

Several 4.4L engines have experienced this issue whether in a 5 or 6 series. Probably something that should have been detected early on and at least one SIB (service bulletin on it). Maybe due to running some length of time with the misadjusted valve/lifters you may have had additional damage hence more parts than usual. But again, several have had their top ends rebuilt.

SIB here:

SI B 11 02 05
Engine January 2006
Technical Service

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

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

Perform basic engine diagnosis (compression, ignition, fuel pressure, etc) to rule out other potential causes.

Allow the engine to cool down.

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".

Start the engine and follow-up the test plan.

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.

Look for the intermediate lever production date (stamped on the lever, next to the smaller roller contacting the eccentric shaft).

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.

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:

Improved intermediate levers are currently available from our Parts Department.

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

Part Number

Description

Quantity

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.

Defect Code

11 37 91 42 00

Labor Operation:

Labor Allowance:

Main work:

00 55 453

93 FRU – E53 X5 4.4i/4.8is

91 FRU – E65/66

102 FRU – E60, E63/64

+Associated work:

00 55 793

91 FRU – E53 X5 4.4i/4.8is

90 FRU – E65/66

100 FRU – E60, E63/64

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

Main Work:

Use this labor operation number when the only repair performed is the listed warranty repair.

OR

+Associated Work:

Use this labor operation number when other repairs or services are performed along with the listed warranty repair.

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.