


## Camshaft — LH

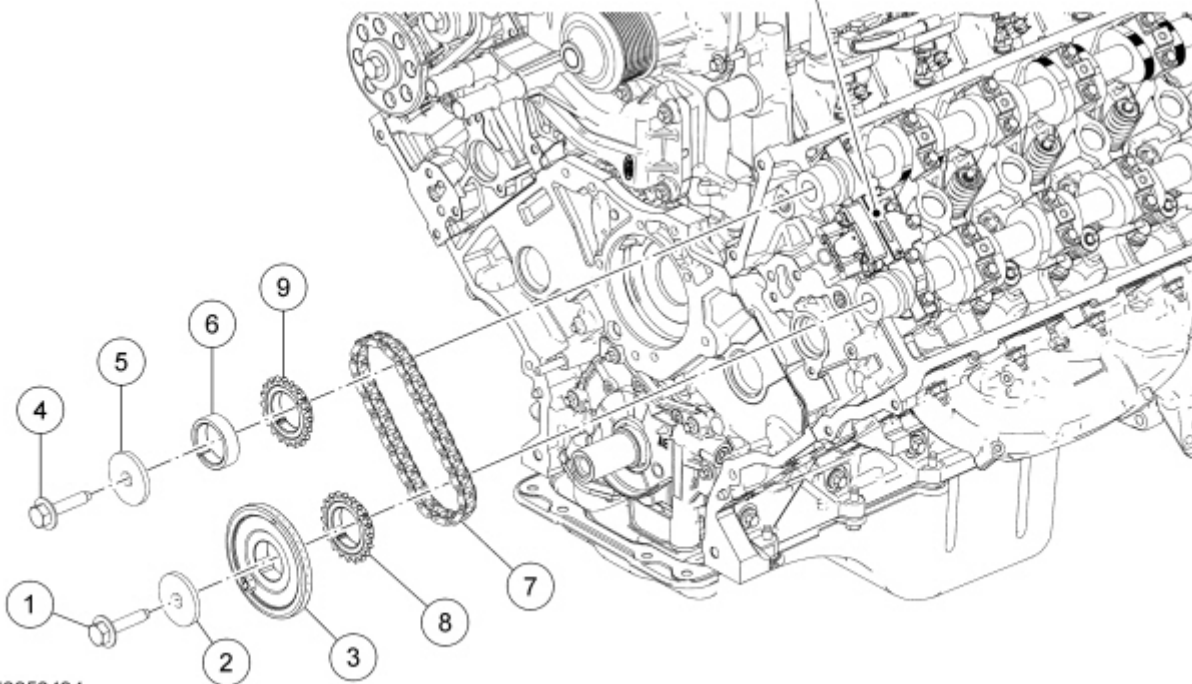
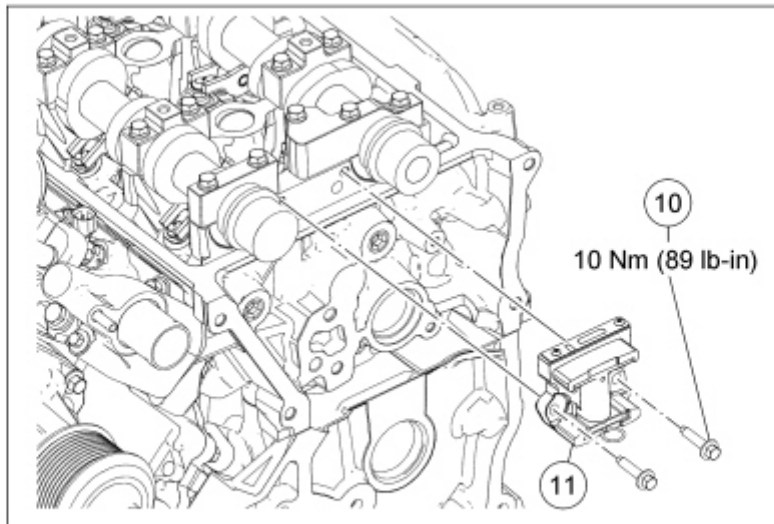
### Special Tool(s)

 <p>ST1715-A</p>	Holding Tool, Camshaft 303-446 (T93P-6256-AHR)
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### Material

