



2006 Kia Rio Engine Valve Cover Gasket Replacement

This guide will take you through the process of removing the current valve cover gasket in a 2006 Kia Rio and replacing it with a new seal.

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INTRODUCTION

If your 2006 Kia Rio's engine is leaking oil from the top of the engine, the valve cover gasket may need to be replaced. This guide will take you through the steps to remove the valve cover, replace the seal using a gasket and a gasket maker, and re-install the cover.

The valve cover provides access to the valves and timing mechanisms of your engine when removed. The valve cover gasket seals the cover and prevents oil from leaking out of the engine. The valve cover gasket is crucial to preventing oil leaks. If the gasket is damaged, these leaks can cause your engine's performance to decrease, or even fail if left unchecked.

Warnings

- **Step 16 will have you apply Gasket Maker to the engine block.** Use gloves and coverings when handling the Gasket Maker.
- **Steps 15-18 will expose the inner mechanisms of the engine.** Dust and other contaminants can damage these components. We cannot recommend leaving your engine exposed for long periods of time. Either be prepared to finish this project in a single sitting or take precautions to cover the exposed engine when not present.
- **As with all automobile work, power off the ignition, engage the parking brake, and disconnect the battery before starting.**



TOOLS:

- [Socket Wrench](#) (1)

Any size will do. 3/8" is recommended

- [Permatex Ultra Black Gasket Maker](#) (1)
- [10mm Socket](#) (1)
- [12mm Socket](#) (1)
- [Large Needle Nose Pliers](#) (1)
- [12mm Wrench](#) (1)
- [Latex or nitrile gloves](#) (1)



PARTS:

- [2006 Kia Rio Valve Cover Gasket](#) (1)
(optional)

Step 1 — Valve Cover Gasket



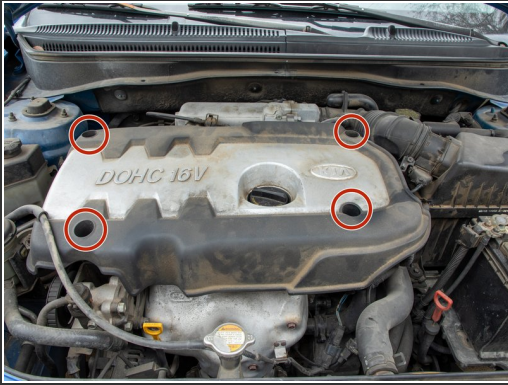
- Open the car's hood using the latch under the steering wheel, next to the door.

Step 2



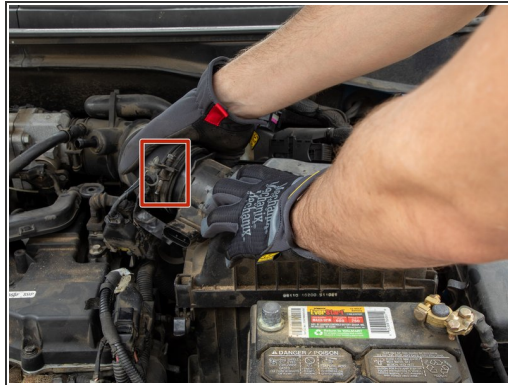
- Remove the battery connection.
 - Loosen the tension bolt on the negative (-) terminal.
 - ⓘ The stock terminal uses a 10mm bolt.
 - Pull the terminal off the battery and tuck it away.

Step 3



- Remove the four bolts with a 10 mm socket.
- Take off the dust cover.

Step 4



- Remove the air filter housing.
 - Disconnect the electronics and air intake hoses.
 - Loosen the tension screw on the air intake hose with a 10 mm socket.
- Undo all latches and pull away the housing cap.

Step 5



- Disconnect the computer terminals.
- Release the tension clamps on the two terminals.
- Tuck both terminals out of the way.

