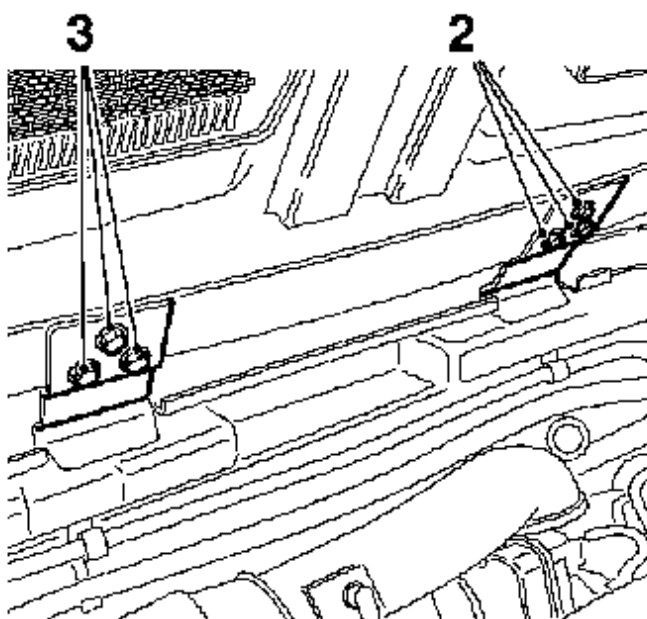
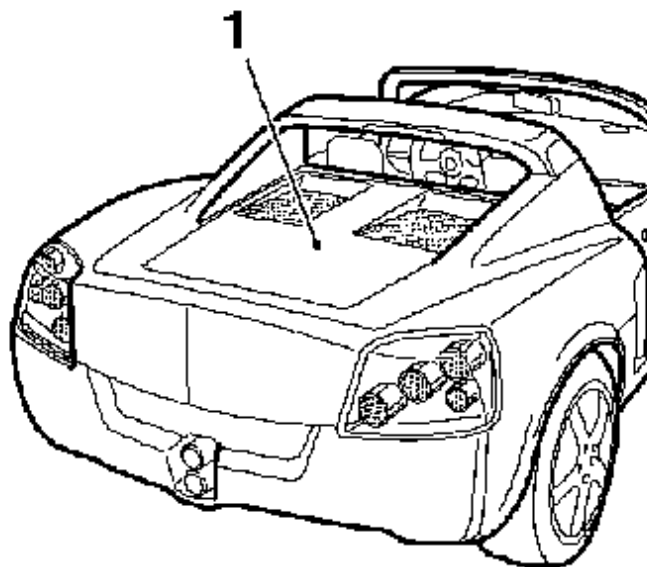


Connecting Rod Bearings, Replace (Z 22 SE)



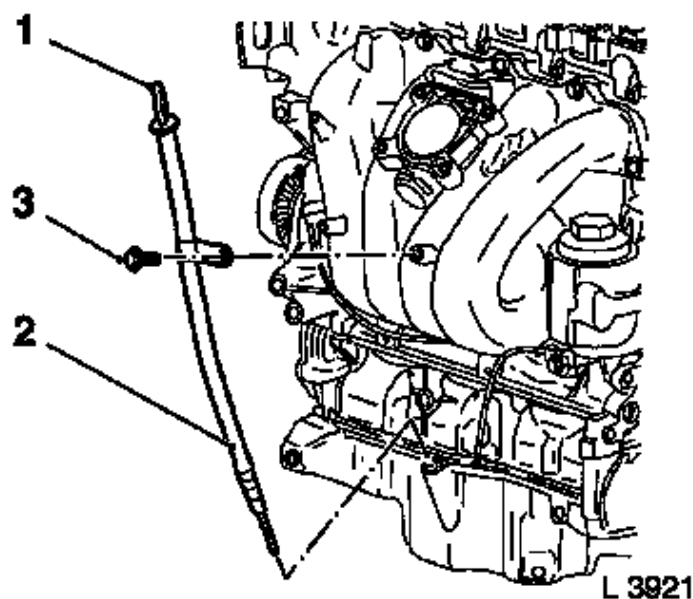
Remove

1. Open the bonnet.
2. Disconnect the battery.
3. Open the engine cover (1).
4. Detach the engine cover.
 - 6 bolts (2) and (3)

