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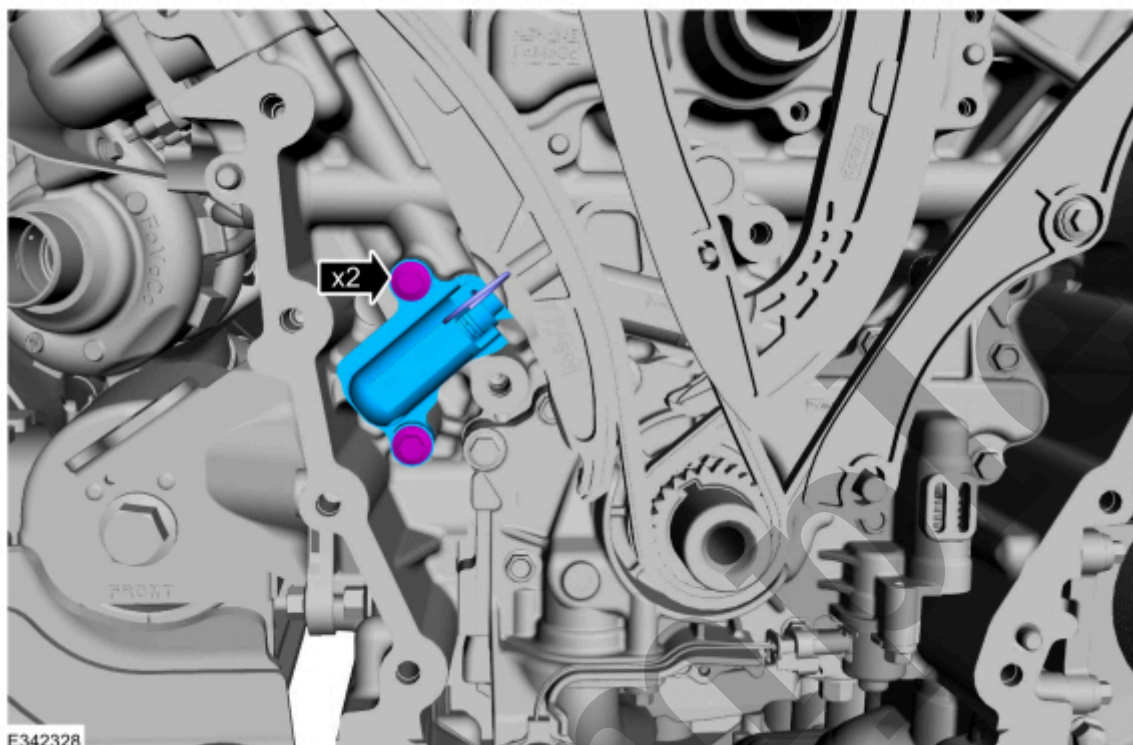
2013 Ford E-150 Service and Repair Manual

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20. Position the RH (right-hand) timing chain tensioner with the end of the tensioner correctly engaged to the tensioner arm and install the fasteners.

Torque : 89 lb.in (10 Nm)



