

## How to fit EGR blanking plate in Toyota 1KD-FTV Engine

### Anyone can do this!

Fitting the blanking plate in 1KD-FTV engine is a tricky job to do for a first timer, but it is a very easy job when you do the second time.

My 18 years old daughter is an expert fitting blanking plate with a little hand which fit surrounding area nicely and she will do it under 10 minutes.

Therefore, you need to be a bit patient. Please call your daughter or wife to do it if you have a big hand because the big hand will have slight difficulty fitting surrounding area of EGR pipe.

### Preparing the right tools.

Please do not use ½ inch socket wrench which is too big for the job. You must have 3/8 inch socket wrench or smaller.

You need two sockets on 3/8 inch wrench, 10mm and 12mm and an extension bar.

A long screw driver either Philips or minus head.

And of course an EGR Blanking plate (1.5-2 mm thick marine grade stainless steel preferred).

### Job preparation:

1... Remove the plastic hood which locked with 3 bolts and 2 nuts.





Know what EGR gas cooler is and where the blanking plate goes.



2... Wrap up with old rags or fits cardboard as a temporary protection for your battery positive terminal. A gentleman had an accident by shorting the battery positive terminal with his wrench and melted battery and socket wrench. Your car battery has enough energy to weld the wrench to engine and battery terminal and melted away together.





Let's do the job:

**1... Disconnecting Fuel pressure sensor connector.**

Many people damaged this connector due to not enough information about how to unplug it. You must locate a plastic tab in the connector. There is a little plastic tab on top of the connector. Grab and pull the connector by the body of the connector **while you are pressing the tab hard**. It should unplug easily. Never use a screwdriver to pry off the connector you will surely break it. We only want to unplug this connector to have more workspace around them.



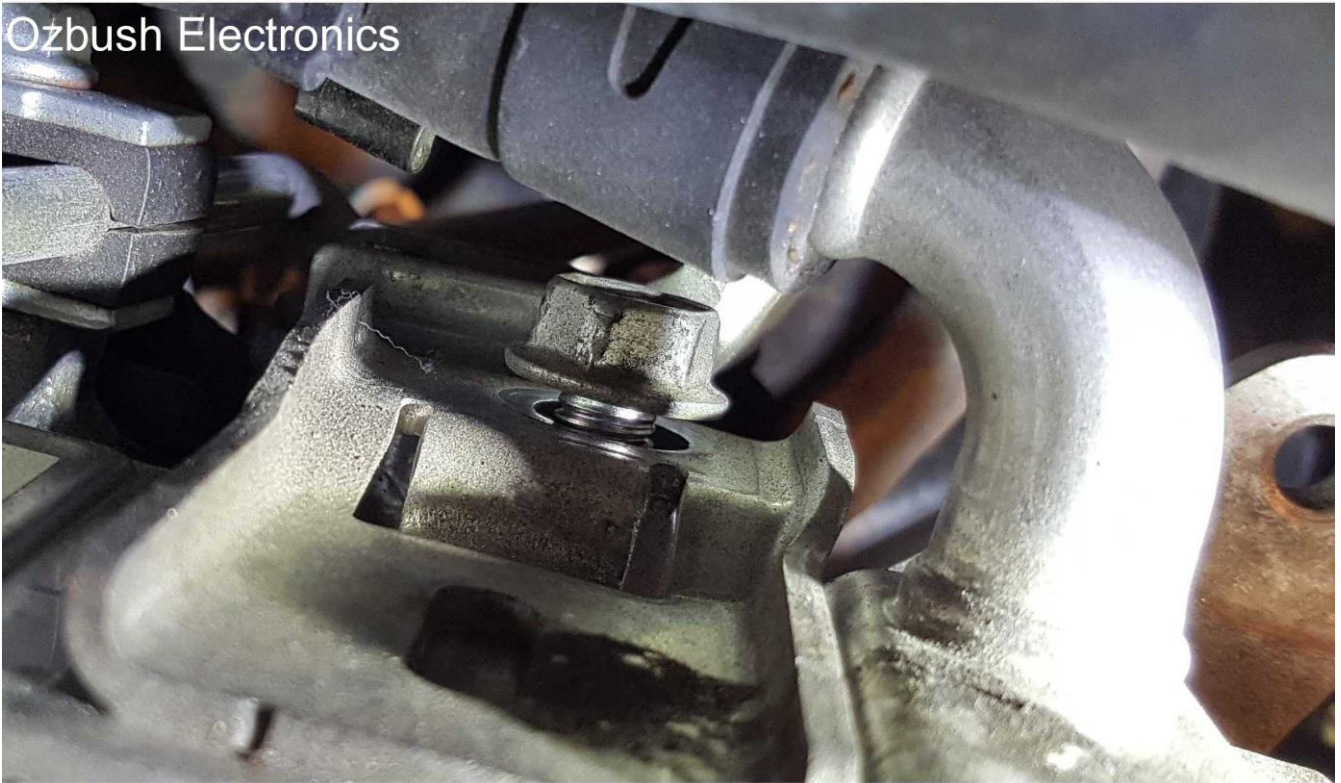
**2... Loosening the EGR gas cooler mounting bolt.**





