

REMOVAL AND INSTALLATION > VARIABLE CAMSHAFT TIMING (VCT) UNIT

Special Tool(s) / General Equipment

	303-1530 Tool, Chain Tensioner Hold Down TKIT-2010A-F TKIT-2010A-LM TKIT-2010A-ROW
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Materials

Name	Specification
Motorcraft ® SAE 5W-20 Premium Synthetic Blend Motor Oil XO-5W20-QSP	WSS-M2C945-A

REMOVAL AND INSTALLATION > VARIABLE CAMSHAFT TIMING (VCT) UNIT > REMOVAL



NOTE: 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.

All variable camshaft timing (VCT) unit

1.

Remove the timing chain. Refer to: Timing Chain .

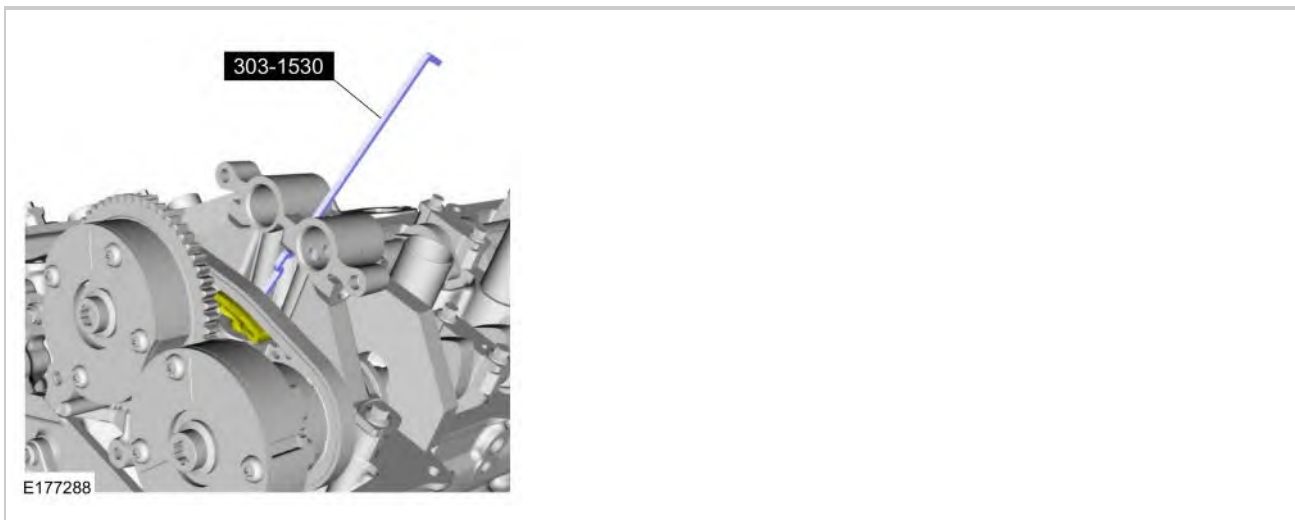
LH variable camshaft timing (VCT) unit

2.



NOTE: The VCT oil control solenoids are removed for clarity.

Compress the LH secondary timing chain tensioner and install the special tool in the hole on the rear of the secondary timing chain tensioner guide and let it hold against the mega cap to retain the tensioner in the collapsed position. Use Special Service Tool: 303-1530 Tool, Chain Tensioner Hold Down.



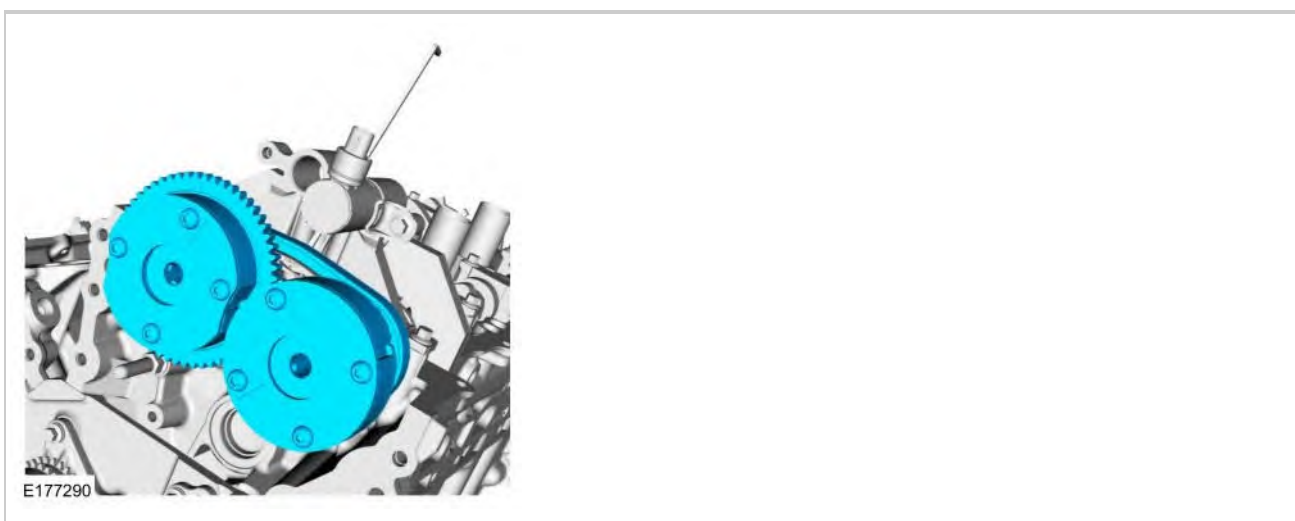
3.