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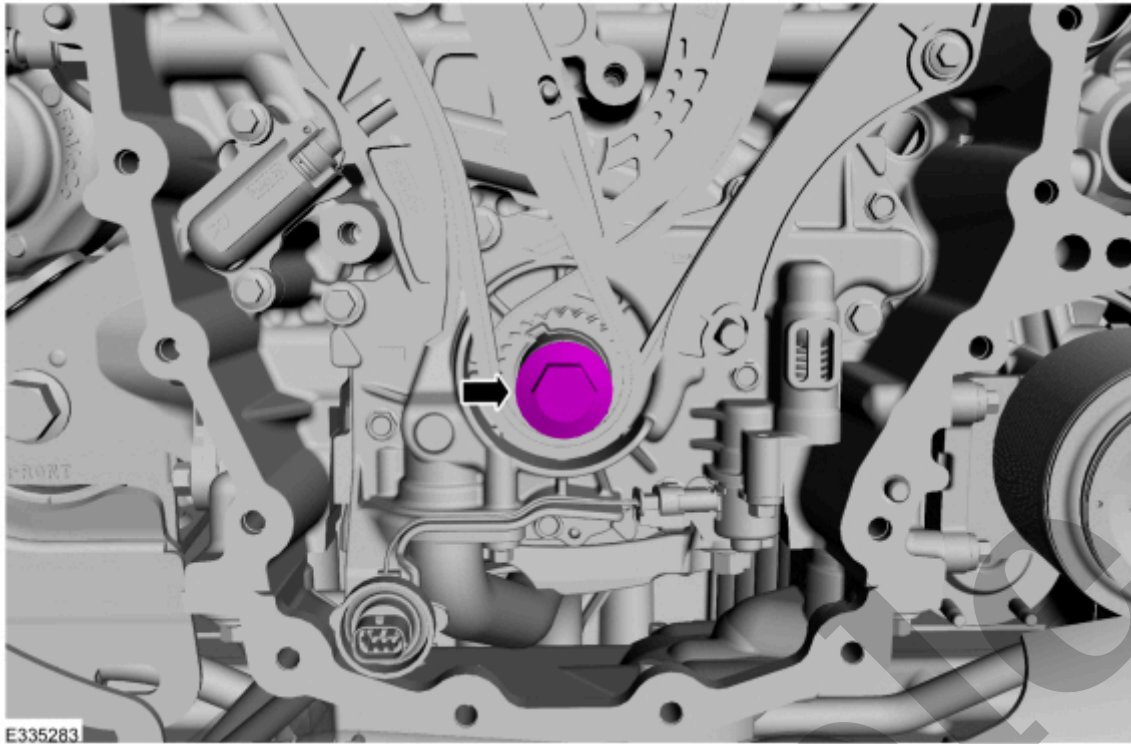
21. Remove the tensioner pin.

23. Install the engine front cover.

Refer to: [Engine Front Cover](#)(303-01C Engine - 3.5L EcoBoost (BM), Removal and Installation).