Be careful not to short out or touch the battery terminal nearby with your wrench handle!

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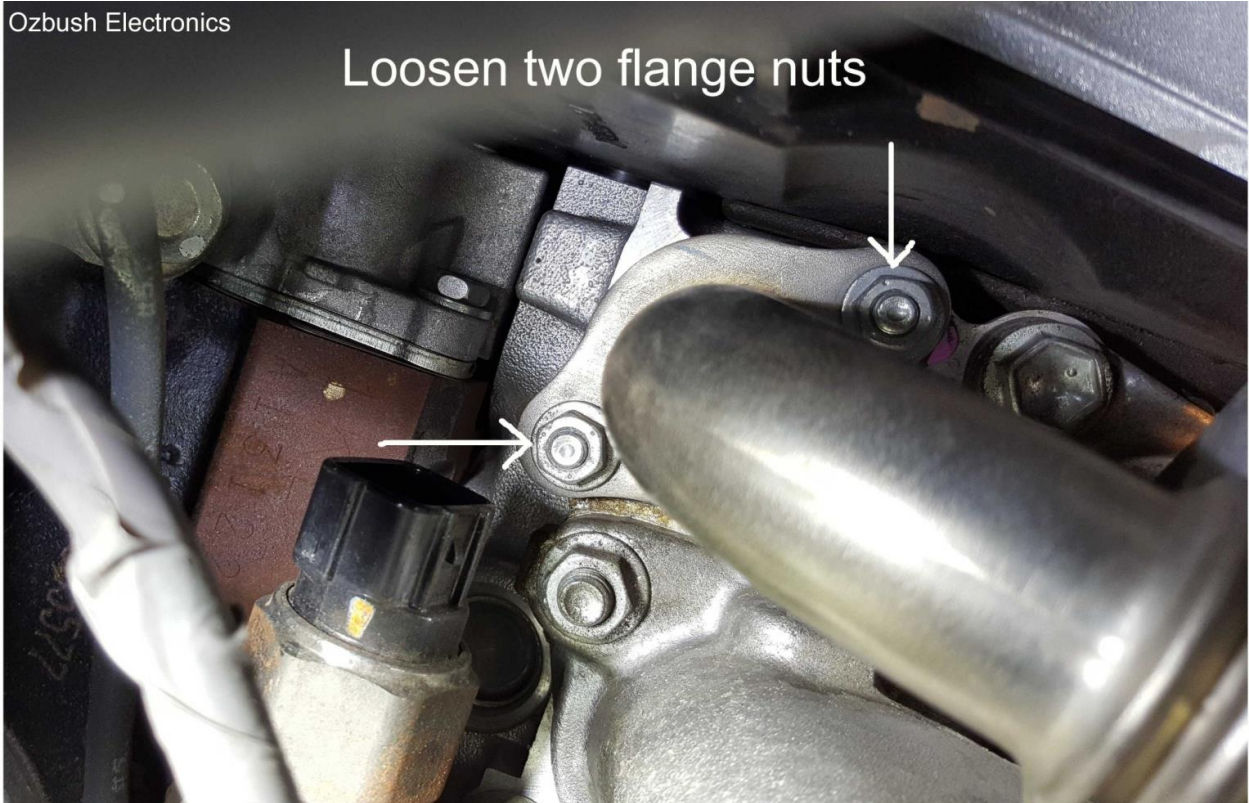
There is a bolt which holds the end section of the EGR cooler on the engine block side. Using a 12mm socket and extension bar, undo this bolt until it shows about 4mm gap. Don't undo it completely leave a gap of about 5mm max. (Don't drop anything down below. You will never find it)

### 3... Undo the two nuts which hold the flange of the EGR pipe.

The EGR gas cooler flange is more accessible after Fuel sensor connector is unplugged and moved out of the way.

