

Complaint - Vibrations in Passenger Compartment at 2,000 - 3,000 rpm (93/20)

Revision: This bulletin replaces bulletin Group 1 93/20, dated August 7, 2020.

Model Year: **As of 2019 up to 2020**

Vehicle Type: **Macan S (95B)**

Subject: **Boost pressure hose between charge-air cooler and throttle valve**

Information: **Unfavorable routing of the boost pressure hose can cause vibrations that may be transmitted into the passenger compartment.**

Remedial Action: Check routing of the boost pressure hose and if necessary:

- Install boost pressure hose correctly
- Re-align boost pressure hose
- Adjust bonnet and front apron
- Replace boost pressure hose
- Retrofit pulsation damper

Parts required if necessary

Parts Info :	Part No.	Designation	Qty.
	95B145993H	⇒ Boost pressure hose	1 ea.

Required tools

- Tools:
- Torque wrench, 2–10 Nm (1.5 – 7.4 ftlb.), e.g. **VAG 1783 Torque wrench, 2–10 Nm (1.5-7.4 ftlb.)**
 - Calliper gauge, e.g. **VAS 6082 Depth gauge**

Preparatory work

Work Work Procedure: Remove front left wheel housing liner, see ⇒ *Workshop Manual '505619 Removing and installing front wheel housing liner'*.

- 2 Document the installation position of the boost pressure hose and the connection points on the charge-air cooler and throttle valve by taking meaningful pictures **before carrying out repairs**.

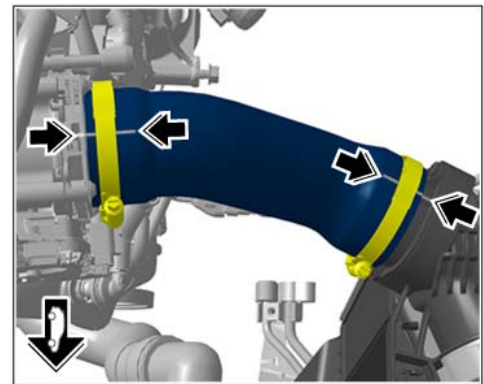
**Information**

Also document your findings after each section if the measure has **not** corrected the noise problem.

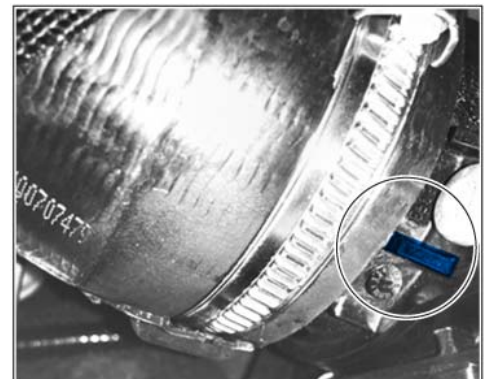
Checking installation position of boost pressure hose

Work Procedure: 1 Check installation position of the boost pressure hose and check whether the boost pressure hose is attached and installed correctly at the specified end points on the throttle valve ⇒ *Installation position of the boost pressure hose* and on the charge-air cooler ⇒ *Connection point for boost pressure hose on charge-air cooler*.

- If the boost pressure hose is installed correctly, continue with ⇒ *Technical Information '505619 Turning charge air hose'*.
- If the boost pressure hose is not installed correctly, install the boost pressure hose correctly and check whether this corrects the problem.



Installation position of the boost pressure hose



Connection point for boost pressure hose on charge-air cooler

- 2 If the problem is corrected, no further action is required.
 - If this is not the case, continue with ⇒ *Technical Information '505619 Turning charge air hose'*.