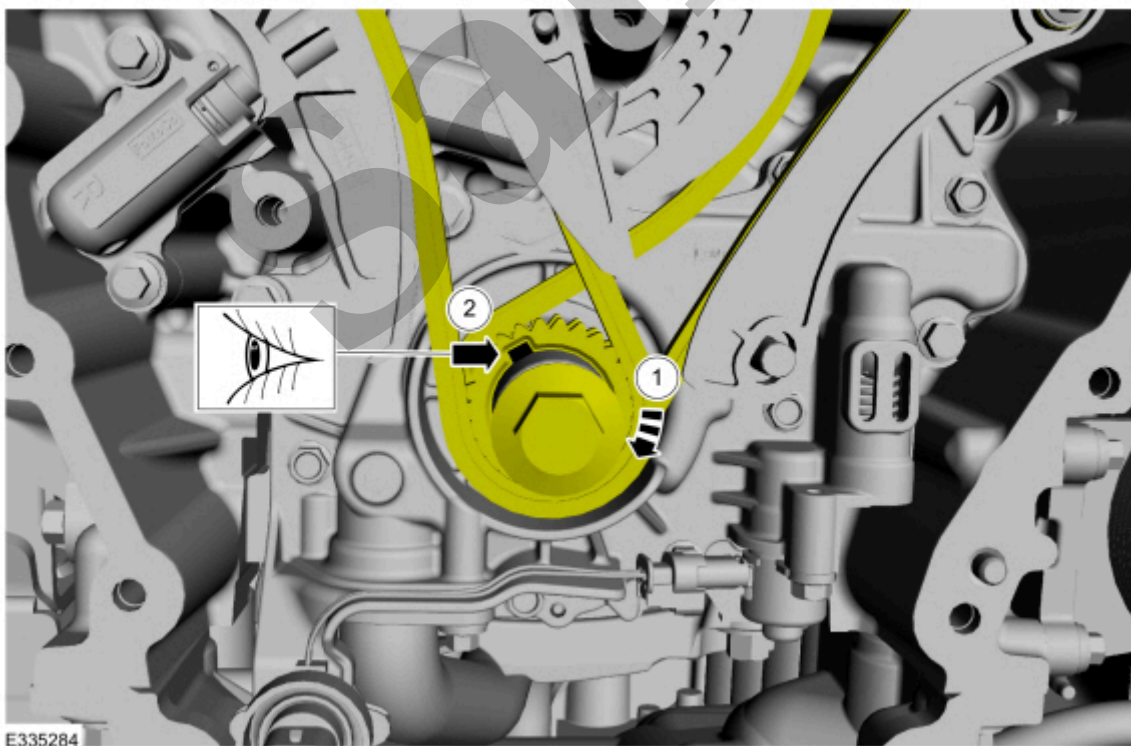
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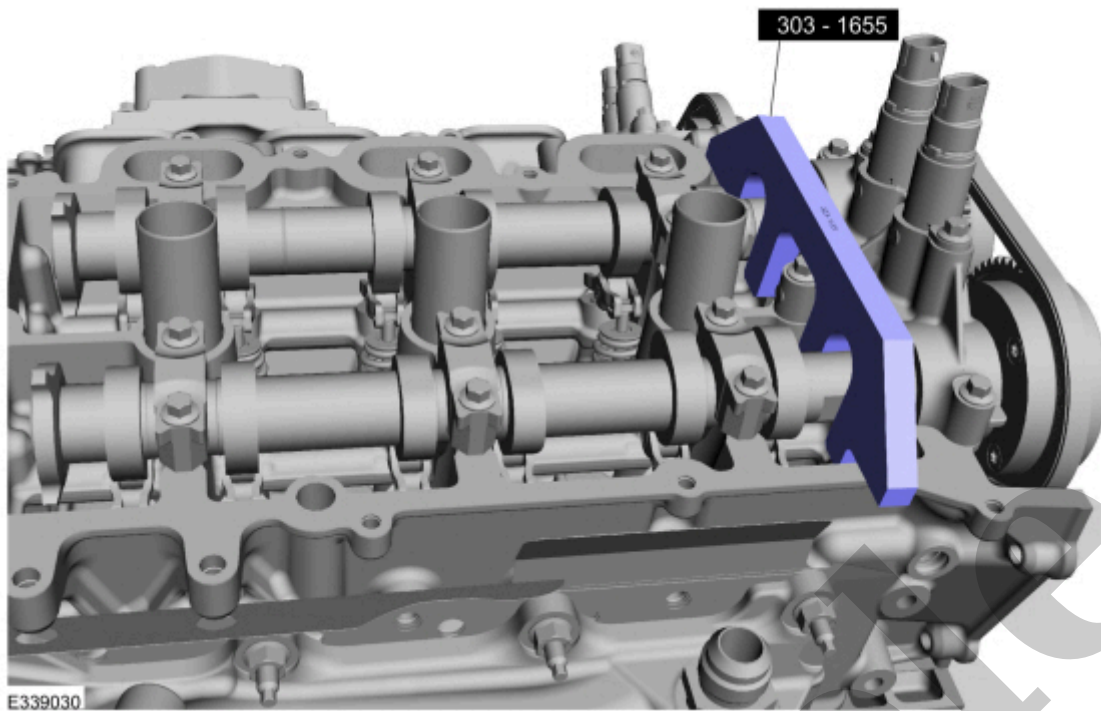
Sample



