

## 2001 BMW 325Ci (E46) – Valve Cover Gasket Install

### Required Tools:

Flat head screwdriver  
Socket wrench  
8mm socket  
10mm socket  
T30 Torx bit and driver  
Spark plug socket

### Suggested Tools:

Torque Wrench capable of 7.5ft.lbs  
3/8inch and 1/4inch socket sets with extensions  
Plastic gloves  
Protective towel to lean against car  
High-temp gasket sealant  
Anti-seize compound for spark plug install  
Flashlight and new batteries  
Multiple containers to store small parts  
Digital camera to take pictures before you take it apart (reassembly help)  
Phillips head screwdriver  
Floor-jack

*(The Philips and floor-jack are for when you (and you will) drop a socket or screwdriver in the engine bay. The plastic panels under the car can be easily removed. Mine automagically appeared in the one-screw panel – this will make sense when you jack it up.)*

### Parts used:

One – 11 12 9 070 990 Valve Cover Gasket Set  
Fifteen – 11 12 1 726 537 Valve Cover Bolt Rubber Seals  
Six – 12 13 9 067 831 Spark Plug Rubber Connector Boots  
Six – NGK-6418 IRIDIUM Plugs  
Gasket sealant  
Anti-seize compound

### Time taken:

About 3.5 hours – I was deliberately very slow and careful. I could do it again in about 2 hours.

This is an easy install, just go slow and be careful.

**DISCLAIMER: I am not a mechanic, so there are no implied or expressed warranties, or implied or expressed validity to these instructions. I suggest you consult a BMW dealer for questions on this installation. I do not recommend that these instructions be followed. Proceed at your own risk. Nothing in these instructions should be considered valid. This should only be considered a journal of what I did to my own car.**

**Good luck,  
SIDEFLY**

DISCLAIMER: I am not a mechanic, so there are no implied or expressed warranties, or implied or expressed validity to these instructions. I suggest you consult a BMW dealer for questions on this installation. I do not recommend that these instructions be followed. Proceed at your own risk. Nothing in these instructions should be considered valid. This should only be considered a journal of what I did to my own car.

An example of the E46 M54 engine from a 2001 325Ci.



DISCLAIMER: I am not a mechanic, so there are no implied or expressed warranties, or implied or expressed validity to these instructions. I suggest you consult a BMW dealer for questions on this installation. I do not recommend that these instructions be followed. Proceed at your own risk. Nothing in these instructions should be considered valid. This should only be considered a journal of what I did to my own car.

The entire cabin filter assembly should be removed for easy access to the engine. This is very easy, and only takes about 15 minutes.



DISCLAIMER: I am not a mechanic, so there are no implied or expressed warranties, or implied or expressed validity to these instructions. I suggest you consult a BMW dealer for questions on this installation. I do not recommend that these instructions be followed. Proceed at your own risk. Nothing in these instructions should be considered valid. This should only be considered a journal of what I did to my own car.

The cabin filter lid is held by three strange fasteners. Just gently twist them counter-clockwise about a quarter turn, and they have a spring that will pop them up.



DISCLAIMER: I am not a mechanic, so there are no implied or expressed warranties, or implied or expressed validity to these instructions. I suggest you consult a BMW dealer for questions on this installation. I do not recommend that these instructions be followed. Proceed at your own risk. Nothing in these instructions should be considered valid. This should only be considered a journal of what I did to my own car.



The filter lid fits between some of the rubber seal, so gently pull out on the entire filter lid, and it should just come out.



DISCLAIMER: I am not a mechanic, so there are no implied or expressed warranties, or implied or expressed validity to these instructions. I suggest you consult a BMW dealer for questions on this installation. I do not recommend that these instructions be followed. Proceed at your own risk. Nothing in these instructions should be considered valid. This should only be considered a journal of what I did to my own car.

Take note of how the filter fits in the assembly, and then remove the filter.



