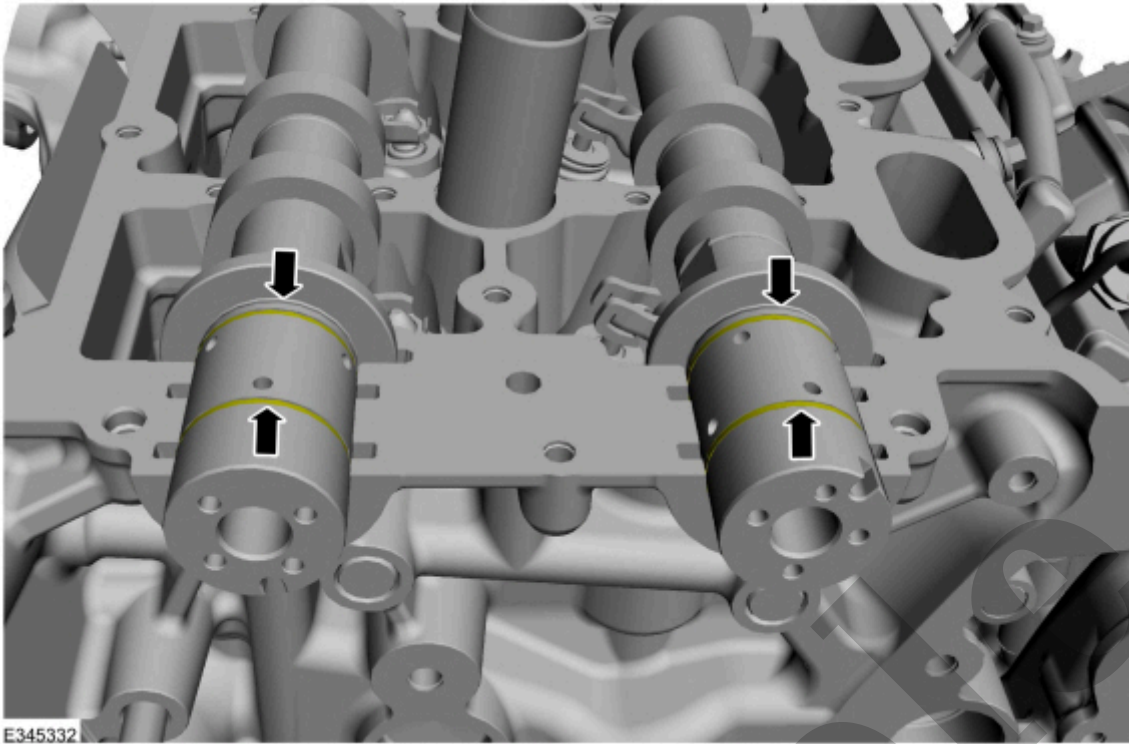


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## 2013 Ford Taurus Service and Repair Manual

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#### 4. NOTE

Cylinder head camshaft bearing caps are numbered to verify that they are assembled in their original positions.

- Install camshaft bearing caps by the markings on the caps and hand install the bolts.
- Install camshaft bearing mega caps and the bolts.

#### ***Torque :***

Stage 1: 1 thru 3: 71 lb.in (8 Nm)

Stage 2: 1 thru 3: 45°

Stage 3: 4: 97 lb.in (11 Nm)