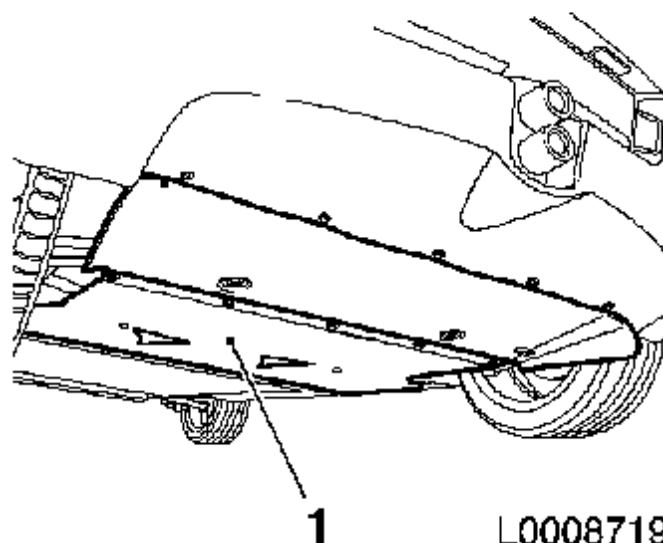


L0008715

5. Undo the bolts on the oil dipstick guide tube (2).
 - Pull out the oil dipstick (1).
 - 1 bolt (3)
6. Remove the oil dipstick guide tube.
 - Pull the oil dipstick guide tube out from the oil pan and lift it out to the top.

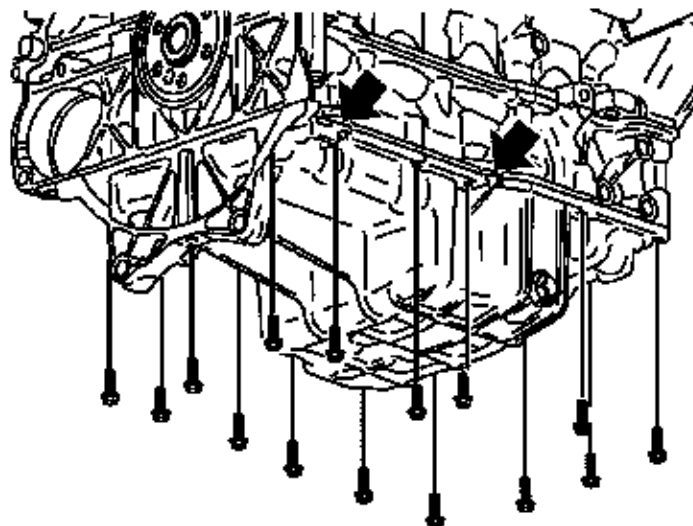


7. Raise the lifting ramp.
8. Remove the lower engine splash shield (1).
 - 13 bolts
9. Place a drip tray underneath.
10. Drain the engine oil.
 - Open the oil drain plug.
 - Install the oil drain plug using a new oil seal.
 - Tightening torque **25 Nm**



11. Remove the oil pan.
 - 17 bolts

Note: Use a suitable tool to evenly prise it off at the leverage points (arrow).

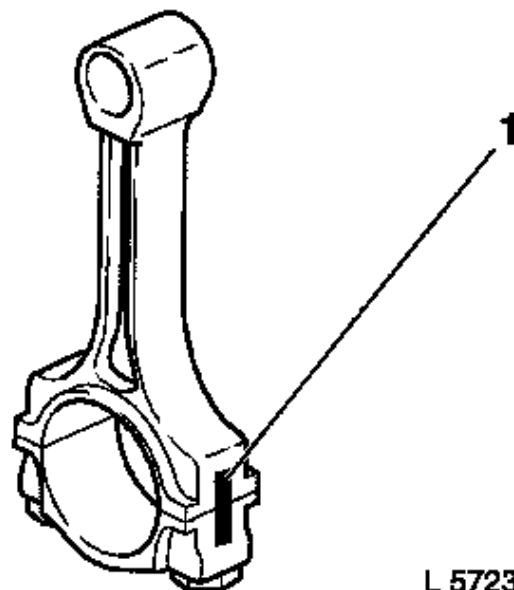


L 5721

**Disassemble**

12. Remove big-end bearing caps 1 and 4.
 - Rotate the crankshaft in the normal direction of rotation until pistons 1 and 4 are at BDC.
 - Mark the connecting rod and big-end bearing cap (1).

Note: Note the cylinder sequence.



