

## MAF R&R (Swap) and Cleaning

This DIY concerns the MBZ V6 320; it is substantially the same for any MBZ vehicle with that engine. For others, you'll have to locate the MAF assembly, but the procedure is thereafter quite similar. First we'll discuss the R&R process for the assembly itself.

Here's the MAF,  
right in the middle  
of this shot...



And here is  
a close-up:



Three things fix the MAF assembly to the vehicle: two clips on the airbox side, a worm-gear type clamp on the intake side and the electrical connection. In the above shot you can see the latter two very clearly as well as one of the two spring clips.

Start by removing the airbox cover. Release the 6 clips (3 on each side) and the two spring clips that hold the airbox hose to the MAF assembly. Both of the spring clips can be seen in this shot:



With the airbox cover removed you can see the MAF assembly a bit better...



Loosen the worm-gear clamp with either a screwdriver or a 7mm nut driver. Do NOT remove the assembly at this point or you will put undue stress on the wiring. While you

can remove the electrical connection before loosening the worm-gear clamp, I've found it's easier and ultimately faster to loosen the clamp first.

With the clamp loosened, gently support the assembly with one hand while you press the clips that keep the electrical plug fast to the assembly:



Holding the clip firmly, rock the assembly and connection while pulling the connection away from the assembly. With the electrical connection unplugged, it is now very simple to remove the assembly. Note the little alignment tang/ear on the intake side of the assembly; in the shot above it is deflected so it's easier to spot.

If you are fitting a new MAF assembly, install it by first aligning the notch to the tang/ear and then sliding the intake side into the hose. Support the assembly in this position while you install the electrical connection, ensuring the clips latch into place. Then double-check that the assembly is properly seated and aligned in the intake hose and swivel the clamp around and tighten it. Attach the airbox cover to the inlet side of the assembly and snap the two spring clips into place, then refit the cover and snap the 6 airbox cover clips back into position.

You're done. It shouldn't take much longer to do the R&R than it did to read this DIY. It's a very simple R&R.



## CLEANING THE MAF SENSOR

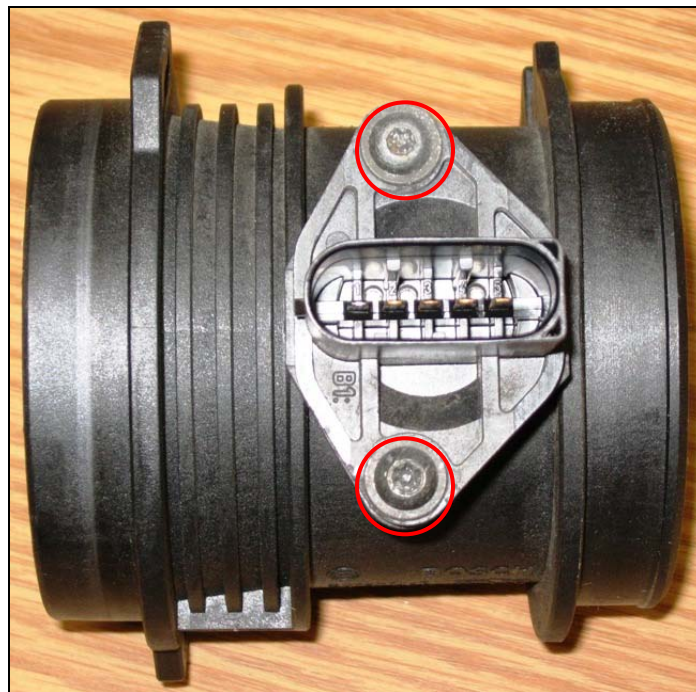
Before we get to the details, a brief discussion seems appropriate. There is quite a bit of information – and misinformation – regarding how to clean a MAF. The procedure outlined below is safe for use on MBZ vehicles. While some advocate the use of a cloth to rub directly on the metal wire, others argue that this degrades the sensor. Since MBZ doesn't even specify a cleaning regimen or interval, you're on your own in this regard.

