Td5 Turbo Boost Box

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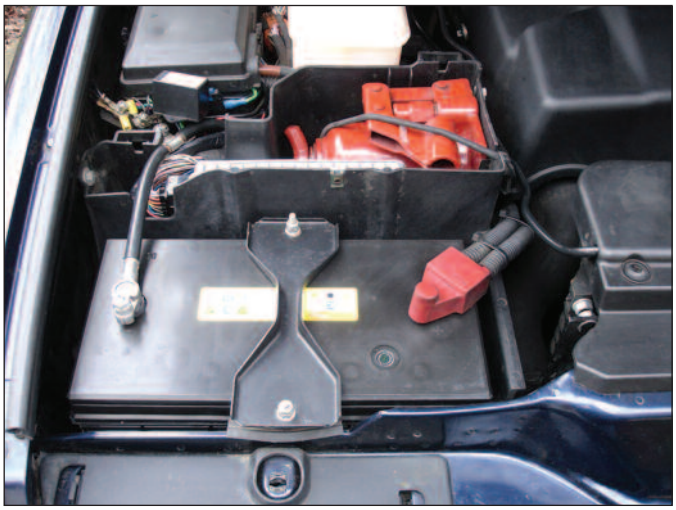
FITTING INSTRUCTIONS

Part Number - DA4667

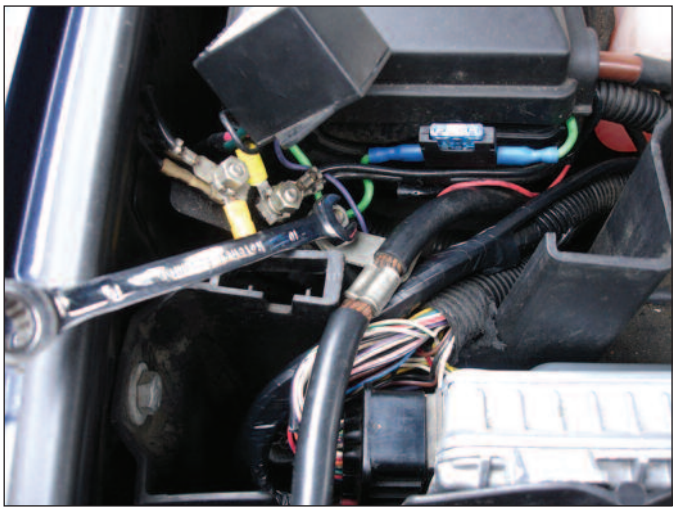
SAFETY NOTICE: Please ensure that you have removed the ignition key, and that you have it on you whilst fitting this device!

Although this guide shows fitting instructions for the Discovery Td5, the Defender Td5 models will be the same, but the engine ECU is located under the drivers seat instead.

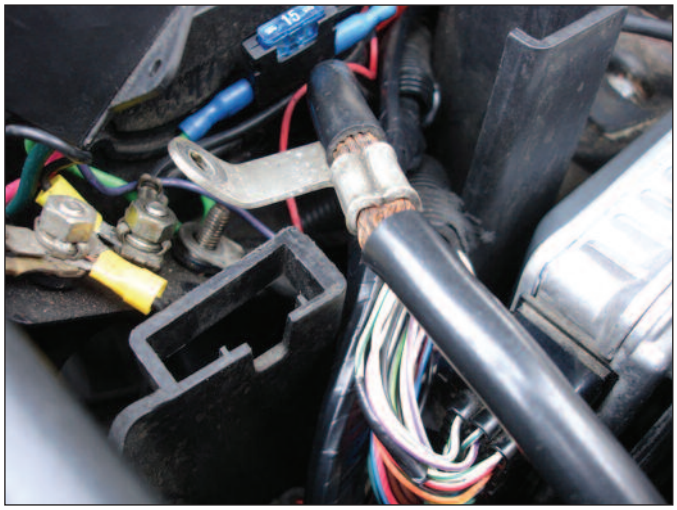
Remove the plastic battery/ECU cover.



Undo the battery lead to chassis earth retaining nut with a 10mm spanner.



Now lift the battery earth cable off the chassis earth post.