DISCLAIMER: I am not a mechanic, so there are no implied or expressed warranties, or implied or expressed validity to these instructions. I suggest you consult a BMW dealer for questions on this installation. I do not recommend that these instructions be followed. Proceed at your own risk. Nothing in these instructions should be considered valid. This should only be considered a journal of what I did to my own car.

The wires running in front of the cabin filter assembly are covered by a flat lid. Each side of the lid has simple snap connectors like the one shown. Just gently lift the tabs while working the lid off. Once the top side connectors are undone, just gently roll the lid off the channel holding the wires.



DISCLAIMER: I am not a mechanic, so there are no implied or expressed warranties, or implied or expressed validity to these instructions. I suggest you consult a BMW dealer for questions on this installation. I do not recommend that these instructions be followed. Proceed at your own risk. Nothing in these instructions should be considered valid. This should only be considered a journal of what I did to my own car.



Remove the four TORX bolts using a T30 bit. The screws are about an inch long, so keep twisting until they are all the way out. Lifting on the front of the filter tray, gently work it out of its spot. This part is done.



DISCLAIMER: I am not a mechanic, so there are no implied or expressed warranties, or implied or expressed validity to these instructions. I suggest you consult a BMW dealer for questions on this installation. I do not recommend that these instructions be followed. Proceed at your own risk. Nothing in these instructions should be considered valid. This should only be considered a journal of what I did to my own car.



Using a flat head screwdriver, gently pry off the engine cover bolt caps. Using a 10mm socket, remove the bolts and nuts. The right side engine cover should be pulled to the left as it is removed (remember to reverse this procedure when putting everything back together).



DISCLAIMER: I am not a mechanic, so there are no implied or expressed warranties, or implied or expressed validity to these instructions. I suggest you consult a BMW dealer for questions on this installation. I do not recommend that these instructions be followed. Proceed at your own risk. Nothing in these instructions should be considered valid. This should only be considered a journal of what I did to my own car.

The engine is now exposed.



DISCLAIMER: I am not a mechanic, so there are no implied or expressed warranties, or implied or expressed validity to these instructions. I suggest you consult a BMW dealer for questions on this installation. I do not recommend that these instructions be followed. Proceed at your own risk. Nothing in these instructions should be considered valid. This should only be considered a journal of what I did to my own car.



I forgot to take this photo, but Tim P.'s spark plug replacement instructions do a good example of showing how to undo the clip holding the coil wire in place. I did not need to use a screwdriver, but you might. The metal clip just slides up, and you can easily pull the coil plug out from the side. Just be very gentle (a common theme).



DISCLAIMER: I am not a mechanic, so there are no implied or expressed warranties, or implied or expressed validity to these instructions. I suggest you consult a BMW dealer for questions on this installation. I do not recommend that these instructions be followed. Proceed at your own risk. Nothing in these instructions should be considered valid. This should only be considered a journal of what I did to my own car.



All the coil plugs have been removed.



