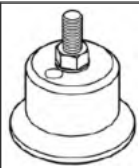
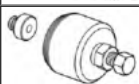


Crankshaft Front Seal

Special Tool(s) / General Equipment

	303-1509 Installer, Front Crank Seal TKIT-2009C-F TKIT-2009C-ROW
	303-1509-01 6.7L Front Seal Installer
	303-1510 Remover, Front Crank Seal
Strap Wrench	
Slide Hammer Dent Puller	

Removal

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 following items:

1.

Remove the cooling fan.
Refer to: Cooling Fan (303-03B Engine Cooling - 6.7L Power Stroke Diesel, Removal and Installation).

2.

Remove the cooling fan stator.
Refer to: Cooling Fan Stator (303-03B Engine Cooling - 6.7L Power Stroke Diesel, Removal and Installation).

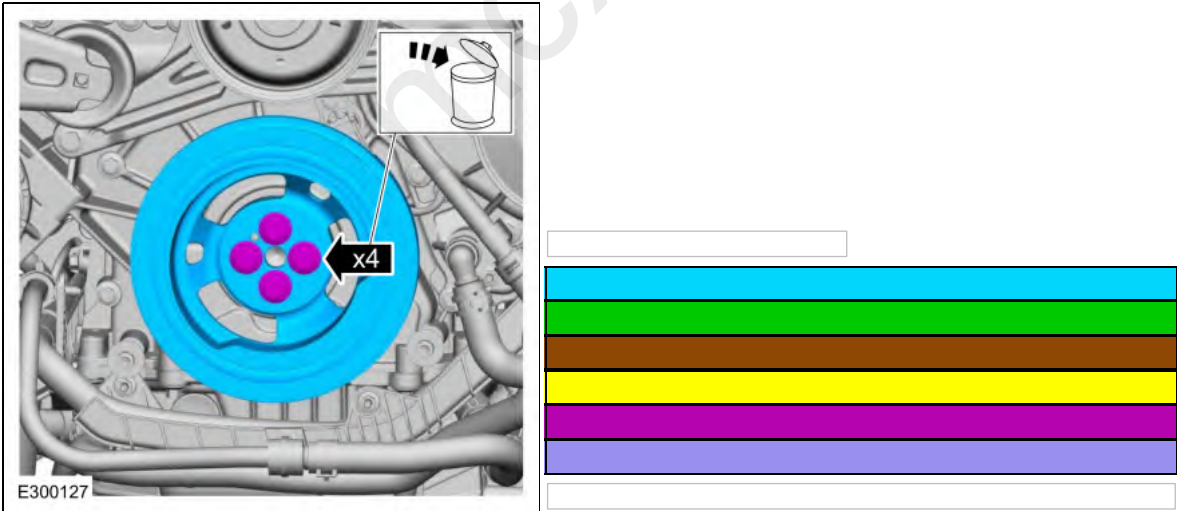
3.

Remove the accessory drive belt.
Refer to: Accessory Drive Belt (303-05B Accessory Drive - 6.7L Power Stroke Diesel, Removal and Installation).
3.

⚠️WARNING: Support the vibration damper during mounting bolt removal. The damper can slide off the nose of the crankshaft. Failure to follow this instruction may result in serious personal injury.

NOTICE: To prevent engine damage, always install new bolts when installing the crankshaft pulley.

Remove the bolts and the crankshaft pulley. Discard the bolts.



4.

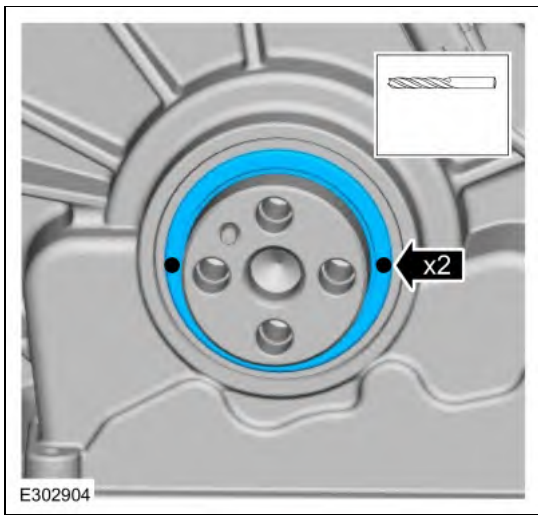
1.

Using a center punch, mark a location for 2 holes 180 degrees apart.

2.

⚠️NOTICE: Drill only deep enough to penetrate the slinger. Engine damage may occur if the slinger is drilled too deep.

Using a drill bit of the appropriate size for the slide hammer dent puller being used, drill a hole on each side of the slinger as shown.