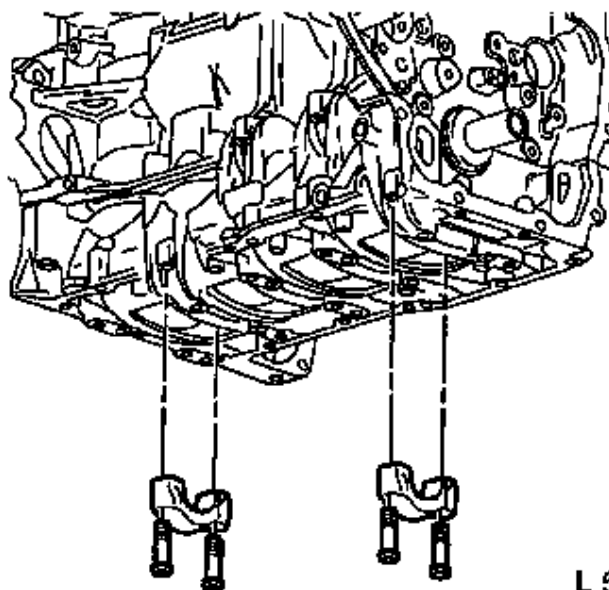
L 5723

13. Detach the big-end bearing caps.
 - 2 off
 - 4 bolts
14. Press the pistons and connecting rods upwards.

Important:

The broken surfaces of the connecting rods and the big-end bearing caps form a unique fit and must not be swapped or

damaged. Do not put the parts down on the broken surfaces.

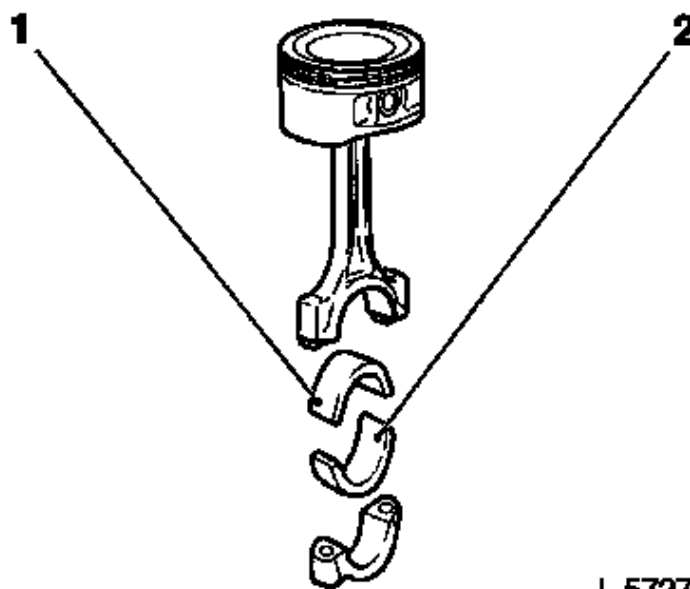


L 5722

15. Take out the big-end bearing shells.

Note: Note the installation position and allocation.

- Remove from connecting rod (1) and big-end bearing cap (2).
- Visually inspect the components.

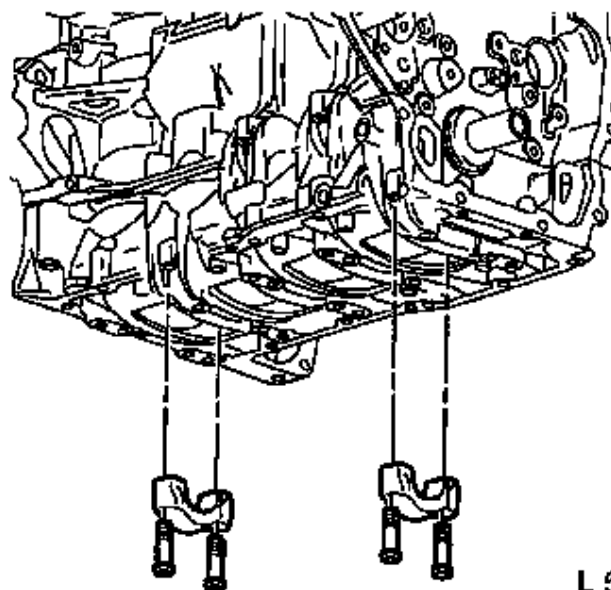


L 5727



Assemble

16. Insert the big-end bearing shells.
- Insert into the connecting rod and big-end bearing cap.
 - Coat the big-end bearing shells with engine oil.
17. Install big-end bearings 1 and 4.

