



Products affected

Truck			Bus			Power Solutions			
4	PGRT	LPGRS	4	FKN	CK	P93	P96	E2011	PS2024
-	-	X	-	-	X	-	-	-	X

Miscellaneous: Applies to DC13 cylinder block generation 3

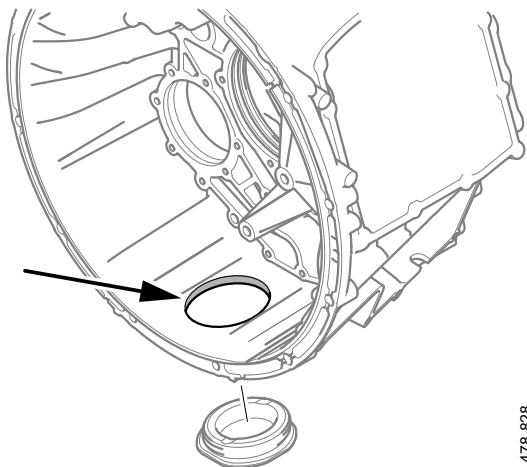
Oil leakage at flywheel housing or front gearbox housing

Issue 4, 2025-05-30.

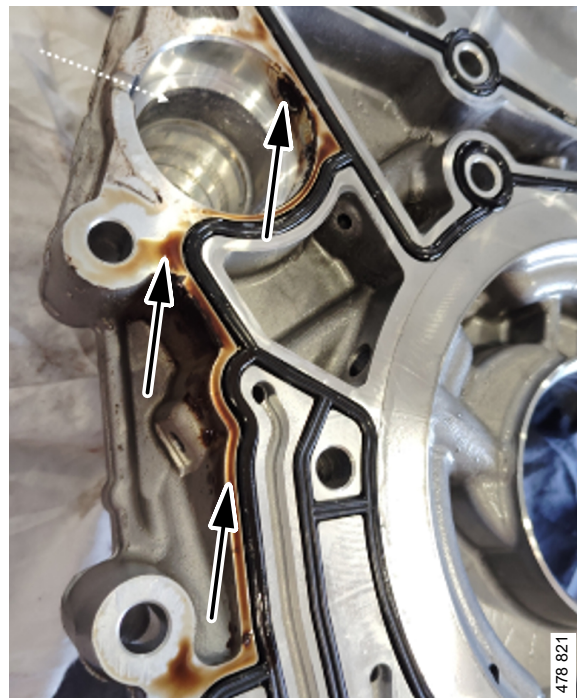
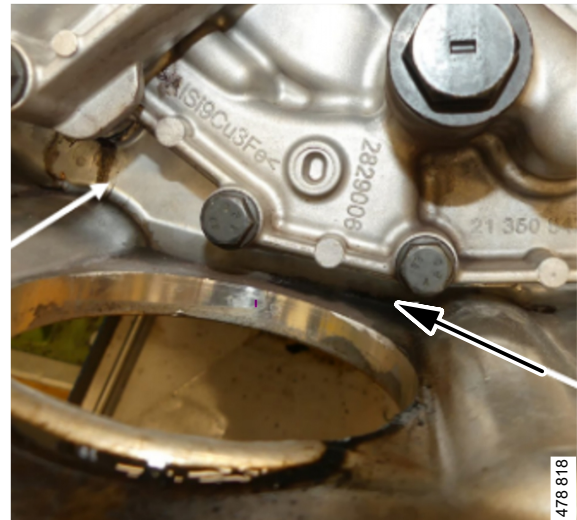
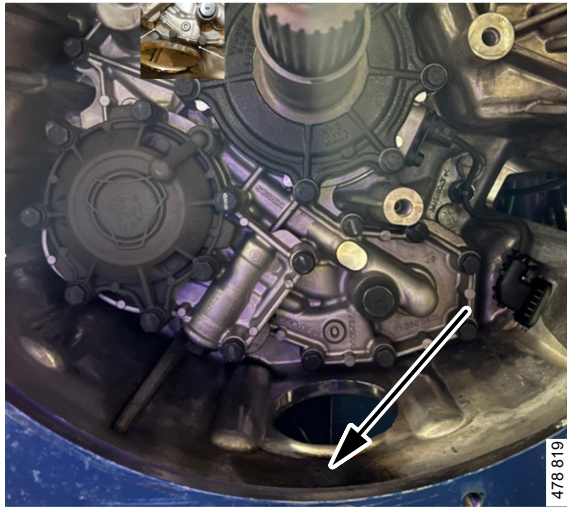
- New crankshaft gear introduced, part number 3 295 927

Background

There have been instances of engines leaking oil at the inspection cover on the front gearbox housing.



