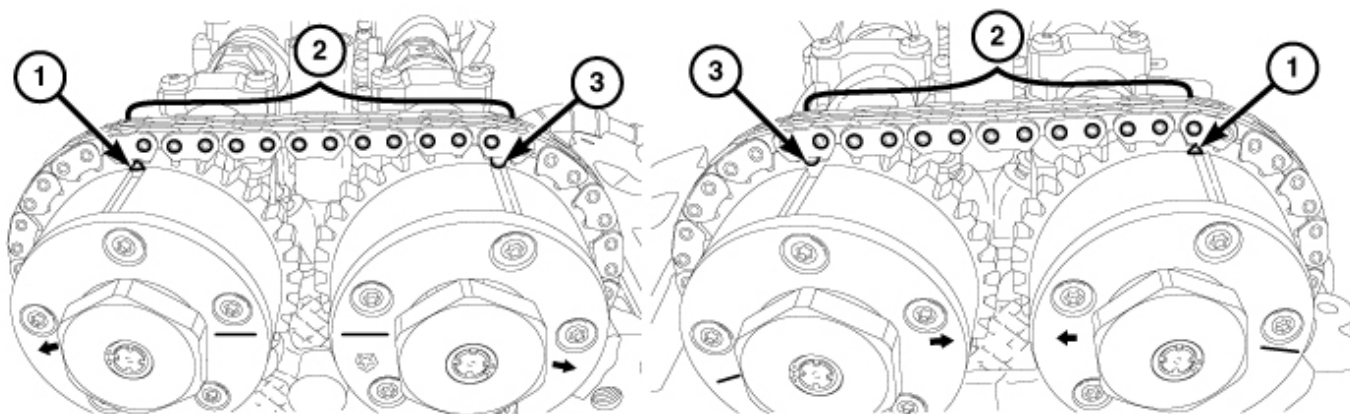


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FactoryManuals.net is a great resource for anyone who wants to save money on repairs by doing their own work. The manuals provide detailed instructions and diagrams that make it easy to understand how to fix a vehicle.

2011 JEEP Wrangler Rubicon OEM Service and Repair Workshop Manual

[Go to manual page](#)



2714685

1 - Exhaust Phaser Triangle Marking

2 - Twelve Chain Link Pins Between Markings

3 - Intake Phaser Circle Marking

NOTE

The phaser markings could align with either an external or internal chain link. Either alignment is acceptable as long as there are twelve chain pins between the markings.

5. There should be twelve chain pins **BETWEEN** the exhaust cam phaser triangle marking and the intake cam phaser circle marking as viewed from either the front or rear of the cam phasers.
6. If the engine timing is not correct, proceed to Timing Chain and Sprockets for service procedures ([Refer to Engine/Valve Timing/CHAIN and SPROCKETS, Timing/Removal and Installation](#))(Refer To List 3).

Refer To List:

List 1

- [09 - Engine, 2.0L / Cylinder Head / COVER\(S\), Cylinder Head / Removal and Installation](#)
- [09 - Engine, 3.6L / Cylinder Head / COVER\(S\), Cylinder Head / Removal and Installation](#)
- [09 - Engine, 5.7L / Cylinder Head / COVER\(S\), Cylinder Head / Removal and Installation](#)

