

Aerokit Turbo (I-no. XAF)

Vehicle Type: **911 Turbo (991)/911 Turbo S (991)**

Model Year: **As of 2017**

Concern: **Retrofitting**

Note: The Aerokit Turbo comprises the following components:

- New spoiler trim for front apron
- New rear spoiler (upper and lower part)
- New sill covers
- New rear skirt

The components have been tested and approved together. Installation of individual components is not permitted or approved!

The Aerokit Turbo (⇒ *Figure 1*) is also available as a factory installed option for new vehicles by requesting optional equipment "XAF" or "XAV".



Figure 1

Parts Info: **991.044.803.05** ⇒ Aerokit Turbo, complete set
991.044.803.08¹ ⇒ Aerokit Turbo, set WITHOUT sill covers and rear skirt

¹ **ONLY** for vehicles with painted sill covers (XAJ/XAW) and/or painted rear skirt (XUE)!

Parts List:

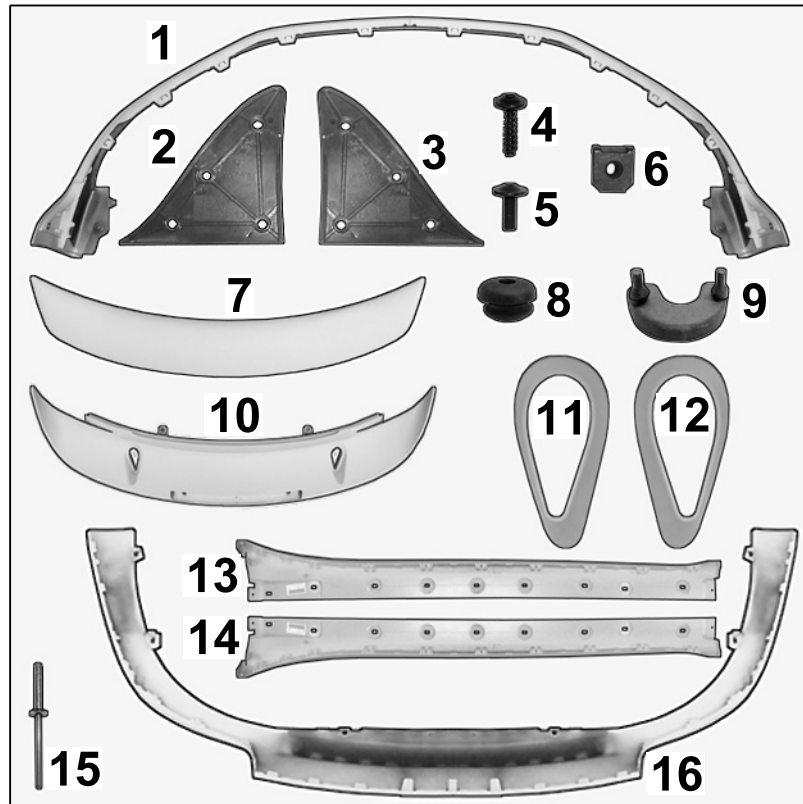


Figure 2

Parts included for front apron:

991.505.984.00.G2X	1 x	Spoiler trim, ready-primed ⇒ Figure 2-1-
991.505.987.00	1 x	Supporting plate – left ⇒ Figure 2-2-
991.505.988.00	1 x	Supporting plate – right ⇒ Figure 2-3-
999.919.099.01	6 x	Oval-head screw, M5 x 20 ⇒ Figure 2-4-
999.073.255.09	2 x	Oval-head screw, M5 x 14 ⇒ Figure 2-5-
999.507.556.03	2 x	Speed nut, M5 ⇒ Figure 2-6-

Parts included for rear spoiler:

991.504.983.08.G2X	1 x	Upper part of rear spoiler, prime-coated ⇒ Figure 2-7-, incl. accessories
999.703.203.40	2 x	Rubber buffer – round ⇒ Figure 2-8-
991.504.635.00	2 x	Rubber buffer – U-shape ⇒ Figure 2-9-
991.504.985.05.G2X	1 x	Lower part of rear spoiler, prime-coated ⇒ Figure 2-10-, incl. accessories
991.622.883.00	1 x	Wiring harness for rear spoiler (not shown)
991.504.581.03	1 x	Left cap, prime-coated ⇒ Figure 2-11-
991.504.582.03	1 x	Right cap, prime-coated ⇒ Figure 2-12-

