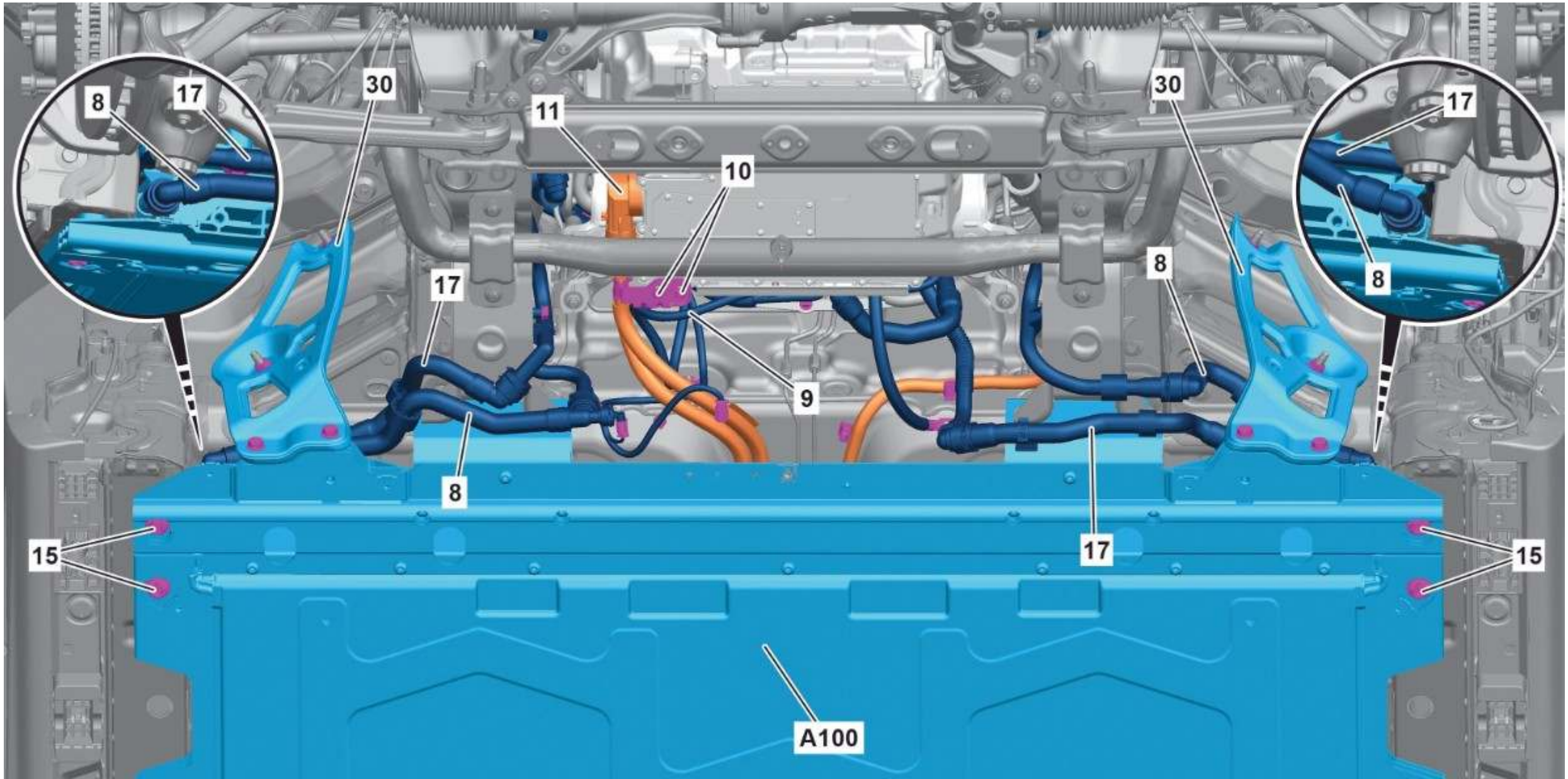


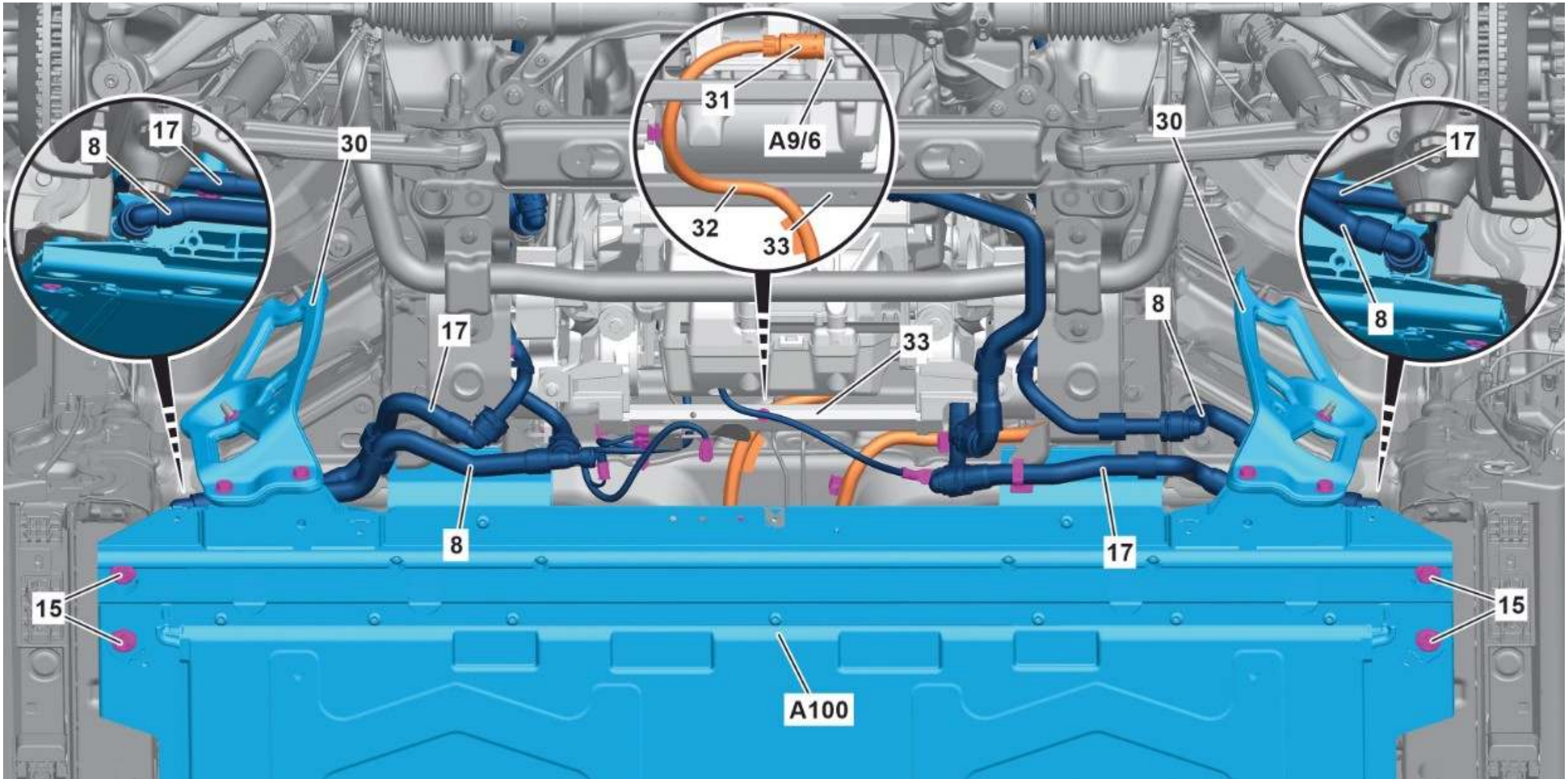

12
12
A100
6
7
6

Shown on model 297 with code M005 (Vehicles with 4MATIC/all-wheel drive)

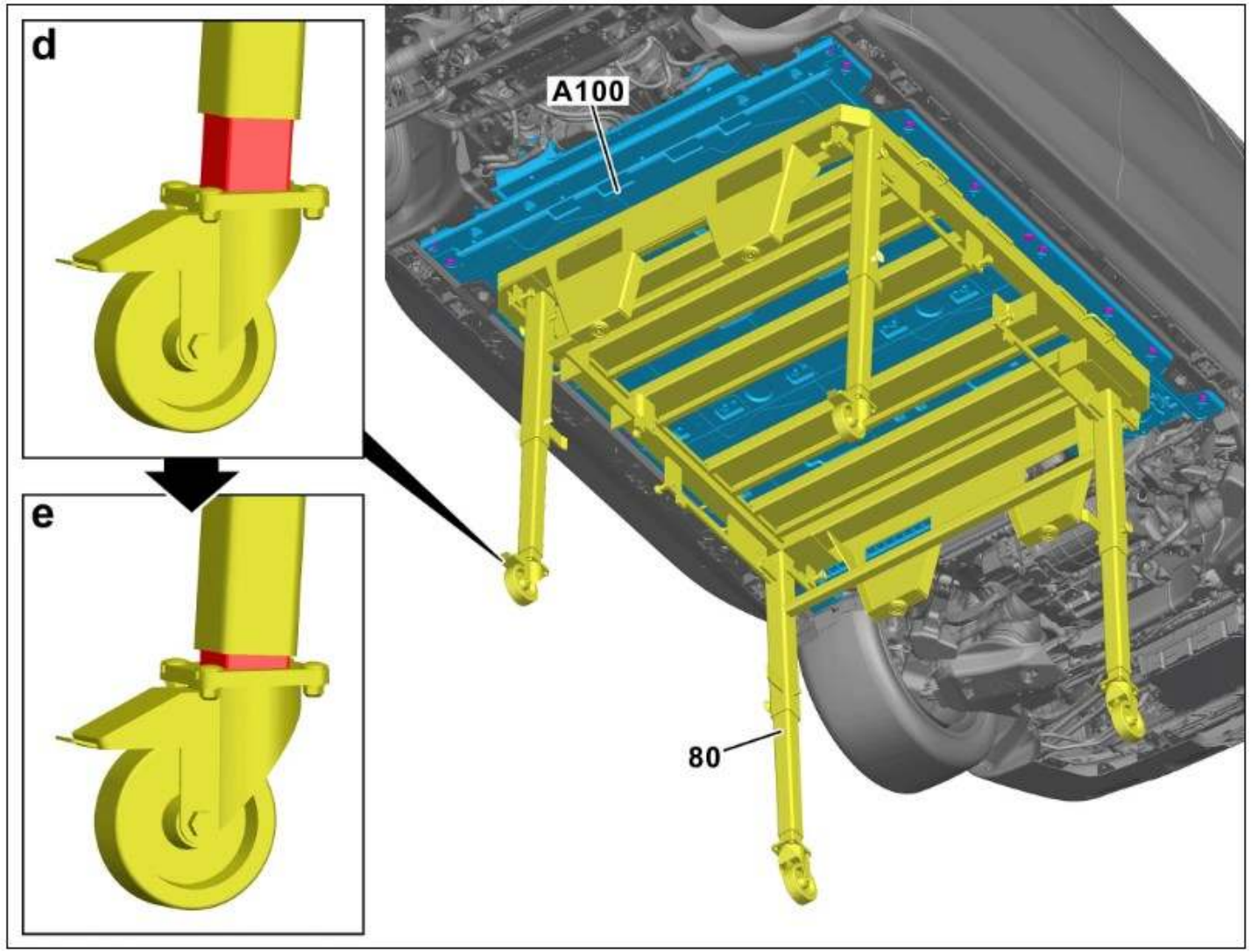
13	*Bolts*
14	*Bolts*
29	*Bracket*
A100	*High-voltage battery module*




8
17
30
11
10
17
9
8
30
17
8
8
17
15
15
A100


31
A9/6
32
33
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15
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A100

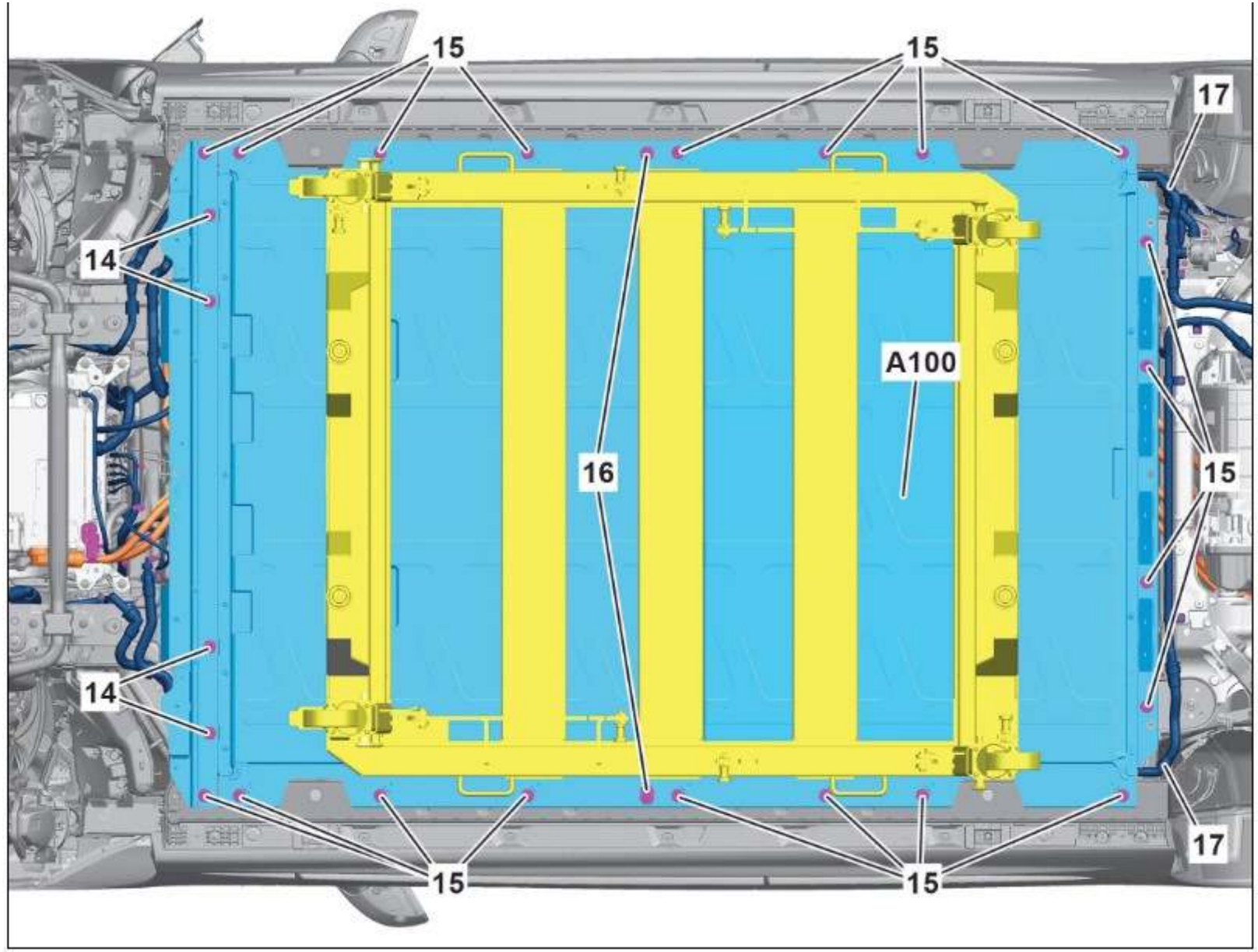
80	*Assembly device*
A100	*High-voltage battery module*
d	*Assembly device under no load*
e	*Loaded assembly device*