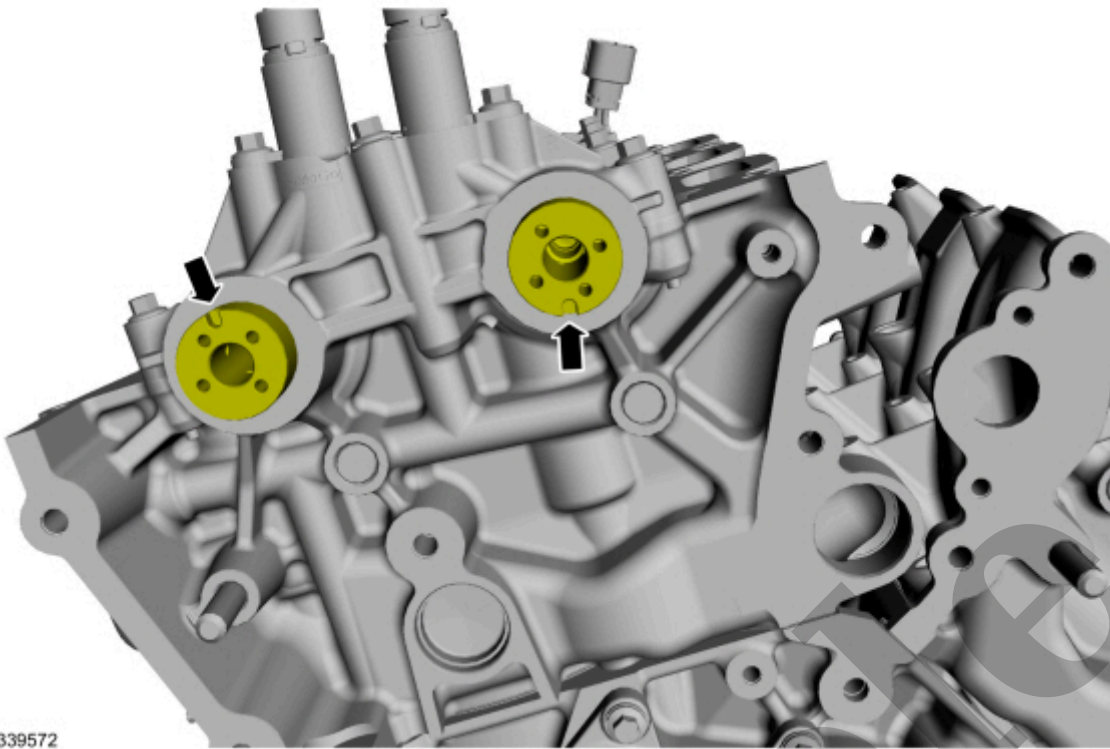
Stage 4: 4: 45°

Stage 5: 5 thru 16: 71 lb.in (8 Nm)

Stage 6: 5 thru 16: 11°

Stage 7: Loosen 12 and 11: Loosen: turn(s)

Stage 8: 12 and 11: 71 lb.in (8 Nm)



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6. **NOTE**

The Camshaft Holding Tool will hold the camshafts in the TDC (top dead center) position.

**Install Special Service Tool** : 303-1655 Tool, Camshaft Holding

## Crankshaft Front Seal

<b>303-01D Engine - 3.5L V6 PowerBoost (CN)</b>	<b>2022 F-150</b>
<b>Removal and Installation</b>	<b>Procedure revision date: 10/1/2020</b>

### Crankshaft Front Seal

#### 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.

#### 3.5L V6 PowerBoost (CN)

1. Remove the accessory drive belt.

Refer to: [Accessory Drive Belt](#)(303-05D Accessory Drive - 3.5L V6 PowerBoost (CN), Removal and Installation).

#### 3.5L EcoBoost (BM)

2. Remove the accessory drive belt.

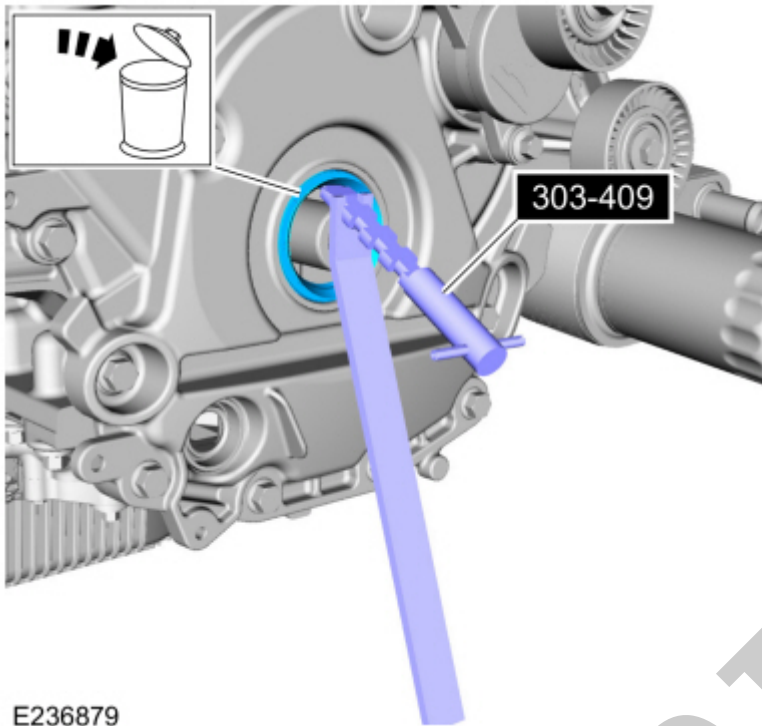
Refer to: [Accessory Drive Belt](#)(303-05C Accessory Drive - 3.5L EcoBoost (BM), Removal and Installation).