Parts included for sill cover:²

991.504.953.00	1 x	Left sill cover, prime-coated incl. add-on parts ⇒ <i>Figure 2-13-</i>
991.504.954.00	1 x	Right sill cover, prime-coated incl. add-on parts ⇒ <i>Figure 2-14-</i>

Parts included for rear skirt:²

999.190.191.30	1 x	Blind rivet, A3.2 x 17.0 ⇒ <i>Figure 2-15-</i>
991.505.975.00	1 x	Rear skirt, prime-coated ⇒ <i>Figure 2-16-</i>

² **ONLY** contained in set "Aerokit Turbo, complete set"!

Materials:	000.043.204.40	1 x	Silicone sliding compound spray – 200 ml
	— — —	— —	Cleaning cloth (commercially available)
	— — —	— —	Isopropanol (commercially available)
	— — —	— —	Paint, corresponding to colour code of vehicle (see Paint Manual)

NOTICE

Incorrect and improper use of new accessories

- Risk of damage to components or to the vehicle
- ⇒ Never use the spoiler to push the vehicle.
- ⇒ Do not use force when opening and closing the rear lid.
- ⇒ Observe specified gap dimensions for positioning new accessories with respect to adjacent components and fit new accessories accordingly.

NOTICE

Cleaning the vehicle

- Risk of damage to the vehicle, paintwork and components
- ⇒ When washing the vehicle in an automatic car wash, check that the spoiler is detected by the light barriers.
- ⇒ If in doubt, seek the advice of the operator of the automatic car wash.
- ⇒ Only use cleaning agents listed in the owner's manual.



Information

Please inform the customer of this accordingly.

Tools:	9900 - PIWIS Tester 3	Nr.90 Pos.1 - Torque wrench
	Nr.124-1 - Hand riveting tool for pop rivets	T10118 - Assembly tool
	Side cutters/pincers	Gap dimension gauge
	Shop light	

Work Procedure: 1 Preliminary work

CAUTION

Painting components

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

1.1 Paint all prime-coated parts to match the vehicle's color code in accordance with the Paint Manual.

1.2 Connect battery charger (⇒ *Workshop Manual '2X00IN Battery trickle charging*).

2 Convert front apron.

2.1 Remove front apron (⇒ *Workshop Manual '631519 Removing and installing front apron*).

2.2 Remove spoiler trim/front apron (⇒ *Workshop Manual '660319 Removing and installing front spoiler (pneumatics)*)

2.2.1 Unclip inner insert (⇒ *Figure 3*).

1 – Inner insert

2 – Front apron

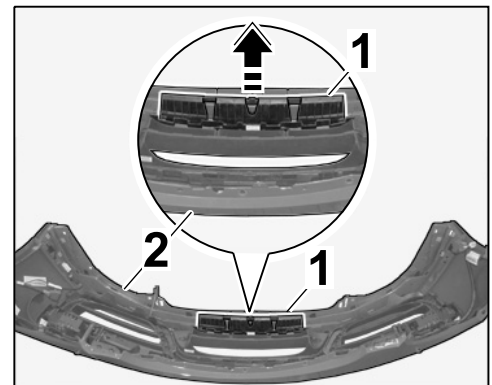


Figure 3

- 2.2.2 Remove outer screws on spoiler trim (⇒ *Figure 4-1*).
 - 1 - Screw
 - 2 - Locking lugs
- 2.2.3 Unclip spoiler trim from front apron (⇒ *Figure 4*).
- 2.3 Prepare for fitting supporting plate (left/right).

