



Crankshaft Position (CKP) Sensor

Special Tool(s) / General Equipment

 <p>E121926</p>	<p>303-1521 Alignment Tool, Crankshaft Position Sensor TKIT-2010C-FLM</p>
 <p>PZ21210</p>	<p>303-507 Timing Peg, Crankshaft TDC TKIT-2001N-FLM TKIT-2001N-ROW</p>

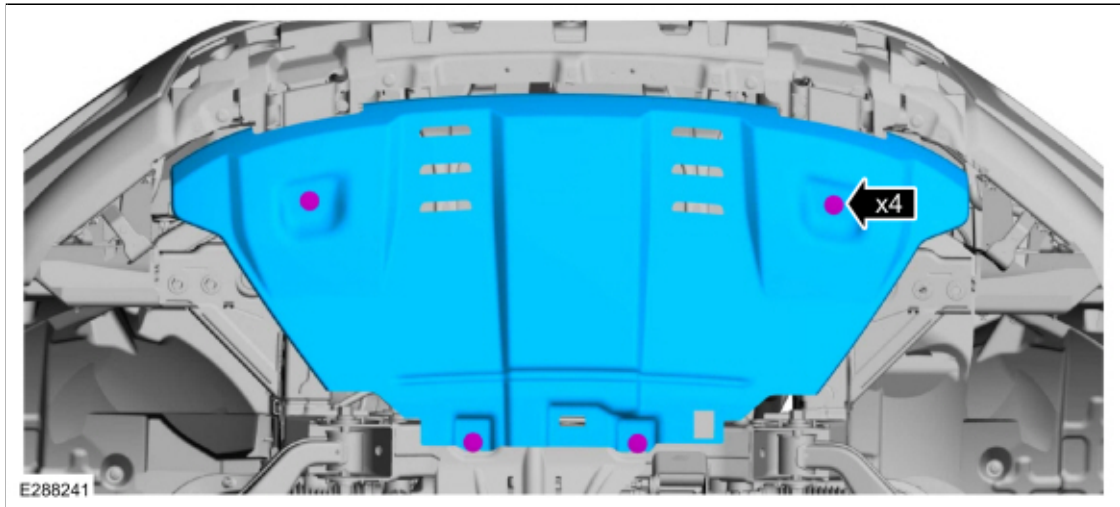
Removal

NOTICE: Do not loosen or remove the crankshaft pulley bolt. 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. All parts must be thoroughly cleaned and 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.

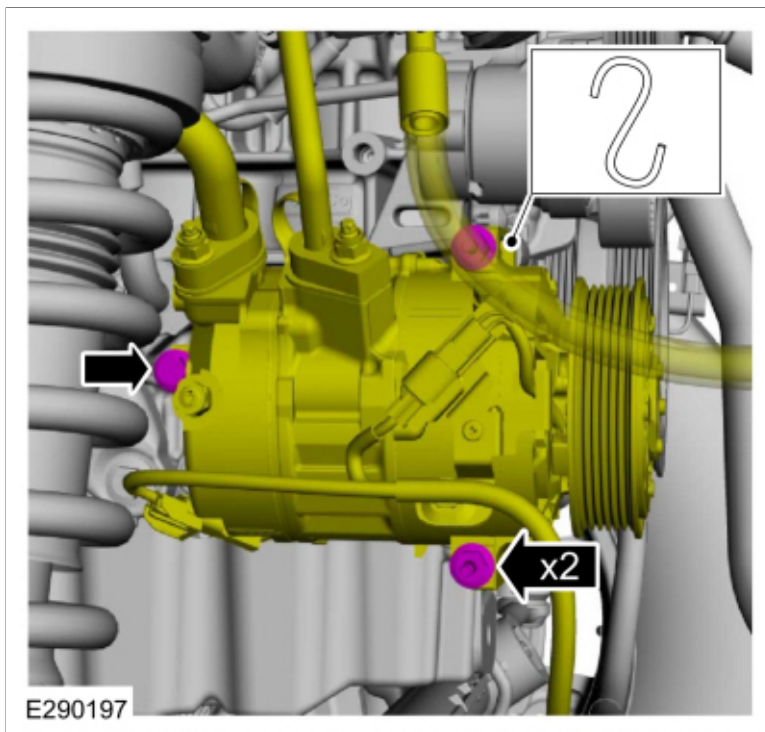
1. With the vehicle in NEUTRAL, position it on a hoist.
Refer to: [Jacking and Lifting](#) (100-02 Jacking and Lifting, Description and Operation).
2. Remove the bolts and the front skid plate.



