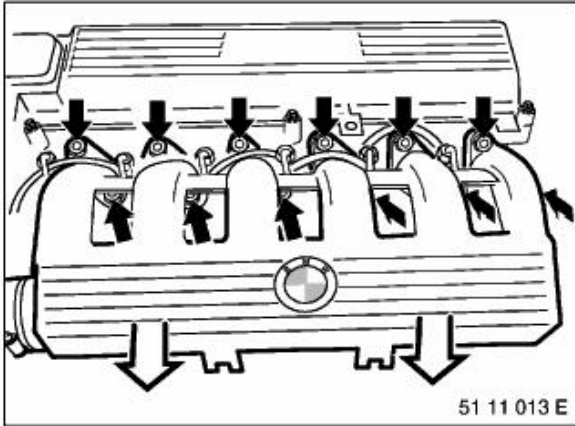


Removing and installing/replacing injection pump (M51)

Connect MoDiC or DIS to diagnosis jack. Select diagnostic program of DDE control module, select Special functions or Test module, follow instructions on how to proceed. Read fault memory of DDE control module.

Switch off ignition.



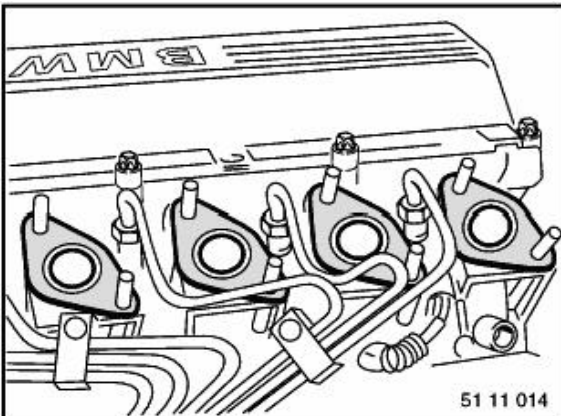
Follow instructions for disconnecting and connecting battery, refer to General Information MG12.

Remove ground wire from battery.

Unscrew and remove splash guard.

Remove fan and fan cowl, refer to 11 52 020.

Remove intake air manifold, refer to 11 61 050.

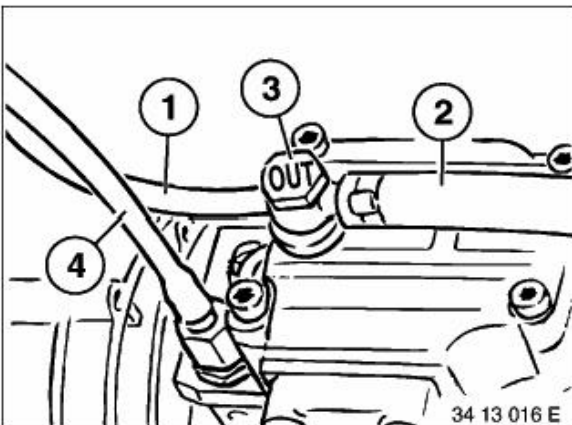


Installation:

With aluminum suction units: Replace seals.

With plastic suction units: check seals in suction unit and replace, if necessary.

Replace leakage oil hoses after disassembly.



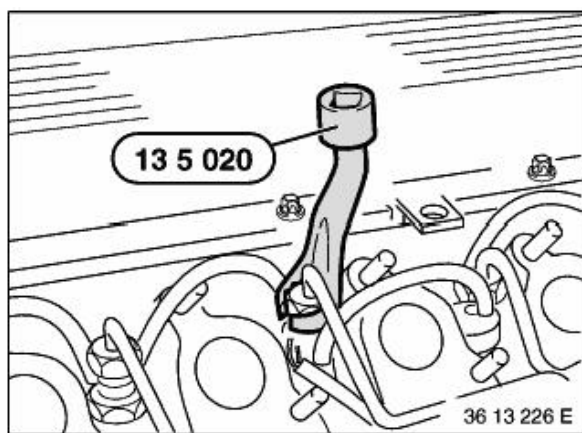
Remove hose for leakage oil (1).

