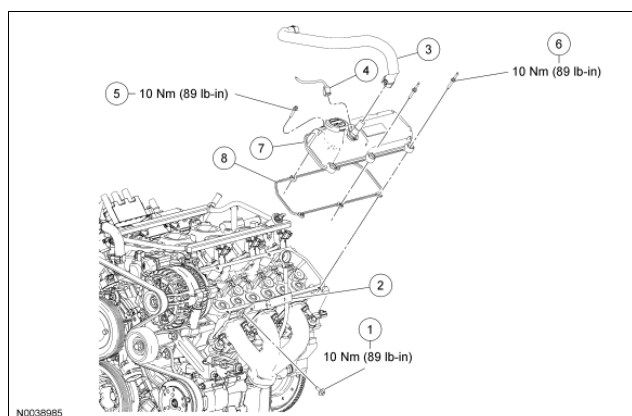


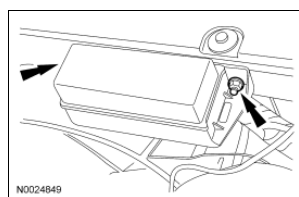
Valve Cover — LH

Item	Part Number	Description
1	W708650	Oil level indicator tube bolt
2	6754	Oil level indicator tube
3	6C342	Crankcase vent hose
4	12B637	Crankcase vent hose electrical connector
5	N807442	Valve cover bolt (3 required)
6	N807443	Valve cover stud bolt (2 required)
7	6582	LH valve cover
8	6584	LH valve cover gasket

Removal and Installation

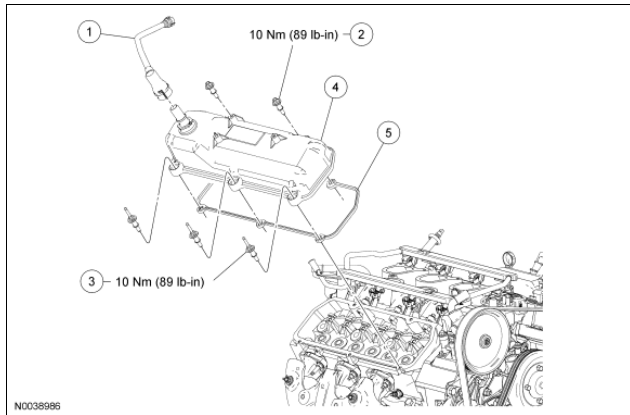
⚠ CAUTION: During engine repair procedures, cleanliness is extremely important. Any foreign material, including any material created while cleaning gasket surfaces, that enters the oil passages, coolant passages or the oil pan, can cause engine failure.

1. Remove the 2 nuts and position the auxiliary relay box aside.
 - To install, tighten to 10 Nm (89 lb-in).



2. Remove the oil level indicator tube bolt and position aside the oil level indicator tube.
 - To install, tighten to 10 Nm (89 lb-in).
3. Disconnect the crankcase vent hose from the LH valve cover.
4. Disconnect the positive crankcase ventilation (PCV) valve electrical connector.
5. Remove the 3 bolts and the 2 stud bolts from the LH valve cover.
 - To install, tighten to 10 Nm (89 lb-in).

6. Remove the LH valve cover.
 7. Remove and discard the LH valve cover gasket.
 8. To install, reverse the removal procedure.
 - Install a new gasket in the LH valve cover.
-

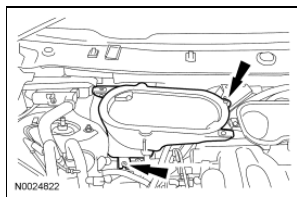
Valve Cover — RH

Item	Part Number	Description
1	6C342	Crankcase vent hose
2	N807442	Valve cover bolt (2 required)
3	N807443	Valve cover stud bolt (3 required)
4	6582	RH valve cover
5	6584	RH valve cover gasket

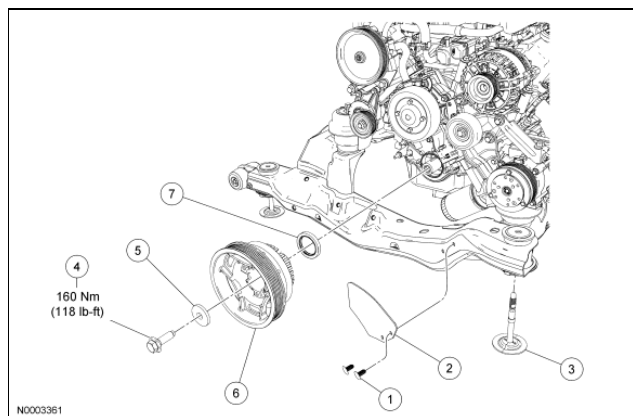
Removal and Installation

⚠ CAUTION: During engine repair procedures, cleanliness is extremely important. Any foreign material, including any material created while cleaning gasket surfaces, that enters the oil passages, coolant passages or the oil pan, can cause engine failure.

