

LUBE-07, Oil Pump Removal and Installation

Introduction

Removing and installing the oil pump is best done with the oil pan removed. However, it can be done by loosening the bolts on the oil pan and dropping the pan enough to remove the pump. With the oil pan still in place, it is difficult to apply sealant to the oil pump sealing surfaces and ensure a good seal is established when the pump is installed. However, it can be done.

Tools

- Metric Wrench Set
- Metric Socket Set
- Ramps OR Jack stands and Floor Jack
- Loctite 574 sealant

Other Procedures Needed

- [LUBE-06](#), Oil Pan Gasket Replacement
- [ENG-13](#), Locating and Setting Engine to Top Dead Center (TDC), Cylinder 1
- [ENG-03](#), Flywheel Lock Installation
- [ENG-05](#), Camshaft and Balance Shaft Belt Removal
- [ENG-06](#), Camshaft and Balance Shaft Belt Installation
- [ENG-10](#), Camshaft and Balance Shaft Belt Tension - Checking and Adjusting
- [AF-01](#), Air Filter Housing and Air Flow Sensor - Removal and Installation
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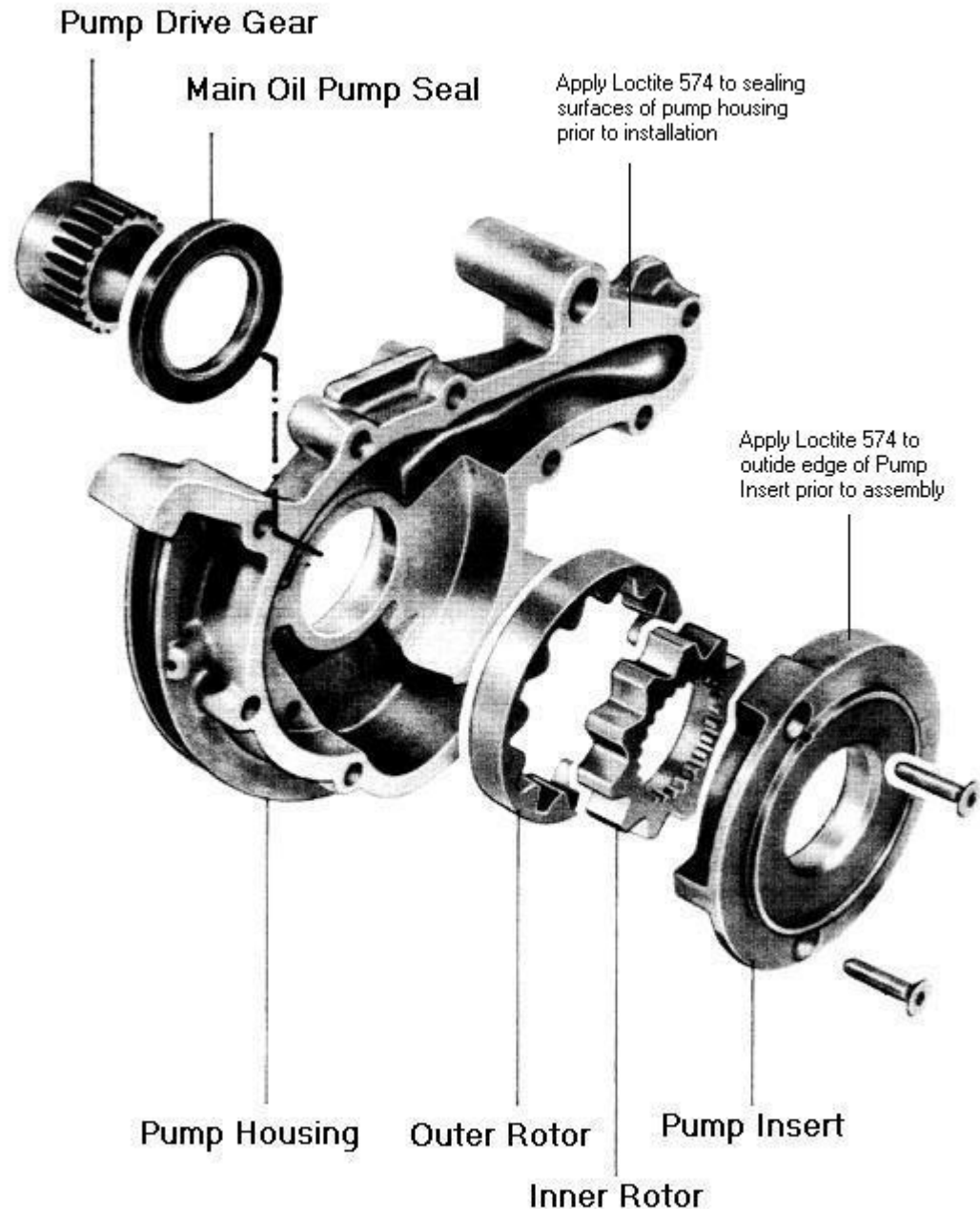
Oil Pump Parts				
Part No.	Description	Model	Year	Engine Code
944 107 114 09*	Oil Pump	944	1982-1985	M44.02 Thru 43E 14858 M44.04 Thru 43E 21783
999 113 268 40	Main Seal (38 x 55 x 7)	944	1982-1985	M44.02 Thru 43E 14858 M44.04 Thru 43E 21783
944 107 161 01	Sleeve / Drive Gear	944	1982-1985	M44.02 Thru 43E 14858 M44.04 Thru 43E 21783

