

911 GT3 RS Manthey Performance Kit

Vehicle Type: **911 GT3 RS**

Model Year: **As of 2019**

Situation: **Retrofitting**

Note: The Manthey Performance Kit for the 911 GT3 RS (type 991.2) was developed in close collaboration between the Porsche Development Center in Weissach and Manthey Racing GmbH.

The Tequipment range is aimed at the target group of motor sports enthusiasts and amateur motor sports drivers.

NOTICE

- **The components have been tested and approved together. If different from TEQ, the available individual options must be requested via TEQ.**

Parts Info:	991.044.805.05	991 GT3 RS Manthey Performance Kit (with FA lift) for Magnesium rim
	991.044.805.06	991 GT3 RS Manthey Performance Kit (without FA lift) for Magnesium rim
	991.044.805.07	991 GT3 RS Manthey Performance Kit (with FA lift) for Aluminium rim
	991.044.805.08	991 GT3 RS Manthey Performance Kit (without FA lift) for Aluminium rim

Parts to be ordered separately:

WHT.008.186	4 x	⇒ M12 x 1.5 x 62 screws for front brake calliper
991.609.181.80	2 x	⇒ Front brake pad wear indicator
999.067.053.09	4 x	⇒ M12 x 1.5 x 85 screws for rear brake calliper
991.609.185.00	2 x	⇒ Brake pad wear indicator, rear (only necessary if PCCB pads are installed)
PAF.003.923	12 x	⇒ Lock nut for securing dome bearing to body
999.084.123.09	4 x	⇒ Collar nut securing connecting link (anti-roll bar)
PAF.008.550.00	2 x	⇒ Lock nut securing damper strut support bearing to piston rod
999.084.445.01	2 x	⇒ Lock nut for connecting lower trailing arm to wheel bearing housing
9A7.007.483.00	4 x	⇒ External hexalobular screw for connecting seat frame to body
PAF.008.243	2 x	⇒ Screws for hook on rear lid

999.073.509.02	4 x	⇒ M6 x 12 screws securing wings to wing support
999.085.051.03	4 x	⇒ M6 nuts securing wing to wing support
PAD181220	1x	Primer
PAD004660	1x	2K pane adhesive set
D 181802M1	1x	Activator
D 00940104	1x	Cleaning solution

Suspension alignment: Intermediate plates may be required for adjusting the camber values on the rear axle. Order the required intermediate plates accordingly:

9F1.505.184.A	2 x	⇒ Intermediate plate, 0.5 mm
9F1.505.184.B	2 x	⇒ Intermediate plate, 1 mm
9F1.505.184.C	2 x	⇒ Intermediate plate, 2 mm
9F1.505.184.D	2 x	⇒ Intermediate plate, 4 mm
9F1.505.184.F	2 x	⇒ Intermediate plate, 0.3 mm

Also order the following stickers:

95B.010.004	1 x	⇒ Vehicle identification number (VIN) sticker, engine code
7PP.010.786.T	1 x	⇒ "MOBIL 1" engine oil sticker



Information

Further overviews of the parts are shown before each relevant step.



Information

Please pass all this information on to the customer.

Also hand the race track booklet included with the parts over to the customer.



Information

Some of the repair illustrations show only one side of the vehicle or a similar component

Naturally, some steps also have to be performed on the opposite side of the vehicle as well

Content:

- 1. Preliminary work
- 2. Chassis assembly
- 3. Installation of new brake pads and brake lines
- 4. Mounting of the flaps on the front apron
- 5. Mounting the air control elements on the underbody
- 6. Installation of rear cover and rear wing
- 7. Installation of rear wheel covers
- 8. Performing suspension alignment

Assembly:



Information

Please note the procedure and preliminary work required for painting the rear lid. ⇒ *Installation and Conversion Instructions '090800 Preliminary work/Painting MR rear lid'*



Information

Some of the repair illustrations show only one side of the vehicle. Naturally, some steps also have to be performed on the opposite side of the vehicle as well. These must be carried out as a mirror image of the steps shown.

NOTICE

Vehicle and driver weight

- Before starting the alignment, please ensure the following conditions are met:
 - ⇒ Fuel tank is completely full
 - ⇒ Driver's weight (incl. helmet and racing suit) has been determined or enquired about and is placed on the driver's seat with an equivalent weight

1 Preliminary work

NOTICE

Painting components

- Risk of warping of components
- Risk of damage to components
- ⇒ Observe the guidelines and instructions for painting components in the Paint Manual.
- ⇒ Always place parts without tension on the painting devices provided during painting and drying processes.

1.1 Paint the new carbon rear cover in accordance with the vehicle color code in the workshop manual.

1.2 Connect battery charger. ⇒ *Workshop Manual '090800 Battery trickle charge'*

- 2 Chassis assembly. **Leave all four wheels removed as described in the Chassis section.**

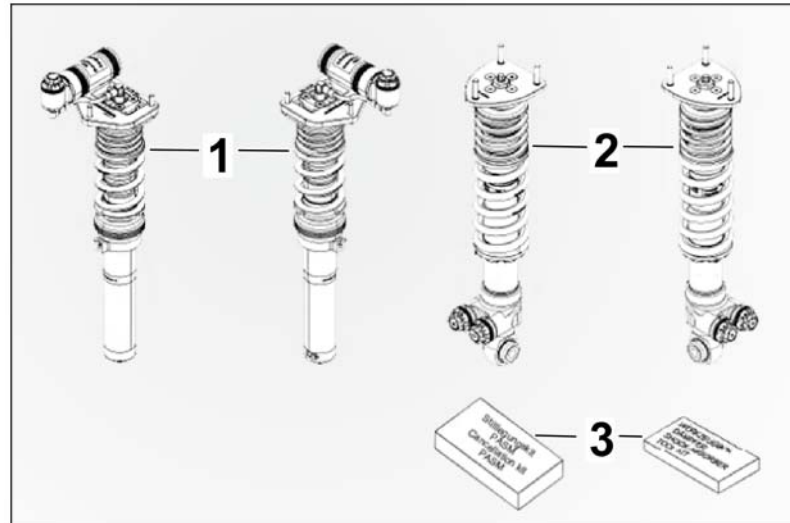


Figure 2

- Kit with 4 dampers/springs/dome bearings including PASM decommissioning kit **with a front axle lift** — 991.044.806.57
 - Kit with 4 dampers/springs/dome bearings including PASM decommissioning kit **without a front axle lift** — 991.044.806.60
- ⇒ **Figure 2-1**- - Shock absorber front axle **with a lift** — 991.044.806.58 **without a lift** — 991.044.806.61
- ⇒ **Figure 2-2**- - Shock absorbers, rear axle — 991.044.806.59
- ⇒ **Figure 2-3**- - PASM decommissioning kit
- 2.1 Remove all four wheels. ⇒ *Workshop Manual '090800 Removing and installing wheel with central bolt'*
- 2.2 Remove front spring strut. ⇒ *Workshop Manual '090800 Removing and installing front spring strut'*
- 2.3 Convert the front axle lift system if installed ⇒ *Workshop Manual '090800 Disassembling and assembling front spring strut'*; otherwise, continue with Step 2.4

2.4 Convert the front suspension struts with the lift system.

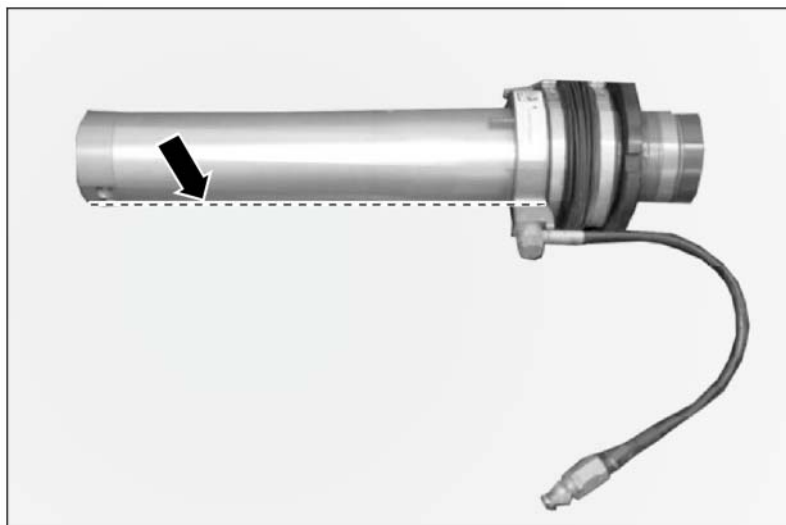


Figure 3

1. – Carefully mount the lift unit on the housing of the new shock absorber. Push the lift unit up to the collar on the damper housing (end stop). Align the connection of the lift unit with the holes in the bottom of the housing. ⇒ *Figure 4 -Arrow and line-* Do not use force during assembly. Never hit the upper edge of the lift unit (gasket) with a hammer.

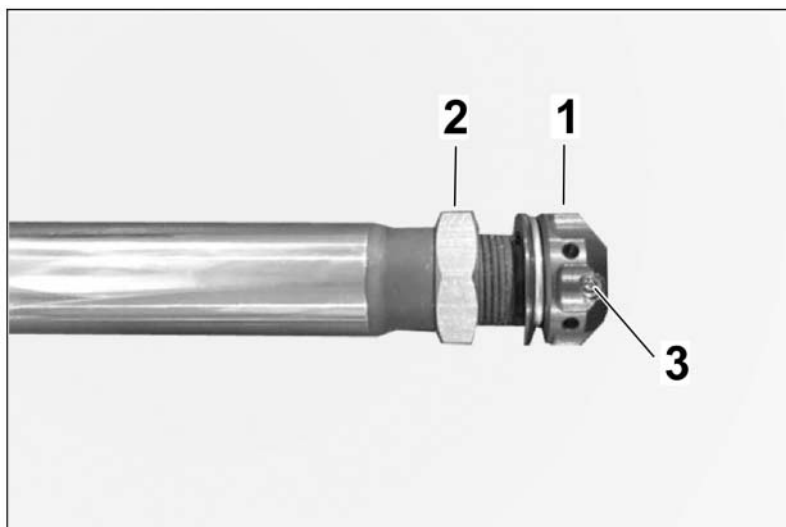


Figure 4

2. – Remove the adjustment wheel for the rebound adjustment from the new damper unit ⇒ *Figure 4-1-* and the fastening nut ⇒ *Figure 4-2-* of the damper housing. Do not completely remove the grub screw ⇒ *Figure 4-3-* of the adjusting wheel. Only loosen it. Otherwise, it may get lost!

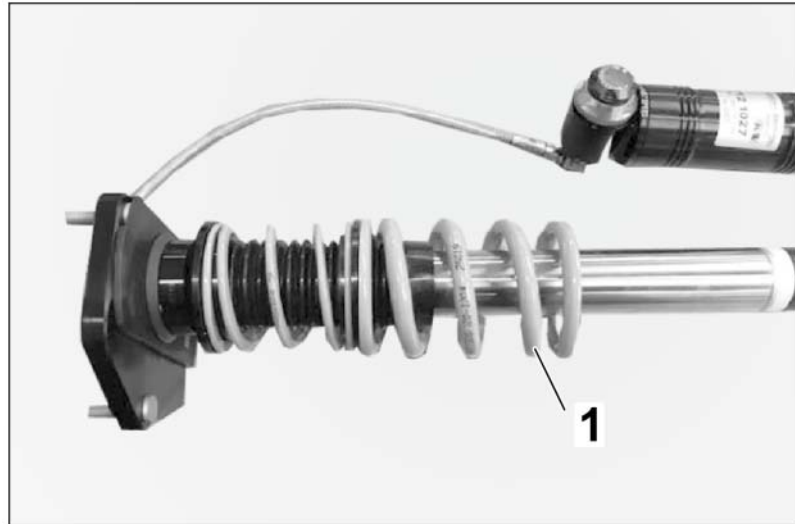


Figure 5

3. – Insert the spring package consisting of the helper spring, intermediate ring and main spring into the damper unit as shown in the picture. The spring package is always mounted with the helper spring at the top (on the upper spring plate).



Figure 6

4. – All four components must be installed in the order shown! If necessary, the arrangement must be corrected! The grooves in the 4 mm/ 0.157 in thick packer ⇒ *Figure 6-1* - must point downwards (in the direction of the rebound adjustment).

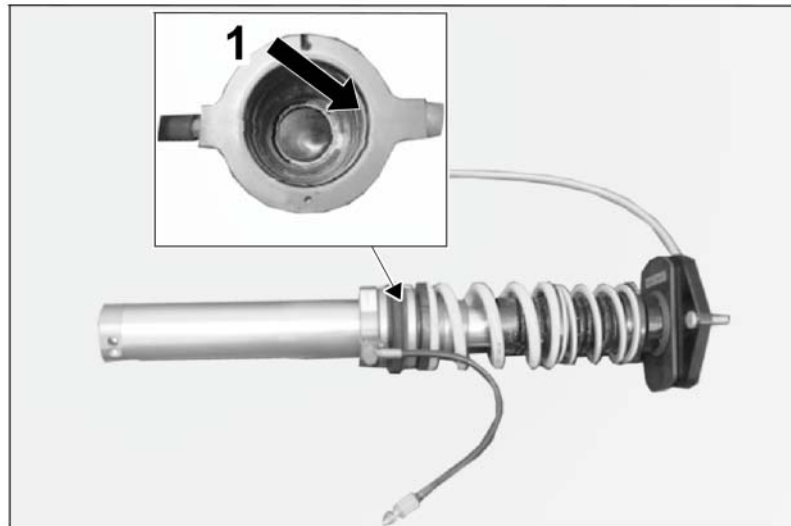


Figure 7

5. – Mount the strut housing. Make sure that the white plastic disc in the lift unit ⇒ *Figure 7-1*- is positioned almost centrally. Otherwise, it may become damaged during assembly! To assemble, set up the damper unit with the piston rod pointing upwards and assemble the housing from above!



