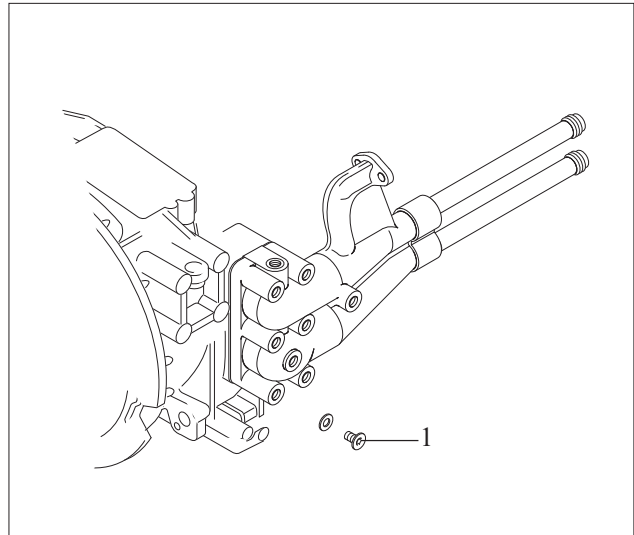


**3 Removal, installation, disassembly and assembly of oil cooler.**

**3.1 Removal of oil cooler.**

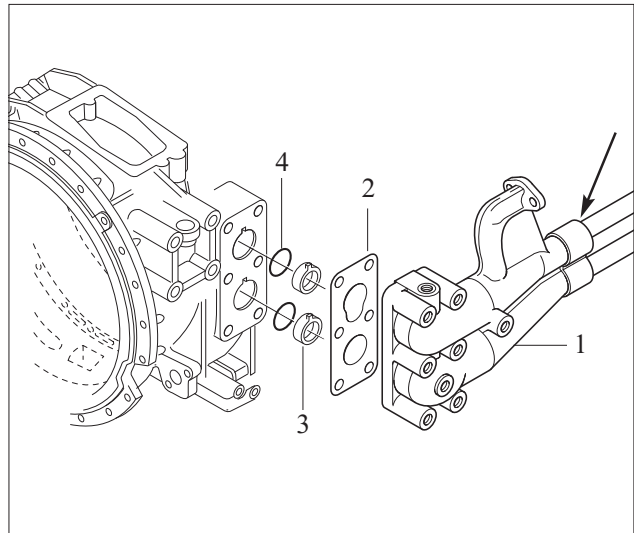
- 1 Unscrew and remove hex bolts (1) from the connection.



001575

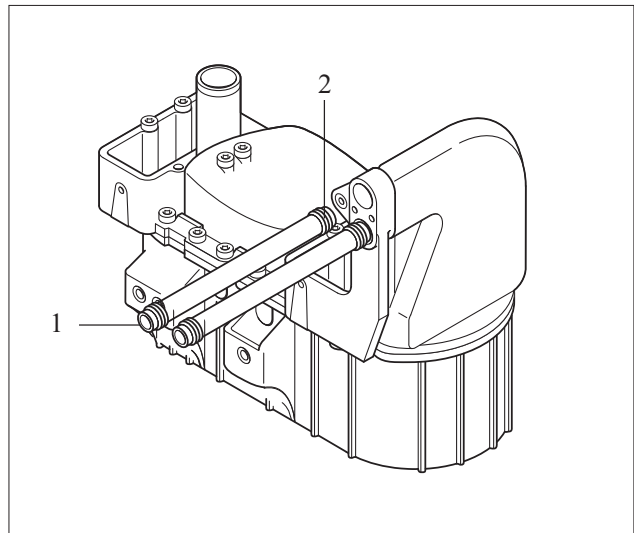
- 2 Using a plastic mallet, knock the connection down off the oil pipes.
- 3 Remove gaskets (2) from the connection and/or transmission.
- 4 Remove inserts (3) and O-rings (4) from housing bores.

**NOTE:** Step 4 only applies for the version with new housing (from transmission no. 96173; modification no.: 65556).



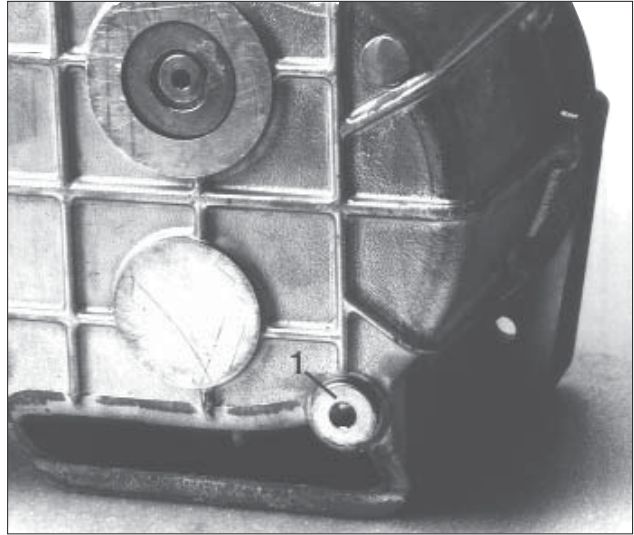
005576

- 5 Pull oil pipes (1) and O-rings (2) out of the bores in the oil cooler.