Step 6



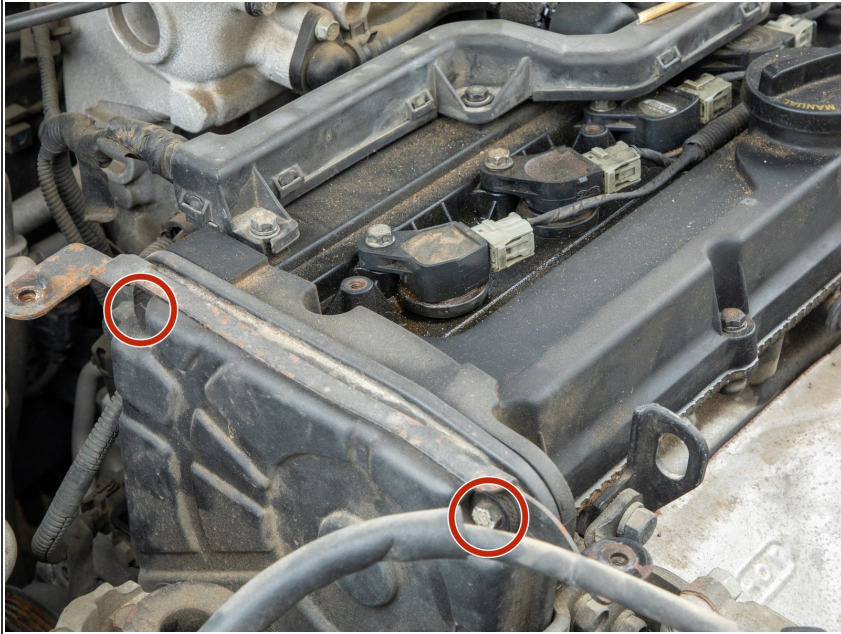
- Unbolt the air filter housing.
 - Loosen the three 10 mm bolts holding the housing in place.
- ⓘ Each photo shows one of the three bolts.

Step 7



- Remove the air intake assembly.
- Remove both the air filter cap and the housing.
- Avoid getting the air filter dirty.

Step 8



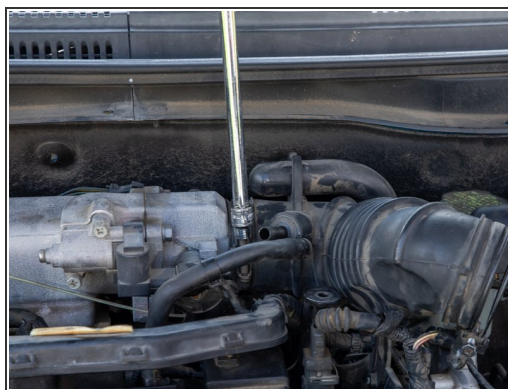
- Remove the two 10 mm bolts.
- Remove the dust cover brackets.
- ☑ Remember the orientation of the removed bracket.

Step 9



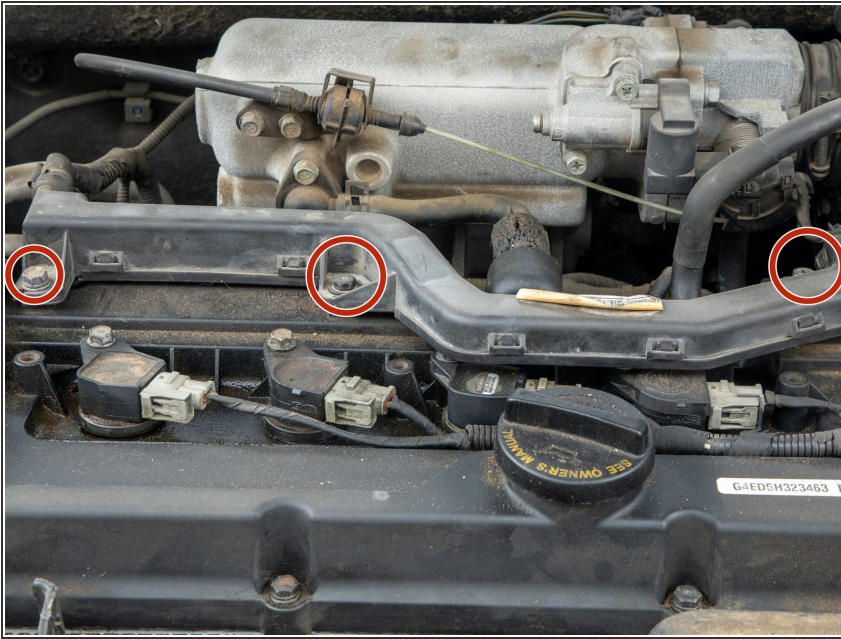
- i** There are two hoses connected to the valve cover.
- Use any set of pliers to loosen the tension clamps on each hose.
 - Disconnect the hoses by pulling them off their contact points.

