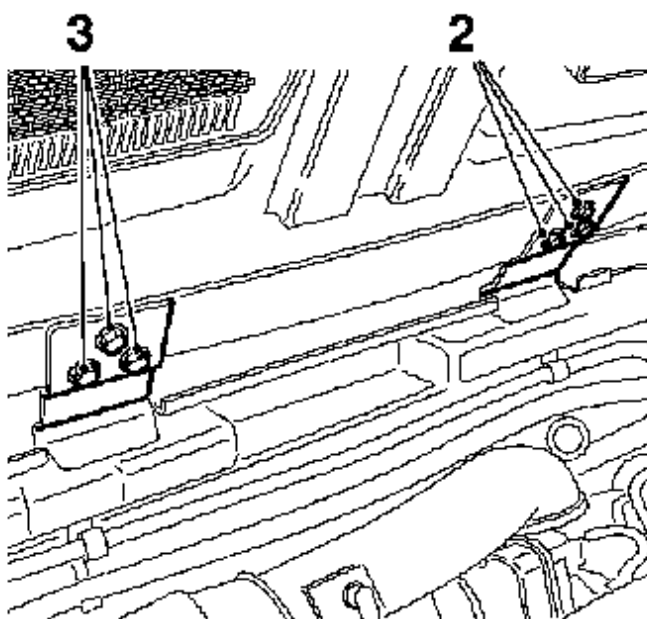
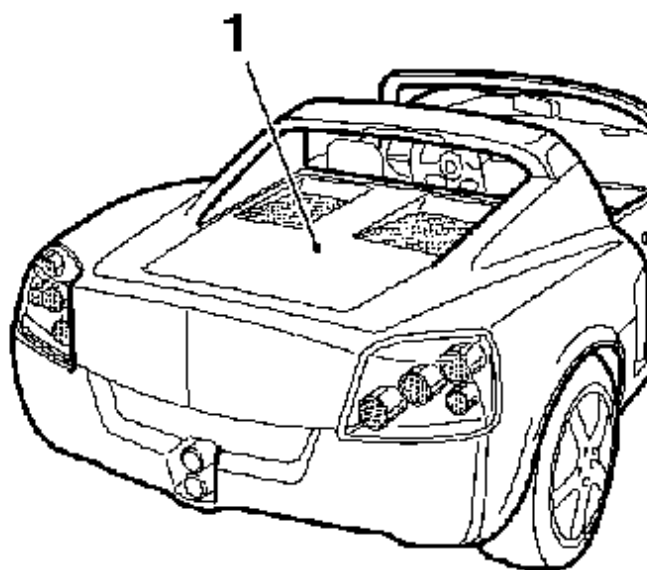


Timing Chain Tensioner, Balancer Shaft, Replace (Z 22 SE)