Remove and discard the LH VCT unit bolts.



4.

Remove the LH VCT units.



Replacement of the LH secondary timing chain tensioner

 **NOTE:** The following 4 steps are only for the replacement of the secondary timing chain tensioner. Do not reuse the secondary timing chain tensioner if removed, or damage to the engine may occur.

5.

Remove Special Service Tool: 303-1530 Tool, Chain Tensioner Hold Down.

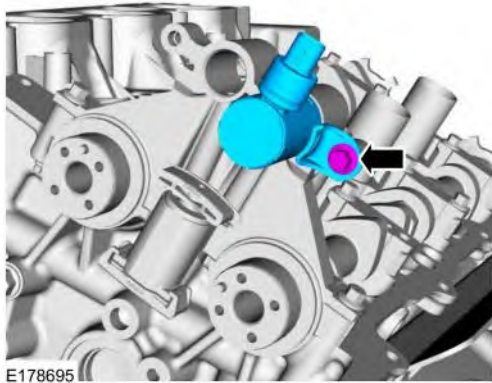


6.

 **NOTE:** A slight twisting motion will aid in the removal of the VCT oil control solenoid.

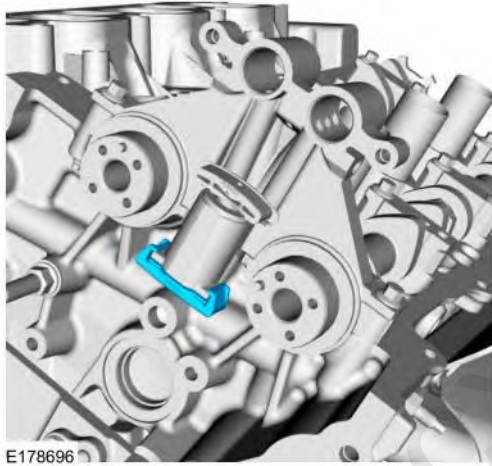
 **NOTE:** Keep the VCT oil control solenoid clean of dirt and debris.

Remove the bolt and the exhaust VCT oil control solenoid.



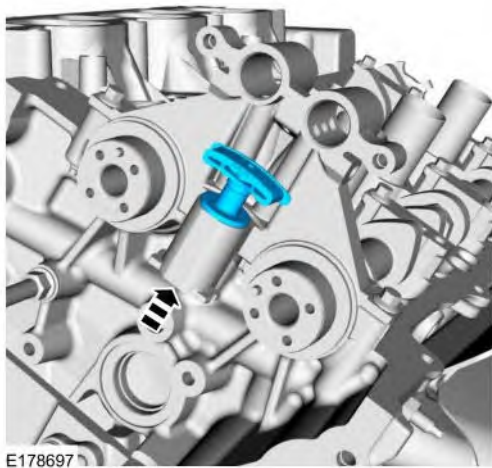
7.

Remove the LH secondary timing chain tensioner shoe.



8.

Remove the LH secondary timing chain tensioner by pushing up from the bottom.



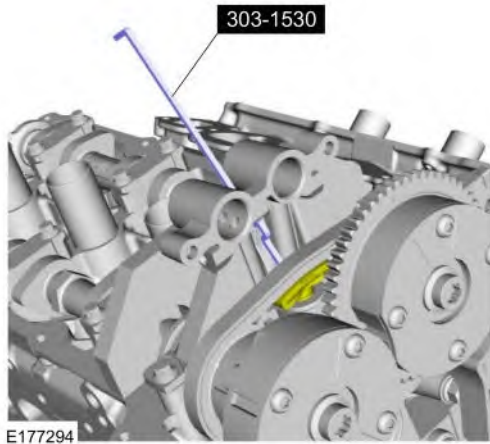
RH variable camshaft timing (VCT) unit

9.