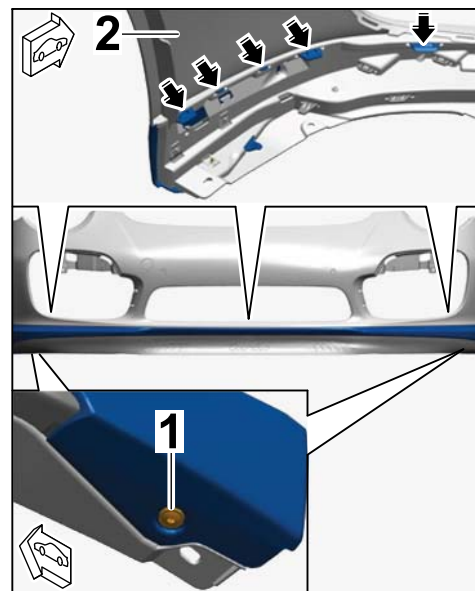


Figure 4

- 2.3.1 Clean the front apron at the left and right in the marked area (inside/outside) with isopropanol (⇒ *Figure 5*).

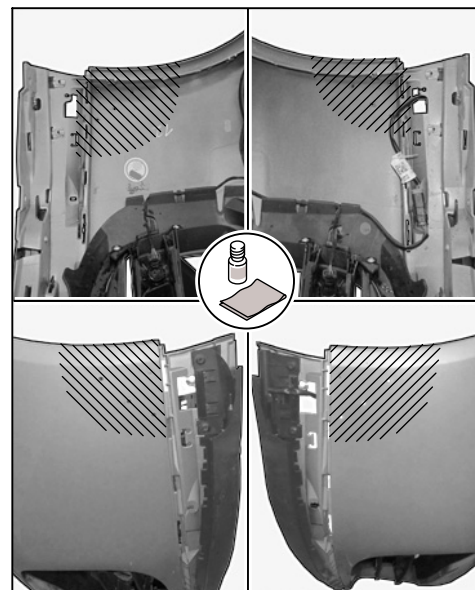


Figure 5

**Information**

Trims are marked R or L.

- 2.3.2 Front apron, left side: Fit left supporting plate on the inside of the front apron so that it is flush with the wheel housing liner/C channel flange (⇒ *Figure 6*)

- 1 – Left supporting plate
- 2 – Wheel housing liner flange
- 3 – C channel

- 2.3.3 Drill holes (4 x) with a diameter of 5.5 mm.

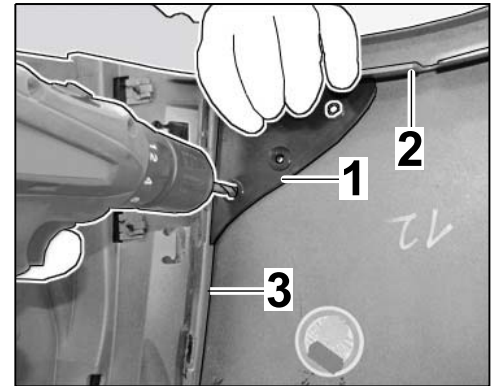


Figure 6

**Information**

Trims are marked R or L.

- 2.3.4 Repeat the work on the right-hand side of the front apron.

- 1 – Right supporting plate
- 2 – Wheel housing liner flange
- 3 – C channel

- 2.4 Fit new Aerokit spoiler trim on front apron.

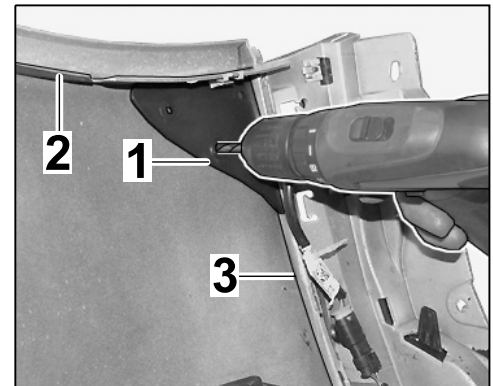


Figure 7

2.4.1 Fit speed nuts (2 x) in the new Aerokit spoiler trim (⇒ *Figure 8*).

- 1 - Speed nut
- 2 - Aerokit spoiler trim



Information

Check locking lugs on the component for damage (breakage, deformation, etc.) before fitting.

During installation, make sure that the locking lug engages fully in the clip.

After fitting the clip connection, check gap dimension of both components on the visible side.