Figure 8

6. – Push the housing onto the damper unit until the thread of the piston rod protrudes approx. 10 mm / 0.394 in ⇒ *Figure 8-1*- from the housing. To check that it is correctly positioned, apply slight pressure to the housing and turn the piston rod by approx. 180° left/right with a suitable open-end wrench. It is possible that the piston rod has not yet snapped into place in the seat of the housing.



Figure 9

7. – If the piston rod is correctly locked in place in the housing, the fastening nut ⇒ *Figure 9-1-* can be assembled. Hold the housing under slight pressure to prevent the piston rod from accidentally slipping out of its seat in the housing. Coat the thread with Loctite 246 (medium strength). **Hexagon nut: Tightening torque 50 Nm (36.9 ftlb.)**



Figure 9.1

- 7.1 – Please note that the damper clamping tool for spring struts with lift must be used in Step 7



Figure 10

- 8. – Push the adjusting wheel ⇒ *Figure 10-1-* onto the adjusting shaft and tighten the grub screw ⇒ *Figure 10-2-*. Make sure that the end of the adjusting shaft is flush with the adjusting wheel. Failure to observe this will lead to functional restrictions of the rebound adjustment. **Grub screw: Tightening torque 2.5 Nm (1.8 ftlb.)**

2.5 Install front spring strut. ⇒ *Workshop Manual '090800 Removing and installing front spring strut'*

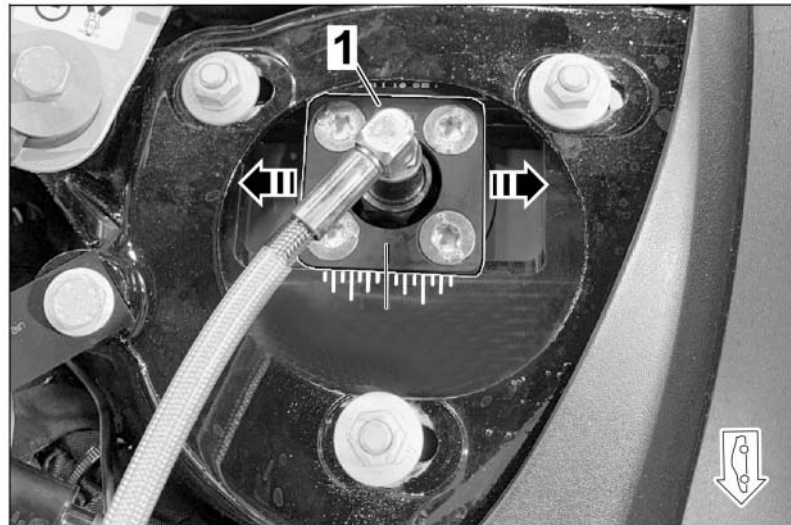


Figure 11

- 9. – Camber adjusting plate on the support bearing (⇒ *Figure 11-1-*) starting from the outer stop (minimum camber) is in position as shown ⇒ *Figure 11*. Tighten the four screws on the camber adjusting plate. **Screw: Tightening torque 25 Nm (18.4 ftlb.)**

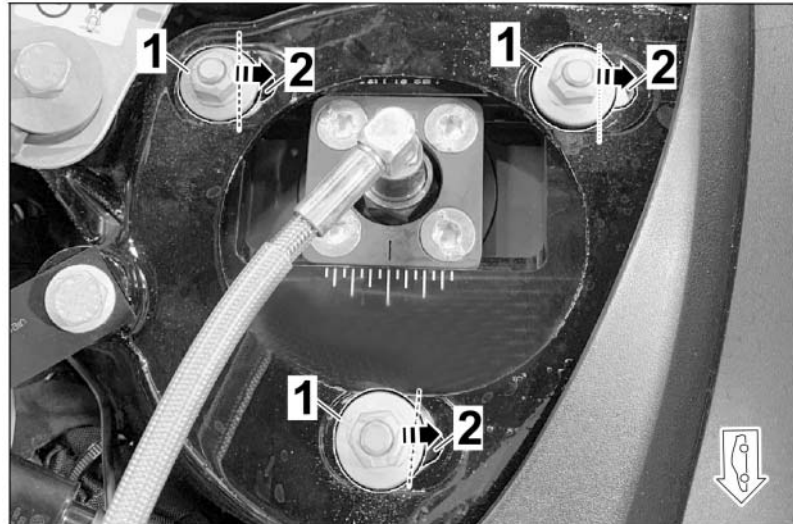


Figure 12

10. – Place the support bearing over the elongated holes \Rightarrow Figure 12-1- in the dome into the center position (picture is different). Fasten the support bearings to the dome with three new collar nuts. **Collar nut: Tightening torque 33 Nm (24.3 ftlb.)**

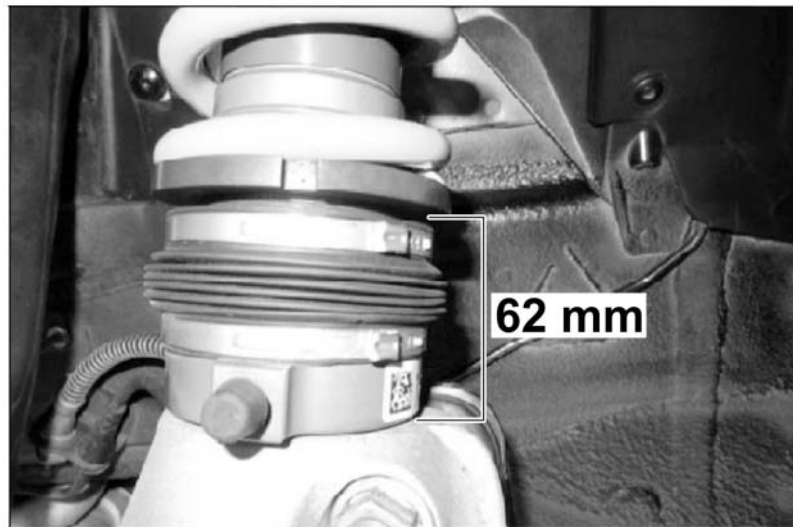


Figure 13

11. – Roughly set the wheel heights for wheel alignment. On the front axle, the height from the upper edge of the wheel carrier to the lower edge of the lower spring plate is set at 62 mm / 2.44 in \Rightarrow Figure 13. **If the chassis variant is installed without a lift system, this measurement is 55 mm / 2.165 in .** Finally, reconnect the lift system and screw the retaining bracket on tight.

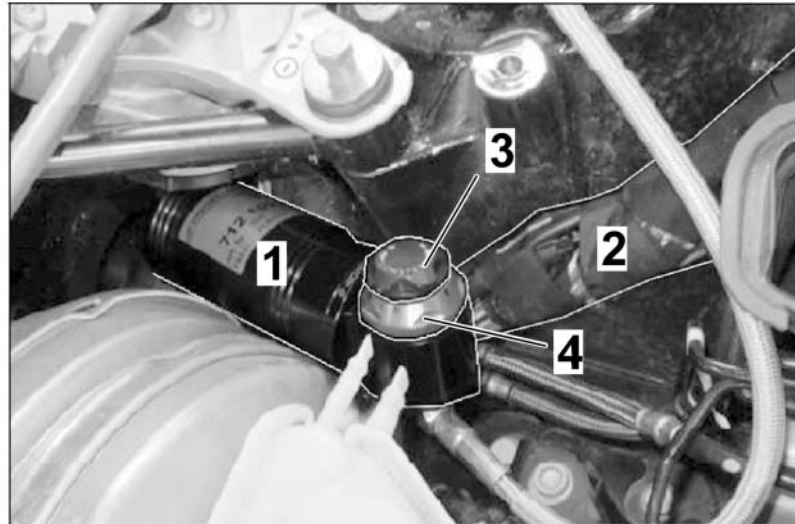


Figure 14 (LHD vehicle)

12. – Attach the pressure cell ⇒ *Figure 14 (LHD vehicle)*-1- of the damper on the driver's side with two cable ties on the wiring harness shown ⇒ *Figure 14 (LHD vehicle)*-2-. Fastening points for right-hand drive vehicles (RL) may vary: Mount the pressure cell onto the existing wiring harness as with left-hand drive vehicles (LL, ⇒ *Figure 14 (LHD vehicle)*).

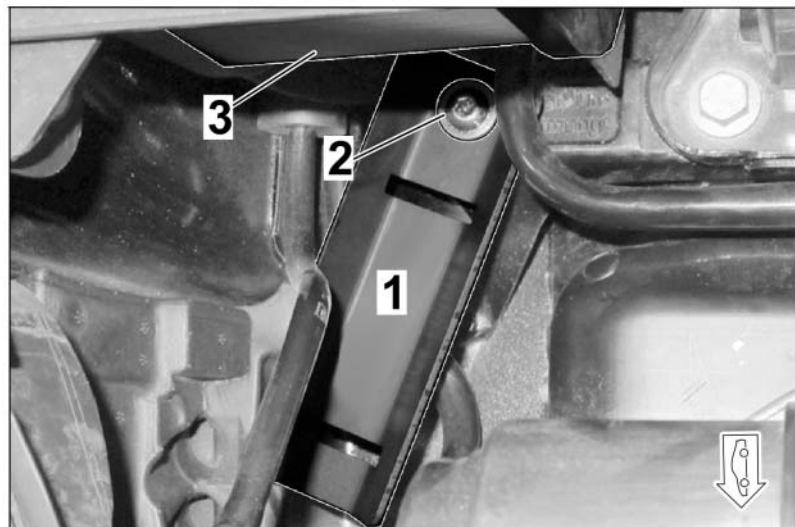


Figure 15

13. – To fasten the pressure cell of the right-hand damper, the holder ⇒ *Figure 15-1-* is mounted on the thread ⇒ *Figure 15-2-* shown below the interior pollen filter ⇒ *Figure 15-3-* using the supplied pan-head screw. Fasten the pressure cell to the holder with two cable ties. **Pan-head screw: Tightening torque 23 Nm (17 ftlb.)**

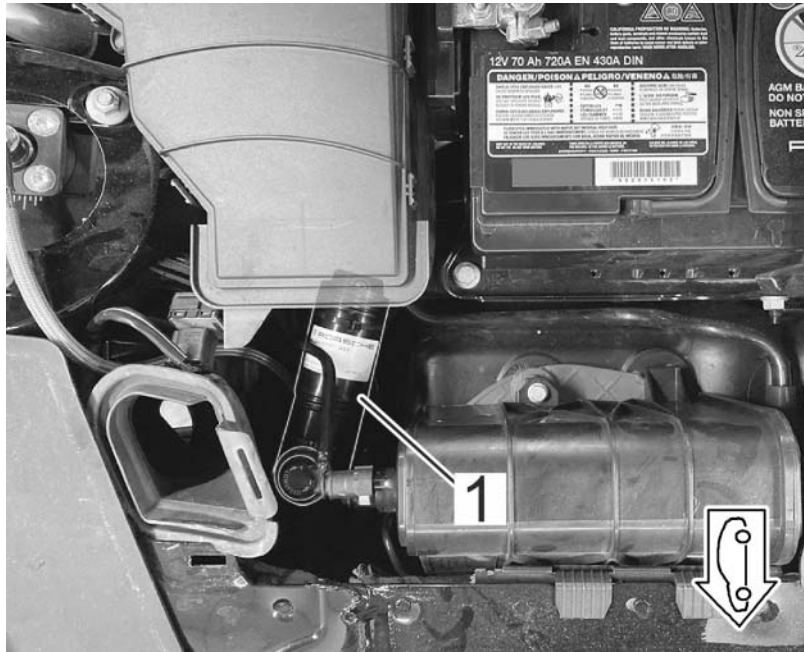


Figure 15.1

13.1 – The overview shows the pressure cell ⇒ *Figure 15.1 -1-* in the final installed position.

- 2.6 Leave the electrical plug connection (on the vehicle side) for PASM on all four axles in the bracket provided for this purpose. Connector remains free.
- 2.7 Damper setting for the front axle:

Traction stage (purple at the bottom of the damper):	Position 12
LowSpeed pressure level (purple at the pressure cell):	Position 5
HighSpeed pressure level (gold at the pressure cell):	Position 7

- 2.8 Remove rear spring strut. ⇒ *Workshop Manual '090800 Removing and installing rear spring strut'*

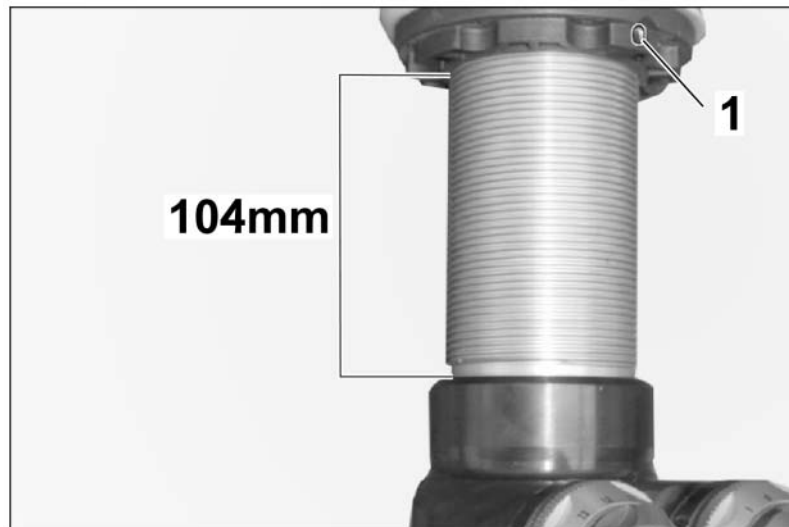


Figure 16

- 14. – Set the chassis height before installing the rear axle dampers in the vehicle. For vehicles with and without a lift system, the pre-setting from the lower housing collar to the lower edge of the spring plate is 104 mm/ 4.09 in ⇒ *Figure 16*. The locking screw on the spring plate may have to be loosened for adjustment.

