

Replacing MK4 Golf/Jetta radiator mounts in-car

This is a guide to replacing the radiator mounts in a MK4 Golf/Jetta. This involves moving the core support to the “service position” which allows you to do this in-car without removing the radiator or disconnecting any coolant hoses.

I did this procedure on my 2001 Golf TDI. The procedure will be the same on a Jetta. The core support will look slightly different, but everything is in the same basic location.

I haven’t worked on a New Beetle so I don’t know how different that model is. I believe getting the bumper cover off is much more involved, but actually moving the core support into the service position should be somewhat similar to the Golf and Jetta. Refer to your Bentley manual for details.

In addition to allowing you to replace the radiator mounts, putting the core support into the service position allows you to remove the radiator without removing the AC condenser (which would mean discharging and recharging the AC system).

I believe on the VR6 cars there are some other engine repairs/mods that are easier done with the core support in the service position.

As a note, VW calls the core support the “lock carrier”. I grew up calling it the core support, so that’s the term I use.

Tools needed:

Torx T25 socket

Torx T30 socket

13mm socket

Appropriate ratchets and extensions for the above

1 pair El-Cheapo Service Position Tools (see next page on how to make them)

Mount part numbers:

Upper 1J0 806 155E (2 needed)

Lower 1J0 806 157F (2 needed)



Left: lower mounts

Right: upper mounts

Making the El-Cheapo Service Position Tools

The factory VW service position tools #3411 looks like these in the photo.

They aren't terribly expensive, but it's real easy to make your own from items found at most any hardware store.



At my hardware store I bought two M8x1.25 metric bolts that were 3 1/2" (90mm) long. These were the longest M8 bolts they stocked. This length is plenty to do the radiator mounts. If you're going to be removing the radiator, bolts in the 6-7" (150-175mm) range would be better as they allow the core support to move farther out.

M8 All-thread would also work. In that case, on one end you'll want to thread on two nuts and tighten them against each other. That will provide a hex for you to put a wrench on. If you have a welder, you could also just weld a nut on one end.

The other item I bought was a piece of PEX tubing in what is called 3/8" CTS (Copper Tube Size). This is a rigid plastic tubing used for plumbing. A 3 foot piece was about \$3.

Cut a piece of PEX tubing about 1/2" shorter than the length of your bolt and slide it over the bolt. See the photo.

The 3/8" PEX tubing is perfectly sized as it fits nicely over the bolt and the outer diameter is small enough to fit in the holes in the core support.

Is the PEX tubing absolutely necessary? No.

Without it, though, the core support will tend to hang up on the threads of the bolt instead of smoothly sliding on the tubing.

You could substitute clear vinyl tubing, rubber vacuum/fuel hose or even wrap a couple of turns of duct tape over the threads.

Whatever you use, it must be no more than 1/2" in diameter (so it will fit into the holes in the core support) and make sure to leave the last 1/2" of the bolt threads uncovered!



Step 1 - Remove the bumper cover

There are plenty of guides on TDIClub, Myturbodiesel and VW Vortex that show how to remove the bumper cover, so I won't go into great detail here. Or refer to your Bentley manual.

Basically, there are four Torx T25 bolts in each fender wheel to remove. Pop the two lower side grilles out to access one Torx T30 bolt per side. Remove the grille to access the five Torx T30 bolts there.

As you slide the bumper off, remember to reach behind the sidemarker lights and remove the wiring to the light.

