

# 11 40 000 Checking engine oil pressure



## WARNING

Hot fluids.

### Risk of scalding!

- Conduct all work in the vehicle wearing appropriate personal protective equipment only.



## WARNING

Hot surfaces.

### Risk of burning!

- Perform all work only on components that have cooled down.



## TECHNICAL INFORMATION

Collect and dispose of emerging fluids. Observe country-specific waste disposal regulations.

## PRELIMINARY WORK

### 1 – Check engine oil level

- Park vehicle on a horizontal surface.
- In the case of automatic transmission, shift to selector lever position N or P.
- Accelerator pedal is not pressed.
- Engine is running and is at operating temperature.
- Read off the engine oil level in the instrument cluster (KOMBI) or on the control display.
- Top up engine oil if necessary.

### 2 – Removing the acoustic cover



## WARNING

Hot surfaces.

### Risk of burning!

- Perform all work only on components that have cooled down.



## RISK OF DAMAGE

### Damage to the acoustic cover.

**Jerky movements during disassembly and excessive application of force during installation may result in breakage of the acoustic cover.**

- Disassemble or mount the acoustic cover carefully.
- Disassemble or mount snap-lock couplings of the ball pivots one after the other.
- Disassemble or mount acoustic cover only at temperatures  $>20^{\circ}\text{C}$ .
- Use only distilled water as an auxiliary material during installation, no lubricants.



- Release the acoustic cover (1) towards the top from the rubber mounts (marks).

## 3 – Removing the oil filter element



### WARNING

**Hot surfaces.**

**Risk of burning!**

- Perform all work only on components that have cooled down.

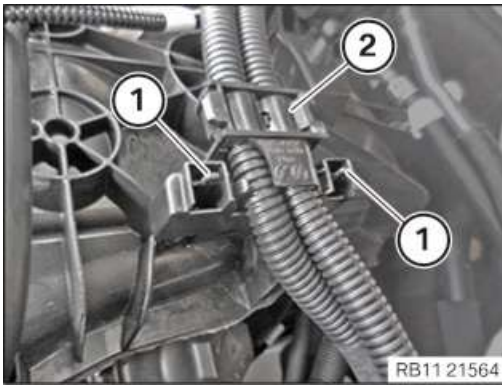


## TECHNICAL INFORMATION

Collect and dispose of emerging fluids. Observe country-specific waste disposal regulations.



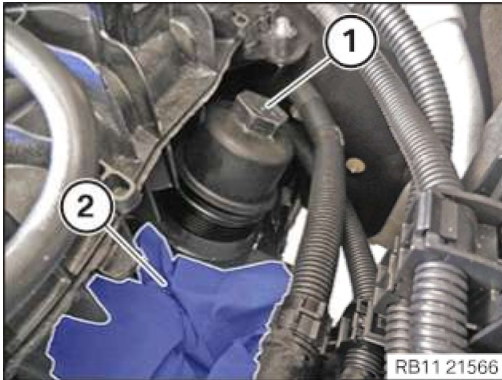
- Guide cover (1) out of the **marked** area and remove it.



- Unlock and loosen the locks (1).
- Thread out the wiring harness section (2) for the injectors and ignition coils and set it aside.



- Release oil filter cover (1) with a conventional tool.



- Guide out and remove the oil filter cover with oil filter element (1).
- Collect escaping engine oil with a lint-free cloth (2) as needed.

## MAIN WORK

### 4 – Checking engine oil pressure



#### RISK OF DAMAGE

##### Contaminant or foreign body.

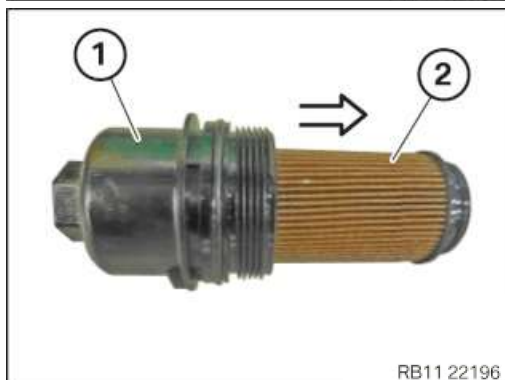
**Contamination can result in malfunctions, operating failure or leaks.**

- Adhere to the utmost cleanliness.
- Protect components from contamination e.g. by covering.
- Close off line connections with seal plugs.