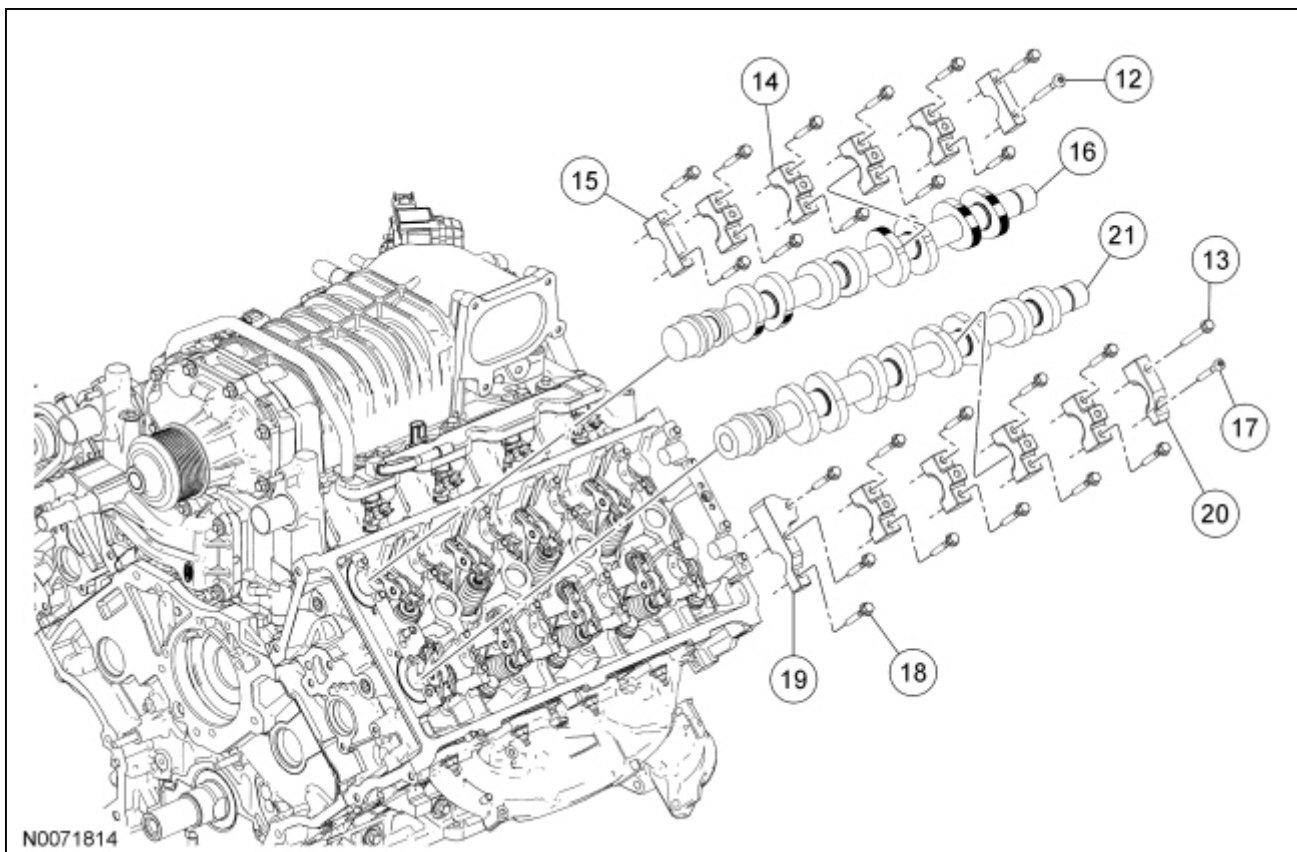
Item	Specification
Motorcraft® SAE 5W-50 Full Synthetic Motor Oil XO-5W50-QGT or equivalent	WSS-M2C931-B