List 2

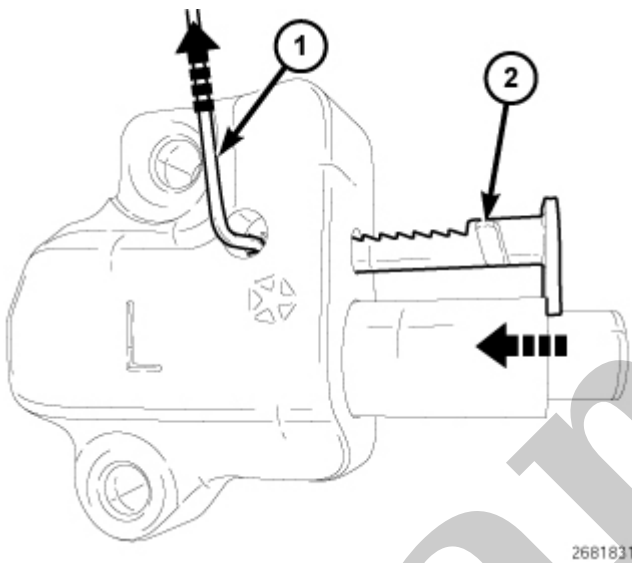
- [09 - Engine, 2.0L / Ignition Control / SPARK PLUG / Removal and Installation](#)
- [09 - Engine, 3.6L / Ignition Control / SPARK PLUG / Removal and Installation](#)

YOUR CURRENT VEHICLE

Resetting Left Cam Chain Tensioner

RESETTING LEFT CAM CHAIN TENSIONER

ENGINE TIMING COVER REMOVED



1 - Allen Wrench

2 - Rack Slot

NOTE

The slot in the rack provides an anchor point for a pin that holds the rack in the retracted position.

