

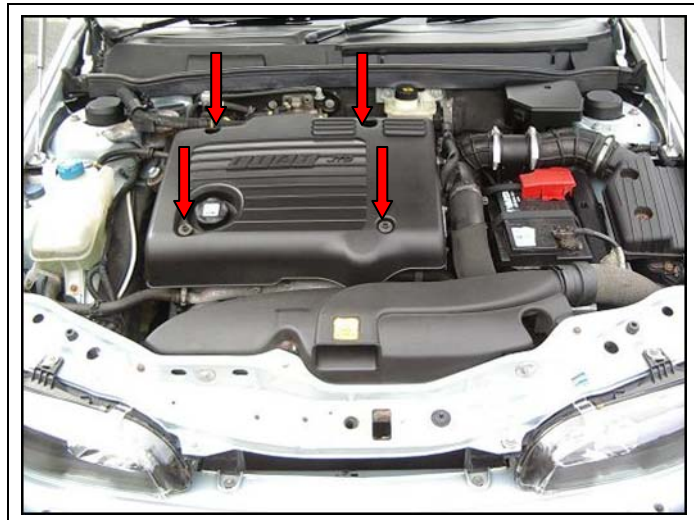
# Cleaning the EGR valve (Electronic)

## Tools Required:

- A 4mm Allen Key
- A 6mm Allen Key
- A 10mm Socket
- A 13mm Socket
- A Ratchet
- Rubber Gloves
- Old Tooth Brush
- Oven Cleaner (Caustic)

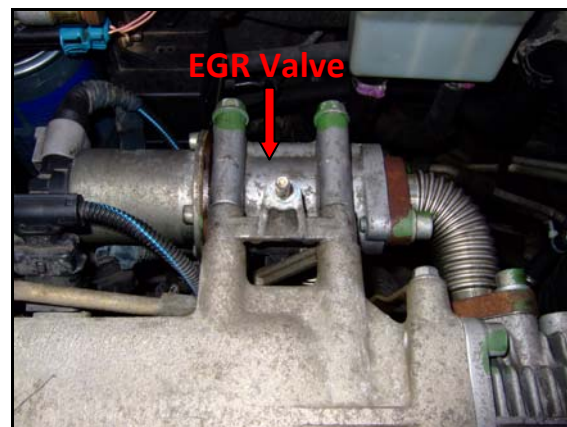
## Step 1:

Remove the plastic engine cover. Use the 10mm socket to remove all 4 nuts and washers. Remove oil filler cap and remove the plastic engine cover. Make sure to refit the oil filler cap after the cover has been removed to avoid anything falling into the engine.



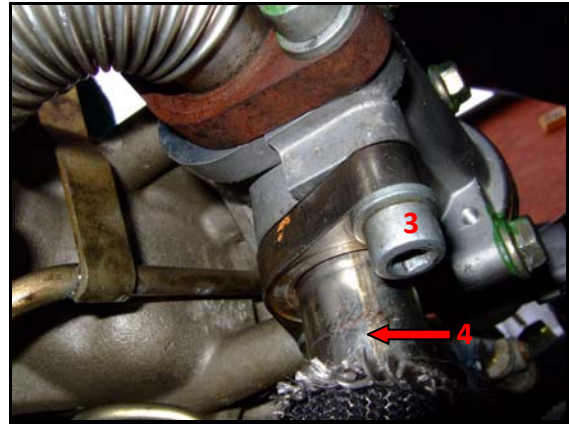
## Step 2:

Locate the EGR valve and carefully disconnect the grey plug from the EGR valve. A small flat headed screw driver will aid with disconnecting the plug.



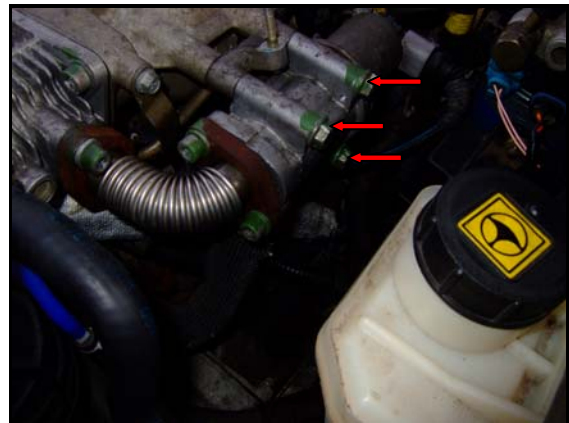
### Step 3:

Unscrew bolts 1, 2, 3 and 4 using the 6mm Allen Key. Make sure not to lose the gasket seals between the pipes and the EGR. (Bolt 4 is tricky to get at but not impossible, just take your time).