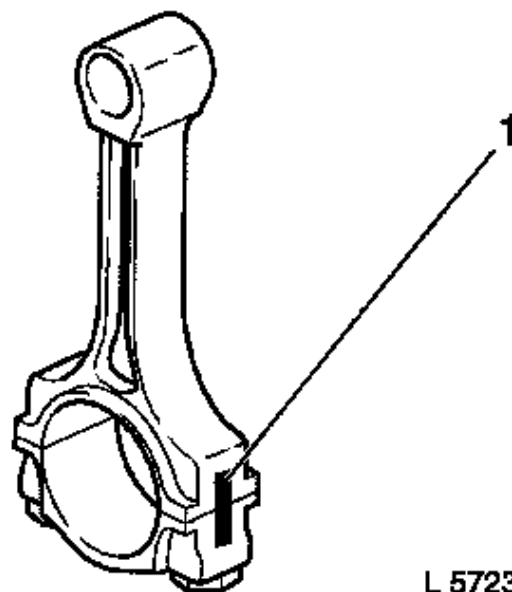


L 5722

18. Coat the big-end bearing journals with engine oil.

Important: Note the applied markings (1).

- Renew the bolts.
- Tightening torque **25 Nm + 50° + 50° + 10°**

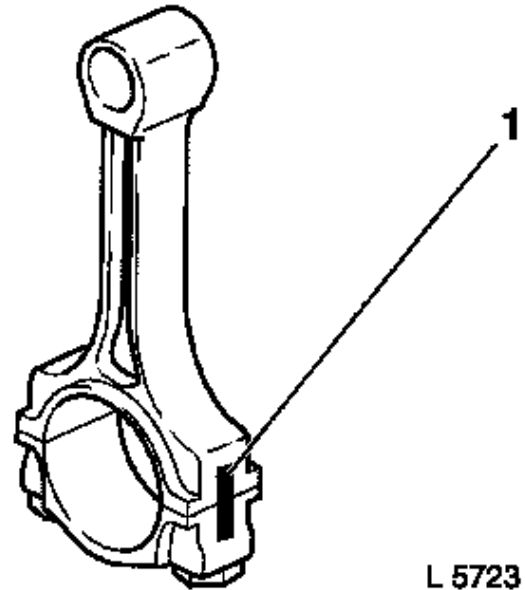


L 5723



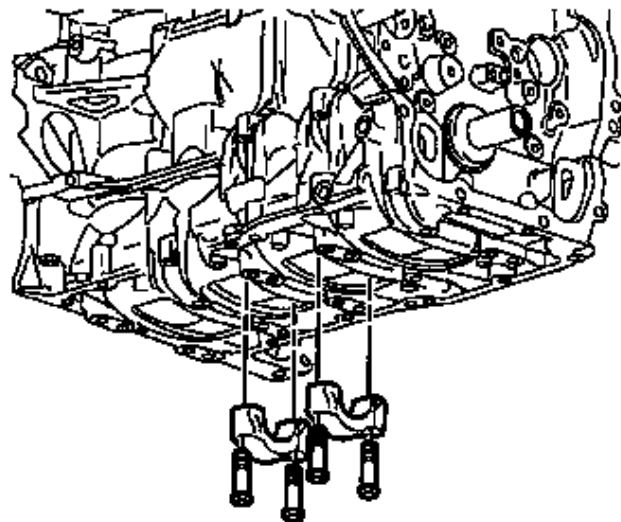
Disassemble

19. Remove big-end bearing caps 2 and 3.
- Rotate the crankshaft in the normal direction of rotation through 180 °C until pistons 2 and 3 are at BDC.
 - Mark the connecting rod and big-end bearing cap (1).
- Note:** Note the cylinder sequence.



L 5723

20. Detach the big-end bearing caps.
 - 2 off
 - 4 bolts
21. Press the pistons and connecting rods upwards.
22. Important:
The broken surfaces of the connecting rods and the big-end bearing caps form a unique fit and must not be swapped or damaged. Do not put the parts down on the broken surfaces.

