## Crankshaft Pulley Removal and Replacement

### Special Service Tool(s)

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<th>Tool</th>
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<td>ST1286-A</td>
<td>Crankshaft Damper Remover 303-009(T58P-6316-D)</td>
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<tr>
<td>ST1287-A</td>
<td>Crankshaft Damper Replacer 303-102(T74P-6316-B)</td>
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### Removal

1. Remove the engine cooling fan and fan shroud (8146). For additional information, refer to Section 303-03.

2. Remove the drive belt (8620). For additional information, refer to Section 303-05.

3. Raise the vehicle on a hoist. For additional information, refer to Section 100-02.

4. Remove the crankshaft pulley bolt (6A340).

5. Using the Crankshaft Damper Remover, remove the crankshaft pulley (6312).
Crankshaft Pulley Removal and Replacement

Installation

1. Note: If not secured within 4 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 4 minutes, whichever is longer. Failure to follow this procedure can cause future oil leakage.

   Apply silicone to the Woodruff key slot in the crankshaft pulley.

   Use Silicone Gasket and Sealant F7AZ-19554-EA or equivalent meeting Ford specification WSE-M4G323-A4.

2. Use the Crankshaft Damper Replacer to install the crankshaft pulley.

3. Tighten the crankshaft pulley bolt in four stages.
   - Stage 1: Tighten to 90 Nm (66 lb-ft).
   - Stage 2: Loosen 360 degrees.
   - Stage 3: Tighten to 47-53 Nm (35-39 lb-ft).
   - Stage 4: Tighten an additional 85-95 degrees.

4. Lower the vehicle.

5. Install the engine cooling fan and the fan shroud. For additional information, refer to Section 303-03.
1. REMOVE AND DISCARD -8501- PRODUCTION WATER PUMP

2. INSTALL -8501- PTO WATER PUMP WITH EXTENDED HUB

3. REATTACH -8A528- PULLEY - WATER PUMP TO -8501- WATER PUMP ASY WITH (4) BOLTS TORQUE TO 20-30 Nm (15-22 lb-ft)
FORD PRODUCT ENGINEERING
INSTALLATION INSTRUCTIONS FOR FRONT END ACCESSORY DRIVE CRANKSHAFT EXT. SUPPORT (SPIDER)

5.4L (DewEze 740276) INSTALLATION SHOWN, 6.8L (DewEze 740275) PROCESS IS IDENTICAL EXCEPT WHERE NOTED.

4. INSTALL -6A329- ADAPTER - CRANKSHAFT DAMPER TO -6316- DAMPER - CRANKSHAFT WITH (3) N605918 BOLTS TORQUE TO 40-55 Nm (30-40 lb-ft)

5. COAT THREADS OF ADAPTER WITH A HIGH TEMPERATURE NICKEL ANTI-SEIZE LUBRICANT SUCH AS FORD MOTOR COMPANY PART NUMBER F6AZ-9L494-AA, SPECIFICATION ESE-M12A4-A OR EQUIVALENT

-N605918- M10 x 1.5 x 23.5 BOLT HEX FLNG HD PILOT TORQUE TO 40-55 Nm (3) REQ

-6A329- ADAPTER CRANKSHAFT DAMPER

-6316- CRANKSHAFT DAMPER & PULLEY ASY
6. RETAIN CRANKSHAFT WITH FORD ROTUNDA TOOL TO BE ANNOUNCED

7. INSTALL -6C254- PULLEY ASY - CRANKSHAFT EXT SUPPORT BY TURNING PULLEY COUNTER CLOCKWISE INTO -6A329- ADAPTER - CRANKSHAFT TORQUE TO 95-105 Nm (70-77 lb-ft)

8. PLACE LEGS OF -6C254- PULLEY ASY - CRANKSHAFT EXT SUPPORT ON TWO STUDS LOCATED AT FRONT OF ENGINE, BOTTOM OF BLOCK

9. ATTACH -7N291- CLIP - TRANS COOLING LINES TO STUD AT FRONT OF ENGINE, PASSENGER SIDE BOTTOM OF BLOCK

10. SECURE TWO LEGS WITH TWO -W520414- NUTS M10 x 1.5 TORQUE TO 40-55 Nm (30-40 lb-ft) ATTACH OTHER BRACKETS TO STUD ABOVE LEGS OF -6C254- PULLEY ASY-CRANKSHAFT EXT SUPPORT AND SECURE

11. SECURE LAST LEG WITH ONE -W500034- BOLT M10 x 1.5 x 33 TO TAPPED HOLE IN ENGINE FRONT COVER TORQUE TO 40-55 Nm (30-40 lb-ft)
NOTE: (PROCESSES 12 AND 13 APPLY ONLY TO 5.4L EQUIPPED VEHICLES, CORRECT CLUTCH EXISTS ON 6.8L EQUIPPED VEHICLES)

12. REMOVE AND DISCARD 5.4L FAN CLUTCH ASY

13. ATTACH FAN TO NEW -8A616- FAN CLUTCH ASY WITH FOUR SCREWS
   TORQUE TO 14.8-20.2 Nm (11-15 lb-ft)

14. INSTALL FAN AND FAN CLUTCH ASY TO WATER PUMP HUB
   TORQUE TO 113-153 Nm (83-113 lb-ft)