

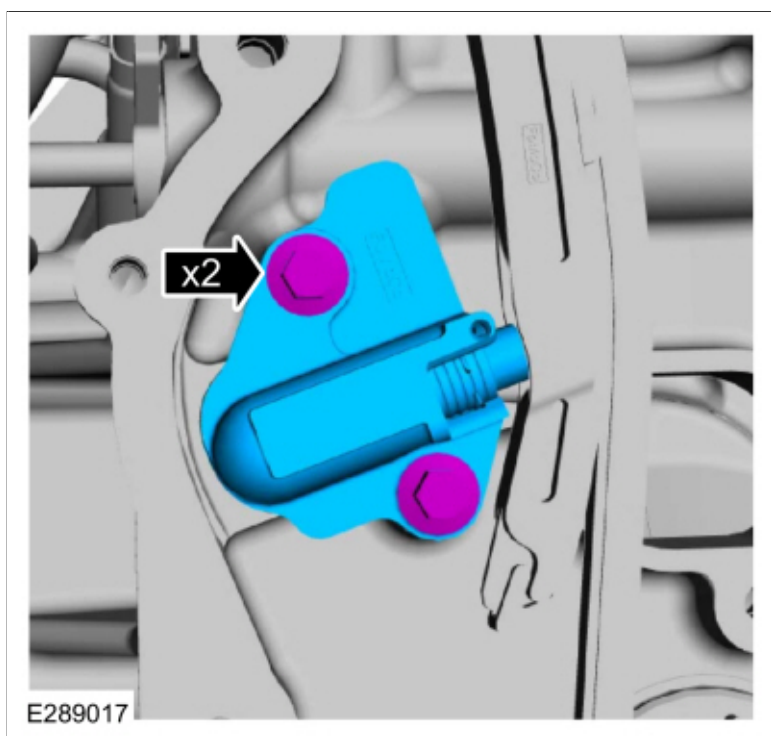
## Timing Chain

### Removal

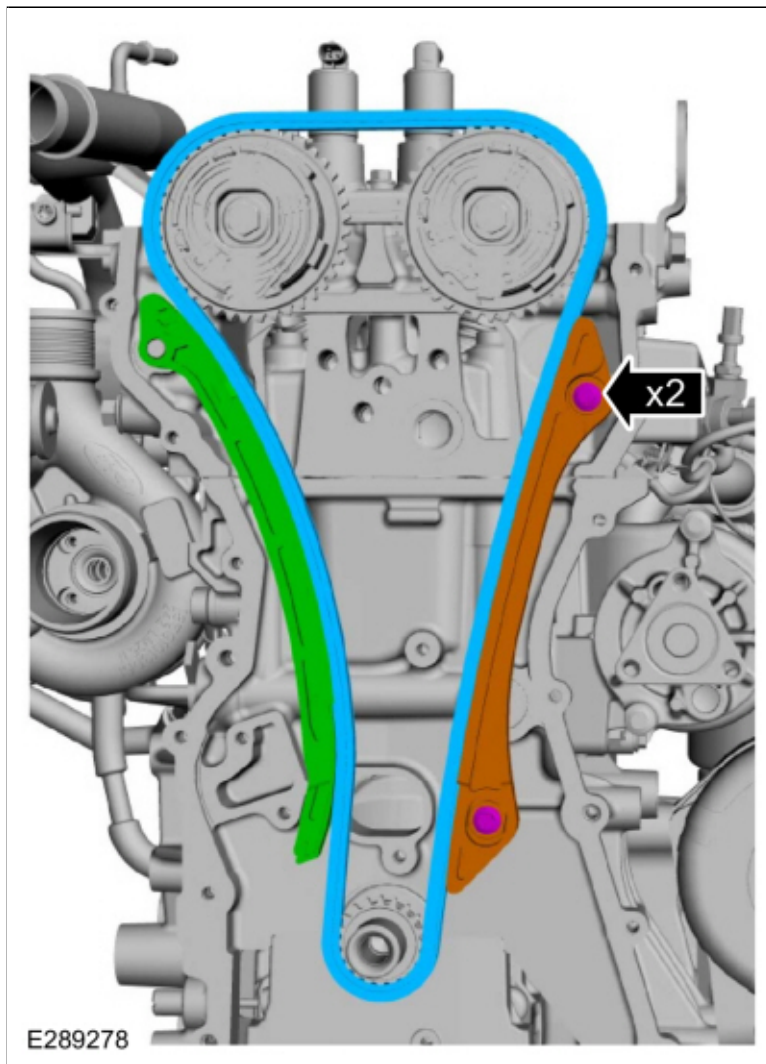
**NOTICE:** Do not loosen or remove the crankshaft pulley bolt without first installing the special tools as instructed in this procedure. The crankshaft pulley and the crankshaft timing sprocket are not keyed to the crankshaft. The crankshaft, the crankshaft sprocket and the pulley are fitted together by friction. For that reason, the crankshaft sprocket is also unfastened if the pulley bolt is loosened. Before any repair requiring loosening or removal of the crankshaft pulley bolt, the crankshaft and camshafts must be locked in place by the special service tools, otherwise severe engine damage can occur.