- 2.9 Install rear spring strut. ⇒ *Workshop Manual '090800 Removing and installing rear spring strut'*

- 2.10 Damper setting for the rear axle:

Rebound stage (R LowSpeed - purple):	Position 6
Rebound (R Highspeed - gold):	Position 6
Compression level (C LowSpeed - purple):	Position 7
Pressure level (C HighSpeed - gold):	Position 7

- 2.11 Installation of the decommissioning kit for the active damper control PASM. In order to avoid error messages/error memory entries after removing and replacing the active shock absorbers (PASM), it is necessary to connect the supplied decommissioning kit to the control unit for the chassis control. The control unit for the chassis control is positioned in the area in front of the engine cover in the interior.
- 2.12 Remove fire extinguisher . ⇒ *Workshop Manual '090800 Removing and installing fire extinguisher'*
- 2.13 Remove passenger seat. ⇒ *Workshop Manual '090800 Removing and installing front seat (sports bucket seat)'*
- 2.14 Remove rear cover. ⇒ *Workshop Manual '090800 Removing and installing rear cover (Coupé)'*

2.15 Mount the PASM decommissioning kit.

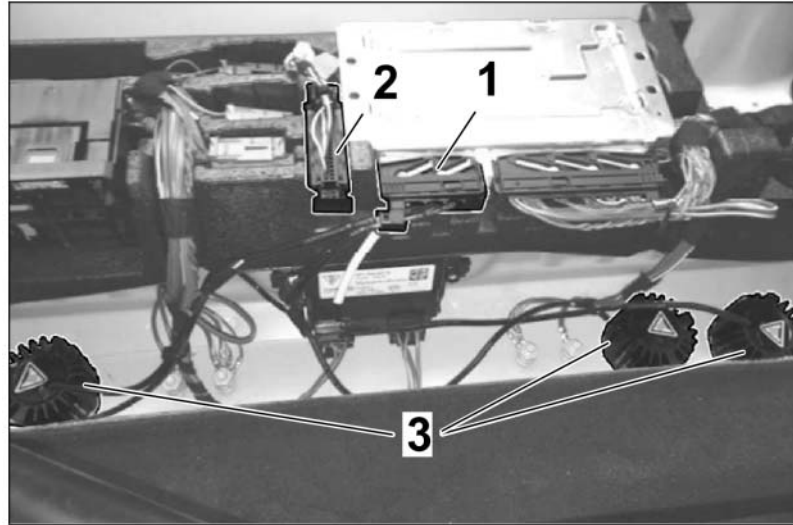


Figure 17

15. – Unlock and remove the connector ⇒ *Figure 17-1-* for the damper control on the control unit.
 16. – Fix the standard connector plug ⇒ *Figure 17-2-* to the left of the control unit in the foam carrier.
 17. – Insert the supplied new central plug in the control unit.
 18. – Attach the resistors as shown above ⇒ *Figure 17-3-* on the surface below the control unit, cleaning the adhesive surface beforehand.
 19. – Make sure that all electrical plug contacts are correctly locked.
- 2.16 Install rear cover. ⇒ *Workshop Manual '090800 Removing and installing rear cover (Coupé)'*
- 2.17 Install passenger seat. ⇒ *Workshop Manual '090800 Removing and installing front seat (sports bucket seat)'*
- 2.18 Install fire extinguishers if included. ⇒ *Workshop Manual '090800 Removing and installing fire extinguisher'*
- 2.19 Read out the fault memory and clear it if necessary. ⇒ *Workshop Manual '090800 Fault memory for on-board diagnosis'*

⚠ WARNING
Danger of injury and damage from brake fluid

- **Poisonous if swallowed**
- **Irritation and damage to skin**
- **Avoid contact with paint surfaces**

⇒ **Only store brake fluid in suitable, labelled containers**

- ⇒ Wear protective gloves and goggles
- ⇒ In the event of contact (eyes or skin), wash immediately with water
- ⇒ In the event of contact with paint surfaces, wash off immediately with water - do not wipe off

NOTICE

Only change the brake pads on vehicles with PCCB

- 3 Installation of new brake pads and brake lines.

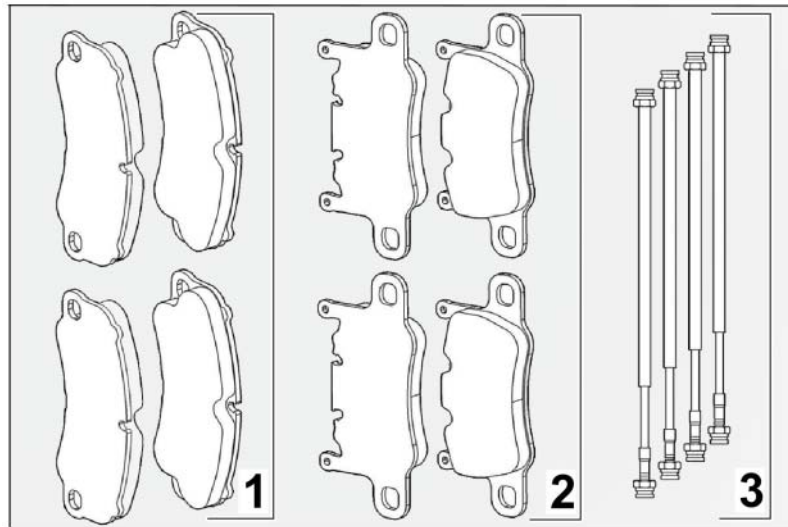


Figure 18

⇒ **Figure 18-1** - Brake pads, front axle — 991.044.806.36

⇒ **Figure 18-2** - Brake pads, rear axle — 991.044.806.37

⇒ **Figure 18-3** - Brake lines sections (steel braided), front axle and rear axle — 991.044.806.38

3.1 Conversion of front axle area

- 3.1.1 Remove brake calliper. ⇒ *Workshop Manual '473919 Removing and installing front brake calliper'*
- 3.1.2 Replace disc brake pads. ⇒ *Workshop Manual '473919 Replacing front disc brake pads'*
- 3.1.3 Replacing brake line

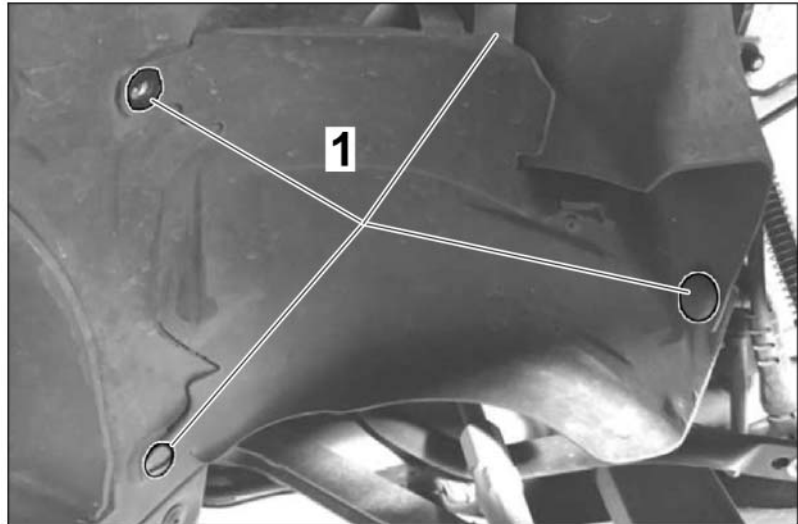


Figure 19

1. - Remove the screws \Rightarrow Figure 19-1- and remove the front left and right brake air guides.

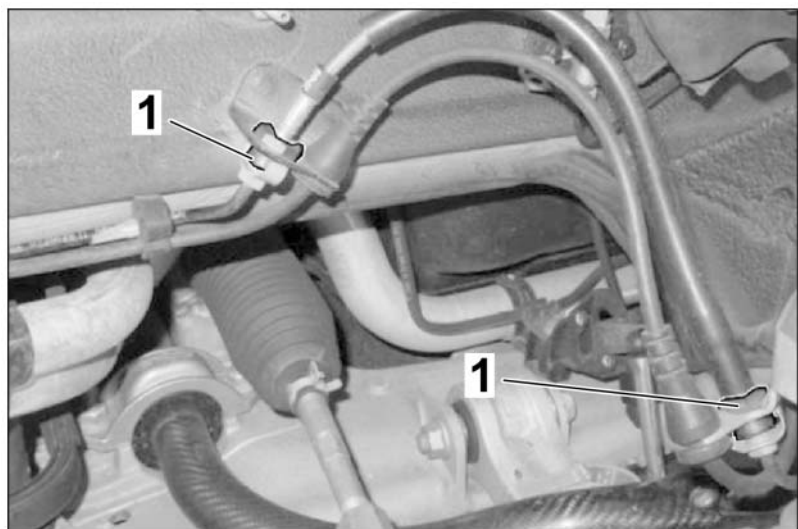


Figure 20

2. - Loosen the screw connection of the brake line \Rightarrow Figure 20-1- and remove the brake line.
3. - Lay the new brake line in the same way as the standard brake line, attach it and tighten the screw connection. **Brake line screw connection: Tightening torque 10 Nm (7.4 ftlb.)**
4. - Clean adjacent components of any brake fluid that may have leaked out.
5. - Mount left and right brake-disc air guides \Rightarrow Figure 20.

- 3.1.4 Install brake calliper. ⇒ *Workshop Manual '473919 Removing and installing front brake calliper'*
- 3.2 Conversion of rear axle area
 - 3.2.1 Remove brake calliper. ⇒ *Workshop Manual '474119 Removing and installing rear brake calliper'*
 - 3.2.2 Replace disc brake pads on the rear axle. ⇒ *Workshop Manual '474119 Replacing rear disc brake pads'*
 - 3.2.3 Replacing brake line

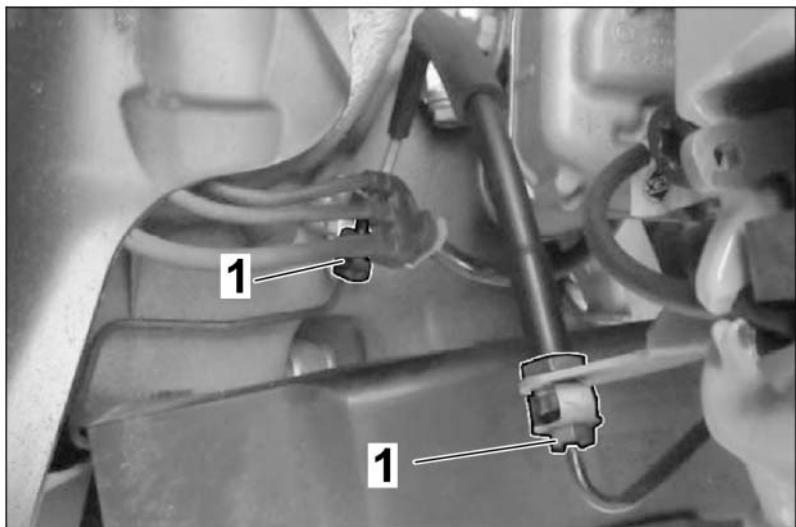


Fig. 21 (sample illustration)

- 1. – Loosen the screw connection of the brake line ⇒ *Fig. 21 (sample illustration) -1-* and remove the brake line.
 - 2. – Lay the new brake line in the same way as the standard brake line, attach it and tighten the screw connection. **Brake line screw connection: Tightening torque 10 Nm (7.4 ftlb.)**
 - 3. – Clean adjacent components of any brake fluid that may have leaked out.
- 3.2.4 Install brake calliper. ⇒ *Workshop Manual '474119 Removing and installing rear brake calliper'*
 - 3.3 Bleed brake system. ⇒ *Workshop Manual '474119 Bleeding brake system'*

4 Mounting of the flaps on the front apron.

- 1 – Flap, left — 991.044.806.51
- 2 – Flap, right — 991.044.806.52
- 3 – Template — 991.044.806.50

- 4.1 Mount the flaps, installation position of the flaps ⇒ *Figure 28-1*-. The flaps are mounted on the side surfaces of the front apron.

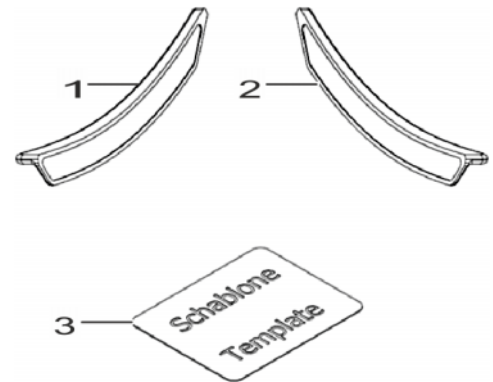


Figure 27

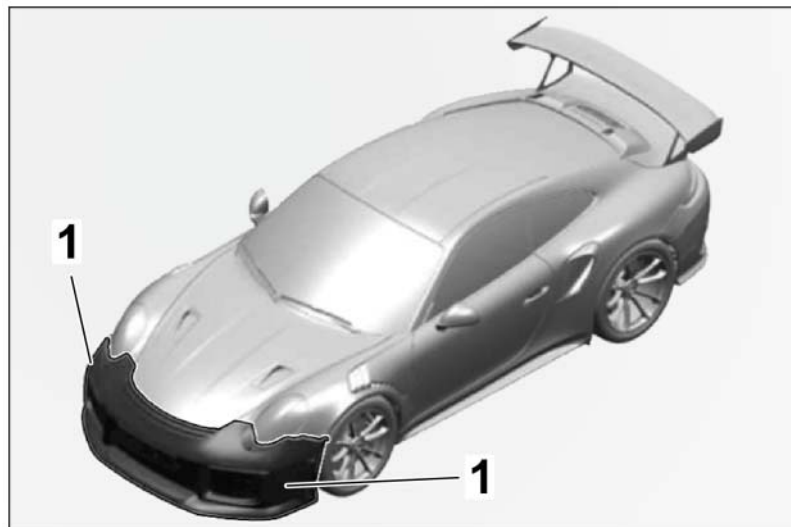


Figure 28

- 1. – Thoroughly clean the adhesive surfaces with isopropanol (alcohol). The adhesive surfaces must be free from dust, dirt and grease of any kind.



Figure 29

2. – Attach the template ⇒ *Figure 29* by means of adhesive strips on the side surface of the front apron. Pay attention to the correct orientation of the template! Place the template on the reference edge below (transition to the front lip) and on the rear reference line (edge of the air outlet).