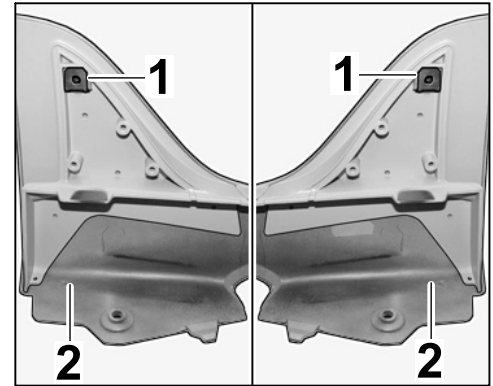


Figure 8



Information

Spray locking lugs with silicone spray to make fitting easier.

2.4.2 Clip new spoiler trim into the front apron (⇒ *Figure 9*).

- 1 - Screw
- 2 - Locking lugs

2.4.3 Fit screws (2 x) securing spoiler trim to front apron (⇒ *Figure 9*).

Tightening torque 2.5 Nm (2 ftlb.)

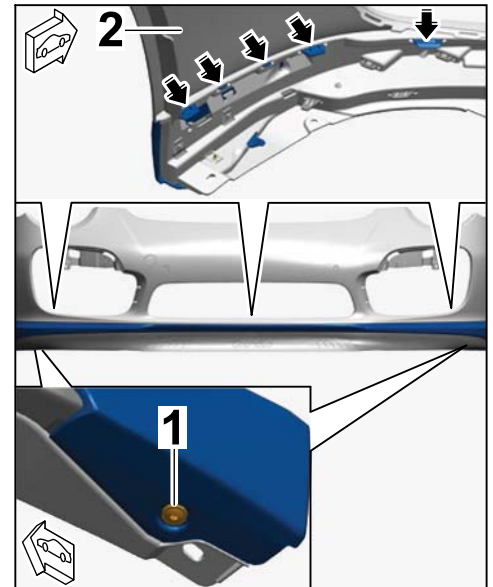


Figure 9

2.4.4 Secure supporting plate (left/right) on each side to the spoiler trim.

- 1 – Supporting plate
- 2 – Oval-head screw, M5 x 20
- 3 – Oval-head screw, M5 x 14
- 4 – Front apron

Oval-head screw, M5 x 20 (3 x):
**Tightening torque 2.5 Nm
(2 ftlb.)**

Oval-head screw, M5 x 14 (1 x):
**Tightening torque 2.5 Nm
(2 ftlb.)**

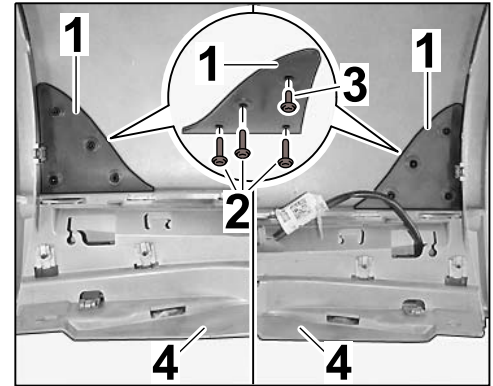


Figure 10

2.4.5 Clip in inner insert.

- 1 – Inner insert
- 2 – Front apron



Information

Check that none of the fastening clips are deformed or broken.

Replace missing or damaged clips with new clips.

Make sure that all fastening clips are engaged securely.

Make sure that all cables and hoses are engaged securely in the brackets.

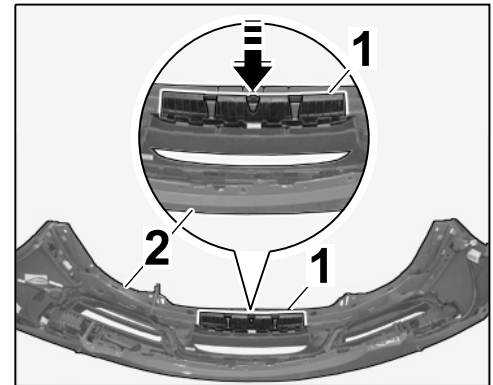


Figure 11

2.5 Install front apron (⇒ *Workshop Manual '631519 Removing and installing front apron*).

3 Convert Aerokit Turbo rear spoiler.

3.1 Remove Turbo rear spoiler **WITHOUT** rear spoiler mounting bracket (⇒ *Workshop Manual '665819 Removing and installing rear spoiler (Turbo)*)

3.2 Complete new Aerokit Turbo rear spoiler.

3.2.1 Fit rubber buffer (2 x) on the underside of the upper part of the Aerokit rear spoiler into the relevant bore (⇒ *Figure 12*).