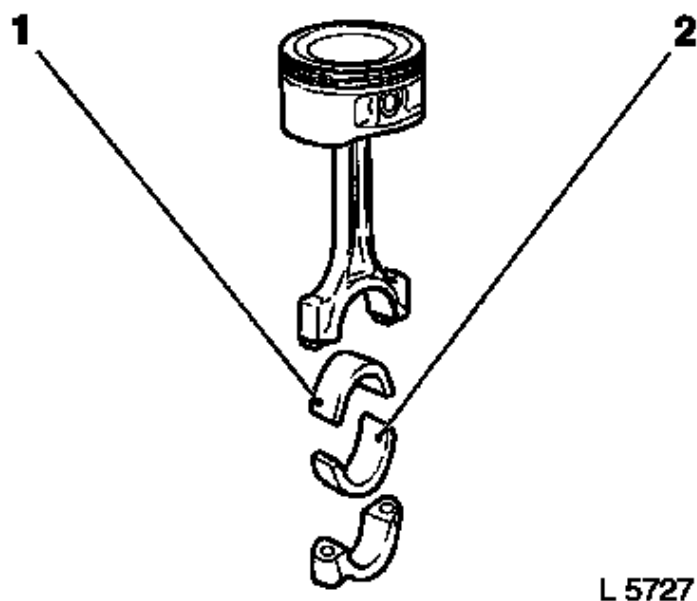


L 5726

23. Take out the big-end bearing shells.

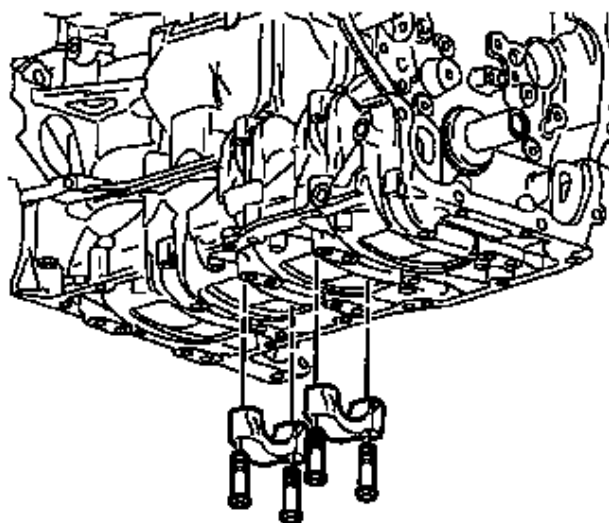
Note: Note the installation position and allocation.

 - Remove from connecting rod (1) and big-end bearing cap (2).
 - Visually inspect the components.
24. Insert the big-end bearing shells.
 - Insert into the connecting rod and big-end bearing cap.
 - Coat the big-end bearing shells with engine oil.



Assemble

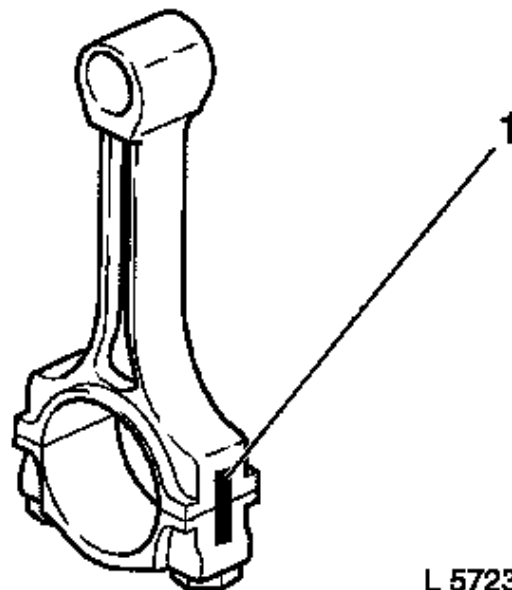
25. Install big-end bearing caps 2 and 3.