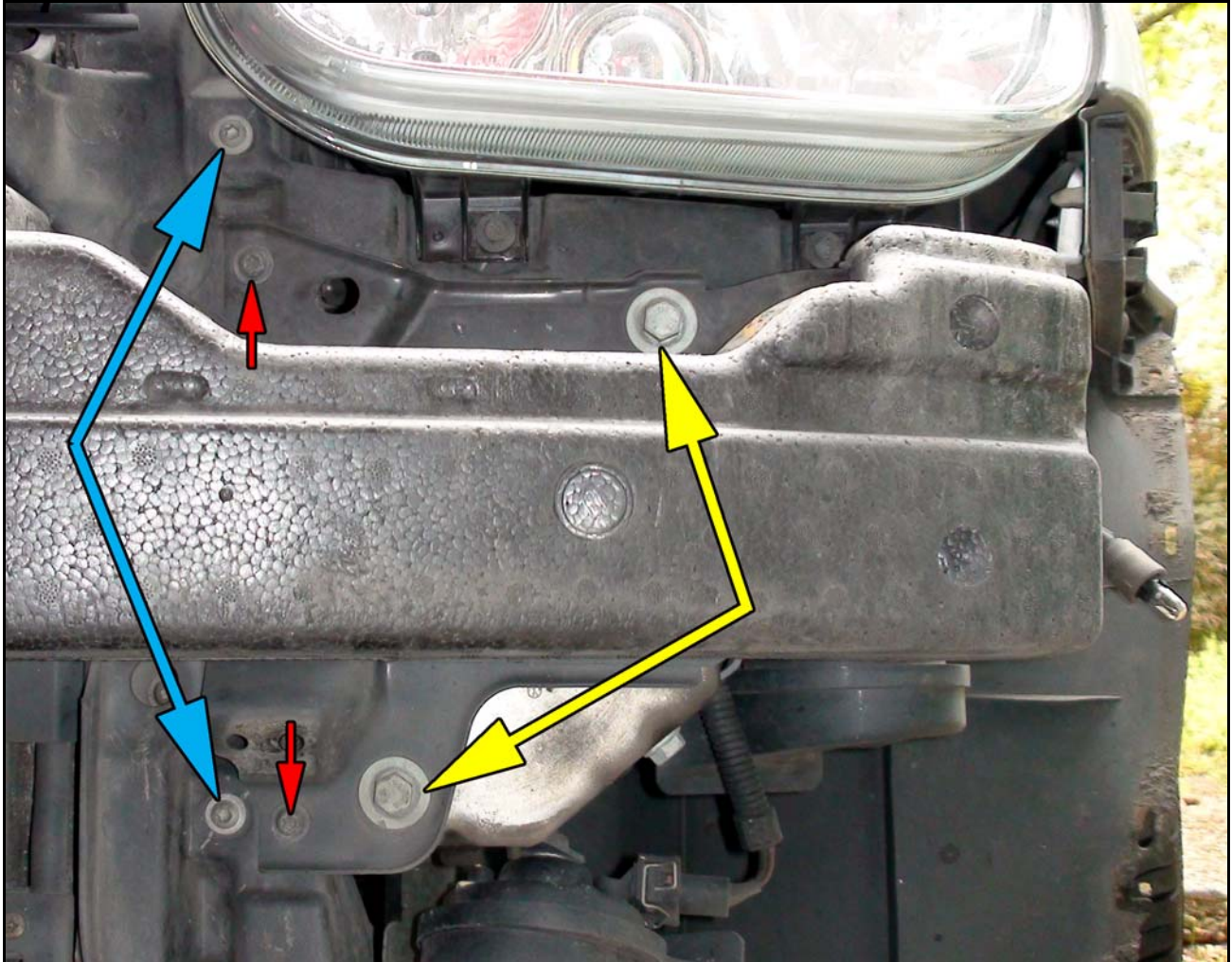
Step 2 - Remove the Fender To Core Support bolts

Remove the one **Fender To Core Support bolt** on each side. The Red arrow points to the Torx T25 bolt.



Step 3 - Which bolts are which?

With the bumper cover off, here are the bolts you'll see on front of the core support.



The Yellow arrows point to the **Core Support To Frame Rail bolts**, 2 per side.

The Blue arrows point to the **Radiator Mount Screws**, also 2 per side.

The Red arrows point to screws we will **not** be removing. They look identical to the Radiator Mount Screws, so make sure when it comes to removing the Radiator Mount Screws that you loosen the correct ones!

Step 4 - Install the El-Cheapo Service Position Tools

Remove the top **Core Support To Frame Rail bolts**, one per side, with a 13mm socket.

Replace each bolt with one of your **El-Cheapo Service Position Tools**. Thread the tool down until the PEX tubing sleeve is almost touching the core support. Don't tighten them just yet.

Important note: If your tools don't use the PEX tubing, make sure to **thread them in about a half an inch**. They will support the entire weight of the core support/radiator/condenser and must be threaded in enough so they don't strip out the threads in the frame rail!

Note in the picture, the PEX tubing won't quite line up with the hole in the core support. We'll correct this after we remove the lower bolts.