In some cases, leakage has been indicated to have come from the engine. In others, from the gearbox. The illustrations below show examples where engine oil has been found in the front gearbox housing and inspection hatch of the gearbox.



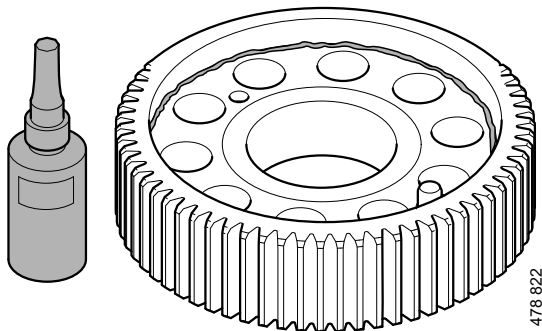
This has often resulted in repairs to the gearbox in other renewals of the engine's rear crankshaft seal. Some cases have resulted in continued leakage and further repairs.

It has now become apparent that engine oil is transported between the end of the crankshaft, the crankshaft gear and the flywheel in small quantities. This TI describes how to rectify this leakage.



Service solution

Apply the sealant *Loctite 574, 2 033 249* on the crankshaft gear to seal.



The work between the application of the adhesive until the flywheel is tightened must be continuous. If the work is interrupted (steps 14-21), the hardening process of the adhesive is negatively affected and the entire adhesive work must be repeated. A maximum of 2 hours of working time for steps 14-21.

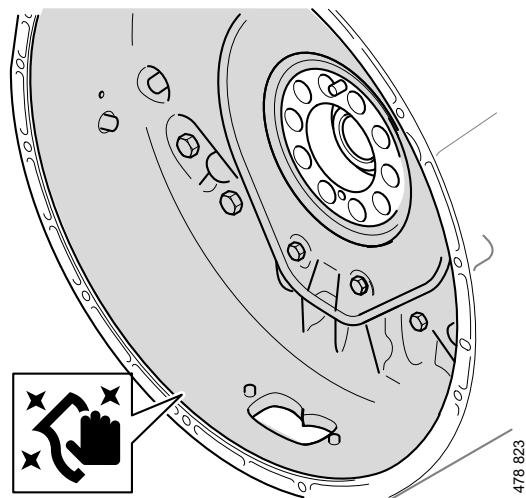
NOTE:

Wear protective goggles and single-use protective gloves.

Apply sealant

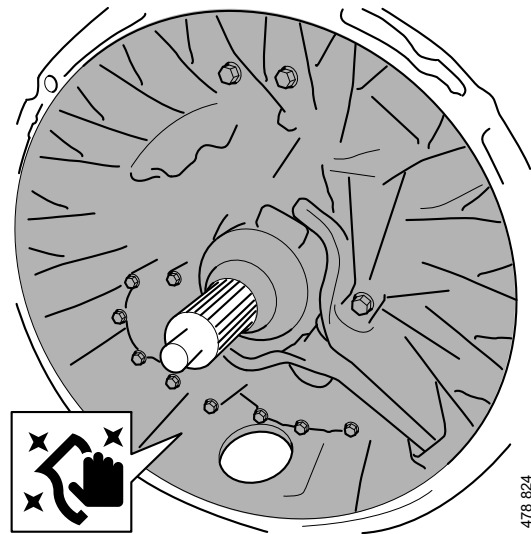
1. Follow the work description in the *Workshop Manual Engine > section 01-05 Cylinder block > Crankshaft seal [DOHC] > Removal – Rear crankshaft seal, 13 litre engine.*
2. Clean the flywheel housing internally before removing the seal. Spray brake/clutch cleaner on dirty surfaces and wipe clean with paper.

For PS2024, go to step 6.