**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 can cause engine failure.

1. Remove the engine front cover.  
Refer to: [Engine Front Cover](#) (303-01 Engine - 2.3L EcoBoost (201kW/273PS), Removal and Installation).
2. Remove the bolts and the timing chain tensioner.

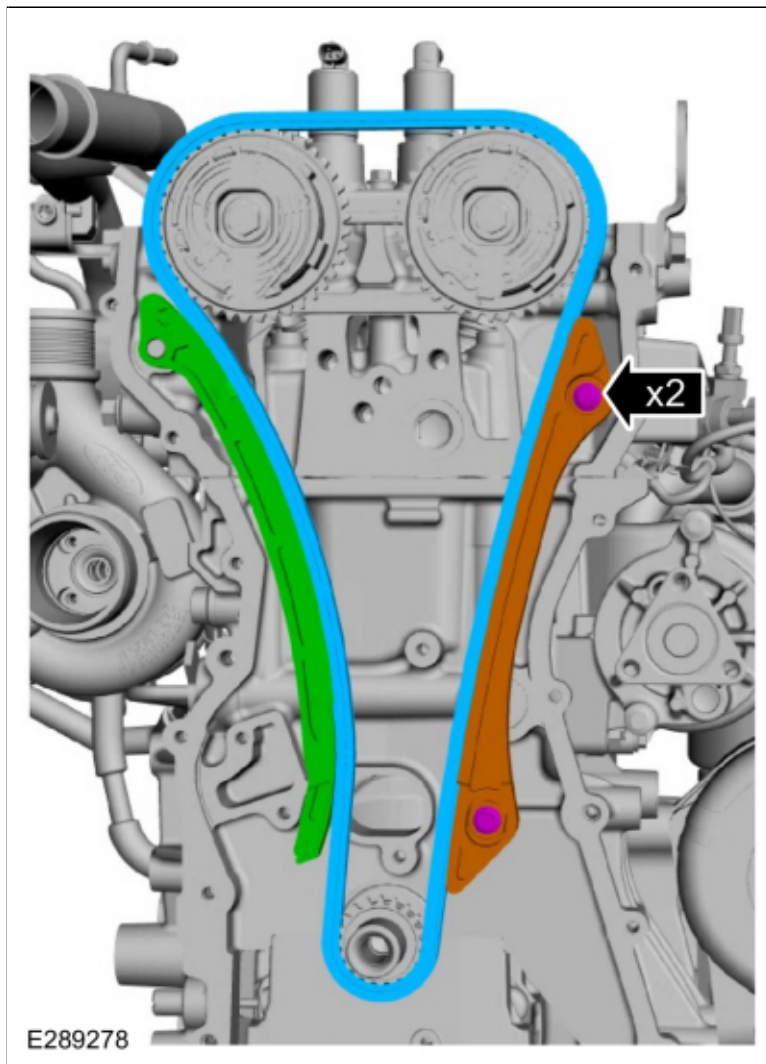


3.
  - Remove the timing chain tensioner arm.
  - Remove the bolts and the timing chain guide.
  - Remove the timing chain.