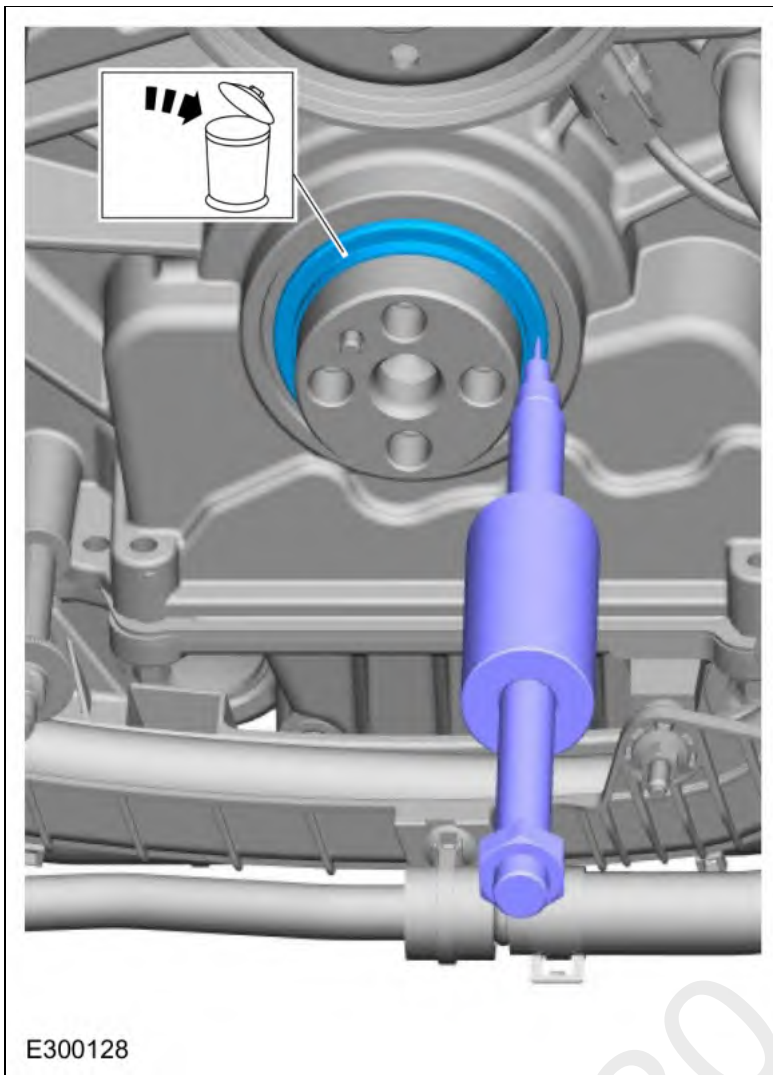


5. **NOTICE:** Use extreme care when removing the slinger or damage to the engine front cover may occur.

Using the 2 drilled holes, a commercially available slide hammer dent puller, walk the slinger off the crankshaft by alternating from side to side. Discard the slinger.

Use the General Equipment: Slide Hammer Dent Puller

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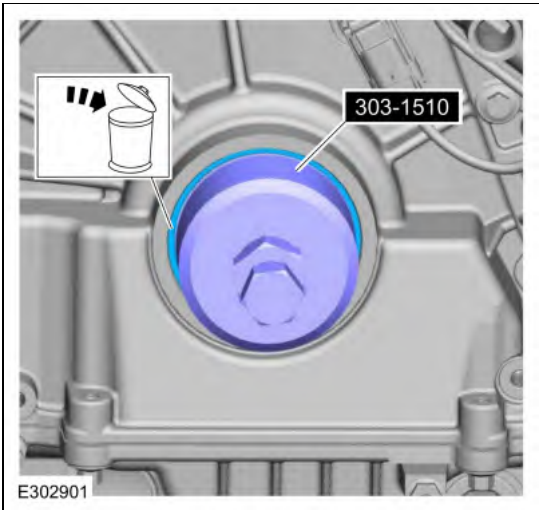


6. **NOTICE:** Do not scratch or damage the crankshaft during removal or installation of the crankshaft front seal.

NOTE: The Front Crank Seal Remover needs to be threaded in until it stops turning.

Using the special tool, remove and discard the crankshaft front seal.

Use Special Service Tool: 303-1510 Remover, Front Crank Seal.

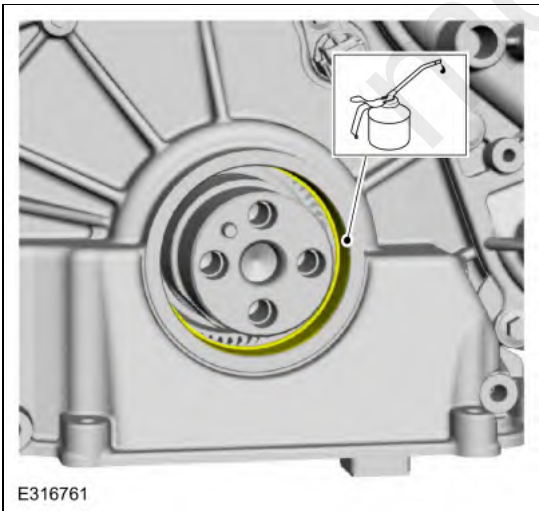


7. Clean and inspect the crankshaft sealing surface.

Installation

1. Apply clean engine oil to the inner diameter of the crankshaft seal bore in the engine front cover.

Refer to: Specifications (303-01B Engine - 6.7L Power Stroke Diesel, Specifications).