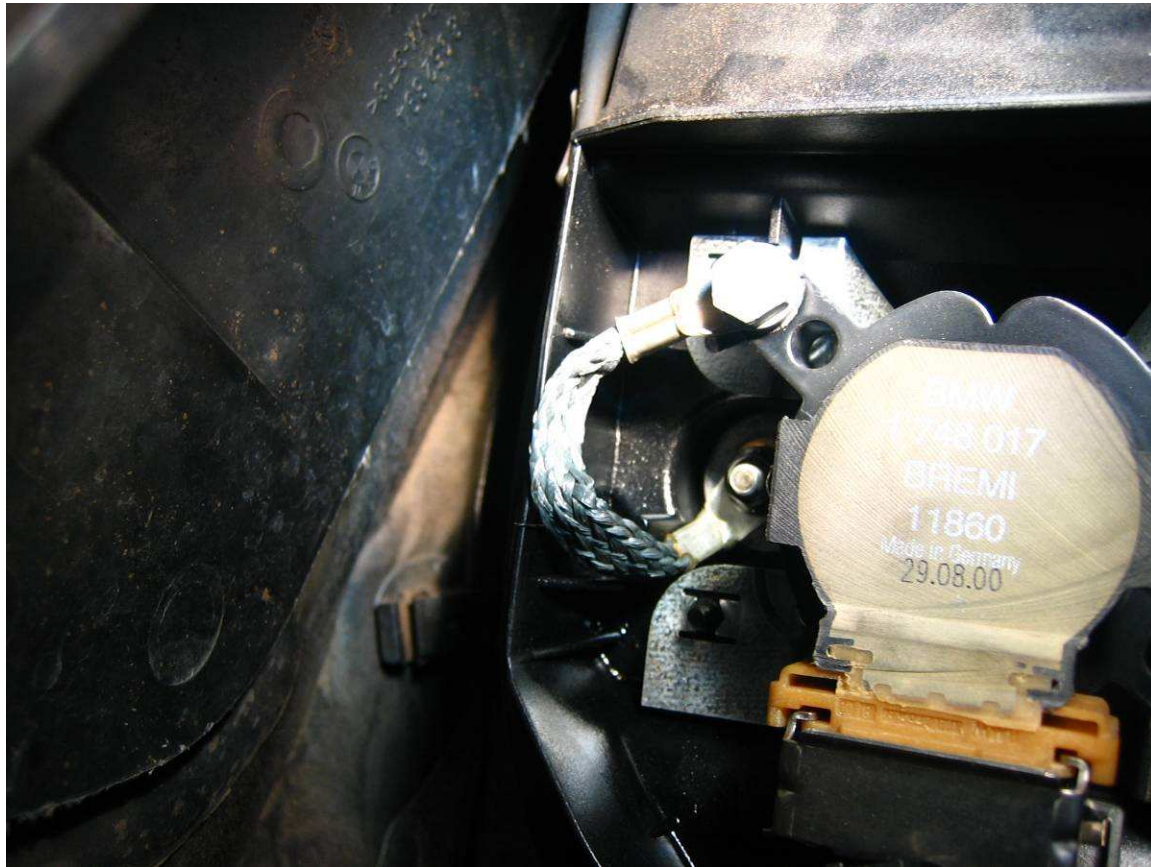
DISCLAIMER: I am not a mechanic, so there are no implied or expressed warranties, or implied or expressed validity to these instructions. I suggest you consult a BMW dealer for questions on this installation. I do not recommend that these instructions be followed. Proceed at your own risk. Nothing in these instructions should be considered valid. This should only be considered a journal of what I did to my own car.

Take note of the ground strap on the 1<sup>st</sup> and 6<sup>th</sup> plug coils. You need to be sure to reassemble everything exactly as it is removed. This is the front coil strap.



DISCLAIMER: I am not a mechanic, so there are no implied or expressed warranties, or implied or expressed validity to these instructions. I suggest you consult a BMW dealer for questions on this installation. I do not recommend that these instructions be followed. Proceed at your own risk. Nothing in these instructions should be considered valid. This should only be considered a journal of what I did to my own car.

This is the rear coil strap. The 8mm nut holding both of these straps to the valve cover is fastened to one of the valve cover bolts. The 8mm nut should be removed to expose the 10mm valve cover one.



DISCLAIMER: I am not a mechanic, so there are no implied or expressed warranties, or implied or expressed validity to these instructions. I suggest you consult a BMW dealer for questions on this installation. I do not recommend that these instructions be followed. Proceed at your own risk. Nothing in these instructions should be considered valid. This should only be considered a journal of what I did to my own car.



Remove this wire with also; it too has an 8mm nut. Once it is off, you will notice that there are four 10mm bolts now exposed on the valve cover top. One was covered by this wire, two were covered by the ground straps. All four of these will need to be removed, they look like nuts, but they are really 10mm bolts.