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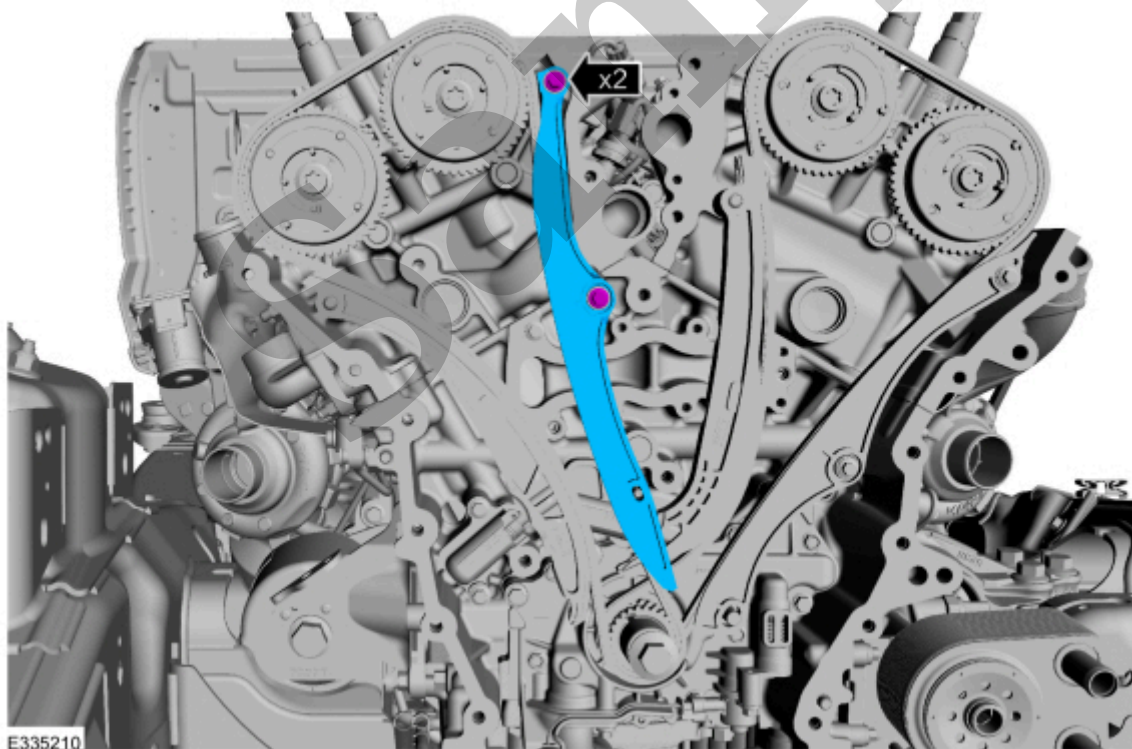
3. 1. Rotate the crankshaft clockwise.
2. Position the crankshaft sprocket keyway at the 11 o'clock position.





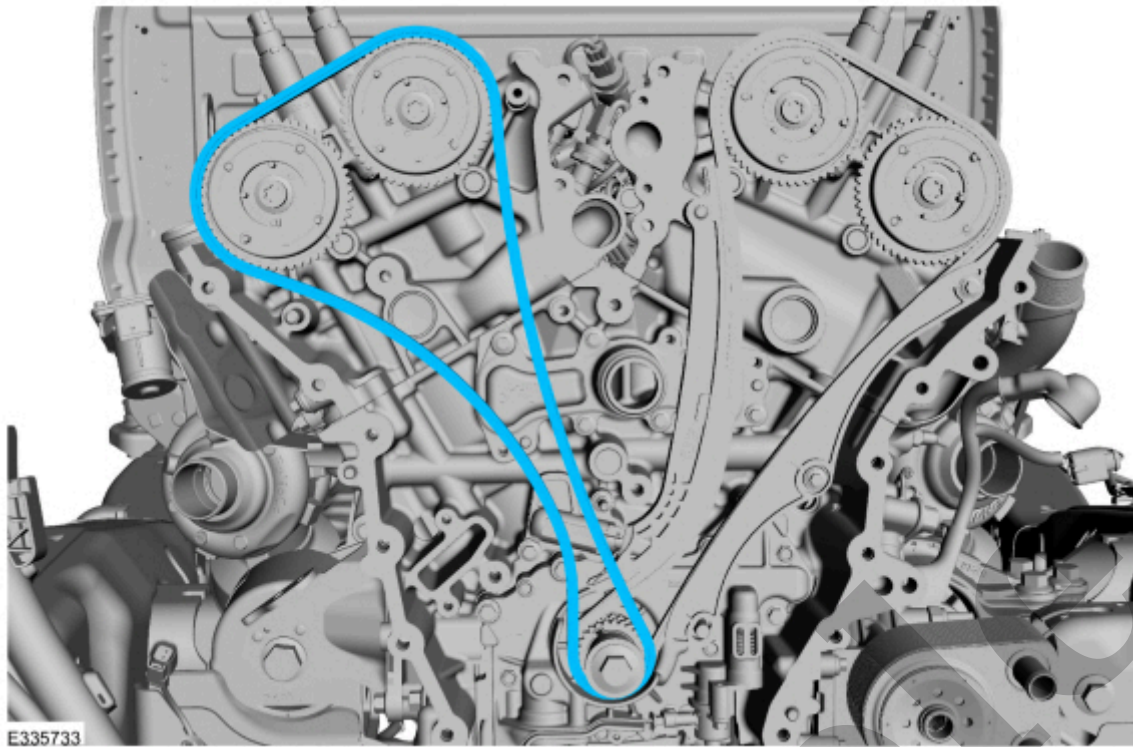
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6. Remove the bolts and the RH (right-hand) timing chain guide.