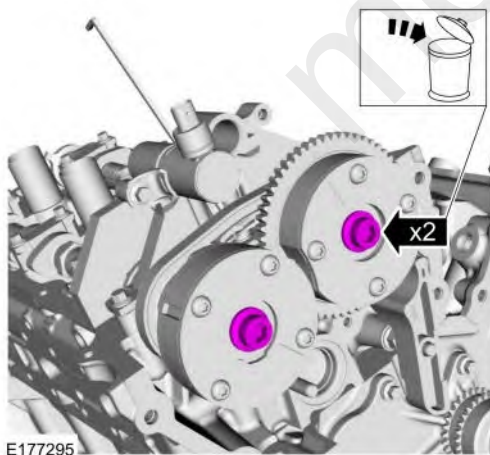
NOTE: The VCT oil control solenoids are removed for clarity.

Compress the RH secondary timing chain tensioner and install the special tool in the hole on the rear of the secondary timing chain tensioner guide and let it hold against the mega cap to retain the tensioner in the collapsed position. Use Special Service Tool: 303-1530 Tool, Chain Tensioner Hold Down.



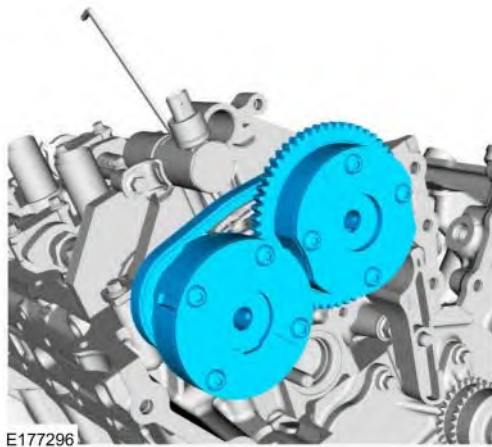
10.

Remove and discard the RH VCT unit bolts.



11.

Remove the RH VCT units.

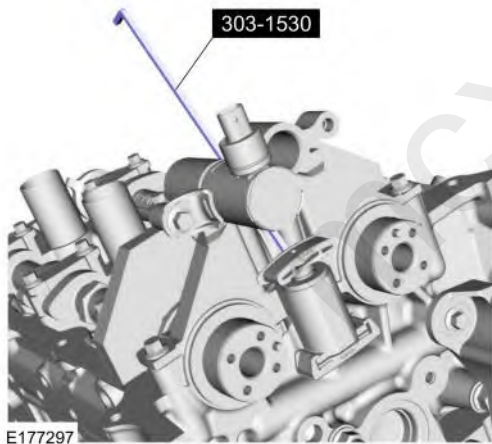


Replacement of the RH secondary timing chain tensioner

 **NOTE:** The following 4 steps are only for the replacement of the secondary timing chain tensioners. Do not reuse the secondary timing chain tensioners if removed, or damage to the engine may occur.

12.

Remove Special Service Tool: 303-1530 Tool, Chain Tensioner Hold Down.

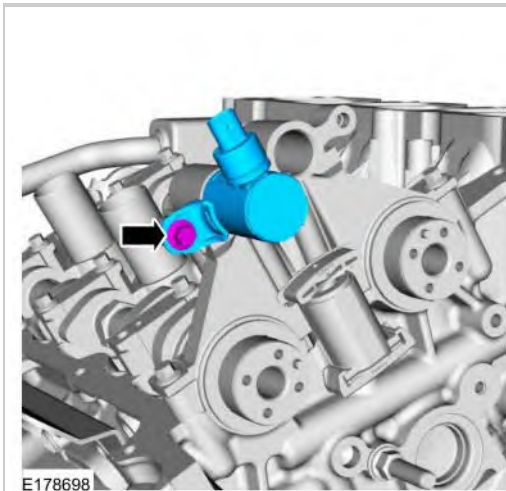


13.

 **NOTE:** A slight twisting motion will aid in the removal of the VCT oil control solenoid.

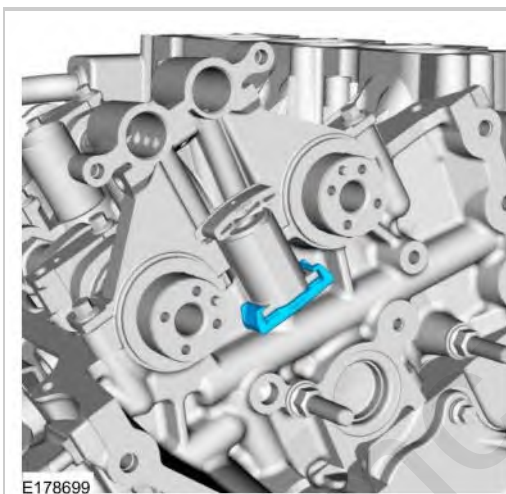
 **NOTE:** Keep the VCT oil control solenoid clean of dirt and debris.

Remove the bolt and the exhaust VCT oil control solenoid.



14.

Remove the RH secondary timing chain tensioner shoe.



15.

Remove the RH secondary timing chain tensioner by pushing up from the bottom.