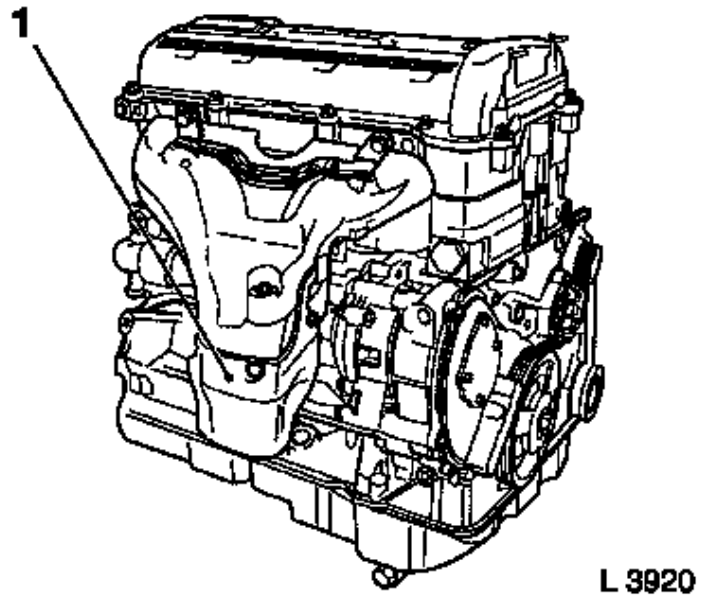
Remove

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

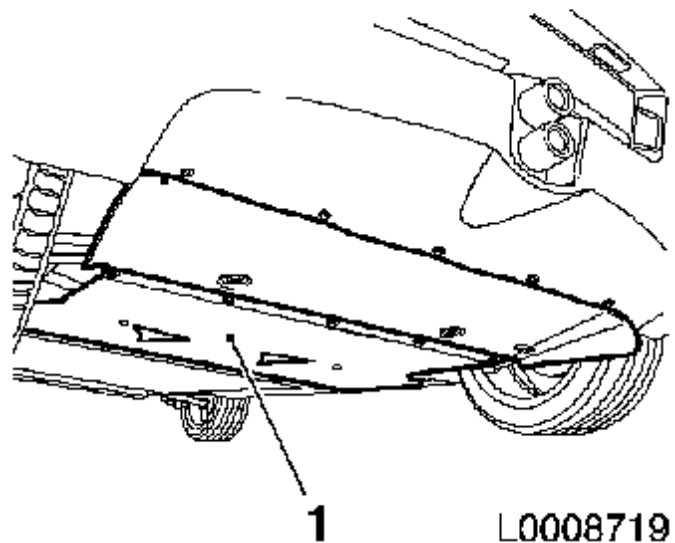


L0008715

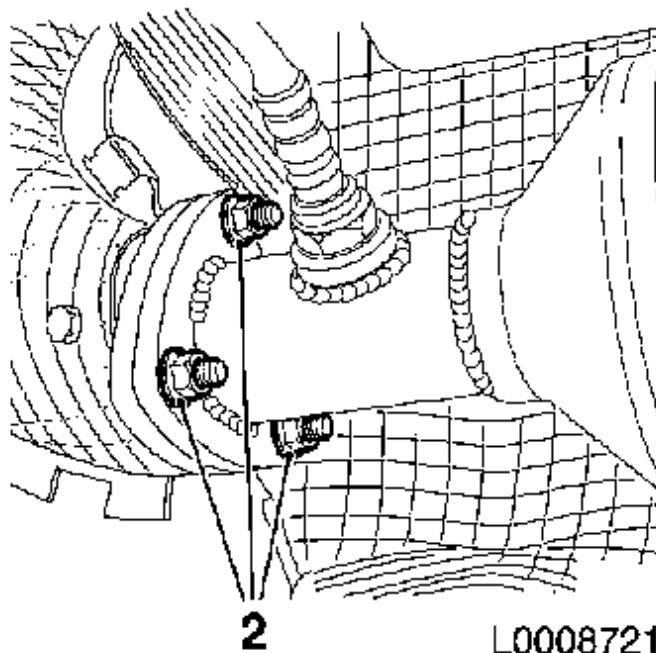
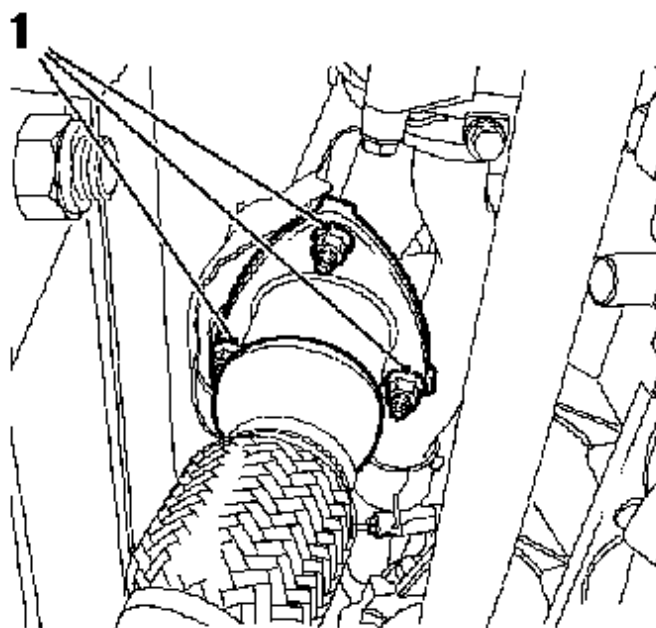
5. Remove the lower heat shield (1).
 - 3 bolts