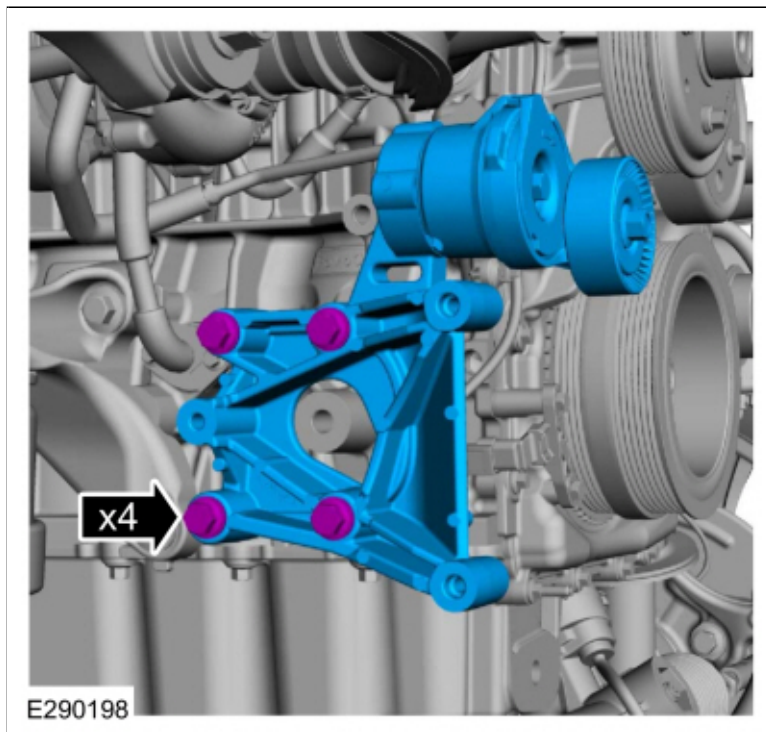


3. Remove the accessory drive belt.
Refer to: [Accessory Drive Belt](#) (303-05 Accessory Drive - 2.3L EcoBoost (201kW/273PS), Removal and Installation).
4. **NOTE:** The A/C compressor bolts will stay with the A/C compressor.

Loosen the bolts, position and support the A/C compressor aside.