Now remove the lower **Core Support To Frame Rail bolts**, one per side, with a 13mm socket.

Lift the core support up slightly on one side until the hole in the core support lines up with the PEX tubing sleeve. Now you can thread the **El-Cheapo Service Position Tool** down until the PEX tubing pokes through the hole in the core support and contacts the frame rail. The core support should now be resting on the PEX tubing. No need to tighten the **El-Cheapo Service Position Tools** super tight, just thread them in until the PEX tubing is firmly up against the frame rail.

Do the same for the other side.

You should now see this. The tool is threaded in until the PEX tubing is tight up against the frame rail. The core support is resting on the PEX tubing and will slide in and out easily.



Step 5 - Pull the core support forwards

Carefully pull the core support forwards. Remember there is wiring still attached to the fans, headlights, etc.

On my TDI, I was able to move it forwards about 2-3 inches which is plenty of room to access the radiator mounts. Gas-engined models may have additional wiring that needs to be disconnected. Be careful and go slow!

If you're intending to pull the radiator, you'll need to remove the hood release cable and any wiring that goes to any components attached to the core support. With all wiring disconnected and the coolant hoses detached from the radiator, you'll then be able to slide the core support even farther forwards. You'll be limited only by the amount of slack in the hoses to the AC condenser.

Step 6 - A look at the mounts

Let's take a look at why we have to bother with all this moving of the core support into the service position.

The photo is of the passenger side upper mount, looking towards the front of the car. The lower mount is similar.

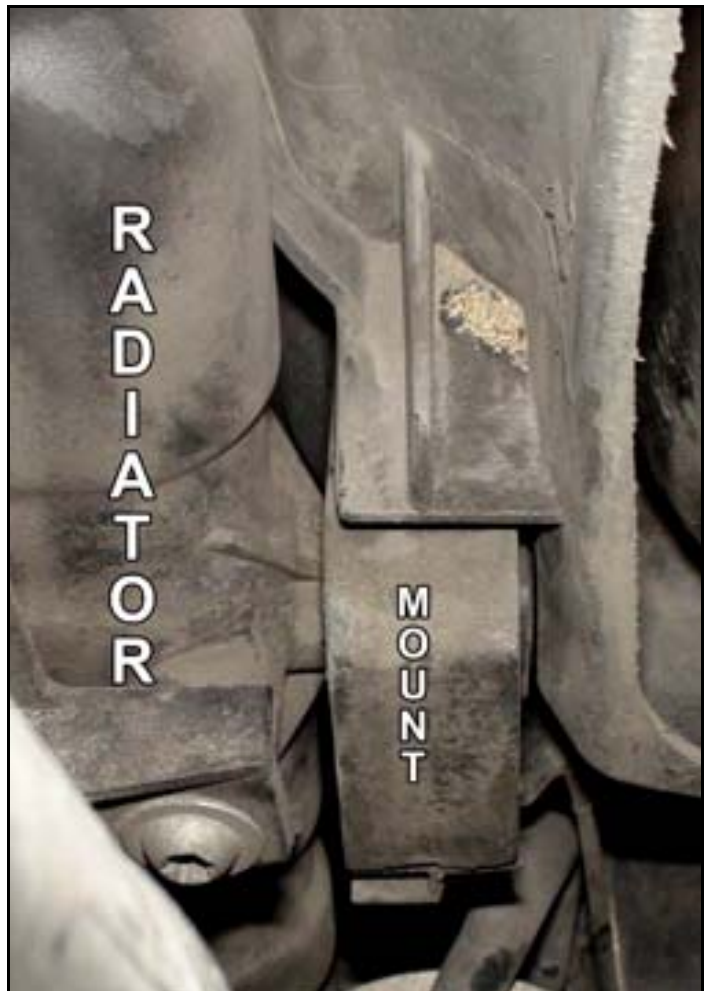
You can see that the mount slides onto a fat "peg" sticking out of the radiator.

To slide the mount off the peg, it has to be slid outwards (to the right in the photo). You can't do this because the core support wraps around the mount and gets in the way.

With the core support in its normal position, you can't move the radiator back enough so the mounts will clear the core support before the fans hit the engine.