001577

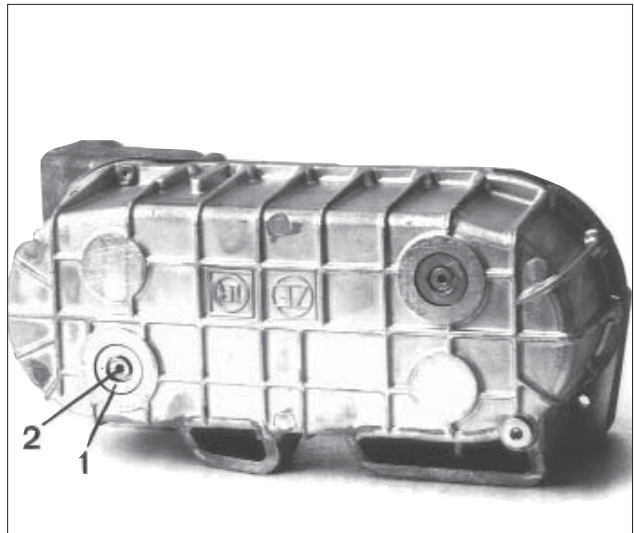
- 6 Unscrew M18x1.5 screw plug (1) and drain the water from the oil cooler.



008405

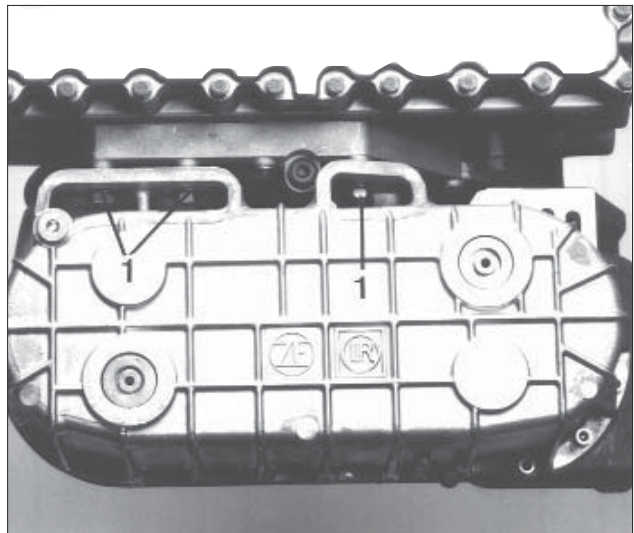
- 7 Remove sealant from oil drain plugs (1) with a triangular scraper.
- 8 Unscrew and remove M12x1.5 oil drain plugs (2) from the oil cooler and drain the oil.

**NOTE:** Oil drain plugs may or may not be fitted, depending on the version.



008406

- 9 Unscrew M10 hex nuts (1) from the bottom of the oil cooler.  
Remove the washers.



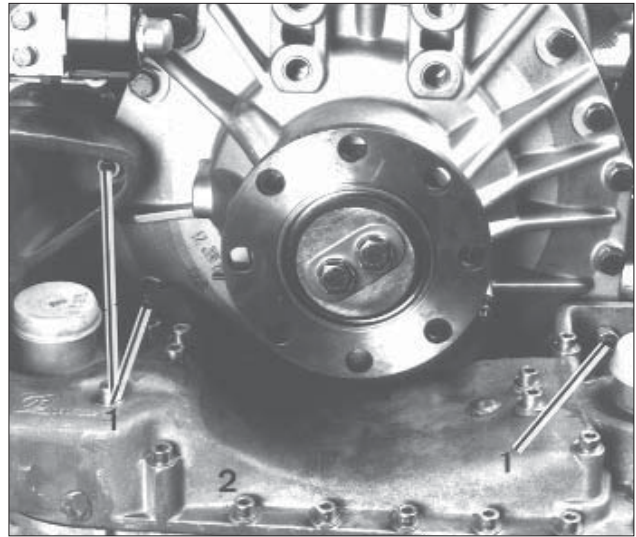
008407

- 10 Unscrew M10 hex nuts (1).  
Remove the washers.
- 11 Remove (lift) oil cooler (2).

**NOTE:** If necessary, separate the oil cooler from the connection pipes by tapping it lightly with a plastic mallet.

**⚠ DANGER**

The oil cooler weighs approx. 50 lbs (25 kg).  
Take extra care when lifting and transporting it.