Remove return line (2). Hollow union bolt (3) is matched with the injection pump.

Remove fuel line (4).

Installation:

Replace leakage oil hoses after disassembly.



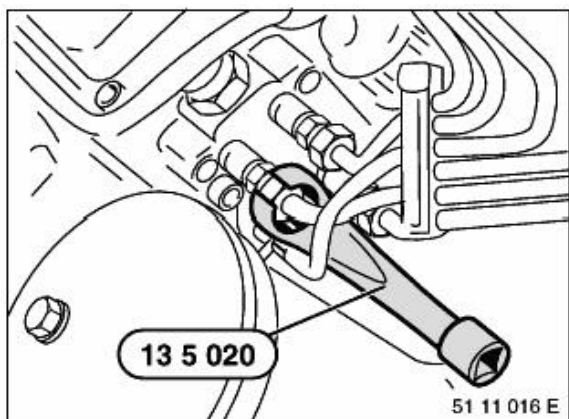
Disconnect injection lines from injection nozzles using special tool 13 5 020 and remove lines.

Caution!

Adjust tool as required to prevent pipes from bending.

Seal nozzle apertures with protective caps.

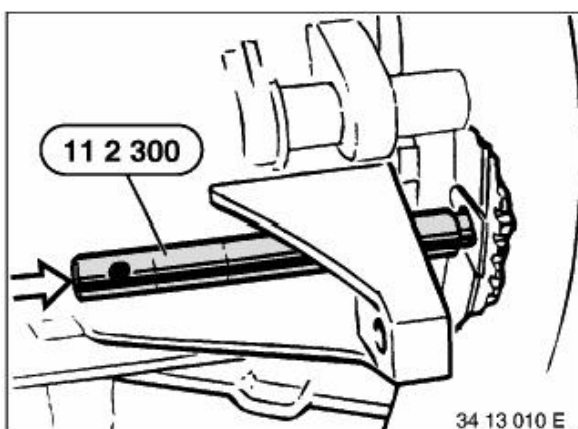
Tightening Torque,
refer to Technical Data 13 53 3AZ.



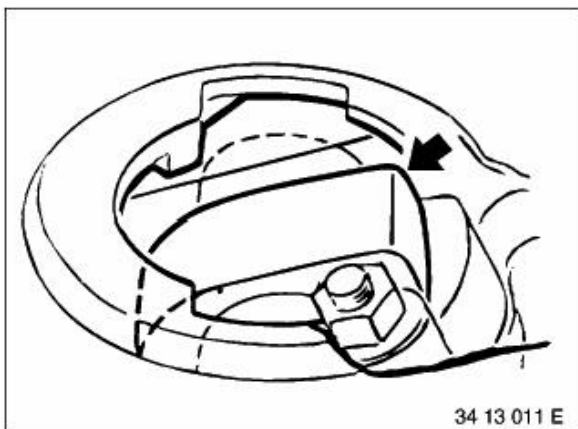
Release union nuts from injection pump with special tool 13 5 020 and remove.

Seal apertures on the injection pump with protective caps.

Tightening Torque,
refer to Technical Data 13 53 3AZ.



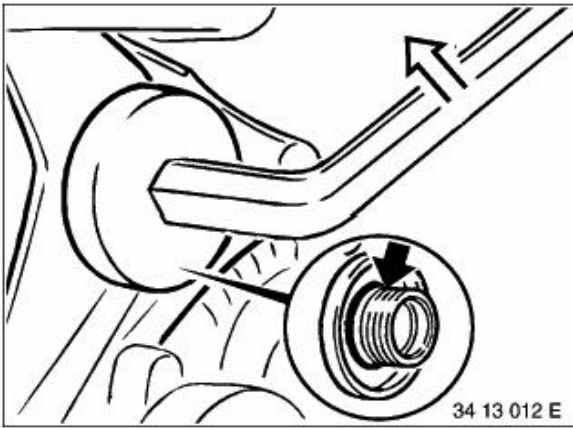
Locate engine in TDC position of 1st cylinder (power stroke) with special tool 11 2 300.