P47.70-A530-76

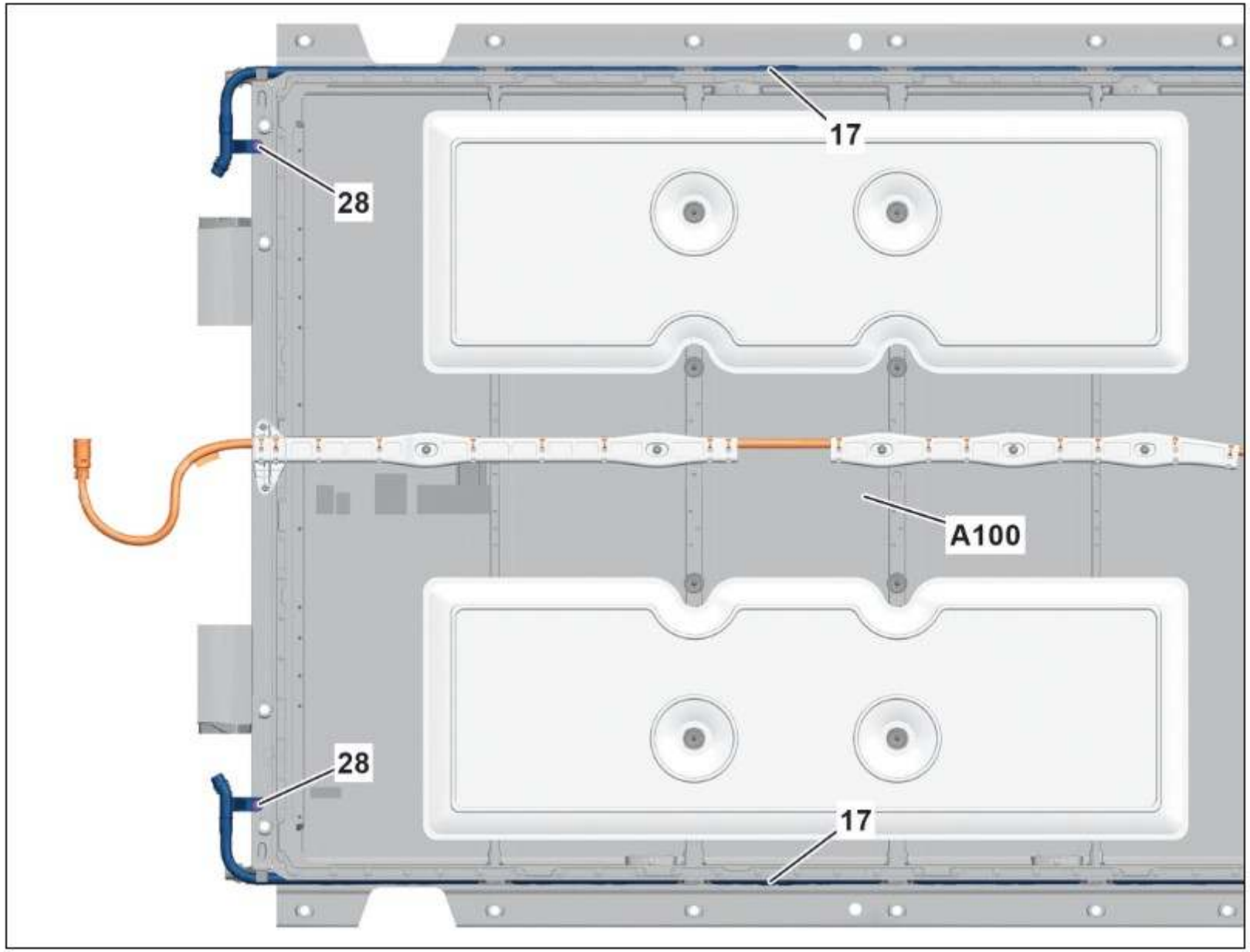
Shown on model 297 with code M005 (Vehicles with 4MATIC/all-wheel drive)

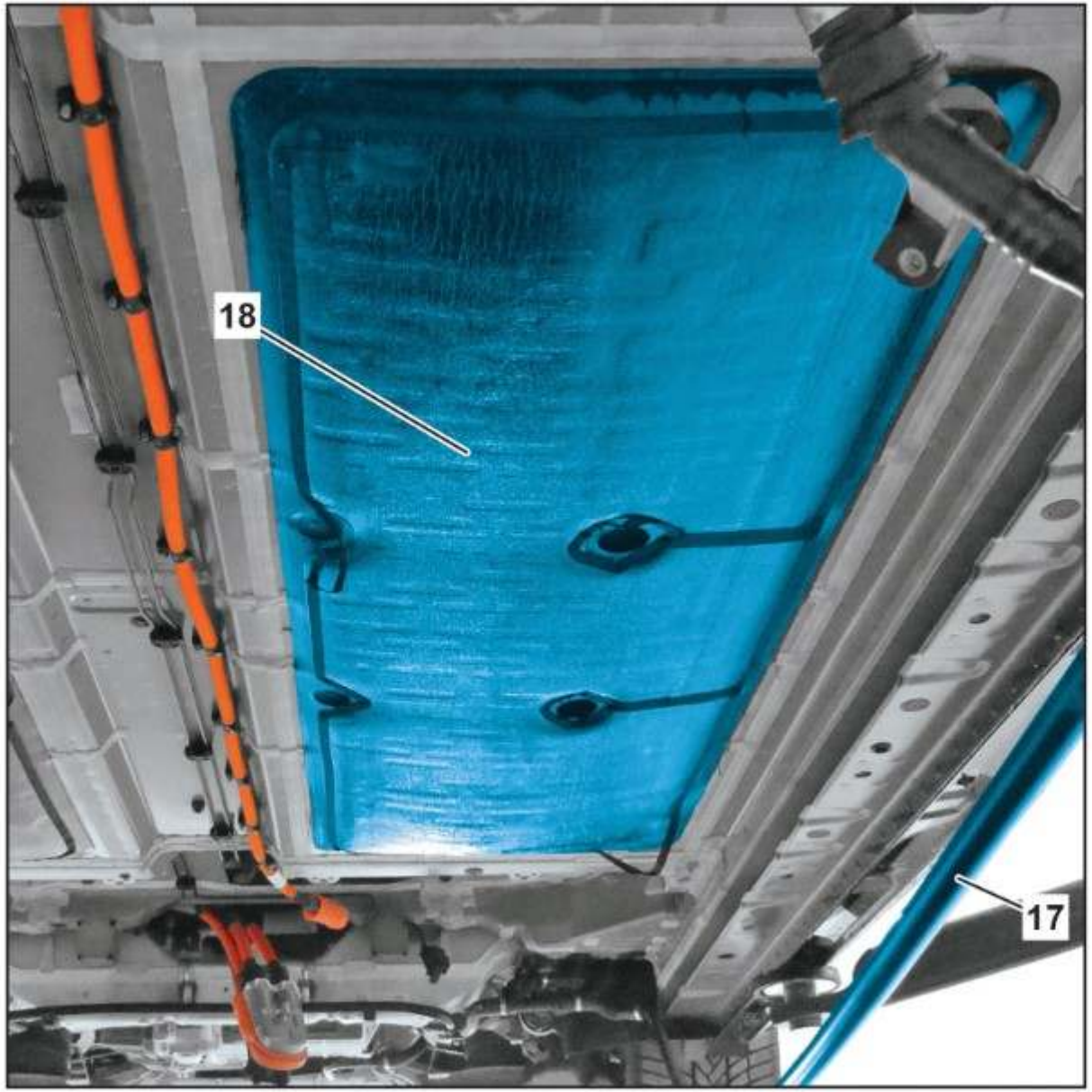
14	*Bolts*
15	*Bolts*
16	*Stop plug*
17	*Coolant line*
A100	*High-voltage battery module*

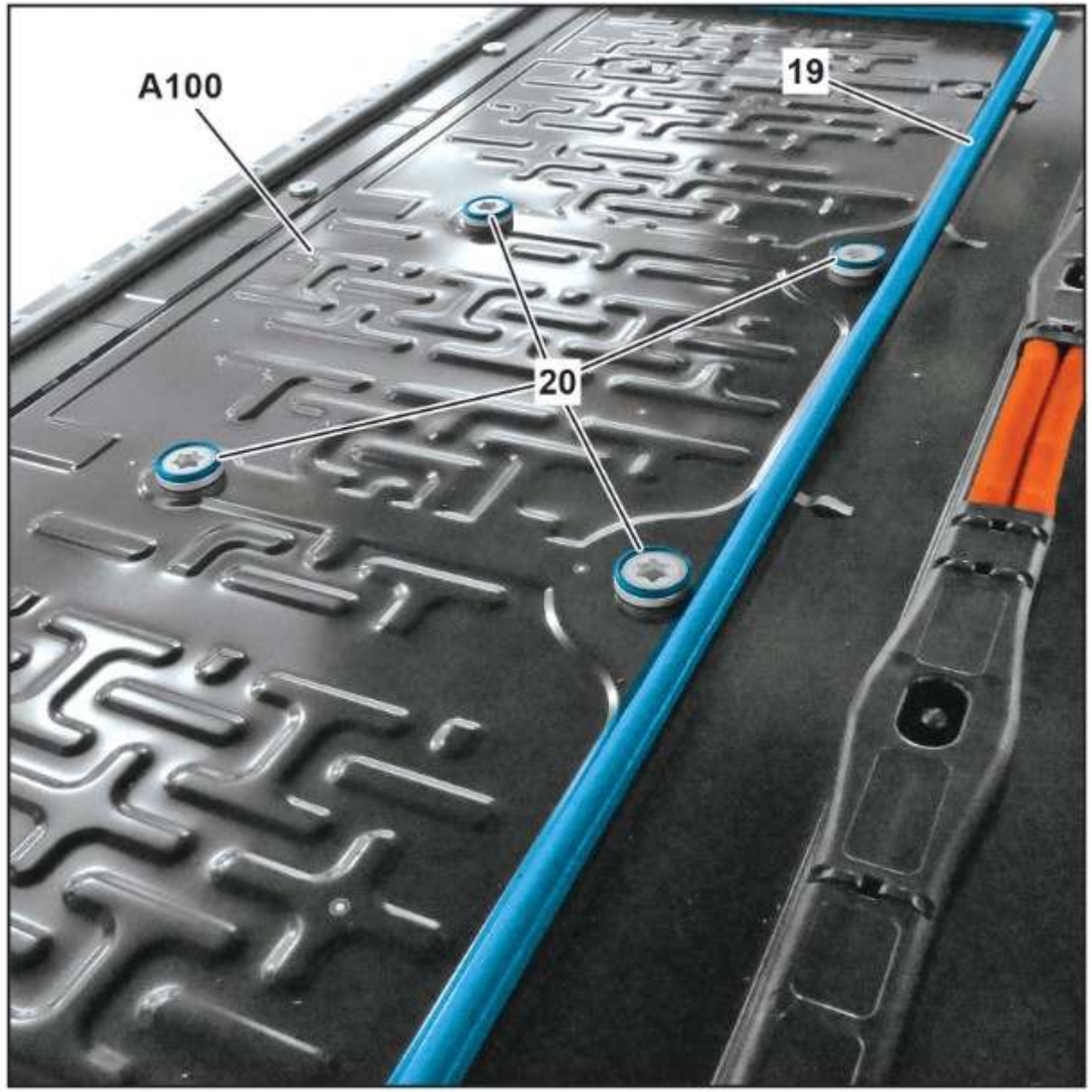


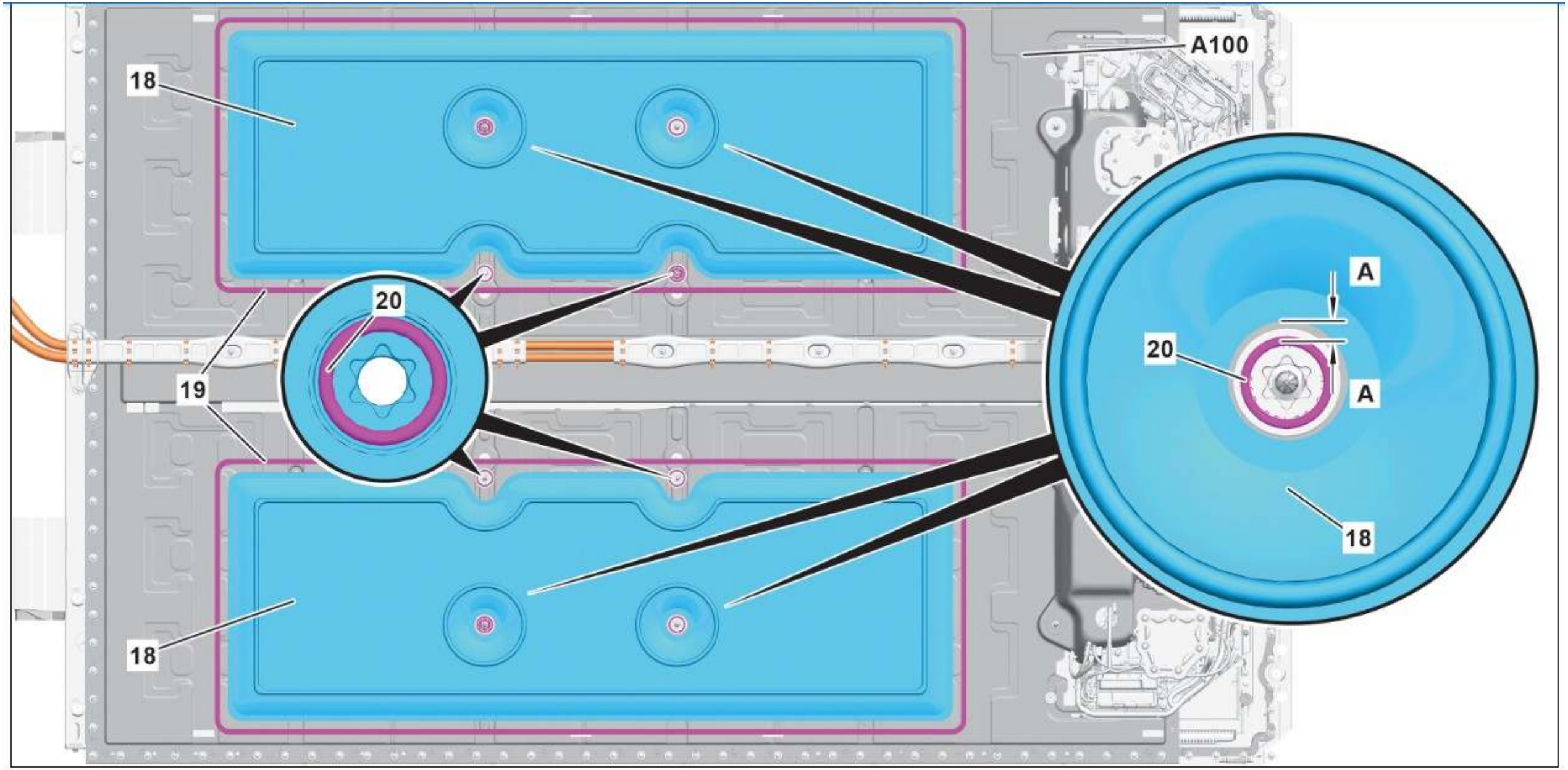
Shown on model 297 without code M005 (vehicles with 4MATIC/all-wheel drive)