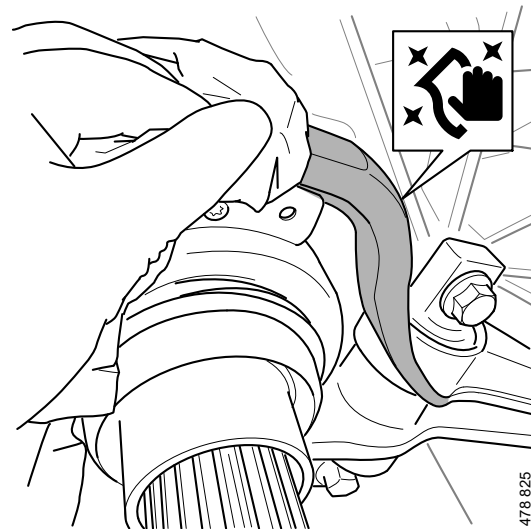


3. Clean the gearbox inside the casing. Use brake/clutch cleaner on dirty surfaces and wipe clean with paper.



4. Clean the clutch lever by using paper and wiping all around.

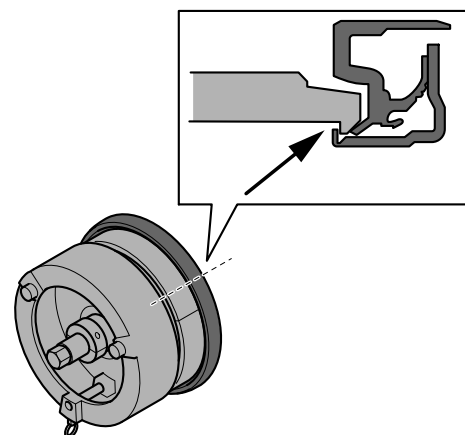
If cleaning is not carried out properly, it may be difficult to determine afterwards whether it is sealed.



5. Then remove the sealing ring.

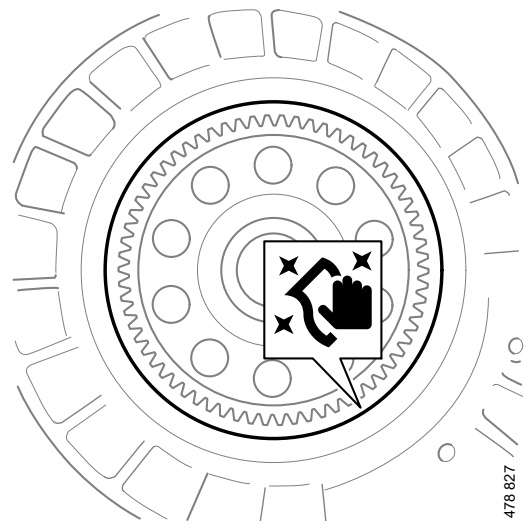
Follow the description for *Dismantling tool sealing ring 3 029 952*, carefully.

In the event of failed removal, the seal may become deformed so that further dismantling attempts are made more difficult.

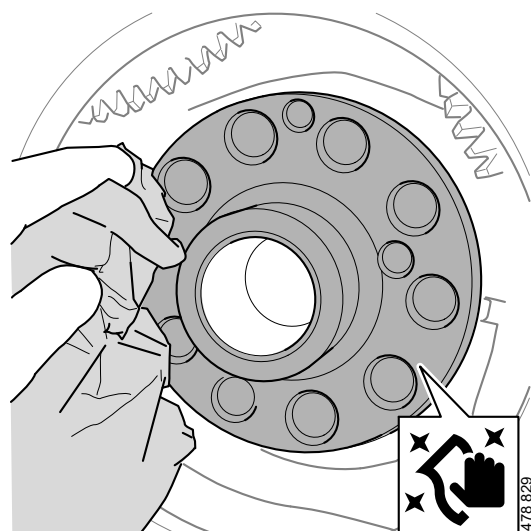




6. Set the engine in the TDC position. Turn the engine counterclockwise so that the backlash gives the correct indication of the TDC position.
7. Lock the engine using *Locking tool for camshafts 3 046 636*.
8. Remove the crankshaft gear from the crankshaft. Grip with your fingers at the screw holes.
9. Clean the contact surface for the sealing ring. Use brake/clutch cleaner sprayed on paper and wipe clean all around.