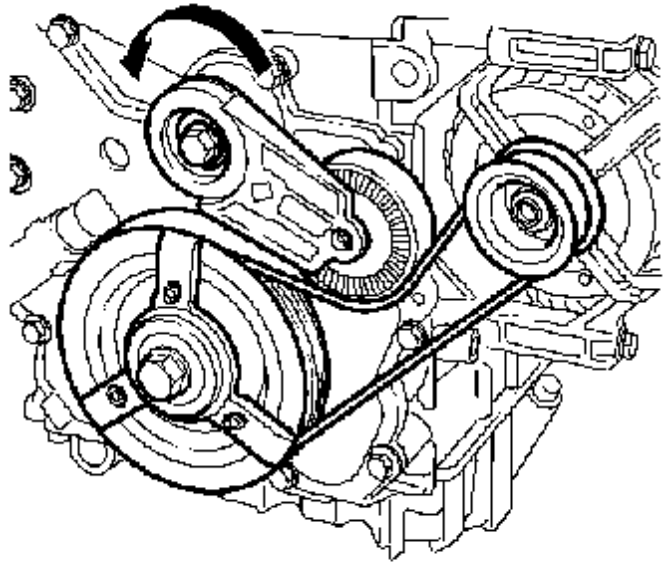
6. Raise the lifting ramp.
7. Remove the lower engine splash shield (1).
 - 13 bolts



8. Place a drip tray underneath.
9. Drain the engine oil.
 - Open the oil drain plug.
 - Install the oil drain plug using a new oil seal.
 - Tightening torque **25 Nm**
10. Detach the front exhaust pipe.
 - 6 nuts (1) and (2), 3 bolts
 - Unhook the exhaust pipe from its mountings.
 - Remove the gaskets.

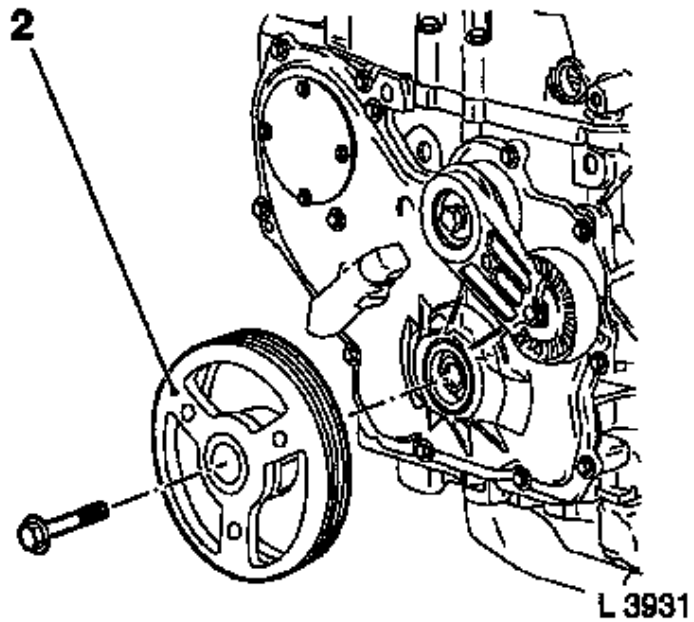
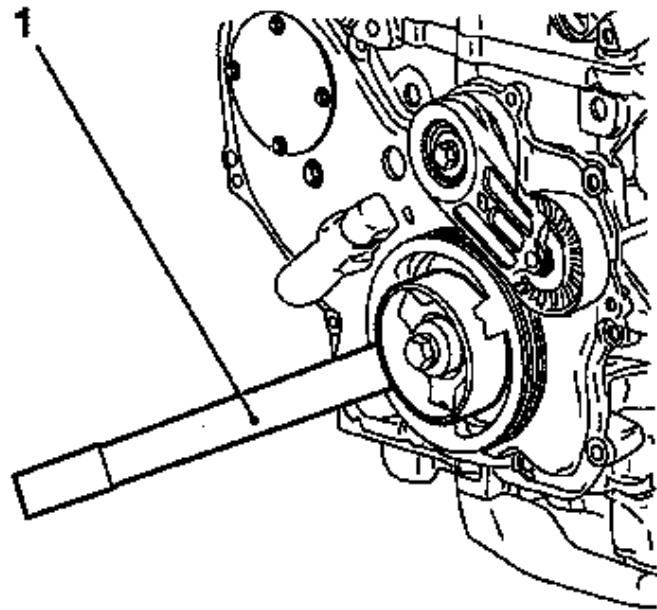


11. Remove the ribbed V-belt.
- Mark the running direction of the ribbed V-belt.
 - Tension the ribbed V-belt tensioner in the direction of the arrow with **KM-6151**.
 - Take out the ribbed V-belt.