17	*Coolant line*
28	*Screw*
A100	*High-voltage battery module*



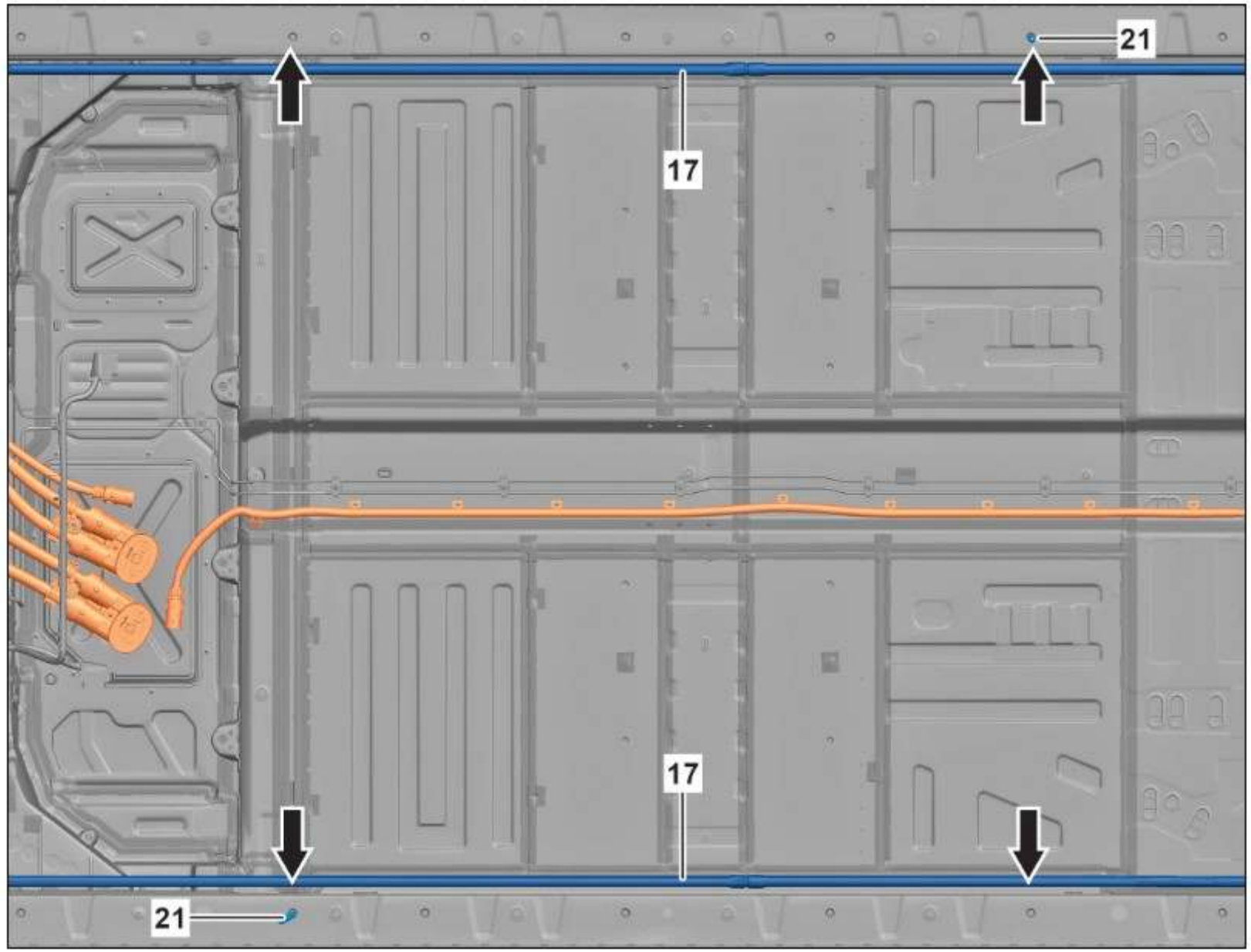

18
17

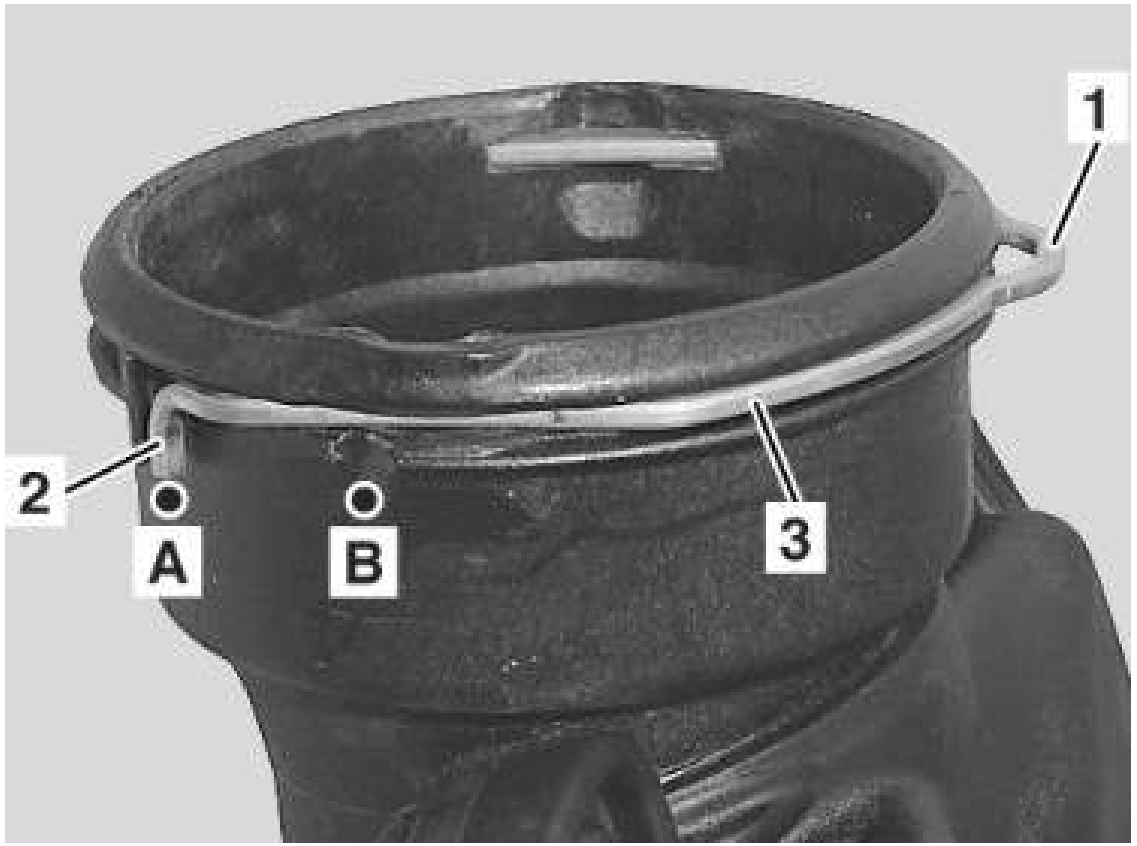

A100
19
20


A100
18
20
19
18
A
20
A
18

17 *Coolant line*

21 *Drift*



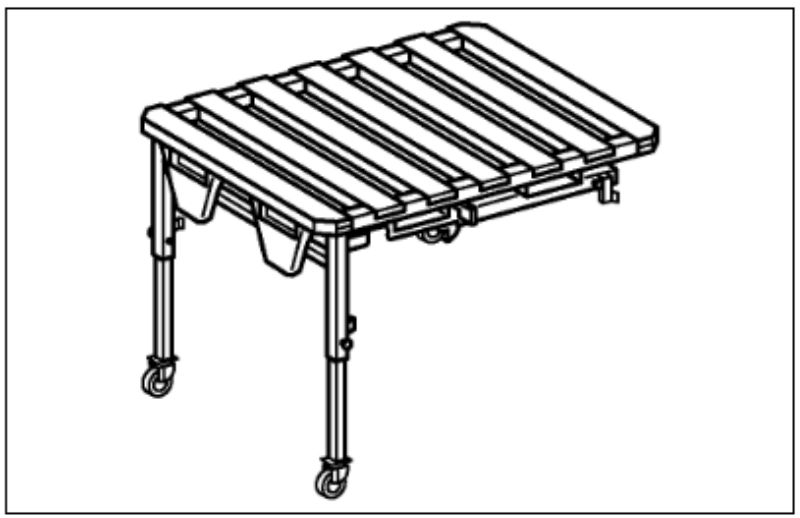

1
2
A
B
3

WS54.00-P-0086B	001 588 00 54 00 Assembly device	23.01.2023

Model ***293, 294, 295, 296, 297, 447, 907, 910***

Use in FG 47/54/Set B

Purpose:
Assembly device for removal/installation of HV vehicle battery as well as repair, transport and temporary storage of the battery.
Procurement information:
This workshop equipment can be ordered directly through the regular replacement part ordering process in GLC/LC.
The manufacturer of this article is BlitzRotary GmbH, Hüfinger Str. 55 / 78199, Bräunlingen / Germany.



001 588 00 54 00

HV Battery Removal



HV Battery Install



Search for operation item via text or number ...

Define Construction group/Construction Subgroup | Select Operation items

Filter by description or number ...

Type	No	Duration	Description
V	47-0646	ZM	Check high-voltage on-board electrical system (After quick test)
G	**47-0647**	ZM	**Check separate parts of high-voltage on-board electrical system: ..... as per fault code**
V	47-7503	0.2 H	Replace one fitting on high-voltage battery (coolant line removed)
G	**47-7542**	**4.4 H**	**Check fitting on high-voltage battery for leak tightness**
G	**47-9200**	**5 H**	**Remove/install high-voltage battery**
G	**47-9201**	**5.9 H**	**Replace high-voltage battery**
V	47-9205	ZM	Perform diagnosis of high-voltage battery (High-voltage battery removed)
V	47-9206	1.3 H	Replace fuse link for high-voltage on-board electrical system (After check)

If written up right, 11 hours can be billed on warranty.

Bringing up the workshop menu

AP00.20-P-0046ES	Bring up workshop level on instrument cluster	22.11.2022

Model ***294, 295, 296, 297***

Modification notes

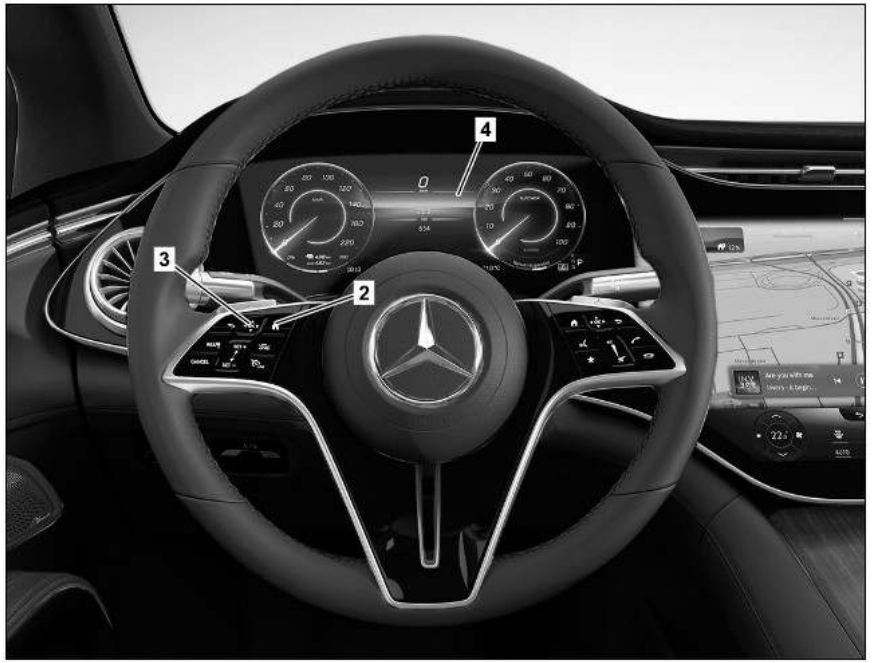
18.11.2022	New operation step inserted.	Operation step 1	

Show on model 297.144

2 "Main menu" button

3 Finger navigation pad

4 Driver display



	Preparatory activity		
1	Close hood of front major assembly compartment, doors, and trunk lid.		
2	Switch electronic ignition lock control unit to position "1" (circuit 15R).	i No fault messages are allowed to appear on the driver's display (4).	
	Open workshop level		
3	Press "Main menu" button (2).	i The main menu appears on the driver's display (4).	
4	Use swipe movements on the finger navigation pad (3) to select and confirm the "Classic" menu item in the driver's display (4).		
5	Use swipe movements on the finger navigation pad (3) to change the menu item until "Total distance" is shown on the driver's display (4).		
6	Press and hold the "Main menu" button (2) for at least 5 s. Then let go of it completely and, within 1 s, press and hold the "OK" button on the finger navigation pad (3) for 3 s.	i The workshop level with the tabs appears in the driver's display (4): "Vehicle data", "ASSYST PLUS", And other equipment-dependent menu items.	
	Close workshop level		
7	Press "Main menu" button (2) and close "Workshop" menu.	i The main menu appears on the driver's display (4).	
	Finishing activity		
8	Use swipe movements on the finger navigation pad (3) to select and confirm the menu item of the input condition in the driver's display (4).		
9	Switch electronic ignition lock control unit to position "0".		

