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Fig. 235: Installing Special Tool On Drive Belt
Courtesy of BMW OF NORTH AMERICA, INC.

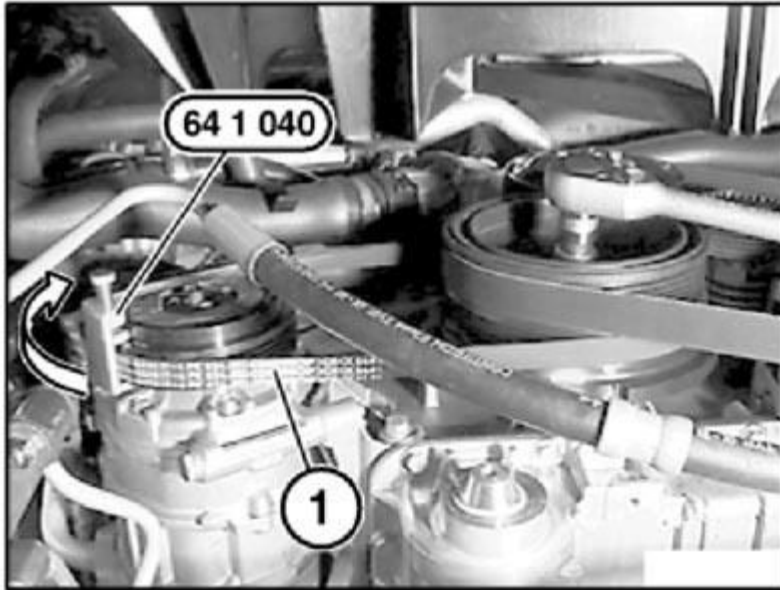
Crank engine at central bolt in direction of rotation until drive belt is fully guided in belt pulley.

Remove special tool 64 1 040.

Installation:

Check installation position of drive belt.

Assemble vehicle.



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Fig. 236: Installing Drive Belt On Pulley
Courtesy of BMW OF NORTH AMERICA, INC.

11 28 050 REPLACING A/C COMPRESSOR DRIVE BELT WITH BELT TENSIONER (N62/N62TU)

NOTE: For Special Tool identification, see **ENGINE- SPECIAL TOOLS - 5-SERIES (E60)** .

Special Tools Required:

- 11 3 340

Necessary Preliminary Tasks:

- Remove alternator drive belt. Refer to **11 28 010 REPLACING ALTERNATOR DRIVE BELT (N62/N62TU)**.
- Remove engine splash guard.

NOTE: If the drive belt is to be reused: Mark direction of travel and reinstall drive belt in same direction of travel.

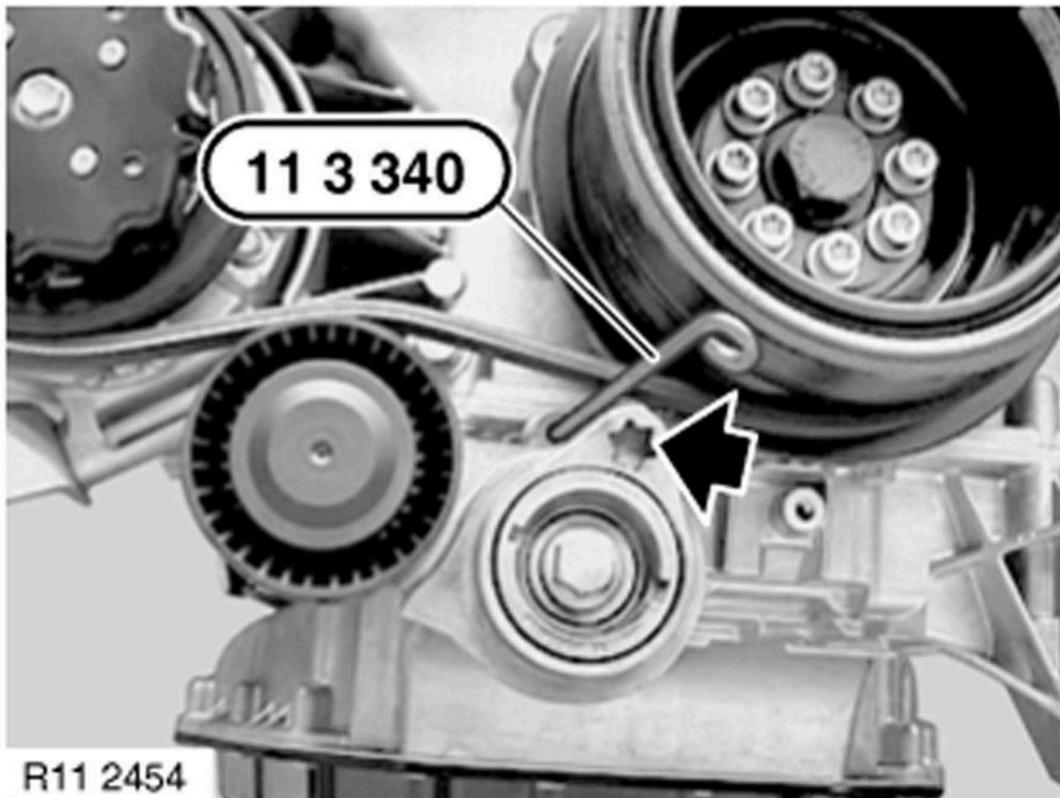
Pretension belt tensioner slowly and carefully with a Torx socket as far as it will go and secure with special tool 11 3 340.