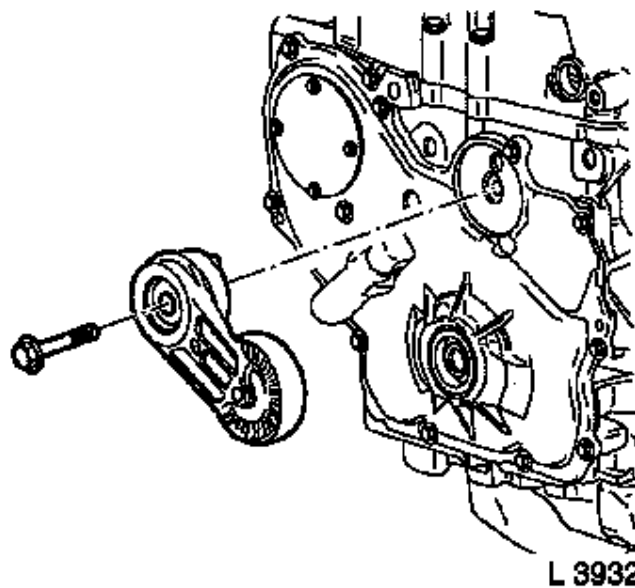


L0008730

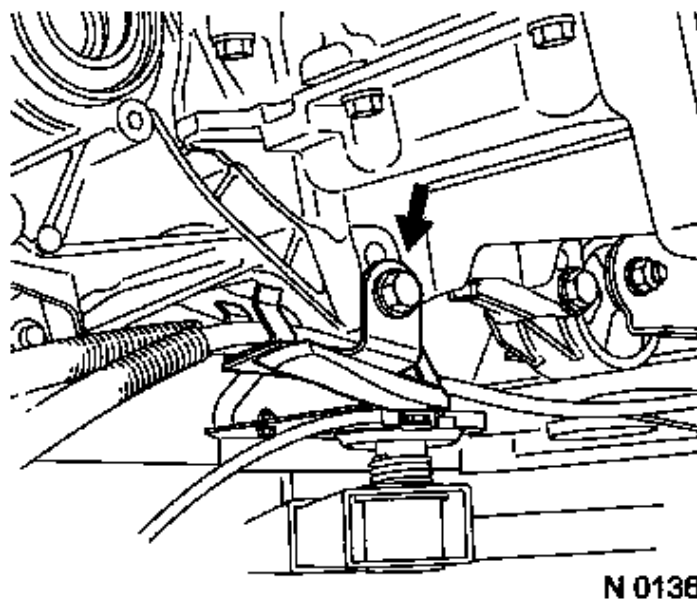
12. Detach the rotational vibration damper (2).
 - Use holding adapter **KM-J-38122-A** in conjunction with **KM-956-1** (1) to hold.



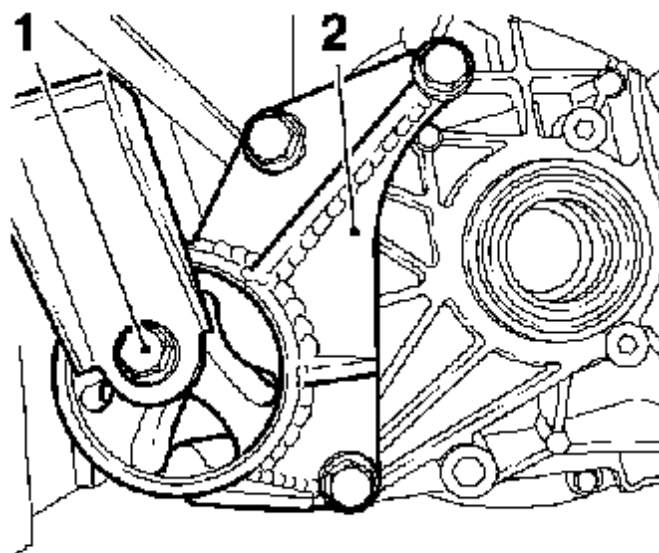
13. Detach the ribbed V-belt tensioner.