2. **NOTICE:** Failure to install the crankshaft front seal with the part numbers facing out may result in engine damage.

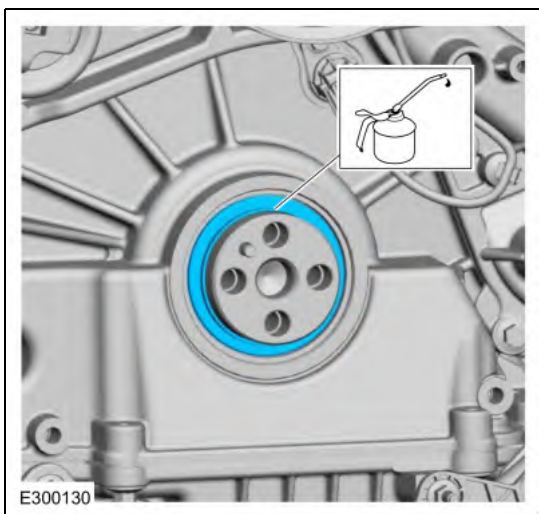
NOTE: Do not discard the installation sleeve provided with the crankshaft front seal. It is used for installation of the crankshaft front seal.

NOTE: Check for correct orientation of the installation sleeve prior to sliding the seal on the crankshaft.

Position the installation sleeve onto the crankshaft, slide the new crankshaft front seal over the installation sleeve onto the crankshaft. Remove the installation sleeve.

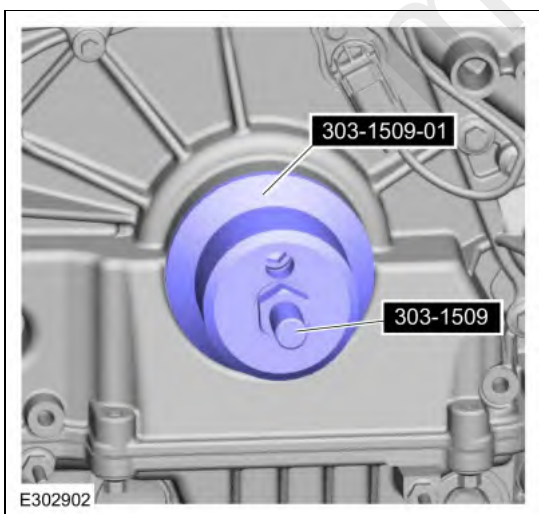


- 3.
- Apply clean engine oil to the inner diameter of the crankshaft oil slinger.
Refer to: Specifications (303-01B Engine - 6.7L Power Stroke Diesel, Specifications).
 - Position the new front crankshaft slinger on the crankshaft.



4. Using the special tools, install the crankshaft front seal and the front crankshaft slinger.

Use Special Service Tool: 303-1509 Installer, Front Crank Seal. , 303-1509-01 6.7L Front Seal Installer.



5. **NOTICE:** To prevent engine damage, always install new bolts when installing the crankshaft pulley.

NOTE: Use the strap wrench to prevent the engine from turning while tightening the bolts.

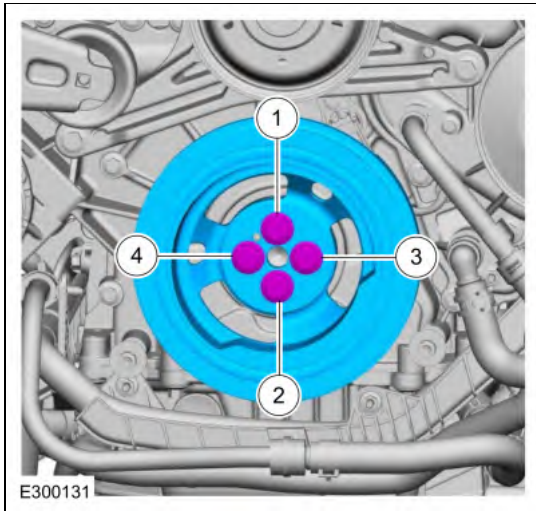
Install the crankshaft pulley and the new bolts.

Use the General Equipment: Strap Wrench

Torque:

Stage 1: 22 lb.ft (30 Nm)

Stage 2: 90 Å°



6. Install the following items:

1. Install the accessory drive belt.
Refer to: Accessory Drive Belt (303-05B Accessory Drive - 6.7L Power Stroke Diesel, Removal and Installation).
2. Install the cooling fan stator.
Refer to: Cooling Fan Stator (303-03B Engine Cooling - 6.7L Power Stroke Diesel, Removal and Installation).
3. Install the cooling fan.
Refer to: Cooling Fan (303-03B Engine Cooling - 6.7L Power Stroke Diesel, Removal and Installation).