2013 BMW 328i Sedan (F30) L4-2.0L Turbo (N20) Vehicle > Powertrain Management > Fuel Delivery and Air Induction > Turbocharger > Wastegate Actuator > Service and Repair > Removal and Replacement

REMOVING AND INSTALLING/REPLACING ELECTRICAL ACTUATOR (WASTEGATE VALVE) (N20) REP-REP-RAF3011N20-1165300 - V.8

# **Repair instruction**

Removing and installing/replacing electrical actuator (wastegate valve) (N20)

11 65 300 | REP-REP-RAF3011N20-1165300 - V.8

## 11 65 300 Removing and installing/replacing electrical actuator (wastegate valve) (N20)



#### Attention!

Read and comply with notes on protection against electrostatic discharge (ESD protection).



### Necessary preliminary work:

• Remove intake silencer housing.



Unlock plug connection (1) on the electrical wastegate valve controller.

## Installation note:

Ensure retaining clip is seated correctly.

Lock must engage.



## Attention!

Absolutely make sure that the adjusting nut (2) is not adjusted.

Release lock nut (1) using 2 open-end spanners.

The adjusting nut (2) is secured with the 2nd open-end spanner.

The retaining clip on the wastegate linkage may **not be released.** 

Detach wastegate linkage (1) on the wastegate valve controller (2).

Let wastegate linkage (1) hang towards the bottom in order to avoid damage.



# When replacing the wastegate valve controller.

Remove and dispose of new wastegate linkage.

The present wastegate linkage must be used.

Release nut (1) of the new wastegate valve controller.

Remove and dispose of new wastegate linkage (2).





Loosen screws (3).

# Tightening torque:



Remove the wastegate actuator.



## Installation note:

Basic setting of the wastegate linkage can only be checked or adjusted using the diagnosis.



## Installation note:

Only when replacing the wastegate valve controller.

## Attention!

The adjusting nuts (1 and 2) may only countered by using two open-end spanners.

Using just one open-end spanner risks damaging the electrical actuator drive.

## Installation note:

Shorten adjustment travel (-).

Increase adjustment travel (+).

To ensure a reliable setting of the adjustment travel, both adjusting nuts must be marked with a coloured mark.

One full turn of the adjusting nut corresponds to an adjustment travel of **0.75 mm**.

Example 1:

Actual value measured by the diagnostic function: **+0.75 mm**.

Required correction: +0.75 mm: 0.75 mm = +1.0 turns.

Adjust the linkage setting correction by turning nut (1) through 1.0 turns in + direction before resetting nut (2) and countering with 6 Nm.

Example 2:

Actual value measured by the diagnostic function: -1.5 mm.

Required correction: -1.5 mm: 0.75 mm = <u>-2</u> turns.

Adjust the linkage setting correction by turning nut (2) through 2 turns in - direction before resetting nut (1) and countering with 6 Nm.

Check basic setting again using diagnosis.

Assemble engine.