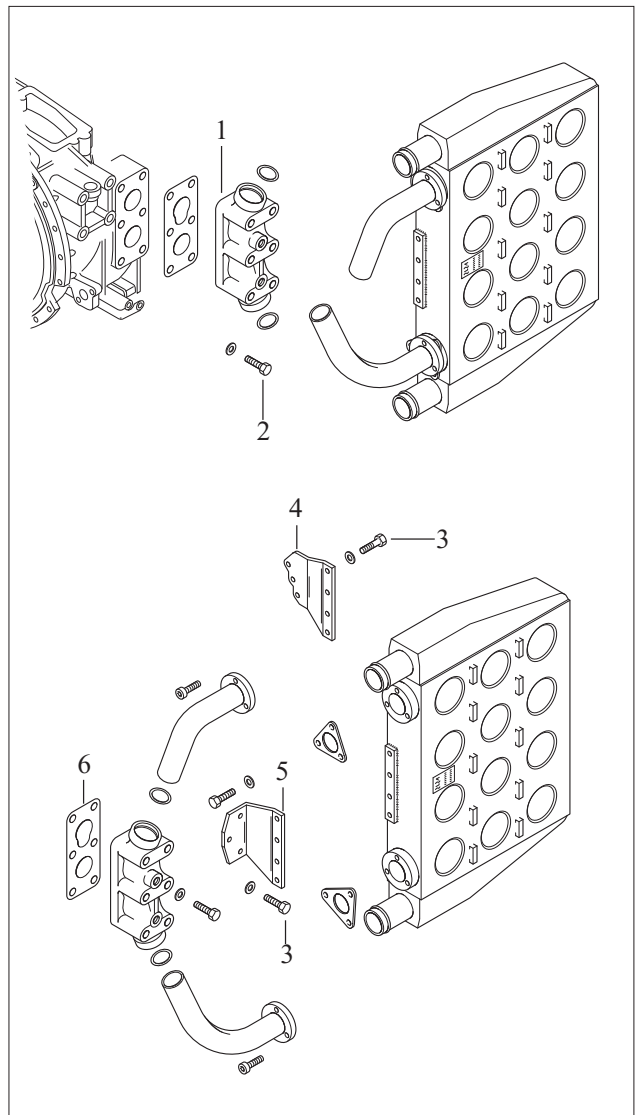
008408

**3.2 Removal of side-mounted oil cooler.**

- 1 Unscrew and remove M8 hex bolts (2) from the connection.
- 2 Unscrew and remove hex bolts (3) from retaining brackets (4) and (5).
- 3 Remove (lift) the oil cooler and gasket (6).

**CAUTION**

Remove and transport the oil cooler carefully.



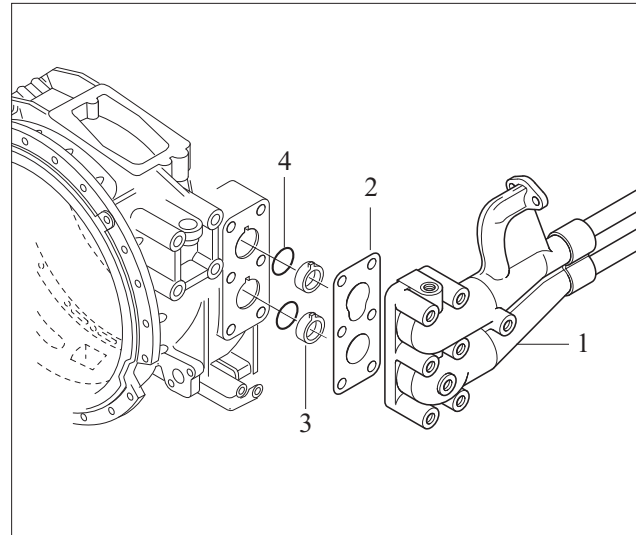
001562/001561

### 3.3 Installation of oil cooler.

- 1 Coat O-rings (4) with vaseline and place in bores on housing.
- 2 Place bushes (3) in bores.

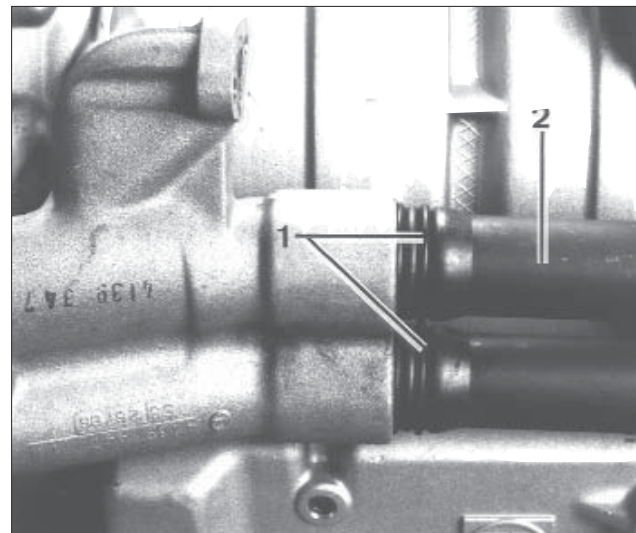
**NOTE:** Steps 1 and 1 only apply for the version with new housing (from transmission no.: 96173; modification no.: 65556).

