

119-32 Lubrication System

Oil filter housing, removing and installing (N52 engines)

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- Drain engine coolant. Remove electric cooling fan. See **170 Radiator and Cooling System**.
- Loosen oil filter cover to allow oil in filter housing to flow into pan.
- Remove intake manifold, see **131 Fuel Injection MSV70, MSV80 (N52 Engine)**.

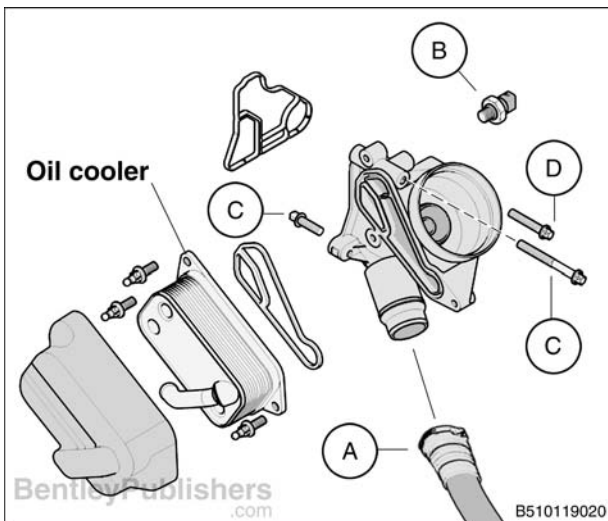
NOTE —

- Intake manifold removal is required to access a difficult-to-reach oil filter housing fastener (bolt **D**). This bolt is located at right side of oil filter housing under intake manifold. It may be possible to access this bolt without removing the intake manifold using suitable tools (universal joints / e-torx socket).
- If necessary, remove oil cooler from oil filter housing. See **Engine oil cooler, removing and installing (N52 engines)** given earlier.



Working at oil filter housing:

- Disconnect coolant line from housing (**A**).
- Remove oil pressure sensor (**B**).
- Remove bolts **C** and **D** and remove oil filter housing from engine.
- Installation is reverse of removal, noting the following:
 - Clean mating surfaces and replace o-rings and seals.
 - Be sure not to over tighten fasteners to avoid damaging seals.



Tightening torques

M8	22 Nm (16 ft-lb)
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- Refill coolant, see **170 Radiator and Cooling System**.
- Check and top off oil, see **020 Maintenance**.

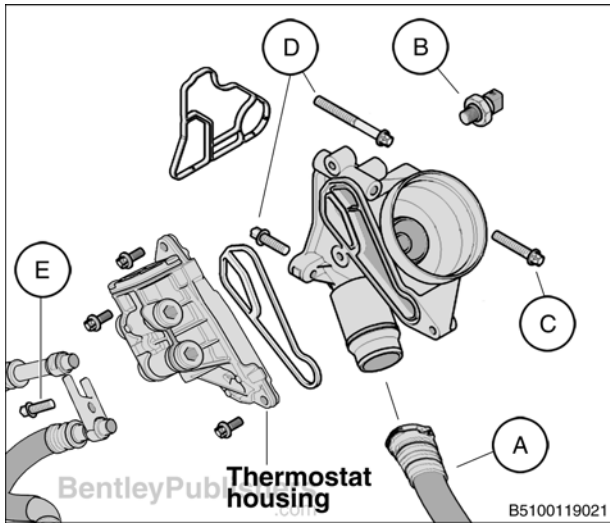
Oil filter housing, removing and installing (N54 engine)

- Drain engine coolant. Remove electric cooling fan with oil cooler. See **170 Radiator and Cooling System**.
- Loosen oil filter cover to allow oil in filter housing to flow into pan.
- Remove intake manifold, see **132 Fuel Injection MSD80, MSD81 (N54 Engine)**.

NOTE —

- Intake manifold removal is required to access a difficult-to-reach oil filter housing fastener (bolt **C**). This bolt is located at right side of oil filter housing under intake manifold. It may be possible to access th bolt without removing the intake manifold using suitable tools (universal joints / e-torx socket).

Oil filter housing, removing and installing (N54 engine)



- Working at oil filter housing:
- Remove fastener **E** and pull lines from thermostat housing.
 - Remove thermostat housing fasteners and remove thermostat housing from oil filter housing.
 - Remove coolant line from housing (**A**).
 - Remove oil pressure sensor (**B**).
 - Remove bolts **C** and **D** and remove oil filter housing from engine.
- Installation is reverse of removal, noting the following.
- Clean mating surfaces and replace o-rings and seals.
 - Be sure not to over tighten fasteners to avoid damaging seals.

Tightening torques

M8	22 Nm (16 ft-lb)
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- Refill coolant, see **170 Radiator and Cooling System**.
- Check and top off oil, see **020 Maintenance**.