Oil Pump Parts				
944 107 014 11*	Oil Pump	944 / 944S / 944 S2 / 944 Turbo / 968	1985-1995	M44.02 43E 14859 Forward M44.04 43E 21784 Forward M44.5-12 M44.40-44
944 107 014 11	Main Seal (38 x 52 x 7)	944 / 944S / 944 S2 / 944 Turbo / 968	1985-1995	M44.02 43E 14859 Forward M44.04 43E 21784 Forward M44.5-12 M44.40-44
944 107 161 02	Sleeve / Drive Gear	944 / 944S / 944 S2 / 944 Turbo / 968	1985-1995	M44.02 43E 14859 Forward M44.04 43E 21784 Forward M44.5-12 M44.40-44
900 174 049 40	Sleeve Seal (28 x 2.58)	944 / 944S / 944 S2 / 944 Turbo / 968	1982-1995	All

*** Before you replace your oil pump, verify the part number stamped on the pump. There is a possibility that you may have an early oil pump on one of the later cars. I have a 1986 944 Turbo which had an original engine whose block was manufactured in 1985 and had an early oil pump.**

Procedure

1. Place car on jack stands or ramps.
2. Disconnect battery positive lead.
3. Using [ENG-13](#), set engine at TDC on cylinder number 1.
4. Using [ENG-03](#), remove the starter and install the flywheel lock (P9206).
5. Using [ENG-05](#), remove the balance shaft belt, timing belt, rollers, balance shaft sprockets, crankshaft gear, and rear timing cover.
6. Remove the crankshaft gear Woodruff key from the crankshaft.
7. If the oil pan is to be removed, refer to the applicable steps of [LUBE-06](#) and remove the oil pan from the vehicle. Otherwise loosen/remove the oil pan retaining bolts as necessary to lower the front of the oil pan slightly.
8. Remove the oil pump retaining bolts and slide the oil pump off the end of the crankshaft.



9. Remove the oil pump drive gear from the pump. Inspect the drive gear closely. It will over time develop a ridge which will prevent proper sealing with the crankshaft oil seal. If a ridge is evident on the drive gear, it should be replaced.
10. Remove the main oil pump seal from the oil pump housing.
11. If the oil pump is to be disassembled for inspection prior to reusing, apply Loctite 574 to the outer edge of the pump insert during assembly.
12. Install a new main seal in the oil pump housing and install the oil pump drive gear.

13. Apply Loctite 574 to the sealing surfaces of the oil pump prior to installation on the block.
14. Install the oil pump onto the block by sliding on to the end of the crankshaft and install the pump mounting bolts. Torque the M6 pump mounting bolts to 8 Nm (6 ft-lbs) and the M10 bolt to 45 Nm (33 ft-lbs).
15. Install the crankshaft gear Woodruff key into the recess on the crankshaft.
16. Using [ENG-06](#) install the timing belt, balance shaft belt and all rollers. The belts are tensioned during the performance of ENG-06 using [ENG-10](#).
17. Install the air filter assembly ([AF-01](#)).
18. Reconnect battery.
19. Install skid pan.
20. Remove car from jack stands/ramps.

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