#### All vehicles

3.
  - Remove the crankshaft pulley bolt and washer.
  - Discard the bolt.

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

**Use Special Service Tool** : 303-409 (T92C-6700-CH) Remover, Crankshaft Seal



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## Installation

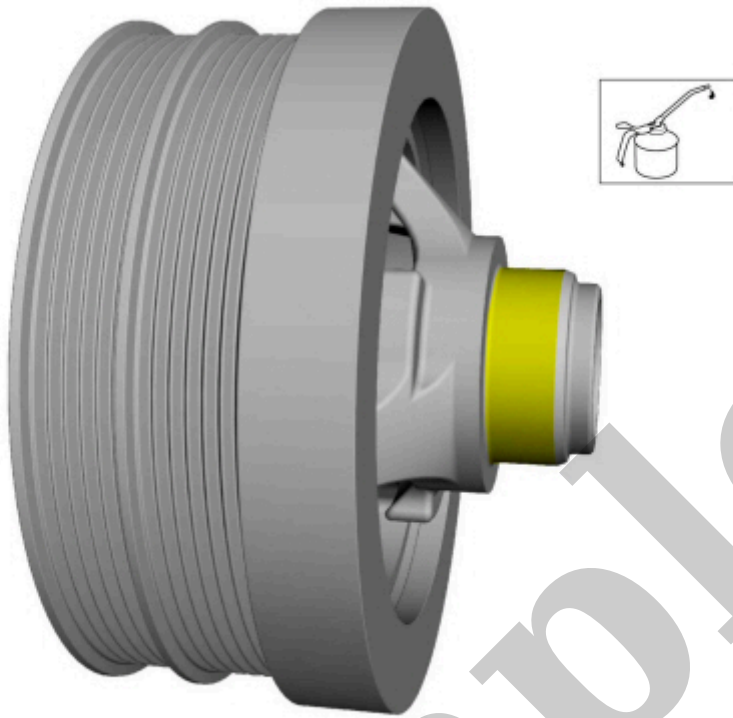
### All vehicles

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

Refer to: [Specifications](#)(303-01C Engine - 3.5L EcoBoost (BM), Specifications).

3. Lubricate the crankshaft pulley with clean engine oil.

Refer to: [Specifications](#)(303-01C Engine - 3.5L EcoBoost (BM), Specifications).

