

The following modifications now apply to standard 6-cylinder engines starting October 1971:

- a) Tapped holes for cylinder head bolts in cylinder crankcase are countersunk for 5 mm.
- b) Cylinder crankcase has been provided with four additional kidney-shaped cooling water holes.
- c) New slide rail bearing bolts were introduced.
- d) Oil groove in bearing bushing for intermediate gear shaft has been enlarged.
- e) Closing cover and bolts on cylinder crankcase were changed.

- f) Shape of combustion chamber has been changed and 6 additional water holes were placed between cylinders (refer to Job No. 01-5).
- g) All-around oil groove in 4th basic bore of crankshaft bearing (refer to Job No. 03-2).
- h) The oil return flow in cylinder crankcase, cylinder head and cylinder head gasket has been increased (refer to Job No. 18-7).
- i) Oil pan lower half extending further down and thereby increase of engine oil capacity. (Refer to Job No. 18-6).

Vehicle models included in these modifications are listed under the respective sections.

Standard Installation of Modified Versions a - e

| Model | Model Designation | Chassis End No. | Engine Type Designation |
|---------------|-------------------|-----------------|-------------------------|
| 230/8 | 114. 015 | 098 215 | 180. 954/955 |
| 250/8 | 114. 010 | 072 700 | 114. 920/923 |
| 250/8 USA | 114. 011 | 010 250 | 130. 923 |
| 250/8 Cp. | 114. 021 | 007 770 | 114. 920/923 |
| 250/8 Cp. USA | 114. 023 | 007 010 | 130. 923 |
| 250 E/8 | 114. 022 | 019 335 | 114. 980/981 |

a) Tapped Holes for Cylinder Head Bolts in Cylinder Crankcase

Vehicles concerned:

Models 250/8, 250/8 USA, 250/8 Cp.,
250/8 Cp. USA and 250 E/8.

These tapped holes are countersunk for 5 mm at cylinder crankcase and are drilled that much deeper. Therefore, cylinder head bolts are now 115 and 145 mm long (formerly 110 and 140 mm) (Fig. 01-11/2).

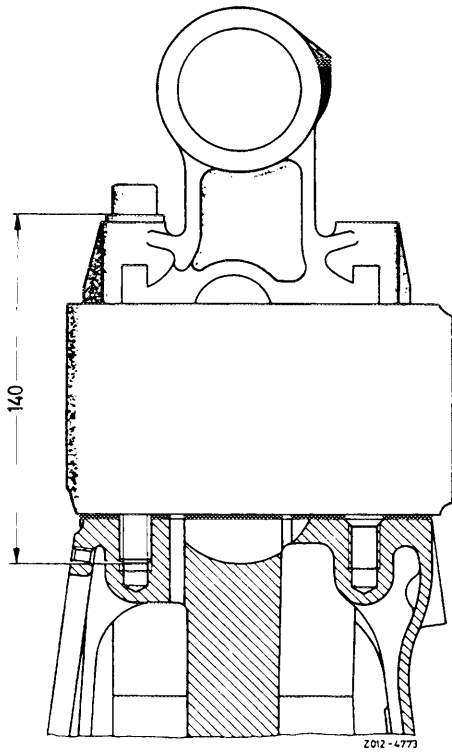


Fig. 01-11/1

Former version

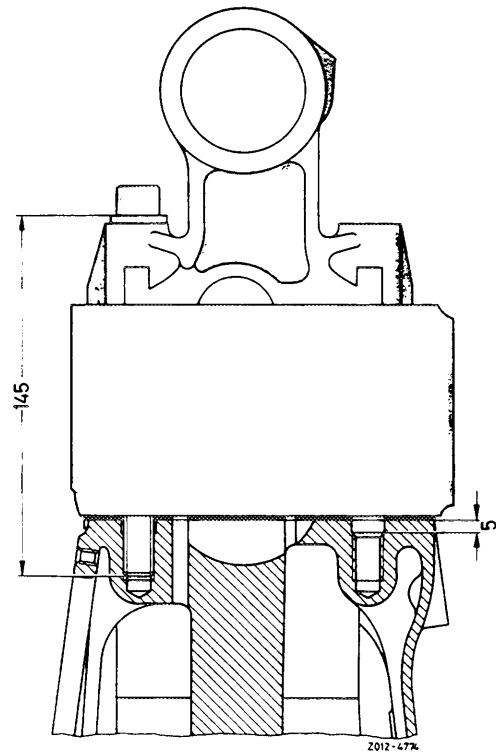


Fig. 01-11/2

Modified version

Caution! Cylinder head bolts M 12 x 140 and M 12 x 110 may no longer be used for the modified cylinder crankcase, because threads may be torn out. Vice versa, cylinder head bolts M 12 x 145 and M 12 x 115 may not be screwed into cylinder crankcase of version used up to now, because they will be stuck at bottom of hole.