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Loosen two flange nuts

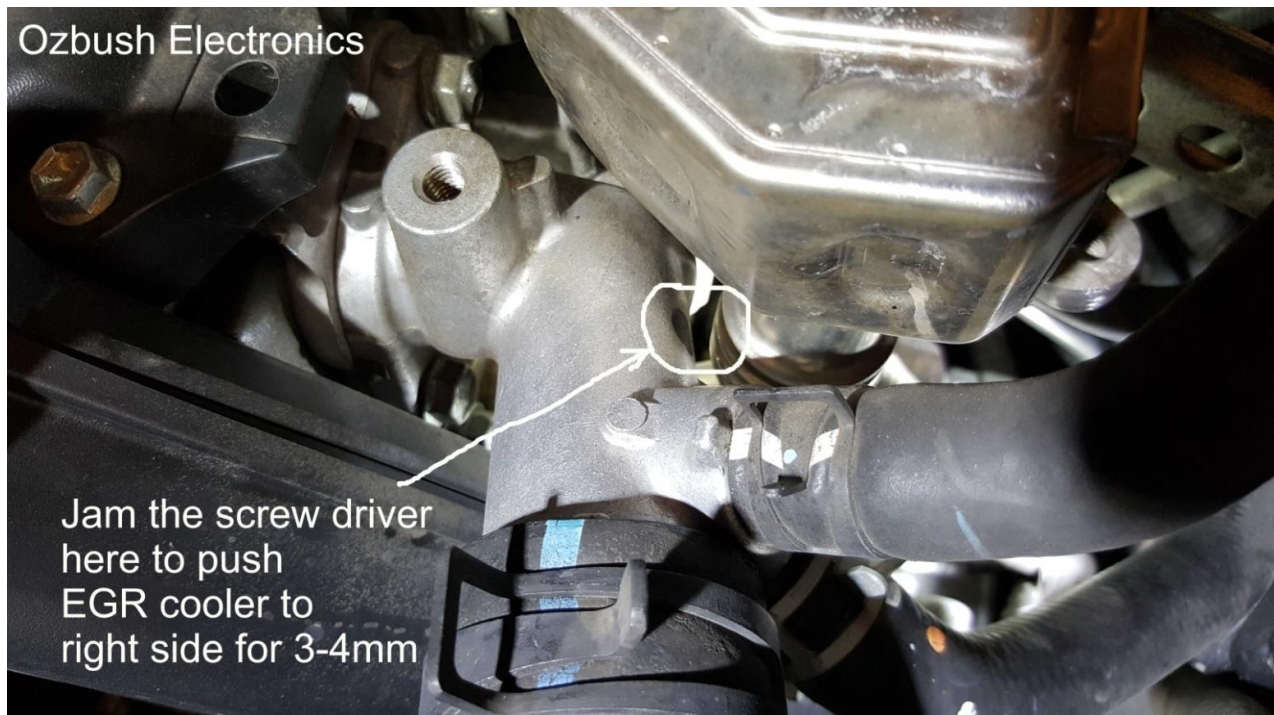




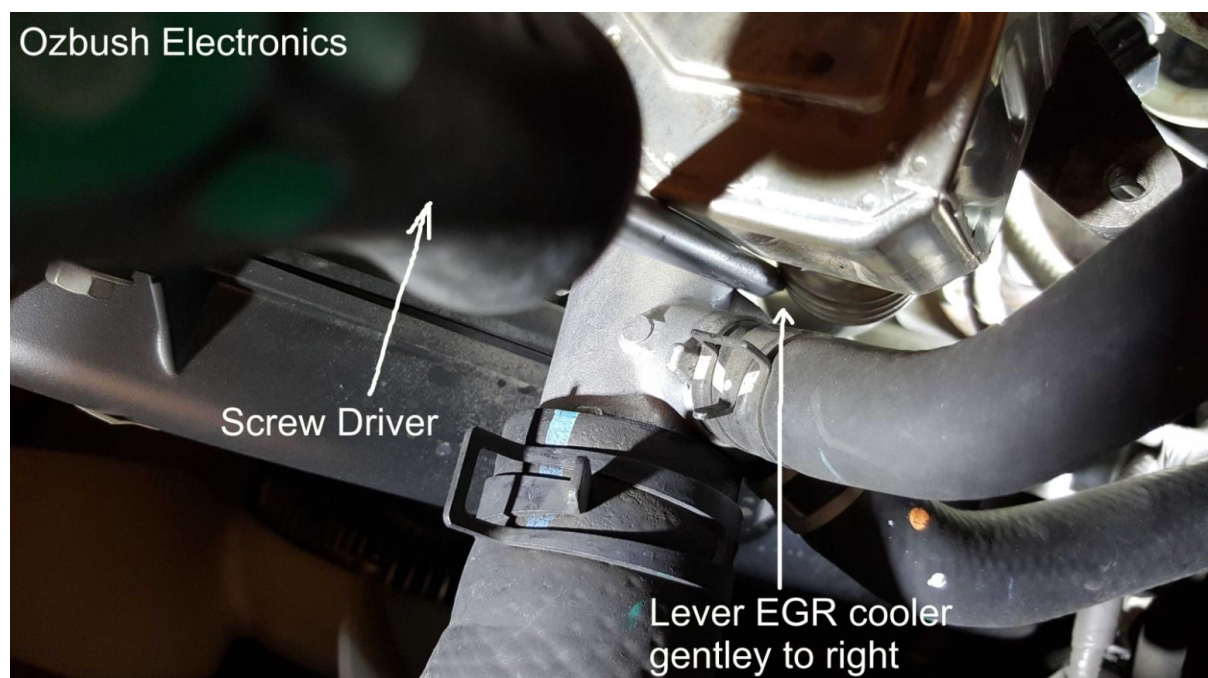
Again, don't take two nuts off completely. Unscrew them until it has a gap of 3-4 mm. You may take the bottom nut off completely.

#### 4... Levering EGR cooler out slightly:

Referring to photo fit the long screwdriver in between Thermostat housing and metal bellow section of EGR gas cooler and gently lever EGR gas cooler away while you are watching the gap is opening between the EGR gas cooler flange and the engine block.