Undo the engine ECU retaining screw

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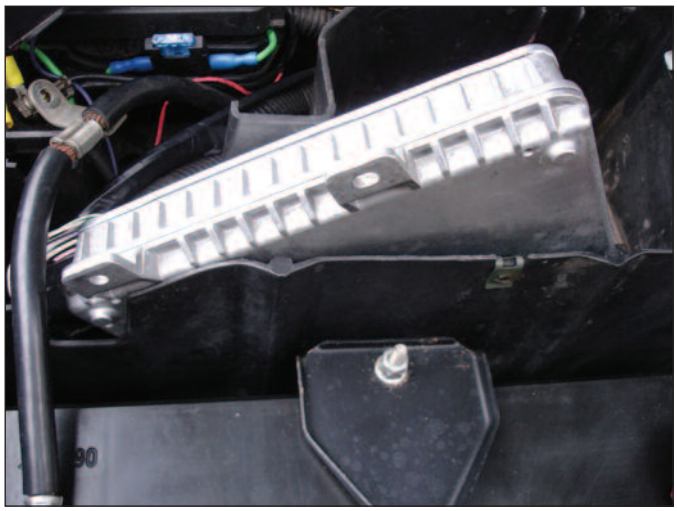
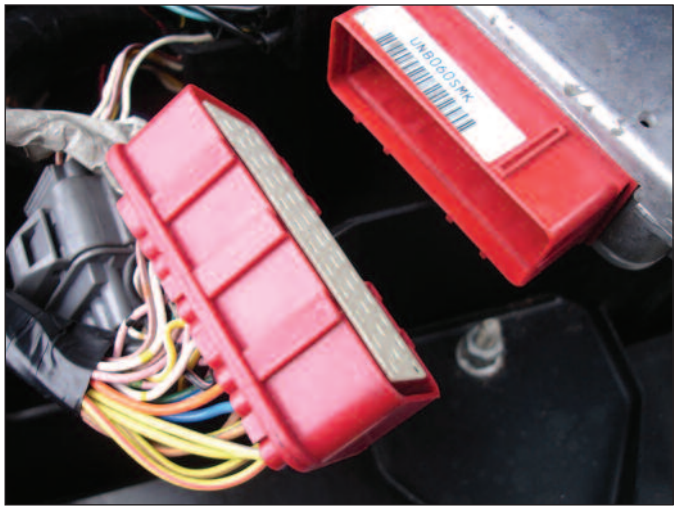
Tilt the ECU up and lift out

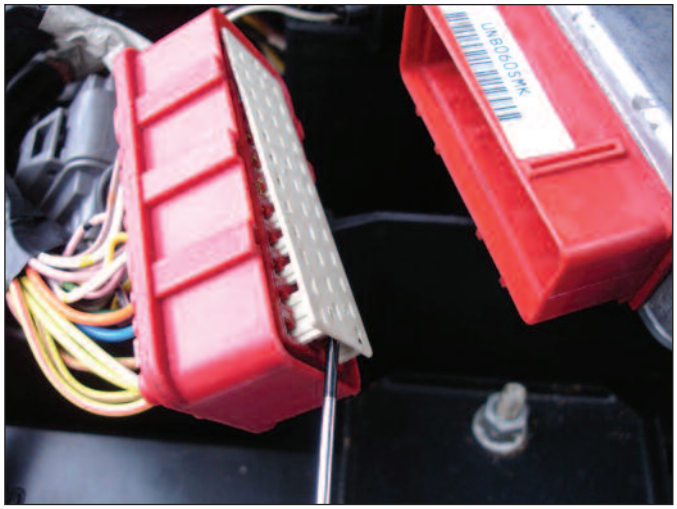


Rest the ECU, upside down on top of it's housing.