- 3 Place connecting piece (1) with gasket (2) on transmission. Screw in hex bolts; Tightening torque: 17 ft-lbs (23 Nm)



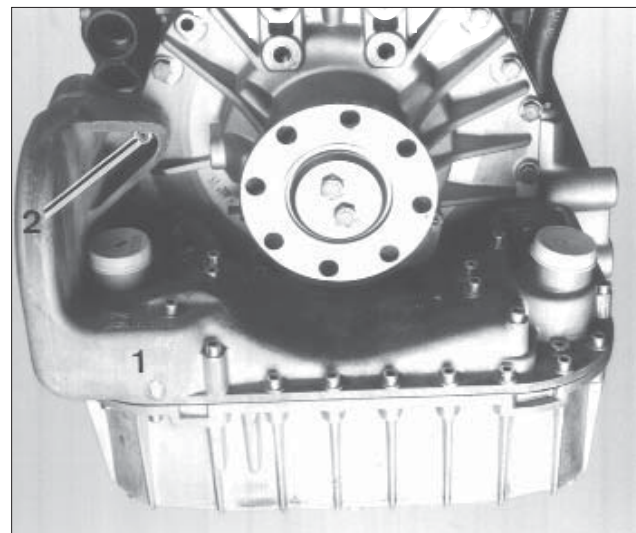
005576

- 4 Coat O-rings (1) with vaseline and push onto both ends of the oil pipes. Place oil pipes (2) in connecting piece.



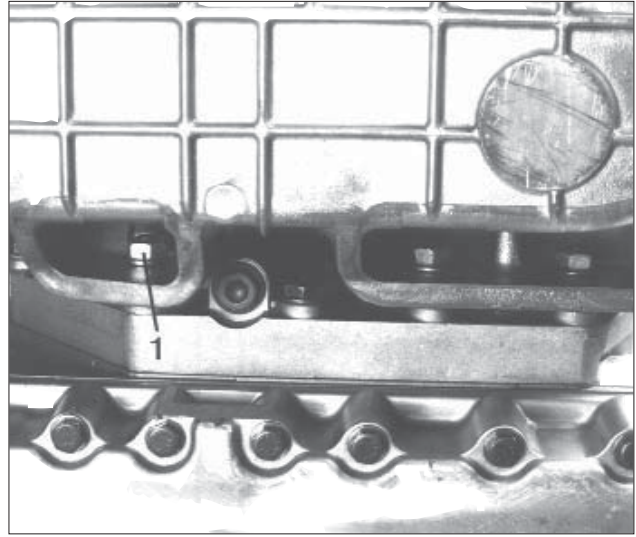
008410

- 5 Place oil cooler (1) onto the mounting threads and push connection pipes into the oil cooler.
- 6 Screw on hex nuts (2) and washers until hand-tight.



008409

- 7 Screw on M10 hex nuts (1) and washers;  
Tightening torque: 34 ft-lbs (46 Nm).



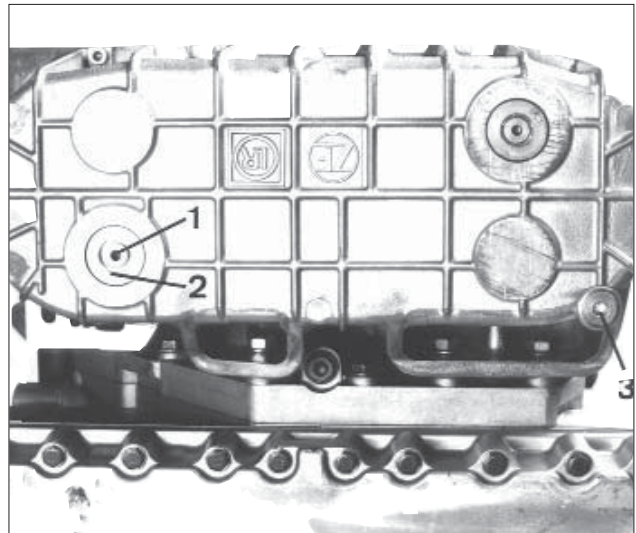
008411

- 8 Thoroughly clean M12x1.5 oil drain plugs (1) and seats (2).