Resetting the service indicator

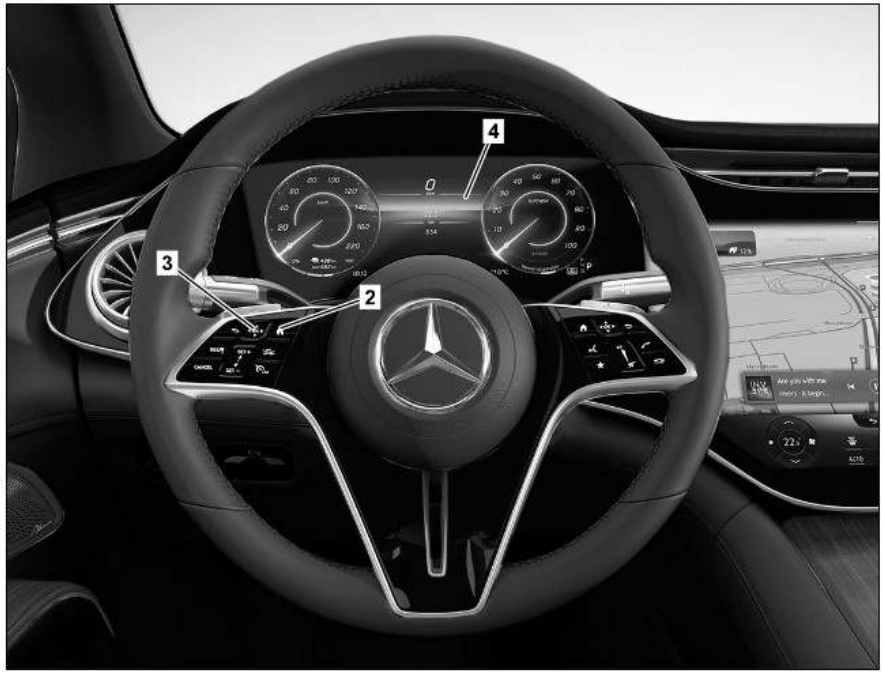
AP00.20-P-0043ES	Read out maintenance data from instrument cluster and reset service indicator	22.11.2022

Model ***294, 295, 296, 297***

Shown on model 297.144

3 Finger navigation pad

4 Driver display



	Dialing		
1	Call up workshop level in the instrument cluster.	ⓘ The workshop level with the tabs appears in the driver's display (4): "Vehicle data", "ASSYST PLUS", And other equipment-dependent menu items.	AP00.20-P-0046ES
2	Switch electronic ignition lock control unit to position "2" (circuit 15).	ⓘ No fault messages are allowed to appear on the driver's display (4).	
3	Use swipe movements on the finger navigation pad (3) to select and confirm the "ASSYST PLUS" menu item on the driver's display (4).	ⓘ The tabs are shown on the driver's display (4): "Service data", "Full service".	
	Read out service data		
4	Use swipe movements on the finger navigation pad (3) to select and confirm the "Service data" tab.	ⓘ In the reception report, note down the workshop codes (e.g. 505) and service codes (e.g. A) that appear on the driver's display (4). The codes are required for generation of the vehicle-specific service sheets in the WIS/MSS.	
5	Use swipe movements on finger navigation pad (3) to scroll forward to remaining time and remaining distance.	ⓘ Note down the remaining time and remaining distance shown on the driver's display (4) in the reception report.	
	Reset service data		
6	Use swipe movements on the finger navigation pad (3) to select and confirm the "Full Service" menu item on the driver's display (4).	ⓘ The current service items appear on the driver's display (4).	
7	Use swipe movements on the finger navigation pad (3) to select and confirm the "Confirm Service" menu item on the driver's display (4).		
8	Use swipe movements on the finger navigation pad (3) to select and confirm the "Yes" menu item on the driver's display (4).	ⓘ "Reversal not possible" is shown on the driver's display (4).	

9	Use swipe movements on the finger navigation pad (3) to select and confirm the "Confirmation" menu item in the driver's display (4).	ⓘ "Full Service completed" appears in the driver's display (4). If the service is not performed or only partly performed after resetting the maintenance computer, ↓ reset the maintenance computer to the default value again.	AP00.20-P-0044B
	Deactivation		
10	Close workshop level in the instrument cluster.		AP00.20-P-0046ES

Service schedule

Model 297

- ☐ **Service A**
- ☐ **Service B**
- ☐ Plus package
- ☐ At every service (equipment specific)
- ☐ Service 3 every service
- ☐ Service 4 Every 2 years
- ☐ Service 5 every 20,000 mi/2 years
- ☐ Service 7 every 60,000 mi/6 years
- ☐ Service 10 every 40,000 mi/4 years
- ☐ Service 13 every 120,000 mi/12 years
- ☐ Service 15 At every Service B



P00.20-A070-11

A	B		Input condition not OK: ⊗	
Completed ☒ ▼	☒ ▼			
☐	☐	**Service reception** The reception report for service on the vehicle is available in completed form.	○	AP00.20-P-0009ZE
			ⓘ **To be performed by the Service Advisor** (where market-specific conditions require). Fully process all acceptance items and the maintenance items listed in the service sheet, only then is the service scope completely performed.	
☐	☐	**Brake system** Perform brake test and enter result in table.	○	AP42.00-P-4290EQ
☐	☐	**Vehicle exterior** Check exterior lighting for proper operation.	○	AP82.10-P-8252A
☐	☐	Check and correct headlamp adjustment.	○	AP82.10-P-8260SD
☐	☐	Check charging cable and vehicle socket for mechanical damage.	○	AP54.10-P-5458ES
☐	☐	**Vehicle interior** Check windshield wipers, windshield washer system for proper operation.	○	AP82.35-P-8252M
		Front major assembly compartment		

☐	☐	**Front major assembly compartment**			
☐	☐	Brake system: Check fluid level.		○	AP42.10-P-4210ES
☐	☐	Check coolant level of low-temperature circuit for electric motor(s) and high-voltage battery cooling system.		○	
			Except code 583 (heat pump for climate control/heating)		AP20.00-P-2064SE
			With code 583 (heat pump for climate control/heating)		AP20.00-P-2064SEE
☐	☐	Check all visible parts in front major assembly compartment for damage and fluid loss.		○	
			Except code 914 (A/C air recirculation filter)		AP00.20-P-0063ES
			With code 914 (A/C air recirculation filter)		AP00.20-P-0063EES
☐	☐	**Underside of vehicle**			
☐	☐	Check all visible parts of vehicle underside for damage and fluid loss.		○	AP00.20-P-0054ES
			ⓘ The country-specific regulations for mobility and body shell complaints apply.		
☐	☐	Check high-voltage battery for visible damage.		○	AP47.70-P-0054ES
☐	☐	Check condition of steering and front axle tie rods.		○	AP46.00-P-4652ES
☐	☐	Check condition of front axle and front axle joints.		○	AP33.10-P-3358ES
☐	☐	Check condition of steering and rear axle tie rods.		○	AP46.00-P-4654ES
☐	☐	Check condition of rear axle and rear axle ball joints.		○	AP35.20-P-3552ES
☐	☐	Check condition of suspension struts or shock absorbers and springs.		○	AP32.25-P-3255ES
☐	☐	Check wheel and tire assemblies for damage and crack formation then enter result in table.		○	AP40.10-P-4055ES

☐	☐	**Trunk** **Plus package** Check/correct tire pressure spare wheel and enter set tire pressure into table.	Vehicles with spare wheel.	○	AP40.15-P-4061ES
☐	☐	Check TIREFIT tire sealant.	Vehicles with TIREFIT. ⓘ Enter expiration date here: _____ ⓘ Replace TIREFIT, invoice as additional operation.	○	AP40.10-P-4054A
☐	☐	Check first-aid kit (soft sided).	ⓘ Enter expiration date here: _____ ⓘ Replace first aid bag, invoice as an additional operation.	○	AP68.00-P-6850A
☐	☐	Check trunk lighting for proper operation.		○	
☐	☐	**Vehicle exterior** **Plus package** Windshield washer system: Check/correct fluid level.	ⓘ When using cleaning compounds for summer/winter, and depending on the ambient temperature, observe the mixing ratio.		AP82.35-P-8210K

☐	☐	**Vehicle interior** **At every service (equipment specific)** Fill up or replace vial of perfume atomizer.	After consultation with customer. With CODE P21 (Air quality package)	AP83.10-P-0100B
☐	☐	Replace battery for KEYLESS-GO key.	After consultation with customer. With code 889 (KEYLESS-GO)	
☐	☐	**Front major assembly compartment** **Service 3 every service** Replace dust filter.	Except code 914 (A/C air recirculation filter) With code 914 (A/C air recirculation filter)	AP83.00-P-8381EES AP83.00-P-8381ES
☐	☐	**Front major assembly compartment** **Service 4 Every 2 years** Brake system: Replace brake fluid.		AP42.00-P-4280ES
☐	☐	**Vehicle interior** **Service 5 every 20,000 mi/2 years** Replace activated charcoal particle filter.		AP83.00-P-8350ES
☐	☐	**Front major assembly compartment** **Service 7 every 60,000 mi/6 years** Replace fine particle filter.	With code 914 (A/C air recirculation filter)	AP83.00-P-8386ES
☐	☐	**Vehicle interior** **Service 10 every 40,000 mi/4 years** Panoramic sliding sunroof: Clean and lubricate guide mechanism.	With code 413 (Panoramic sliding sunroof/glass roof)	AP77.20-P-7732B

☐	☐	**Underside of vehicle** **Service 13 every 120,000 mi/12 years** Replace low-temperature circuit coolant for electric motor(s) and high-voltage battery cooling system.	Except code 583 (heat pump for climate control/heating)	AP20.00-P-2063SE
			With code 583 (heat pump for climate control/heating)	AP20.00-P-2063SEE
	☐	**Vehicle exterior** **Service 15 At every Service B** Trailer hitch: Check condition and operation.	With code 550 (Trailer hitch)	AP31.11-P-3152ES

Brake values

	Left	Right
Front		
Rear		
Parking brake		

Condition of wheel and tire assemblies

	Right front	Left front	Right rear	Left rear
Condition OK.				
Condition not OK.				

Set tire pressure in kPa or psi (100 kPa = 1 bar)

	Front axle	Rear axle	Spare tire
kPa/psi			

Wheels

- You can service the wheels normally, just torque them to specification

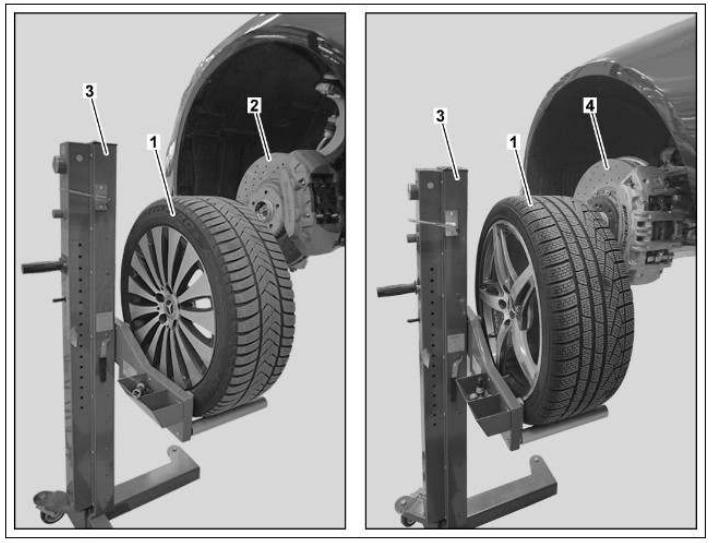
AR40.10-P-1102A	Remove/install wheel and tire assemblies	02.03.2023

Model *205, 206, 213, 214, 217, 222, 223, 232, 238, 253, 254, 257, 290, 293, 294, 295, 296, 297*

Modification notes

21.03.2018	Radschraube an Stahlrad		BA40.10-P-1001-01F
21.03.2018	Radschraube an Leichtmetallrad		BA40.10-P-1002-01F

1 Complete wheel
3 Wheel lift
4 Ceramic brake disk



Nm Wheels

Number	Designation			Model 296	Model 297
BA40.10-P-1001-01P	Wheel bolt	1st stage (initial torque)	Nm	75	75
		2nd stage	Nm	150	150

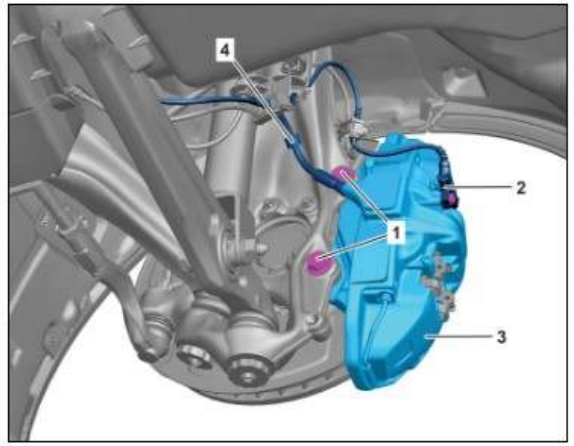
Brakes

- Service brake repair is much the same

AR42.10-P-1610EQS	Remove/check/install front axle brake pads	03.02.2023

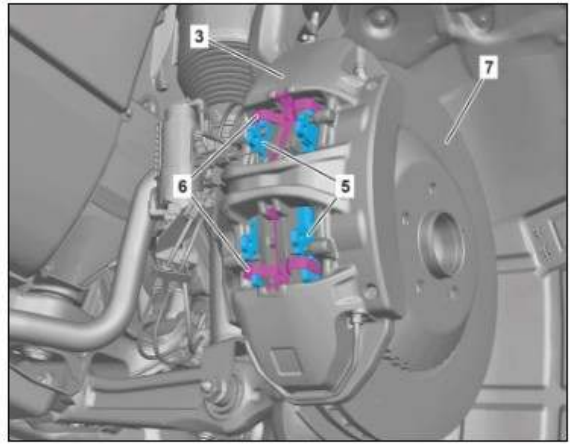
Model *294, 295, 297*
except code B06 (Silver brake calipers)
except code B07 (AMG - ceramic brake system)
except code U70 (red-painted brake callipers)
Model *296*

