

# **Component Procedures: Crankshaft Position Sensor**

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# Component Procedures: Crankshaft Position Sensor

## Parts and Labor (itype\_189)

### Parts

Qualifier	Part #	Name	Price	Note
Crankshaft Position Sensor	12615626	Crankshaft Position Se?	30.30	

### Labor

Operation	Qualifier Path	Skill	Std Hrs	Wty Hrs
Remove & Replace	Powertrain Control > Crankshaft Position Sens?	B	0.5	0.3

## Crankshaft Position Sensor Replacement (Article 11411)

### Removal Procedure

- When major components are removed from the vehicle and the vehicle is supported by a hoist, support the vehicle with jack stands at the opposite end from which the components are being removed and strap the vehicle to the hoist.
- When performing work in the engine compartment or under the vehicle, ensure that the hood is fully open, or opened to its secondary latch. When the hood is opened to the secondary latch, the vehicle will disable the remote start features from the key fob and OnStar mobile app. Failure to open the hood, or open the hood to the secondary latch while doing a repair in the engine compartment or under the vehicle can result in inadvertent vehicle starting which could result in personal injury or damage to a vehicle.
- Turn the ignition OFF. Raise and support the vehicle. Refer to Lifting and Jacking the Vehicle .
- If equipped with all-wheel drive, remove the right side catalytic converter . Refer to Catalytic Converter Replacement - Right Side .
- Reposition the wiring harness heat shield to obtain access. Click for full-size image
- Disconnect the crankshaft position ( CKP ) harness connector (3) from the CKP.
- Remove the CKP to engine block retaining bolt (1) from the CKP sensor (2). Click for full-size image
- Remove the CKP sensor (2) from the engine block.

### Installation Procedure

- Install the CKP sensor (2) to the engine block. Click for full-size image
- Install the CKP sensor to engine block retaining bolt (1) and tighten to 10 Nm (89 lb in) .
- Connect the CKP electrical connector (3) to the CKP sensor. Click for full-size image
- If equipped with all-wheel drive, install the right side catalytic converter. Refer to Catalytic Converter Replacement - Right Side .
- Lower the vehicle.
- Perform the crankshaft variation learn procedure. Refer to Control Module References .

## Crankshaft Position Variation Learn (Article 11412)

- An engine replacement
- A engine control module ( ECM ) or body control module ( BCM ) replacement
- A crankshaft balancer replacement
- A crankshaft removal and/or replacement
- A crankshaft position sensor disturbance/removal and/or replacement
- Any engine repairs which disturb the crankshaft to crankshaft position sensor relationship.
- Crankshaft position sensors activity—If there is a crankshaft position sensor condition, refer to the applicable DTC that set.
- Camshaft position sensor signal activity—If there is a camshaft position sensor signal condition, refer to the applicable DTC that set.
- Engine coolant temperature ( ECT )—If the engine coolant temperature is not warm enough, idle the engine until the engine coolant temperature reaches the correct temperature.
- Ignition ON, observe the DTC information with a scan tool. Verify no other DTCs are set, except DTCs P0300–P0306, or P0315.
- If DTCs are set, except DTCs P0300–P0306, or P0315, refer to Diagnostic Trouble Code (DTC) List - Vehicle for further diagnosis.
- Select the Crankshaft Position Variation Learn Procedure with a scan tool and follow the on screen instructions:
- Verify DTC P0315 does not set.

- If DTC P0315 set, or another DTC is present refer to Diagnostic Trouble Code (DTC) List - Vehicle for the applicable DTC that set.
- If the DTC does not set
- All OK.