Remove drive belt.

IMPORTANT: If contaminated with hydraulic fluid: Replace drive belt.

Put on the drive belt.

Remove special tool 11 3 340.



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Fig. 237: Securing Belt Tensioner Using Locking Pin
Courtesy of BMW OF NORTH AMERICA, INC.

Installation:

Check that drive belt is correctly positioned on pulleys.



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Fig. 238: Identifying Correctly Positioned Drive Belt
Courtesy of BMW OF NORTH AMERICA, INC.

CAMSHAFT

11 31 032 REMOVING AND INSTALLING/REPLACING LEFT INLET CAMSHAFT (N62 FROM 9/03 AND N62TU)

NOTE: For Special Tool identification, see **ENGINE- SPECIAL TOOLS - 5-SERIES (E60)** .

Special Tools Required:

- 11 9 470
- 11 9 472
- 11 9 473
- 11 9 474
- 11 9 475

- 11 9 480
- 11 9 490

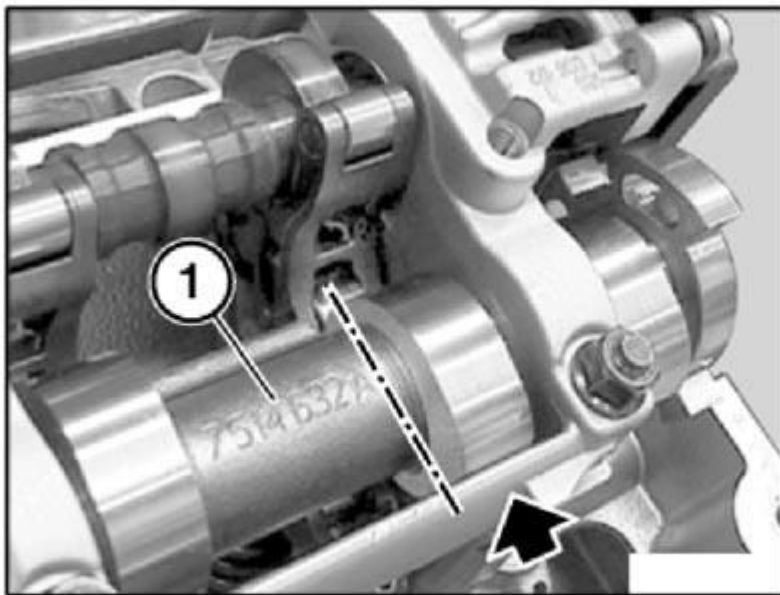
(Cylinder Bank 5 To 8)

Necessary Preliminary Tasks:

- Remove servomotor for left eccentric shaft. Refer to **11 37 022 REMOVING AND INSTALLING/REPLACING SERVMOTOR FOR LEFT ECCENTRIC SHAFT (N62/N62TU)**.
- Remove ignition coils on cylinder bank 5 to 8.
- Remove left cylinder head cover. Refer to **11 12 005 REMOVING AND INSTALLING/SEALING LEFT CYLINDER HEAD COVER (N62/N62TU)**.
- Remove spark plugs on cylinder bank 5 to 8.
- Remove inlet and exhaust adjustment unit on left side. Refer to **11 36 047 REMOVING AND INSTALLING/REPLACING INLET AND EXHAUST ADJUSTMENT UNITS ON LEFT SIDE (N62/N62TU)**.

IMPORTANT: The inlet camshaft must first be rotated so that when the bearing bracket is removed the intermediate levers do not slip out and damage the camshaft.