14. Detach the bracket for the gearshift cables.
- From the transmission
 - 1 bolt (arrow)

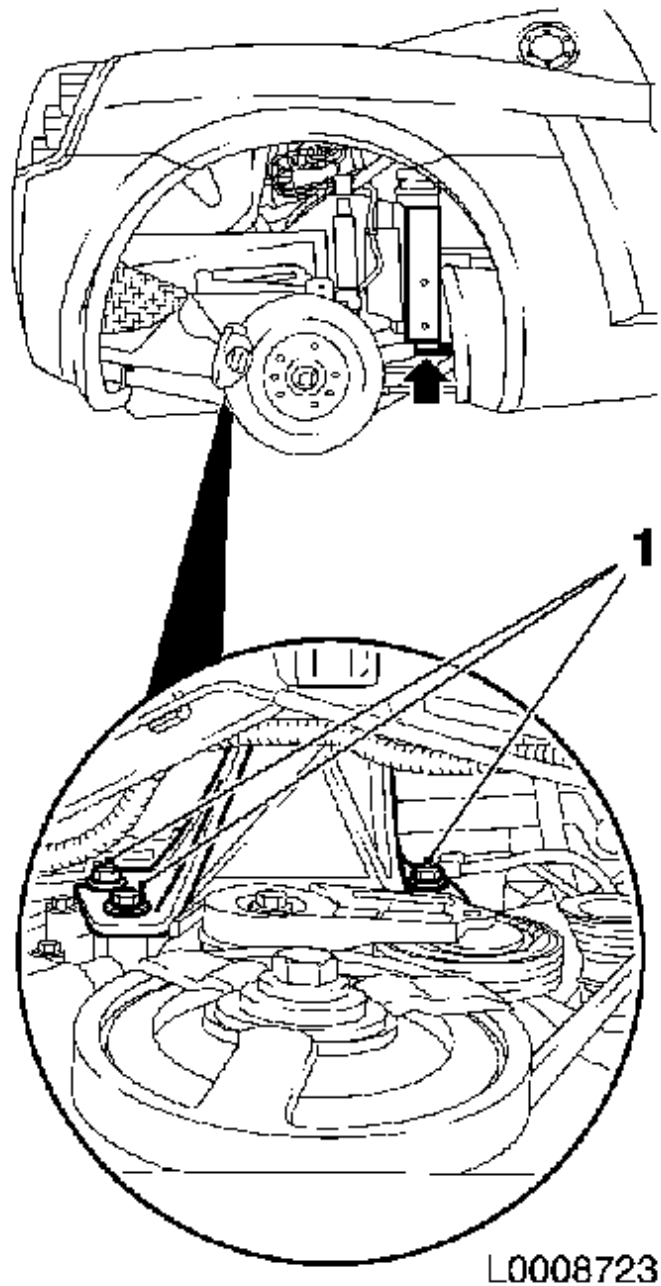


15. Support the engine from underneath with **KM-904** together with **KM-6054**.
16. Release the rear engine damping block (2).
- 1 bolt (1), 1 nut



L0008722

17. Undo the bolts on the right-hand engine damping block bracket.
 - 3 bolts (1)
18. Undo the bolts on the right-hand engine damping block.
 - 1 nut (arrow)
19. Take out the engine damping block bracket together with the right-hand engine damping block.



20. Undo the bolts on the timing case (5).
 - 11 bolts (1), (2) and (6)
21. Lower the engine.

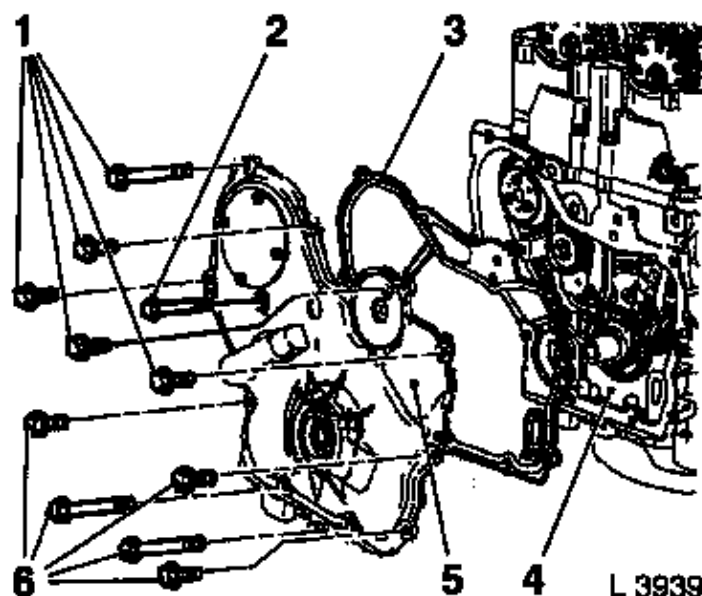
Note: It must be possible to guide the long bolt (2) of the timing case past the longitudinal member.
22. Remove the timing case.
 - Remove the gasket (3).

