

If There is a Loss of Power or if a Fault Code is Stored in the Fault Memory: Checking Wastegate Function (62/16)



Information

This Quick Information shall remain valid until such a time as PIWIS Tester software version 18.100 becomes available.

Until then, the following check must be performed.

Vehicle Type: **911 Carrera (991)**
911 Carrera S (991)

Model Year: **2017**

Subject: **Turbocharger – wastegate**

Information: **If there is a loss of power or if the following fault codes are stored in the fault memory, the wastegate must be checked for smooth operation and corrosion:**

- P0133 (Oxygen sensor upstream of catalytic converter, bank 1)
- P0153 (Oxygen sensor upstream of catalytic converter, bank 2)
- P0234 (Boost pressure control limit exceeded)
- P0299 (Boost pressure control deviation)
- P2262 (Boost pressure too low)

Remedial Action:

- Check wastegate on turbocharger bank 1 for smooth operation and corrosion.
- Check wastegate on turbocharger bank 2 for smooth operation and corrosion.
- If the wastegate shaft on turbocharger bank 1 is stuck, replace turbocharger on bank 1.
- If the wastegate shaft on turbocharger bank 2 is stuck, replace turbocharger on bank 2.

Work Procedure: **Always check the wastegate on both turbochargers. Perform each test step on turbocharger bank 1 (left in direction of travel) first and then on turbocharger bank 2.**

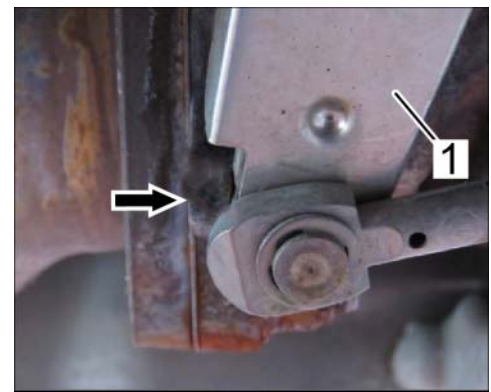


Hot components

- Risk of burns
- ⇒ Let hot components cool down.
- ⇒ Wear personal protective gear.

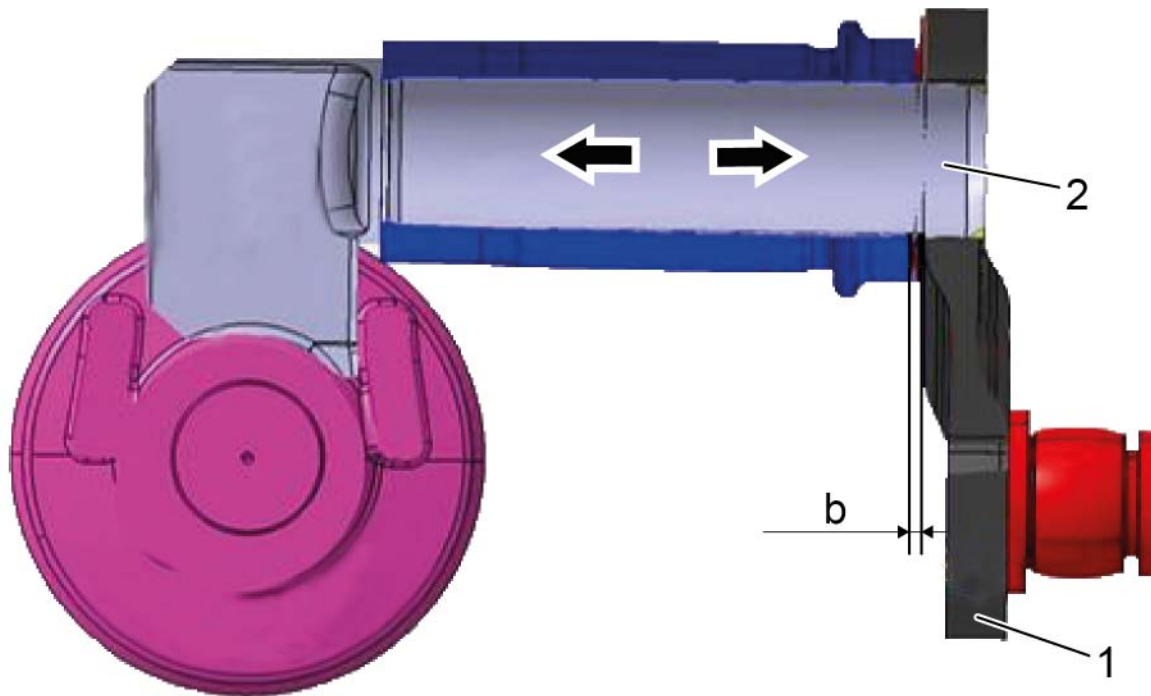
- 1 Raise the vehicle. ⇒ *Workshop Manual '4X00IN Lifting the vehicle'*
- 2 Check actuating lever and wastegate shaft for corrosion.