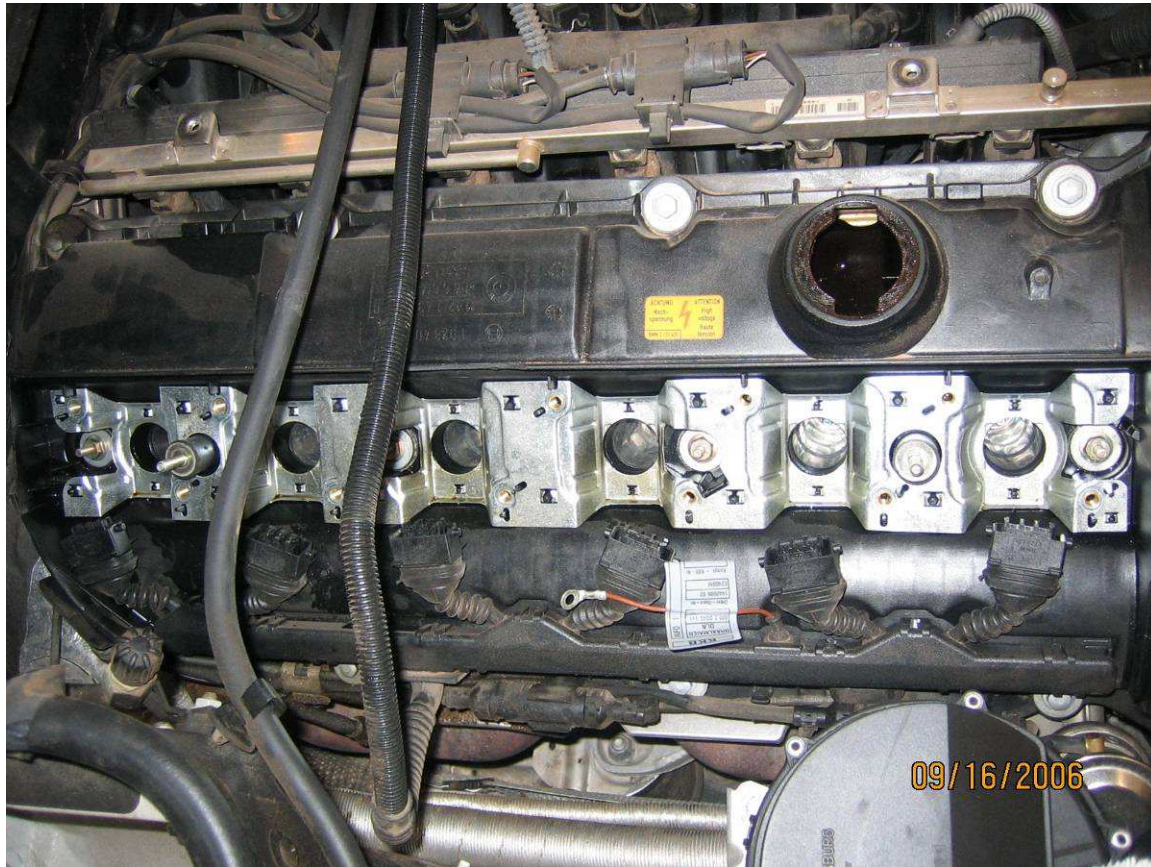
DISCLAIMER: I am not a mechanic, so there are no implied or expressed warranties, or implied or expressed validity to these instructions. I suggest you consult a BMW dealer for questions on this installation. I do not recommend that these instructions be followed. Proceed at your own risk. Nothing in these instructions should be considered valid. This should only be considered a journal of what I did to my own car.

Using a 10mm socket, remove the two bolts holding the plug coils in place. Once the bolts are removed, just pull up on the coil to remove it. I don't think it is necessary to keep track of which one was which, but I did so I could put everything back the way I found it. Upon reassembly, this is good time to replace the spark plugs and plug boots. I torqued the plugs to 18-ft.lbs



DISCLAIMER: I am not a mechanic, so there are no implied or expressed warranties, or implied or expressed validity to these instructions. I suggest you consult a BMW dealer for questions on this installation. I do not recommend that these instructions be followed. Proceed at your own risk. Nothing in these instructions should be considered valid. This should only be considered a journal of what I did to my own car.

