

Assemble the following tools and supplies:

1. Sleeping bag or large quilt (Not shown)
2. ¼ inch ratchet drive & at least one 6" and one 3" ¼ inch drive extensions
3. ¼" drive E8 Torx Socket
4. Panel removal tool or large flat blade screwdriver
5. Needle nose pliers
6. Band-aids ;-) (Not shown)



- Open your hood to the fully vertical position.
- Take your air filter housing off.
- Remove your MAF (just the top half for now)



- Unplug the MAF connector (it's easier after you remove the top half of the MAF)



- Remove the PCV hose from the bottom right of the elbow. (use the panel tool or large flat blade screw driver)



- Twist the elbow 20 degrees to the left with both hands.
- Push the elbow straight back to the firewall and pull the top up and toward you.

☞ Take your MAF and spray it liberally with CRC Mass Airflow Sensor Cleaner and set aside to dry.

- Get your big sleeping bag or old quilt and fold it in half on top of the left side of your engine. Get comfy.



- Take a bright LED flashlight and point it down and to the right of the PCV hose you disconnected from the elbow. You'll see the top of the CPS electrical connector about six inches below the hose.

☞ To the right and on the bell housing is a clip that holds another wire loom with two small wires. Move the loom and wires toward the front of the car and using pliers pull that clip off. This is not actually necessary but will save you about 1/2 pint of blood loss from your knuckles.

- Now, use your left hand to push down on the tab atop the CPS connector and wiggle it as you are pushing – HARD.

☞ Once you have the connector off and out of the way, put the 1/4 " E8 Torx socket onto a 6" or couple of 3" extensions and carefully work the ratchet and extensions into place under the connector spot on the CPS. (Note, a 3/8" drive

socket **WILL NOT** fit under the connector and onto the Torx bolt. It will feel like it's the wrong socket and you'll never seat it onto the bolt.)

- Loosen the bolt until it starts to turn easily but don't back it all the way out. Ease the socket off and do the rest with your fingers. Drop that bolt and you'll wish you had been more careful. Remove the sensor and replace with the new one.
- Put a dab of blue thread locker on the bolt and start it with your fingers until it grabs some thread.
- Put your socket/extension/ratchet combo back into play and snug it down.
- Plug the connector back into the CPS and replace the "hand shark" clip back onto the bell housing. Return the loom and wire to the clip.

👉 As you reassemble, pay particular attention to the "upstream" part of the PCV hose that will go back onto the MAF elbow. There is a portion that has a dual orifice with orange plastic "nostrils" inside and it snaps into a larger hose close to the firewall. I accidentally unsnapped this during disassembly and thought I had it back together tightly as I reassembled. I was wrong. Much MAF and vacuum line troubleshooting time later, I discovered that I had failed to pay attention to that critical detail. After taking the MAF and elbow back out, I was able to make those parts "SNAP" together positively. If your hoses don't come apart – be happy. Below is a picture with the green arrow pointing to the location of these hoses.



- Swab some dish soap on the fitting on the right of the elbow and put the elbow back onto the airbox. As you are working the elbow back down into its home, ease the PCV hose onto the tip of the fitting. I used a bit of pressure with my finger to get the hose started and then levered a screw driver against the hose to seat it onto the fitting.
- Examine your work. Make sure that the "compound hose" I mentioned is intact before continuing.
- Put your MAF back onto the elbow and install the plastic clip that secures it.
- Check that you didn't undo any vacuum lines with your gut while laying on the engine.
- Re-fit the air filter housing.
- Start your car, take a bow and enjoy your choice of beer, bourbon or Bordeaux to celebrate. I selected a nice Malbec and a Padron Anniversario cigar. Hey, I saved myself at least \$300!

Postscript: As I mentioned earlier, I botched the job the first time by not securing the compound hose line. The car started fine but idled like crap and almost stalled on the test drive. I sure didn't want that to happen to anyone else.