1. Using a suitable tool, such as an Allen wrench, lift the pawl off of the rack.
2. While holding the pawl off of the rack, push the rack and the piston into the tensioner body.

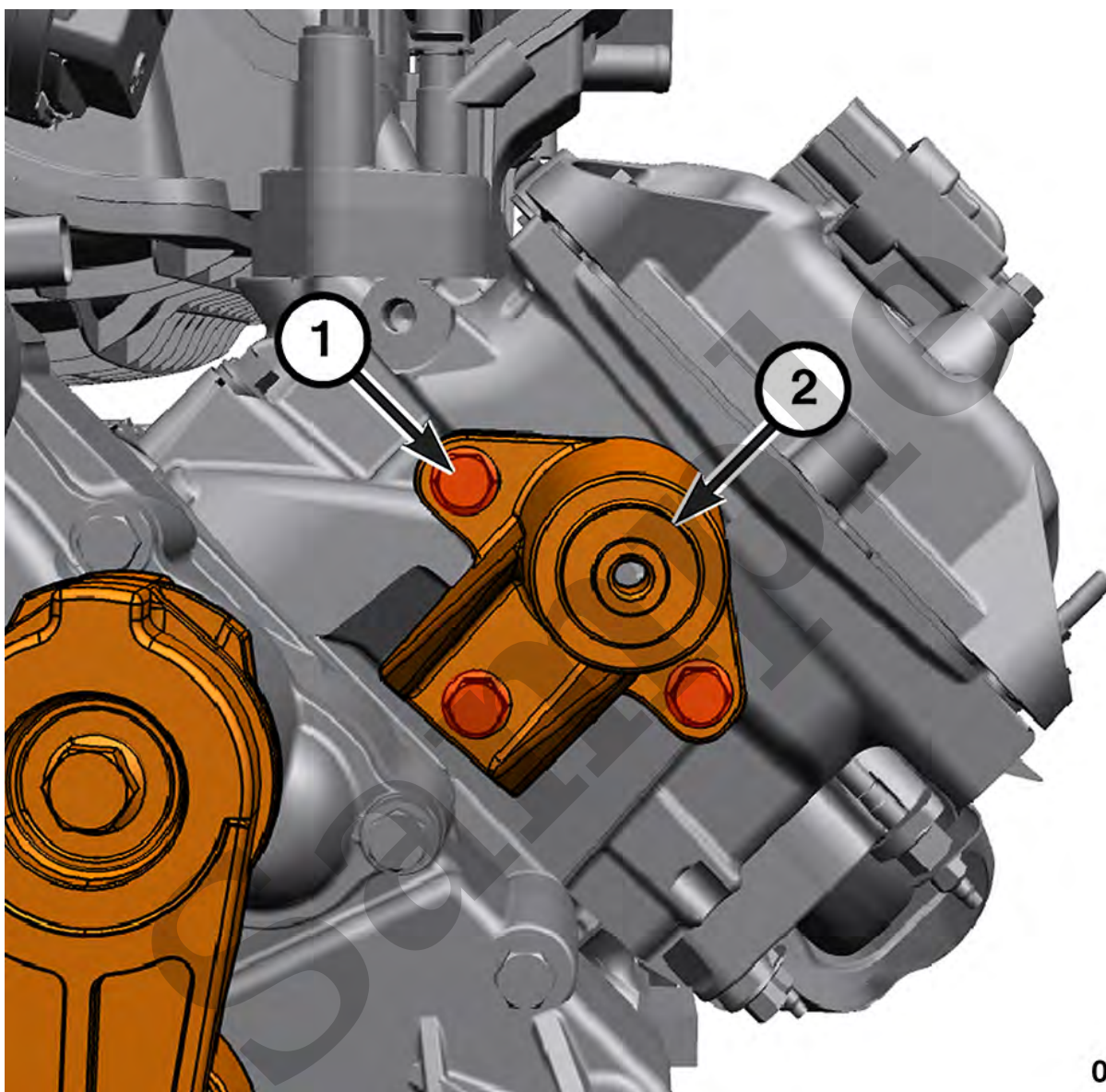
into place between the cylinder head and the cam chain guide to force the rack and piston back into the tensioner body. The holder must remain in place during service to keep the rack and piston in the retracted position.