Figure 30

3. – Remove the protective film from the adhesive tape of the flap and insert the component on the edge of the adhesive template. Pay attention to the correct orientation when attaching the flap. The positioning cannot be corrected afterwards. Press the flap firmly and as flat as possible against the front apron for 10 seconds.
4. – Remove the template. The flap on the left is now installed. Install the flaps on the right side the same way.
5. – Use the reverse side of the template to mount the flap on the right side.
6. – Only the double-sided adhesive tape used here may be used.

5 Mounting air control elements in the area of the underbody

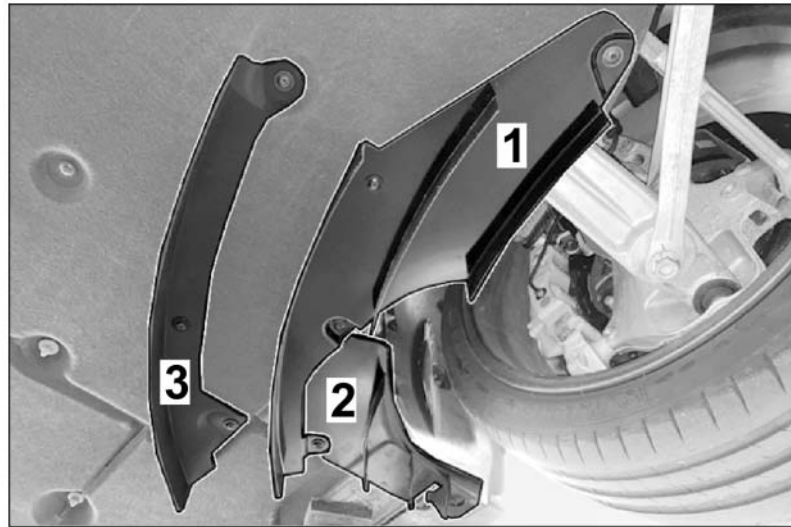


Figure 31

- 1 – Air control element, front left — 991.044.806.10 / front right — 991.044.806.11 (not shown)
- 2 – Air control element, left rear — 991.044.806.12 / right rear — 991.044.806.13 (not shown)
- 3 – Air control element, left inside — 991.044.806.14 / air control element, right inside — 991.044.806.15 (not shown)

5.1 Removing the standard air control elements

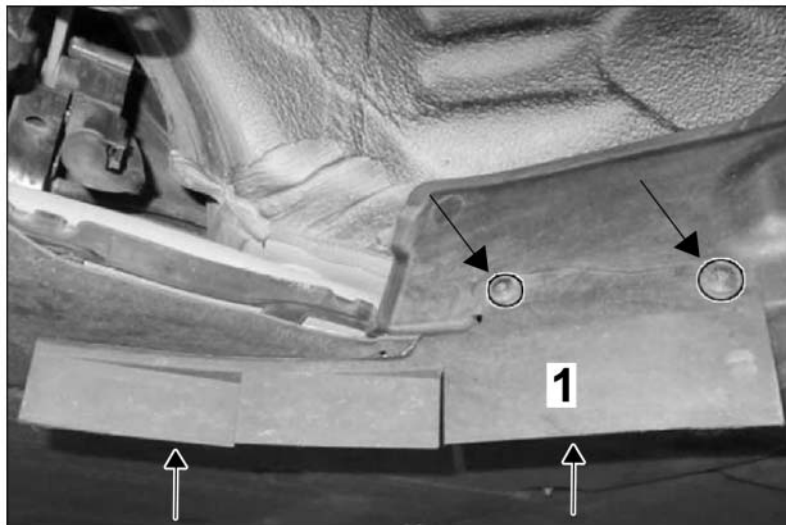


Figure 32

1 – Air control element (transition from underbody to wheelhouse)

- 5.1.1 Remove tapping screws (4 pcs. ⇒ *Figure 32-Arrows-*) on air control elements (transition from underbody to wheelhouse ⇒ *Figure 32-1-*) on the left/right side.
- 5.1.2 Remove left/right air control elements (transition from underbody to wheelhouse ⇒ *Figure 32-1-*); these are NO longer needed.
- 5.1.3 Remove the aero insert on the front wheelhouse liner (left/right) (⇒ *Figure 33*).

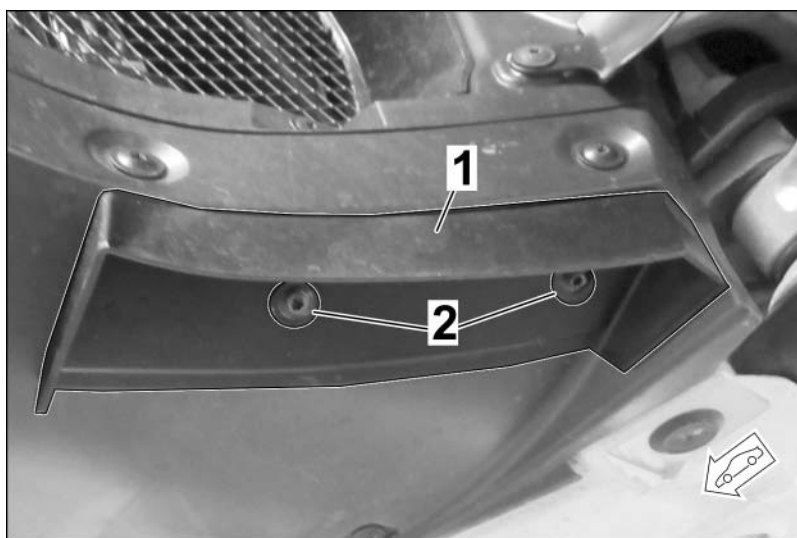


Figure 33

- 1** – Aero insert (wheelhouse liner, left)
- 2** – Screw

5.2 Mounting the new air control element (inside) on the underbody cover (front) on the left/right

- 5.2.1 Mount the respective air control element (inside) with screws (2 pcs.) at the existing fastening points (front/rear) on the underbody cover (front) on the corresponding side (left/right) (⇒ *Figure 34*).

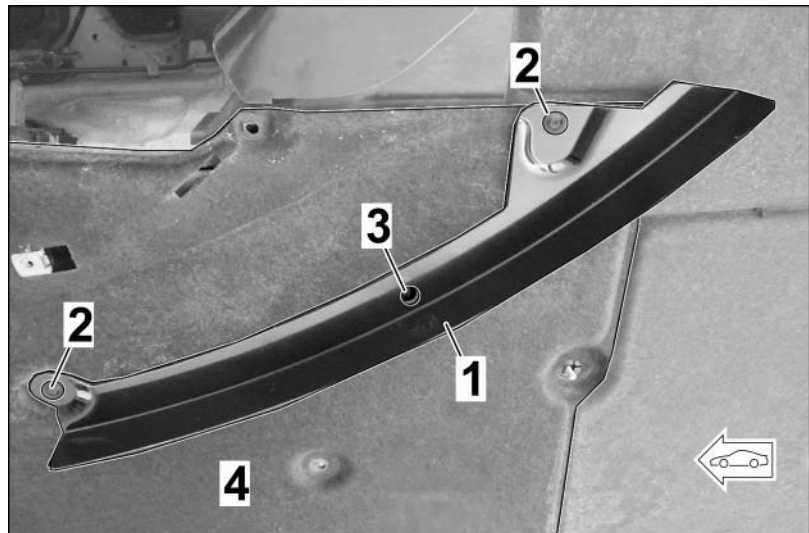


Figure 34

- 1 – Air control element (inside), left side
- 2 – Rear fastening points (front/rear)
- 3 – Fastening point (center)
- 4 – Underbody cover (front)
- Please use ⇒ *Figure 31* as a guide

- 5.2.2 Replicate middle hole in air control element (inside ⇒ *Figure 34-3-*) on the underbody cover (front).
- 5.2.3 Remove the air control element (inside) again.
- 5.2.4 Remove underbody cover (front). ⇒ *Workshop Manual '519219 Removing and installing cover for front underbody'*
- 5.2.5 Drill a hole $\varnothing = 6.5 \text{ mm} / 0.255 \text{ in}$ at the marking.
- 5.2.6 Position the respective air control element (inside) on the underside of the underbody cover (front, left/right side) at the fastening points (front/rear).
- 5.2.7 Mount the air control element (inside) on the underside of the underbody cover (front) with a new M6 x 30 screw and M6 flange nut at the fastening point (center).
Tightening torque 10 Nm (7.4 ftlb.)
- 5.2.8 Install underbody cover (front). ⇒ *Workshop Manual '519219 Removing and installing cover for front underbody'*

5.3 Pre-assemble new air control elements at the front

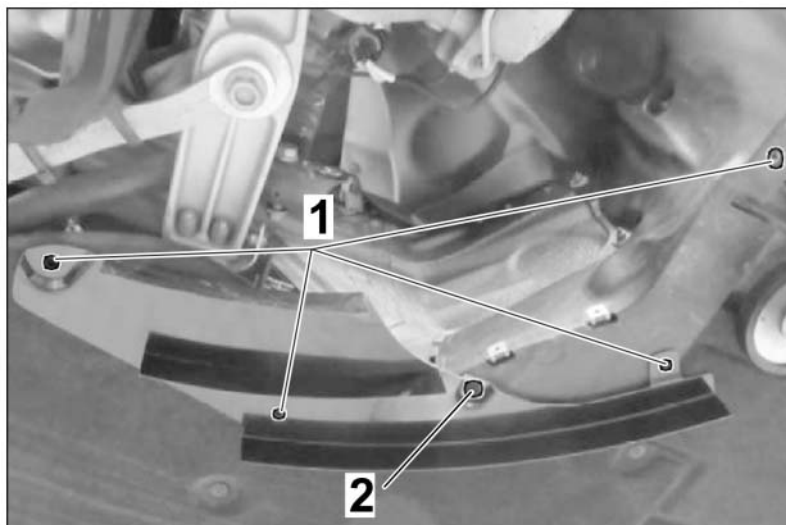


Figure 35

- 1 – Tapping screw
- 2 – Front air control element (left side)

5.3.1 Removing tapping screws (⇒ *Figure 35-1*-)

5.3.2 Pre-assemble the air control element (front) with a new ST4.8 x 19 tapping screw with collar (fastening kit included) on the underbody on the left-hand side (⇒ *Figure 35*).

5.4 Installing new air control elements at the rear

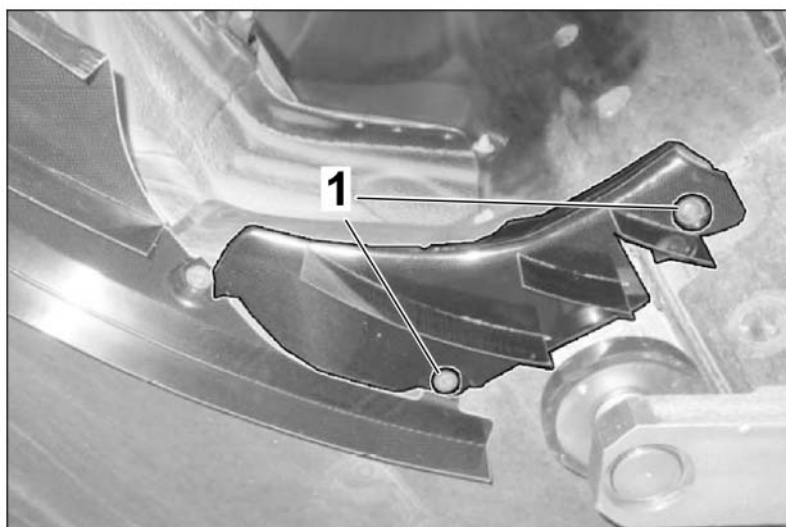


Figure 36

- 1 – ST4.8 x 19 tapping screw with collar

- 5.4.1 Mount air control element (rear 991.044.806.12) with ST4.8 x 19 tapping screws with collar (2 pcs. ⇒ *Figure 36-1-*) on the underbody on the left side (⇒ *Figure 36*).
- Tightening torque 3.2 Nm (2.4 ftlb.)**
- 5.4.2 Fasten the air control element (rear) with two more ST4.8 x 16 tapping screws without collar in the area of the wheel arch (⇒ *Figure 37*).
- Tightening torque 3.2 Nm (2.4 ftlb.)**

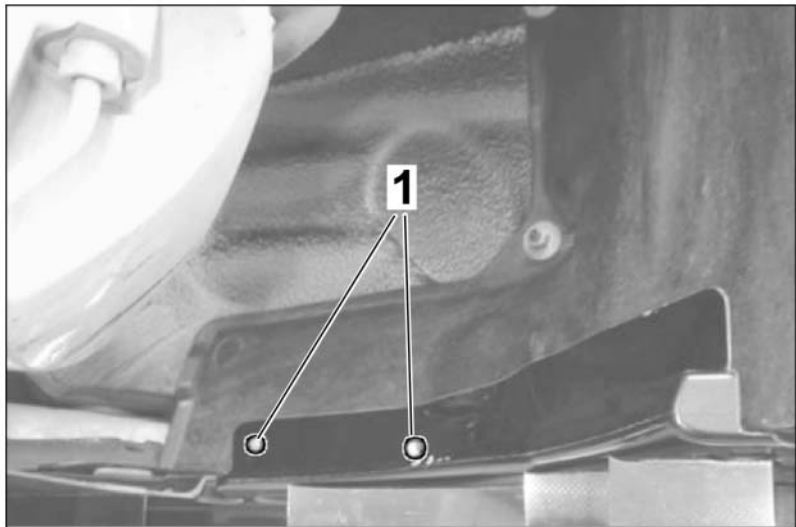


Figure 37

- 1** – ST 4.8 x 16 tapping screw

- 5.5 Finally, fastening the air control elements (front) and air control element (inside)
- 5.5.1 Fasten the air control element (front) to the underbody with two more ST4.8 x 19 TX27 tapping screws with collar (⇒ *Figure 38*).