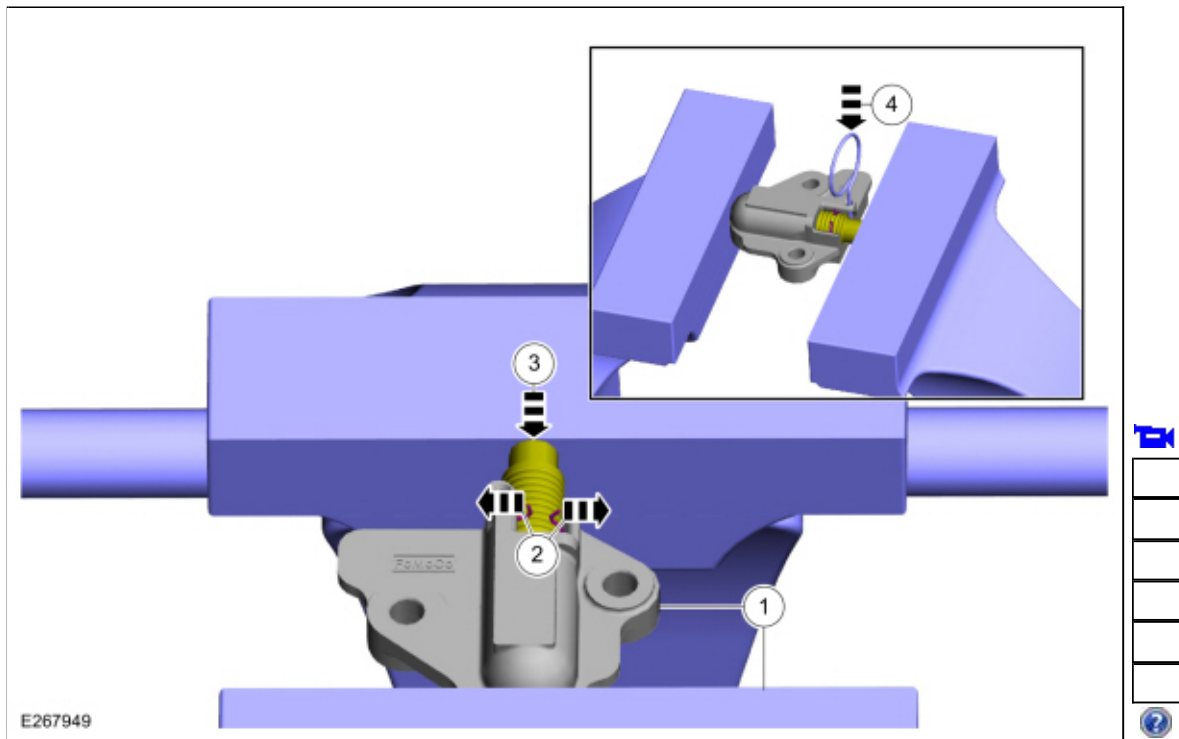
## Installation

1.
  - Install the timing chain.
  - Install the timing chain guide and the bolts.  
*Torque: 97 lb.in (11 Nm)*
  - Install the timing chain tensioner arm.