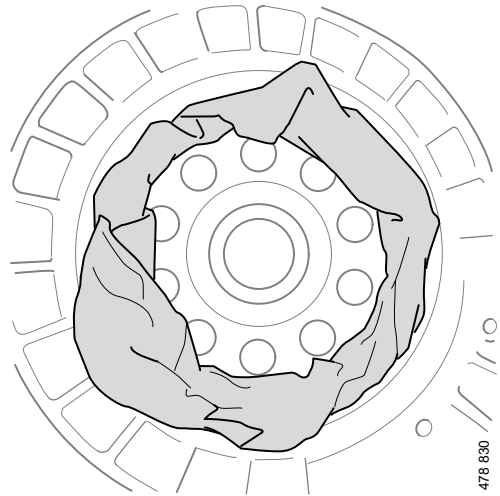


10. Clean the crankshaft end. Use brake/clutch cleaner sprayed on paper and wipe clean all around.





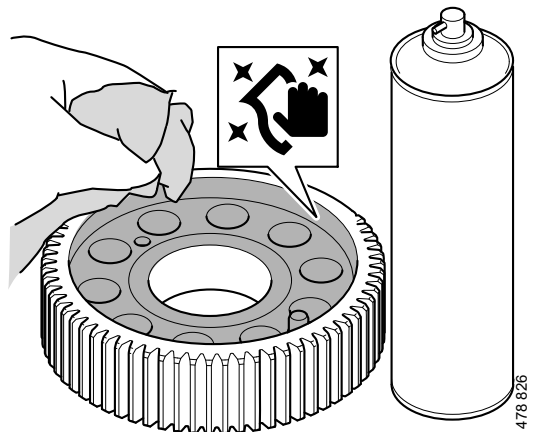
11. Place lint-free paper to protect against contamination.



12. Screw in the *Guide pins for flywheel* 3 006 033.

13. Replace the old crankshaft gear with the new one with part number 3 295 927.

Clean the crankshaft gear using brake/clutch cleaner. Spray on the inside of the gear and wipe clean all around with paper.

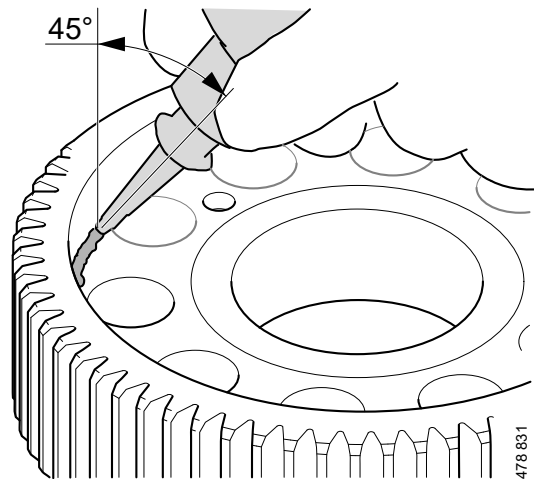




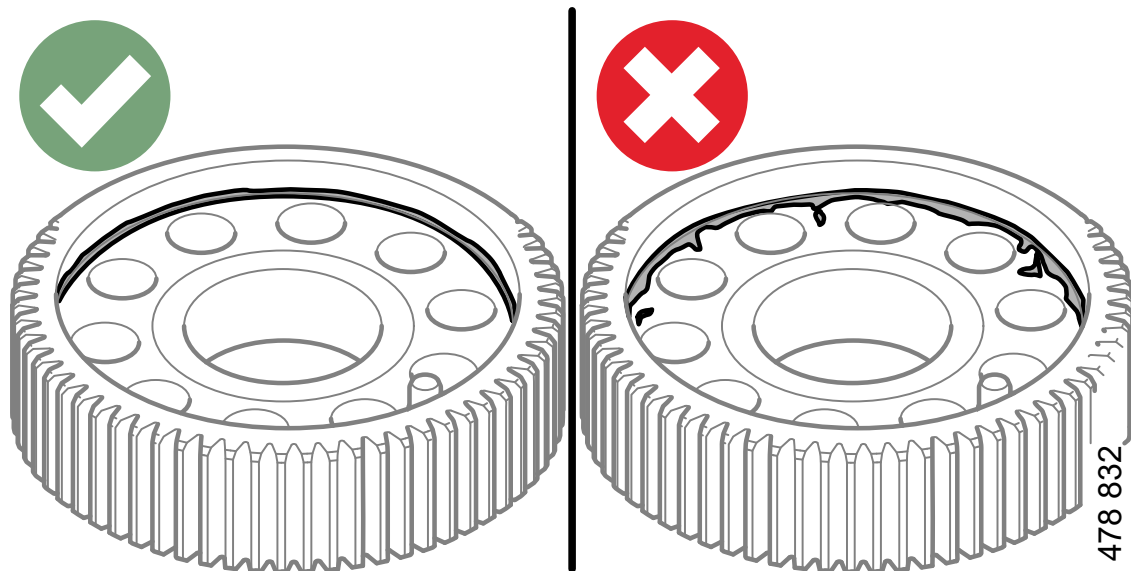
14. Apply the sealant *Loctite 574*, 2 033 249 on the gear. Do not cut the tip.