Checking:

Unscrew and remove oil filler cover.

1st cam on camshaft must point upwards.

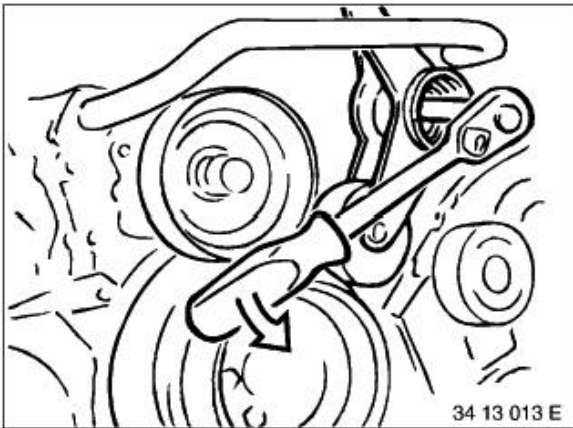


Remove screw connection from toothed belt tensioner.

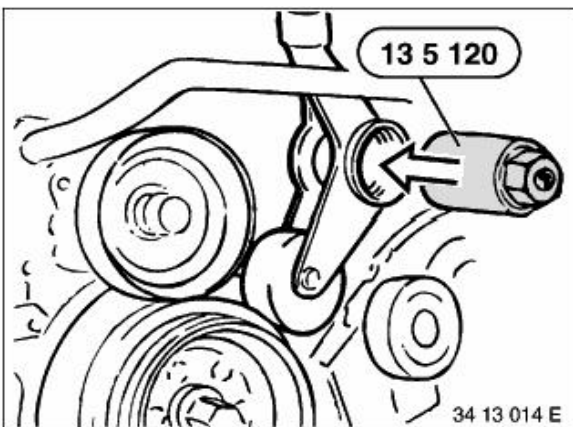
Installation:

Check O-ring, replace, if necessary.

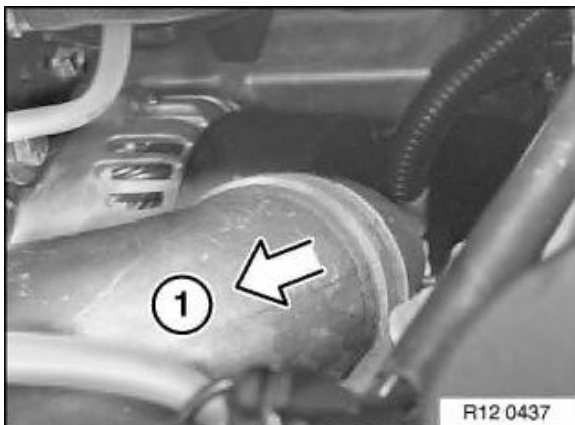
Tightening Torque,
refer to Technical Data 11 14 3AZ.



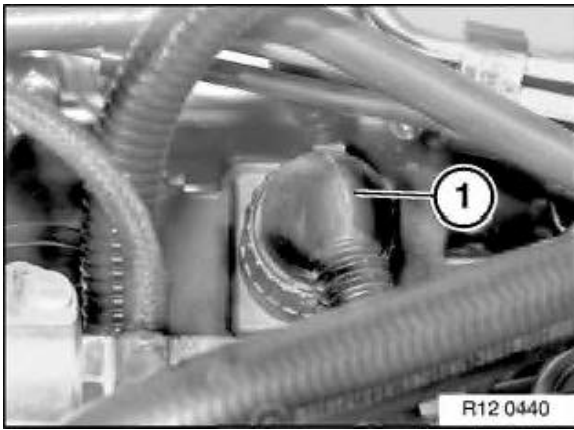
Unfasten central nut (width across flanks 18).