**⚠ DANGER**

See special safety regulations for cleaning agents.

- 9 Tighten oil drain plugs;  
Tightening torque: 17 ft-lbs (23 Nm).
- 10 Fit the water drain plug with a new M18x1.5  
sealing ring (3) and screw it in;  
Tightening torque: 18 ft-lbs (25 Nm).
- 11 Seal oil drain plugs with silicon paste (if oil drain  
plugs fitted).

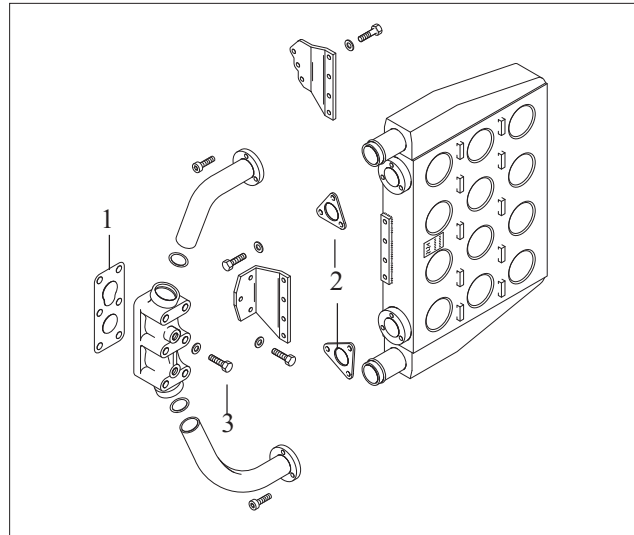


008412

**NOTE:** Oil drain plugs may or may not be fitted,  
depending on version.

**3.4 Installation of side-mounted oil cooler.**

- 1 Attach the retaining bracket to the transmission.
- 2 Attach the oil cooler to the fixing plate.
- 3 Coat gaskets (1, 2) with Vaseline and position them on the transmission and oil cooler.
- 4 Screw the pre-assembled connection with inserted oil pipes onto the oil cooler;  
Tightening torque: 17 ft-lbs (23 Nm).
- 5 Screw hex bolts (3) and washers into the connection;  
Tightening torque: 17 ft-lbs (23 Nm).
- 6 Tighten M10 hex bolts on the retaining bracket;  
Tightening torque: 34 ft-lbs (46 Nm).

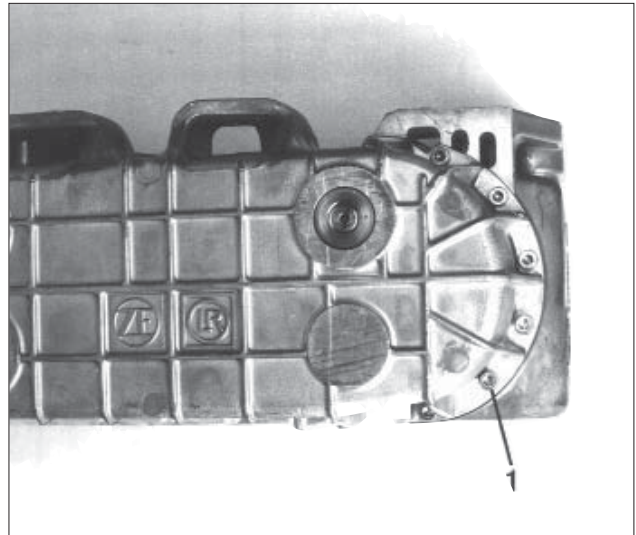


001561



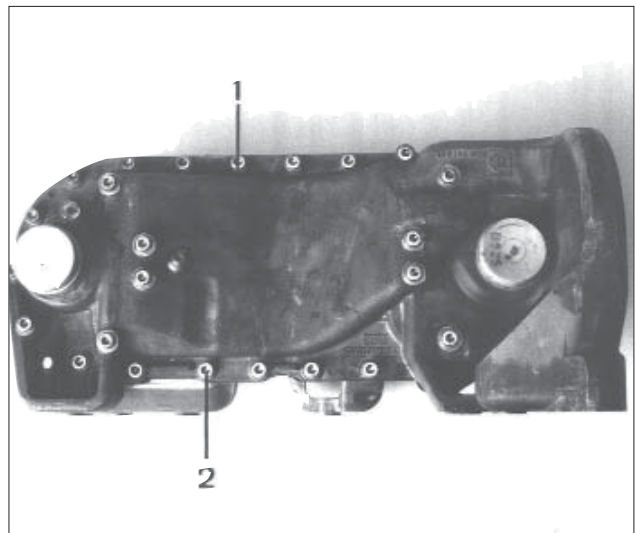
**3.5 Disassembly of oil cooler.**

- 1 Unscrew seven M8 cap screws (1).