With the core support in the service position the radiator can be moved farther backwards, allowing the mount to clear the part of the core support that is in the way.

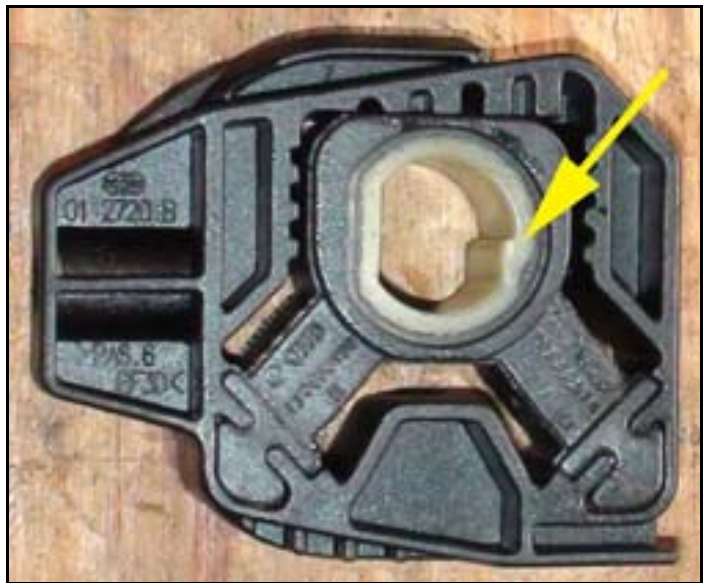
That's why we move the core support to the service position.



Step 7 - Replace the passenger side mounts

1. Use a Torx T25 socket to remove the two **Radiator Mount Screws** for the passenger side mounts. Refer to the blue arrows in the photo on Step 3 (page 4). Make sure you remove the correct ones!
2. Carefully slide the passenger side of the radiator back towards the engine just enough so the mount clears the core support.
3. Slide the old upper mount off its peg. Mine was really stuck on tight. The temptation is to pry it off with a screwdriver. There's nothing to pry against except for the plastic radiator tanks, so this **not** advised. I had to get both hands in there and muscle it off.

4. Slide the new mount onto the peg.
Note the top mounts have an up and down.
The photo shows an upper mount in its correct orientation. The two angled rubber "feet" face downwards. The white round part slides over the peg.
Note the notch (yellow arrow). There is a matching groove on the peg which ensures the mount can't be installed upside down or backwards.



5. Do the same for the lower mount. The lower mounts do not have an up or down, just make sure the hole for the screw is facing forwards. The lower mounts slid off easily on my car. I was able to reach around between the side skirt and belly pan cover to access the lower mount. I did not remove either the belly pan or plastic side skirts.
6. Slide the radiator forward and back into place in the core support. Push it forwards until the mounts are flush up against the core support. Look through the holes in the core support to verify the mounts are right up against the core support.
7. Install the **Radiator Mount Screws**. The official torque spec on these is 71 in-lb. That's INCH-lb not FOOT-lb! This is no place to be a gorilla with the wrench! Spin them down until you feel the screw tighten up and go about 1/16th of a rotation more. That should be plenty. Remember you're driving the screws into plastic, not metal.

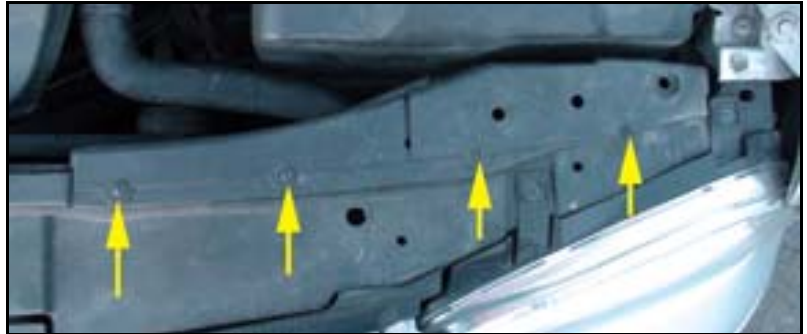
Step 8 - Replace the drivers side mounts

The drivers side mounts are done just like the passenger side mounts with one exception. The drivers side upper mount is harder to access due to a couple of plastic pieces around the headlight which get in the way.