1 Bolts
2 Electrical connector
3 Brake caliper
4 Brake hose



P42.10-A142-81

3 Brake caliper
5 Brake linings
6 Spreader springs
7 Brake disk



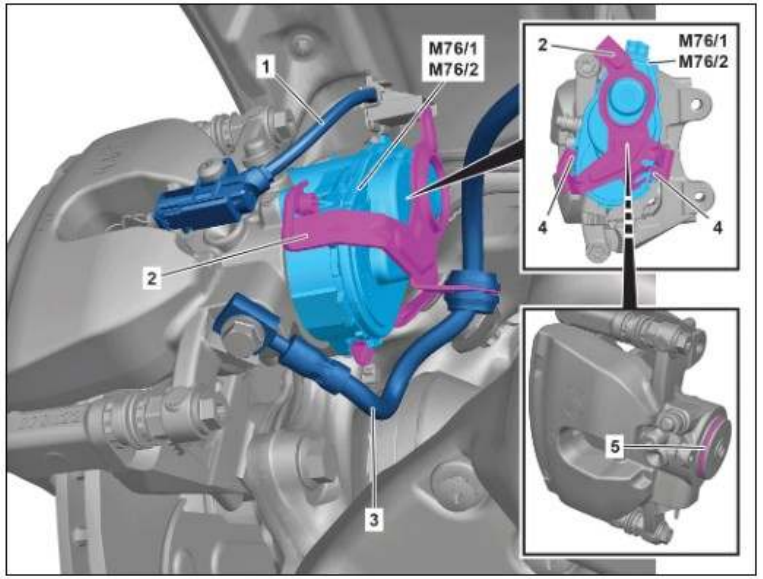
Parking Brake

- Parking brake service is the same

AR42.20-P-0600EQS	Remove/install electric parking brake actuator motor	02.11.2022

Model *294, 295, 296, 297*

1	*Electric line*
2	*Bracket*
3	*Brake hose*
4	*Screw*
5	*Sealing ring*
M76/1	*Left electric parking brake actuator motor*
M76/2	*Right electric parking brake actuator motor*



P42.20-A024-76

Warning	**Risk of injury**. Skin or eye injuries may result when handling hot or glowing objects.	Wear protective gloves, protective clothing and safety glasses, if necessary.	AS00.00-Z-0002-01A
Notice	Information on preventing damage to electronic components due to electrostatic discharge		AH54.00-P-0001-01A
Notice	Notes on repairs to brake system		AH42.00-P-0003-01A
Notice	Notes on self-locking nuts and bolts		AH00.00-P-0001-01KOA
	Notes on safety-relevant components		AH00.00-Z-0019-01A
	Remove/install		
1	Move rear axle brake pads into assembly position.	Do not operate the service brake while "Move to assembly position" is shown. Otherwise, the spindle in the brake caliper will be damaged. The hood must be closed.	AR42.10-P-1710-01S

Document section:

Accessing brake pad change mode

AR42.10-P-1710-01S	Activate/deactivate pad change mode		

Model ***192, 206, 214, 223, 232, 236, 254, 294, 295, 296, 297***

Activate

1 Place the transmitter key inside the vehicle.

2 Press Start button once.

i Do not operate brake pedal.

i Circuit 15 R is switched.

3 Switch instrument cluster to basic mode.

i The total distance must be displayed.

4 Press and hold down main menu button (2) for 5 s, release and then immediately press and hold down OK button (1) for 3 s.

i The Workshop menu is now open.

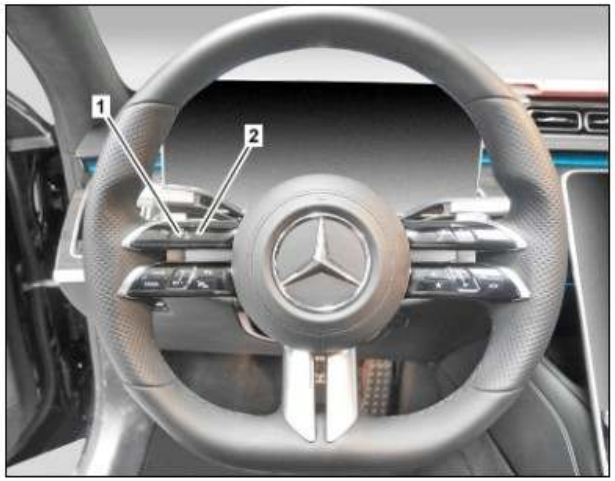
5 Change to brake pad change menu item and confirm with OK button (1).

i The service menu still remains open even after activation.

6 Activate brake pad change mode with OK button (1).

Do not depress the service brake during "Move to assembly position".
Otherwise, damage to the spindle in the brake caliper will occur.

i The "Assembly position reached" message is shown.



P46.20-A009-81

Suspension

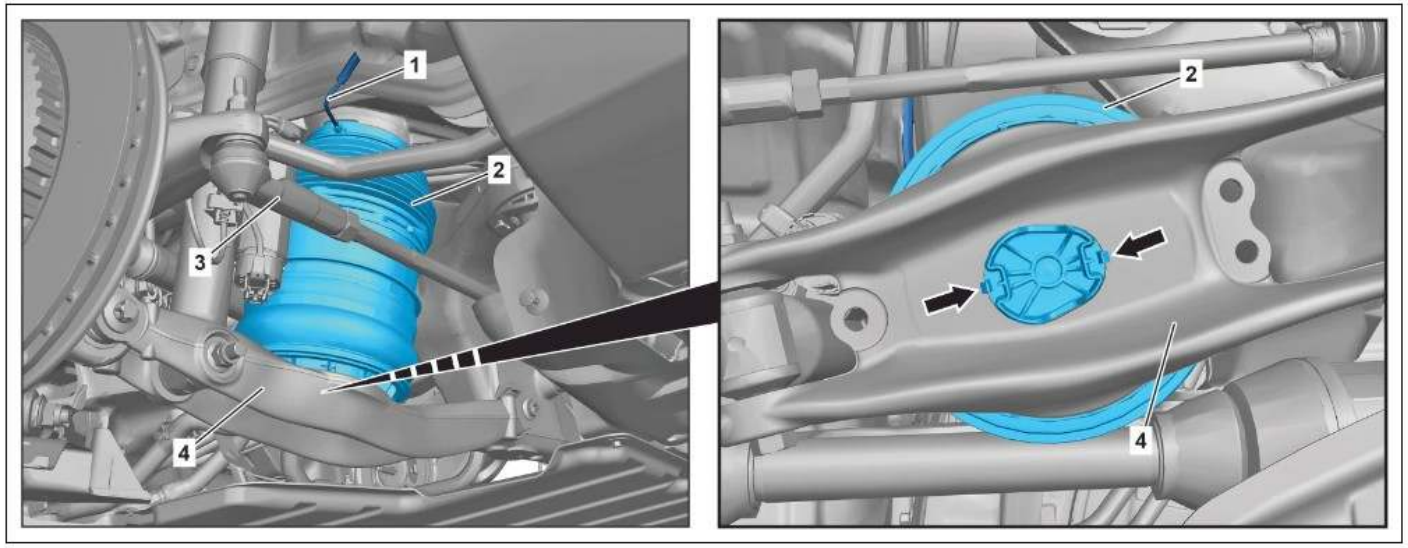
- You can replace an air spring normally

AR32.22-P-1500EQS	Remove/install air spring	07.11.2022

Model ***294, 295***
with code 489 (AIRMATIC Dual Control/semi-active air suspension)
Model ***296, 297***

Modification notes

10.05.2022	Air suspension pressure line to rear air spring	Model 296	BA32.25-P-1006-04O
10.05.2022	Druckleitung Luftfederung an Luftfeder hinten	Typ 296	BA32.25-P-1006-04O



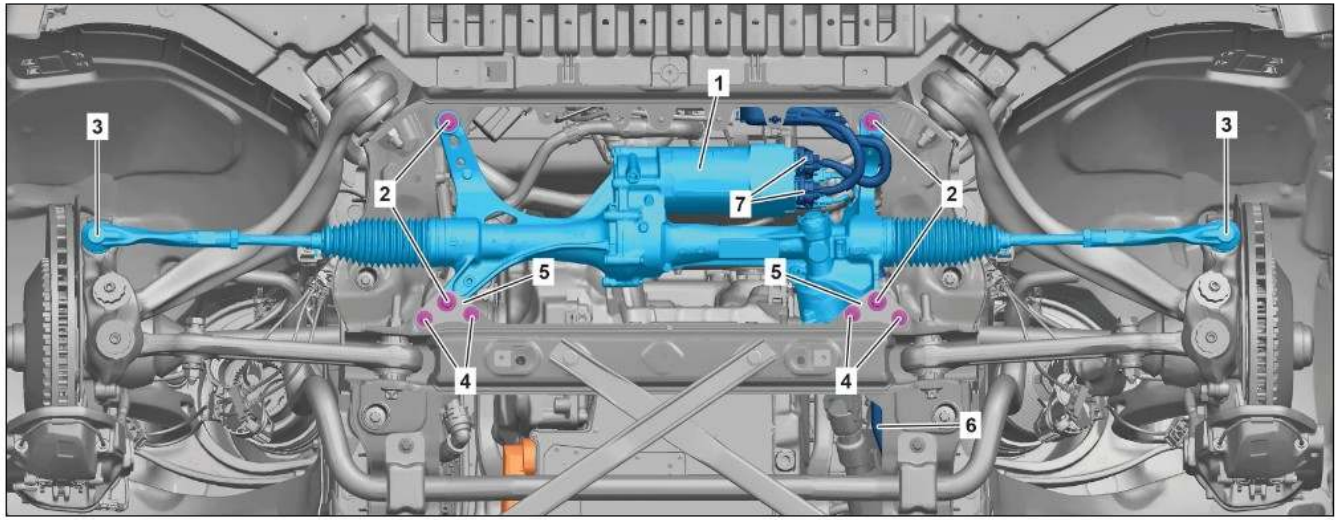
P32.22-A039-78

Steering

- The electric steering rack is low voltage and requires no special procedures to replace

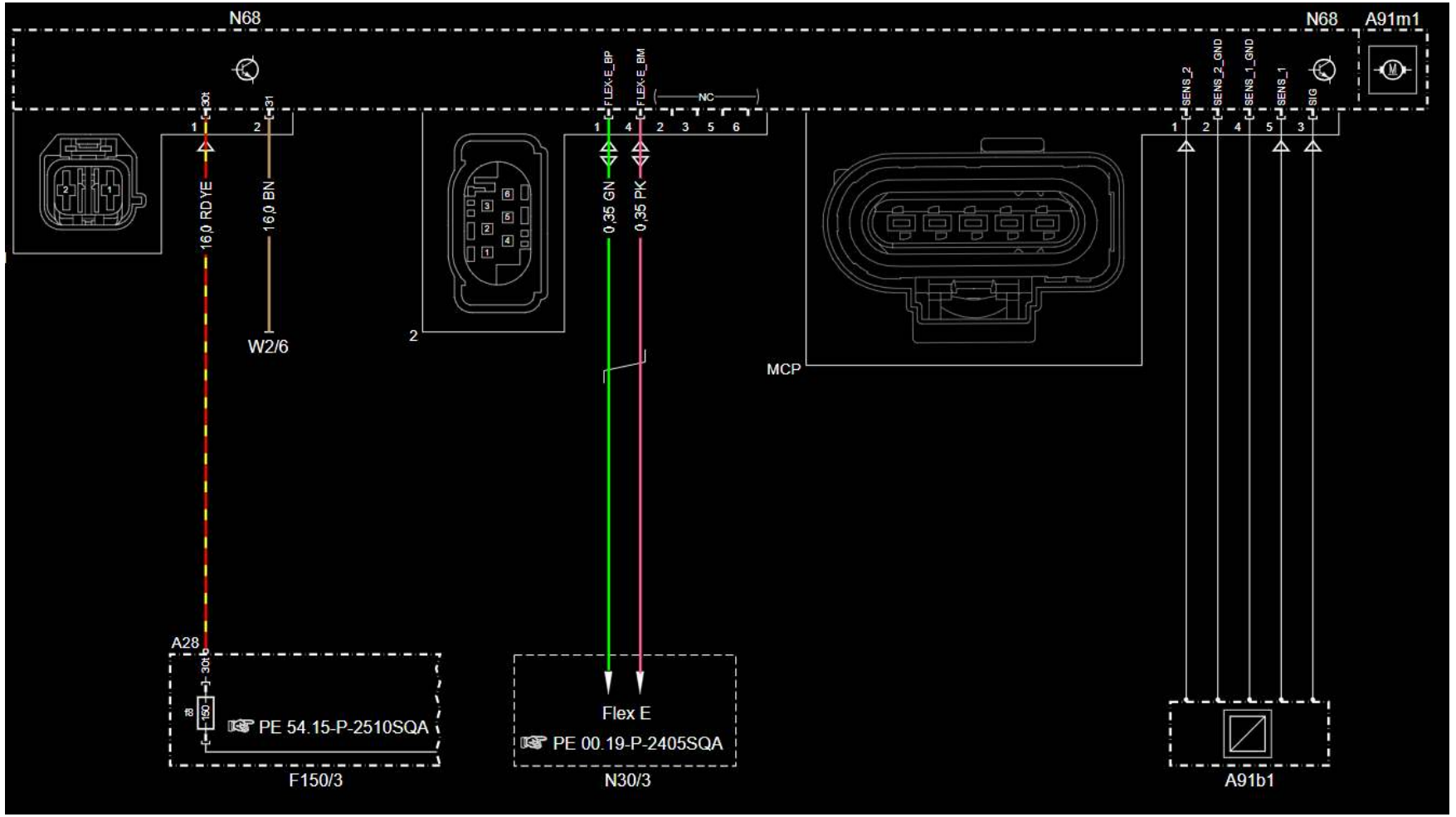
AR46.20-P-0500EQS	Remove/install steering gear	05.05.2023

Model *294, 295, 296, 297*



P46.20-A018-78

Low voltage to the steering rack



Unintentional Opening of the Tailgate - Recoding of Long Press on Double-Click

Title | Complaint | Cause | Rem

Title

Topic number	LI72.20-P-075746
Version	2
Function group	72.20 Tailgate, rear door
Date	3/11/24, 9:18 AM
Validity	118, 167, 177, 206, 213, 223, 238, 243, 247, 254, 257, 293, 295, 296, 297 MOPF: 205, 253, 217, 222
Reason for change	Clarification of "Release Tab"

Complaint

Tailgate opens unintentionally.