Additional Cooling Water Holes in Cylinder Crankcase

Vehicles concerned:

Model 250/8, 250/8 USA, 250/8 Cp.,
250/8 Cp. USA and 250 E/8.

The cylinder crankcase has been provided with four additional kidney-shaped cooling water holes (Fig. 01-11/3).

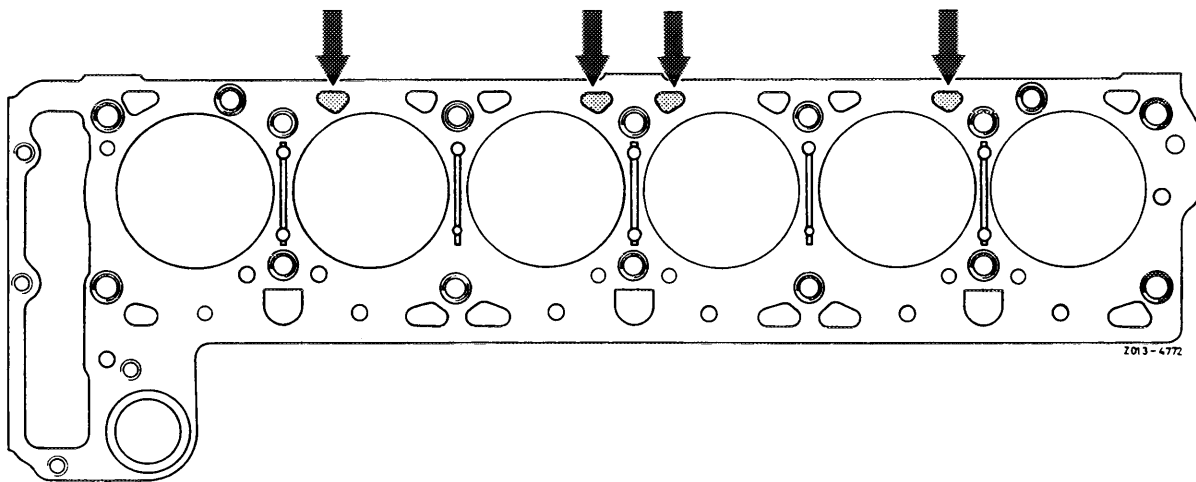


Fig. 01-11/3

Parting surface cylinder crankcase

In accordance with these cooling water holes, a modified cylinder head gasket with four additional

round holes will be used (Fig. 01-11/4).

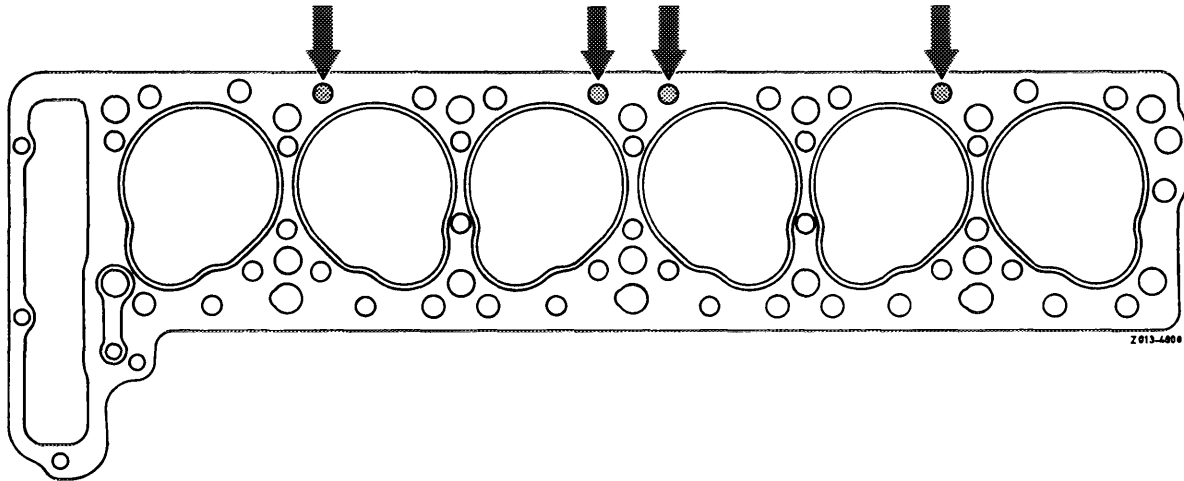


Fig. 01-11/4

Modified cylinder head gasket.

c) Slide Rail Bearing

Vehicles concerned:

Model 250/8, 250/8 USA, 250/8 Cp.,
250/8 Cp. USA and 250 E/8.

These vehicles were provided with the slide rail bearing bolt which is already used as a tensioning rail bearing bolt on four-cylinder models.