Figure 38

- 1 – ST4.8 x 19 tapping screws with collar

Tighten all screws. **ST 4.8 x 19 tapping screw: Tightening torque 3.2 Nm (2.4 ftlb.)**

- 5.5.2 Fasten the air control element (inside) with ST 4.8 x 19 screws in the front/rear to the underbody cover (front) (⇒ Figure 39).
Tightening torque 3.2 Nm (2.4 ftlb.)

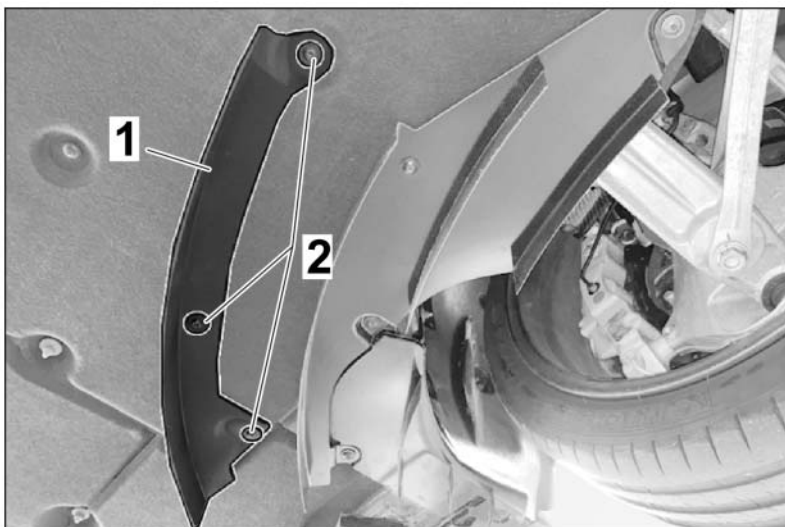


Figure 39

- 1 – Air control element (inside)
- 2 – Fastening points

- 5.6 The air control elements are installed on the right-hand side of the vehicle in the same way.

6 Conversion of mounting brackets, rear cover and rear wing.

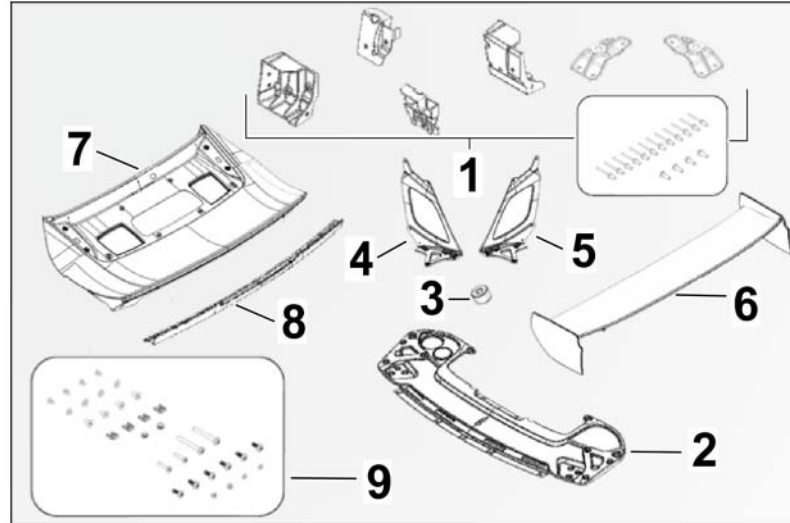


Figure 43

- ⇒ **Figure 43-1-** – Rear body reinforcement set
- ⇒ **Figure 43-2-** – Mounting bracket GT3 RS kit — 991.044.806.53
- ⇒ **Figure 43-3-** – Mounting bracket spacer
- ⇒ **Figure 43-4-** – Left wing support GT3 RS kit — 991.044.806.05
- ⇒ **Figure 43-5-** – Right wing support GT3 RS kit — 991.044.806.06
- ⇒ **Figure 43-6-** – Rear wing GT3 RS kit — 991.044.806.17
- ⇒ **Figure 43-7-** – Rear cover CFK GT3 RS kit — 991.044.806.54
- ⇒ **Figure 43-8-** – Gurney GT3 RS kit — 991.044.806.55
- ⇒ **Figure 43-9-** – Aero parts fastening kit — 991.044.806.56

Scope of parts for “Rear body reinforcement” set (⇒ *Figure 43-1-*):

991.044.806.19	1 x	Reinforcement for left tail light mounting, inside
991.044.806.20	1 x	Reinforcement for right tail light mounting, inside
991.044.806.21	1 x	Reinforcement for left tail light mounting, outside
991.044.806.22	1 x	Reinforcement for right tail light mounting, outside
991.044.806.23	1 x	Reinforcement for rear sealing channel, left
991.044.806.24	1 x	Reinforcement for rear sealing channel, right
991.044.806.18	1 x	Reinforcement fastening, set

- 6.1 Remove rear apron. ⇒ *Workshop Manual '519219 Removing and installing rear apron'*
- 6.2 Remove and dismantle rear lid. ⇒ *Workshop Manual '519219 Replacing rear lid'*
- 6.3 Remove lock base. ⇒ *Workshop Manual '519219 Removing and installing rear lid lock base (cover)'*

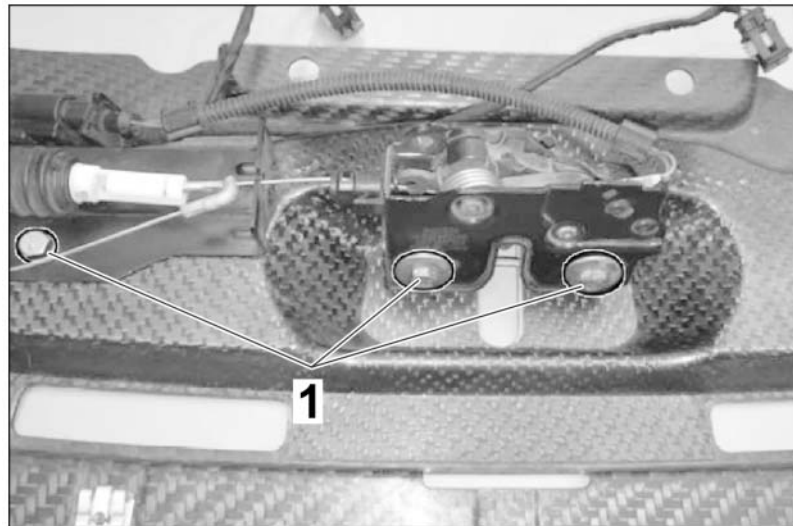


Figure 44

1. – Place the mounting bracket on a suitable surface and remove the lock unit and the complete cable harness, including all retaining clips. Remove the fastening screws \Rightarrow Figure 44 -1- on the lock unit. Remove the cable harness with all retaining clips from the standard mounting bracket.

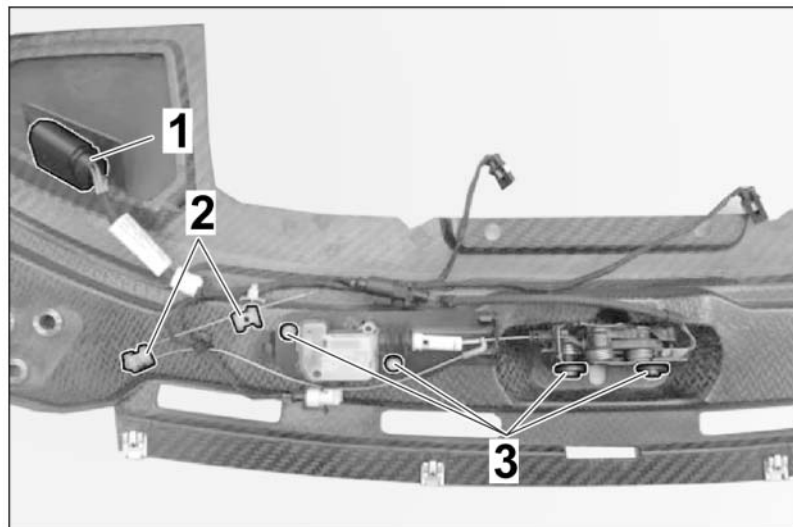


Figure 45

2. – Mount the lock unit and the cable harness on the new mounting bracket. Start by assembling the lock unit. Fasten it with the standard screws at the specified points \Rightarrow Figure 45 -3-. **Screw: Tightening torque 8 Nm (5.9 ftlb.).** The two marked retaining clips for the wire cable of the emergency release \Rightarrow Figure 45 -2- cannot be used. If the retaining pin of these clips is pressed inwards, they can no longer be used.

3. – Next, attach the 12-pin central plug of the mounting bracket. Use the standard retaining clip for this ⇒ *Figure 45 -1-*. The other fastening points then come about automatically.

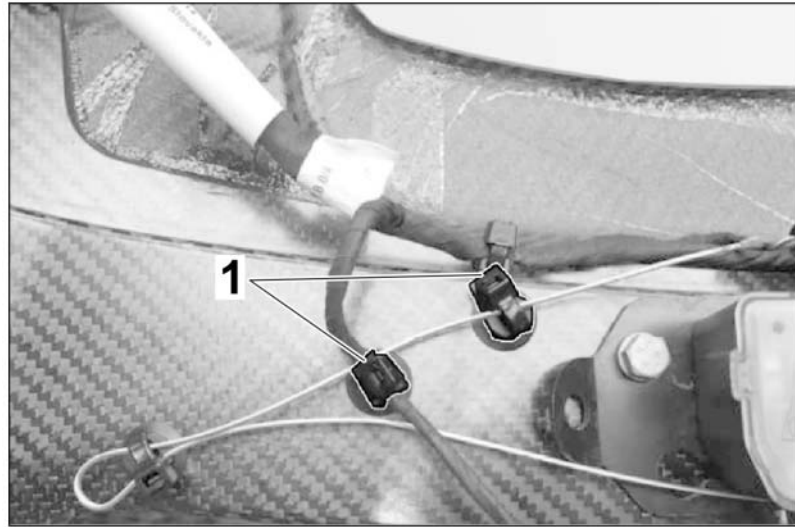


Figure 46

4. – Place new retaining clips (included) at the points shown ⇒ *Figure 46 -1-* into the mounting bracket and fasten the wire cable for the emergency release as shown opposite. Set the mounting bracket aside until it is ready to be installed to the vehicle.

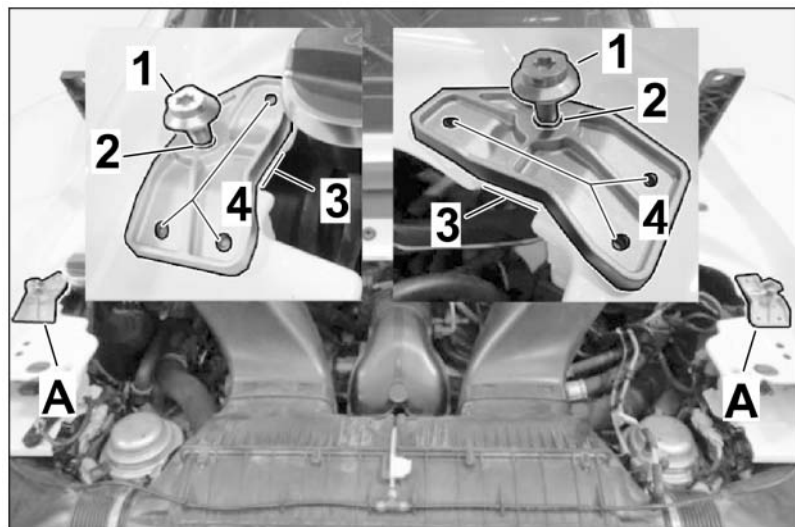


Figure 47

5. – Place the two stiffeners (991.044.806.23) and (991.044.806.24) in the positions shown on the left and right of the rear frame ⇒ *Figure 47 -A-*.

6. – For exact positioning, a fastening screw of the mounting bracket is screwed through the stiffener into the fastening point of the body ⇒ *Figure 47-1-*.
7. – Align the hole in the component centered around the screw ⇒ *Figure 47-2-*.
8. – In addition, align the component parallel to the sheet metal edge of the rear frame ⇒ *Figure 47-3-*.
9. – Replicate the required holes on the rear frame. Remove the stiffeners again for the following work steps ⇒ *Figure 49-1-*.

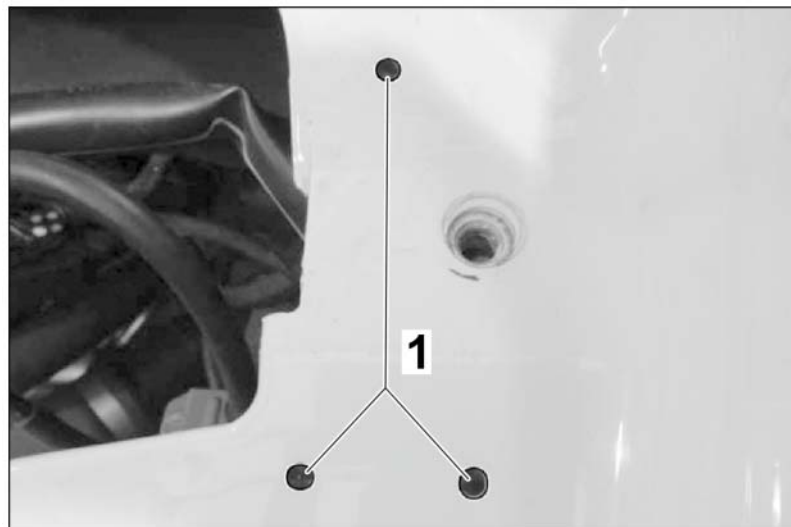


Figure 48

10. – Center mark the drill holes ⇒ *Figure 48-1-*. Drill holes with a diameter of 5.0 mm/ 0.197 in at the markings you made in step 1. The holes must be deburred.
Important: When making the holes, pay attention to the cables and components underneath.



Figure 49

11. – Clean the area \Rightarrow Figure 49-1- for fastening the stiffeners with isopropanol. This step is necessary for the subsequent bonding. **Note:** The SIKAFLEX 260N body adhesive required for bonding the components is included in the scope of delivery.

