Section 303-01B: Basic Engine 5.4L IN-VEHICLE REPAIR

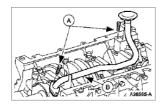
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Oil Pump Screen Cover and Tube

4x4

Removal

- 1. Remove the oil pan; refer to the procedure in this section.
- 2. Remove the three (A) oil pump screen and cover bolts and the (B) oil pump screen and cover.

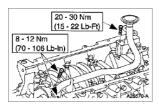


Installation

- 1. Clean and inspect the mating surfaces.
- 2. A CAUTION: Make sure the O-ring is in place and not damaged. A missing or damaged O-ring can cause foam in the lubrication system, low oil pressure and severe engine damage.

NOTE: Clean and inspect the mating surfaces and install a new O-ring. Lubricate with Ford SAE 5W30 Super Premium Motor Oil XO-5W30-QSP or equivalent meeting Ford specification WSS-M2C153-G.

Install the oil pump screen and cover and install the three oil pump screen and cover bolts.



3. Install the oil pan; refer to the procedure in this section.

Flexplate

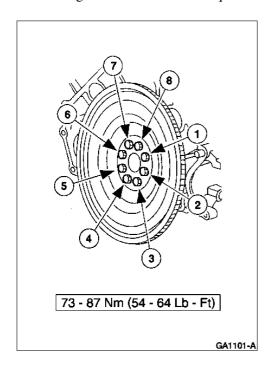
Removal

- 1. Remove the transmission (7003); refer to Section 307-01B.
- 2. Remove the bolts and the flexplate.



Installation

- 1. Position the flexplate and loosely install the bolts.
- 2. Tighten the bolts in the sequence shown.



3. Install the transmission; refer to Section 307-01B.

Flexplate 1244

Flexplate 1245

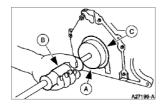
Rear Main Seal 4x4

Special Service Tool(s)

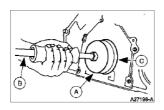
©11110 @ () ST1480-A	Rear Crankshaft Seal Adapter T95P-6701-DH
\$11302-A	Rear Crankshaft Seal Remover T95P-6701-EH
ST1470-A	Rear Crankshaft Seal Replacer T95P-6701-BH
ST1481-A	Rear Crankshaft Slinger Remover T95P-6701-AH
ST1482-A	Rear Crankshaft Slinger Replacer T95P-6701-CH
ST1185-A	Slide Hammer T50T-100-A

Removal

- 1. Remove the flexplate; refer to the procedure in this section.
- 2. Remove the oil pan; refer to the procedure in this section.
- 3. Use (A) Rear Crankshaft Slinger Remover and (B) Slide Hammer to remove the (C) rear oil seal slinger.

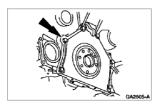


4. Use (A) Rear Crankshaft Seal Remover and (B) Slide Hammer to remove the (C) rear main seal.



Rear Main Seal 4x4

5. Remove the six bolts and the crankcase rear oil seal retainer.



Installation

1. **AUTION:** Do not use metal scrapers, wire brushes, power abrasive discs or other abrasive means to clean the sealing surfaces. These tools cause scratches and gouges which make leak paths. Use a plastic scraping tool to remove all traces of old sealant.

NOTE: Clean sealing surfaces with Metal Surface Cleaner F4AZ-19A536-RA or equivalent meeting Ford specification WSE-M5B392-A. Allow to dry until there is no sign of wetness, or four minutes, whichever is longer. Failure to follow this procedure can cause future oil leakage.

Clean and inspect the mating surface.

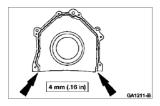
2. A CAUTION: Do not use metal scrapers, wire brushes, power abrasive discs or other abrasive means to clean the sealing surfaces. These tools cause scratches and gouges which make leak paths. Use a plastic scraping tool to remove all traces of old sealant.

NOTE: If the rear crankshaft seal retaining plate is not secured within four minutes, the sealant must be removed and the sealing area cleaned with Metal Surface Cleaner F4AZ-19A536-RA or equivalent meeting Ford specification WSE-M5B392-A. Allow to dry until there is no sign of wetness, or four minutes, whichever is longer. Failure to follow this procedure can cause future oil leakage.

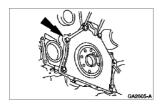
NOTE: The silicone must be applied on the groove along the retainer plate.

Apply silicone around the rear oil seal retainer sealing surface.

• Use Silicone Gasket and Sealant F6AZ-19562-A or equivalent meeting Ford specification WSE-M4G323-A6.

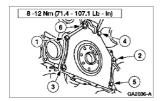


3. Install the rear oil seal retainer and loosely install the six bolts.



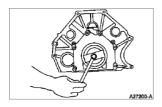
4. Tighten the six rear oil seal retainer bolts in the sequence shown.

Rear Main Seal 4x4

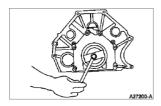


5. **NOTE:** Lubricate the inner lip of the rear seal with SAE 50W motor oil or equivalent meeting Ford specification WSE-908-A1.