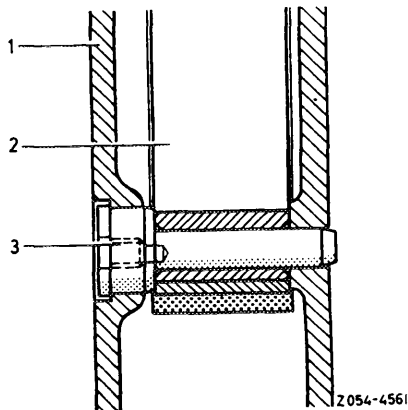


Fig. 01-11/5

- 1 Cylinder crankcase
- 2 Slide rail
- 3 Bearing bolt

Caution! Be sure to coat sealing surfaces of bearing bolts with Hylomar sealing compound during installation. For pulling-out bearing bolt, use impact puller 116 589 20 33 00 (basic unit) and threaded

bolts M 6, 116 589 02 34 00, or threaded bolts M 8, 116 589 03 34 00.

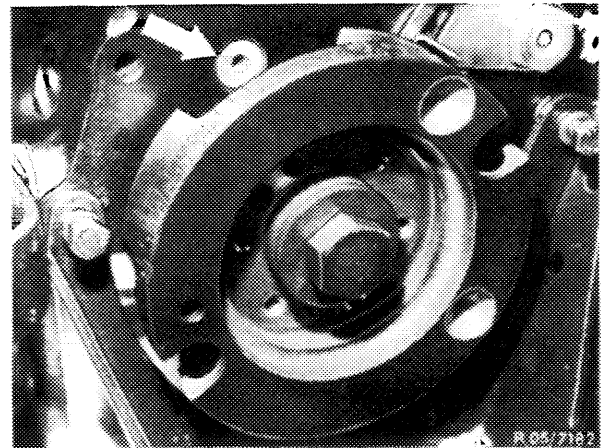


Fig. 01-11/6

Arrow: Bearing bolt

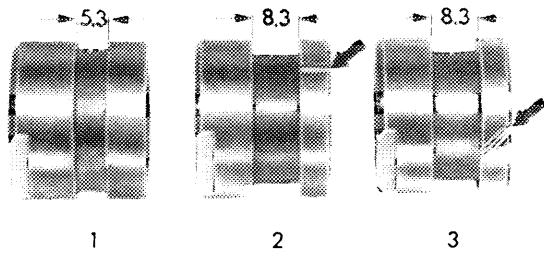
d) Bearing Bushing, Intermediate Gear Shaft

Vehicles Concerned:

Model 250/8, 250/8 USA, 250/8 Cp.,
250/8 Cp. USA and 250 E/8.

The oil groove at front bearing bushing of intermediate gear shaft has been increased and a notch has been applied (arrow in Fig. 01-11/7).

Caution! This bearing bushing can be installed in modified crankcase only.



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Fig. 01-11/7

Arrow: Additional notch

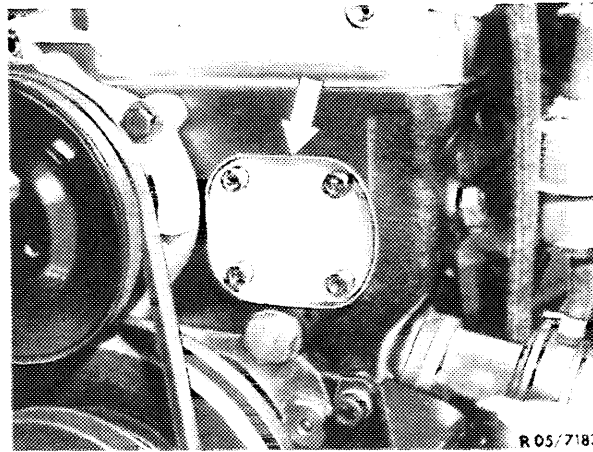
- | | |
|--|----------------------------|
| 1 Former bearing bushing | 3 Modified bearing bushing |
| 2 Modified bearing bushing 1st version | bushing 2nd version |

e) Closing Cover on Cylinder Crankcase

Vehicles Concerned:

Model 230/8, 250/8, 250/8 USA, 250/8 Cp., 250/8 Cp. USA and 250 E/8.

Fastening bolts and tapped holes in cylinder crankcase were changed from M 6 x 12 to M 8 x 12 (Fig. 01-11/8).



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Fig. 01-11/8

Arrow: Closing cover

Accordingly, the closing cover on cylinder crankcase and the pertinent gasket were also changed.

Caution! The modified closing cover and the pertinent gasket may be used only on engines with tapped holes M 8. On engines with tapped holes M 6, use former closing cover with pertinent gasket. Both parts will continue to be available as a spare part.