Sample

1 - Idler Pulley Bolt

2 - Idler Pulley

2. Remove the idler pulley bolt and the idler pulley.



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1 - Idler Pulley Bracket Bolts

2 - Idler Pulley Bracket

3. If necessary, remove the idler pulley bracket bolts and the idler pulley bracket.

INSTALLATION

Follow the removal procedure in reverse for general reassembly of the components on the vehicle.

1 - Idler Pulley Bolt

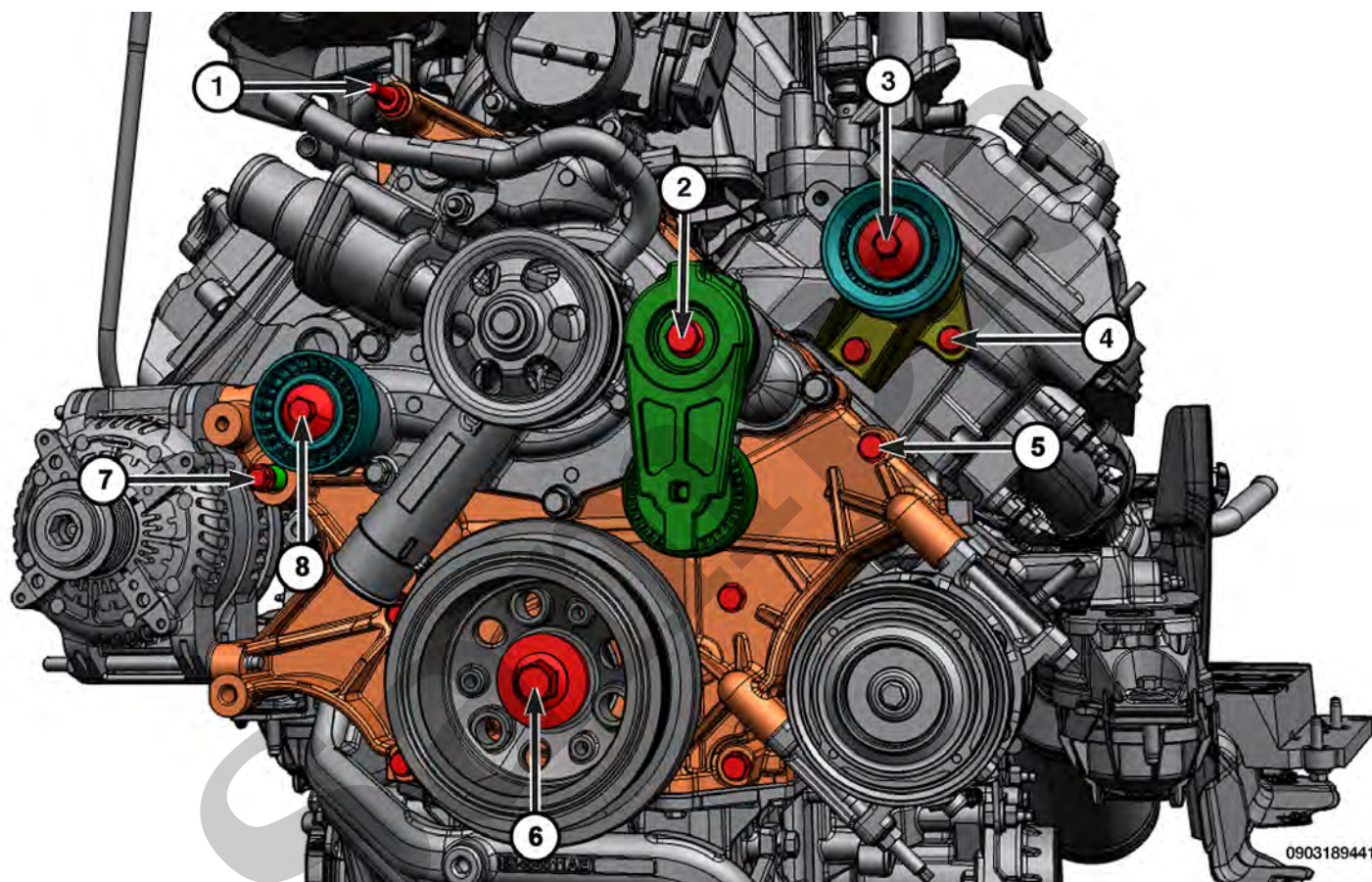
2 - Idler Pulley

2. Remove the idler pulley bolt and the idler pulley.

INSTALLATION

Follow the removal procedure in reverse for general reassembly of the components on the vehicle.

