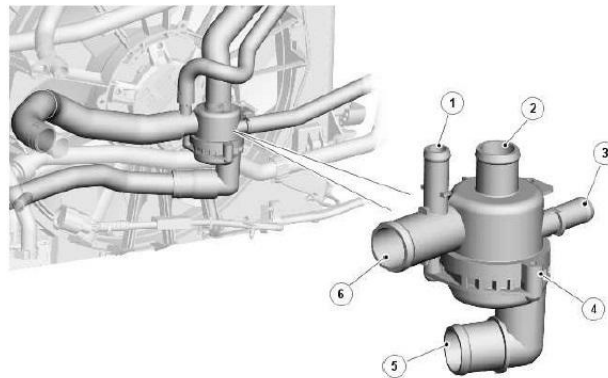


# **A Guide to replacing the Water Outlet Connector on a XF250 3.0L Diesel**



This guide covers the replacement of the Water Outlet Connector, as shown on the front cover, on the V6 3.0 Litre Diesel engine X250.

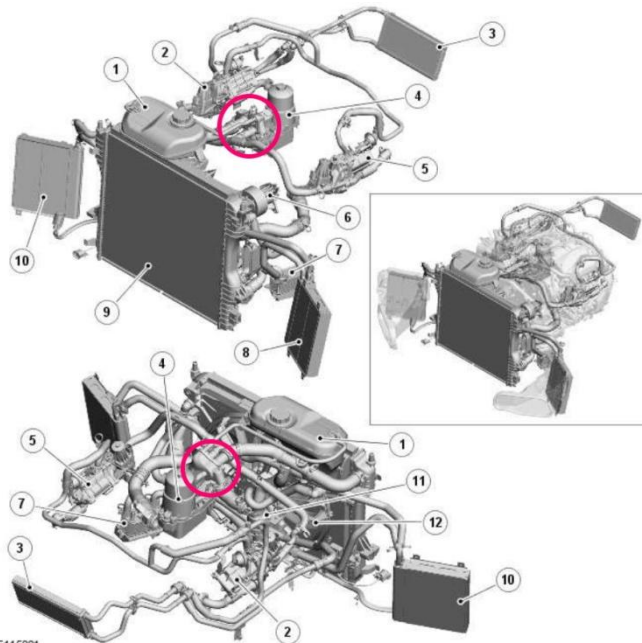
This component is sometimes **incorrectly** referred to as the thermostat (even by some suppliers!). It is not. The thermostat is located below the expansion tank next to the radiator.



E115003

**This is the thermostat**

The Water Outlet Connector is located in the 'Vee' of the engine, under the throttle body housing and sits on the engine oil and fuel cooler.



E115001

**Water Outlet Connector indicated by the red circles**

The usual failure of the component is that it splits along the seam that joins the front part to the rear part. This results in the loss of coolant and a subsequent warning of "Low Coolant Level" in red, in the message centre on the dash.

Replacing the item is not that difficult and can be completed in about an hour.

The tools required to carry out the work are as follows:

7mm socket

8mm socket

10mm socket

Coolant hose clip pliers

EGR valve outlet pipe clip pliers

**A note about the EGR valve outlet pipe clips.**

These clips are not like normal hose clips. The correct name for them is a Clic GR clamp.



**Clic GR Clamp**

They should be removed and refitted with the correct pliers. This makes removal much easier than struggling with a plumber's wrench and/or long nose pliers.

I found these Clic R pliers on Amazon and they certainly made life easier



**Clic R pliers**

To remove the normal coolant hose clips I found a small pair of Molegrips to work very satisfactorily.

First, start by removing the engine cover. Remove the oil filler cap and the cover simply pulls off. It is secured on four 'pegs'. Replace the oil filler cap to guard against foreign objects falling into the engine.



**It's under there somewhere**

The first thing to remove is the air duct in front of the throttle body. Start by removing this pipe from its clip