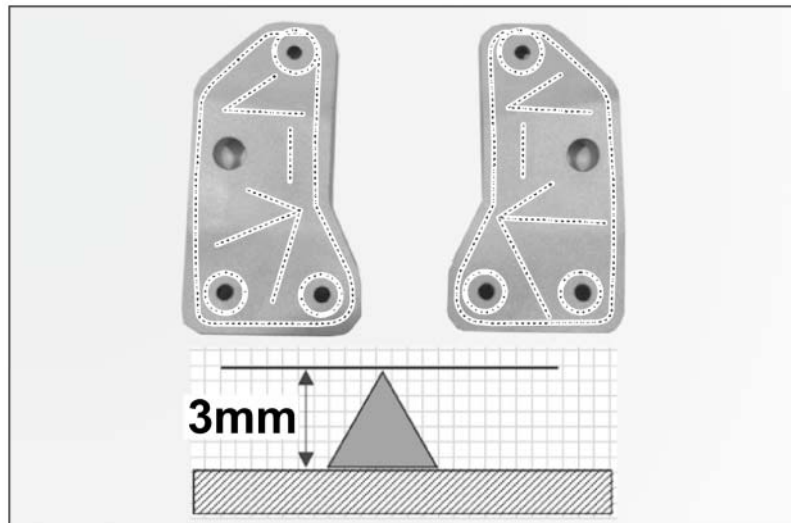


Figure 50

12. – Clean the adhesive surfaces (underside) on the stiffeners with isopropanol. Apply a triangular adhesive bead 3 mm/ 0.118 in high according to the adhesive pattern shown above \Rightarrow Figure 50.



Figure 51

13. – Position the stiffener and align it with the holes made in step 2. Finally, attach the component with the three supplied blind rivets. **Note:** A minimal lateral leakage of adhesive is desired. Note that the curing time of the adhesive is 24 hours at an ambient temperature between 15 °C and 25 °C (59 °F and 77 °F). Use pneumatic rivet pliers to set the blind rivets.

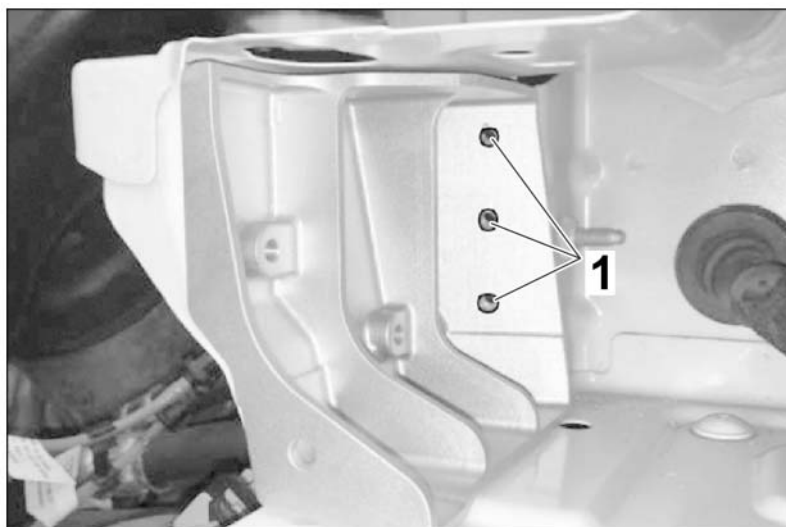


Figure 52

14. – Insert the stiffener (991.044.806.20) on the inside of the right lamp box. Replicate the three required holes on the lamp box and remove the component again for the following work steps ⇒ Figure 52-1-.



Figure 53

15. – Center-punch the drill holes. Drill holes with a diameter of 5.0 mm/ 0.197 in at the markings. The holes must be deburred ⇒ *Figure 53-1*. **Important:** When making the holes, pay attention to the cables and components underneath.

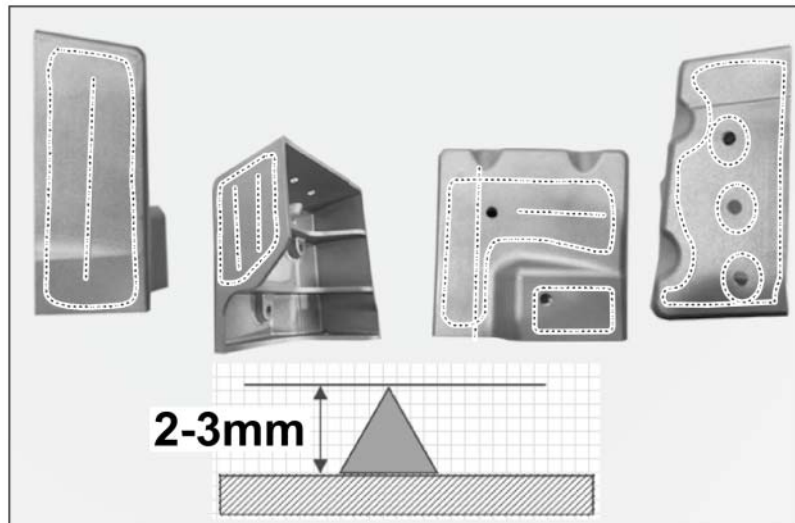


Figure 54

16. – Clean all contact surfaces in the lamp box and on the stiffener with isopropanol. Apply a triangular adhesive bead of 2-3 mm/ 0.079 — 0.118 in on the indicated adhesive surfaces according to the pattern shown.



Figure 55

17. – Position the stiffener and align it with the drill holes. Finally, attach the component with the three supplied blind rivets ⇒ *Figure 55-1-*. **Note:** A minimal lateral leakage of adhesive is desired. Note that the curing time of the adhesive is 24 hours at an ambient temperature between 15 °C and 25 °C (59 °F and 77 °F). Use pneumatic rivet pliers to set the blind rivets.

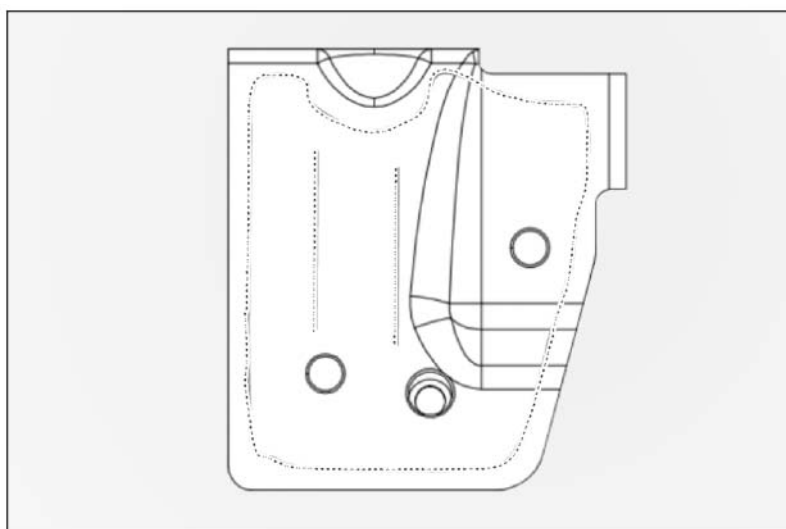


Figure 56

18. – Prepare the outer stiffener (991.044.806.22) for the right lamp box for installation. Clean the adhesive surface on the component and on the body with isopropanol. Apply a 2-3 mm / 0.079 — 0.118 in high triangular bead of adhesive on the back of the outer stiffener according to the pattern shown above.

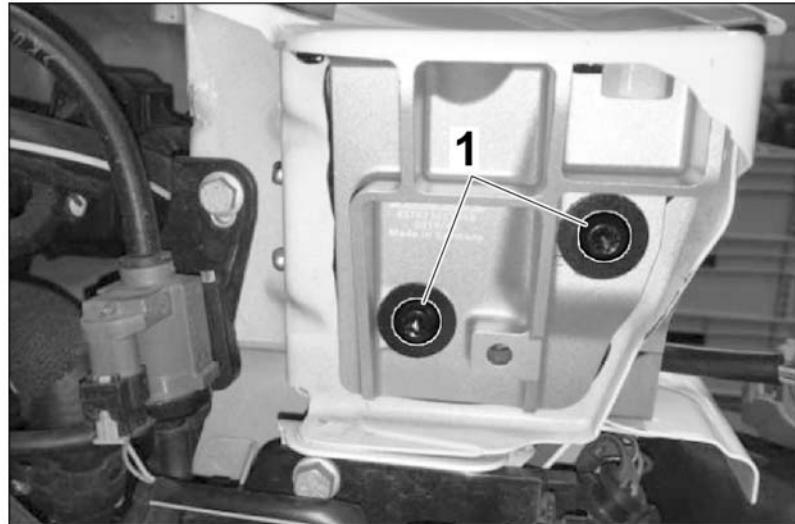


Figure 57

- 19. – Screw the two stiffeners from the outer stiffener with the supplied **M6 x 16 collar screws** (2 pcs.): **Tightening torque 10 Nm (7.4 ftlb.)**.
- 20. – The stiffeners on the left side are mounted in the same way.

6.4 Assembly of the new mounting bracket/lock base.

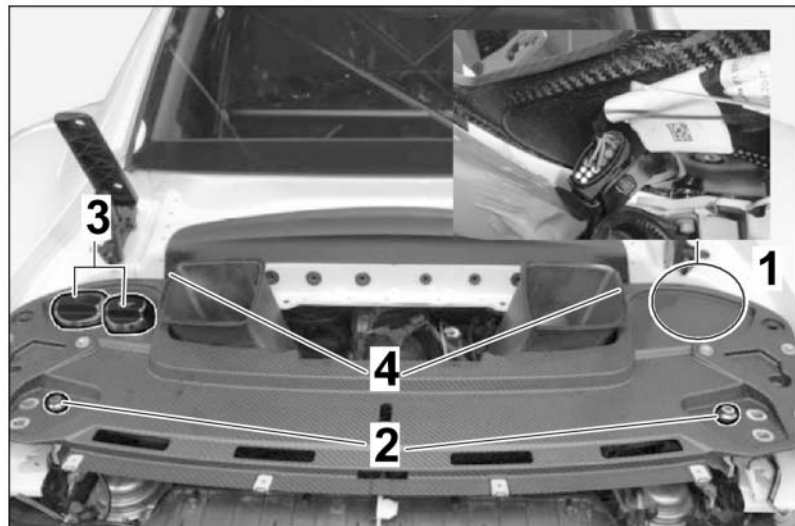


Figure 58

- 21. – Place the new mounting bracket on the vehicle.
- 22. – When attaching the mounting bracket, the central plug must be reconnected to the plug on the vehicle ⇒ *Figure 58-1-*.
- 23. – Place two of the standard screws at the lower fastening points by hand ⇒ *Figure 58-2-*.
- 24. – Install the two sealing caps for engine oil and cooling water ⇒ *Figure 58-3-*.

- 25. – Fasten the mounting bracket behind the left air inlet with a new M6 x 30 screw ⇒ *Figure 58-4-*.

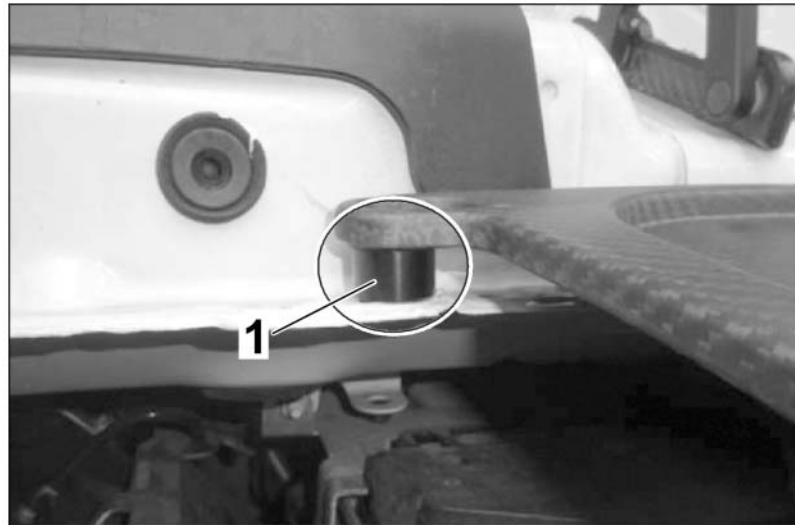


Figure 59

- 26. – On the right-hand side behind the air inlet (here dismantled for illustration), the supplied spacer must be placed between the mounting bracket and the body ⇒ *Figure 59-1-*. It is fastened with a new M6 x 30 screw and a nut with a washer. **Tightening torque 8 Nm (5.9 ftlb.)**

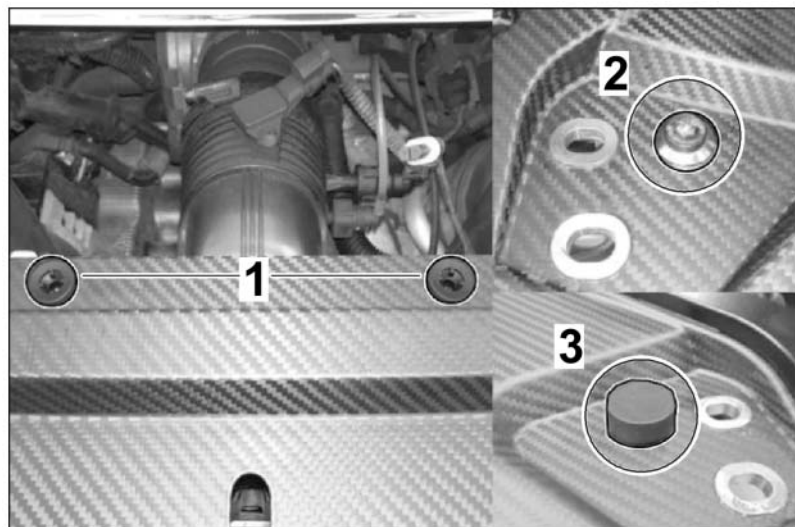


Figure 60

- 27. – Mount rubber stopper ⇒ *Figure 60-1-* (engine compartment flushing fan mount) in the mounting bracket.
- 28. – Tighten standard screws (step 23) ⇒ *Figure 58-2-*: **Tightening torque 35 Nm (25.8 ftlb.)**

29. – Install caps ⇒ *Figure 60-3-*.
30. – Establish electrical plug connection (fan control) to engine compartment flushing fan. Mount the engine compartment flush fan in rubber stopper, making sure that the electrical cable is not touching/chafing anywhere.