Slip in the blanking plate between EGR gas cooler flange and the engine block, it be fitted by slipping into position from the bottom of the pipe when you have enough gap (about 2-3 mm). Shift EGR gas cooler with screw driver only to have just enough gap to slip in the blanking plate, up to 3-4 mm maximum.

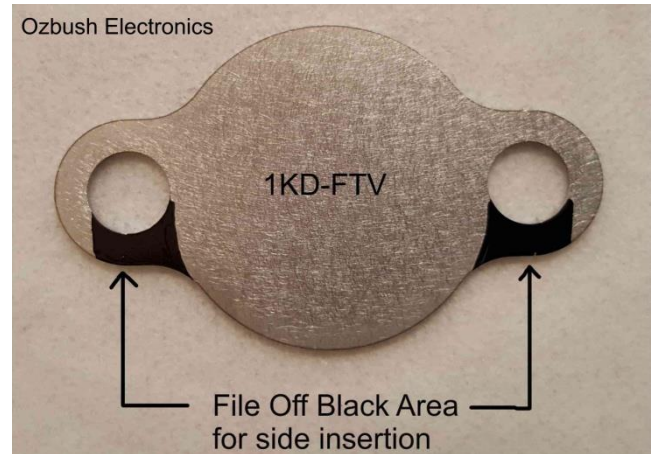




**Warning!** DO NOT push out the EGR gas cooler too much, if you do EGR gas cooler will **Crack** inside and coolant will leak into the engine and coolant loss will also melt the engine.

