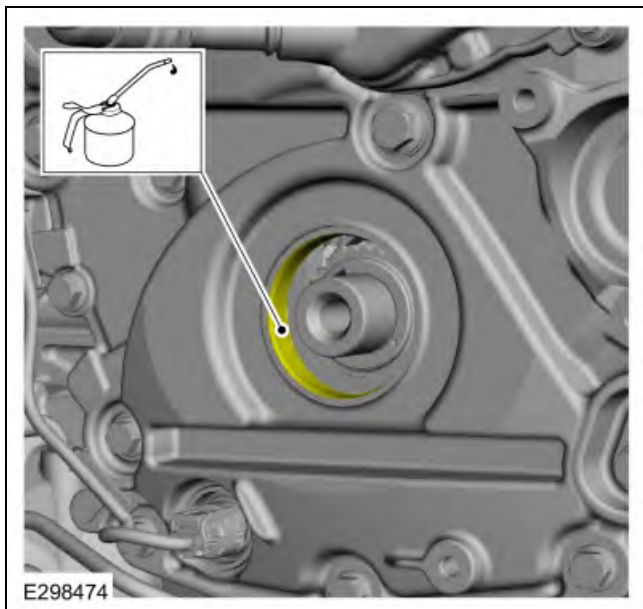
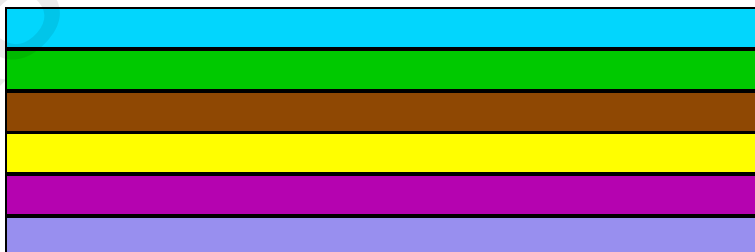
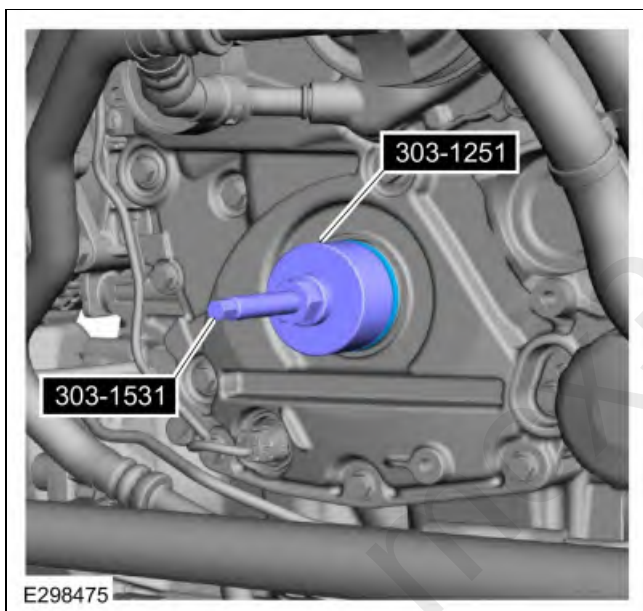


1. Lubricate the crankshaft front seal bore with clean engine oil.



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

Use Special Service Tool: 303-1531 Installer, Front Crank Seal and Damper. , 303-1251 Installer, Front Seal.



3. Install the crankshaft pulley.

Refer to: Crankshaft Pulley (303-01D Engine - 3.3L Duratec-V6 “Hybrid (BP), Removal and Installation).

Crankshaft Pulley

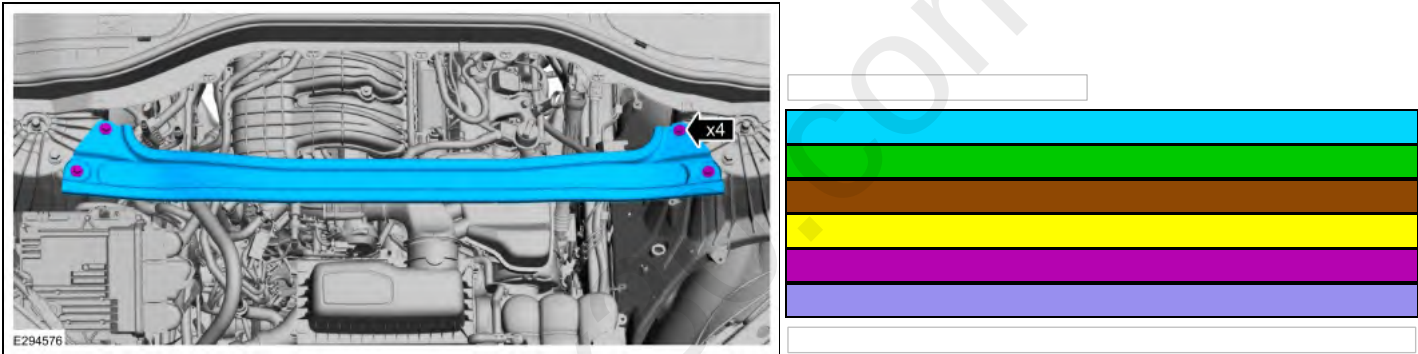
Special Tool(s) / General Equipment

 E216458	303-1531 Installer, Front Crank Seal and Damper
 E222985	303-335 (T88T-6701-A) Installer, Front Cover Oil Seal TKIT-1988-FLM TKIT-1988-F

