

Volvo B230 Connecting Rod Bearing-Oil Pump Replacement

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[Volvo Maintenance FAQ for 7xx/9xx/90 Cars](#)

[Courtesy of Dick Riess]

Replacement of Connecting Rod Bearings, Oil Pump and Oil Pan Gasket. See also the [FAQ file](#) section on oil pump wear and replacement.

1. It is wise to clean the engine first or at least the areas where work will be performed. You will be under the car and dirt and oil falling in your face and on clean surfaces to be reassembled is not desirable.
2. Place car on jack stands so that there is no danger of the car falling on you. This includes using emergency brake and chocking the rear wheels.
3. Remove the front license plate and bracket. This is to reduce gouging your body parts as I have often done..
4. Depending upon the model and year of the car, certain engine parts need to be disconnected and loosened. The fan shroud needs to be loosened as the engine will be raised and the blades may run into the shroud itself. Turbo hoses may need to be removed partially if any strain is placed on them.
5. Disconnect the battery ground.
6. Pull dipstick out and cover the opening.
7. Drain oil and remove filter. Replace drain plug after oil is out. Keeps things much neater.
8. Remove the engine to transmission bracket (6 bolts).
9. Steering: Remove the bottom bolt and pin holding the steering shaft to the rack and pinion. Remove the top pin and loosen the bolt. Slide up the coupling so it is free of the rack and pinion. The steering shaft will be loose and can be tucked toward the fender wall.
10. Mount the engine lift so the lift feet are in the area where the fender bolts are located. The lift hook should be over the hook by the thermostat housing where it can be attached. I have made lifts from heavy duty wood and presently am using one from Harbor Freight which is a significant improvement.
11. Remove the belly pan.
12. Motor mounts: Lift the engine to take the weight off the engine. Drivers side: remove the three nuts holding the base of the mount to the axel. Remove the one nut holding the mount on to the engine bracket. Passenger side: remove the top two nuts holding the mount to the axel. Under the axel remove the one bolt holding the mount. Remove the top nut holding the mount to the engine bracket. You can now remove the mounts from the axes providing you have lifted your engine clear of the axel.
13. Remove the bolt holding the clamp retaining hoses on the front of the axel. Check other straps as you lift the engine and drop the axes so there is not

strain that will break or tear wires and hoses.

14. Loosen completely the 4 bolts holding the front axel. Two on each side. These do not need to be removed. You can now push down the axel and may have to block it between the frame to hold it.
15. Remove the pan bolts. You will have to turn the fan approximately 90 degrees to the rear to get it clear of the oil pump. It may take a couple of tries to get it down.
16. Clean all surfaces of the pan and bottom of the block. This is a good time to clean the inside of the pan completely. I have used Simple Green to dissolve the crud.
17. If replacing the oil pump, remove the two bolts holding it. First study the location of the hose draining the oil trap and the finger on the oil pump holding it in place. Also note the location of the little metal bracket holding the hose. Mark the pipe feeding the block from the pump. Mark it so you know which end goes where when you reassemble. Clean the pipe thoroughly and make sure the O rings are out of the block and pump locations.
18. Rotate the engine so two of the connecting rods are fully down where you can get to them.
19. Remove the rod bearing caps. You will need a 10 mm 12 point socket to remove them. Perhaps a different size on earlier engines. Note the marking on the cap. It will have a number 1 through 4 and this number points toward the exhaust side. The connecting rod will have a like number on the same side. Get acquainted with your engine and make notes if you are in doubt. The engine does need to be put together as you found it. Once the nuts are off the cap, you may need to tap the sides to loosen it. Push the piston up enough to remove the insert bearing. Coat the new insert with a light coat of assembly grease on the face toward the crankshaft. Make sure the small tang on the insert fits into the rod properly. Pull the rod down to the crank. Clean the rod cap and mount a new insert with assembly grease on the surface toward the crankshaft. Make sure the tang goes into the portion designed to receive it. Assemble the cap on the connecting rod and be sure the numbers are on the exhaust side. Tighten the nuts to 18 lbs. Angle tighten each nut to 90 degrees. Repeat this on all four connecting rods. You can easily turn the engine if you have a wrench on the crankshaft bolt holding the harmonic damper on to the crank.
20. Reassemble the oil pump using new O rings on the pipe and make certain everything is in its place as you took it apart. Lightly lubricate the O rings with vaselene before inserting into the oil pump and engine block. Tighten the two bolts holding the pump to the block. In my experience I find original Volvo parts best when it comes to bearings and gaskets. Good fit and no leak. I confess I have used the aircraft grade Permatex on the oil pan gasket. Oil pumps: I use febi-Bilstein as they are higher pressure and I run turbo engines. I have had to replace pan gaskets because they were aftermarket and leaked by acting as a wick. You do now want to do this twice.
21. Mounting the gasket to the engine is a pain. I have used small plastic zip ties to loosely suspend the gasket from the block while I fight the pan into place. It usually takes me awhile to get the pan on as the oil pump must fit into the sump and then the pan must be turned. Once you do this and hang the pan loosely by a bolt or two you can remove the zip ties. Pan bolts are tightened at only 8 - 12 lbs. Tighten them each a little at a time.
22. Finish your reassembly of the car.

23. PUT OIL IN THE ENGINE!!!!!!

24. Remove the coil wires and crank the engine till the oil warning light goes out.

25 Run car 500 or so miles and change oil and filter as you may have loosened up some more crud. Good luck, it has worked for me a few times.

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