- 1 - Rubber buffer
- 2 - Bore on underside of upper part of Aerokit rear spoiler — right-hand side

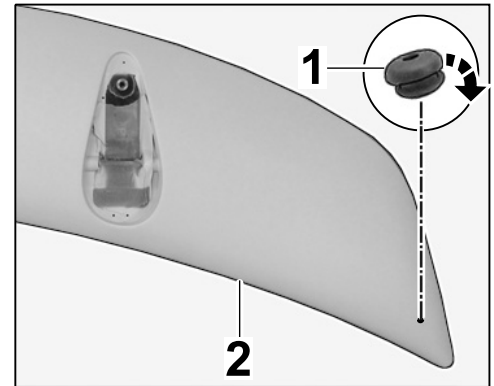


Figure 12



Information

Trims are marked R or L.

3.2.2 Install new rear spoiler holder in new upper part of Aerokit rear spoiler (⇒ *Figure 13*).

- 1 - Front holder – left
- 2 - Front holder – right
- 3 - Rear holder
- 4 - Screw, 3.5 x 9.5
- 5 - Underside of upper part of Aerokit rear spoiler

Remove holder from old upper part of rear spoiler if necessary and install it in new upper part of Aerokit rear spoiler.

Screw, 3.5 x 9.5 (10 x):
Tightening torque 1.8 Nm
 (1.5 ftlb.)

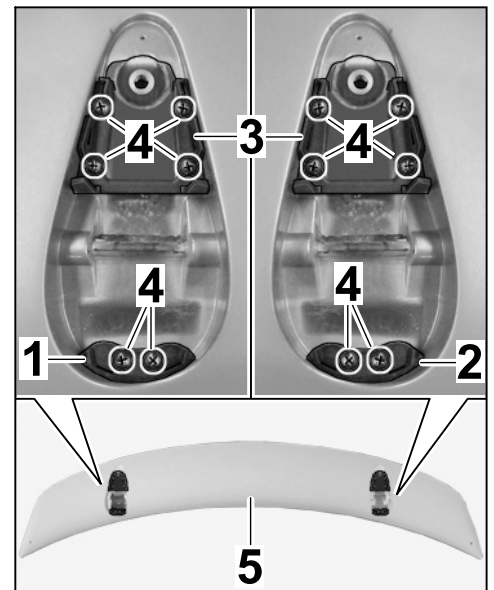


Figure 13

- 3.2.3 Install new electric wire harness in new lower part of Aerokit rear spoiler (⇒ *Figure 14*).
- Remove wire harness from old lower part of rear spoiler if necessary and install it in new lower part of Aerokit rear spoiler

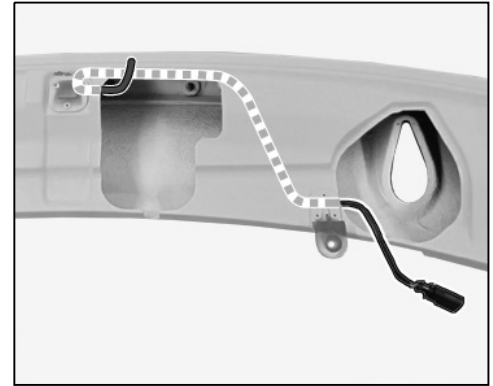


Figure 14

- 3.2.4 Fit rubber buffer (U-shape) in the cut-out for the spoiler drive in lower part of rear spoiler (at the left ⇒ *Figure 15/right*).