### LH Camshaft (View 1 of 2)



N0050434

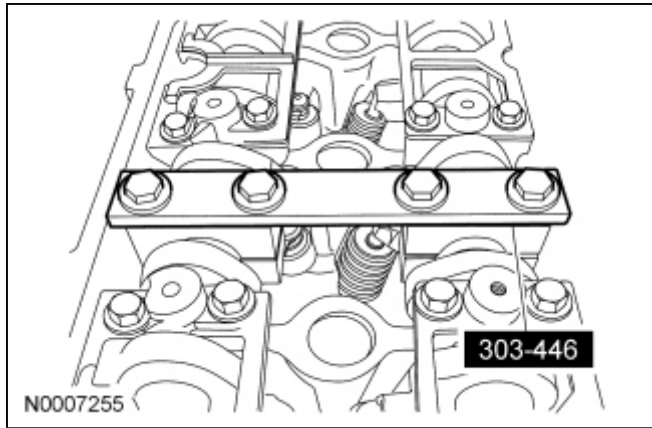
Item	Part Number	Description
1	N811085	Camshaft drive sprocket bolt
2	N806164	Camshaft drive sprocket washer
3	6C253	Camshaft drive sprocket
4	N811085	Camshaft drive sprocket bolt
5	N806164	Camshaft drive sprocket washer
6	6265	Camshaft drive sprocket spacer
7	6268	Secondary timing chain
8	6256	Exhaust camshaft drive sprocket
9	6256	Intake camshaft drive sprocket
10	W500215	LH secondary timing chain tensioner bolt (2 required)
11	6C271	LH secondary timing chain tensioner



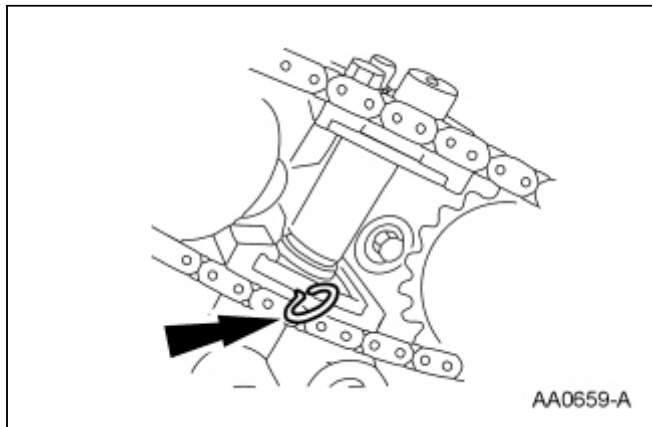
Item	Part Number	Description
12	W710990	Intake camshaft bearing cap bolt
13	N807352	Intake/exhaust camshaft bearing cap bolt (22 required)
14	6B277	Intake/exhaust camshaft bearing cap (8 required)
15	6B277	Intake camshaft bearing cap (2 required)
16	6A271	LH intake camshaft
17	W710991	Exhaust camshaft bearing cap bolt
18	W705438	Exhaust camshaft bearing cap bolt (3 required)
19	6B278	Exhaust camshaft bearing cap
20	6B278	Exhaust camshaft bearing cap
21	6A273	LH exhaust camshaft

## Removal

1. Remove the timing drive components. For additional information, refer to [Timing Drive Components](#) in this section.
2. Install the Camshaft Holding Tool.



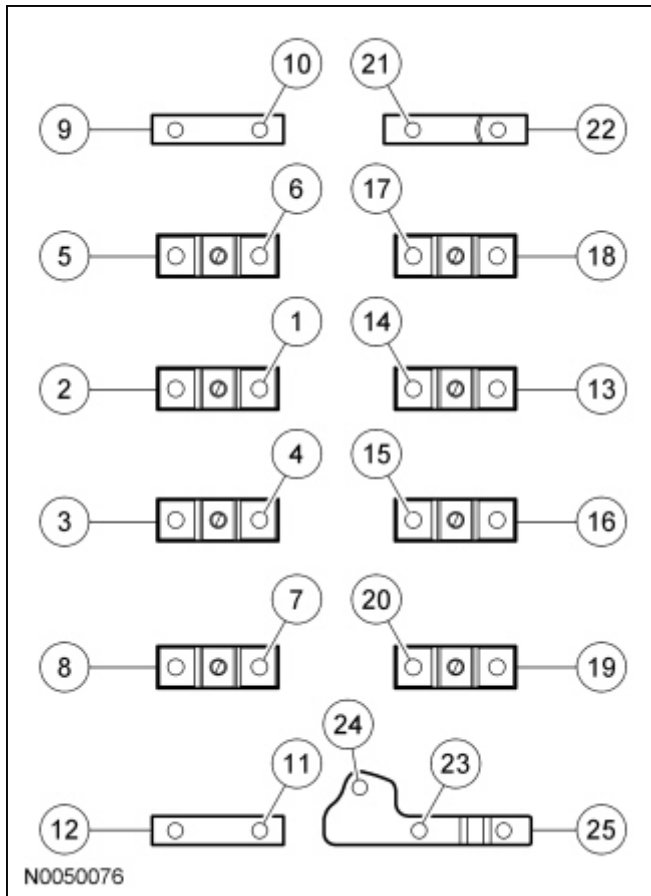
3. Remove the bolt, washer and camshaft drive sprocket.
4. Remove the bolt, washer and camshaft sprocket spacer.
5. Compress the secondary timing chain tensioner and install a lockpin.