TORQUE SPECIFICATIONS - FRONT ENGINE



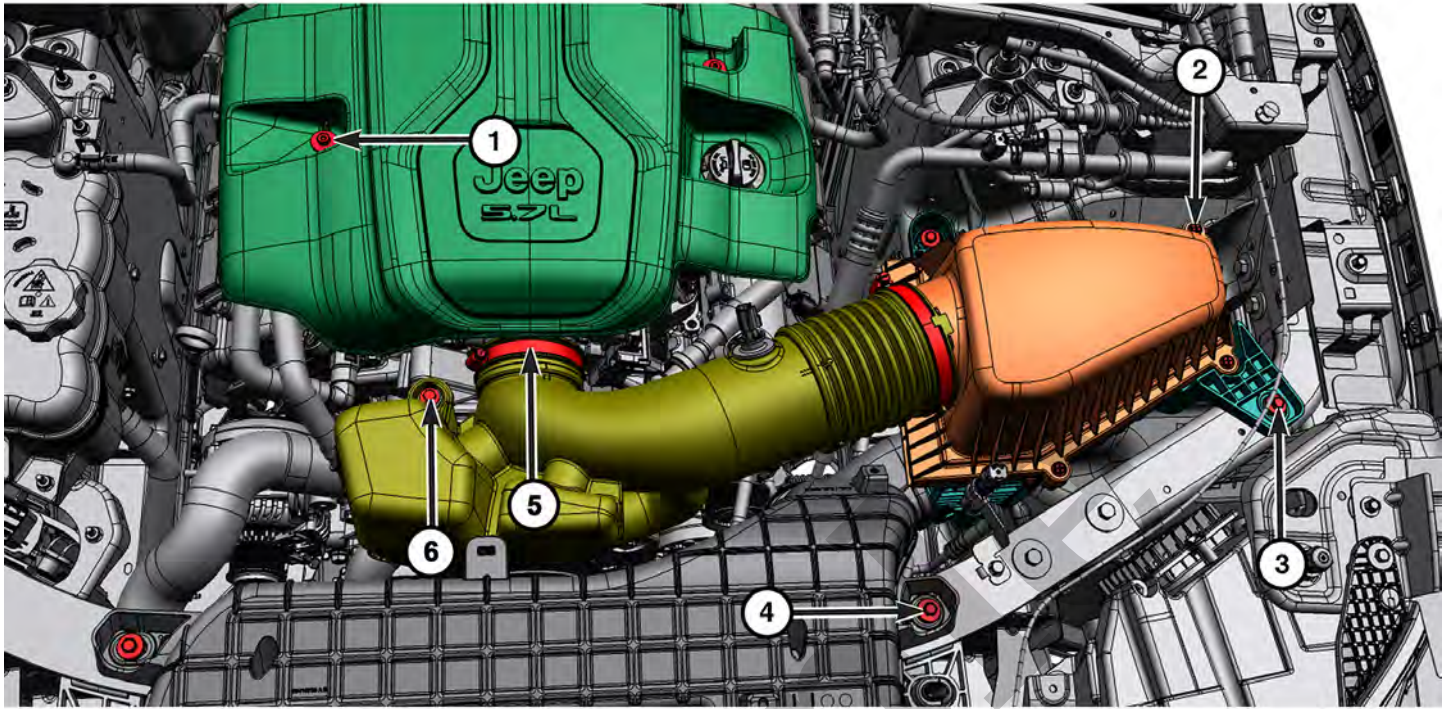
CALLOUT	DESCRIPTION	SPECIFICATION	COMMENTS
1	Timing Chain Cover Stud Bolts	28 N·m (21 Ft. Lbs.)	-
2	Belt Tensioner Bolt	55 N·m (41 Ft. Lbs.)	-
3	Idler Pulley Bolt	29 N·m (21 Ft. Lbs.)	-
4	Idler Pulley Bracket Bolts	29 N·m (21 Ft. Lbs.)	-

5	Timing Chain Cover Bolts	28 N·m (21 Ft. Lbs.)	–
6	Vibration Damper Bolt	185 N·m (136 Ft. Lbs.)	–
7	Timing Chain Cover Slide Bushing Bolt	25 N·m (18 Ft. Lbs.)	–
8	Idler Pulley Bolt	55 N·m (41 Ft. Lbs.)	–

Refer To List:

List 1

- [09 - Engine, 2.0L / Accessory Drive / BELT, Serpentine / Removal and Installation](#)
- [09 - Engine, 3.6L / Accessory Drive / BELT, Serpentine / Removal and Installation](#)
- [09 - Engine, 5.7L / Accessory Drive / BELT, Serpentine / Removal and Installation](#)