If the old mount isn't stuck on tight (and you have small hands), you may be able to reach in and slide it off.

Mine was stuck on tight, like the other upper mount. If that is the case, follow these steps:

1. Remove the two plastic shields behind the headlight.
Remove the 4 Phillips screws (yellow arrows). Pull the outer shield upwards to remove it. Slide the inner shield out and around the hood release cable.



2. Remove the headlight. Two Torx T25 screws on top, two below. Remove the wiring connector.
3. Remove the plastic lower shield that wraps around the side and bottom of the headlight opening. The yellow arrow in the photo below points to this shield after it is moved out of the way. It is attached to the core support with two plastic “push-pin” style clips. One is located in a deep recess in the core support. Top blue arrow in the photo below. The other is directly underneath the headlight opening, lower blue arrow.



4. The clips look like this. The small round pin is pushed into the hole in the clip. That spreads the fingers of the clip and locks it in place.

To remove the clips, you first need to push the round pin out of the clip. A small punch or screwdriver will work. You can push the pin out towards the front or back of the clip, whichever is easiest. Make sure to catch the pin as it comes out! It's a small little bugger and easily lost.

Once the pin is out, the clip can be pushed out of the hole in the core support.



5. With the push-pin clips removed, the lower headlight shield can be moved out of the way. I didn't remove it completely, just moved it enough so that I could access the upper mount. You can now easily access the upper mount, as seen below.



6. Replace both mounts, move the radiator back into position and install the two **Radiator Mount Screws** - just like you did on the passenger side.

7. Re-install the lower headlight shield. First, prepare the push-pin clips. Insert the pin into the hole into the clip about 2 to 3mm. Enough so it sticks in the hole, but not enough that the fingers start to spread.



8. Move the shield into position against the core support. Line up the holes in the shield with the matching holes in the core support. Insert the clips all the way into their holes. The upper clip is hard to get into its hole, since it sits deep in a recess. I held it between two fingers and carefully positioned it into the hole in the core support. I couldn't push it all the way in with my fingers, so I used a 8mm deep socket to reach in and push it all the way down.

Now push the pins in until they are flush with the clips, this locks the clip into place. Use the handle of a screwdriver or something similar to do this.

This is the lower clip inserted and ready for the pin to be pushed in.



9. Install the headlight (4 screws and the wiring connector).
10. Install the two plastic shields behind the headlight. The inner shield goes in first, then the outer shield. Note that the hood release cable goes behind the outer shield and into the "groove" in the inner shield.

Notes: *What if I lose the little pin for one of the push-pin clips?* Not a huge problem. Install the clip without the pin and it'll hold the shield in place reasonably well. The shield may be a little loose, but it can't fall out or anything. After you finish the procedure, you can stop by your local dealer or junkyard, buy a new clip (part number N 038 550 1) and install it later. You'll have to pull the bumper cover to access the upper clip. The lower clip may be able to be reached from below, not 100% sure.

If I lose the pins or the clips break, can I just remove that lower shield entirely? Not recommended. It is part of the cold air intake system. Air for the engine is drawn in at the upper driver's side of the grille and that lower shield and the two other shields you removed direct the air into the air filter box. Will your engine blow up without the shield? No, but the engine will be sucking in hot engine compartment air instead of colder outside air.

Step 9 - Move the core support back to its normal position

Slide the core support backwards until it is up against the frame rails.

Install the two **Fender To Core Support bolts**. Don't tighten them yet, just thread them in several turns for now.

Install the 2 lower **Core Support To Frame Rail bolts**. Don't tighten them just yet, thread them in until they almost touch the core support.

Important note: Don't just thread them in 1 or 2 turns. They'll be supporting the entire weight of the core support/radiator/condenser when we remove the tools from the upper holes, so they **must** be threaded in most of the way!

Remove the **El-Cheapo Service Position Tools** from the top holes and install the upper **Core Support To Frame Rail bolts**.

Tighten all 4 **Core Support To Frame Rail bolts** to 15 ft-lb.

Tighten the 2 **Fender To Core Support bolts**. Official spec is 71 in-lb, I use "just snug".

Step 10 - Re-install the bumper cover

Re-install the bumper cover per whatever guide you chose to use.

Step 11 - Bask in the glow of a job well done

That is it, you're done! Fun, wasn't it?