Turning boost pressure hose

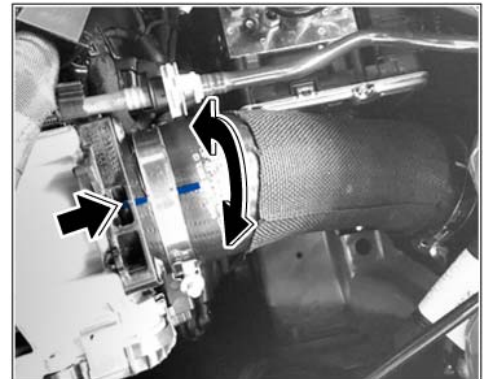
Work Procedure: 1 Loosen the hose clamp on the boost pressure hose, move the boost pressure hose at the throttle valve approx. 7 mm/ 0.28 in from the alignment point ⇒ *Connection point for boost pressure hose on throttle valve* by turning it **clockwise** and secure the boost pressure hose. Then, check whether the problem is corrected.



Information

Turning the charge air hose should relieve tension on the charge-air cooler mount in order to prevent this problem.

- If the problem is corrected, no further action is required.
- If this is not the case, repeat the procedure and move the boost pressure hose again by turning it approx. 7 mm/ 0.28 **incounter-clockwise**. Then, check again to see whether the problem is corrected.



Connection point for boost pressure hose on throttle valve

- 2 If the problem is corrected, no further action is required.
 - If this is not the case and the vehicle was produced **before 12.08.2019**, continue with ⇒ *Technical Information '505619 Adjusting bonnet and front apron'*.
 - If this is not the case and the vehicle was produced **after 12.08.2019**, continue with ⇒ *Technical Information '505619 Replacing boost pressure hose'*.

Adjusting bonnet and front apron

Work
Procedure:

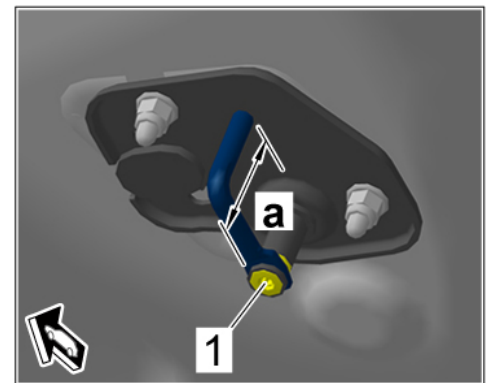


Information

Carry out the steps described under "Adjusting bonnet and front apron" only on vehicles produced **before 8/12/2019**.

This measure was already implemented during production on vehicles produced after this date.

- 1 Check adjustment dimension on **both** bonnet lock latches.
To do this, use a suitable tool, e.g. a calliper gauge, to measure at position \Rightarrow *Bonnet lock latch -a-* (lower edge of lock latch to retainer plate) and write down the measured value.
 - If the value is **37 mm/ 1.46 in**, continue with \Rightarrow *Technical Information '505619 Replacing boost pressure hose'*. The bonnet has already been adjusted to the optimized dimension.
 - If the value is **not 37 mm/ 1.46 in**, continue with Step 2 - Adjust lock latch.



Bonnet lock latch

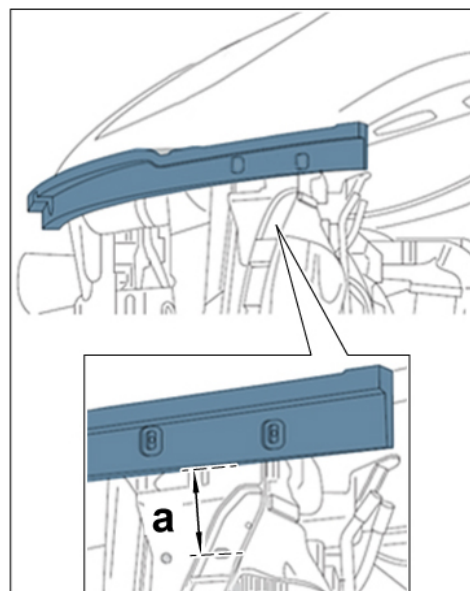
Adjust lock latch.