Cause

Accidental or unnoticed activation of the button to open the tailgate on the vehicle key. E.g. when stored in trouser pocket, handbag etc.

Remedy

As of the 6th generation, the vehicle key can be recoded so that the tailgate no longer opens as a result of a long press on the button, but by double-clicking on the button instead.

The recoding can be carried out as follows:

1. Add AO code O19 in VeDoc (O as in the letter "O" for Oscar, not the number "0"/zero)
2. EZS N73: Perform SCN coding
3. Deactivate the vehicle key (a successful deactivation is indicated by the LED lighting up 2x briefly and then 1x for a long period).
4. Place the vehicle key on the key symbol in the storage compartment and then switch on the ignition. All other vehicle keys must be outside of the vehicle when doing this!

Noises In The Steering Wheel Area When Steering

Title | Complaint | Cause | Remedy

Title

Topic number	LI46.10-P-077313
Version	1
Function group	46.10 Steering wheel, jacket tube, steering shaft, steering lock
Date	1/24/24, 1:12 PM
Validity	Vehicles as of production year 2019
Reason for change	

Complaint

The steering wheel generates grinding noises between the steering wheel and steering column switch module during steering maneuvers

See example file in the attachments area: Lenkrad-Schleifgeräusch_SteeringWheel-GrindingNoises.mp4

Cause

The plastic cover on the back of the steering wheel is not positioned correctly and may therefore rub against the steering column switch module

Remedy

Please use the following noise files for the damaged part analysis:

1. Grinding noise | pot. cause: steering wheel | see attachment: Lenkrad-Schleifgeräusch_SteeringWheel-GrindingNoises.mp4
2. Creaking/cracking noise | pot. cause: steering column switch module | see attachment: MRSM-Schleifgeräusch_SCCM-GrindingNoises.MOV

Squeaking Noise From The Electric Power Steering

Title

Topic number	LI46.35-P-076566
Version	2
Function group	46.35 Electrical steering
Date	12/4/23, 1:20 PM
Validity	Model series 206 (left-hand drive vehicle, with code M005) Model series 214 (left-hand drive vehicle, with code M005) Model series 223 (left-hand drive vehicle, with code M005) Model series 254 (left-hand drive vehicle, with code M005) Model series 294 (left-hand drive vehicle) Model series 295 (left-hand drive vehicle) Model series 296 (left-hand drive vehicle) Model series 297 (left-hand drive vehicle) Model series 232 (left-hand drive vehicle)
Reason for change	Damage code revised

Complaint

A squeaking noise comes from the electric power steering; see video with example.

Attachments

BR223 Noise EPS.mp4

Squeaking Noise

Cause

Toothed rack in the area of the screw drive of the electric power steering needs additional grease.

U116000 Bus keepawake stored

Title | Complaint | Cause | Remedy

Title

Topic number	LI54.10-P-076896
Version	2
Function group	54.10 Battery, power supply, voltage converter
Date	9/25/23, 12:18 PM
Validity	Star 3 vehicles (206, 223, 232, 254, 294, 295, 296, 297)
Reason for change	Remedy description

Complaint

12V message in IC when starting the vehicle.

Cause

SW updates need to be performed.

Remedy

Follow the guided test for FC U116000 in N73/3*1 EIS CU, this will lead you to programming multiple control units.

Perform the SW checks and updates.

Fully charge both the 12V battery to 80% and 48V battery to 70%.

After, perform a few drive/park cycles with at least 1 overnight park cycle.

If the 12V message is no longer present, release the vehicle.

Seat Heating and Seat Ventilation Cannot Be Activated Via The Pre-entry Climate Control

Title

Topic number	LI91.30-P-076797
Version	1
Function group	91.30 Seat heater, seat ventilation
Date	8/14/23, 10:32 AM
Validity	Model series 206 Hybrid with code 241 or code 275 Model series 254 Hybrid with code 241 or code 275 Model series 294 Model series 295 with code 241 or code 275 Model series 296 (except Z296) Model series 297 with code 873 or code 902 Cleanpoint as of manufacturing date 07.2023
Reason for change	

Complaint

The seat heating and seat ventilation cannot be activated via the pre-entry climate control.

Note:
Activation is neither possible via MBUX nor via the app.
It is possible to operate the seat heating and seat ventilation during normal driving operation.

Cause

Erroneous coding in seat control unit.

Remedy

Carry out SCN coding in seat control unit subject to complaint

Flush Door Handle - Servo Opening Inoperative

Title | Complaint | Cause | Remedy | WIS references

Title

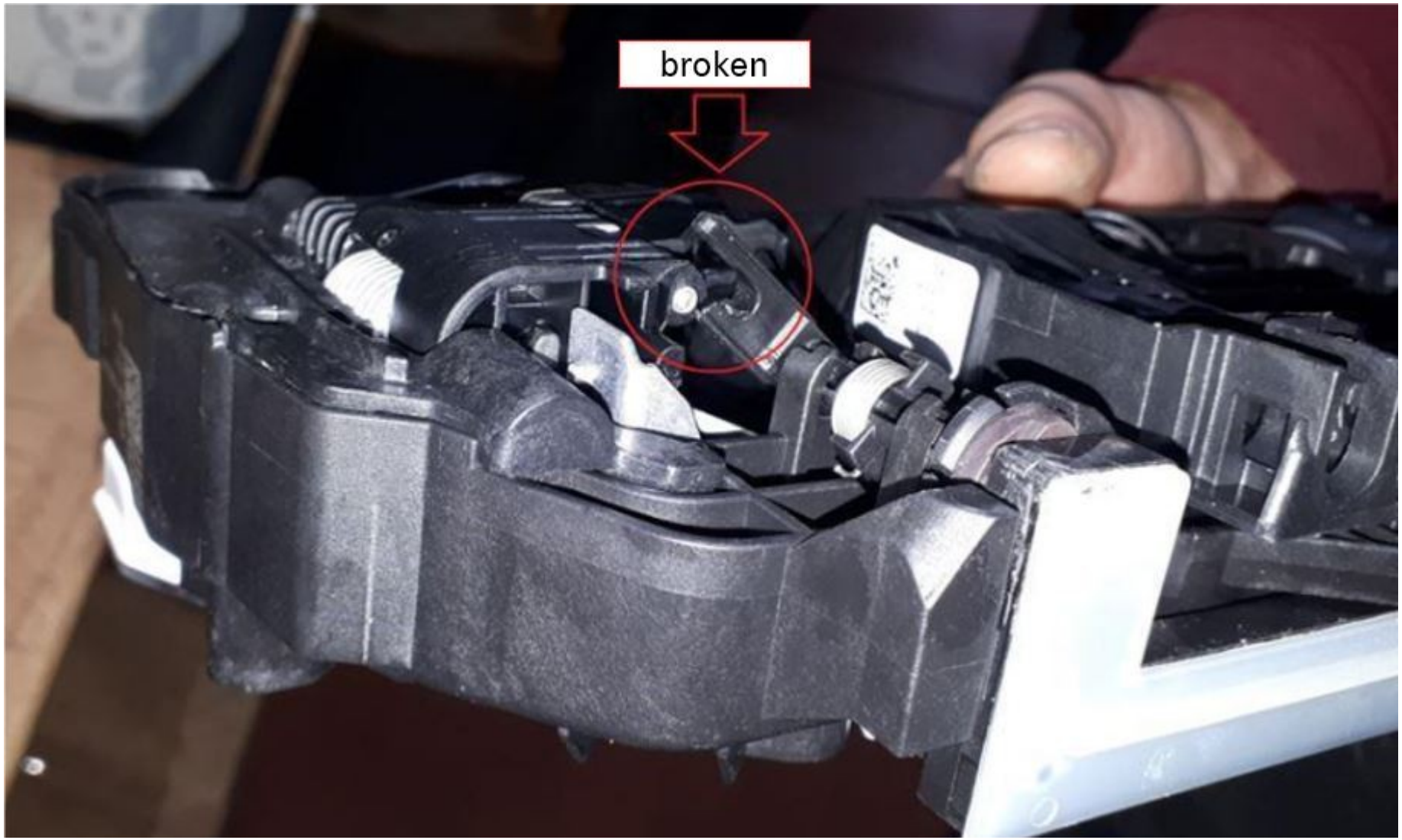
Topic number	LI72.10-P-076701
Version	1
Function group	72.10 Front door
Date	8/9/23, 3:31 PM
Validity	MODEL 223 with code 889 MODEL 294 with code 889 MODEL 295 with code 889 MODEL 296 with code 889 MODEL 297 with code 889
Reason for change	

Complaint

Flush door handle needs to be pulled on with increased force in order to open the door manually.

Cause

Turning angle sensor lever is broken (see picture).


broken

Model series 223/296/297 Augmented Reality Head-Up Display driver's settings lost

Title | Complaint | Cause | Remedy

Title

Topic number	LI54.30-P-075652
Version	3
Function group	54.30 Instrument cluster, display instruments, hazard warning device
Date	7/25/23, 9:10 AM
Validity	Model series 223, 296, and 297 with SA code 445 Augmented Reality Head-Up Display (AR HUD)
Reason for change	Software available

Complaint

The last settings for the Augmented Reality Head-up Display (AR HUD) may not always be saved and the settings are reset to the default state.

Cause

Instrument Cluster control unit (N133/1) software

Remedy

Update the Instrument Cluster control unit (N133/1) software.

Interior Hood Release Lever

Title | Complaint | Cause | Remedy

Title

Topic number	LI68.00-P-076105
Version	4
Function group	68.00 General
Date	5/18/23, 11:05 AM
Validity	New technical condition without release handle from: - Sindelfingen factory, week of May 1, 2023 - Tuscaloosa factory, week of March 13, 2023
Reason for change	Additional Information Provided in Remedy

Complaint

Technicians have reported the interior hood release lever (red) missing from vehicle.

Do not retrofit hood release lever as the part has been blocked for all EVA2 vehicles.

Cause

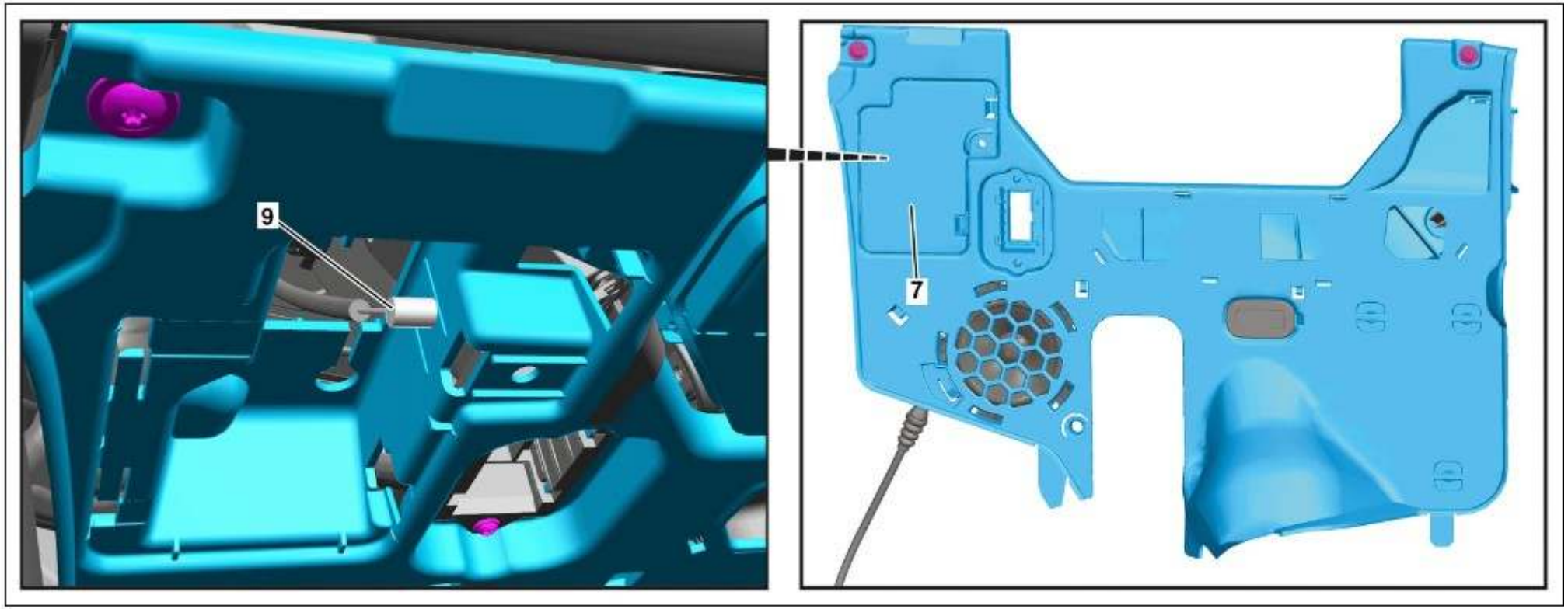
Production change. Hood latch system no longer includes the interior release lever.

- The opening of the hood on all EVA2 vehicles is exclusively reserved for specialist personnel at a qualified specialist workshop.

Remedy

No remedy required. Replacement release lever should not be ordered. See note in XPPI and Paragon. Dealers will be debited if a warranty claim for “Missing Part” is submitted.

The hood can be opened by hand using the cable. Grasp the cable with your fingers and pull on this until the hood springs.



P88.40-A230-78

Shown on model 297 as of 01.05.23 Sindelfingen plant

7 Cover

9 Engine hood cable

	Open		
1	Remove cover (7) from trim (6).		
2.1	Pull release lever for hood (1).	Model 294 up to 3/5/23, 295 up to 3/5/23, 296 up to 3/5/23, 297 up to 3/5/23 Tuscaloosa plantModel 294 up to 4/30/23, 295 up to 4/30/23, 296 up to 4/30/23, 297 up to 4/30/23 China plantModel 294 up to 4/30/23, 295 up to 4/30/23, 296 up to 4/30/23, 297 up to 4/30/23 Sindelfingen plant	
2.2	Using suitable tool, pull hood cable (9) to release hood (1).	Model 294 as of 3/6/23, 295 as of 3/6/23, 296 as of 3/6/23, 297 as of 3/6/23 Tuscaloosa plantModel 294 as of 5/1/23, 295 as of 5/1/23, 296 as of 5/1/23, 297 as of 5/1/23 China plantModel 294 as of 5/1/23, 295 as of 5/1/23, 296 as of 5/1/23, 297 as of 5/1/23 Sindelfingen plant	

Surface-Flush Door Handle Does Not Retract When Vehicle Locked

Title

Topic number	LI72.10-P-075291
Version	2
Function group	72.10 Front door
Date	2/13/23, 9:34 AM
Validity	MODEL 223 with code 889 up to manufacturing date 2 July 2022. MODEL 295 with code 889 up to manufacturing date 2 July 2022. MODEL 296 with code 889 up to manufacturing date 2 July 2022. MODEL 297 with code 889 up to manufacturing date 2 July 2022.
Reason for change	Validity adapted: Model series X296 added; Cause adapted: Fault code B185E96 amended

Complaint

The surface-flush door handle sometimes does not retract when the vehicle is locked.

