



This Service Information bulletin supersedes SI B11 13 07 **dated April 2009.**

**NEW** designates changes to this revision

## SUBJECT

### **N54 Distinct Clanking Noise from Turbocharger Area**

## MODEL

E90, E92 and E93 (3 Series) 335i and 335xi

E60 and E61 (5 Series) 535i and 535xi

**NEW** All with N54 engine from the start of production up to March 2008 production

## SITUATION

The customer complains of a metallic noise from the exhaust system near the engine or turbocharger area. This noise is described as a clanking noise, occurring up to six or seven times in a row during a deceleration from approximately 3,500 RPM; or during a heavy application of the accelerator without a drive gear being engaged.

Complaints received regarding a slight rattle from this area under steady acceleration in the 2,000 RPM to 4,000 RPM range are due to the rotating waste gate valve face; this is a characteristic of the mechanical waste gate. The rotating waste gate valve face is necessary to ensure proper sealing. This slight rattle noise is considered normal operation of the mechanical waste gate valve. No repair should be attempted for this type of rattling complaint.

## CAUSE

The wastegate valve does not completely close due to the mechanical tolerances of the wastegate actuator. This results in the wastegate valve repeatedly clanking against its seating surface.

## PROCEDURE

### **Vehicles produced from May 2006 up to September 2007**

#### **Do not replace the turbocharger or adjust the existing wastegate actuator control rod.**

1. Perform DIS Test Plan 120012, Noises at Turbocharger (Path: Fault Symptom – 1200 Engine control –120012 Noises at Turbocharger).
2. The test plan will conclude with an instruction to replace the wastegate actuators; ignore this instruction. Reprogram the DME if the vehicle has not already been programmed to one of the levels described below. Compare the vehicle I-Level to the table below.

<b>Model</b>	<b>Vehicle Data Status</b>
E90, E92, and E93 (335i and 335xi)	E89x-08-03-530 or higher
E60 and E61 (535i and 535xi)	E060-08-03-525 or higher

3. If the vehicle has not achieved one of the levels above, reprogram the vehicle using ISTA/P 2.32.1 or a more recent version.
4. After programming is completed, if the noise is no longer present, take no further action. If the noise is still

present, replace both of the turbocharger wastegate actuators in accordance with Repair Instruction RA 11 65 580, Replacing vacuum unit (wastegate) (N54).

### **Vehicles produced from September 2007 up to March 2008**

#### **Do not replace the turbocharger or adjust the existing wastegate actuator control rod.**

1. Perform the DIS Test Plan 120012, Noises at Turbocharger (Path: Fault Symptom – 1200 Engine control –120012 Noises at Turbocharger).
2. The test plan will conclude with an instruction to replace the wastegate actuators; ignore this instruction. Reprogram the DME if the vehicle has not already been programmed to one of the levels described below. Compare the vehicle I-Level to the table below.

<b>Model</b>	<b>Vehicle Data Status</b>
E90, E92, and E93 (335i and 335xi)	E89x-08-03-530 or higher
E60 and E61 (535i and 535xi)	E060-08-03-525 or higher

3. If the vehicle has not already achieved one of the levels above, reprogram the vehicle using ISTA/P 2.32.1 or more recent version.

### **All 335i/xi and 535i/xi models built from June 2006 up to September 2007**

The updated software causes a small amount of increased "turbocharger lag" under certain circumstances and, while not substantial, the lag may be perceptible to the most sensitive BMW drivers. X6, 135i, 3 Series and 5 Series vehicles from March 2008 production onward are not affected. If said "turbocharger lag" is a customer's complaint, then the vehicle's DME software can be retrofitted to the original waste gate operation.

#### **Procedure for vehicles up to September 2007 production:**

Using ISTA/P 2.32.1 or a more recent version, select "Conversions", and then select "Wastegate valve conversion". Follow the on-screen prompts to reinstall the original waste gate operation.

After the "Waste gate valve conversion" has been completed, some waste gate-related noise may be detected.

#### **Important Note:**

To eliminate the "turbocharger lag" complaint on the vehicles produced from September 2007 up to March 2008 (after programming with Progran versions V29.2 – V32.0), reprogram the complete vehicle, using ISTA/P 2.32.1 or a more recent version.

#### **PARTS INFORMATION**

##### **E90, E92, and E93 (3 Series):**

<b>Part Number</b>	<b>Description</b>	<b>Quantity</b>
11 65 7 585 745	Actuator Cylinder 1-3	1
11 65 7 585 746	Actuator Cylinder 4-6	1

##### **E60 and E61 (5 Series):**

Part Number	Description	Quantity
11 65 7 585 745	Actuator Cylinder 1-3	1
11 65 7 585 747	Actuator Cylinder 4-6	1

**Note: The DIS Test Plan 120012, Noises at Turbocharger, supplies incorrect part numbers; please refer to this Service Information bulletin for the correct part numbers. The Test Plan will be corrected in D54.0.**

**WARRANTY INFORMATION**

Covered under the terms of the BMW New Vehicle Limited Warranty.

**Defect Code: 11 65 05 39 00**

Labor Operation:	Labor Allowance:	Description:
*61 00 811	8 FRU	Programming/encoding control units Including CAS
*61 00 801	7 FRU	Programming/encoding control units Not including CAS

\*Main Work - use this labor operation number when this is the only repair being performed, or if this is the main repair when performed along with other repairs at the same time. If this is not the main repair, refer to KSD for the associated (+) labor operation code.

Note 1: Should the vehicle be affected at the same time by another repair in which programming of control units is also required, programming may be claimed only once.

Note 2: In the case where Progman requires the replacement of control modules or additional programming because certain control modules failed to program correctly, print out the Measures Plan and Status Report/Final Report as described in the Progman programming procedure (B09 05 01). Attach these reports to the RO in the vehicle file. This additional work should be claimed under the defect code listed in this bulletin using the labor operation and labor allowance from the KSD.

Labor Operation:	Labor Allowance:	Description:
*11 65 048	Refer to KSD based on model	Removing and installing or replacing both exhaust turbochargers
<b>NEW</b> +11 65 580	Refer to KSD based on model	Adjusting vacuum units and replacing if necessary