- 3 Check actuating lever.
 - 3.1 The actuating lever ⇒ *Checking stop -1-* must be at the stop ⇒ *Checking stop -arrow-*.
 - 3.2 It must be possible to move the actuating lever ⇒ *Checking stop -1-* against the spring force of the vacuum unit with your hand.
- If the actuating lever is stuck, replace the relevant turbocharger. ⇒ *Workshop Manual '213019 Removing and installing turbocharger'*
- If the actuating lever is at the stop and can be moved by hand, continue with Step 4.



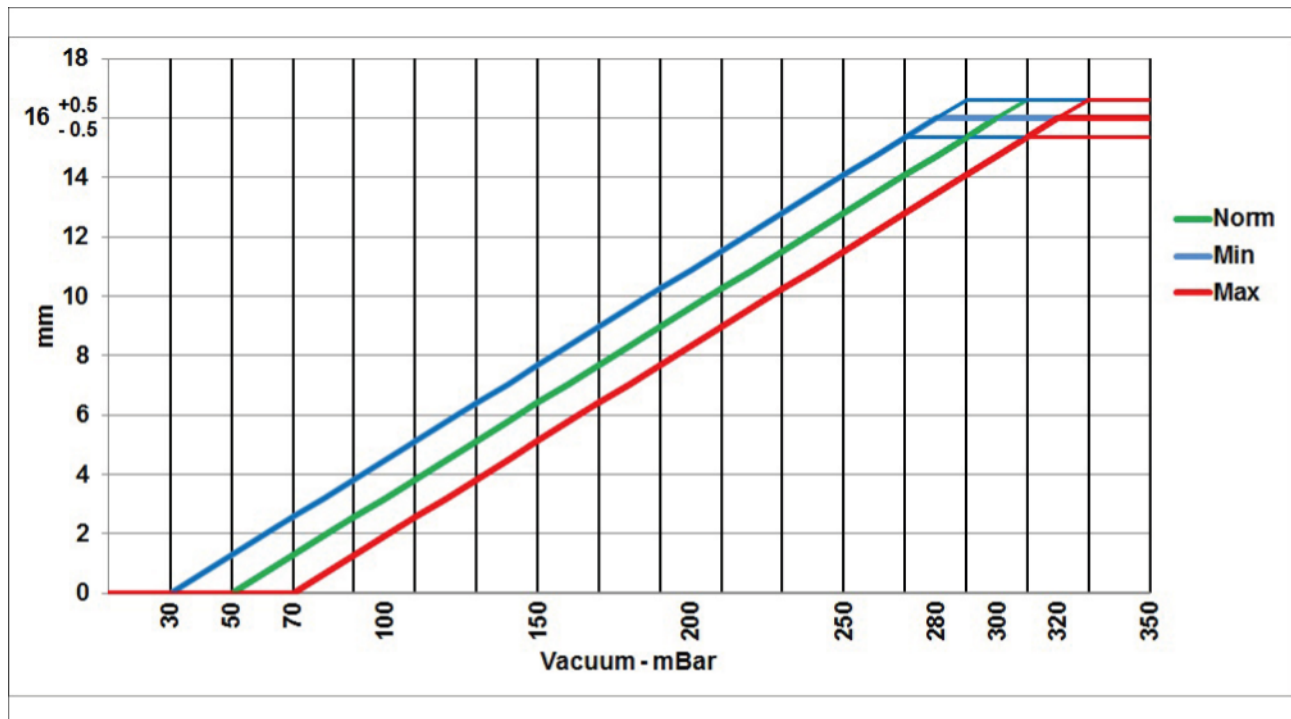
Checking stop

- 4 Check wastegate shaft ⇒ *Checking wastegate shaft -2-*.
 - 4.1 Check that the wastegate shaft ⇒ *Checking wastegate shaft -2-* moves smoothly internally.
 - 4.2 Move the wastegate shaft ⇒ *Checking wastegate shaft -2-* using the actuating lever ⇒ *Checking wastegate shaft -1-* in axial direction ⇒ *Checking wastegate shaft -arrows-*.
The axial play ⇒ *Checking wastegate shaft -b-* of the wastegate shaft ⇒ *Checking wastegate shaft -2-* is about 0.5 mm.
A clear locking sound can be heard in both directions.
- If the wastegate shaft is stiff and/or if there is too much/not enough axial play, replace the relevant turbocharger. ⇒ *Workshop Manual '213019 Removing and installing turbocharger'*
- If the wastegate shaft moves freely and the axial play corresponds to the setpoint value, continue with Step 5.



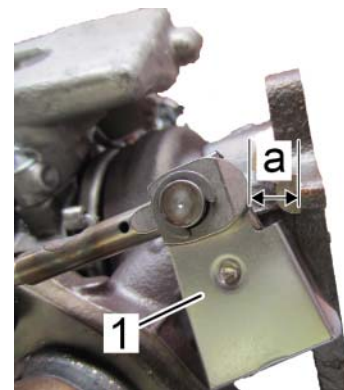
Checking wastegate shaft

- 5 Perform vacuum test.
 - 5.1 Disconnect vacuum line from the vacuum unit for the wastegate adjuster.
 - 5.2 **9160/1 - Tester** must then be connected to the vacuum connection on the boost pressure control valve.