- 2 Adjust the lock latch by unscrewing the adjusting screw \Rightarrow *Bonnet lock latch -1-* to dimension \Rightarrow *Bonnet lock latch -a-37 mm/ 1.46 in* and write down the difference in measurement on both lock latches. (Actual dimension compared to 37 mm/ 1.46 in)

The front apron must then be raised by the same dimension.

- 3 To do this, remove the front apron. See \Rightarrow *Workshop Manual '631519 Removing and installing front apron'*.

- 3.1 Measure the dimension \Rightarrow *Retaining strip on front apron -a-* between the bore and lower edge of retaining strip on the front apron and write it down.
 - 3.2 Loosen screws on the front apron retaining strip.
 - 3.3 Move the front apron retaining strip up by the difference measured in 3.1 and tighten screws on the front apron retaining strip to **Tightening torque 9.7 Nm (7.2 ftlb.)** . Perform this procedure on both retaining strips for the front apron.
- 4 Install front apron, see \Rightarrow *Workshop Manual '631519 Removing and installing front apron'*.



Retaining strip on front apron

Then, check whether the problem is corrected.

- If the problem is corrected, no further action is required.
- If this is not the case, continue with \Rightarrow *Technical Information '631519 Replacing boost pressure hose'*.

Replacing boost pressure hose

Work Remove boost pressure hose.

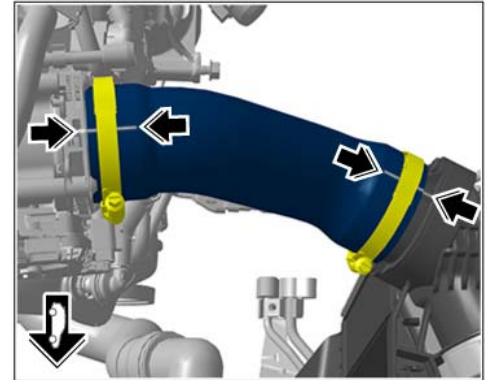
- Procedure:
- 1 Loosen both hose clamps on the boost pressure hose \Rightarrow *Installation position of the boost pressure hose*.
 - 2 Pull boost pressure hose off the throttle valve and then off the charge-air cooler.

Install **new** boost pressure hose (Part No. 95B145993H).

- 3 The boost pressure hose is installed in reverse order. Also check that the boost pressure hose is installed at the correct position ⇒ *Installation position of the boost pressure hose*.

Then, check whether the problem is corrected.

- If the problem is corrected, no further action is required.
- If this is not the case, turn the boost pressure hose as described under ⇒ *Technical Information '631519 Turning charge air hose'*.



Installation position of the boost pressure hose



Information

If the problem persists after turning the boost pressure hose, retrofit the pulsation damper as described in the section ⇒ *Technical Information '631519 Retrofitting the pulsation damper'*.

Retrofitting the pulsation damper

Parts:

Parts required:

Part No.	Designation	Qty.
95B145784A	⇒ Connection piece	1 ea.
N 10470703	⇒ Countersunk screw	2 ea.
95B129953	⇒ Pulsation damper	1 ea.
PAF107234	⇒ Hose clamp	1 ea.
N 10661002	⇒ Oval-head screw	4 ea.
95B145993H	⇒ Boost pressure hose	1 ea.
N 10544401	⇒ Hose clamp	2 ea.
95B803228A	⇒ Strut	1 ea.

Work
Procedure:



Information

Retrofitting must only be carried out if all other measures have already been performed, are documented and if the customer complaint persists.

- 1 To remove engine cover (design cover), see ⇒ *Workshop Manual '108319 Removing and installing engine cover (design cover) (V6 Turbo)'*.
- 2 Remove upper part of lock carrier, see ⇒ *Workshop Manual '503819 Removing and installing upper part of lock carrier'*.