Note: Cover the opening (4) in the timing case with a cloth.
 - Use a suitable tool to remove the oil seal.

Important: Do not damage the sealing

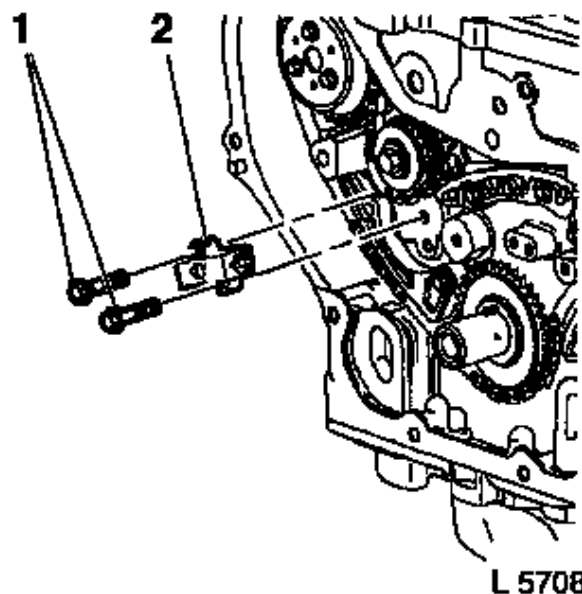
surfaces.

- Clean the sealing surfaces.



23. Remove the balancer shaft timing chain tensioner (2).

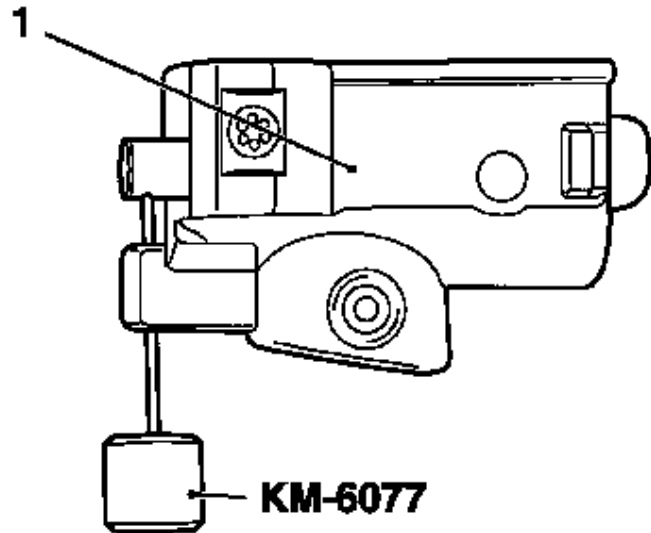
- 2 bolts (1)



Install

24. Install the balancer shaft timing chain tensioner.

- Lock the chain tensioner (1) with **KM-6077**.
 - Rotate the piston clockwise, press it in and insert **KM-6077** into the designated bores.
- Tightening torque **10 Nm**
- Take out **KM-6077**.