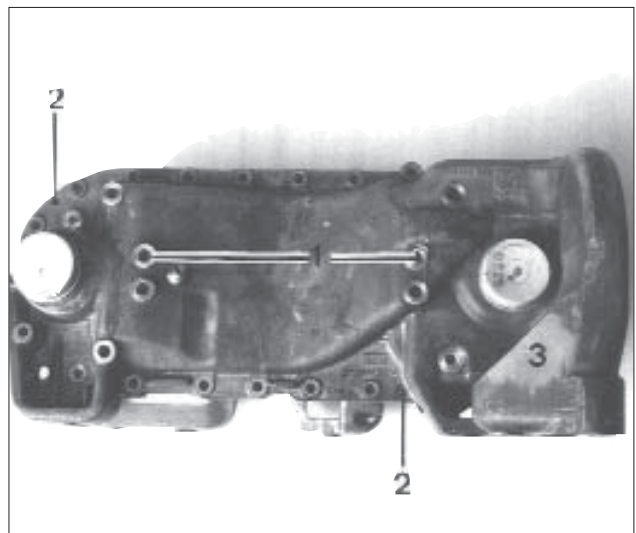
008413

- 2 Unscrew M8 (1) and M6 (2) cap screws from the rear of the oil cooler.



008415

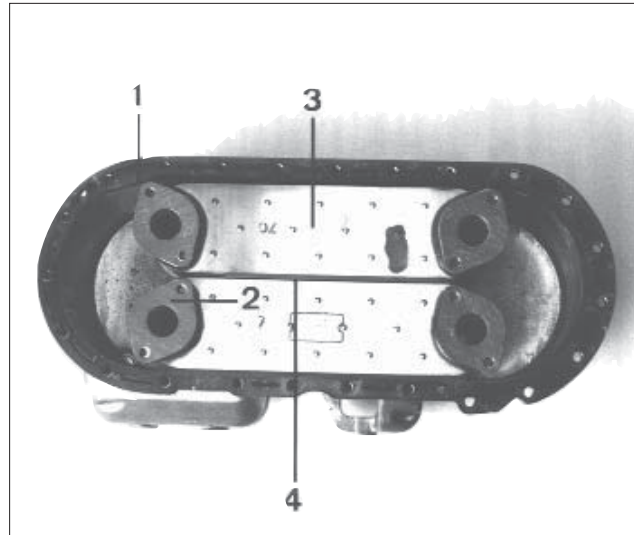
- 3 Unscrew M8 cap screws (1).
- 4 Drive out the clamping pins.
- 5 Remove cover (3) from the oil cooler



008414

- 6 Remove gasket (1) from the oil cooler housing.
- 7 Remove gaskets (2) from the heat exchanger.
- 8 Pull heat exchanger (3) out of the oil cooler housing and remove silicone partition (4).