Use Rear Crankshaft Seal Replacer and Rear Crankshaft Seal Adapter to install the rear main seal.



6. With Rear Crankshaft Seal Adapter still installed, use Rear Crankshaft Slinger Replacer and Rear Crankshaft Seal Replacer to install the rear main seal slinger.



- 7. Install the oil pan; refer to the procedure in this section.
- 8. Install the flexplate (6375); refer to the procedure in this section.

Rear Main Seal 4x4

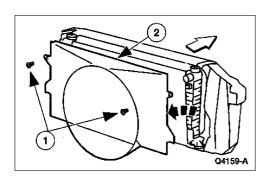
Section 303-01B: Basic Engine 5.4L IN-VEHICLE REPAIR

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Engine Mount LH

Removal

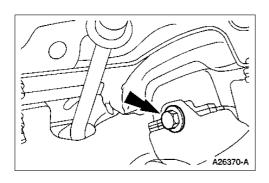
- 1. Remove the fan shroud.
 - 1. Remove the bolts.
 - 2. Position the fan shroud aside.



2. A WARNING: THE ELECTRICAL POWER TO THE AIR SUSPENSION SYSTEM MUST BE SHUT OFF PRIOR TO HOISTING, JACKING OR TOWING AN AIR SUSPENSION VEHICLE. THIS CAN BE ACCOMPLISHED BY TURNING OFF THE AIR SUSPENSION SWITCH LOCATED IN THE RH KICK PANEL AREA. FAILURE TO DO SO MAY RESULT IN UNEXPECTED INFLATION OR DEFLATION OF THE AIR SPRINGS WHICH MAY RESULT IN SHIFTING OF THE VEHICLE DURING THESE OPERATIONS.

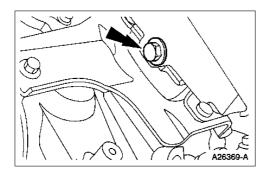
Raise and support the vehicle.

3. Remove the LH engine mount to frame mount bolt.

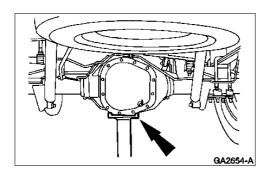


4. Loosen the RH engine mount to frame mount bolt.

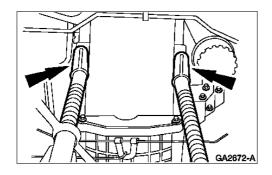
Engine Mount LH 1249



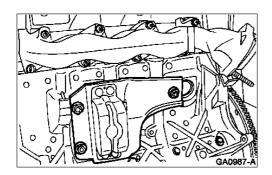
5. Position a suitable jack under the rear axle.



6. Lift the engine with suitable jacks.



7. Remove the three LH engine mount to cylinder block bolts and remove the engine mount.

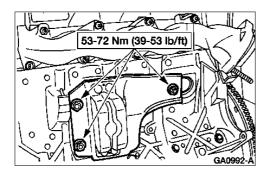


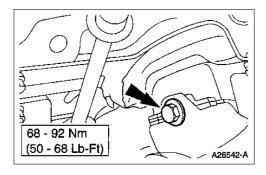
Installation

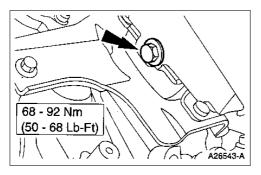
1. To install, reverse the removal procedure.

Engine Mount LH 1250

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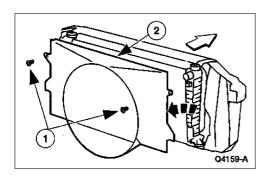


Engine Mount LH 1251

Engine Mount RH

Removal

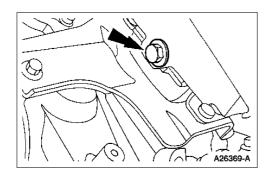
- 1. Remove the fan shroud.
 - 1. Remove the bolts.
 - 2. Position the fan shroud aside.



2. A WARNING: THE ELECTRICAL POWER TO THE AIR SUSPENSION SYSTEM MUST BE SHUT OFF PRIOR TO HOISTING, JACKING OR TOWING AN AIR SUSPENSION VEHICLE. THIS CAN BE ACCOMPLISHED BY TURNING OFF THE AIR SUSPENSION SWITCH LOCATED IN THE RH KICK PANEL AREA. FAILURE TO DO SO MAY RESULT IN UNEXPECTED INFLATION OR DEFLATION OF THE AIR SPRINGS WHICH MAY RESULT IN SHIFTING OF THE VEHICLE DURING THESE OPERATIONS.

Raise and support the vehicle.

- 3. Remove the starter motor; refer to Section 303-06.
- 4. Remove the RH engine mount to frame mount bolt.



5. Loosen the LH engine mount to frame mount bolt.

Engine Mount RH 1252