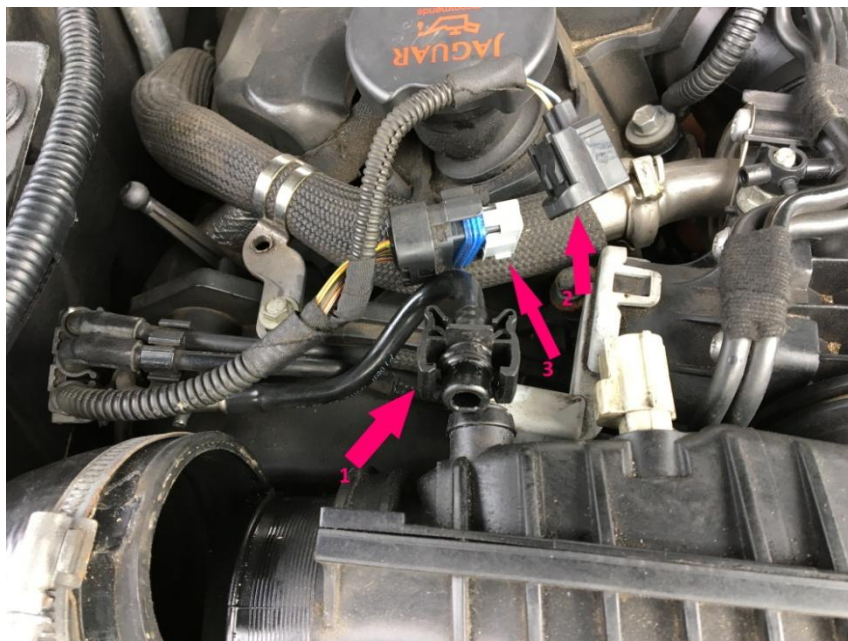




Then tease this cable tie fitting from the air duct itself. I used a pair of long nosed pliers to remove the whole thing by wiggling it back and forth. This enabled me to reuse it afterwards. It will go back in and hold.



Then remove the two 'plugs' (1 and 2 in the picture below) on the back of the air duct. These simply pull off by being squeezed.



Then reach down underneath where these two plugs are and remove plug 3 (in the picture above) from the throttle body housing.

Next, undo the hose clip on the large hose on the left of the air box and pull off the hose.

Then, using a screwdriver, lever up the securing clip on the back of the air box, as seen in the picture below.



Next remove the bolt located behind the expansion tank holding the air box on. This is quite a long bolt and seemingly cannot be removed fully because it fouls on the expansion tank as you pull it out. But if you wiggle it to the left, it is possible to get it out.



**Location of bolt holding the air box on**

Once the bolt is out, pull the air box forwards and upwards to get it out.



The next task is to remove the throttle body.

The first thing to do is to unplug the MAP sensor at the rear of the throttle body.

Next, you need to disconnect the EGR valve outlet tubes on either side of the throttle body.

There are two securing bolts on each tube which must be removed to allow the limited amount of movement in the tubes to be exploited.



**EGR valve outlet tube securing bolts**

Next the clips securing the tubes to the throttle bottle need to be undone.



**Clic GR clamps removed**

If you damage these clamps such that they cannot be reused, the part number is JDE 3754

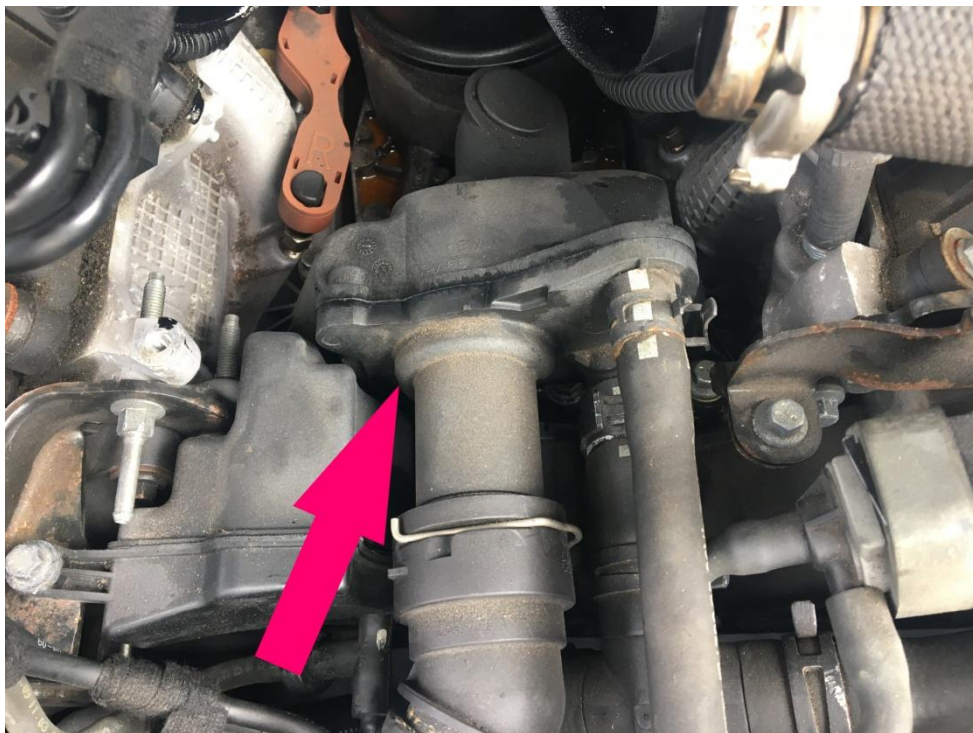
The pipes can now be eased away from the throttle body. These pipes are quite stiff, so movement is limited.

The final item to be removed, to free off the throttle body, is the bolt on top of the throttle body.



Once this bolt is removed, grasp the front of the throttle body and lift it up and to the right. Then wiggle the throttle body left and right whilst pulling towards you. The body should then come free.

You will then be able to see the part that needs removing, as indicated by the arrow in the picture below.





Next you will need to drain off some coolant. You do not need to drain it all down. I removed about 2 litres, by siphoning it out of the expansion tank. A note about this: The tank appears to be compartmentalised, so just siphoning the coolant from the filler, does not empty the tank. I then removed the bleed screw and inserted a very thin pipe into there and siphoned off more.