### Step 4:

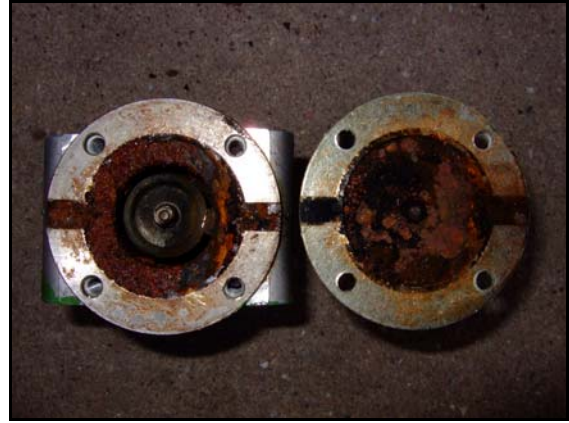
Carefully support the EGR and bracket as you remove the 3 bolts holding the EGR to the inlet manifold using the 13mm socket.



You should now have an assortment of bolts, nuts, gaskets, brackets and of course the EGR valve.

## Splitting the EGR valve:

Use the 4mm Allen Key to remove the 4 screws holding the electronic part of the EGR valve to the mechanical part. Also take care with the gasket between the two. As you can see from the picture on the right, my EGR hasn't been working for a long time and has corroded.



**Cleaning the EGR valve:** I started with the mechanical part first. The spring was covered thickly with the build up of carbon deposits that the spring was impossible to compress. I used super strength caustic oven cleaner to clean the EGR valve, try not to get the caustic cleaner onto the external part of the EGR otherwise the metal reacts with the caustic cleaner and tarnishes the finish. **WEAR GLOVES** as it's harmful to the skin. Spray the cleaner into all the openings of the EGR and let it soak in for a few hours or overnight. Wash off with warm water and remove deposits with an old tooth brush. Repeat for stubborn areas.



## Cleaning the rest of the EGR valve:

Your EGR should not really look like this; it should be covered with a small amount of carbon that you can brush off with an old tooth brush. My EGR had jammed for a long period of time and moisture had accumulated between both parts and corroded the mechanical pin and surrounding area. I used a Dremel with a sanding disc and carefully sanded the rusted area. I then lubricated and freed up the metal pin.

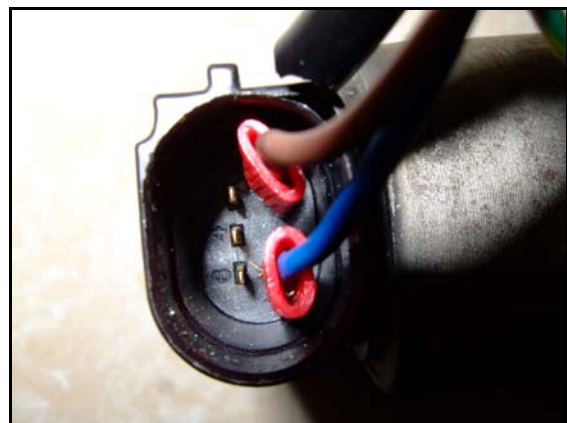


Once you are satisfied the EGR valve is clean and moving freely, put the EGR valve back together, making sure to refit the gasket between the electronic and mechanical parts.

## Testing the EGR Valve:

You can test the EGR valve to see if works. Connect a wire to a 12V source and a wire to negative, then connect the positive 12V wire to pin 1 and the negative to pin 5 as shown in the picture.

Brown Wire = 12V Positive  
Blue Wire = Negative



As you turn on and off the +12V power source you should see the valve open and close. If not then your EGR valve may not be cleaned thoroughly enough or the electrical part is faulty.

Once you are happy that the EGR valve is clean and working, refit the EGR valve back into your car.

## Refitting

It is always good practice to replace the two gaskets that fit between the EGR valve and the inlet and outlet pipes. The part number is 46773082 (x2).

- Firstly bolt the lower inlet pipe to the bottom of the EGR valve using the 6mm Allen Key. This is the trickiest bit and is best to do this first.
- Secondly bolt the outlet pipe to inlet manifold to the EGR valve using the 6mm Allen Key.
- Fit the bracket behind the EGR valve and bolt the EGR to the inlet manifold with the 3 long bolts using the 13mm socket.
- Reconnect the grey EGR plug.
- Refit the plastic engine cover, using the 4 washers and bolts with the 10mm socket.



Job done.

**I take no responsibility for any damage caused or injury sustained to anyone who has been following this guide. This guide has been written for reference and guidance only.**