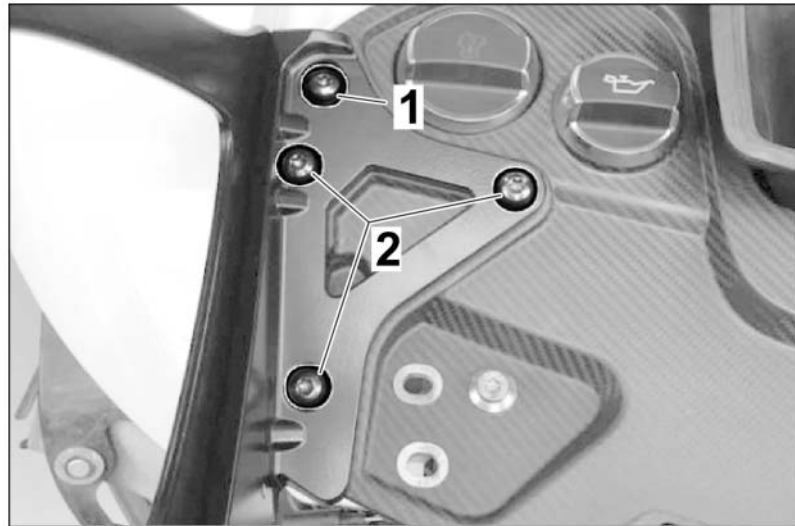


Figure 61

31. – Position the new wing support and fasten it with three M8 x 30 screws at the points ⇒ *Figure 61-2-* shown and with an M8 x 60 screw at the upper fastening point ⇒ *Figure 61-1-*. **Tightening torque: 30 Nm (22 ftlb.)**
32. – The wing support is installed on the right-hand side of the vehicle in the same way.

6.5 Installation of the new hinge lock



Figure 62

33. – Lifting the right engine cover hinge ⇒ *Figure 62-1-*

34. – Loosening the two fastening screws ⇒ *Figure 62-2-* of the hinge lock

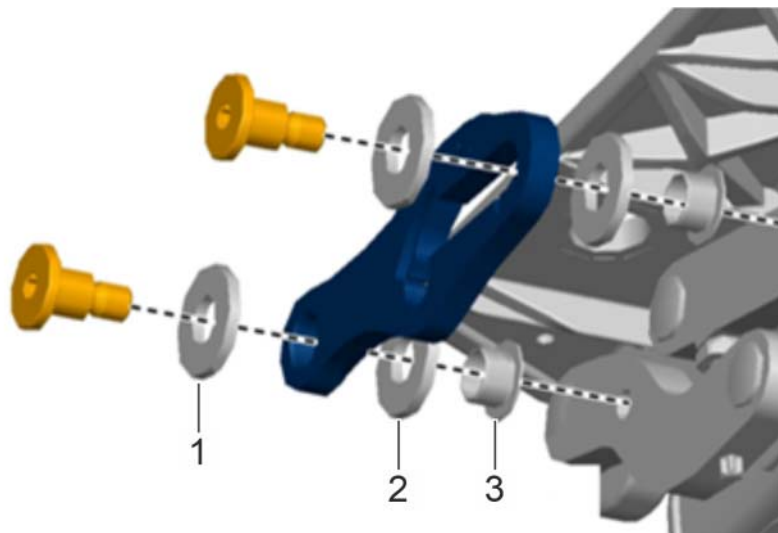


Figure 63

35. – Remove the two fastening screws together with the original locking device, washers ⇒ *Figure 63-1-* ⇒ *Figure 63-2-* and the sockets ⇒ *Figure 63-3-*



Figure 64

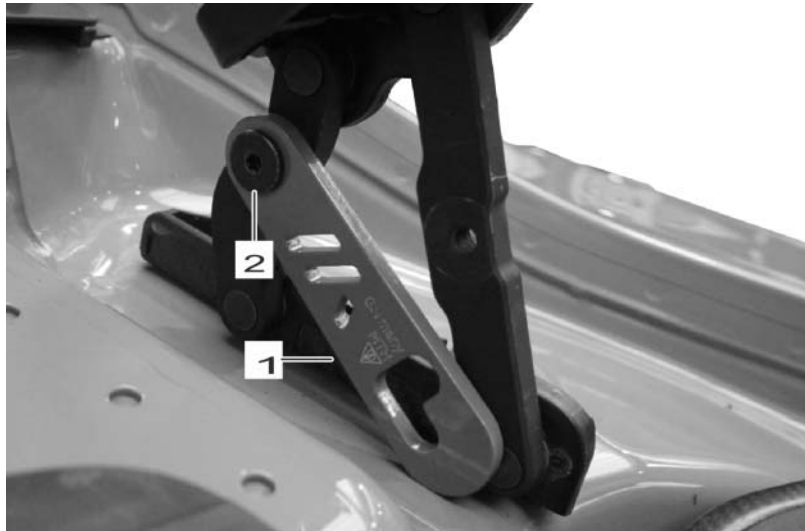


Figure 65

36. – Mount the new hinge lock ⇒ *Figure 65 -1-* with the components removed under position 35 (screw and washer) in the first step on the rear hinge arm ⇒ *Figure 65 -2-*. There is no socket for the rear screw connection.

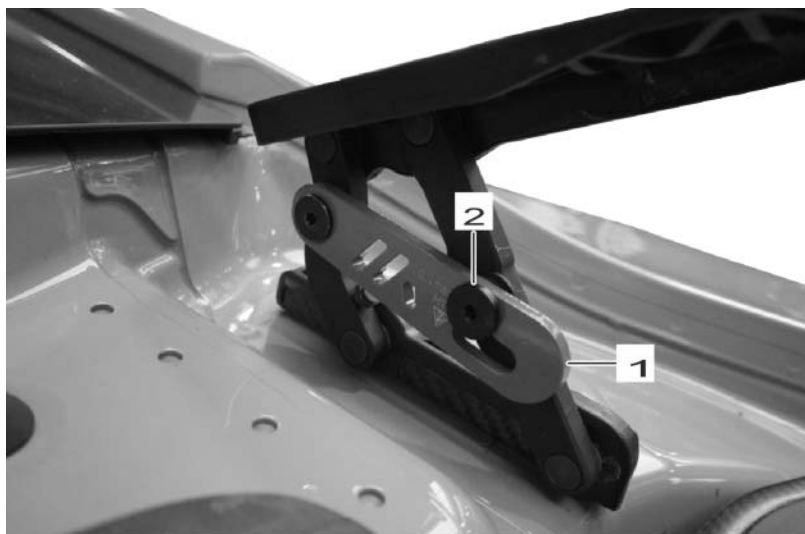


Figure 66

37. – Attach the new hinge lock ⇒ *Figure 66 -1-* in position so that the screw ⇒ *Figure 66 -2-* can be attached to the front hinge arm.



Figure 67

- 38. – Make sure that all fasteners are installed in the correct order. There is no sleeve for the rear connection.

Tighten both screws at **6 Nm (4.5 ftlb.)**.

- 6.6 Install rear apron. ⇒ *Workshop Manual '519219 Removing and installing rear apron'*
- 6.7 Installation of new rear cover and gurney.

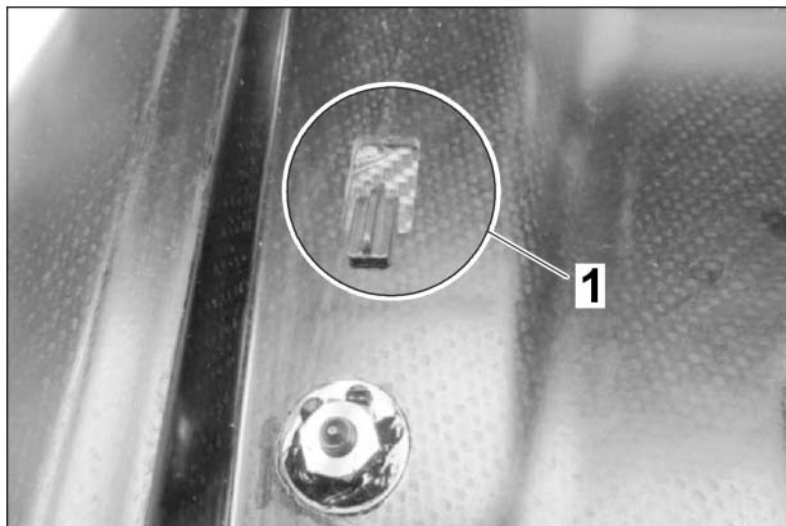


Figure 68

- 39. – Place the new rear cover on the hinges. Check That the retaining lugs on the hinges snap into the recesses in the rear cover ⇒ *Figure 68 -1-*.

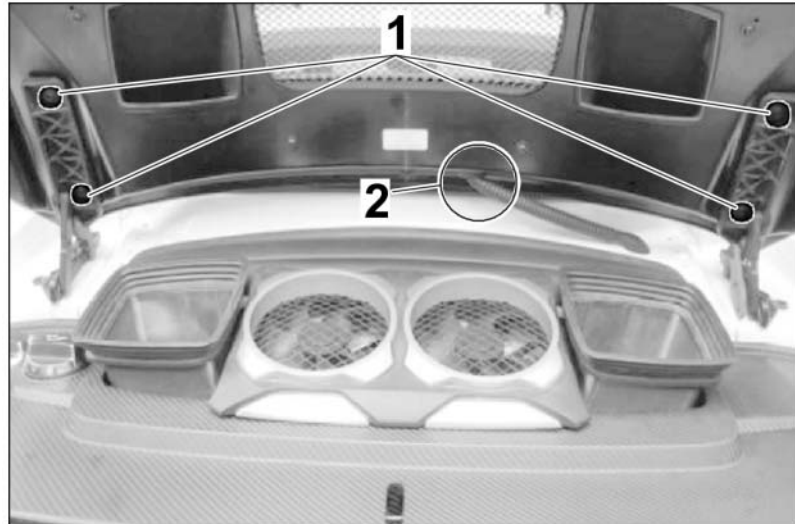


Fig. 69 (sample illustration)

40. – Fasten the rear cover with the standard screws ⇒ Fig. 69 (sample illustration)-1-. Insert the standard wiring harness for the third brake light through the opening in the rear cover ⇒ Fig. 69 (sample illustration)-2-. Check that the rubber sleeve is installed correctly. Close the rear cover and, if necessary, correct the gap dimensions at the transitions to the adjacent body parts. **Screw: Tightening torque 10 Nm (7.4 ftlb.)**

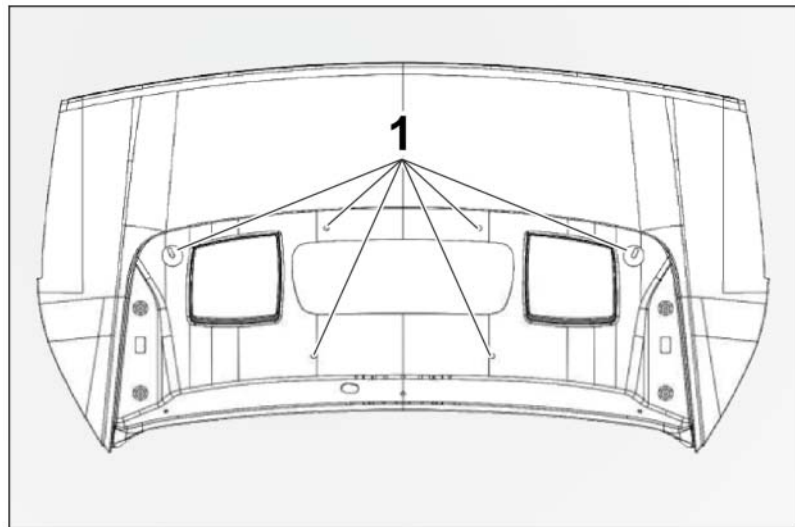


Fig. 70 (sample illustration)

41. – Attach the supplied spacers for the upper air intake to the fastening points ⇒ Fig. 70 (sample illustration)-1- shown. **Note:** The spacers should be glued on with the standard Porsche windshield adhesive. Please order the primer and 2K pane adhesive set mentioned in the parts list at the beginning of the document. They will then adhere to the rear cover, but their position can still be shifted.



Fig. 71 (sample illustration)

- 42. – Mount the upper air inlet with the standard screws ⇒ Fig. 71 (sample illustration) -1-.

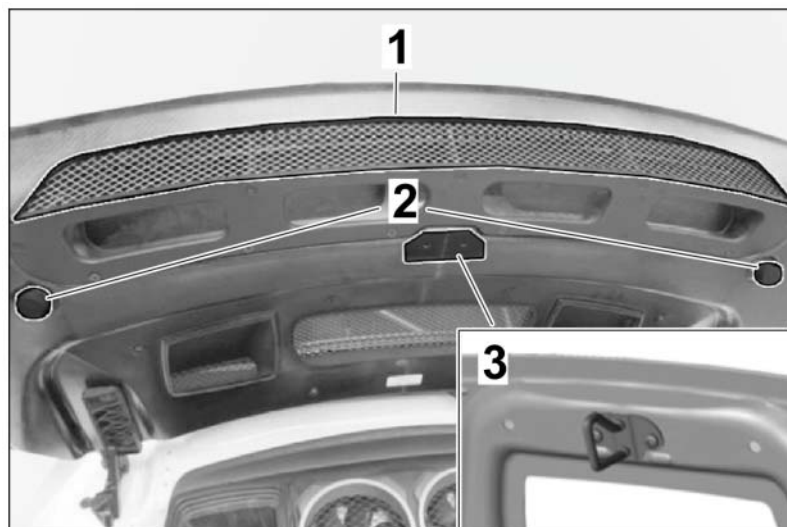


Fig. 72 (sample illustration)

- 43. – Mount the rear exhaust grille on the new rear cover with new screws (M5 x 20).
- 44. – Mount the stop buffer (standard).
- 45. – Mount lock hook with **NEW** microencapsulated screws (2 pcs.). **Tightening torque 10 Nm (7.4 ftlb.)**



Renew the engine identification sticker on the cover on the right.