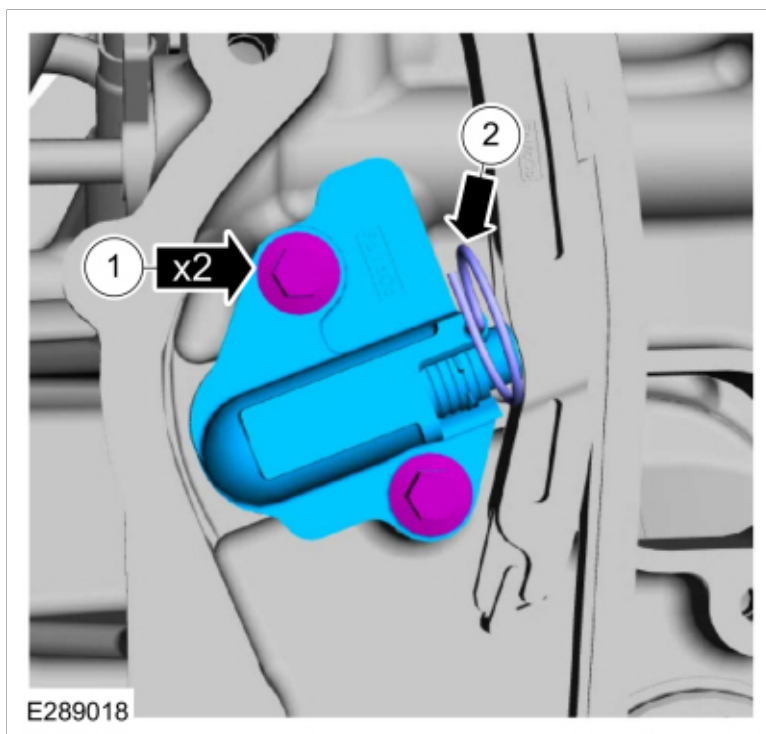
**NOTE:** If the timing chain tensioner plunger is not pinned in the compressed position, follow the next step.

2. Reset the timing chain tensioner.
  1. Position the timing chain tensioner in a soft-jawed vise.
  2. Spread the ends of the ratchet wire clip apart.
  3. Using the soft-jawed vise, compress the plunger to the reset position.
  4. Install a locking pin in the 2 holes of the timing chain tensioner body to hold the plunger in place.



3. **NOTE:** Do not remove the locking pin until the tensioner bolts are tightened.

1. Install the timing chain tensioner and the bolts.  
Torque: 97 lb.in (11 Nm)
2. Remove the locking pin.



4. **NOTICE:** Use an open-ended wrench on the flats of the camshaft to prevent the camshaft from

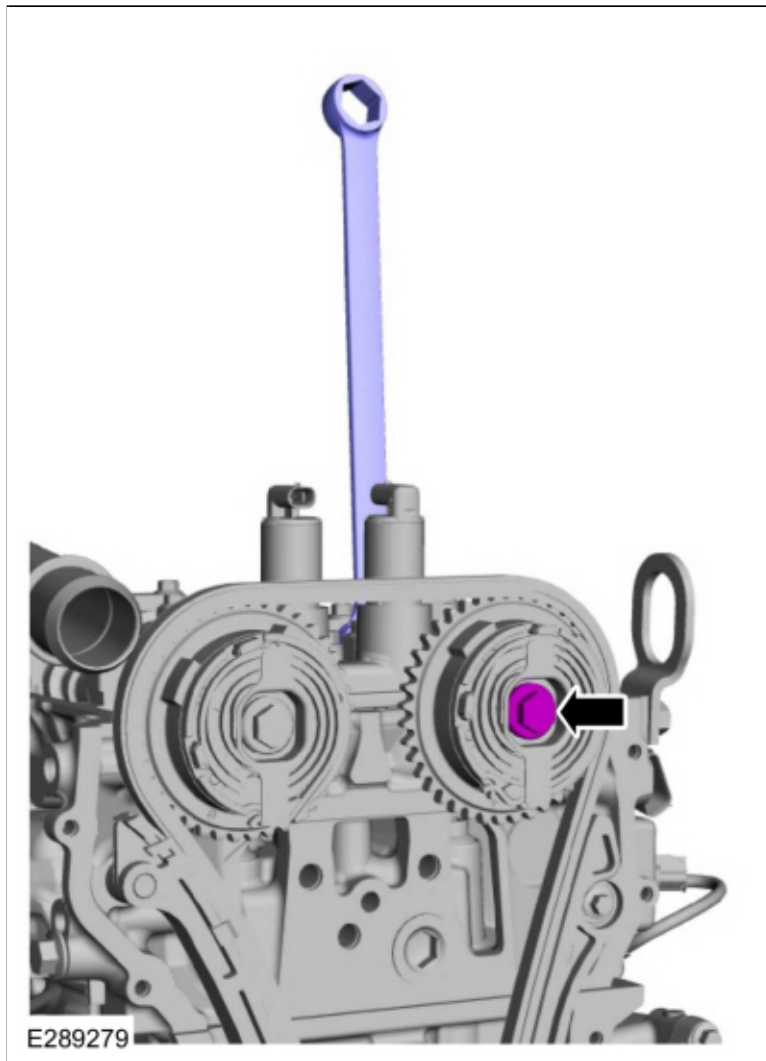
turning.