- Have special tools ready.

| Number    | Description       |
|-----------|-------------------|
| 11 4 310  | Adapter           |
| 2 420 355 | Adapter           |
| 2 410 238 | Measuring adapter |



- Guide the oil filter element (1) in the **direction of arrow** out of the oil filter cover (2) and remove.



- Guide in and install the oil filter element (1) in **direction of arrow** into the special tool [2 410 238](#).

The oil filter element (1) must engage audibly.



- Install and tighten the special tool [2 410 238](#).

#### Special tool to measure the pressure on the oil filter module

|                       |                   |       |
|-----------------------|-------------------|-------|
| O-ring lightly oiled. | Tightening torque | 25 Nm |
|-----------------------|-------------------|-------|



- Install special tool [2 420 355](#) on special tool [2 410 238](#) and tighten.



- Install special tool [0 496 623 \(11 4 310\)](#) on special tool [2 420 355](#) and tighten.
- Lightly oil sealing ring on the 100 bar sensor.

#### Standard tools:

- Screw 100 bar sensor hand-tight into the special tool [0 496 623 \(11 4 310\)](#).
- Connect the 100 bar pressure sensor to the Integrated Measurement Interface Box (IMIB) using the connecting cable.

#### Standard tools:



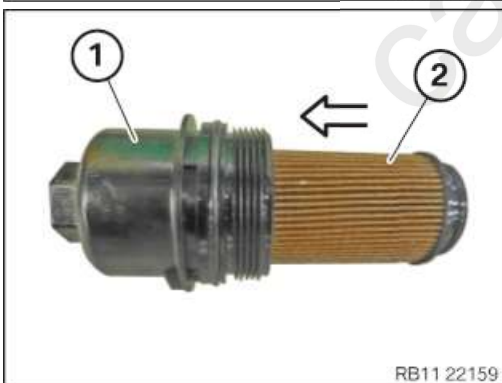
- Check engine oil pressure.
- Observe diagnosis instructions.



- Remove special tools [0 496 623 \(11 4 310\)](#), [2 420 355](#) and [2 410 238](#).
- Release the oil filter element (1) from the special tool [2 410 238](#) in the **direction of arrow**.



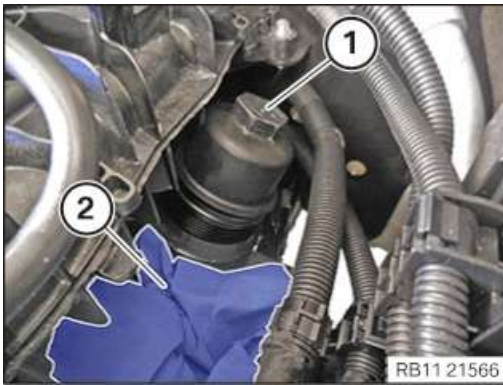
- Renew sealing ring (1).
- Parts:** Sealing ring
- Renew sealing ring (1) on the oil filter cover (2).



- Insert and install the oil filter element (2) on the oil filter cover (1) in the **direction of arrow**.
- The oil filter element (2) must engage audibly.

## POSTPROCESSES

### 5 – Installing the oil filter element



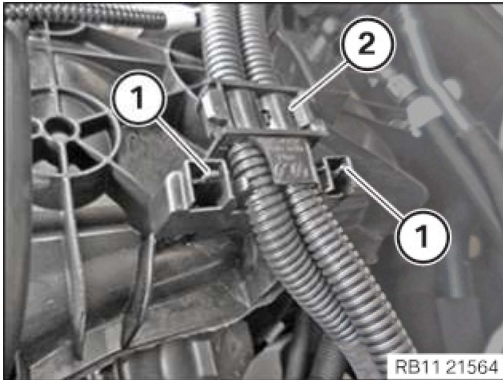
- Guide in and install the oil filter cover with oil filter element (1).
- Replace lint-free rag (2).



- Tighten the oil filter cover (1).