Rotate inlet camshaft against direction of rotation until lettering (1) on 8th cylinder points upwards in cylinder axis and cam is horizontal.



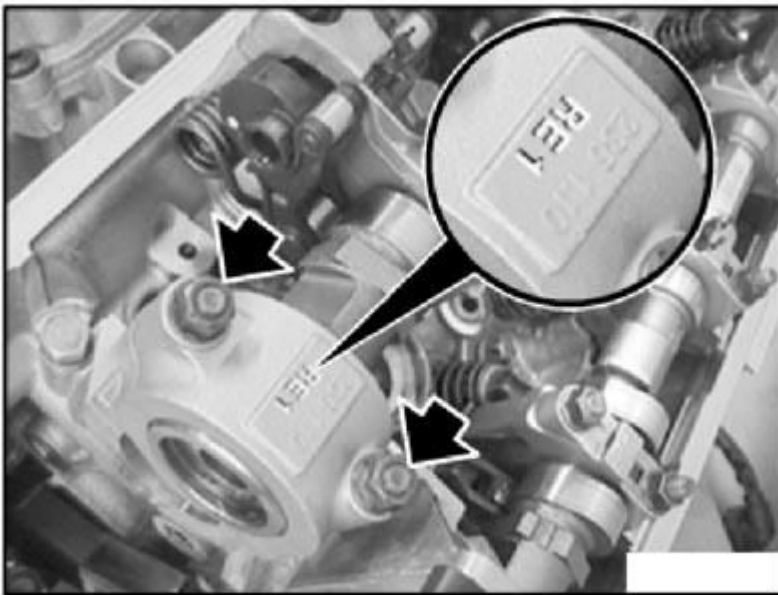
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Fig. 239: Identifying Lettering On Cylinder
Courtesy of BMW OF NORTH AMERICA, INC.

IMPORTANT: Do not mix up the camshaft bearing covers of cylinders 1 to 4 and 5 to 8.

NOTE: Bearing caps of inlet camshaft are marked on cylinder bank 5 to 8 with R E1 to R E5 from inlet side.

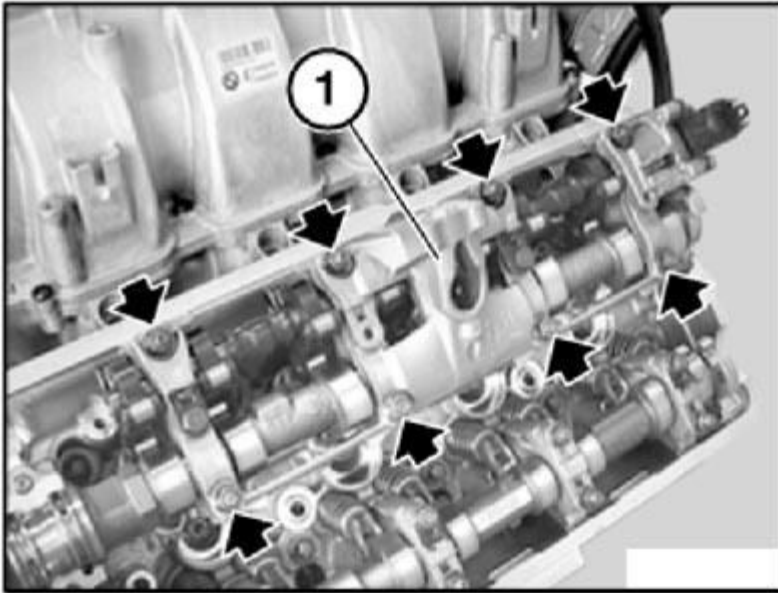
Release nuts and remove bearing cap R E1.



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Fig. 240: Identifying Bearing Cap R E1
Courtesy of BMW OF NORTH AMERICA, INC.

Release 8 nuts of bearing bracket (1) from outside to inside.