If the intake VCT unit was removed, using an open-ended wrench, tighten the new exhaust VCT unit bolt.

*Torque:*

Stage 1: 26 lb.ft (35 Nm)

Stage 2: 135°



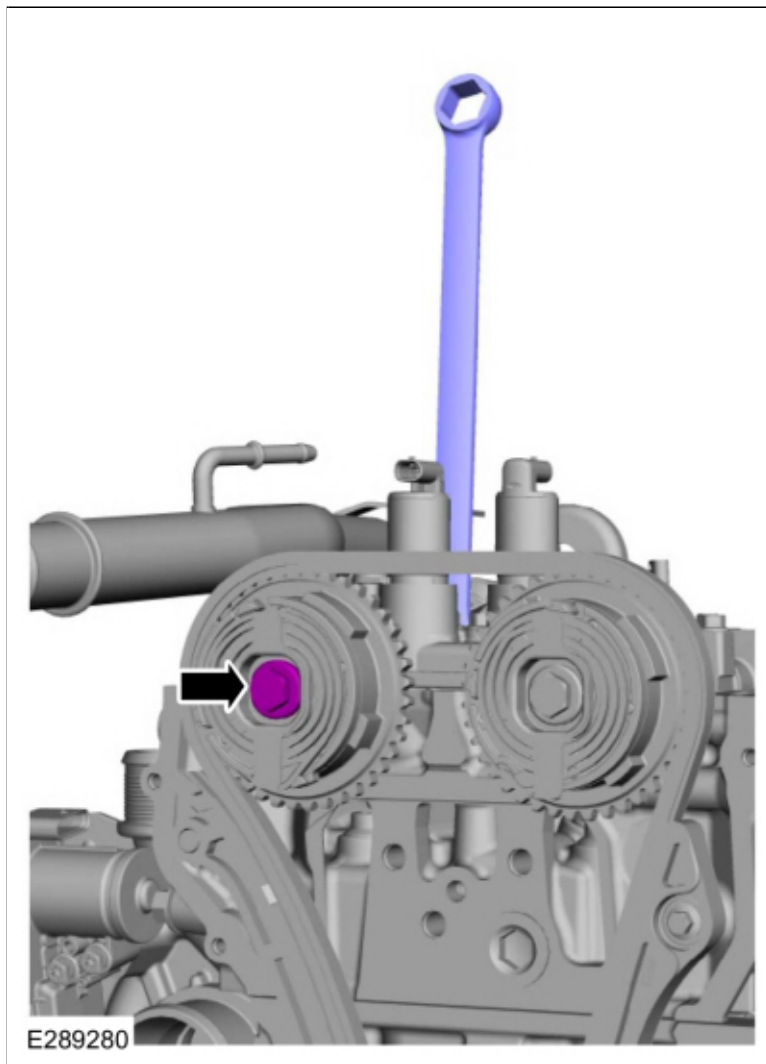
5. **NOTICE:** Use an open-ended wrench on the flats of the camshaft to prevent the camshaft from turning.

If the exhaust VCT unit was removed, using an open-ended wrench, tighten the new exhaust VCT unit bolt.

*Torque:*

Stage 1: 26 lb.ft (35 Nm)

Stage 2: 135°



6. Install the engine front cover.  
Refer to: [Engine Front Cover](#) (303-01 Engine - 2.3L EcoBoost (201kW/273PS), Removal and Installation).

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