It is only after repeated locking operation that the problematic door handle retracts.

Cause

Motor fault detection (FC B185E96 or B185D96) is triggered in the bearing bracket electronics of the surface-flush door handle (A17/x) during the retracting movement and an adjustment for this cycle is prevented.

Remedy

Replace bearing bracket of surface-flush door handle on problematic door.

Unlock sporadically inoperative with intermittent no start

Title | Complaint | Cause | Remedy | Symptoms

Title

Topic number	LI80.20-P-075086
Version	1
Function group	80.20 Central locking system, interior central locking
Date	7/19/22, 9:06 AM
Validity	Model series 223, model series 206, model series 297 with SA code 802 (modification year 21/1)
Reason for change	

Complaint

The vehicle sporadically may not unlock via the radio remote control or Keyless Go. The vehicle may require multiple start attempts before starting.
The faults B1A7611 and U113E87 are stored in the electronic ignition lock N73 (both faults must be present).
After bus idle, the problem is no longer present.

Cause

Software fault in electronic ignition lock N73.

Remedy

Update electronic ignition lock N73 to software A2069025508.

Symptoms

Overall vehicle > Safety and locking system > Locks/locking/Remote closing mechanism > Does not open

Warning Message "Steering" - No Power Steering Following Engine Start

Title	Complaint	Cause

Version	1
Function group	46.35 Electrical steering
Date	11/29/22, 8:34 AM
Validity	Model series 206, 223, 295, 296, 297, 232, 254
Reason for change	

Complaint

Power steering unavailable following engine start, warning message in instrument cluster.

Fault codes in electric power steering control unit (N68).

Fault code details/freeze frame data of the fault codes show the following values:
P063500: "The electric power steering has a malfunction. There is a component fault." - Mon_ID 40
P063547: "The electric power steering has a malfunction. There is a runtime error." - Mon_ID 33
P063509: "The electric power steering has a malfunction. _" - Mon_ID 938

Cause

Software error when starting the electric power steering control unit (N68).

Remedy

Perform software update of electric power steering, control unit N68.
Please also observe the guided check in XENTRY Diagnosis!

No Suspension Height Adjustment Possible. Production Mode Activated.

Title | Complaint | Cause | Remedy

Title

Topic number	LI32.22-P-074279
Version	2
Function group	32.22 Air suspension
Date	8/2/22, 10:13 AM
Validity	Model 223, 297
Reason for change	Functionality: Deactivation of production mode possible using XENTRY.

Complaint

Height adjustment and deactivation of the production mode not possible.

Cause

The deactivation of the production mode is not stored in the AIRMATIC control unit. The control unit is not operational.

Remedy

The production mode can be deactivated with XENTRY. If the deactivation is not to be saved, please update the software for the AIRMATIC control unit N51/8.

Vehicle will not start. HV message displayed in instrument cluster.

Title | Complaint | Cause | Remedy | Sy

Title

Topic number	LI54.21-P-074167
Version	1
Function group	54.21 Control units / basic modules
Date	12/23/21, 10:57 AM
Validity	297 EQS
Reason for change	

Complaint

The vehicle cannot be started. There is a red HV message displayed in the instrument cluster.

The following codes are found during a quick test:

P154500 - There is a warning due to a detected crash event.

U103E88 - Communication with the suspension FlexRay has a malfunction. Bus OFF

NOTE: Both error codes must appear together.

Cause

Possibly the FlexRay communication disrupted.

Remedy

Do not replace parts. A new software is planned. The LI will be updated when available.

Complaints about the electric range

Title	Complaint	Cause

Title

Topic number	LI08.00-P-072749
Version	2
Function group	08.00 General
Date	4/26/21, 10:23 AM
Validity	Plug-in hybrid and electric vehicles
Reason for change	Model series extension

Complaint

The electric range does not meet customer's expectations.

Cause

At Mercedes-Benz, we believe that our vehicles should display to the driver a range that in all probability can actually be achieved. These ranges are predictions - the range actually achieved may therefore differ from the range shown. The calculation for the predicted range takes into account the **current outside temperature**, the **set temperature** of the air conditioning system, the **battery capacity** and the **characteristics of previous journeys** (sporty/anticipatory driving style). Where previous journeys are concerned, factors given particular consideration are **individual driving style** and the **use of other power consumers** (seat heating, lights, charging function for smartphones, etc.). It is therefore possible that data from the last few hundred kilometers driven is also used in the calculation. Consequently any change in usage behavior will only slowly affect the predicted range. If **active navigation** or **active commuter route** is used, additional information about the route ahead (for example elevation profile, traffic volume) can be included in the range calculation.

Noises from front electric drivetrain at 60 mph - 75 mph

Title

Topic number	LI08.10-P-076885
Version	1
Function group	08.10 Electrical motor
Date	9/11/23, 8:19 AM
Validity	Model 294 with code M005 (VEHICLES WITH 4MATIC/ALL-WHEEL DRIVE) Model 295 with code M005 (VEHICLES WITH 4MATIC/ALL-WHEEL DRIVE) Model 296 with code M005 (VEHICLES WITH 4MATIC/ALL-WHEEL DRIVE) Model 297 with code M005 (VEHICLES WITH 4MATIC/ALL-WHEEL DRIVE)
Reason for change	

Complaint

High frequency noise/high frequency whistling at speeds between 60 mph - 75 mph

Cause

Noises of 26th engine order from the transmission gearing

Remedy

Perform software update for control unit "N127 - drivetrain (PTCU)".

If the noises continue even after a successful software update, please do not exchange any parts.

The cause is currently being investigated.

Model series 294, 295, 296, 297 with Hyperscreen: Front Passenger Display shows dark, pixelated images during startup or shutdown

Title

Topic number	LI82.85-P-074735
Version	3
Function group	82.85 Navigation and Communication systems
Date	10/17/23, 3:38 PM
Validity	Model series 294, 295, 296, and 297 with code 535
Reason for change	Head unit software released and damage codes added

Complaint

Customer states that the Hyperscreen Passenger Display (A40/26) may show dark, pixelated images when the display is starting up or shutting off (see attached picture). The complaint is not present when the display is in use and does not occur during every ignition cycle.

Note: The dark pixelated images do not appear in the driver or center displays for the Hyperscreen.

Cause

Implausible video transfer from The MBUX multimedia system (A26/17) during start-up and shut-down sequence. These digital artifacts do not affect the normal operation of the Passenger Display.

Remedy

Software update of MBUX (A26/17) to software release E316.5 or higher.



Insufficient Heating Output Due To Broken Refrigerant Line Between Refrigerant Compressor And The condenser (Hot Gas Line)

Title

Topic number	LI83.20-P-076623
Version	1
Function group	83.20 Heating
Date	6/26/23, 2:03 PM
Validity	EQA (H243), EQB (X243)
Reason for change	Addition of German-language screenshots in the German version

Complaint

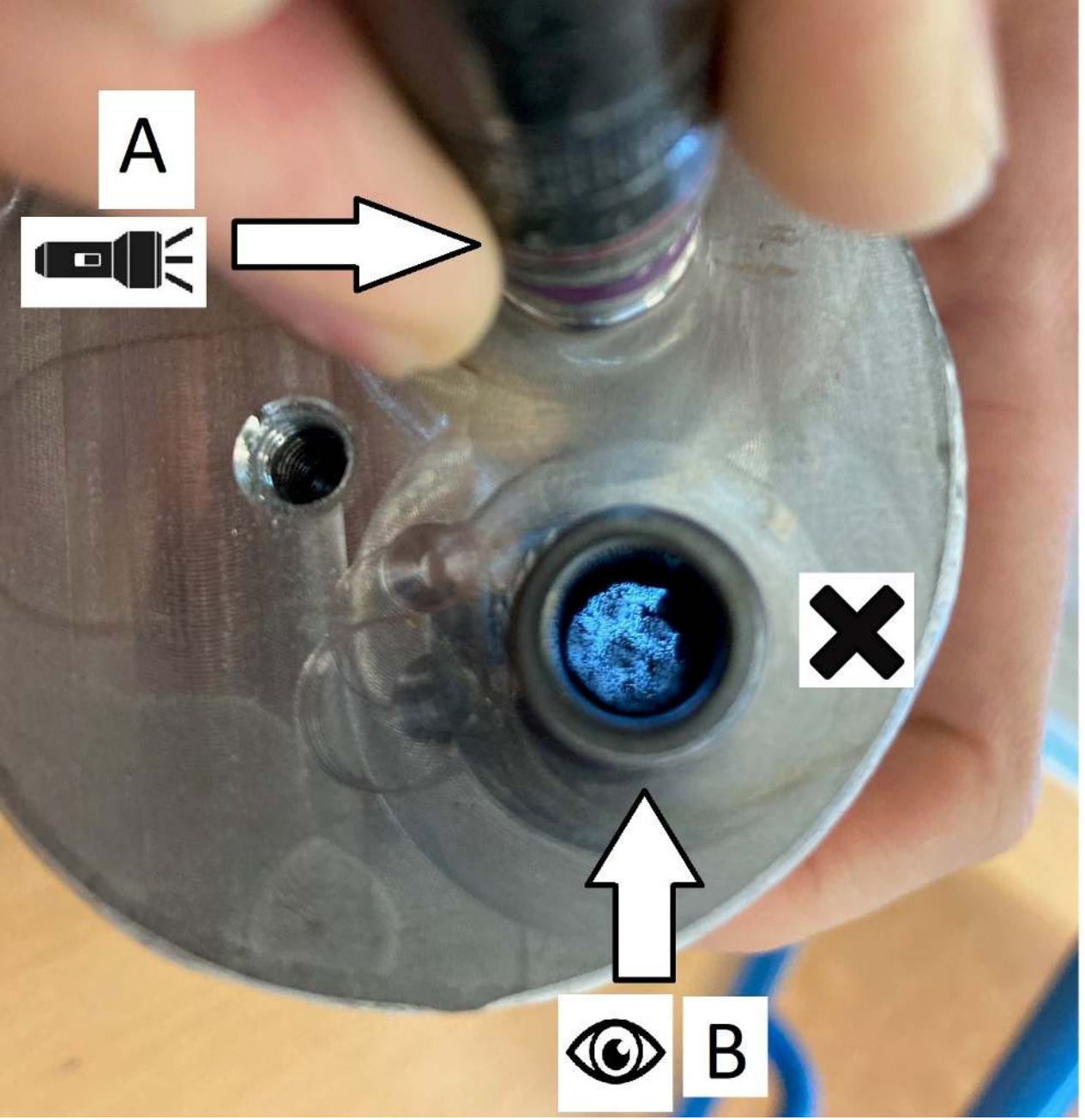
- Insufficient heating output in vehicle interior
- Customer describes a one-off, loud "plopping" noise during the journey

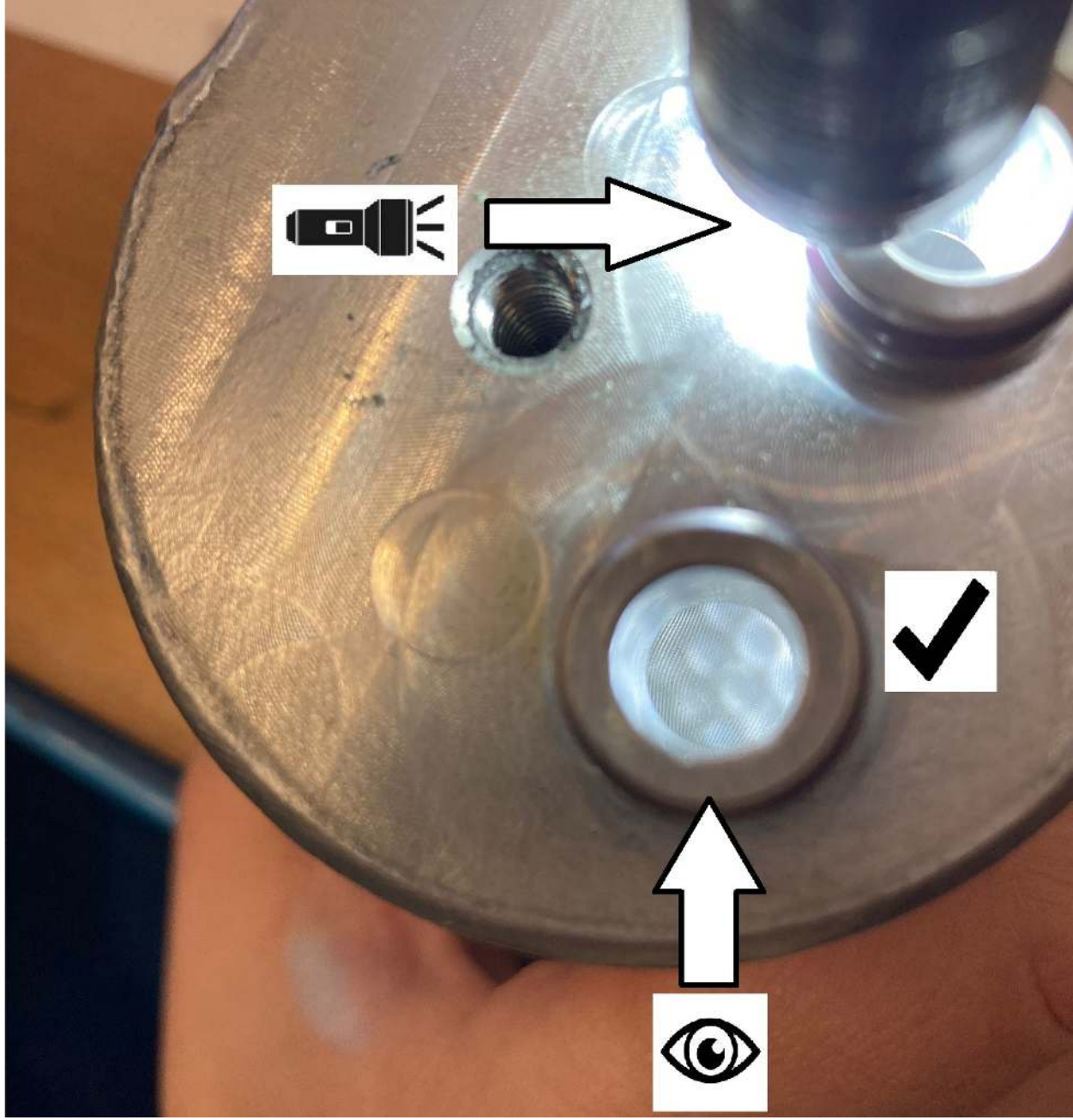
Workshop findings:

- Refrigerant line between refrigerant compressor and condenser cracked
- If listed line is cracked, please conduct the following tests

1. Are the fault codes B19A200 or P053400 current or stored in air conditioner control unit N10*1?

2. Check dryer cartridge at condenser for particles: Remove dryer cartridge, illuminate inlet of dryer cartridge using flashlight (A), and examine filter screen through outlet of dryer cartridge (B) -> see comparison picture bad/good


A
B



The charging process using the mode 2 charging cable cannot be started.