**NOTE:** Because of the O-ring, the heat exchanger is quite firmly located in the oil cooler housing.

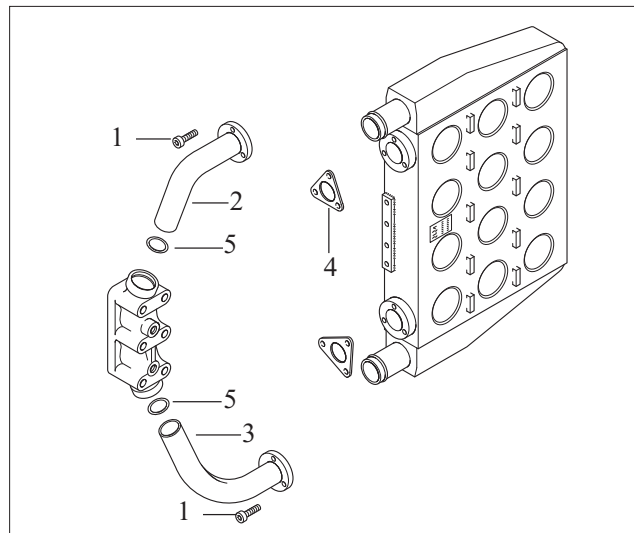


008416

**4 Disassembly and assembly of connection components for side-mounted oil cooler.**

**4.1 Disassembly of connection components for side-mounted oil cooler.**

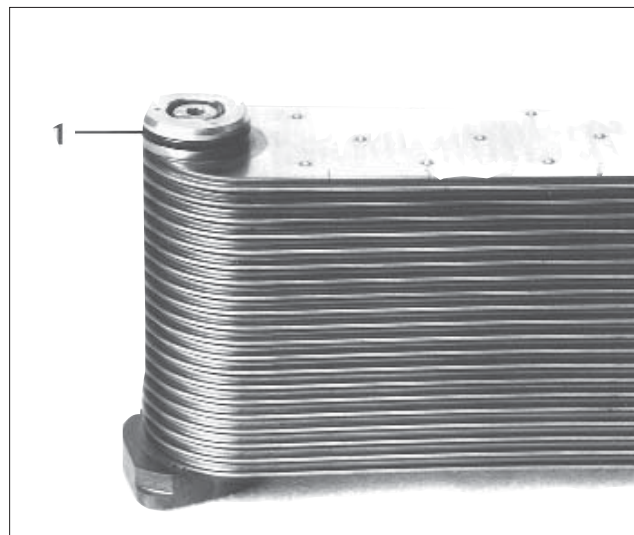
- 1 Unscrew hex bolts (1) from pipes (2) and (3) and remove the pipes and gaskets (4) from the oil cooler.
- 2 Pull oil pipes (2) and (3) out of the connection and slide O-rings (5) off the oil pipes.



001563

**4.2 Assembly of oil cooler.**

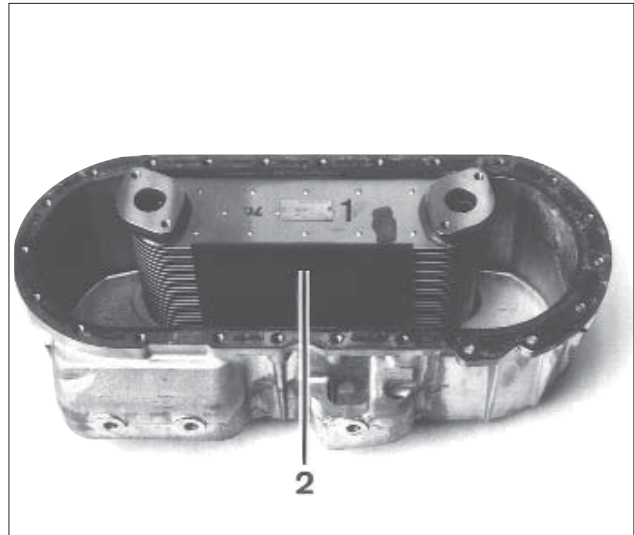
- 1 Check the heat exchanger for damage and renew it if necessary.
- 2 If re-using the same heat exchanger, renew O-ring (1).



008417



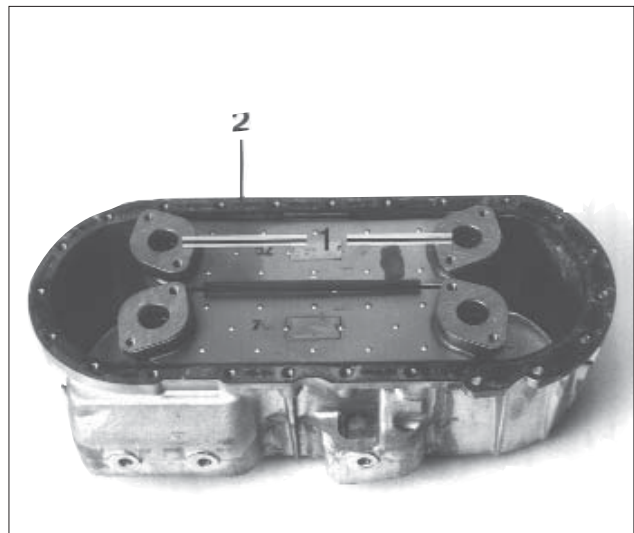
- 3 Insert both heat exchangers (1) one after the other into the oil cooler housing.
- 4 Insert silicone partition (2) between the two heat exchangers.



008420

**NOTE** Clean the metal sealing faces before installing the gaskets. Use an oil stone, for example.

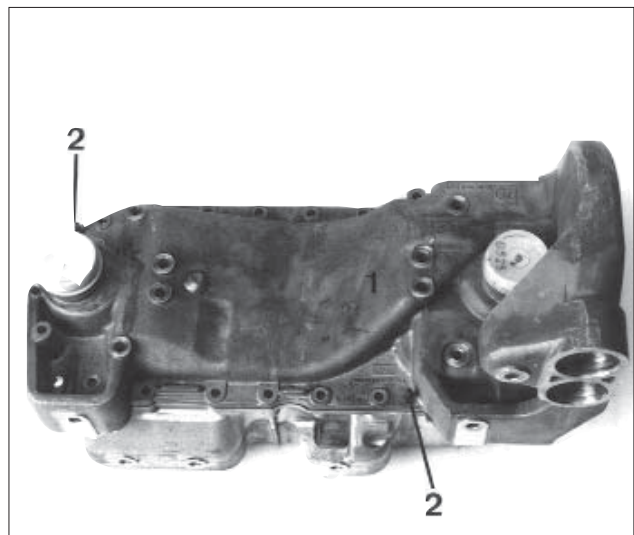
- 5 Position new gaskets (1) on the heat exchanger.
- 6 Position new gasket (2) on the sealing face of the oil cooler housing.



