



This Service Information bulletin supersedes S.I. B11 02 05 **dated May 2005**.

**NEW** designates changes to this revision

## SUBJECT

**N62 Engine - Rough Idle, Misfire Faults after Cold Start**

## MODEL

E53 (X5 4.4 i/4.8is); E60, E63/64, E65/66 with N62 from 06/04 up to 02/05 production

## SITUATION

Customer may complain of erratic engine idle speed lasting for approximately 20 seconds after a cold start. Check Engine Soon light may be illuminated and misfire faults for various cylinders (e.g. FC 2742, 2743, 2744, 2745, 2746, 2748, 2749, 274E) may be stored in the DME.

## CAUSE

Incorrect tolerances and geometry of Valvetronic intermediate levers are causing uneven cylinder filling during the transitional cold start period (60 seconds after the engine has been started) when the Valvetronic system is switching from the initial 6 mm to a minimum 0.3/0.8 mm valve lift.

## CORRECTION

On a customer complaint basis, and after performing diagnostic procedure described below, replace the Valvetronic intermediate levers.

## PROCEDURE

1. Perform basic engine diagnosis (compression, ignition, fuel pressure, etc) to rule out other potential causes.
2. Allow the engine to cool down.
3. **NEW** Connect GT1/DIS loaded with CD 44.0, or higher, to a cold vehicle (coolant temperature below 30 deg C) and from the Function Selection select: "Service Functions", "Drive", "Engine management ME9", "Test runs" and then "Tolerance test, intermediate lever".
4. **NEW** Start the engine and follow-up the test plan.
5. Observe rough running values when idle speed stabilizes. If values are in excess of +/- 2.5 accompanied with noticeable engine vibration (and sometimes Check Engine Soon flashing), then remove valve covers on both banks.
6. Look for the intermediate lever production date (stamped on the lever, next to the smaller roller contacting the eccentric shaft).
7. If the production date is in the range between "04 180" and "04 324" (e.g. day 324 of the year 2004), then the whole set of intermediate levers (16) has to be replaced. The same classification of levers must be

used when ordering the intermediate levers (classification number is stamped below production date). There are 5 classifications of levers used in the N62 engine.

**Note:** In an individual cylinder head, all levers must have the same classification, but two different classification of intermediate levers may be used in one engine (e.g. bank 1: classification 2, bank 2: classification 3).

**Important:** The lower production range of the affected intermediate levers is only an approximation. It is possible that levers produced prior to "04 180" (but not earlier than "03 363") may have certain deviations in tolerances.

8. For Valvetronic intermediate lever replacement procedure, refer to RA 11 37 012 (bank 1) and RA 11 37 014 (bank 2), found in BMW TIS.

### **IMPORTANT:**

1. Improved intermediate levers are currently available from our Parts Department.
2. In the event of a reproducible customer complaint proceed with the diagnostic and repair procedure. There is no need to contact Technical Hotline.

### **PARTS INFORMATION**

| <b>Part Number</b> | <b>Description</b>                               | <b>Quantity</b> |
|--------------------|--|-----------------|
| 11 37 7 516 895    | Intermediate levers class 1                      | Maximum 16      |
| 11 37 7 514 012    | Intermediate levers class 2                      | Maximum 16      |
| 11 37 7 514 013    | Intermediate levers class 3                      | Maximum 16      |
| 11 37 7 514 014    | Intermediate levers class 4                      | Maximum 16      |
| 11 37 7 514 015    | Intermediate levers class 5                      | Maximum 16      |
| 11 12 7 513 194    | Valve cover gasket bank 1                        | 1               |
| 11 12 7 513 195    | Valve cover gasket bank 2                        | 1               |
| 11 31 7 507 432    | Tensioner sealing ring                           | 2               |
| 07 11 9 903 596    | Valvetronic motor spacer ring                    | 2               |
| 11 14 7 506 424    | Timing chain cover, u-shape metal gasket, bank 1 | 1               |
| 11 14 7 506 425    | Timing chain cover, u-shape metal gasket, bank 2 | 1               |
| 11 36 7 513 222    | Vanos solenoid O-ring                            | 4               |
| 11 36 7 546 379    | Vanos solenoid O-ring                            | 4               |
| 11 36 7 501 423    | Vanos unit bolts                                 | 4               |
| 12 14 1 748 398    | Cam sensor o-rings                               | 4               |
| 11 12 7 518 420    | Eccentric shaft sensor o-ring                    | 2               |

**NOTE:**

It is not necessary to replace spark plugs tubes during a course of this repair.

**WARRANTY INFORMATION**

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

|                    |                         |  |
|--------------------|-------------------------|--|
| <b>Defect Code</b> | <b>11 37 91 42 00</b>   |  |
|                    | <b>Labor Operation:</b> | <b>Labor Allowance:</b>  |
| Main work:         | 00 55 453               | 93 FRU – E53 X5 4.4i/4.8is<br>91 FRU – E65/66<br>102 FRU – E60, E63/64 |
| +Associated work:  | 00 55 793               | 91 FRU – E53 X5 4.4i/4.8is<br>90 FRU – E65/66<br>100 FRU – E60, E63/64 |

Note: The following explanations will spell out the correct use of the work times.

|                          |   |
|--------------------------|---|
| <b>Main Work:</b>        | Use this labor operation number when the only repair performed is the listed warranty repair.   |
|                          | OR  |
| <b>+Associated Work:</b> | Use this labor operation number when other repairs or services are performed along with the listed warranty repair.<br>Under no circumstances should both labor operation numbers be claimed. Attempts to claim both times will result in an unnecessary delay in claim processing and payment. |