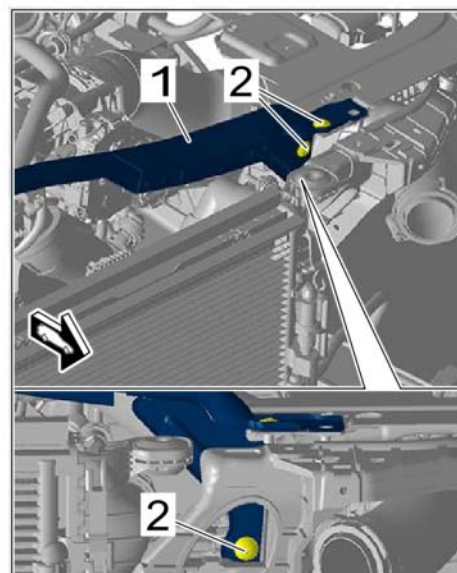
- 3 Remove headlight mounting, see ⇒ *Workshop Manual '941419 Removing and installing headlight mounting'*.



Information

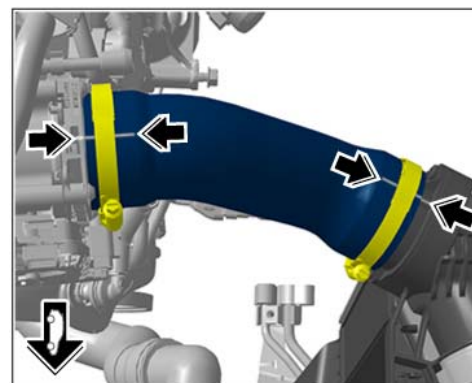
The procedure for removing and installing is described for one side as an example. The procedure for the other side is practically identical.

- 4 Replace strut ⇒ *Strut -1-* with new component version.
 - 4.1 Unscrew screws ⇒ *Strut -2-* and put the strut ⇒ *Strut -1-* to the side.
 - 4.2 Position **new** strut (Part No. 95B803228A).
 - 4.3 Screw in screws ⇒ *Strut -2-* and tighten to **with torque 9 Nm (6.6 ftlb.)**.
- 5 Remove boost pressure hose.
 - 5.1 Loosen both hose clamps on the boost pressure hose ⇒ *Installation position of the boost pressure hose*.



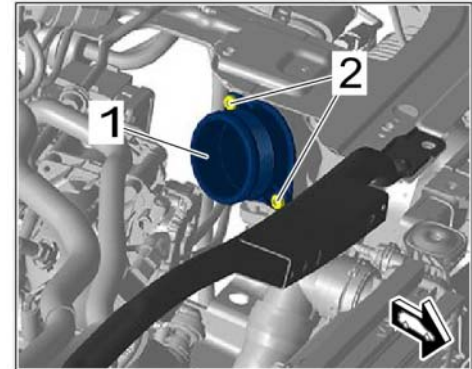
Strut

- 5.2 Pull boost pressure hose off the throttle valve and then off the charge-air cooler.
- 6 Replace connection piece for charge-air cooler ⇒ *Charge-air cooler connection piece -1-* with new component version.
 - 6.1 Unscrew screws ⇒ *Charge-air cooler connection piece -2-* and remove charge-air cooler connection piece ⇒ *Charge-air cooler connection piece -1-*.



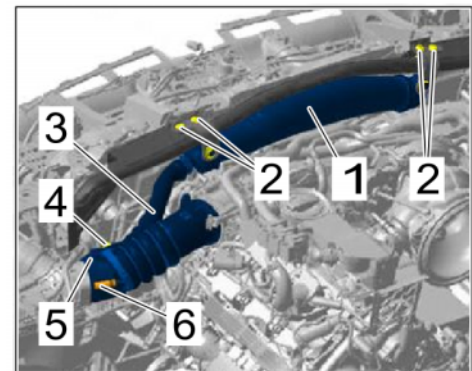
Installation position of the boost pressure hose

- 6.2 Position **new** charge-air cooler connection piece (Part No. 95B145784A), install **new** screws (Part No. N 10470703) and tighten to **with torque 3.5 Nm (2.6ftlb.)** .
- 7 Install boost pressure hose (Part No. 95B145993H).
- 7.1 To make installing easier, coat the boost pressure hose at the connection points with water. Do not use lubricant.
- 7.2 Push boost pressure hose onto the charge-air cooler connection piece as far as the stop.
- 7.3 Push boost pressure hose onto the throttle valve connection piece as far as the stop.
- 7.4 Align both ends with the relevant markings and tighten hose clamps.