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7. Remove the bolts and the RH (right-hand) timing chain tensioner.



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LH timing chain

10. NOTE

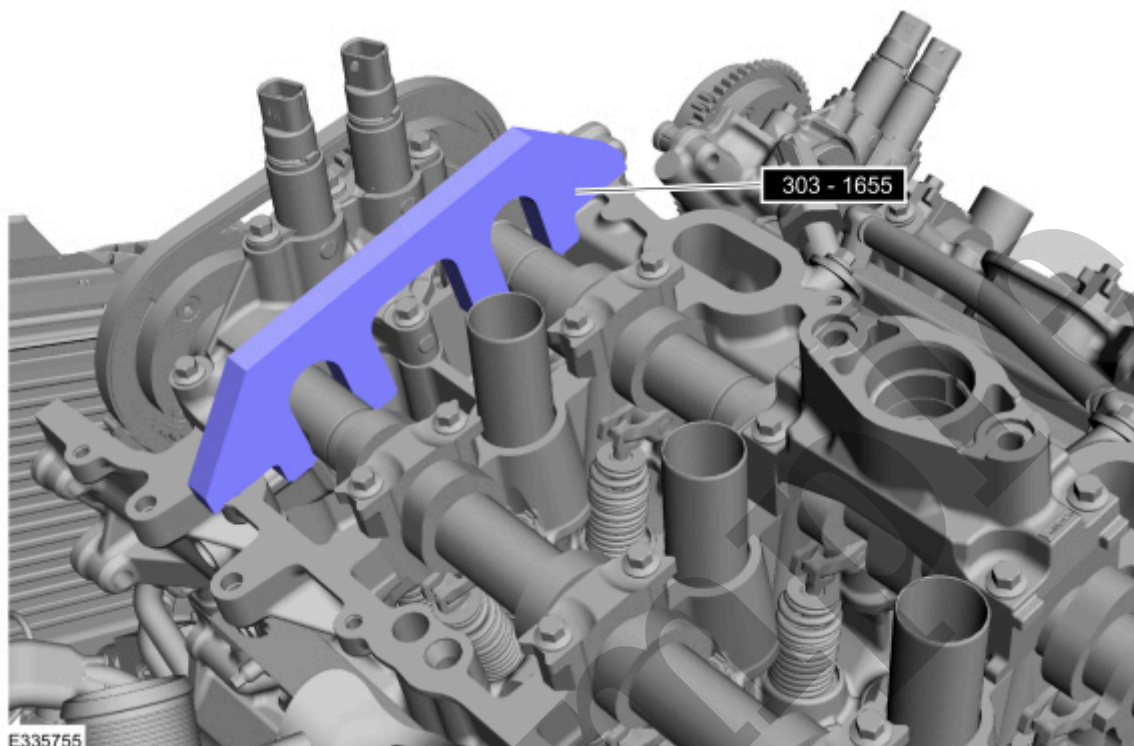
The Camshaft Holding Tool will hold the camshafts in the TDC (top dead center) position.