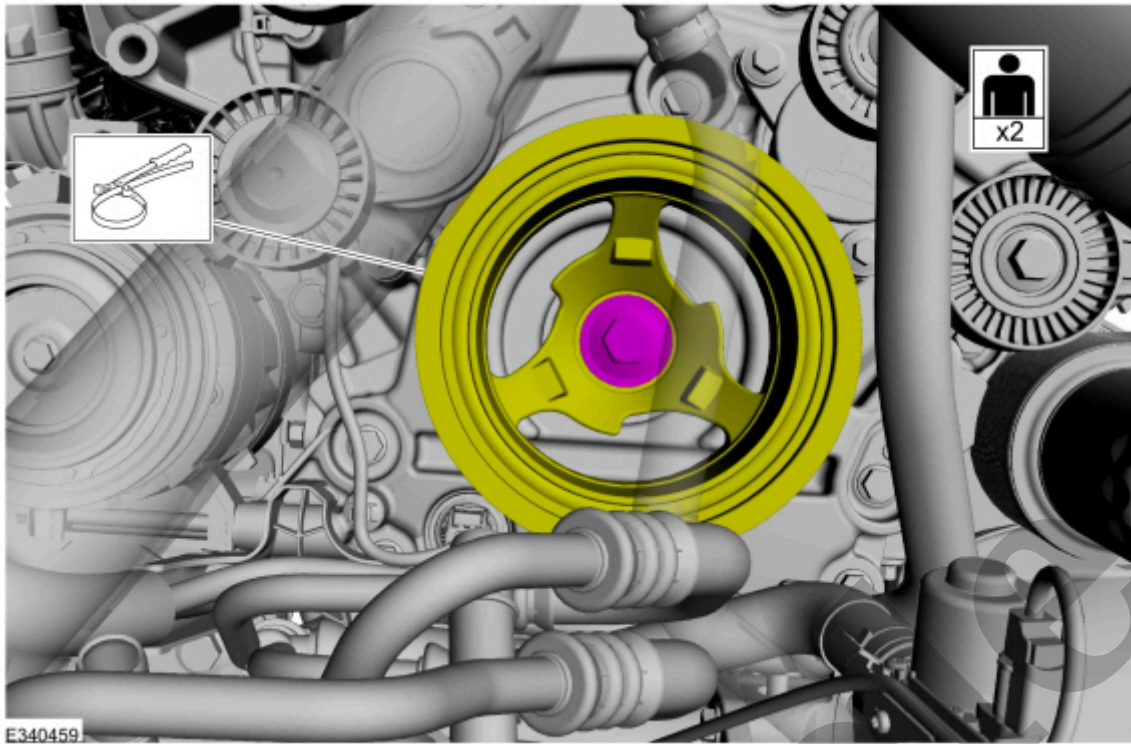


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[Click here to learn about symbols, color coding, and icons used in this manual.](#)

4. Using the special tools, install the crankshaft pulley.

**Use Special Service Tool** : 303-102 Installer, Crankshaft Pulley



[Click here to learn about symbols, color coding, and icons used in this manual.](#)

### **3.5L V6 PowerBoost (CN)**

6. Install the accessory drive belt.

Refer to: [Accessory Drive Belt](#)(303-05D Accessory Drive - 3.5L V6 PowerBoost (CN), Removal and Installation).

### **3.5L EcoBoost (BM)**

7. Lubricate the crankshaft pulley with clean engine oil.

Refer to: [Specifications](#)(303-01C Engine - 3.5L EcoBoost (BM), Specifications).