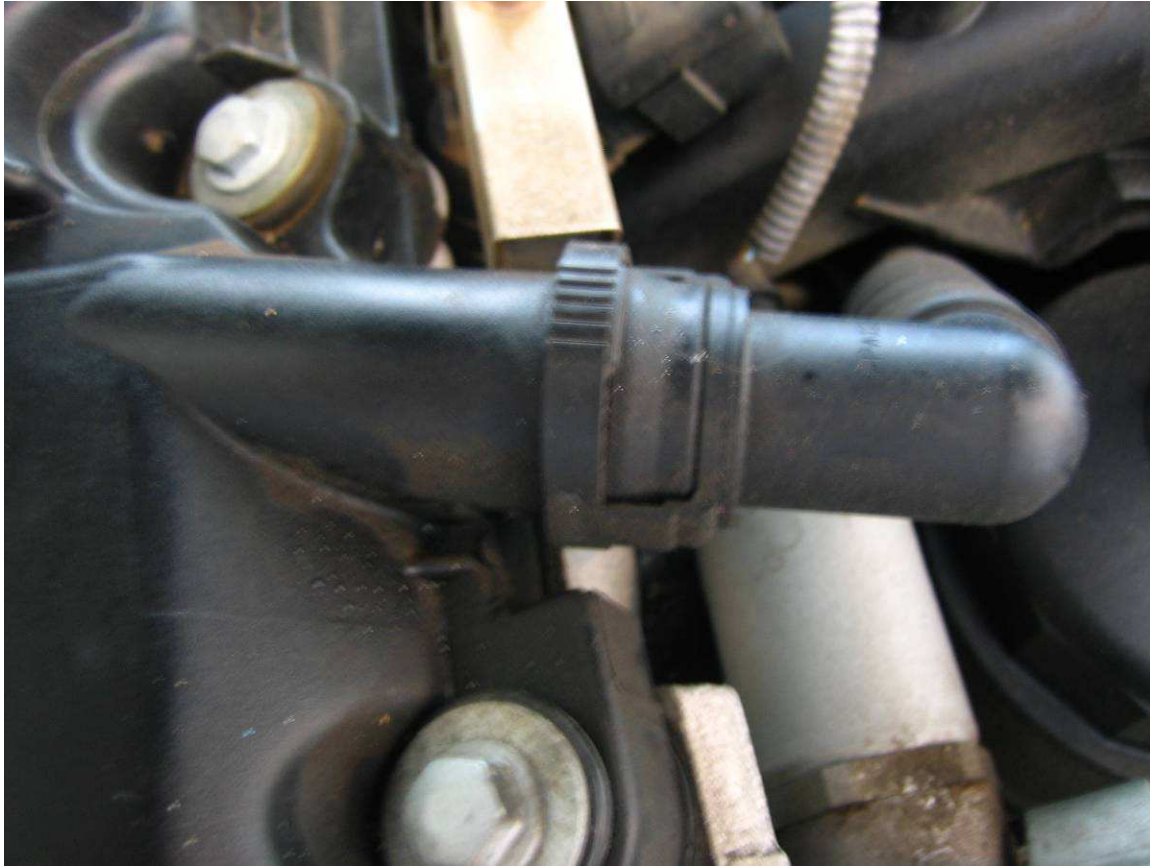
Everything is out. Soon we will remove the entire electrical assembly holding the coil wires.



DISCLAIMER: I am not a mechanic, so there are no implied or expressed warranties, or implied or expressed validity to these instructions. I suggest you consult a BMW dealer for questions on this installation. I do not recommend that these instructions be followed. Proceed at your own risk. Nothing in these instructions should be considered valid. This should only be considered a journal of what I did to my own car.



For lack of a better description, the vent tube needs to be unfastened. It is very stiff, brittle, thin plastic, so be very gentle. See next photo.



DISCLAIMER: I am not a mechanic, so there are no implied or expressed warranties, or implied or expressed validity to these instructions. I suggest you consult a BMW dealer for questions on this installation. I do not recommend that these instructions be followed. Proceed at your own risk. Nothing in these instructions should be considered valid. This should only be considered a journal of what I did to my own car.