Remove Special Service Tool : 303-1655 Tool, Camshaft Holding

12. **NOTE**

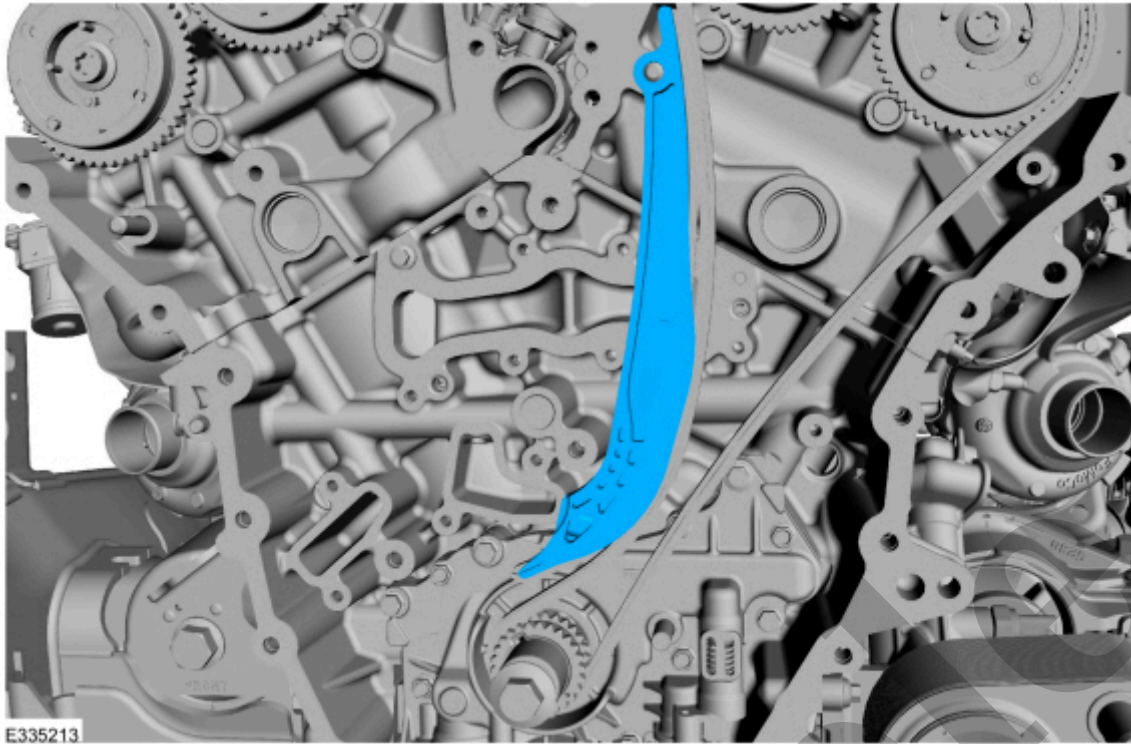
The Camshaft Holding Tool will hold the camshafts in the TDC (top dead center) position.

