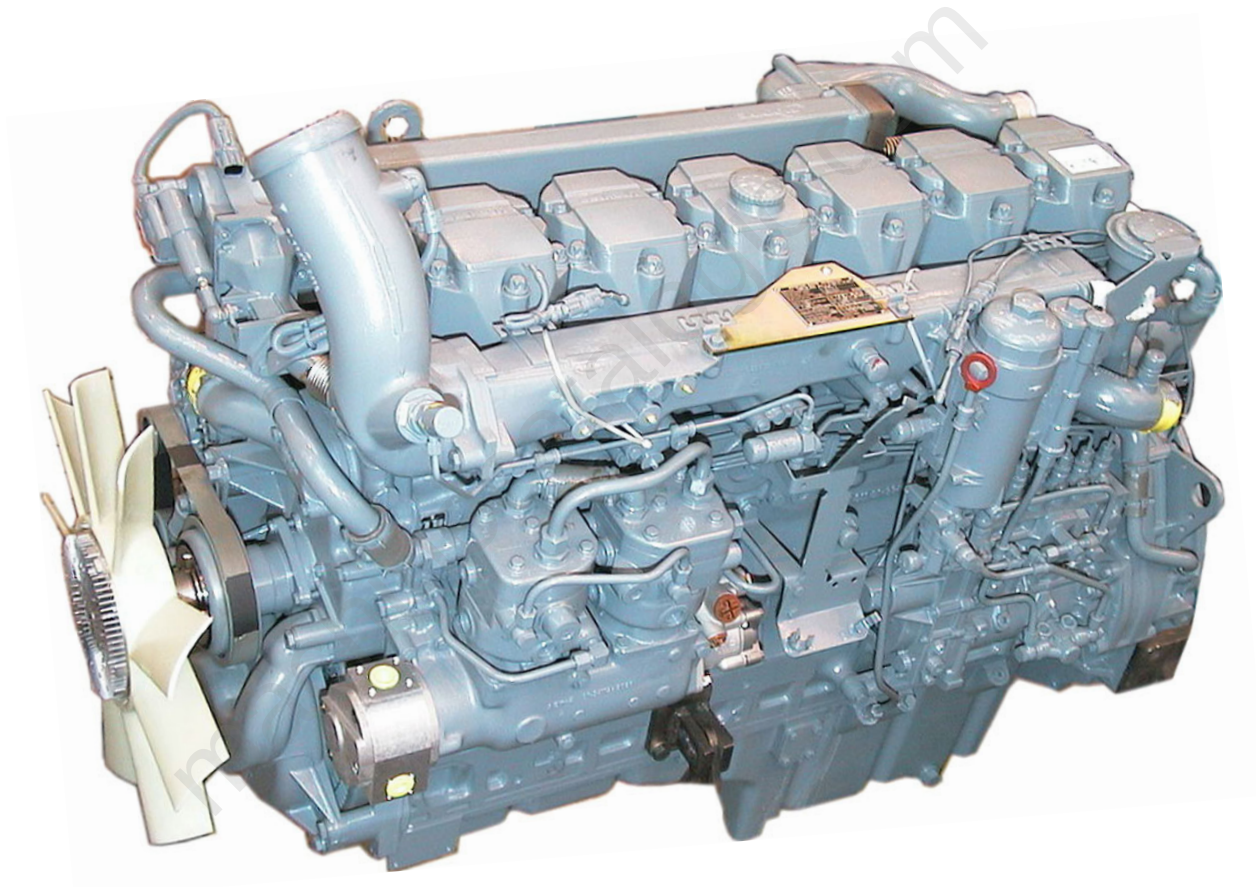


WORKSHOP MANUAL

LIEBHERR Diesel engine

D 846 TI A5



9739069

LIEBHERR



Name	Value	Units
	max.2,728	mm
Installation stage —0,75 mm	min.2,843 max.2,853	mm mm
Installation stage —1,00 mm	min.2,968 max.2,978	mm mm

Note

When being tightened, the connecting rod bearing bolts are consciously stressed beyond the yield point, thus each time they are tightened the bolts undergo a permanent elongation.

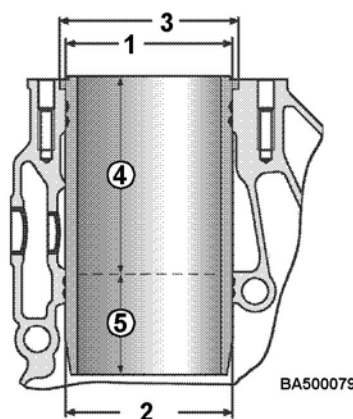
! When the maximum "shank length (L) max." is reached, the bolts are to be replaced.