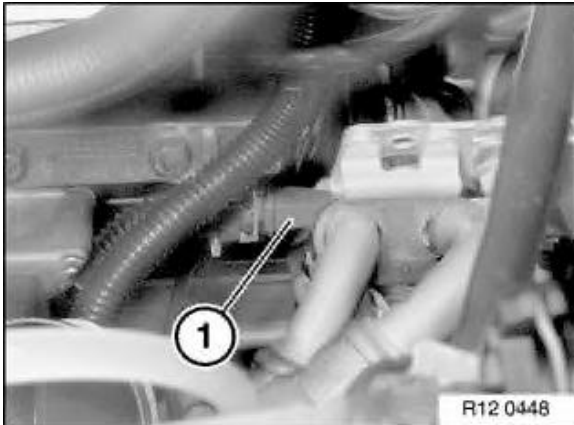
Screw in special tool 13 5 120 without jack screw.



Remove inlet duct from alternator.

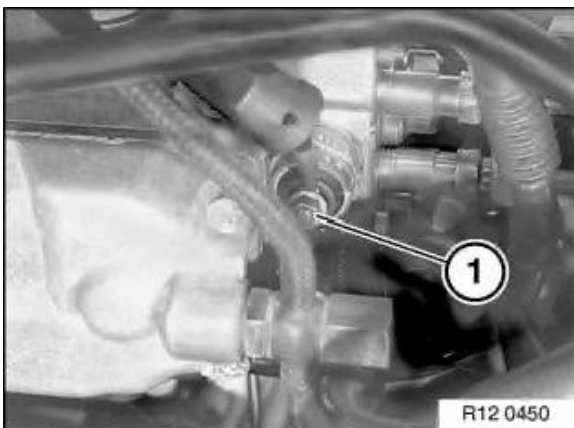


Disconnect plug connection (1) from fuel injection pump.

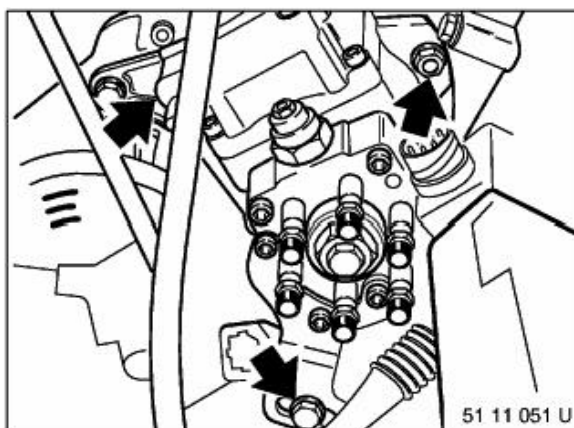


E39:

Disconnect plug connection (1) from fuel injection pump.



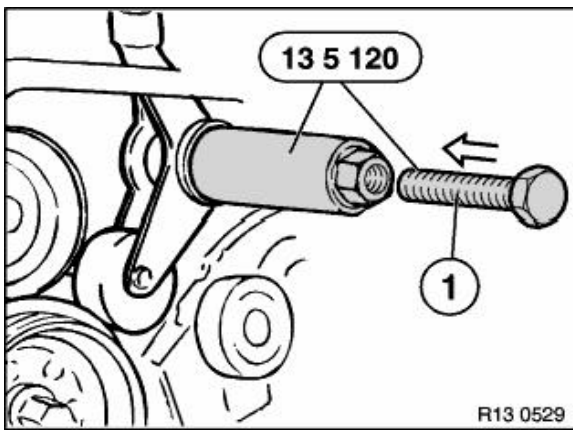
Remove dust cap and unfasten nut (1).