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



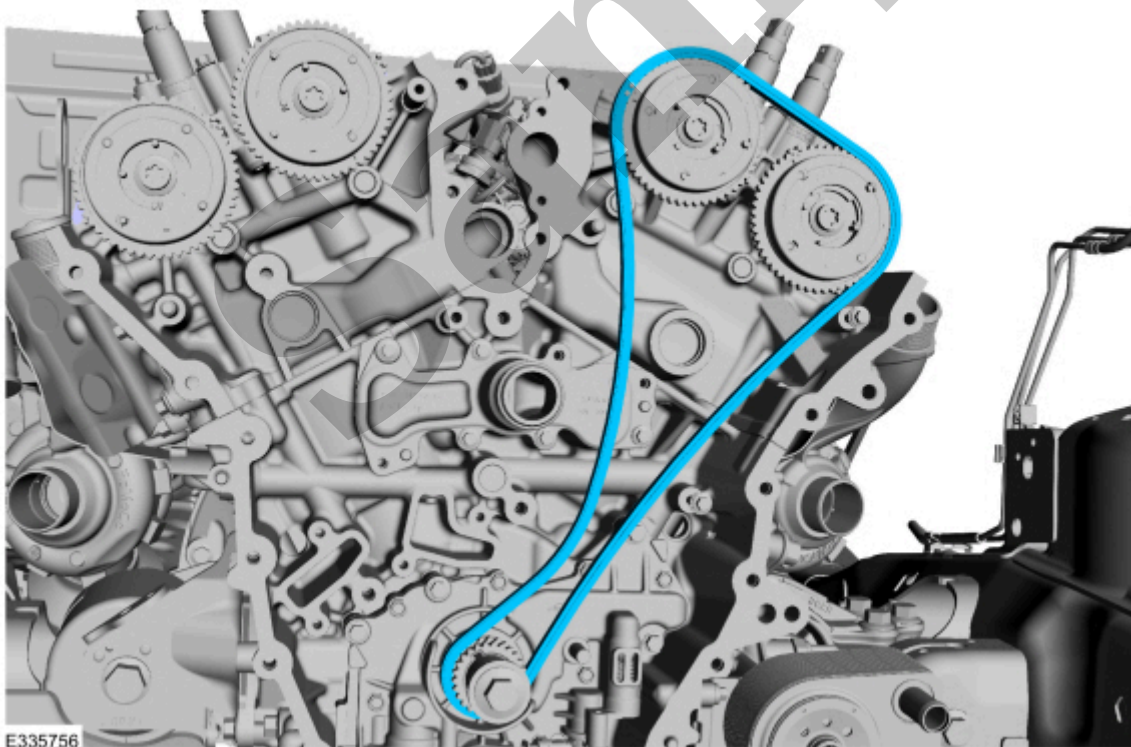
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13. Remove the bolts and the LH (left-hand) timing chain guide.



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16. Remove the LH (left-hand) timing chain.