Step 10



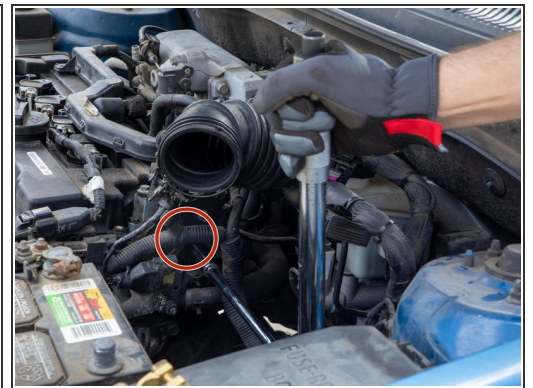
- Remove the air intake pipe.
 - Loosen the 10 mm tension screw to release the clamp on this end of the hose.
 - Pull the hose free from the rear intake assembly.

Step 11



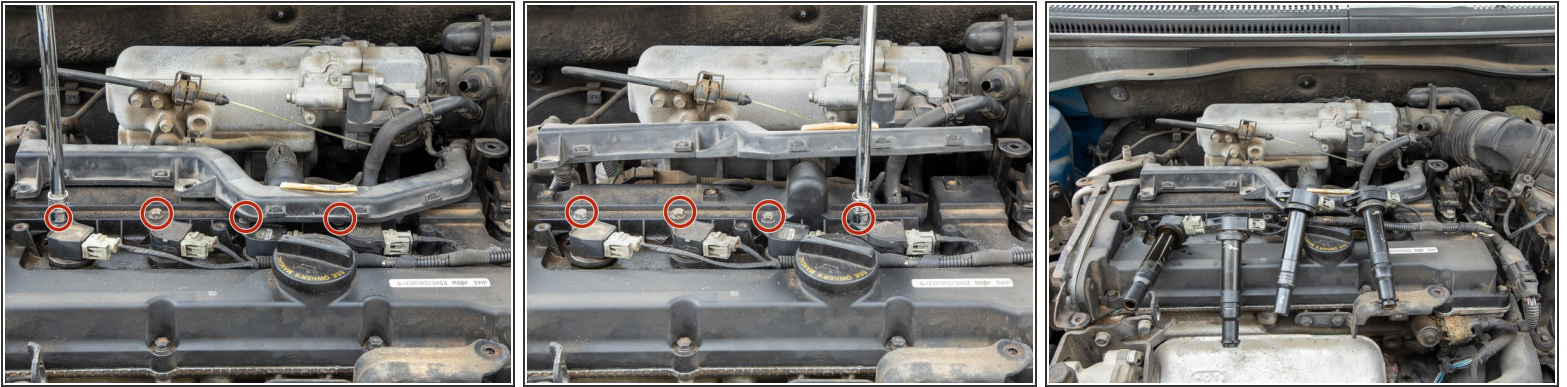
- Loosen the three 10 mm bolts holding the wire guide in place.
- Move the guide out of the way.

Step 12



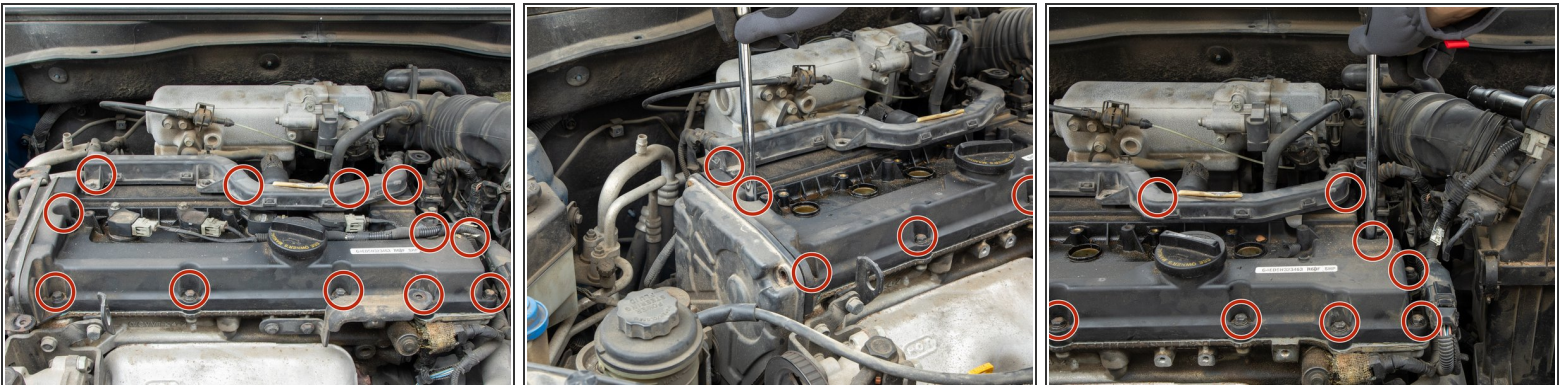
- Remove the two 12 mm bolts from the rear wire bracket.
- ***i*** They may be a little hard to find . Look behind and beside the valve cover.
- Move the rear wire bracket to the side.