Prior to doing this, I did a pressure test, just to confirm where the coolant was leaking from and the picture below shows the coolant weeping out from the seam in the failed water outlet

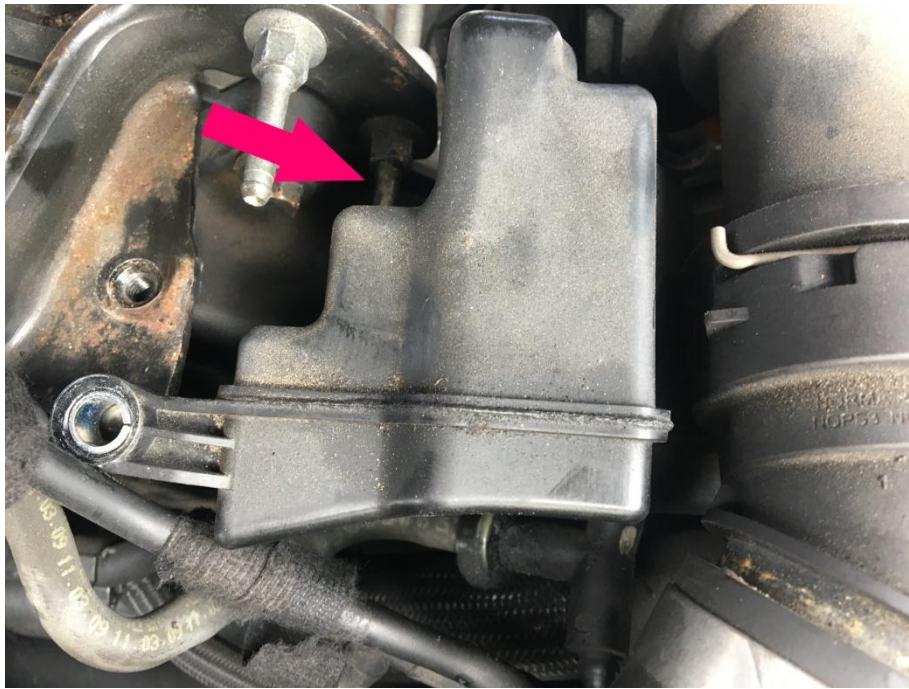


**Thar she blows!**

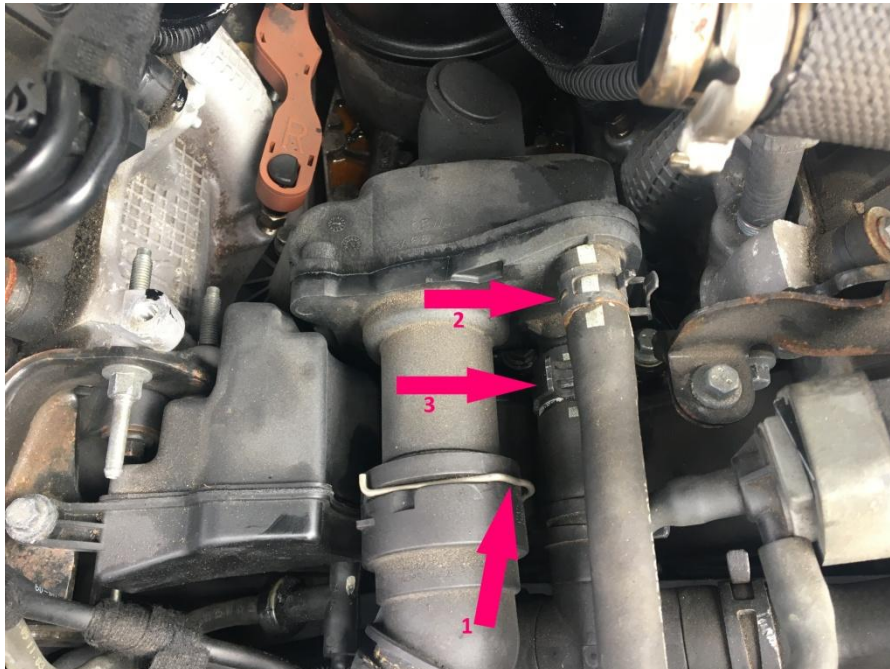
Next remove the bolt as indicated in the picture below. This has to be removed, as the object that it secures covers one of the bolts that hold on the item to be replaced.



Draw the item just released towards you, as it engages on a pipe which will be revealed as you draw it forward. The picture below shows the pipe in question.



Next, remove the clips 1, 2 and 3, as indicated in the picture below





Then pull the hoses off.



You are now in a position to remove the water outlet. This is secured by four bolts. Once these are removed the component can be removed by lifting it up and wiggling it from side to side to free off the connection at the rear.



**Water outlet removed**

Refitting is, as they glibly say in the Haynes manuals, the reversal of removal. One tip about refitting the throttle body is to insert the right hand pipe first, then wiggle the left hand pipe in, line up the throttle body with the bolt hole and insert the securing bolt.