12-sided connecting rod bearing screws M 16x1.5

Name	Value	Units
Shaft length (L) new	65,5	mm
Toleranz	-0,3	mm
Shaft length (L) max.	66,5	mm

2.2.10 Cylinder liners

Housing bore for
cylinder liners

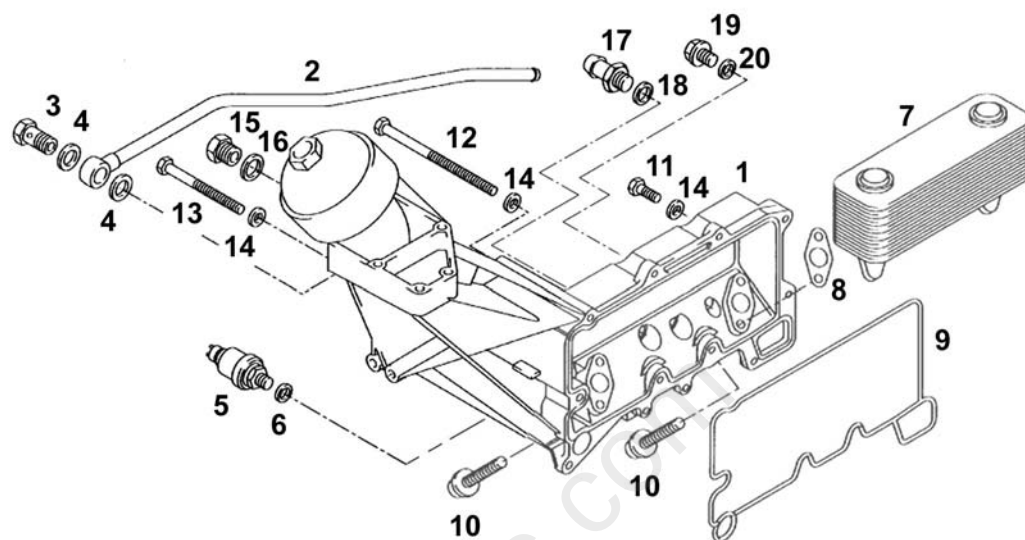


1 Upper press fit
2 Lower press fit

3 Collar

13.2 Oil cooler

Function description



BA500450

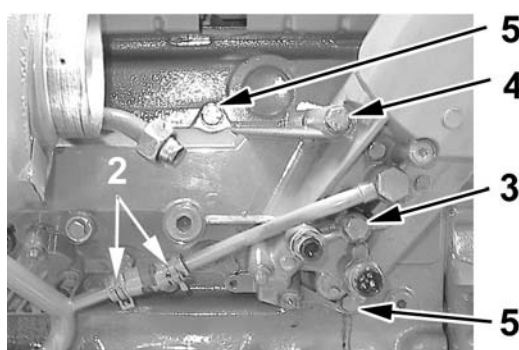
- | | |
|----------------------|---------------------|
| 1 Oil cooler housing | 11 Hexagonal screw |
| 2 Return-flow line | 12 Hexagonal screw |
| 3 Banjo bolt | 13 Hexagonal screw |
| 4 Gasket set | 14 Spring washer |
| 5 Pressure sensor | 15 Connecting piece |
| 6 Sealing ring | 16 Sealing ring |
| 7 Oil cooler | 17 Hose connection |
| 8 Seal | 18 Sealing ring |
| 9 Seal | 18 Screw plug |
| 10 Collar screw | 20 Sealing ring |

The oil cooler has 9 or 10 hard-soldered stainless steel flat tubes and has been integrated on the right-hand side in the crankcase. The oil cooling output has been adapted to the diesel engine output.

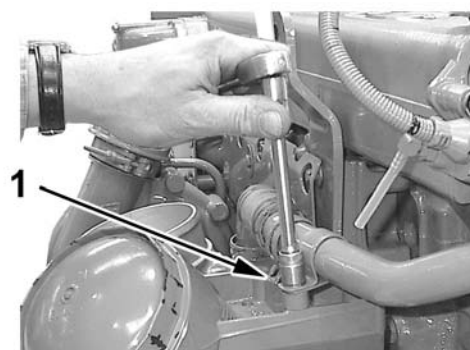
13.2.1 Dismantling the oil cooler housing with oil filter

It must be ensured that:

- the diesel engine oil has been completely drained, see further up in this chapter
- the coolant has been drained, see "Thermostats"

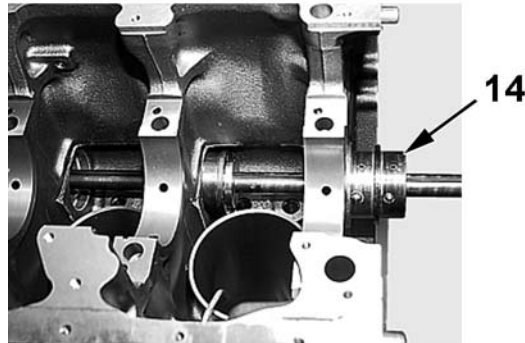


1 Fastening screw

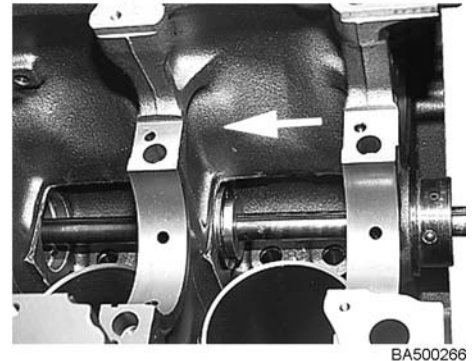


2 hose clips

BA500449



3 Guide bushing



BA500266

Press in bearing bushes 6 and 5 as with bearing bushes 2, 3 and 4.