Hold the tube angled at 45 degrees and apply a smooth string of adhesive of approx. 1.5 mm at the **inner** radius.

Remove excess adhesive and wipe down any unevenness.



Examples of quantity and position:



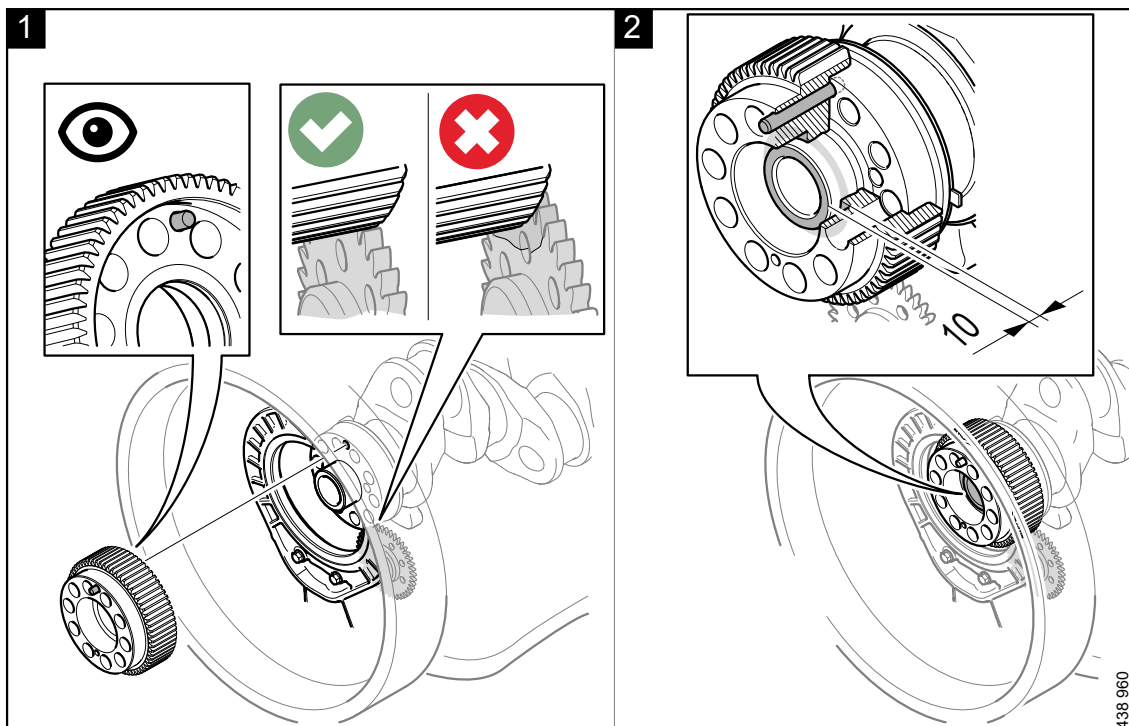
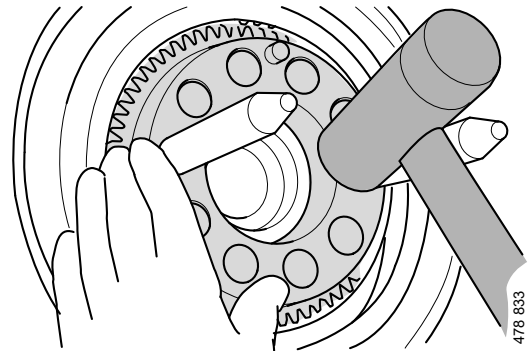


15. Remove the dirt-resistant paper and fit the gear on the crankshaft.

Take care when fitting, align the guide pin with the hole on the crankshaft hub. Make sure that the gear bottoms out against the crankshaft correctly.

Align the crankshaft gear with the utmost care to avoid damage.

If it jams, use a cleaned plastic mallet and carefully tap the gear crosswise.