- 1** – Rubber buffer (U-shape)
2 – Cut-out for spoiler drive in lower part of rear spoiler – left-hand side

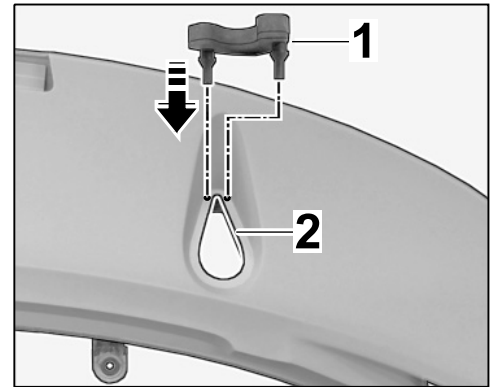


Figure 15

- 3.2.5 Remove additional brake light from old lower part of rear spoiler and install it in new lower part of Aerokit rear spoiler (⇒ *Workshop Manual '947019 Removing and installing additional brake light in rear spoiler*).

4 Install new Aerokit Turbo rear skirt.

- 4.1 Remove tail light (⇒ *Workshop Manual '943119 Removing and installing tail lights*).
- 4.2 Remove rear apron (⇒ *Workshop Manual '635519 Removing and installing rear apron*).
- 4.3 Remove rear skirt (⇒ *Workshop Manual '636819 Removing and installing rear skirt*).

4.3.1 Remove lower retaining strip by drilling out blind rivet A3.2 x 17 (⇒ Figure 16).

- 1 - Retaining strip
- 2 - Blind rivet, A3.2 x 17

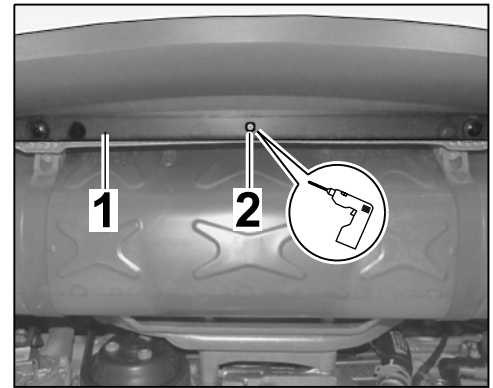


Figure 16

4.3.2 Remove protective tailpipe cover (2 x). To do this, cut off retaining eyelets if necessary.

- 1 - Retaining eyelet
- 2 - Protective tailpipe cover

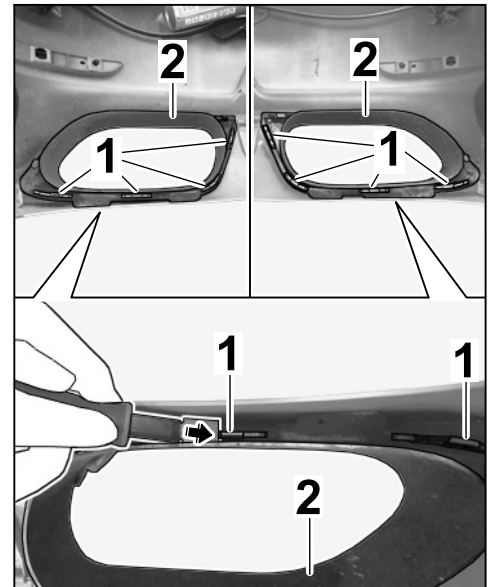


Figure 17

- 4.3.3 Release the remaining locking lugs (⇒ *Figure 18-1*-) using a suitable tool.
- 4.3.4 Remove rear skirt.
- 4.4 Install new rear skirt (⇒ *Workshop Manual '636819 Removing and installing rear skirt*).

**Information**

Check locking lugs on the component for damage (breakage, deformation, etc.) before fitting.

During installation, make sure that the locking lug engages fully in the clip.

After fitting the clip connection, check gap dimension of both components on the visible side.

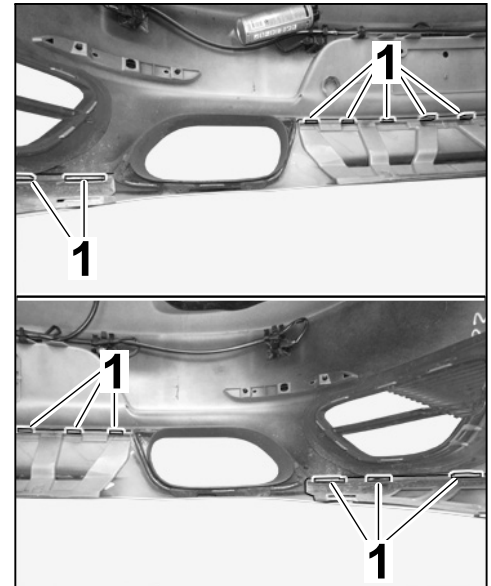


Figure 18

**Information**

Spray locking lugs with silicone spray to make fitting easier.