Squeeze the plastic clip on the top and bottom while pulling back on the tube. Don't pull hard, because it only gives about one inch. The tube will break if you pull it hard. I had to wiggle mine for a few minutes to get it loose. This was about the worst part of the entire install.



DISCLAIMER: I am not a mechanic, so there are no implied or expressed warranties, or implied or expressed validity to these instructions. I suggest you consult a BMW dealer for questions on this installation. I do not recommend that these instructions be followed. Proceed at your own risk. Nothing in these instructions should be considered valid. This should only be considered a journal of what I did to my own car.

All of the coil wires are tucked into this nice tidy plastic channel. The entire channel (top and bottom) come off as one piece. Do not remove the cover. Just gently pull it free by pulling up on the entire assembly. There are a few clips holding it down, so you might need to use a flat head screwdriver to negotiate the thing out. See next photo for a zoomed pick at the clip.



DISCLAIMER: I am not a mechanic, so there are no implied or expressed warranties, or implied or expressed validity to these instructions. I suggest you consult a BMW dealer for questions on this installation. I do not recommend that these instructions be followed. Proceed at your own risk. Nothing in these instructions should be considered valid. This should only be considered a journal of what I did to my own car.

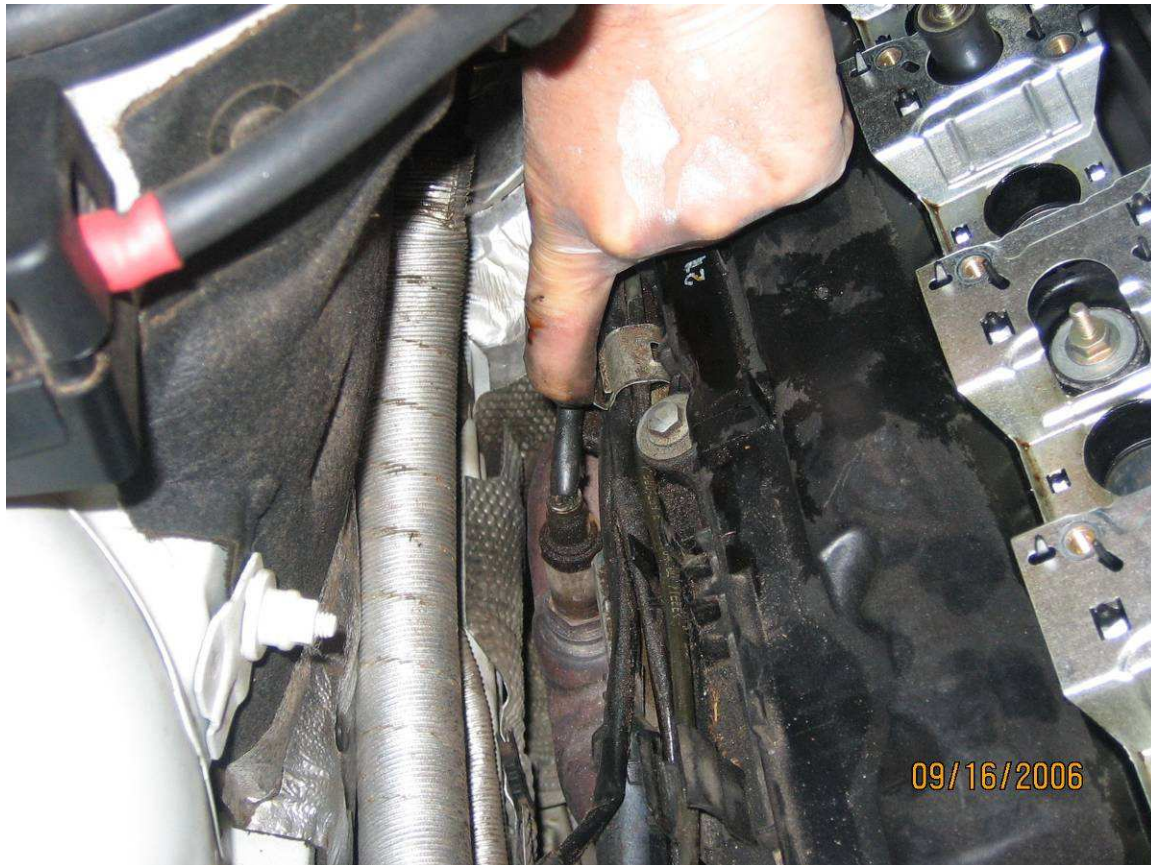


The clip as described in the prior step. When reinstalling the assembly, just make sure it is lined up and press it down. It will click back in place. This was pretty slick, BMW did this right.



DISCLAIMER: I am not a mechanic, so there are no implied or expressed warranties, or implied or expressed validity to these instructions. I suggest you consult a BMW dealer for questions on this installation. I do not recommend that these instructions be followed. Proceed at your own risk. Nothing in these instructions should be considered valid. This should only be considered a journal of what I did to my own car.

Once the coil wires are moved, you can pull up gently on the wires underneath. These are just held by some simple U-clips. Only the one held by my finger in the photo is tricky, just lift the tab and pull the wires out from the side (this is right above one of the oxygen sensors, so don't bust the wire off the top of the sensor). As a note, I did not disconnect any wires, I just moved them out of the way. These wires I twist-tied to the heavy battery cable running above the engine.