9. Install the new crankshaft bolt and the washer.

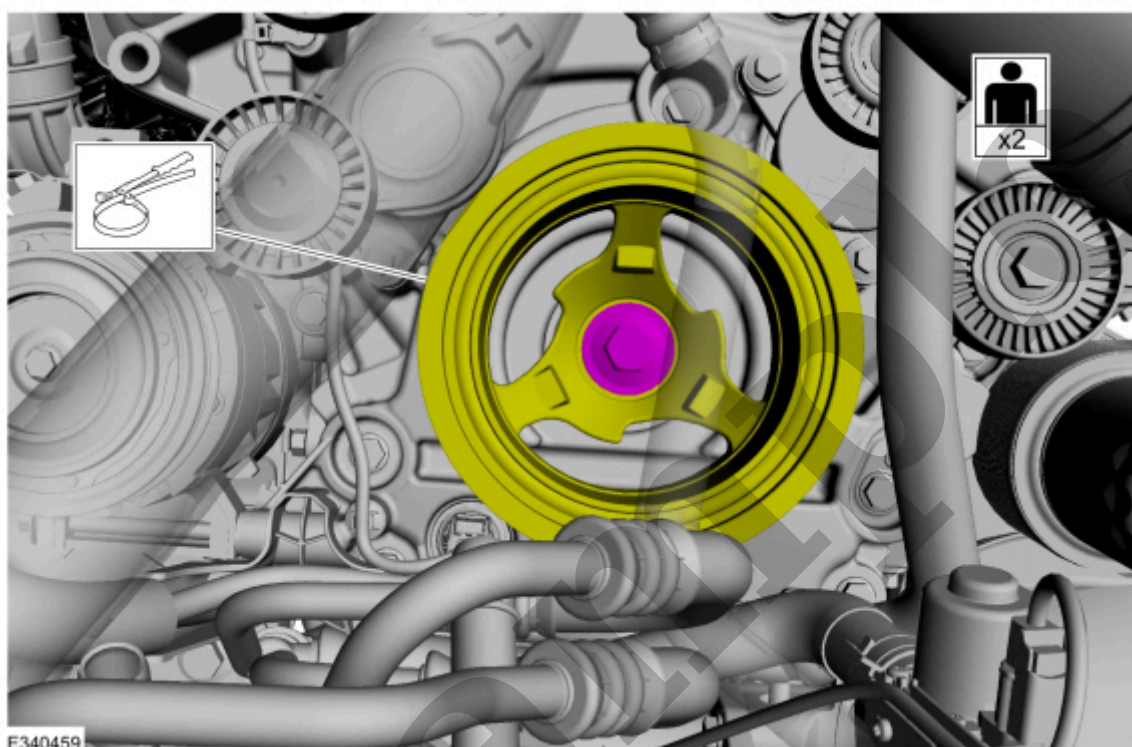
Use the General Equipment: Strap Wrench

**Torque :**

Stage 1: 37 lb.ft (50 Nm)

Stage 2: 90°

Stage 3: 60°



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10. Install the accessory drive belt.

Refer to: [Accessory Drive Belt](#)(303-05C Accessory Drive - 3.5L EcoBoost (BM), Removal and Installation).

11. Install the accessory drive belt.

Refer to: [Accessory Drive Belt](#)(303-05C Accessory Drive - 3.5L EcoBoost (BM), Removal and Installation).

**All vehicles**

12. After completing the repairs, perform the Misfire Monitor Neutral Profile Correction procedure using a diagnostic scan tool.

13. Road test the vehicle.



## Crankshaft Pulley

<b>303-01D Engine - 3.5L V6 PowerBoost (CN)</b>	<b>2022 F-150</b>
<b>Removal and Installation</b>	<b>Procedure revision date: 10/30/2020</b>

### Crankshaft Pulley

#### 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. Remove the coolant pump belt.

Refer to: [Coolant Pump Belt](#)(303-05D Accessory Drive - 3.5L V6 PowerBoost (CN), Removal and Installation).

2. Remove the accessory drive belt.

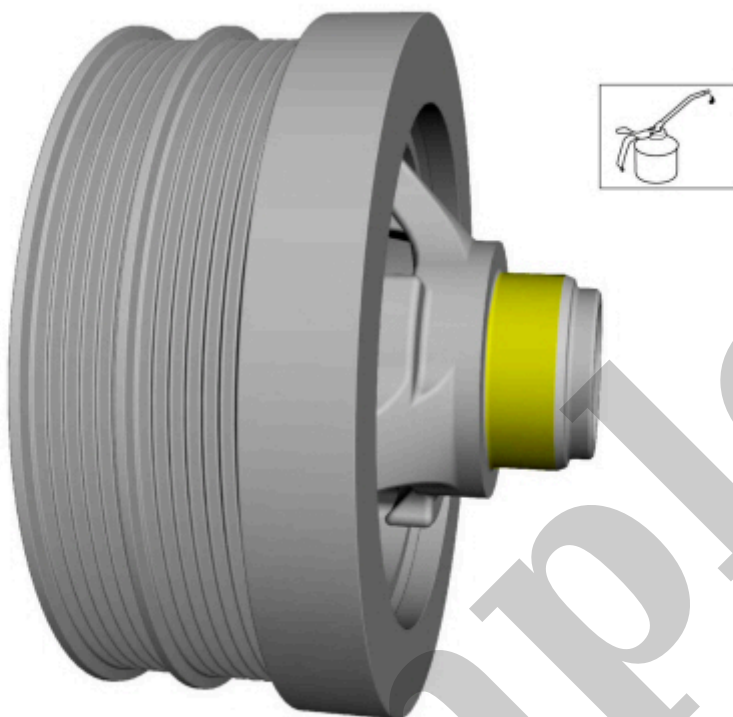
Refer to: [Accessory Drive Belt](#)(303-05D Accessory Drive - 3.5L V6 PowerBoost (CN), Removal and Installation).

3.
  - Remove the crankshaft pulley bolt and washer.
  - Discard the bolt.

## Installation

1. Lubricate the crankshaft pulley with clean engine oil.

Refer to: [Specifications](#)(303-01D Engine - 3.5L V6 PowerBoost (CN), Specifications).



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2. Using the special tool, install the crankshaft pulley.

**Use Special Service Tool** : 303-102 Installer, Crankshaft Pulley