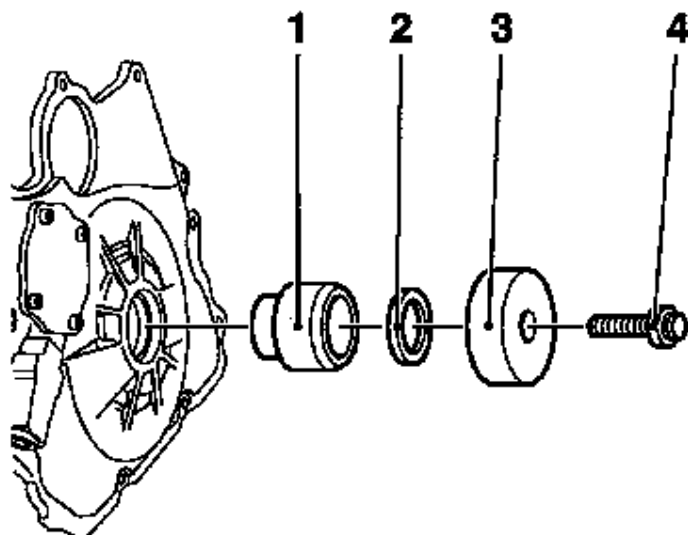


L 5713

25. Install the timing case.

Note: Remove the cloth from the opening in the timing case.

- Use a new gasket.
- Tightening torque **21 Nm**
- Install a new crankshaft front oil seal (2).
 - Slide protective sleeve (1) from **KM-6105** (3) onto the connecting rod journal.
 - Coat the sealing lips with silicone grease (white).
 - Slide the oil seals over the protective sleeve onto the connecting rod journal.
 - Use **KM-6105** to press the oil seal into the timing case.
 - Use bolt (4) of the rotational vibration damper.
 - Take out **KM-6105**.



L 3952

26. Raise the engine.

27. Insert the right-hand engine damping block together with the engine damping block bracket.

28. Attach the right-hand engine damping block.

- 1 nut
 - Tightening torque **45 Nm**

29. Attach the right-hand engine damping block bracket.

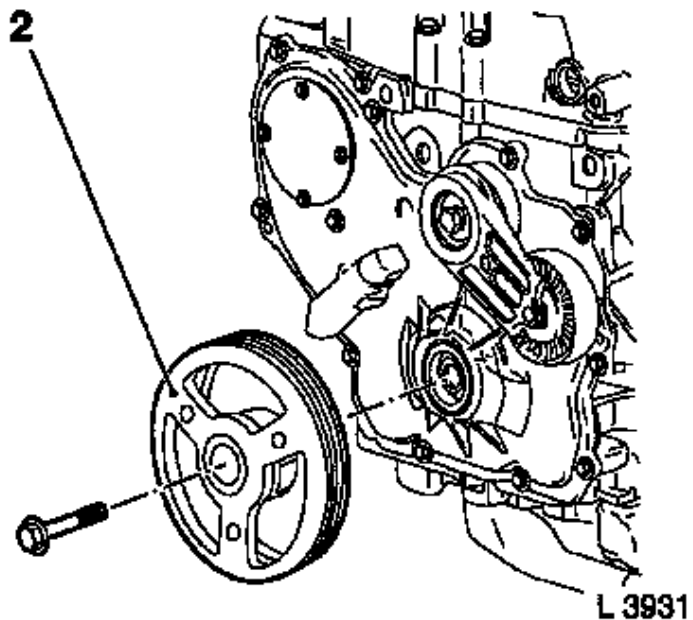
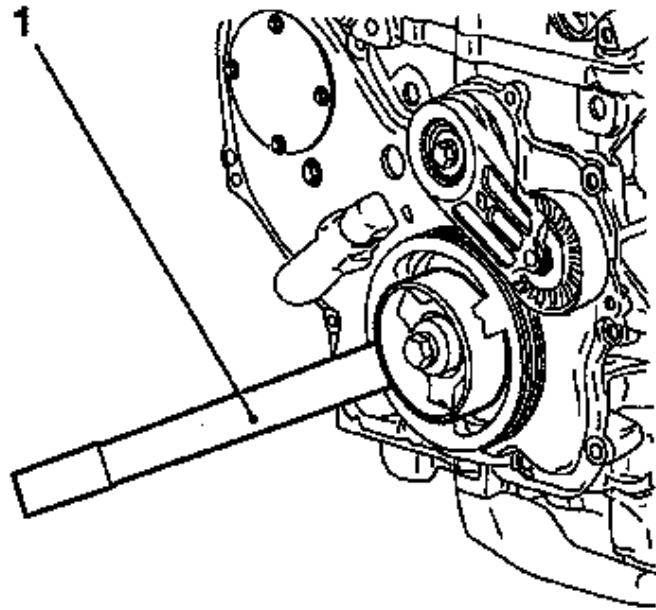
- 3 bolts
 - Tightening torque **85 Nm**