6. Remove the timing chain and the 2 camshaft sprockets.
7. Remove the 2 bolts and the secondary timing chain tensioner.
8. **NOTICE:** The camshaft bearing cap bolts vary in length and head design and must be installed in their original positions. Camshaft bearing caps are not interchangeable and must be installed in their original positions. If not reassembled in their original positions, severe engine damage may occur.

Remove the camshaft bearing cap bolts in the sequence shown.

- Remove the camshaft bearing caps.
- Remove the camshafts.



## Installation

1. **NOTE:** Lubricate the camshafts with clean engine oil prior to installation.

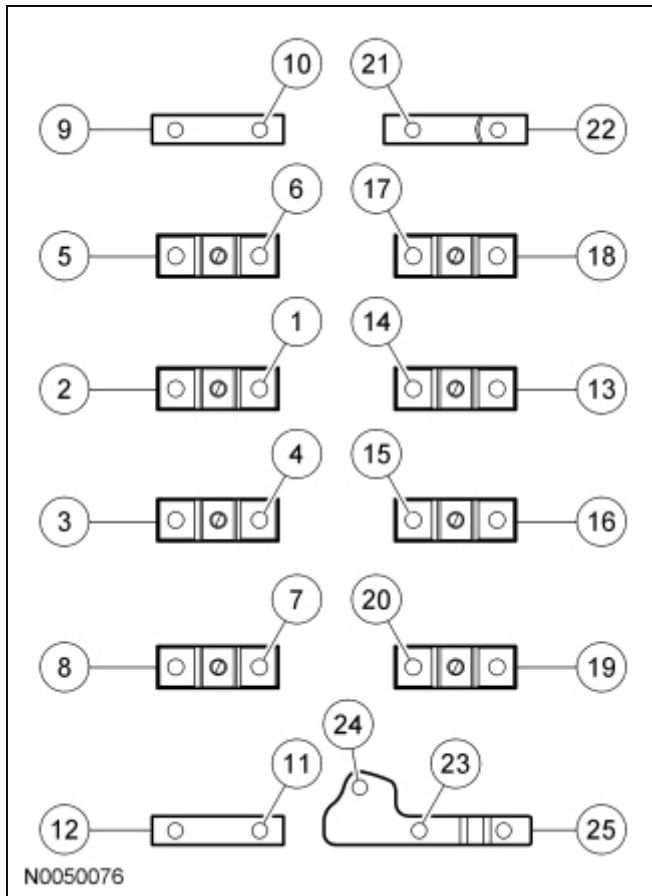
Install the camshafts.

2. **NOTICE:** The camshaft bearing cap bolts vary in length and head design and must be installed in their original positions. Camshaft bearing caps are not interchangeable and must be installed in their original positions. If not reassembled in their original positions, severe engine damage may occur.

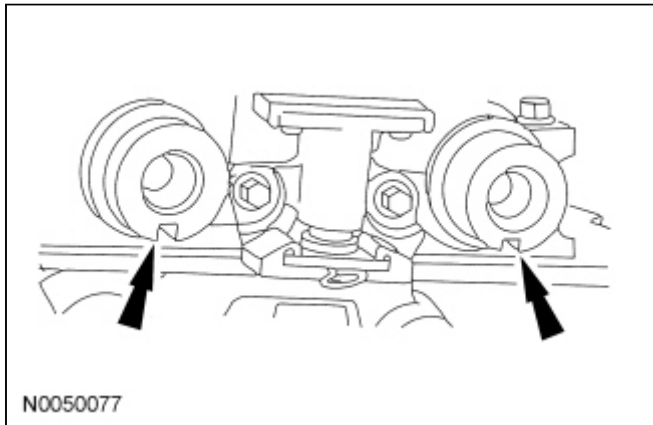
**NOTE:** Lubricate the camshaft bearing cap bearing surfaces with clean engine oil prior to installation.