 - 5.3 Build up vacuum and compare setpoint values \Rightarrow *Nominal values*:
 - 5.3.1 The actuating lever must start to move within the specified setpoint value.
 - 5.3.2 The end position of the actuating lever must be reached within the specified setpoint value.
 - 5.3.3 The actuating lever must move evenly and without jerking.



Nominal values

- If the setpoint values are not reached and/or if the actuating lever does not move evenly, replace the relevant turbocharger. ⇒ *Workshop Manual '213019 Removing and installing turbocharger'*
 - If the setpoint values are reached and the actuating lever moves evenly, continue with Step 6.
- 6 Check actuating lever travel.
- 6.1 The actuating lever ⇒ *Lever travel-1-* must travel a total distance ⇒ *Lever travel-a-* of approx. 16 mm.



Lever travel

- If the actuating lever travel does not correspond to the setpoint value, replace the relevant turbocharger. ⇒ *Workshop Manual '213019 Removing and installing turbocharger'*

- If the actuating lever travel corresponds to the setpoint value and if the **wastegate is checked and found to be OK, the fault is not due to the cause described here. Find the cause of the fault and correct it.**

Invoicing: The work involved is invoiced under the labor operation:

APOS	Labor operation	I No.

For invoicing and documentation using PQIS, enter the following coding:

Location (FES5)	21300	Turbocharger
Damage type (SA4)	1711	Stiff, stuck, not enough play

References: ⇒ *Workshop Manual '213019 Removing and installing turbocharger'*

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