Title | Complaint | Cause | Remedy | Symptoms

Title

Topic number	LI47.70-P-073596
Version	1
Function group	47.70 Powertrain energy supply
Date	9/14/21, 11:02 AM
Validity	All plug-in hybrid vehicles (PHEV) All all-electric vehicles (BEV)
Reason for change	

Complaint

Vehicle cannot be charged and the "Fault" LED on the charge indicator box of the mode 2 charging cable lights up.

Attachments

Fault.png



Fault profile

Cause

The customer connected the charging cable to the vehicle first.

Remedy

Notify the customer about the importance to correctly perform the plug-in sequence. If the customer failed to observe the plug-in sequence, the fault can be rectified as follows:

1. Unplug the charging cable from the vehicle first and then from the infrastructure connection
2. Wait for at least five seconds
3. Plug in the charging cable at the infrastructure connection first
4. Wait until the Power LED lights up constantly in green
5. Then plug-in the charging cable on the vehicle
6. Check if the charging process has started

Replace Cap for Coolant Expansion Reservoir

Title | Complaint | Cause | Remedy

Title

Topic number	LI08.10-P-075956
Version	1
Function group	08.10 Electrical motor
Date	3/6/23, 3:21 PM
Validity	Model 243
Reason for change	Cap should be replaced with or without eATS replacement.

Complaint

Coolant indicator lamp lights up

Coolant level too low

Cause

If one of the following part numbers is installed when replacing the axle drive module, air may enter into the cooling system.

EQB: Part number for front axle: (A 243 340 89 02) or (A 243 340 90 02).

Part number for rear axle: (A 243 340 88 02).

Therefore, when replacing either electric drive, whether or not a complaint exists as part of this replacement process, always check the radiator cap too and replace it, if necessary.

<u>If the complaint for low coolant occurs without an axle drive module replacement, the red radiator cap A 297 500 51 00 should still be replaced for the large chamber.</u>

Remedy

EQB (model series 243):

If a black cap is installed on the large chamber of the coolant expansion reservoir, replace it with a red cap with part number (A 297 500 51 00).

The black cap on the small chamber must not be replaced.



Recall Campaign Bulletin

Campaign No. 2024030008, March 2024

TO: ALL MERCEDES-BENZ CENTERS

SUBJECT: **Various Models**
Model Year 2023 – 2024

Replace Fuse Box(es)

Mercedes-Benz AG, the manufacturer of Mercedes-Benz vehicles, has determined that on certain MY 2023-2024 C-Class, CLE, E-Class, EQE, EQE SUV, EQS, EQS SUV, GLC, S-Class, and SL (206, 214, 223, 232, 236, 254, 294, 295, 296 and 297 platform) vehicles, certain 80A fuses which were installed might not meet production requirements. As a result, a contact interruption or an increased triggering resistance might occur. In this case, systems connected to the fuse might become inoperable. The vehicle might also lose propulsion without warning, and restraint functions or the instrument cluster might be impaired, which could increase the risk of a crash or injuries. In addition, a risk of fire cannot be ruled out. An authorized Mercedes-Benz dealer will replace the respective main fuse box(es) on the affected vehicles.

Prior to performing this Campaign:

- VMI must be checked before performing campaigns to verify that the campaign is required on a specific vehicle. Always check for any other open campaigns and perform accordingly.
- Please review the entire Campaign bulletin and follow the repair procedure exactly as described.

Approximately 31,848 vehicles are affected.

Order No. P-RC-2024030008

Recall Campaign Bulletin

not meet production requirements. As a result, a contact interruption or an increased triggering resistance might occur. In this case, systems connected to the fuse might become inoperable. The vehicle might also lose propulsion without warning and restraint functions or the instrument cluster might be impaired, which

Replace Fuse Box(es)

Work Procedure A

For models 192, 206, 214, 223, 232, 236, and 254

1. Disconnect ground line of 12 V battery **(Figure 1)**.
   Screw/nut, electric line to battery terminal of on-board electrical system battery: **6 Nm**.



Figure 1

2. Remove floor mat, remove trim **(Figure 2, A)** from A-pillar / passenger door sill panel, and fold back floor covering on right front footwell.
   Step 2 is not required for model 232 - Only remove the molded part under the floor mat.



Figure 2

3. Unscrew nuts **(Figures 3, A)** of interior prefuse box cover and remove the cover.

   For model 232: Unscrew fuse box holder support **(Figure 4, A)** covering prefuse box **(Figure 4, B),** place to one side keeping electrical lines connected.



Figure 3, Interior prefuse box cover, shown on model 206

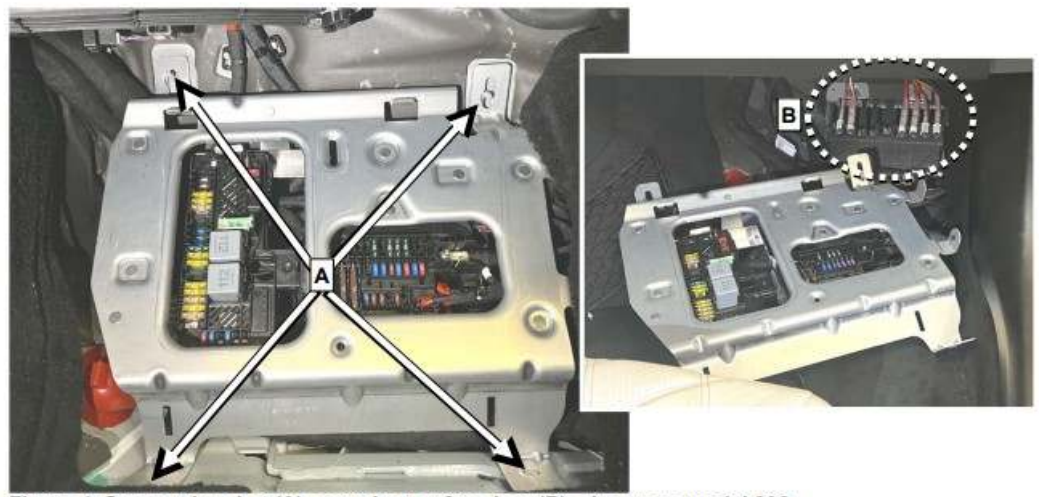


Figure 4, Support bracket (A), covering prefuse box (B), shown on model 232

4. Replace **interior** compartment prefuse box **(F150/2).**

i For basic data on **models 192 and 232**, see AR54.15-P-1350SLY.

i For basic data on **model 223**, see AR54.15-P-1350S.

i For basic data on **models 206, 214, 236, and 254**, see AR54.15-P-1350WT.

i **Mounting nuts must be reused.**

Nm **M6** nut, positive line to vehicle interior prefuse box: **8 Nm**.

Nm **M8** nut, positive line to vehicle interior prefuse box: **16 Nm**.

i Connections of the electrical lines are shape-coded to match the prefuse box and cannot be mixed up.



Figure 5

5. Re-connect ground line of 12 V battery.

6. Read out and erase fault memory.

Replace Fuse Box(es)

Work Procedure B

For models 294, 295, 296, and 297; non-AMG models.

1. Disconnect ground line of 12 V battery.

Nm Screw/nut, electric line to battery terminal of on-board electrical system battery: **6 Nm**.

2. Remove trim on A-pillar / door sill panel.

3. Replace **interior** prefuse box **(F150/7)**.

For basic data on **models 294, 295, 296, and 297**, see AR54.15-P-1350EQS.

- Step 1 – Remove floor covering on front passenger side, see:
  - AR68.80-P-0008EQD for **294** and **296**
  - AR68.80-P-0008EQS for **295** and **297**

To make it easier to fold back the floor covering, the trim (Figure 6, C) and the stowage tray (Figure 6, D) in front of the center console must be partially removed.

Mounting nuts must be reused.

Nm **M6** nut, positive line to vehicle interior prefuse box: **8 Nm**.

Nm **M8** nut, positive line to vehicle interior prefuse box: **16 Nm**.

Connections of the electrical lines are shape-coded to match the prefuse box and cannot be mixed up.

Positive lines are secured with additional cable ties.

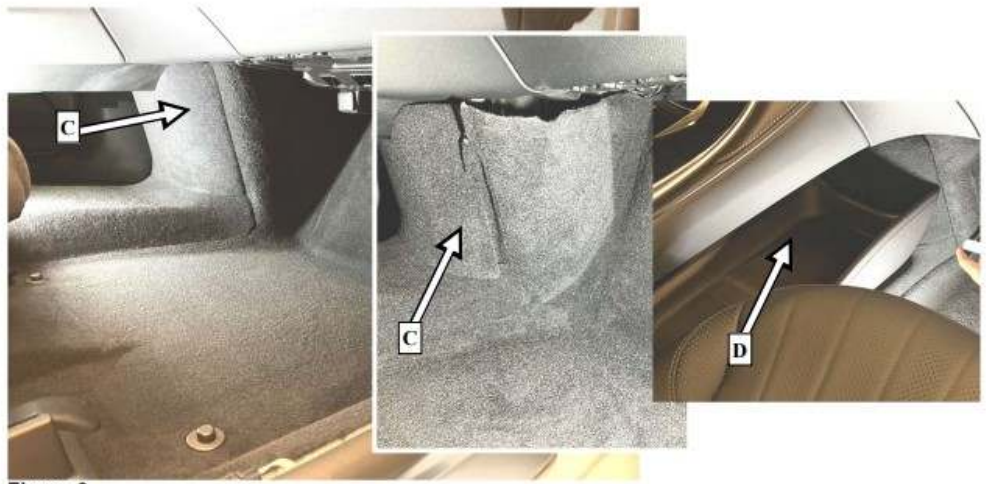


Figure 6

4. Connect ground line of 12 V battery.

Work Procedure C

WARNING – HV training required / HV power down must be performed by certified technician

For models 294, 295, 296, and 297; only AMG models.

On AMG-EQ models, front prefuse box in the major assembly compartment is replaced in addition to the interior prefuse box.

1. Remove trim on A-pillar / door sill panel.

2. Replace **interior** prefuse box **(F150/7).**

   For basic data on **models 294, 295, 296, and 297**, see AR54.15-P-1350EQS.
   - Step 1 – Remove floor covering on front passenger side, see:
     - AR68.80-P-0008EQD for **294** and **296**
     - AR68.80-P-0008EQS for **295** and **297**

   To make it easier to fold back the floor covering, the trim (Figure 6, C) and the stowage tray (Figure 6, D) in front of the center console must be partially removed (see Work Procedure B).

Mounting nuts must be reused.

Nm **M6** nut, positive line to vehicle interior prefuse box: **8 Nm**.

Nm **M8** nut, positive line to vehicle interior prefuse box: **16 Nm**.

Positive lines are shape-coded to match the prefuse box and cannot be mixed up.

Positive lines are secured with additional cable ties.

3. Replace **front** prefuse box **(F150/3).**

   For basic data on **models 294, 295, 296, and 297**, see AR54.15-P-1330EQS.



Figure 7, HV electrical connectors with protective covers (001 589 06 91 00)

Pay close attention that High Voltage electrical connectors for DC/DC converter are clean and free from coolant

ⓘ Recommend performing **Step 4.2 prior to 4.1** of AR54.15-P-1330EQS to aid in removal of DC/DC converter.

NOTE: For AR54.15-P-1330EQS **Step 5;** disconnect electrical connections first, then unclip from bracket **(Figure 8).**



Figure 8

4. Re-connect ground line of 12 V battery.
5. Read out and erase fault memory.

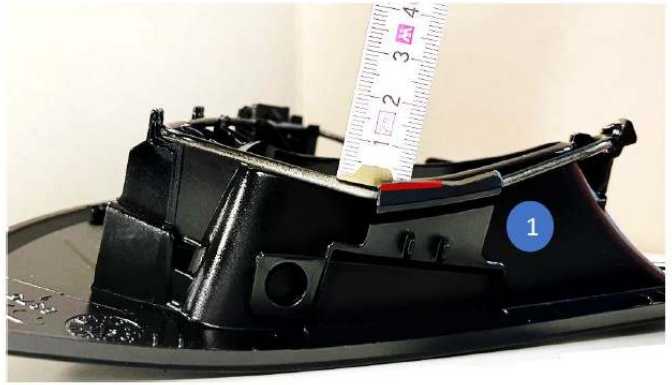


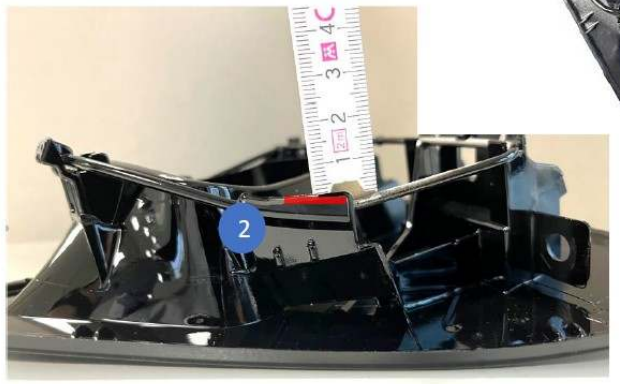
294 R17 Wheel Inlay Rework

Mechanical rework of inlays

- Rework (1) A294 401 18 00 and (4) A294 401 17 00 in kit A2944000200.
- Take off approx 2mm as marked in picture (red box) with cutting pliers.
- 2 positions per inlay.
- Return parts to box.








BBC
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The blueprint Mercedes laid out three years ago predicted that half the vehicles the company sold would be electrified, meaning EVs or hybrids, by 2025. That goal has now been pushed back five years to 2030, according to the financial news wire. It's easy to see why the automaker no longer feels so bullish. Feb 23, 2024

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Mercedes Won't Go All-Electric by 2030 as It Once Promised


Thank you very much!
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