Note: Do not try to remove the entire EGR gas cooler. It is part of the EGR emission control system assembly and it will require removing the entire EGR assembly which took me more than a half day of hard work.

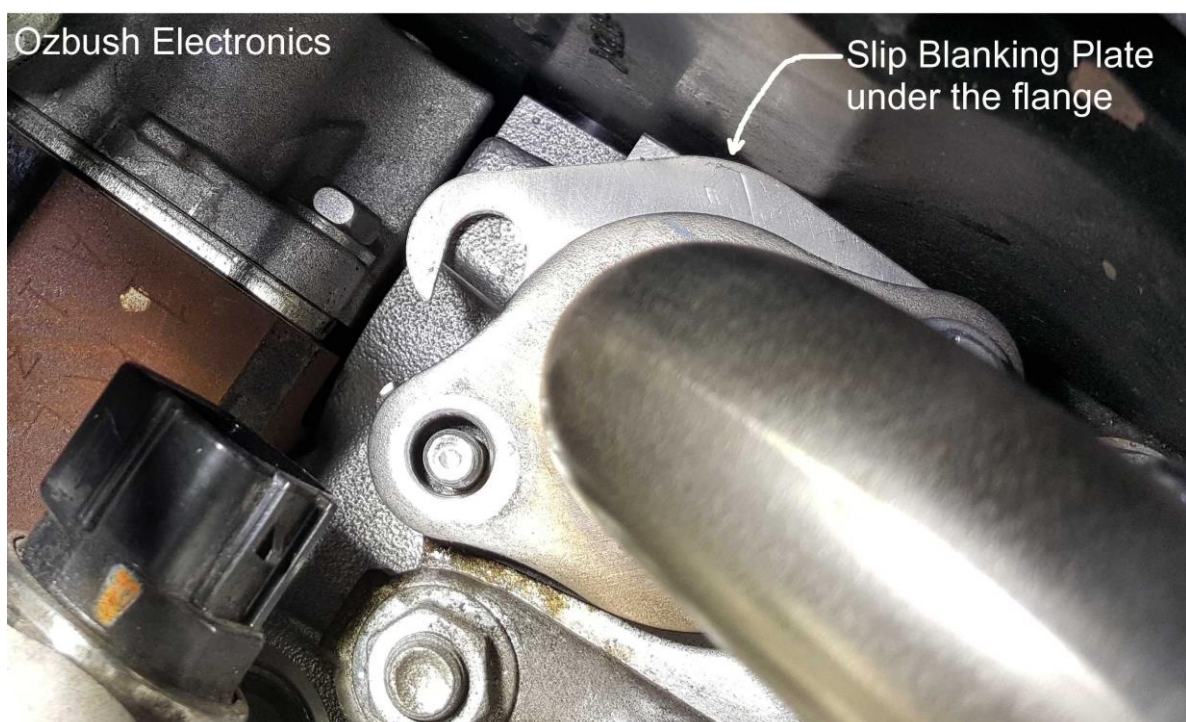
#### 5... Slip EGR Blanking Plate under the flange.



EGR Blanking Plate for use of the full EGR block using the Manual Mapper from Ozbush Electronics.

Both corners of the holes need to be filed off like photo to make side insertion of the plate possible if you have the blanking plate without the slits. You need to enter side way by slipping into position from the bottom of the pipe so you don't have to remove the entire EGR emission assembly.

**Slip the plate side way without lifting the EGR cooler flange.**



(Do not try to lift the flange too much, you may crack the EGR cooler).

**6... Tighten up the two nuts at the EGR gas cooler flange:** You don't need any sealant.

**Caution!** The two bolts in the flange are **very easily damaged by over tightening**.

Be very careful not to over tighten the bolts. These bolts are very soft metal and the **thread will be stripped** very easily.

**7... Plug the fuel sensor connector back in:**

Make sure you push hard and hear or feel "click".

**8... Re-tighten the EGR gas cooler bolt (12mm).**

Make sure exhaust gas is not leaking at the flange.

You now have successfully finished the job. It took me an hour to do the first time, but it only takes me under 15 minutes nowadays.

**Please note: Above Modifications are for use only for private land, off road or racing.  
It may not comply with current emission standard set by government authority.**

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