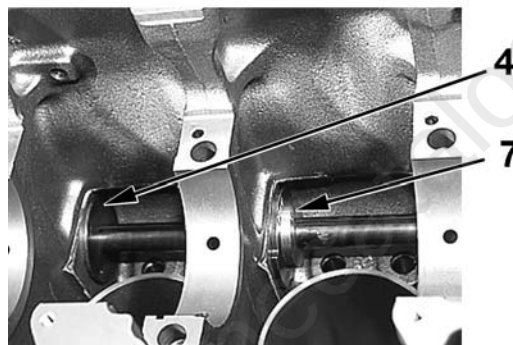
- Insert guide bushing 3 with large diameter into bearing 7.

The nut of the shaft must then be pointing upwards.

- Force the bearing bush into bearing 6 using a soft hammer (plastic or copper), .
- Proceed accordingly for installation of bearing 5.

Pressing in camshaft bearing bush, bearing 7

— from the flywheel side —



4 Extraction squeeze head for bearing bushes 2 to 6 as an additional guide (tool no. 84.4)



BA500267

7 internal squeeze head for bearing bushes 5 and 6 (tool no. 84.7)

- Insert extraction squeeze head 4 as guide into bearing 5.
- Insert internal squeeze head 7 as a guide into bearing 6, and allow the spring-loaded ball to engage in the oil hole for fixing of the shaft .
- Insert shaft into the internal squeeze head (bearing 6) up to the stop and into extraction squeeze head (bearing 5).

— **Do not twist the fixing via the nut. Nut must be positioned at the top.** —

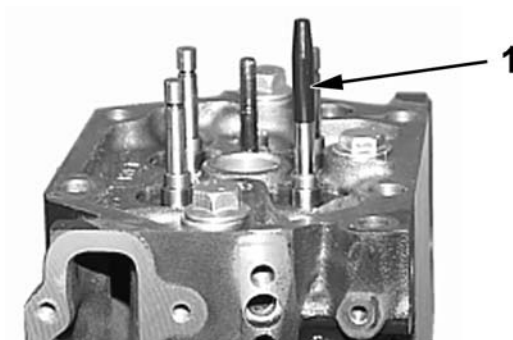
Attention



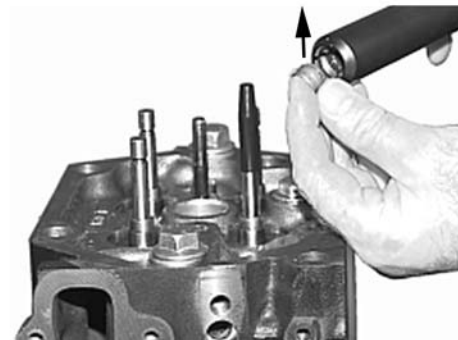
Observe the following criteria for correct coupling and seating:

- ! An oil hole 10 of the bearing bush must be fixed via the spring-loaded ball.
- ! The other oil hole 11 must be flush with the counterbore of the internal squeeze head.
- ! The bearing bush must be resting against the stop of the internal squeeze head 12 on the internal squeeze head.

- Fit bearing bush with edge on internal squeeze head.



1 Insertion sleeve



BA500223

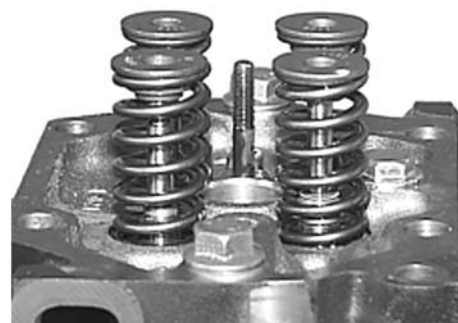
Attention

Valve stem sealing rings

! are only used on the outlet sides with designs featuring auxiliary drive.

! Use new valve stem sealing rings only.

- Fit insertion sleeve 1 (tool no. 70) for valve stem sealing rings onto the respective valve.
- Insert the valve stem sealing ring in the quick-clamp (tool no. 69) so that the spiral-type expander is positioned at the top following installation (arrow).



BA500224

- Slide on valve stem seal up to the stop.
- Remove insertion sleeve.

Note

With ZBS, the inner exhaust valve springs are rendered inapplicable.

! Only exterior springs are used on the inlet and outlet sides.

Note

For diesel engines without ZBS, the following is to be noted:

! Only exterior springs are used on the inlet side.

! Interior and exterior springs are used on the outlet side.

- Fit valve spring.
- Fit spring cap.

Full Version Available

Liebherr D 846 Engine Service Manual

Liebherr D 846 engine service manual with repair procedures, adjustments and troubleshooting for the main systems. 2 PDF files. Instant PDF download.

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<https://machinecatalogic.com/liebherr-d-846-engine-service-manual/>

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