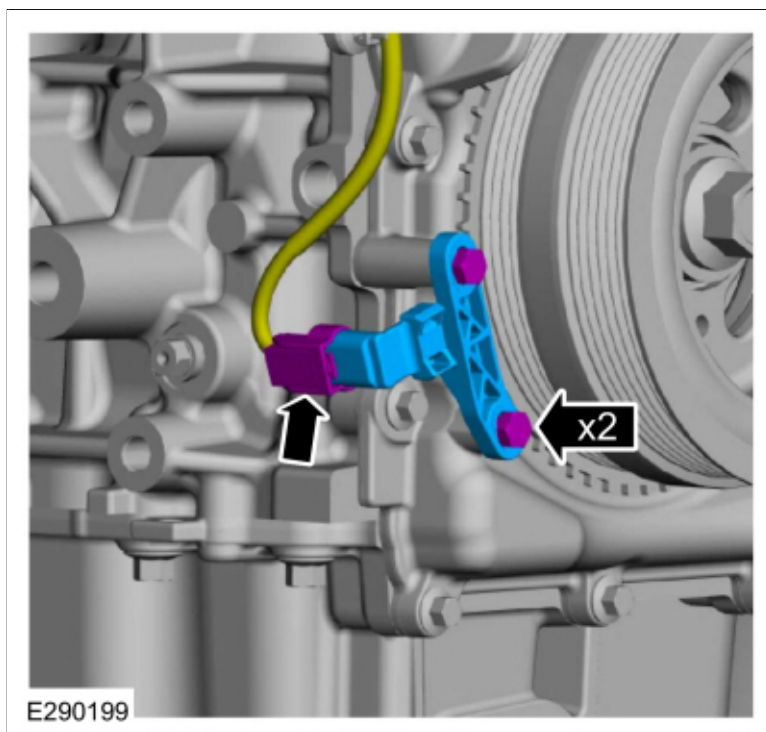


5. Remove the bolts and the A/C compressor bracket.

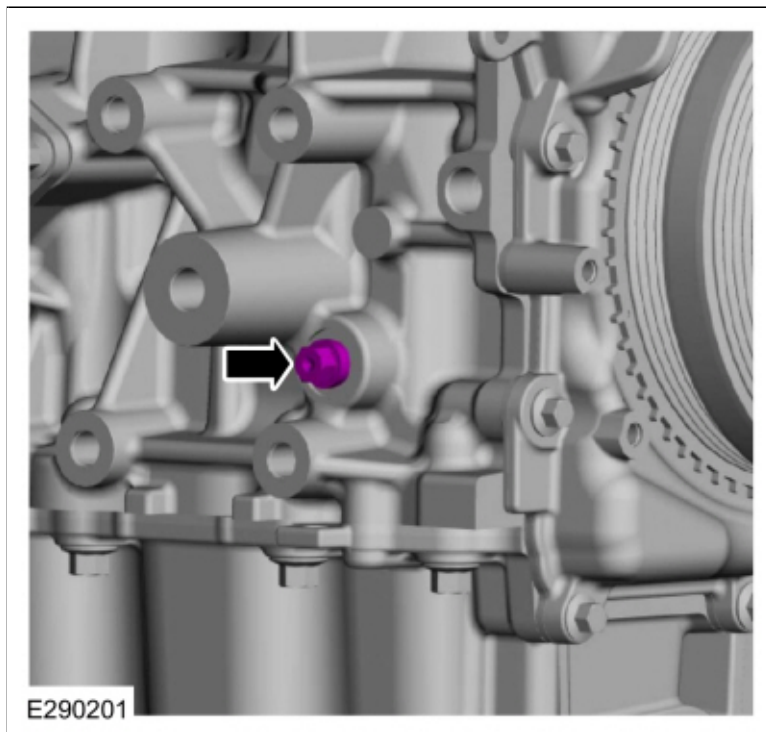


6.

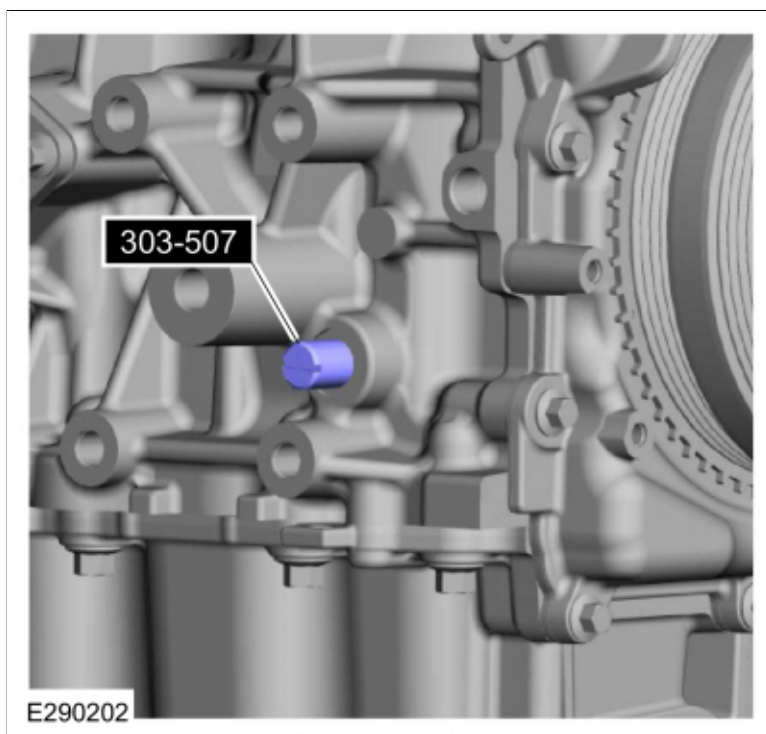
- Disconnect the CKP sensor electrical connector.
- Remove the bolts and the CKP sensor.