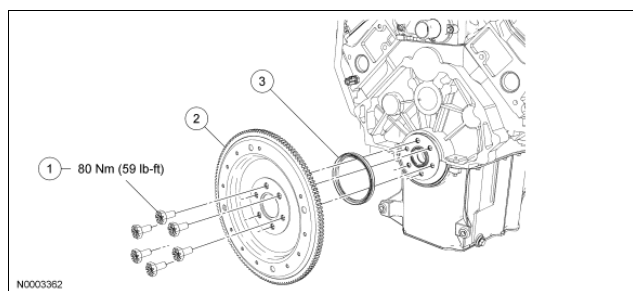
1. Remove the ignition coil. For additional information, refer to [Section 303-07](#).
2. Remove the nuts and the fresh air inlet duct.
 - To install, tighten to 5 Nm (44 lb-in).



3. Disconnect the crankcase vent hose.
4. Remove the 2 bolts and the 3 stud bolts from the RH valve cover.
 - To install, tighten to 10 Nm (89 lb-in).
5. Remove the RH valve cover.
6. Remove and discard the RH valve cover gasket.
7. To install, reverse the removal procedure.
 - Install a new gasket in the RH valve cover.

Lower End Components — Exploded View**Crankshaft Pulley and Front Seal**

Item	Part Number	Description
1	388930	Pin-type retainer (2 required)
2	16102	Shield
3	N808852	Subframe bolt (2 required)
4	6A340	Crankshaft pulley bolt
5	6378	Crankshaft pulley washer
6	6B321	Crankshaft pulley
7	6700	Crankshaft front seal




Flexplate and Crankshaft Rear Seal

Item	Part Number	Description
1	W707770	Flexplate bolt (6 required)
2	6375	Flexplate
3	6701	Crankshaft rear seal

1. For additional information, refer to the procedures in this section.

Crankshaft Pulley

Special Tool(s)

	Remover, Crankshaft Vibration Damper 303-009 (T58P-6316-D)
	Remover, Crankshaft Vibration Damper 303-176 (T82L-6316-B)
	Installer, Crankshaft Vibration Damper 303-175 (T82L-6316-A)

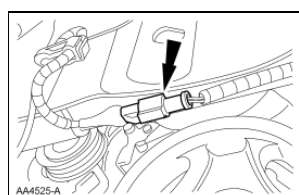
Material

Item	Specification
Motorcraft SAE 5W-20 Premium Synthetic Blend Motor Oil XO-5W20-QSP (US); Motorcraft SAE 5W-20 Super Premium Motor Oil CXO-5W20-LSP12 (Canada); or equivalent	WSS-M2C930-A
Silicone Gasket and Sealant TA-30	WSE-M4G323-A4

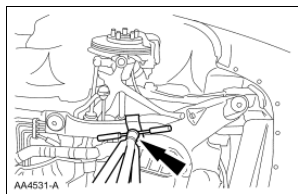
Removal

⚠ CAUTION: During engine repair procedures, cleanliness is extremely important. Any foreign material, including any material created while cleaning gasket surfaces, that enters the oil passages, coolant passages or the oil pan, can cause engine failure.

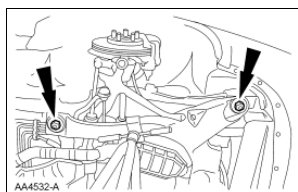
1. With the vehicle in NEUTRAL, position it on a hoist. For additional information, refer to Section 100-02.
2. Remove the accessory drive belt. For additional information, refer to Section 303-05.
3. Remove the 2 pin-type retainers and the shield.
4. Disconnect the RH front anti-lock brake wheel sensor electrical connector.



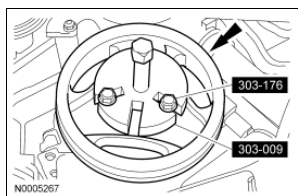
5. Position a safety stand under the RH side of the subframe.