30. Attach the rear engine damping block.

- 1 bolt, 1 nut

- Tightening torque **49 Nm**

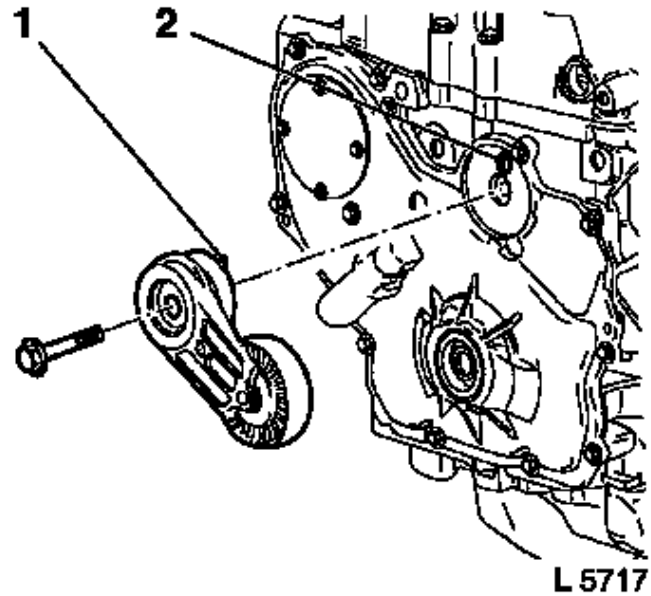
31. Lower the engine.
 - Take out **KM-904** with **KM-6054**.
32. Attach the bracket for the gearshift cables.
 - To the transmission
 - 1 bolt
 - Tightening torque **22 Nm**
33. Attach the rotational vibration damper (2).
 - Use holding adapter **KM-J-38122-A** in conjunction with **KM-956-1** (1) to hold.
 - Use a new bolt.
 - Tightening torque **100 Nm + 75° + 15°**



34. Attach the ribbed V-belt tensioner.

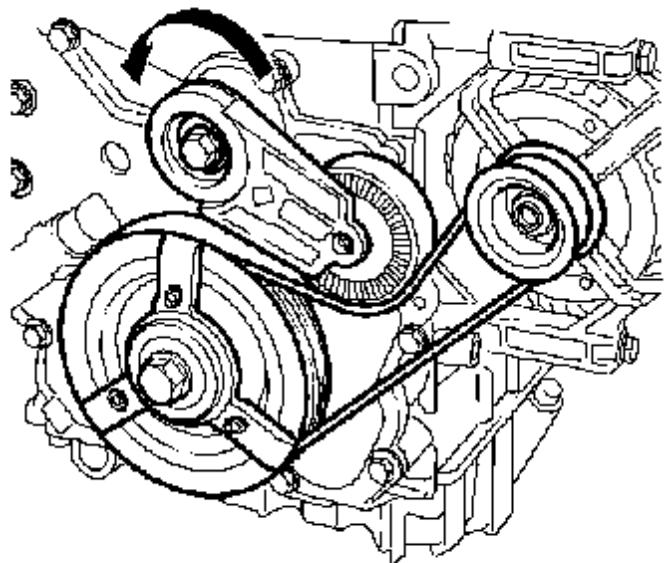
Note: The lug (1) of the ribbed V-belt tensioner engages into the bore in the timing case (2).

 - Tightening torque **43 Nm**



35. Install the ribbed V-belt.

- Lay the ribbed V-belt in place.
Note: Note the running direction and installation position of the ribbed V-belt.
- Tension the ribbed V-belt tensioner in the direction of the arrow with **KM-6151**.



36. Install the front exhaust pipe.

- Use new gaskets.
- 6 nuts, 3 bolts
 - Tightening torque **16 Nm**
- Hook into the mountings.

37. Install the lower engine splash shield

- 13 bolts

38. Lower the lifting ramp.

39. Install the lower heat shield.

- Tightening torque **8 Nm**

40. Fill up with engine oil and check the oil level.
41. Install the engine cover.
 - Check the alignment.
 - 6 bolts, tightening torque **14 Nm**
42. Close the engine cover.
43. Connect the battery.
44. Close the bonnet.
45. Reprogram the volatile memories.