7. Remove the engine plug bolt.



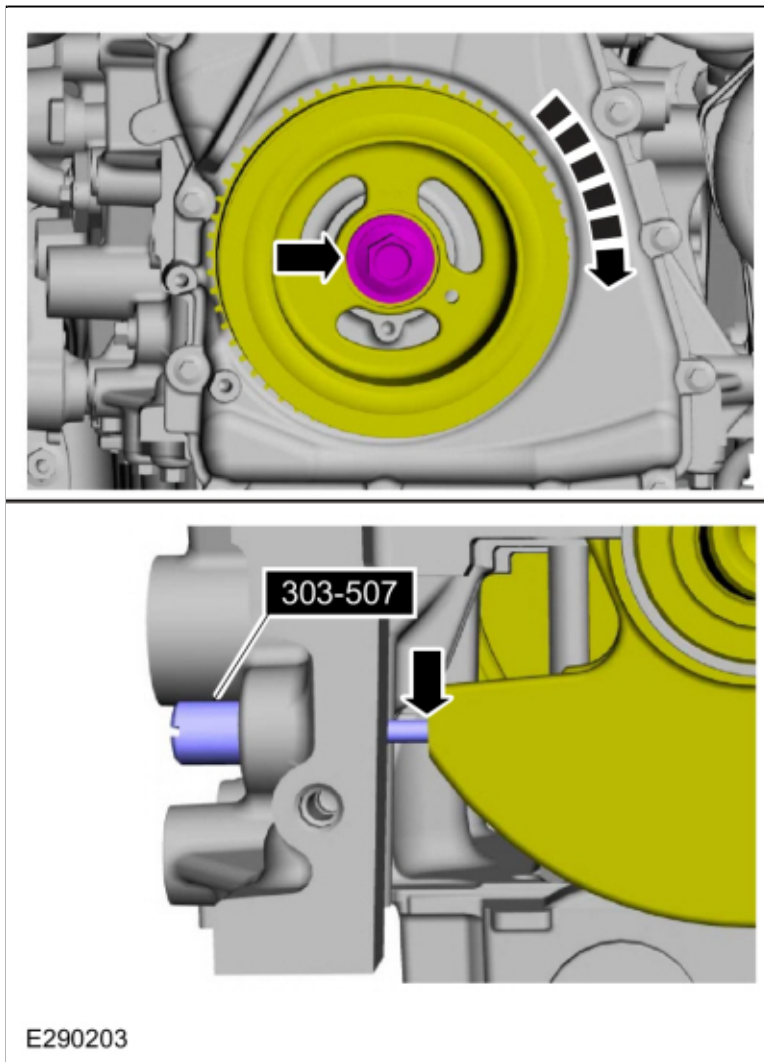
8. Install Special Service Tool: [303-507 Timing Peg, Crankshaft TDC](#).



9. **NOTE:** The Crankshaft TDC Timing Peg will contact the crankshaft and prevent it from turning past TDC. However, the crankshaft can still be rotated in the counterclockwise direction. The crankshaft must remain at the TDC position during the crankshaft pulley removal and installation.

NOTE: The engine front cover is removed from graphic for clarity.

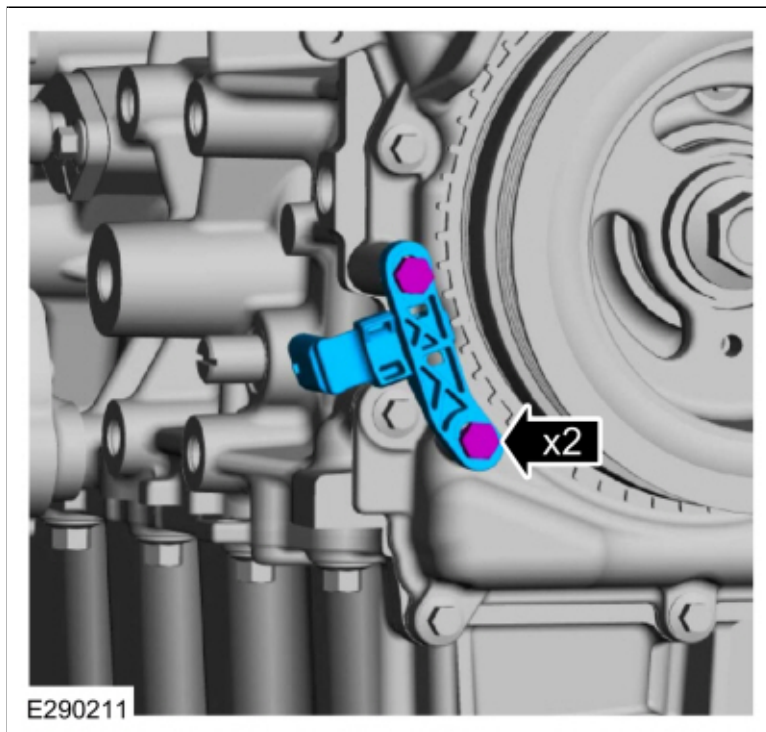
Rotate the crankshaft clockwise until the contacts the special tool.
Use Special Service Tool: [303-507 Timing Peg, Crankshaft TDC](#).