DISCLAIMER: I am not a mechanic, so there are no implied or expressed warranties, or implied or expressed validity to these instructions. I suggest you consult a BMW dealer for questions on this installation. I do not recommend that these instructions be followed. Proceed at your own risk. Nothing in these instructions should be considered valid. This should only be considered a journal of what I did to my own car.



Now you can finally start removing the valve cover hold down bolts. All of them are 10mm. This photo shows one of the center ones coming out. Every bolt has a metal washer, then a rubber gasket. Replace the gaskets on your install, mine looked pretty used (see next photo). Once all the bolts are removed, pull the valve cover up to remove it. I had to gently pry mine in a few places.



DISCLAIMER: I am not a mechanic, so there are no implied or expressed warranties, or implied or expressed validity to these instructions. I suggest you consult a BMW dealer for questions on this installation. I do not recommend that these instructions be followed. Proceed at your own risk. Nothing in these instructions should be considered valid. This should only be considered a journal of what I did to my own car.



My old rubber gaskets (basically a thick tapered rubber washer).



DISCLAIMER: I am not a mechanic, so there are no implied or expressed warranties, or implied or expressed validity to these instructions. I suggest you consult a BMW dealer for questions on this installation. I do not recommend that these instructions be followed. Proceed at your own risk. Nothing in these instructions should be considered valid. This should only be considered a journal of what I did to my own car.

If you are not lucky enough to pull the entire gasket like me, be sure you get it all. Some people report theirs as very brittle. Mine was just stiff. Not at all like the soft rubber replacement.

I took this time to spray the entire cover with some Simple Green grease remover and then spray it with the hose. By the time I was ready to reinstall, the sun had dried it for me.



DISCLAIMER: I am not a mechanic, so there are no implied or expressed warranties, or implied or expressed validity to these instructions. I suggest you consult a BMW dealer for questions on this installation. I do not recommend that these instructions be followed. Proceed at your own risk. Nothing in these instructions should be considered valid. This should only be considered a journal of what I did to my own car.