- 4.4.1 Clip protective tailpipe cover (2 x) into the new rear skirt.
- 4.4.2 Install lower retaining strip and secure with a new blind rivet A3.2 x 17.

**Information**

Check that none of the fastening clips are deformed or broken.

Replace missing or damaged clips with new clips.

Make sure that all fastening clips are engaged securely.

Make sure that all cables and hoses are engaged securely in the brackets.

- 4.5 Install rear apron (⇒ *Workshop Manual '635519 Removing and installing rear apron*)
- 5 Install Aerokit Turbo rear spoiler
- 5.1 Install new lower part of rear spoiler (⇒ *Workshop Manual '665819 Removing and installing rear spoiler (Turbo)*)



Information

Trims are marked R or L.

- 5.2 Guide cap (at the left ⇒ *Figure 19*/right) over each spoiler drive hinge.

- 1 – Cap – left-hand side
- 2 – Spoiler drive hinge – left-hand side

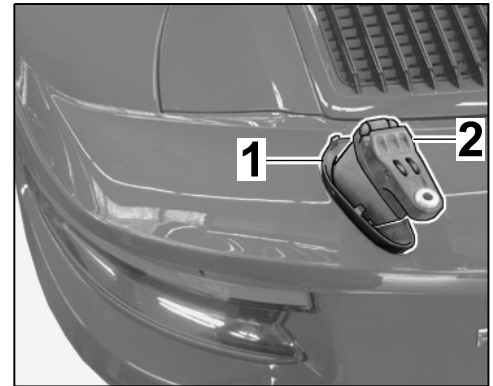


Figure 19

- 5.3 Install new upper part of Aerokit rear spoiler (⇒ *Figure 20*).

- 1 – Upper part of Aerokit rear spoiler
- 2 – Lower part of Aerokit rear spoiler
- 3 – Countersunk screw, M6 x 25

Countersunk screw, M6 x 25 (2 x):

Tightening torque 9.7 Nm (7.5 ftlb.)

- 5.4 Fit cap (left/right) on upper part of Aerokit rear spoiler.

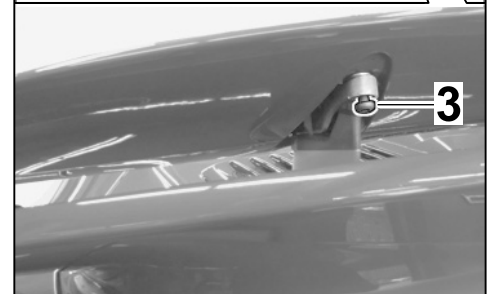
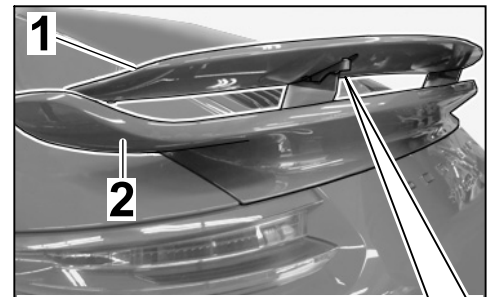


Figure 20

- 6 Convert Aerokit Turbo sill cover.

- 6.1 Remove sill cover (⇒ *Workshop Manual '663119 Removing and installing door entry guard'*).

- 6.2 Complete and install new sill cover (⇒ *Workshop Manual '663119 Removing and installing door entry guard'*).

NOTICE

Voltage drop

- Risk of irreparable damage to control unit
- Risk of damage to control unit
- Fault entries in the control unit

- Coding in the control unit is aborted
 - Malfunctions in control unit, even during programming
- ⇒ Switch off the ignition and remove the ignition key before disconnecting the control unit.
- ⇒ Ensure that the power supply is not interrupted during programming.
- ⇒ Connect a battery charger with a current rating of at least Nominal value 70 A to the vehicle battery.