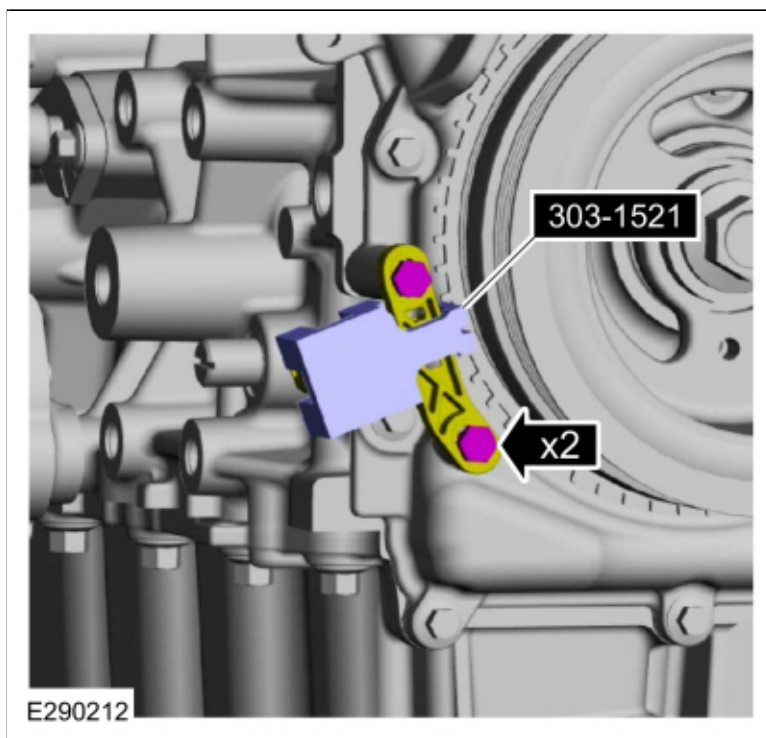
Installation

1. **NOTE:** Do not tighten the CKP sensor bolts at this time.

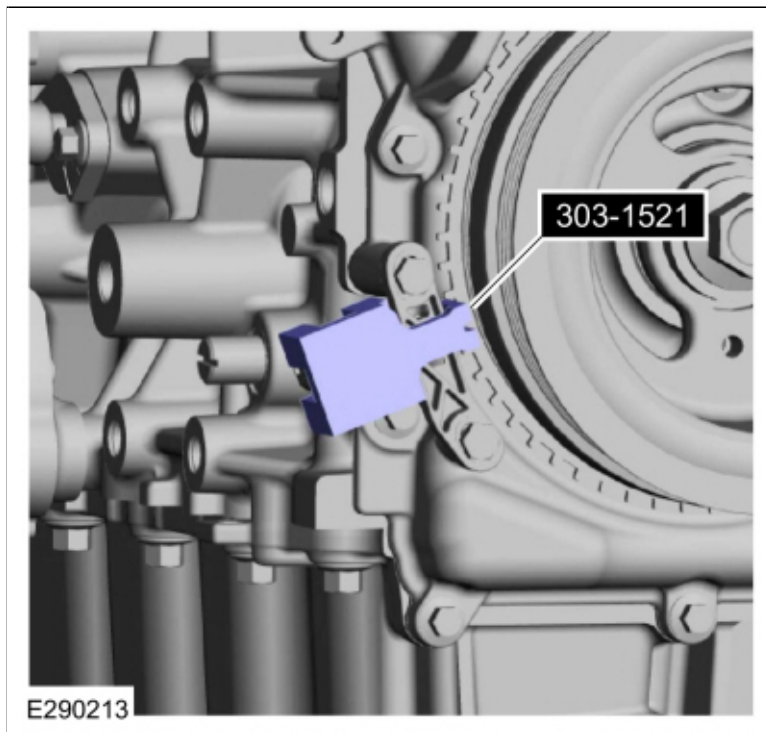
Install the CKP sensor and the bolts finger tight.