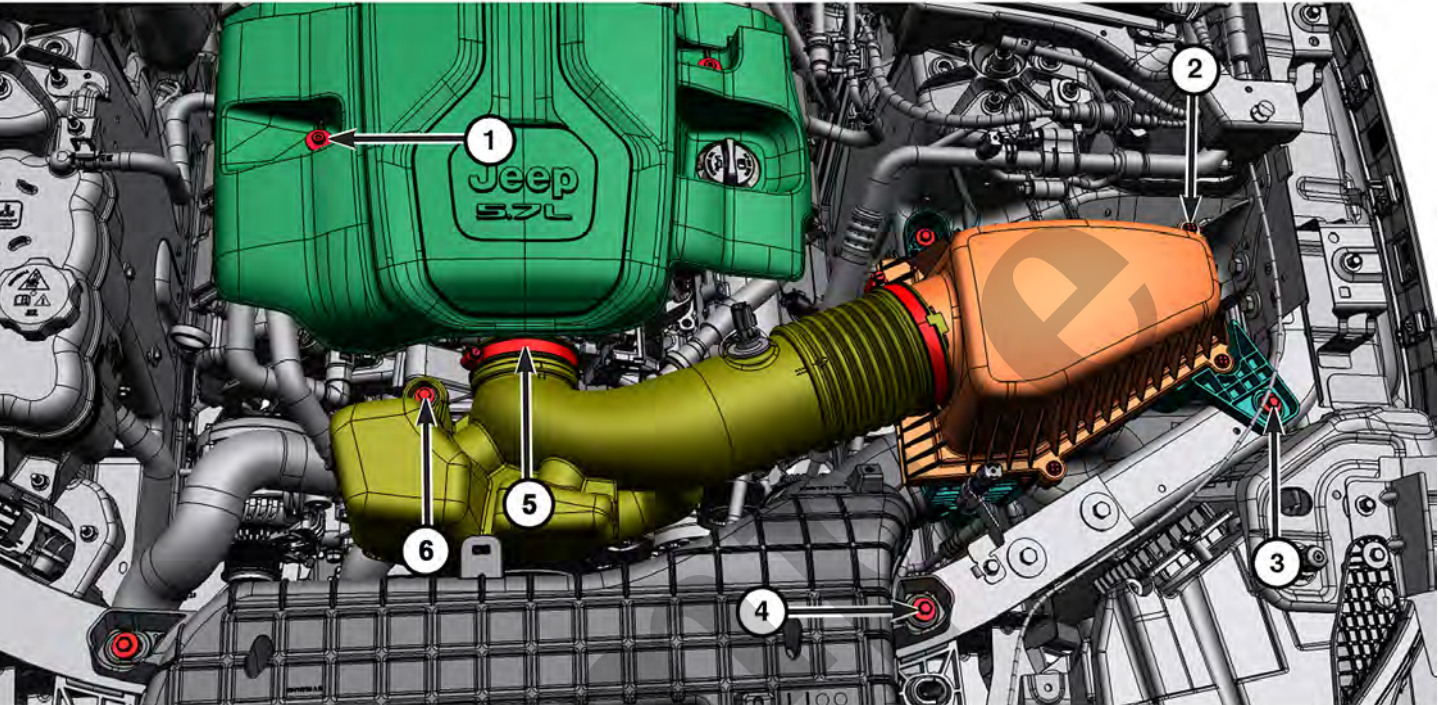
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CALLOUT	DESCRIPTION	SPECIFICATION	COMMENTS
1	Engine Cover Nut	5 N·m (44 In. Lbs.)	–
2	Air Cleaner Body Cover Bolts	4 N·m (35 In. Lbs.)	–
3	Air Cleaner Body Bracket to Frame Bolts	7 N·m (62 In. Lbs.)	–
4	Air Intake to Upper Radiator Support	7 N·m (62 In. Lbs.)	–
5	Clean Air Hose Clamps	4 N·m (35 In. Lbs.)	–
6	Clean Air Hose Bolt	7 N·m (62 In. Lbs.)	–

INSTALLATION

Follow the removal procedure in reverse for general reassembly of the components on the vehicle.

TORQUE SPECIFICATIONS - AIR INTAKE



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CALLOUT	DESCRIPTION	SPECIFICATION	COMMENTS
1	Engine Cover Nut	5 N·m (44 In. Lbs.)	–
2	Air Cleaner Body Cover Bolts	4 N·m (35 In. Lbs.)	–
3	Air Cleaner Body Bracket to Frame Bolts	7 N·m (62 In. Lbs.)	–
4	Air Intake to Upper Radiator Support	7 N·m (62 In. Lbs.)	–
5	Clean Air Hose Clamps	4 N·m (35 In. Lbs.)	–
6	Clean Air Hose Bolt	7 N·m (62 In. Lbs.)	–