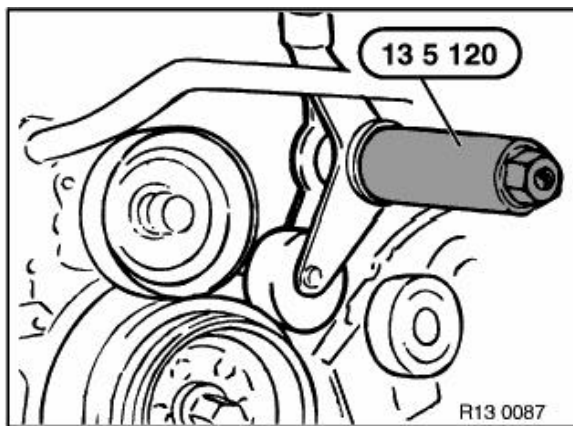
Unfasten bolts of injection pump.

Installation:

Pay attention to shims.



Press injection pump off chain wheel by screwing forcing screw (1) into special tool 13 5 120.

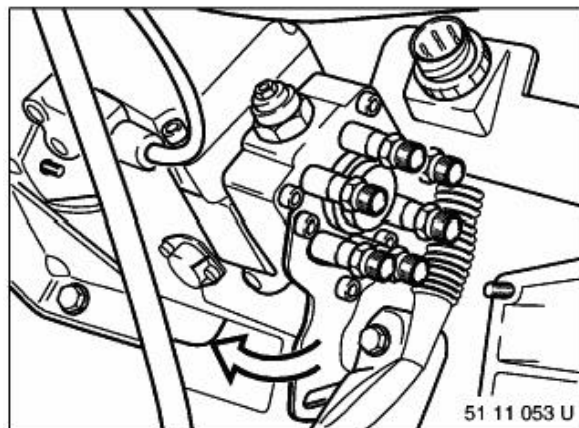


Caution!

Leave special tool 13 5 120 screwed in until injection pump is reinstalled, as otherwise chain wheel will fall down and engine must be dismantled.

Installation:

Fully unscrew forcing screw on tool 13 5 120 before installing the fuel injection pump.



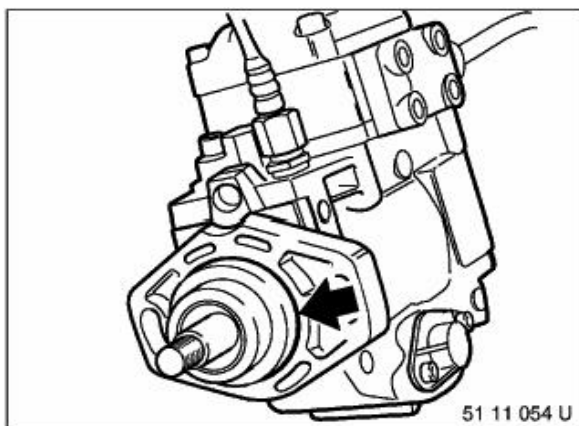
E39:

Remove rear bracket from fuel injection pump, then remove injection pump.

E36, E38:

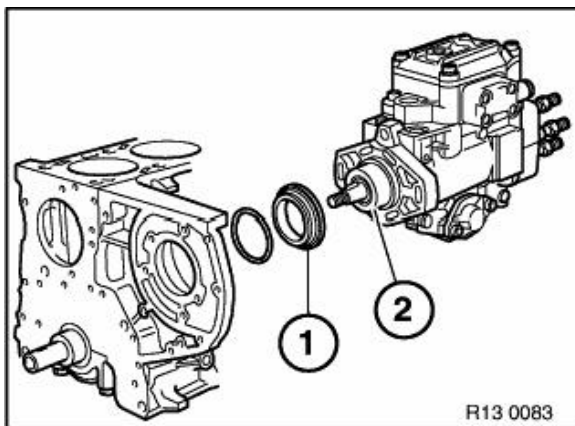
Twist fuel injection pump clockwise to enable bracket on engine mounting block to be guided past.

Remove fuel injection pump.