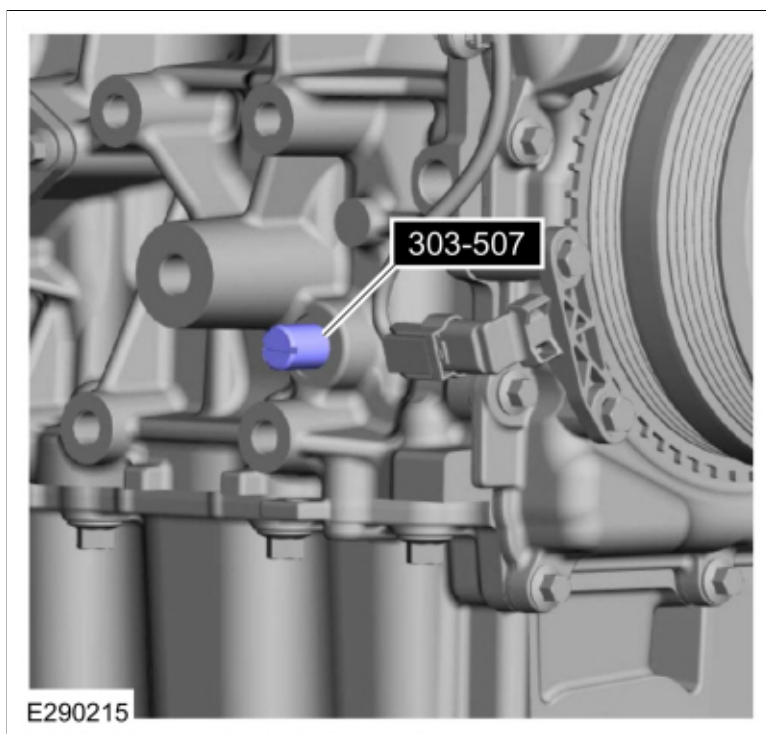
2. Install the special tool onto the CKP sensor and the tooth of the crankshaft pulley trigger wheel. Tighten the CKP sensor bolts.
 Use Special Service Tool: [303-1521 Alignment Tool, Crankshaft Position Sensor](#).
 Torque: 97 lb.in (11 Nm)



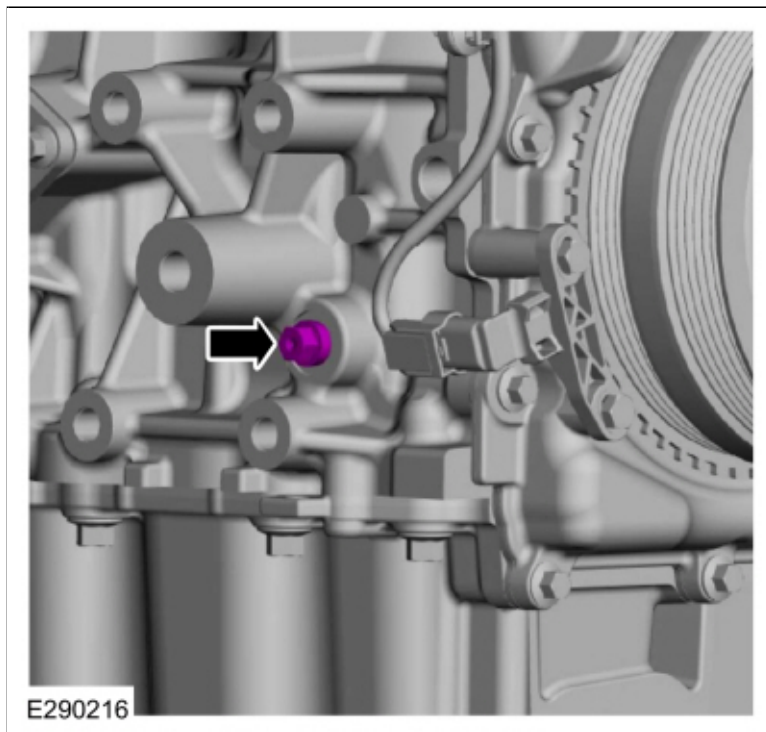
3. Remove Special Service Tool: [303-1521 Alignment Tool, Crankshaft Position Sensor](#).