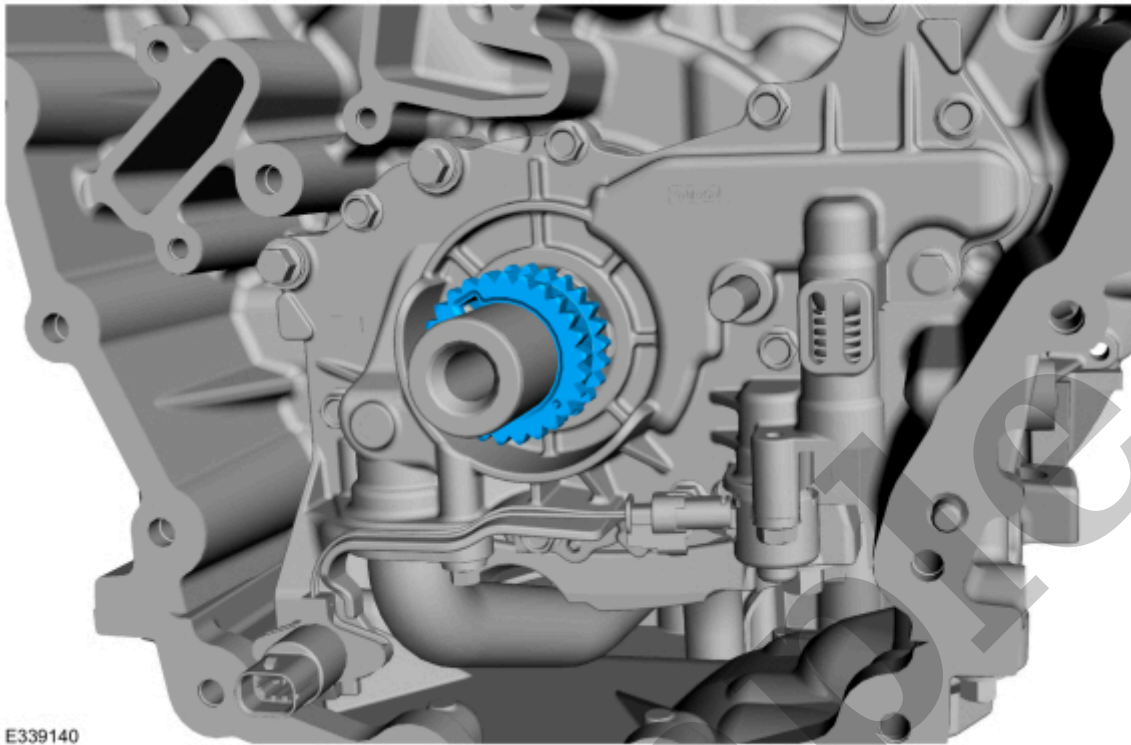


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17. Remove the crankshaft pulley bolt.

LH timing chain

1. Install the timing chain sprocket.

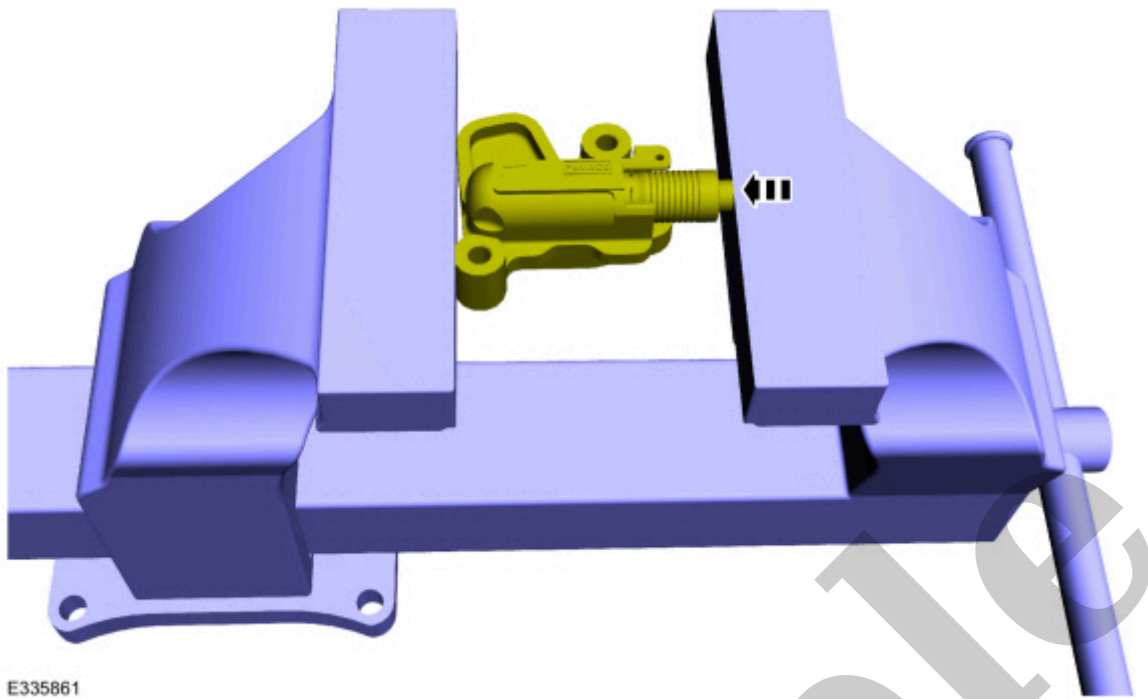


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2. **NOTE**

The crankshaft sprocket is reversible with a timing mark on each face. For installation of each timing chain, utilize the timing mark on the front face of the crankshaft sprocket for chain alignment.

1. Install the LH (left-hand) timing chain with the single colored links aligned with the timing marks on the VCT (variable camshaft timing) units.
2. Install the double colored links so they straddle the timing mark on the crankshaft sprocket.



E335861

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5. **NOTE**

Use of a commercially available tools with a curved radius in the range of 10mm - 15mm is suggested for use in resetting the ratchet clip. Examples are a 8mm closed end wrench, 12x12mm piece of bar stock, T40 to T50 Torx screwdriver or 3/8 wobble style socket extender.

Using a commercially available wrench, push down on the ratchet clip so the ratchet clip pushes outward.