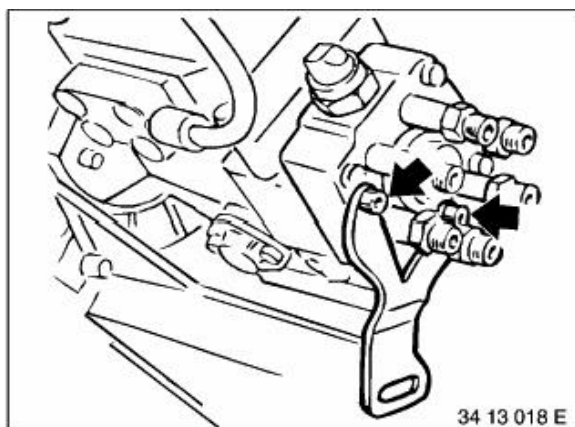
Installation:

Replace O-ring on pump flange.



Installation:

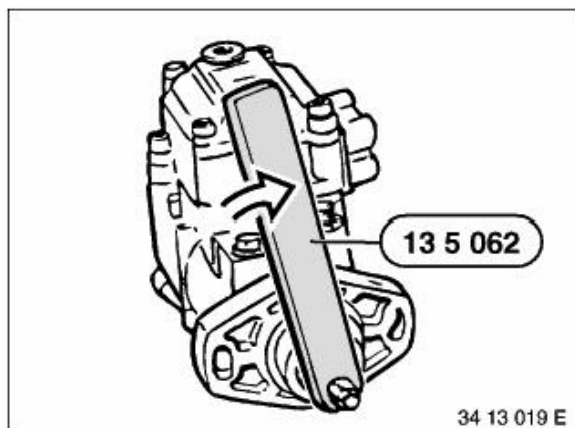
Depending on the injection pump bearing block, it is essential to install an intermediate ring to support the injection pump. Remove intermediate ring (1) if the injection pump centering diameter (2) is 68 mm.



Only pump replacement:

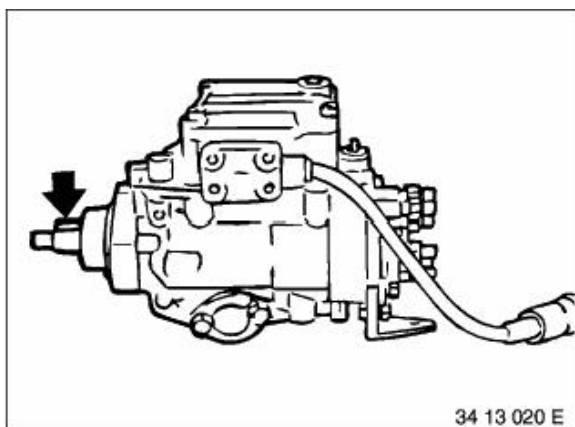
Installation:

Convert mounting and securing components.

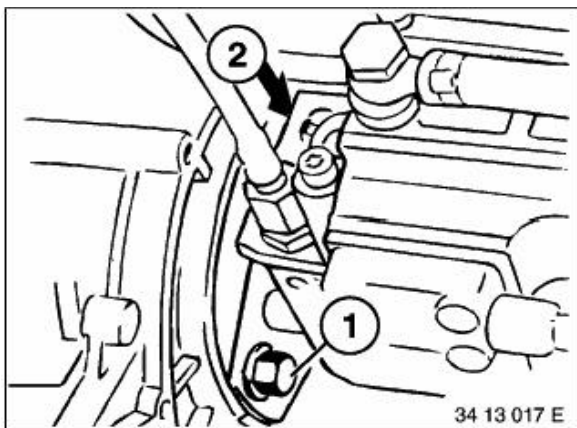


Move injection pump shaft to installation position with special tool 13 5 062.

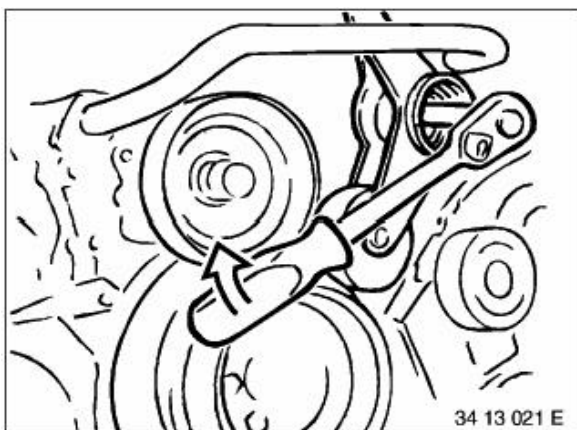
The rotary lever must be positioned vertically in front of the protruding cam.