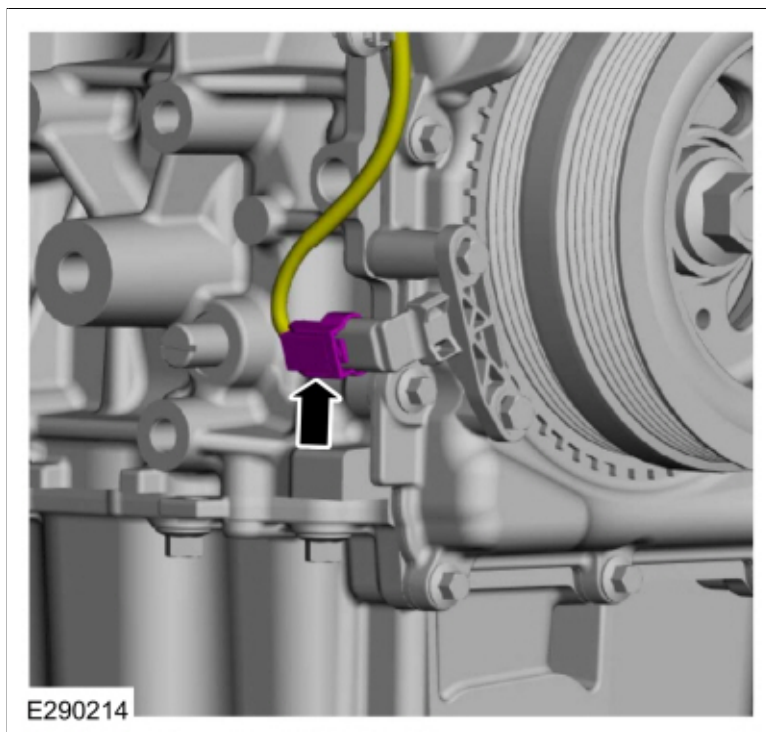
4. Remove Special Service Tool: [303-507 Timing Peg, Crankshaft TDC](#).



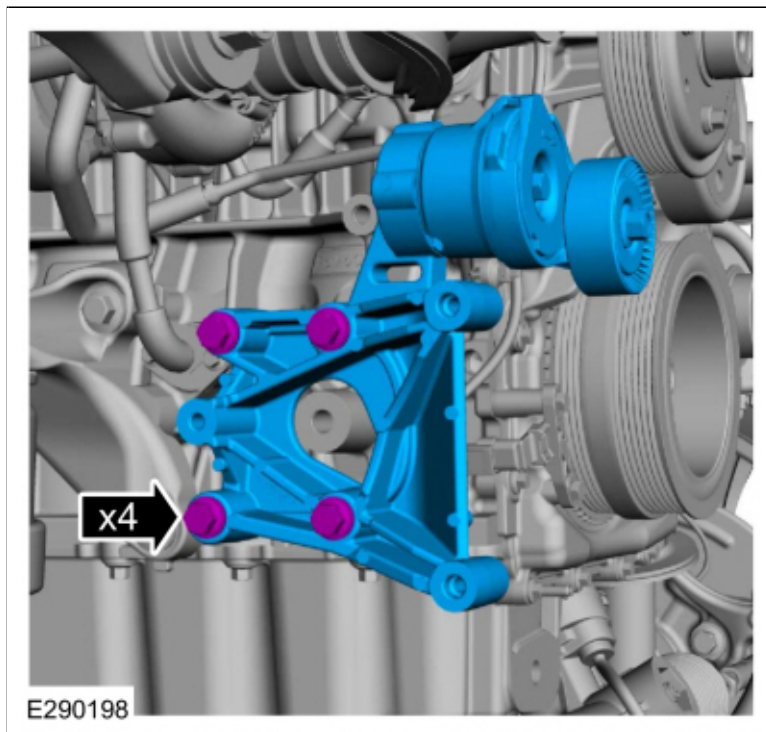
5. Install the engine plug bolt.
Torque: 177 lb.in (20 Nm)