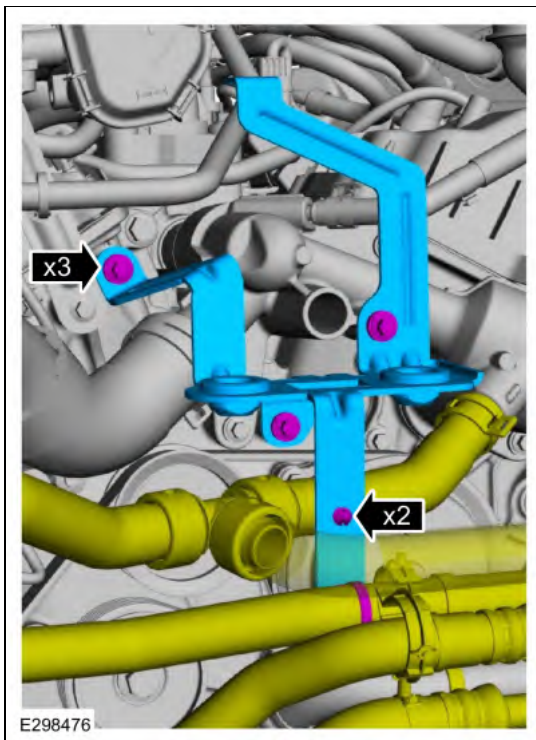
Removal

NOTICE: 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 may cause engine failure.

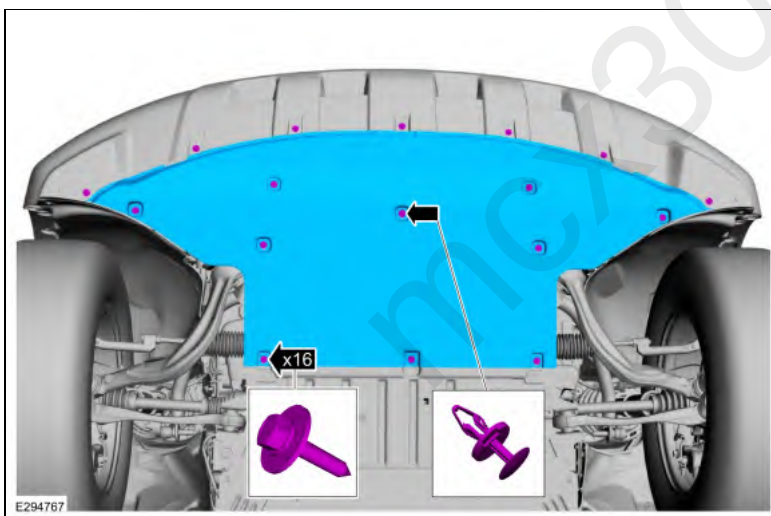
1. With the vehicle in NEUTRAL, position it on a hoist.
Refer to: Jacking and Lifting - Overview (100-02 Jacking and Lifting, Description and Operation).
2. Remove the bolts and the suspension support bar.



3. Remove the following items:
 1. Remove the air cleaner outlet pipe.
Refer to: Air Cleaner Outlet Pipe (303-12D Intake Air Distribution and Filtering - 3.3L Duratec-V6 â€“ Hybrid (BP), Removal and Installation).
 2. Remove the air cleaner.
Refer to: Air Cleaner (303-12C Intake Air Distribution and Filtering - 3.3L Duratec-V6, Removal and Installation).
 3. Remove the degas bottle.
Refer to: Degas Bottle (303-03D Engine Cooling - 3.3L Duratec-V6 â€“ Hybrid (BP), Removal and Installation).
 4. Remove the coolant expansion tank.
Refer to: Coolant Expansion Tank (303-03E Electric Powertrain Cooling - 3.3L Duratec-V6 â€“ Hybrid (BP), Removal and Installation).
4.
 - Detach the coolant hose retainers.
 - Remove the bolts and the air cleaner bracket.



- 5.
- Remove pin-type retainer.
 - Remove the bolts and the underbody shield.



6. Remove the accessory drive belt.
Refer to: Accessory Drive Belt (303-05D Accessory Drive - 3.3L Duratec-V6 â€” Hybrid (BP), Removal and Installation).
7. **NOTE:** If further disassembly of the engine will be performed, retain the original crankshaft pulley bolt.
- Remove the crankshaft pulley bolt and washer.
 - Discard the bolt.