#### Oil filter cover to oil filter module

|                       |                   |       |
|-----------------------|-------------------|-------|
| O-ring lightly oiled. | Tightening torque | 25 Nm |
|-----------------------|-------------------|-------|



- Insert and install the wiring harness section (2) for the injectors and ignition coils.
- Ensure that the locks (1) engage audibly.



- Guide in and install cover (1).
- The cover (1) must engage audibly in this **marked** area.

## 6 – Install acoustic cover

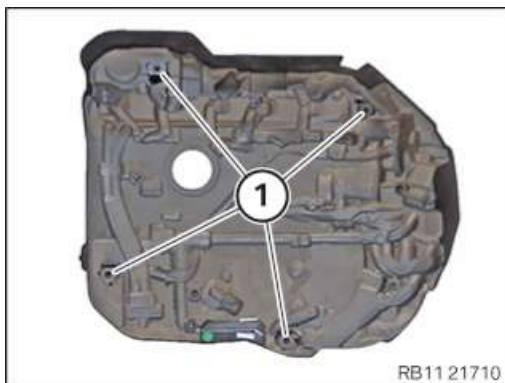


### RISK OF DAMAGE

#### Damage to the acoustic cover.

**Jerky movements during disassembly and excessive application of force during installation may result in breakage of the acoustic cover.**

- Disassemble or mount the acoustic cover carefully.
- Disassemble or mount snap-lock couplings of the ball pivots one after the other.
- Disassemble or mount acoustic cover only at temperatures >20 °C.
- Use only distilled water as an auxiliary material during installation, no lubricants.



- Check the rubber mount (1) for correct fit in the acoustic cover.



- Install acoustic cover (1) and fix in the rubber mounts (marks).

## 7 – Check engine oil level

- Park vehicle on a horizontal surface.
- In the case of automatic transmission, shift to selector lever position N or P.
- Accelerator pedal is not pressed.
- Engine is running and is at operating temperature.
- Read off the engine oil level in the instrument cluster (KOMBI) or on the control display.
- Top up engine oil if necessary.

## Additional Information

### Overview of Tightening Torques

#### Special tool to measure the pressure on the oil filter module

Used in step 4

|                       |                   |       |
|-----------------------|-------------------|-------|
| O-ring lightly oiled. | Tightening torque | 25 Nm |
|-----------------------|-------------------|-------|

#### Oil filter cover to oil filter module

Used in step 5

|                       |                   |       |
|-----------------------|-------------------|-------|
| O-ring lightly oiled. | Tightening torque | 25 Nm |
|-----------------------|-------------------|-------|

### Overview of Special Tools

## 2 410 238 Measuring adapter



### Common

Used in step 4

|       |                                                                                                                                                                                                                                       |
|-------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Usage | For oil pressure metering on the oil module. Contour-graphic silhouette foil is included in the delivery specification. Further information on the contour-graphic silhouette foil is included in service information 00 22 13 (969). |
|-------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Included in the tool or work

Storage location B55

Replaced by

In connection with 2420355

SI-Number 01 23 15 (280)

## 2 420 355 Adapter



### Common

Used in step 4

Usage For oil pressure metering on the oil module.

Included in the tool or work

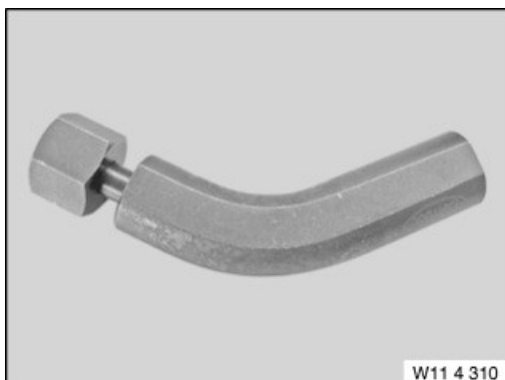
Storage location

Replaced by

In connection with 2410238

SI-Number 01 23 15 (280)

## 0 496 623 (11 4 310) Adapter



### Common

Used in step 4

Usage For fuel pressure check. For variable camshaft timing control VANOS with Integrated Measurement Interface Box IMIB (100 bar sensor in delivery specification). In combination with 11 5 360.

Included in the tool or work

Storage location B26

Replaced by

In connection with 11 5 360 = 0495130

SI-Number 01 27 09 (598)

**Overview Technical Data**

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