Install the camshaft bearing caps.

- Install the bearing cap bolts and tighten in the sequence shown to 10 Nm (89 lb-in).

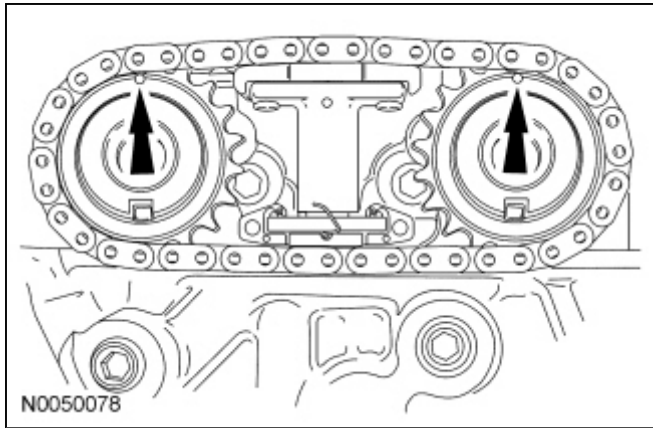


3. Install the secondary timing chain tensioner and the bolts.
  - Tighten to 10 Nm (89 lb-in).
4. Index the keyways on the camshafts to the 6 o'clock position.

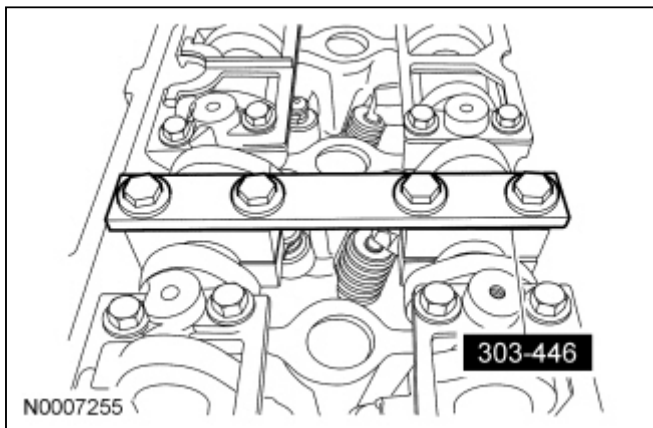


5. **NOTICE:** Timing marks must be at the 12 o'clock position or damage to the engine may occur.

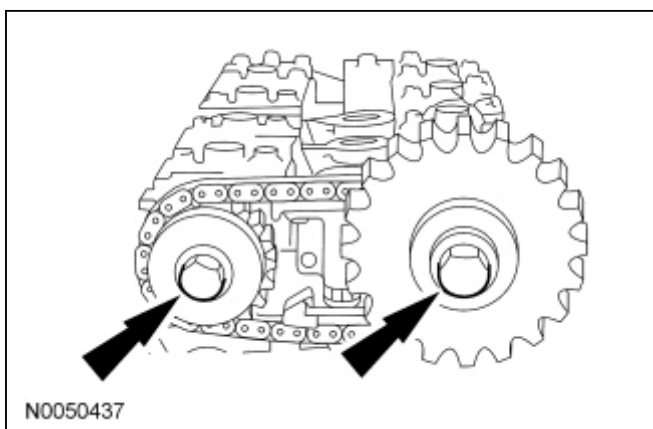
Install the camshaft sprockets and the chain as an assembly.



6. Install the Camshaft Holding Tool.



7. Install the camshaft sprocket spacer, washer and bolt, and hand-tighten the bolt.
8. Install the camshaft drive sprocket, washer and bolt, and hand-tighten the bolt.
9. Tighten the bolts in 2 stages:
  - Stage 1: Tighten to 40 Nm (30 lb-ft).
  - Stage 2: Tighten an additional 90 degrees.



10. Install the timing drive components. For additional information, refer to [Timing Drive Components](#) in this section.
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