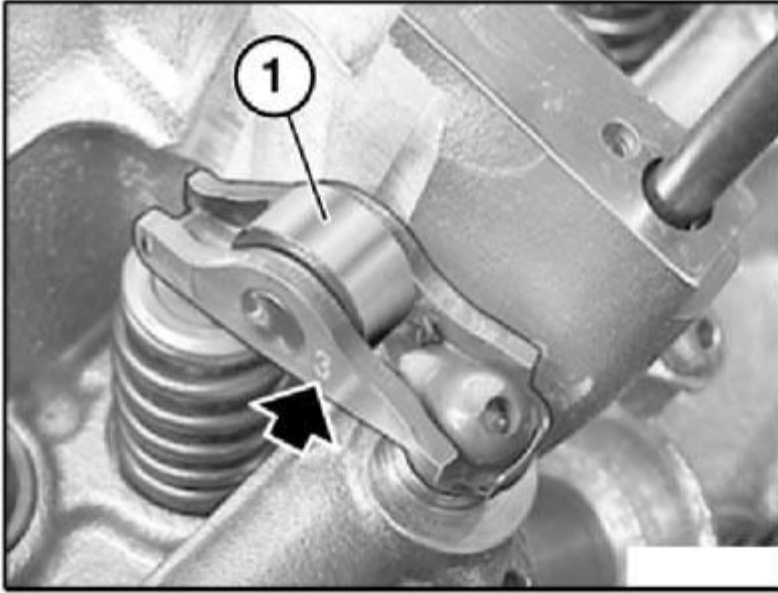
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Fig. 241: Locating Nuts Of Bearing Bracket
Courtesy of BMW OF NORTH AMERICA, INC.

NOTE: Rocker arms are freely accessible after bearing bracket has been removed. Do "not" remove rocker arm (1) on inlet side.

IMPORTANT: Rockers arms (1) are divided into individual tolerance classes. The tolerance classes are designated as illustrated with the numbers from 1 to 4. Used rocker arms (1) may only be reused in the same position.

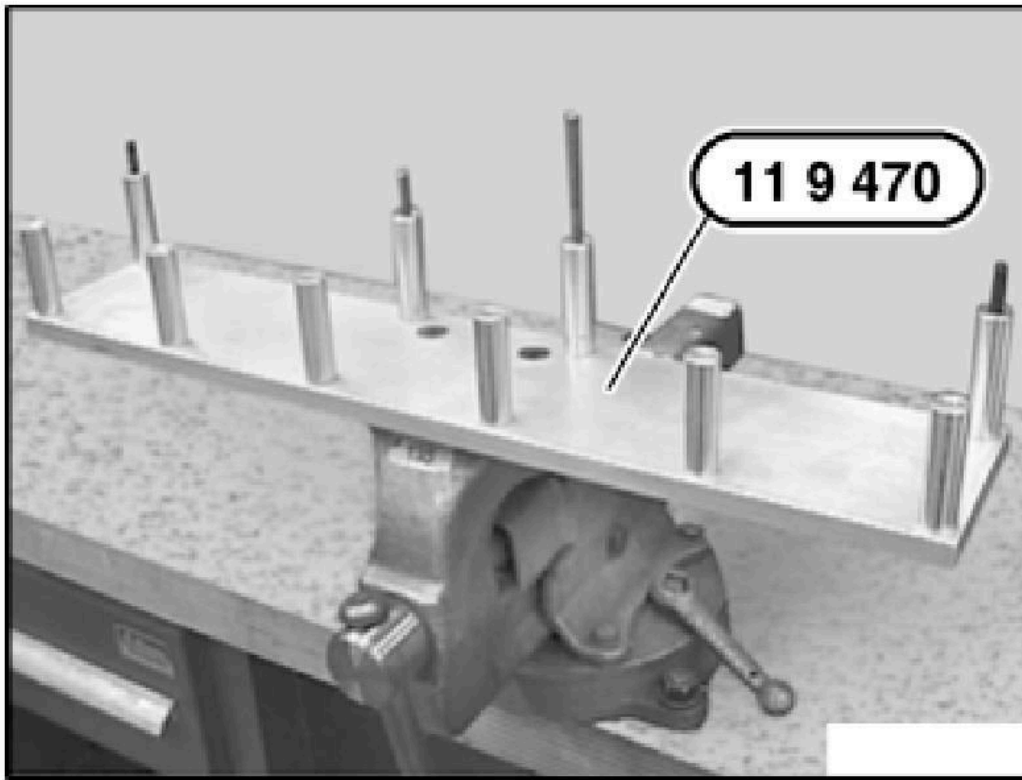
When replacing rocker arms (1) on inlet side: install rocker arms of the same tolerance class in the same position.



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Fig. 242: Identifying Rocker Arm
Courtesy of BMW OF NORTH AMERICA, INC.

Clamp special tool 11 9 470 as illustrated in a vise.



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Fig. 243: Clamping Special Tool In Vise
Courtesy of BMW OF NORTH AMERICA, INC.

IMPORTANT: Do not tilt bearing bracket (1).

Carefully lift out bearing bracket (1).