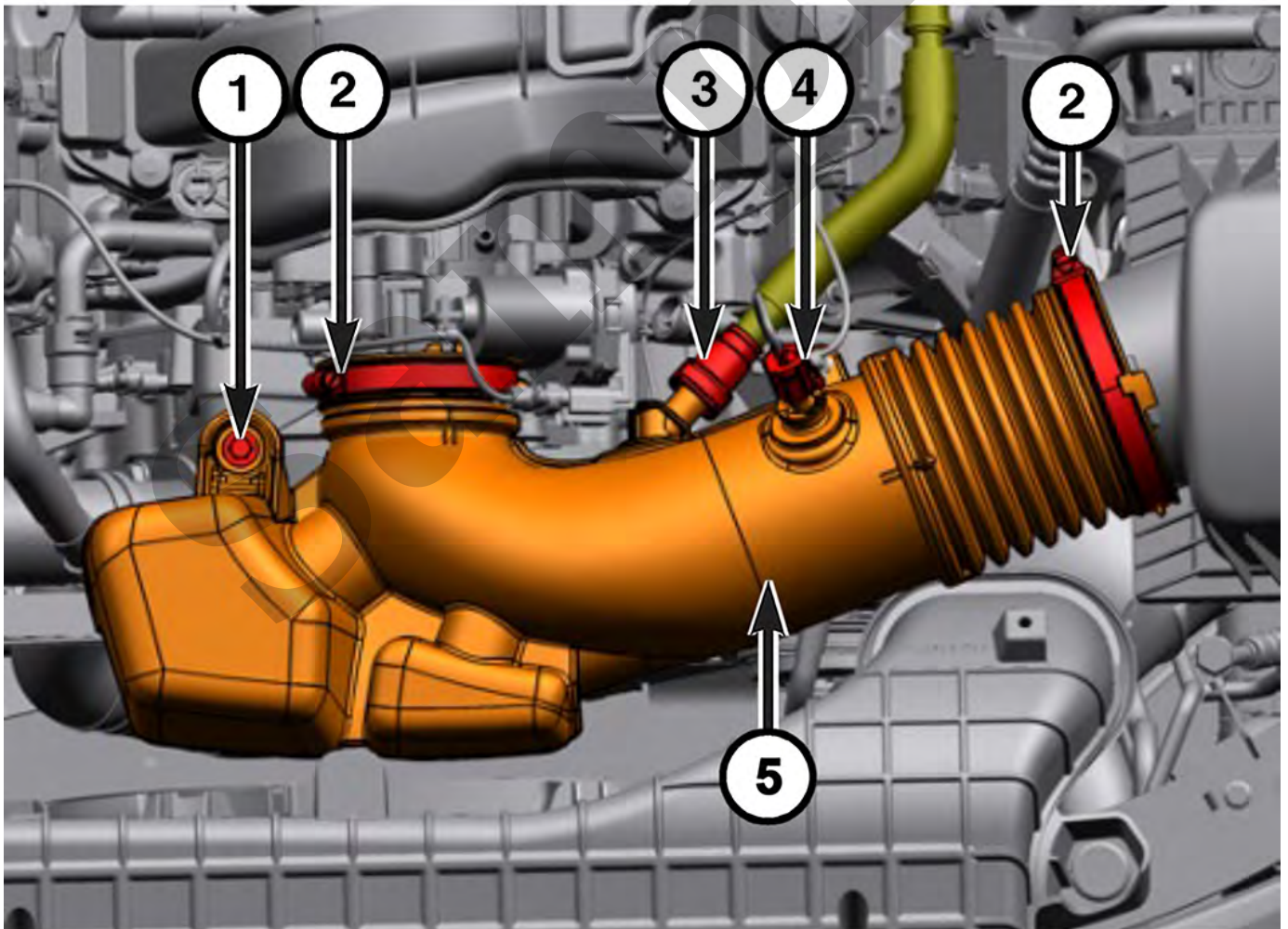
YOUR CURRENT VEHICLE

Clean Air Hose

CLEAN AIR HOSE

REMOVAL

1. Remove the engine cover.



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