Step 13



- Disconnect and remove the ignition coils.
- Remove the four 10 mm bolts holding the four ignition coils in place.
- ⓘ Try to keep the coils connected and in order.

Step 14




- Remove twelve 10 mm bolts from the valve cover on the engine head.
- ⓘ Move parts around until each bolt is reachable.

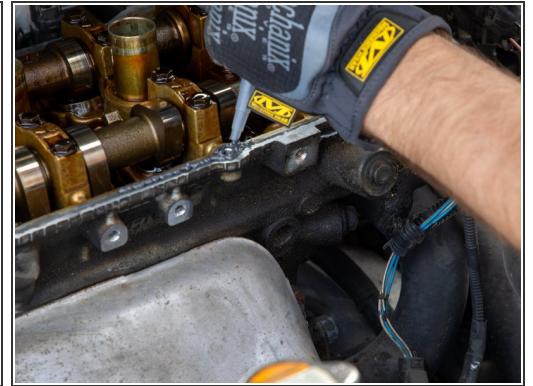
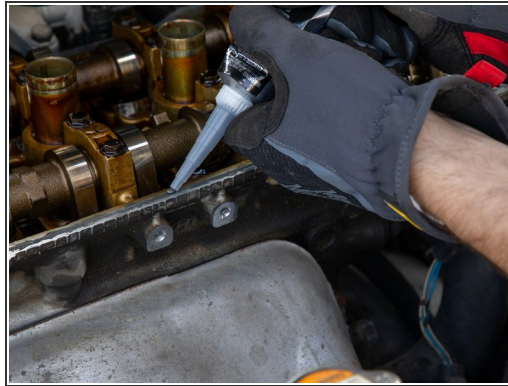
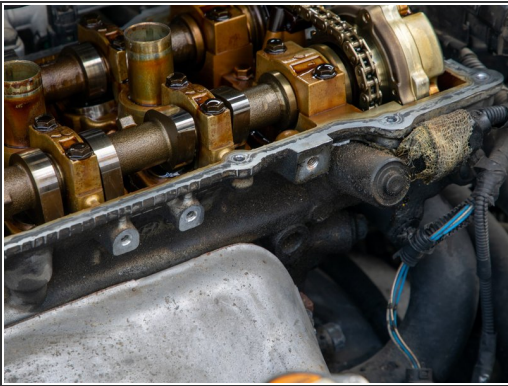
Step 15




- Remove the engine head.

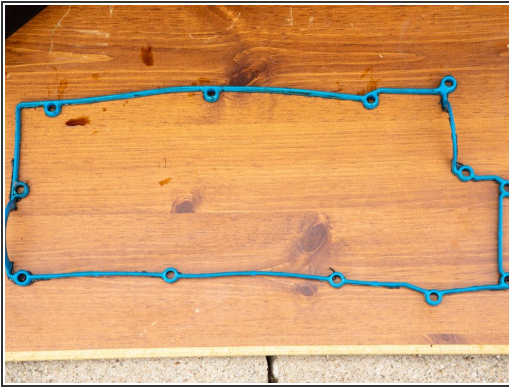
 Make sure the engine is kept clean. Avoid getting dust or other contaminants into the uncovered assembly.

Step 16



- Clean the residue off of the engine block.
-  Keep the rim as clean and level as possible.
- Apply a steady line of gasket maker with a 1/4" thickness around the engine block.
- Surround each bolt hole on the block with gasket maker.

Step 17



- Insert the engine block seal into the engine head.
- ⓘ If you don't have a valve cover gasket, then you can skip this step.

Step 18



- Place the engine head back on the engine.
- ⚠ Potential for device damage: Be careful **NOT** to get any gasket maker on the exposed assembly.

Step 19



- Re-bolt the engine head cover by hand.
- Let the seal set for one hour.
- Tighten the head cover bolts fully after the seal sets.

To reassemble your device, follow these instructions in reverse order. Avoid running the engine for 12 hours to allow the seal to harden.