Second, there is no such thing as a “maintenance interval” for cleaning (or replacing) the MAF. If your CEL illuminates and the code reader reveals the codes for the MAF, then it's time to consider cleaning the MAF before replacing it. Put another way: *there is no sound reason to regularly clean the MAF.*

So you've had the codes read and you know the MAF is the culprit. Should you replace or clean? If you're a DIY type looking to save money, there is no reason *not* to try cleaning the MAF sensor. While it is less useful in MBZ vehicles than in others, all it will take you is a little time and an aerosol can of MAF cleaner. Note, however, that once you have MAF codes, only a smaller percentage of them result from a dirty MAF sensor. So it will more often turn out that you clean the MAF only to have the codes never clear, the CEL continues to stay lit, and you end up buying the MAF anyway.

If you've decided to clean the MAF, first remove the assembly as set forth above.

Circled in the shot below are the two torx security screws that secure the MAF sensor to the assembly. These must be removed so you can in turn remove the sensor from the assembly. You don't need to drop several dollars on this special torx bit since you can get to the shoulders of these screws and remove them with a pair of pliers.



With the screws removed, rock, twist and pull to remove the sensor from the assembly:

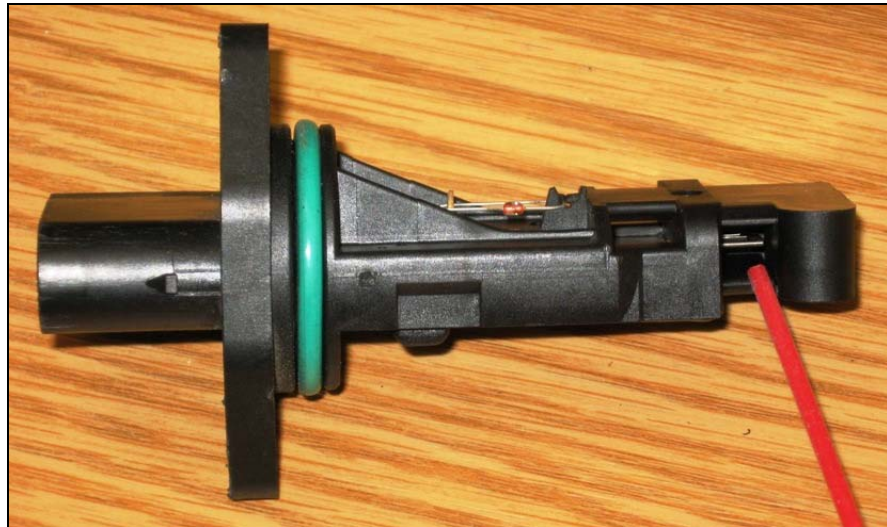


These are the two sides of the MAF sensor insert. In the top shot the resistor is plainly visible; predominantly apparent in the lower shot is the sealed cover protecting the “brains” of the sensor insert. Neither of these need to be cleaned.

The red oval in the shot below draws attention to the “business section” of the sensor. This is the area to which cleaning efforts should be directed, so thoroughly spray MAF cleaner on the inside part of this area, paying special attention to both sides of the metal surface lightly visible inside the red circle.



This shot shows one angle for the straw on the MAF aerosol cleaner. The metal surface to be cleaned is a bit more visible from this aspect.



It should not be necessary to clean the rest of the MAF; however, if you wish to do so, then with the sensor removed, the rest of the MAF (pictured below) can be cleaned in warm, soapy water. If you do so, be sure to rinse it thoroughly and dry it completely before reinstalling the sensor. The shot below shows the MAF, sensor removed, with the aspect from the intake side of the MAF. Clearly visible on the right of the shot is the alignment notch which engages the rubber tang/ear on the intake side.



Reassemble the sensor into the MAF and reinstall and tighten the screws. Reinstall the MAF assembly.