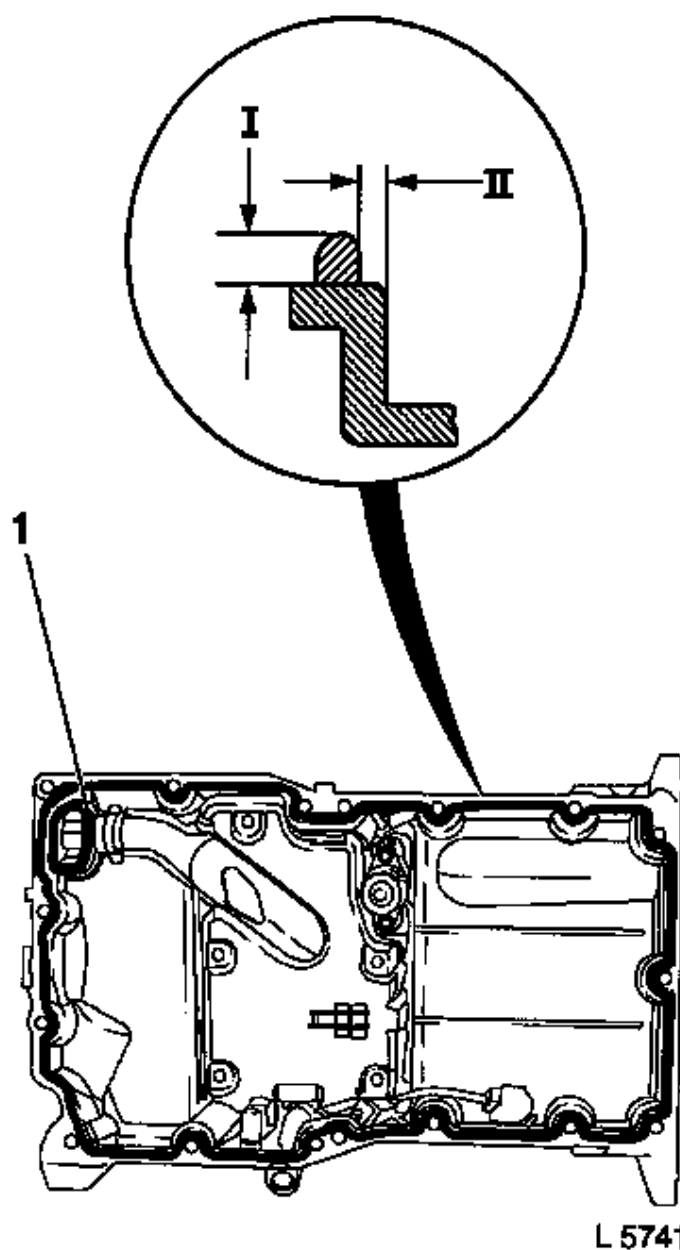
26. Coat the big-end bearing journals with engine oil.
- Warning:** Note the applied markings (1).
- Renew the bolts.
 - Tightening torque **25 Nm + 50° + 50° + 10°**
27. Clean the sealing surfaces.
- Cylinder block base plate, oil pan

28. Recut the thread.

- 15 off

**Install****29.** Install the oil pan.

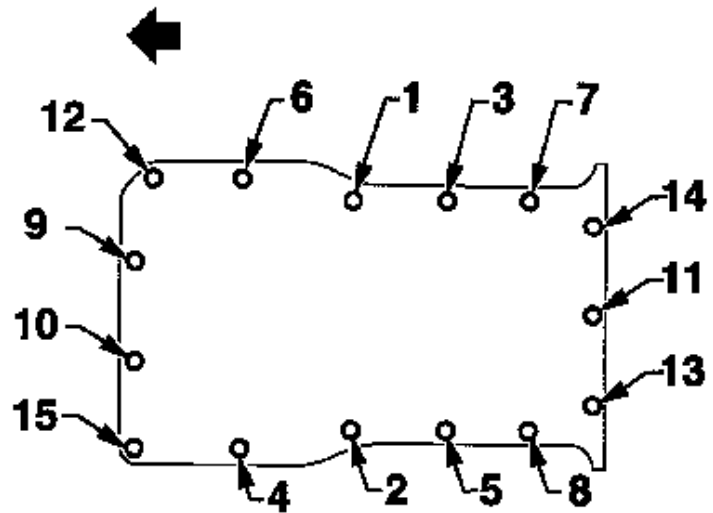
- Apply a bead of silicone sealant (grey) (approx. **2 mm** to **2.5 mm** (dimension I) thick) at a spacing of **0.5 mm** to **1.5 mm** (dimension II) from the inner edge of the sealing surface to the sealing surfaces of the oil pan.
- Apply an additional bead of silicone sealant (grey) (approx. **2 mm** to **2.5 mm** (dimension I) thick) centrally to the oil intake pipe connection (1).



30.

Note: Observe the tightening sequence.

- Tighten all bolts loosely.
- To the cylinder block base plate – tightening torque **23 Nm**
- To the transmission housing – tightening torque **23 Nm**



L 5742

31. Install the lower engine splash shield
 - 13 bolts
32. Lower the lifting ramp.
33. Insert the oil dipstick guide tube.
 - Use new oil seals.
 - Coat the oil seals with silicone grease (white).
 - Insert the oil dipstick guide tube as far as the stop into the oil pan.
 - Attach the knock sensor wiring harness connector.
34. Attach the oil dipstick guide tube.
 - Tightening torque **9 Nm**
35. Fill up with engine oil and check the oil level.
36. Install the rear engine cover.
 - Check the alignment.
 - 6 bolts, tightening torque **14 Nm**
37. Close the rear engine cover.
38. Connect the battery.
39. Close the bonnet.
40. Reprogram the volatile memories.