NOTICE

Control unit programming will be aborted if the Internet connection is unstable.

- An unstable Internet connection can interrupt communication between PIWIS Tester II and the vehicle communication module (VCI). As a result, control unit programming may be aborted.
- ⇒ During control unit programming, always connect PIWIS Tester II to the vehicle communication module (VCI) via the USB cable.

**Information**

The **9900 - PIWIS Tester 3** instructions take precedence since the description may be different with later Tester releases.

The procedure described here has been structured in general terms; different text or additions may appear on the **9900 - PIWIS Tester 3**.

7 Concluding work

- 7.1 **9900 - PIWIS Tester 3** must be connected and ignition switched on.
- 7.2 Enter "Aerokit Turbo" in the vehicle data.
 - 7.2.1 Select the "Diagnostics" function.
 - 7.2.2 Select the required vehicle type. Press •F12" to continue.
 - 7.2.3 Press •F7" in the control unit overview to switch to the "Additional menu".
 - 7.2.4 Select the "Maintenance of vehicle data" function. Press •F12" until "X numbers" appears in the Value group column.
 - 7.2.5 Scroll to "Aerokit Cup" in the "Family" column, select "XAF – AEROKIT TURBO" there and press •F8" to save your selection.

Press •F12" as soon as the message "Modified values have been buffered" appears.
 - 7.2.6 Press •F12" until modified values are displayed. Save the values by pressing •F8" .

- 7.2.7 Wait until the message "Generation of the vehicle order is complete" appears. Continue to Log management by pressing •F12" .
- 7.2.8 Press •F10" to open the log. Check that vehicle equipment "XAF – AEROKIT TURBO" has been entered and close the log.
- 7.3 Code the new vehicle equipment.
 - 7.3.1 Switch to the "Codings/adaptations" menu and select "Automatic coding with coding rules". Press •F12" to continue.
 - 7.3.2 Select all control units in the control unit overview (•CTRL+A") and switch to the "Codings/adaptations" column.
 - 7.3.3 Select Automatic coding. Press •F12" to continue.
- 7.4 Once coding is completed successfully: Read out the fault memory of all systems, work through any existing faults and erase the fault memory (⇒ *Workshop Manual '033500 Fault memory for on-board diagnosis*).
- 7.5 Check function of lights, particularly the additional brake light.
- 7.6 Switch off ignition and disconnect **9900 - PIWIS Tester 3**.
- 7.7 Disconnect the battery charger (⇒ *Workshop Manual '2X00IN Battery trickle charging*) and drive the vehicle off the lifting platform.

- 66 99 61 71: –Painting new Aerokit Turbo, complete– Labor time: **310 TU**
Includes: Painting spoiler trim on front apron, rear spoiler (upper and lower part), sill covers (left/right) and new rear skirt.
Materials: 33 MU
Without: Paint preparation (separate LO No.)!
- 66 99 61 73: –Painting new Aerokit Turbo– Labor time: **230 TU**
Includes: Painting spoiler trim on front apron and new rear spoiler (upper and lower part).
Materials: 18 MU
Without: Paint preparation (separate LO No.)!
- 51 01 71 05: –Preparing body paintwork– Labor time: **130 TU**
Includes: Order-based;
Painting of new parts, Step 1;
Plastic part

- 66 99 23 20: –Installing Aerokit Turbo, complete– Labor time: **433 TU**
 Includes: Removing front apron, fitting new spoiler lip on front apron and installing front apron.
 Removing rear spoiler, completing and installing new rear spoiler.
 Removing sill covers, completing and installing new sill covers.
 Removing rear apron, fitting new rear skirt on rear apron and installing rear apron.
 Performing function test on front and rear lights and additional brake light. Programming/coding "Aerokit Turbo – XAF" option.
- 66 99 23 21: –Installing Aerokit Turbo– Labor time: **234 TU**
 Includes: Removing front apron, fitting new spoiler lip on front apron and installing front apron.
 Removing rear spoiler, completing and installing new rear spoiler.
 Performing function test on front and rear lights and additional brake light. Programming/coding "Aerokit Turbo – XAF" option.

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