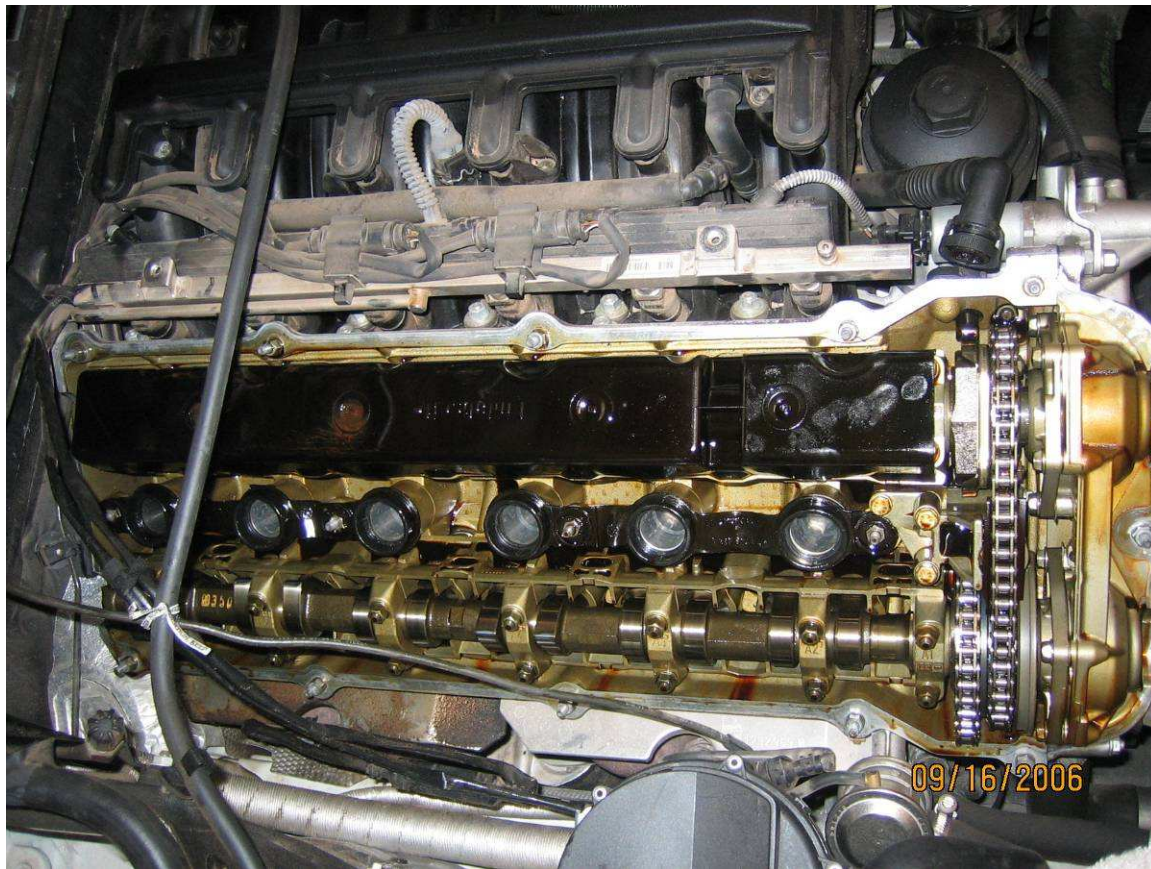
Now you will notice the spark plug gaskets. Mine were stuck pretty good. You don't need to remove the bolts that appear to be holding them down, but I did.

Once all your gaskets are off, clean the entire gasket area. Gasket sealant is not supposed to be required, but everyone says to use it on the half-moon areas (this will make sense once you get it apart). I used a high-temp sealant.

To get the gaskets back on, I just placed the in the cover (there is groove that holds them in place) and set the cover back on the engine. Seems simple enough, but it took me some time – I was super careful that everything went back in place correctly.

Now put it all back together. I torqued all the valve cover bolts down to about 10-ft.lbs, I think BMW says 7.5-ft.lbs (that wasn't an option on my torque wrench, plus less seemed to lose).

My disclaimer: I am not a mechanic, so there are no implied or expressed warranties, or implied or expressed validity to these instructions.



DISCLAIMER: I am not a mechanic, so there are no implied or expressed warranties, or implied or expressed validity to these instructions. I suggest you consult a BMW dealer for questions on this installation. I do not recommend that these instructions be followed. Proceed at your own risk. Nothing in these instructions should be considered valid. This should only be considered a journal of what I did to my own car.