Charge-air cooler connection piece

- 8 Install pulsation damper (Part No. 95B129953).
- 8.1 Position hose clamp \Rightarrow *Pulsation damper -4-* (Part No. PAF107234) on pressure hose \Rightarrow *Pulsation damper -3-*.
- 8.2 Push pressure hose for pulsation damper \Rightarrow *Pulsation damper -3-* as far as it will go onto the corresponding connection on the connector of the charge-air cooler \Rightarrow *Pulsation damper -5-*. Do not use lubricant.
- 8.3 Align pulsation damper \Rightarrow *Pulsation damper -1-* on strut, install **new** screws \Rightarrow *Pulsation damper -2-* (Part No. N 10661002) and tighten to **with torque 9 Nm (6.6 ftlb.)** .
- 8.4 Push the pressure hose of the pulsation damper \Rightarrow *Pulsation damper -3-* onto the connection of the charge-air cooler \Rightarrow *Pulsation damper -5-*, align it and tighten the hose clamp \Rightarrow *Pulsation damper -4-*.
- 9 Install headlight mounting, see \Rightarrow *Workshop Manual '941419 Removing and installing headlight mounting'*.
- 10 Install upper part of lock carrier, see \Rightarrow *Workshop Manual '503819 Removing and installing upper part of lock carrier'*.
- 11 To install engine cover (design cover), see \Rightarrow *Workshop Manual '108319 Removing and installing engine cover (design cover) (V6 Turbo)'*.



Pulsation damper

Concluding work

Work Procedure: 1 Install front left wheel housing liner, see ⇒ *Workshop Manual '505619 Removing and installing front wheel housing liner'*.

Invoicing

Invoicing: For documentation and warranty invoicing, enter the labor operations (depending on the time and effort involved), PCSS coding and part numbers specified below in the warranty claim:

APOS	Labor operation	I No.
21390111	Checking moulded hose	
21394961	Reworking moulded hose	
21394962	Reworking (turning) moulded hose	
21394900	Reworking moulded hose (pulsation damper)	
55180250	Checking upper parts of front lock	
55181650	Adjusting upper parts of front lock	
63151900	Removing and installing front apron	
63171650	Adjusting retaining strip	
21391961	Removing and installing moulded hose	

PCSS coding:

Location (FES5)	2141A	Charge air hose at top left
Damage type (SA4)	1715	strained

Parts Info: ¹⁾

Part No.	Designation	Qty.
95B145993H	Boost pressure hose	1 ea.
95B145784A	Connection piece	1 ea.
N 10470703	Countersunk screw	2 ea.
95B129953	Pulsation damper	1 ea.
PAF107234	Hose clamp	1 ea.
N 10661002	Oval-head screw	4 ea.
95B145993H	Boost pressure hose	1 ea.
N 10544401	Hose clamp	2 ea.
95B803228A	Strut	1 ea.

¹⁾ only if necessary

- References:
- ⇒ *Workshop Manual '505619 Removing and installing front wheel housing liner'*
 - ⇒ *Workshop Manual '631519 Removing and installing front apron'*
 - ⇒ *Workshop Manual '108319 Removing and installing engine cover (design cover) (V6 Turbo)'*
 - ⇒ *Workshop Manual '503819 Removing and installing upper part of lock carrier'*
 - ⇒ *Workshop Manual '941419 Removing and installing headlight mounting'*

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