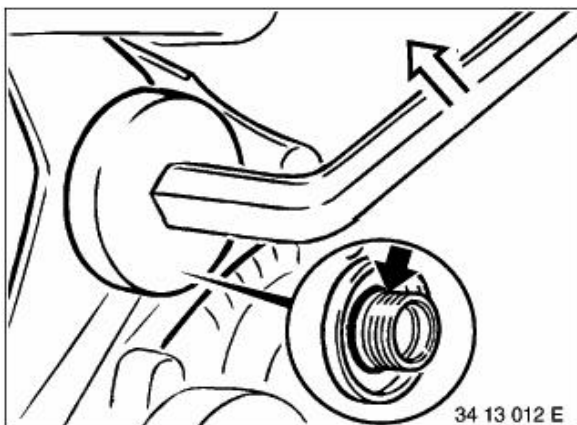
Make sure that the Woodruff key does not fall out while installing the injection pump.



Secure nuts (1 and 2) before removing special tool 13 5 120.



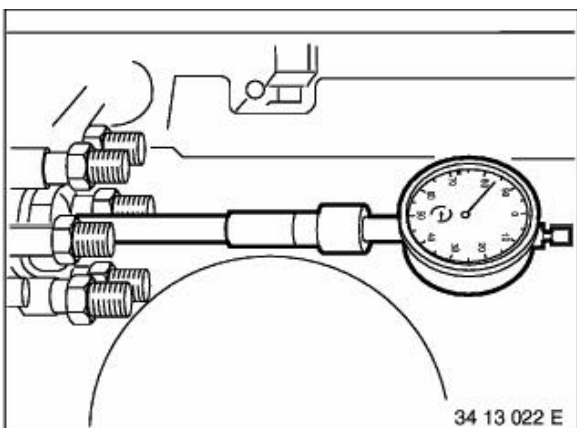
Remove special tool 13 5 120.
Screw in central nut and tighten down.
Tightening Torque,
refer to Technical Data 13 52 2AZ.



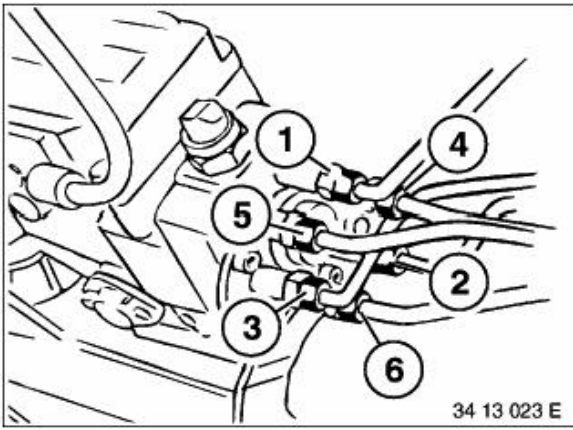
Installation:

Check O-ring, replace, if necessary.
Install screw connection of toothed belt tensioner.

Tightening Torque,
refer to Technical Data 11 14 3AZ.



Statically adjust injection pump,
refer to 13 51 005.



When tightening fuel injection lines, start at connection (4).
Note lines for cylinders 1,5,3,6,2,4 = firing sequence.

Note:

After assembly, longer starting time.

Turn engine on starter. The fuel delivery pump is activated by the DDE control module, the fuel system thereby vents itself.

Installation:

Connect MoDiC or DIS to diagnosis jack, select diagnostic program of DDE control module, select Special functions or Test module, follow instructions on how to proceed. Read fault memory of DDE control module, check stored fault messages, rectify faults, clear fault memory.