008419

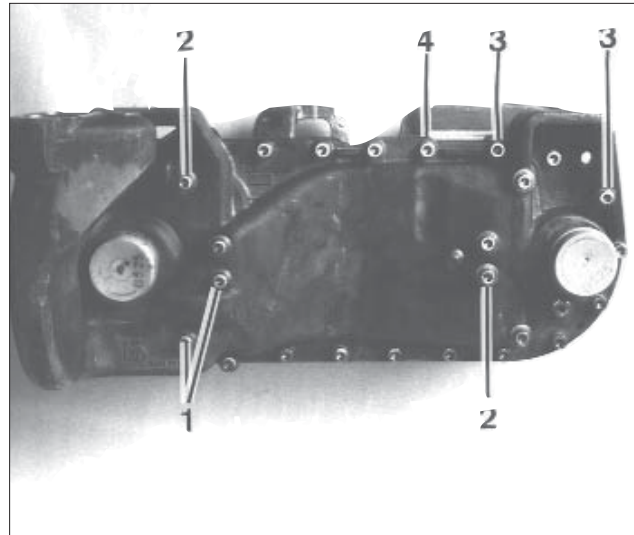
- 7 Position cover (1).
- 8 Drive in clamping pins (2) to center the cover.

**NOTE:** Do not displace the gaskets when positioning the cover.



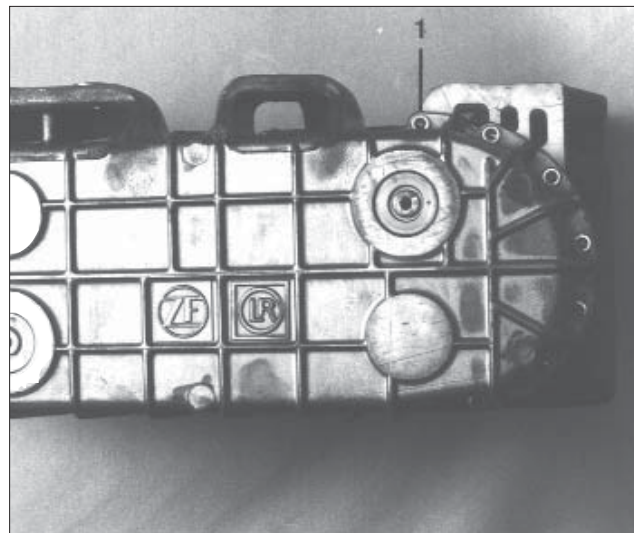
008418

- 9 Screw in M8x70 (1) and M8x50 (2) cap screws and washers until hand-tight.
- 10 Fit spring washers to the cap screws.
- 11 Screw in M8x25 (3), M8x50 (2) and M8x70 (1) cap screws;  
Tightening torque: 17 ft-lbs (23 Nm).
- 12 Screw in M8x20 cap screw (4);  
Tightening torque: 12 ft-lbs (16 Nm).



008422

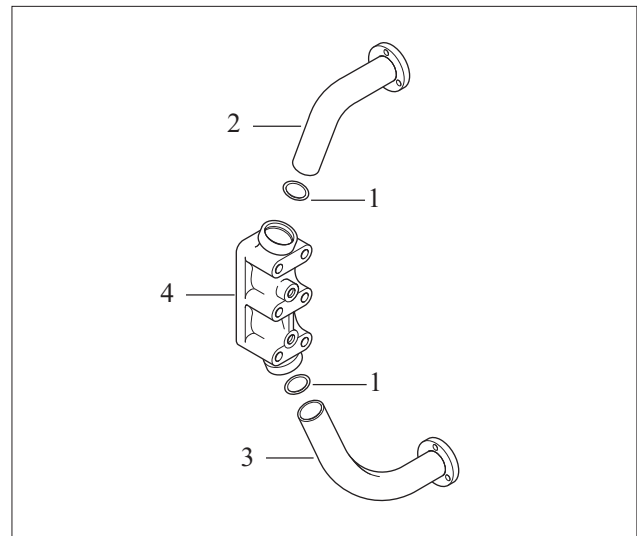
- 13 Turn the oil cooler over.
- 14 Fit M8x25 (1) cap screws with spring washers and screw them in;  
Tightening torque: 17 ft-lbs (23 Nm).



008421

**4.3 Assembly of connection components for side-mounted oil cooler.**

- 1 Coat O-rings (1) with Vaseline and insert them into the groove in the connection piece.
- 2 Insert oil pipes (2, 3) into connection piece (4).



001564