Fig. 73 (sample illustration)

- 46.** – Clean the adhesive areas for the Gurney on the top and back of the rear cover with isopropanol ⇒ *Fig. 73 (sample illustration) -1-*.

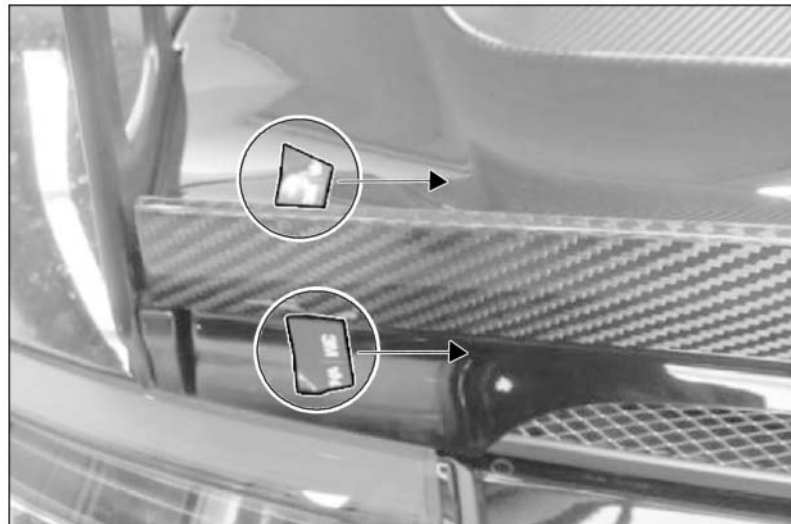


Figure 74

- 47. – Put on gurney. **Note:** Make sure there is an even gap between the gurney and the rear wing bracket. This must be the same on both sides.
- 48. – Remove approx. 5 cm of the backing film from the adhesive strip on the gurney and position this piece of the film such that it protrudes when the gurney is attached ⇒ Figure 74.
- 49. – First, slowly pull the backing film from under the gurney at the rear of the rear cover while pressing the gurney firmly against the rear cover. In the next step, pull off the carrier film at the top between the gurney and the rear cover and press the gurney firmly against the rear cover ⇒ Figure 74. **Note:** Press the adhesive surfaces as flat as possible for at least 10 seconds

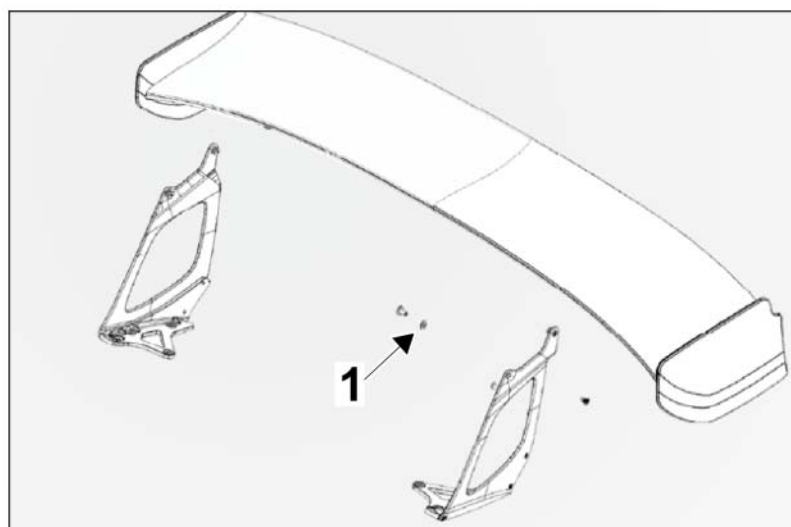


Figure 75

50. – **Note:** Make sure to position the standard spacers \Rightarrow *Figure 75-1* between the wing and wing support connection during assembly. Failure to observe this can lead to damage.
51. – Mount the new rear wing on the wing supports. **Note:** The standard screws can be re-used, but must be inserted with screw locking agent "Loctite 241" when reassembling. **Tightening torque 10 Nm (7.4 ftlb.)**

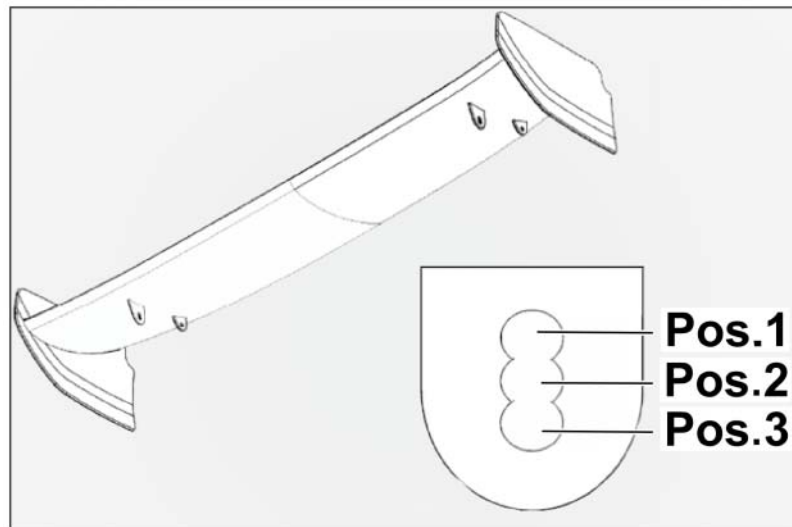


Figure 76

52. – The incline of the rear wing can be adjusted using three holes in the front fastening straps \Rightarrow *Figure 76*. Wing position 3 represents the standard setting (delivery status).

- 7 Mounting of the wheel covers on the rear axle wheels. (Mounting different for aluminium rims, wheel cover for aluminium wheel structurally different)

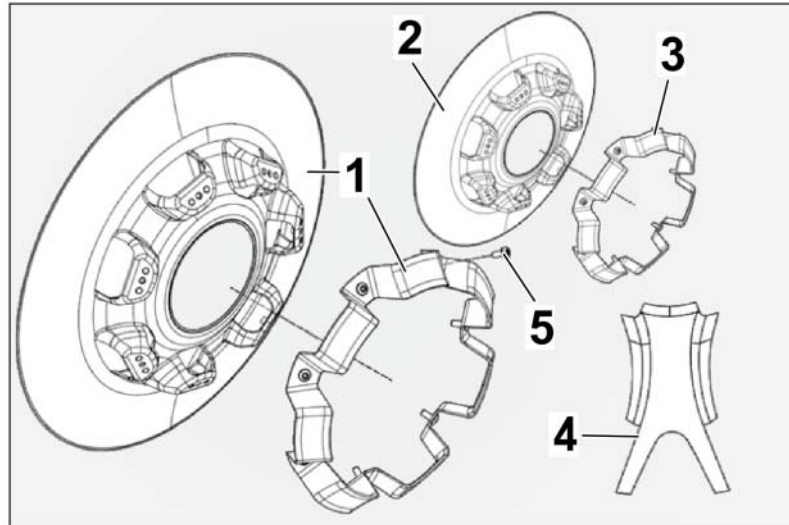


Figure 77

- ⇒ **Figure 77-1-** – Set of wheel covers for magnesium rims — 991.044.806.27
- ⇒ **Figure 77-2-** – Wheel cover
- ⇒ **Figure 77-3-** – Fastening ring
- ⇒ **Figure 77-4-** – Rim protection sticker — 991.044.806.29
- ⇒ **Figure 77-5-** – M5 x 12 pan-head screw

7.1 Install wheel covers.

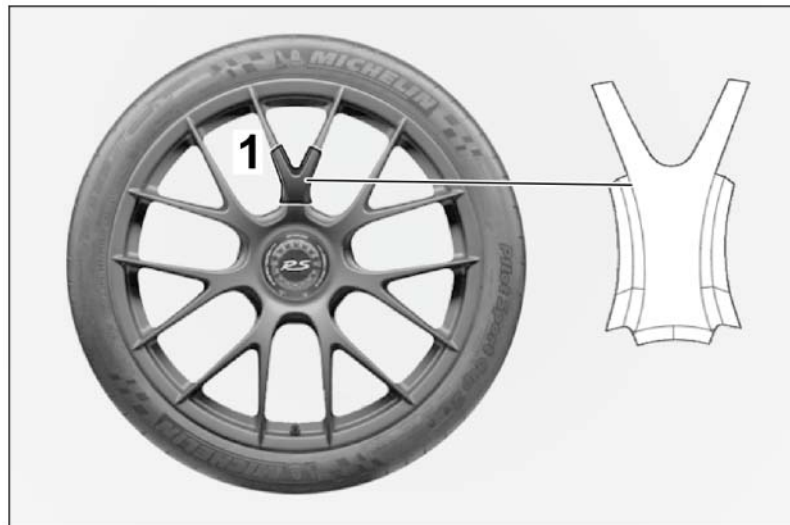


Figure 78

- 1. – Clean the surfaces for installing the rim protectors on the front and sides ⇒ **Figure 78-1-** on all spokes (7 x) of each wheel. Before attaching the wheel covers, the adhesive areas for the rim protectors on the new rims must be degreased using a

suitable cleaning agent. (Isopropanol). Rims that have already been used must be thoroughly cleaned and freed from brake dust.

2. – Attach a rim protector to all seven spokes. Make sure to adhere the side wings of the stickers carefully around the spokes. The rim protectors should be heated with a hair dryer to make it easier to adhere them all around. **Important:** If the rim protectors are not attached, there may be chafing points on the paint surface. Please perform a visual inspection every time you dismantle them and replace if damaged!

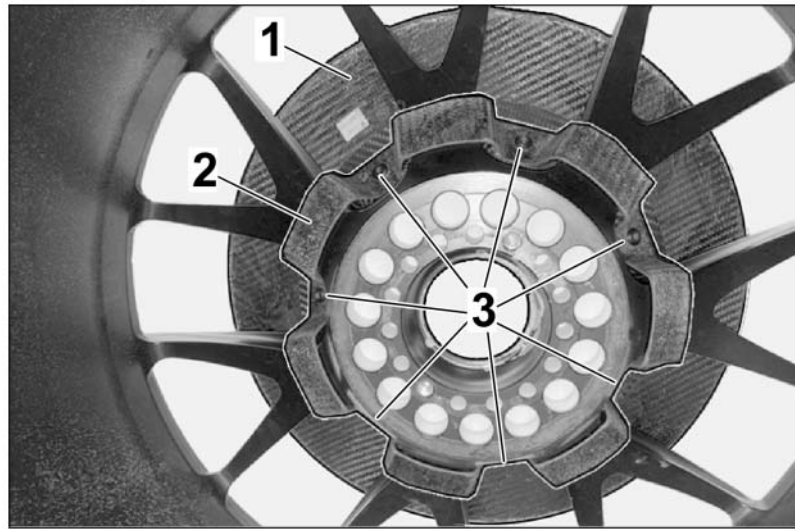


Figure 79

3. – Put the wheel cover ⇒ *Figure 79-1-* into the rim from the front. Make sure to push the wheel cover completely into the rim.
4. – Attach the fastening ring ⇒ *Figure 79-2-* from within.
5. – Attach the ring to the wheel cover with **M5 x 12 pan-head screws** ⇒ *Figure 79-3-* (7 pcs.): **Tightening torque 2.5 Nm (1.8 ftlb.)**
6. – The wheel cover on the second rear axle wheel is assembled in the same way.
7. – **Important:** Balance wheels **AFTER** mounting the wheel covers. ⇒ *Workshop Manual '519219 Balancing/optimising wheels'*

7.2 Install all four wheels. ⇒ *Workshop Manual '519219 Removing and installing wheel with central bolt'*

Chassis: 8 Perform complete alignment.

For further information, see also: Instructions for the measuring wheel system. ⇒ *Installation and Conversion Instructions '440000 Measuring wheel system'*

8.1 Measuring criteria:

- Front tires: **Michelin Cup 2 ZR 265/35 R20**
- Rear tires: **Michelin Cup 2 ZR 325/30 R21**

- Tank capacity: **Full**
- Driver ballast: **Driver weight**
- Rear wing: **Position 3**

Damper clicking	Front axle	Rear axle
Rebound stage (R) LowSpeed (purple)	12	6
Rebound stage (R) HighSpeed (gold)		6
Compression (C) LowSpeed (purple)	5	7
Compression (C) HighSpeed (gold)	7	7
Steel anti-roll bar	Rear position = soft	Center position = medium
CRFP anti-roll bar	Rear position = soft	Rear position = soft
Ride height	109.0 mm/ 4.29 in	268.0 mm/ 10.55 in
Driving height on measuring wheel system	86 mm/ 3.39 in (offset: -23 mm/ 0.9 in)	256 mm/ 10.08 in (offset: -12 mm/ 0.47 in)

8.2 Measurement log:

Measurement log (executing PORSCHE center)			
Wheel alignment values (worldwide)	Initial reading	Setpoint values	Final measurement
Front axle			
Toe unpressed (total)		+ 2 mm/ 0.078 in	
Camber with wheels in straight-ahead position		- 2.6°	
Rear axle			
Toe per wheel		+ 2 mm/ 0.078 in	
Camber		- 2.6°	
Installed on:	Mechanic:	Acceptance:	Stamp:
(Date)	(First Name)	(Name of Foreman)	(Porsche Center)

- 00 19 22 66: 911 GT3 RS Manthey Performance Kit Labor time: **1100 TU**
Includes: 911 GT3 RS Manthey Performance Kit installed, vehicle
aligned and adjusted.
- 55 90 61 51: Painting new parts of rear lid Labor time: **90 TU**
Includes: Painting of new parts, step 1:
Materials: 6 MU
- 51 01 71 05: Body paint finish prepared Labor time: **130 TU**
Includes: Order-related
Painting of new parts, step 1
Plastic part

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