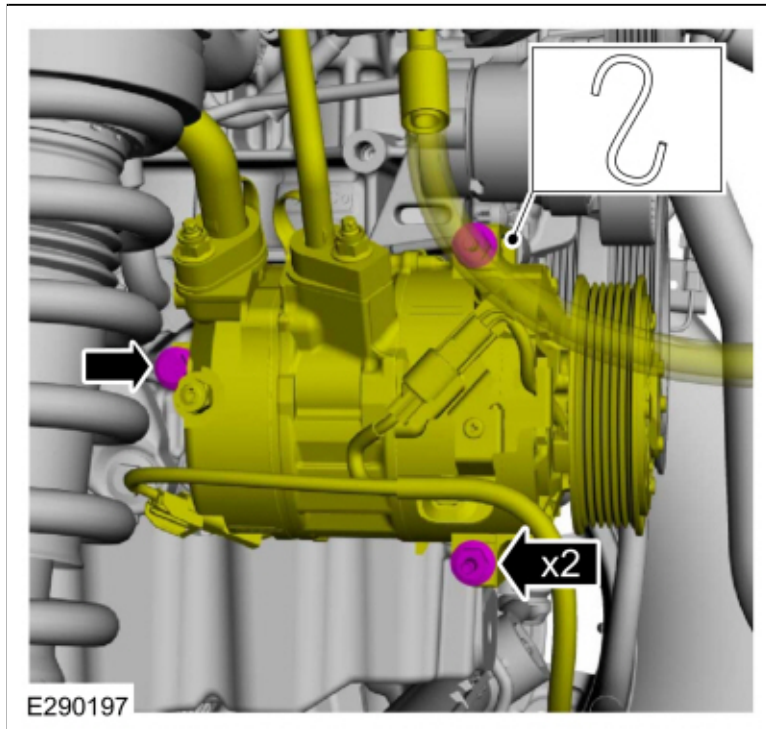
6. Connect the CKP sensor electrical connector.



7. Install the A/C compressor bracket and the bolts.
Torque: 35 lb.ft (48 Nm)

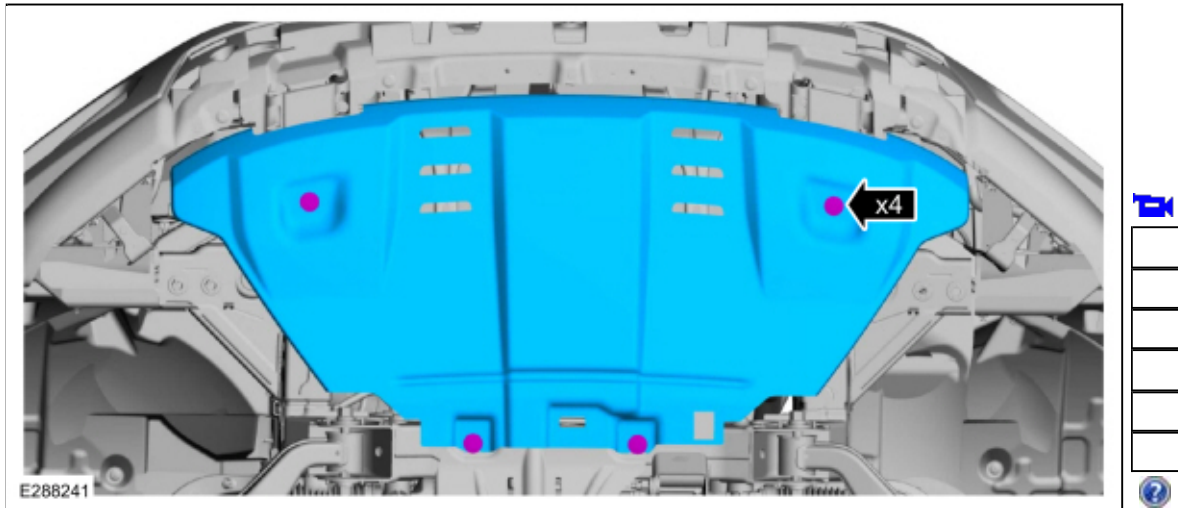


8. Remove the support and position the A/C compressor and tighten the bolts.
Torque: 18 lb.ft (25 Nm)



9. Install the accessory drive belt.
 Refer to: [Accessory Drive Belt](#) (303-05 Accessory Drive - 2.3L EcoBoost (201kW/273PS), Removal and Installation).

10. Install the front skid plate and the bolts.
Torque: 22 lb.ft (30 Nm)



11. Use the Powertrain Control Module (PCM) Misfire Monitor Profile Correction routine in the diagnostic scan tool.

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