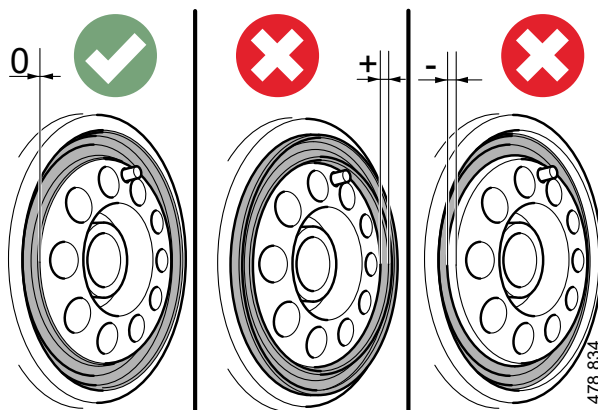
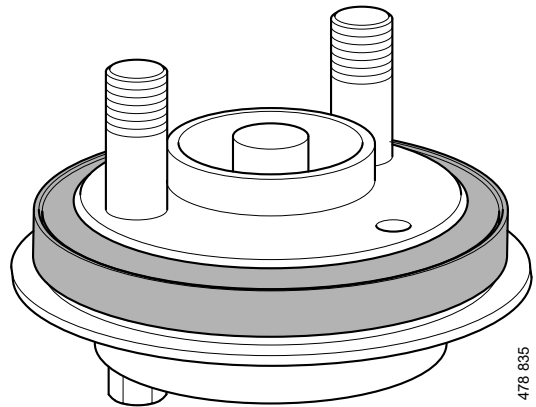




16. Follow the work description in the *Workshop Manual Engine* > section *01-05 Cylinder block* > *Crankshaft seal [DOHC]* > *Fitting – Rear crankshaft seal, 13 litre engine.*

It is best to place the new seal on *Assembly tool sealing ring 2 968 593.*

Make sure that the seal is in the correct position along the depth axis and that it is evenly positioned over the surface.



17. Clean the flywheel. Spray brake/clutch cleaner on the entire flywheel and wipe clean with paper.

18. Inspect the support bearing. Renew if necessary.

19. Fit the flywheel.

20. Fit new screws, tighten them crosswise with a nut runner.

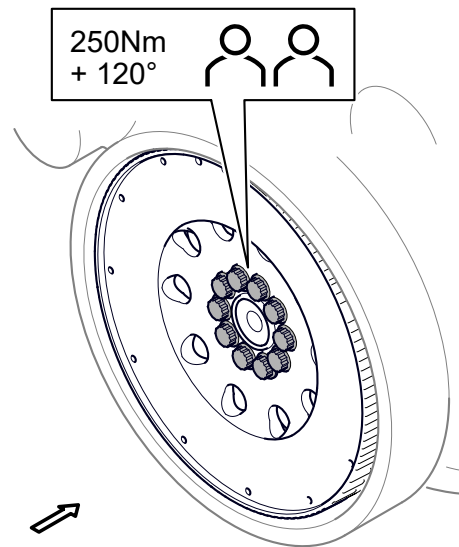


21. Tighten the screws with the tightening torque:

1. 250 Nm
2. Angle +120 degrees

Two people are required.

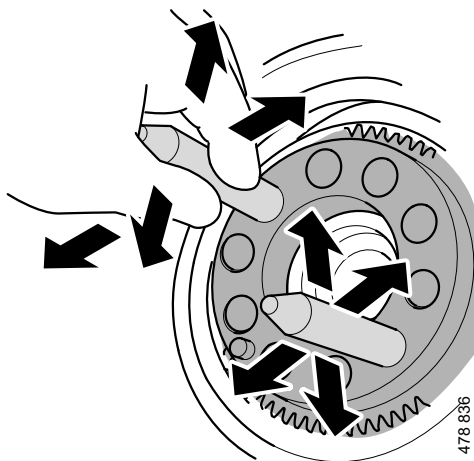
For PS 2024, different torque applies. For more information, see the *Workshop Manual 01-10 Crank mechanism > Flywheel*.



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22. Fit the other parts and finish by checking through the inspection hatch that there are no leaks.

Glued gears can be removed by positioning *Guide pins 3 006 033* with the tip inwards. After which, the gear can be removed from the crankshaft with movements to the side/back and back/forth.



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If the gear is stuck tightly, the flywheel housing must be removed to access the gear.

Use e.g. *Slide hammer 87 596* to tap off the gear crosswise. If the teeth are damaged, the gear must be discarded.



Parts

Designation	Part number	Qty
Crankshaft gear	3 295 927	1
Sealant	2 033 249	1
Sealing ring	2 987 571	1
Screw	2 580 635	10
Torx screw	2 790 036	8

Replaced parts to be scrapped locally.