6. Remove the bolts and lower the RH side of the subframe 50.8 mm (2 in).



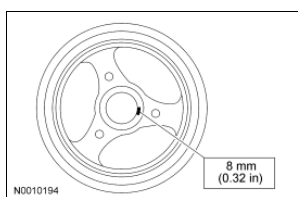
7. Remove the crankshaft pulley bolt and washer.
8. Using the special tools, remove the crankshaft pulley.



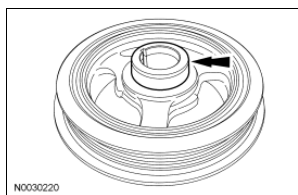
Installation

1. **NOTE:** If not secured within 4 minutes, the sealant must be removed and the sealing area cleaned with metal surface prep and silicone gasket remover. Allow to dry until there is no sign of wetness, or 4 minutes, whichever is longer. Failure to follow this procedure can cause future oil leakage.

Apply silicone gasket and sealer to the Woodruff key slot in the crankshaft pulley.

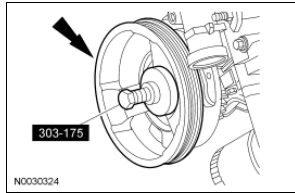


2. Lubricate the crankshaft pulley sealing surface with clean engine oil.

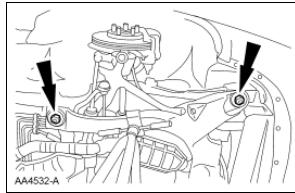


3. **NOTE:** Lubricate the crankshaft front seal inner lip with clean engine oil prior to installation.

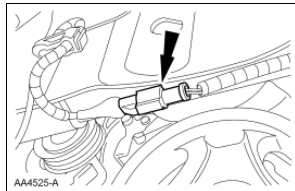
Using the special tool, install the crankshaft pulley.



4. Install the crankshaft pulley washer and the bolt.
 - Tighten to 160 Nm (118 lb-ft).
5. Raise the subframe into position, then install the bolts.
 - Tighten to 175 Nm (127 lb-ft).






6. Connect the RH front anti-lock brake wheel sensor electrical connector.



7. Install the shield and the 2 pin-type retainers.
8. Install the accessory drive belt. For additional information, refer to [Section 303-05](#) .

Crankshaft Front Seal

Special Tool(s)

 ST1385-A	Remover, Oil Seal 303-409 (T92C-6700-CH)
 ST2296-A	Installer, Crankshaft Front Oil Seal 303-335 (T82L-6316-A)
 ST1379-A	Installer, Crankshaft Front Oil Seal 303-474 (T94P-6701-AH)

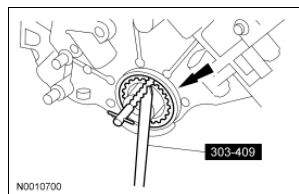
Material

Item	Specification
Motorcraft SAE 5W-20 Premium Synthetic Blend Motor Oil XO-5W20-QSP (US); Motorcraft SAE 5W-20 Super Premium Motor Oil CXO-5W20-LSP12 (Canada); or equivalent	WSS-M2C930-A

Removal

⚠ CAUTION: During engine repair procedures, cleanliness is extremely important. Any foreign material, including any material created while cleaning gasket surfaces, that enters the oil passages, coolant passages or the oil pan, can cause engine failure.

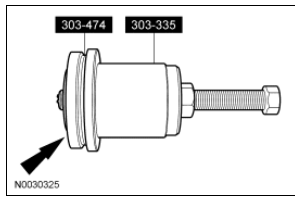
1. With the vehicle in NEUTRAL, position it on a hoist. For additional information, refer to Section 100-02.
2. Remove the crankshaft pulley. For additional information, refer to Crankshaft Pulley in this section.
3. Using the special tool, remove the front crankshaft seal.

**Installation**

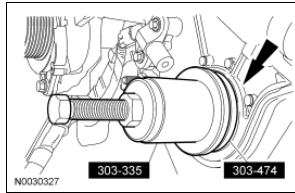
1. Clean and inspect the mating surface.

2. **NOTE:** Lubricate the crankshaft front seal lips with clean engine oil prior to installation.

Assemble the special tools, then place the crankshaft front seal onto the special tools.



3. Using the special tools, install the crankshaft front seal.



4. Install the crankshaft pulley. For additional information, refer to Crankshaft Pulley in this section.
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