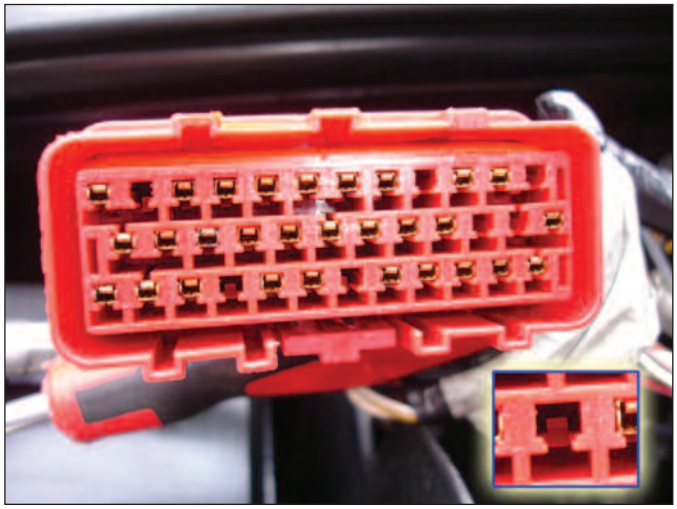
Take the red ECU plug off it's socket. There is a retaining clip on the other side of the plug, which you will need to press down to release it.



Using a small screwdriver, gently prise off the white plastic cover, to expose the terminals.

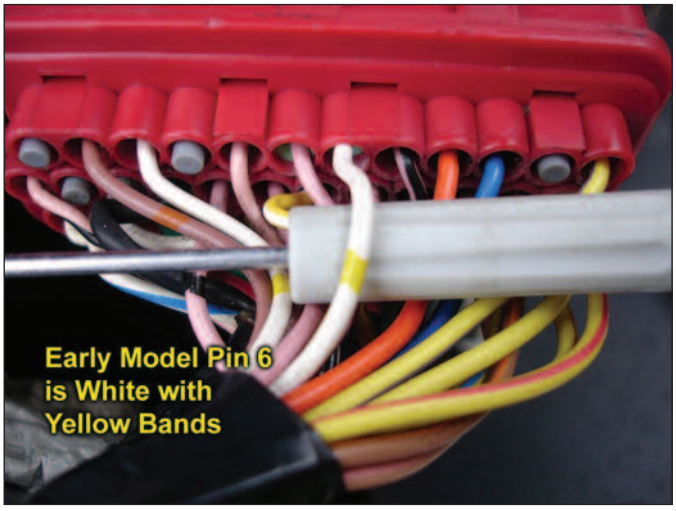


Once you've removed the plastic cover, you'll see all of the connectors in the plug. Each of these connectors are held in place with a small plastic retainer. Looking at the inset picture (connector removed for clarity) you'll see the retainer quite clearly.

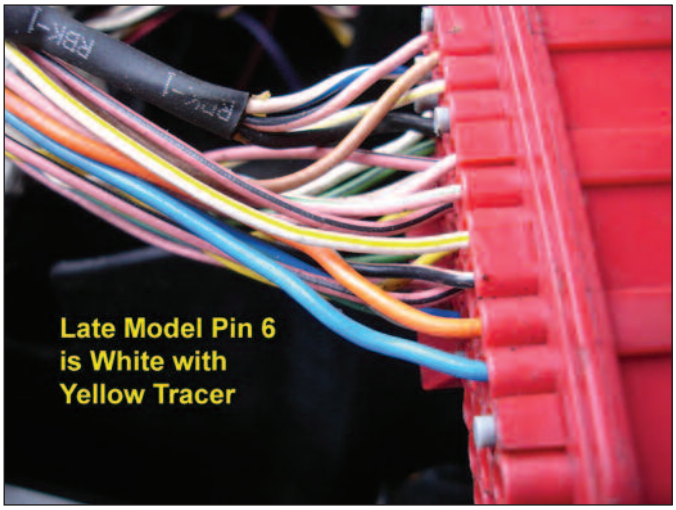


Now we need to identify the pin which needs to be removed. We are looking for pin 6, which is located on the bottom row of the plug. **As our plug is upside down, it is therefore at the top.** Counting from right to left, starting at 1, count the pin numbers (including pins not in use) up to 6. This will be a **White** wire with a **Yellow** marking. The markings on the wire will vary depending on the year of manufacture of your vehicle. Examples of early and late model wiring is shown below.

Early vehicles have the following wire type...
WHITE wire with **YELLOW BANDS.**

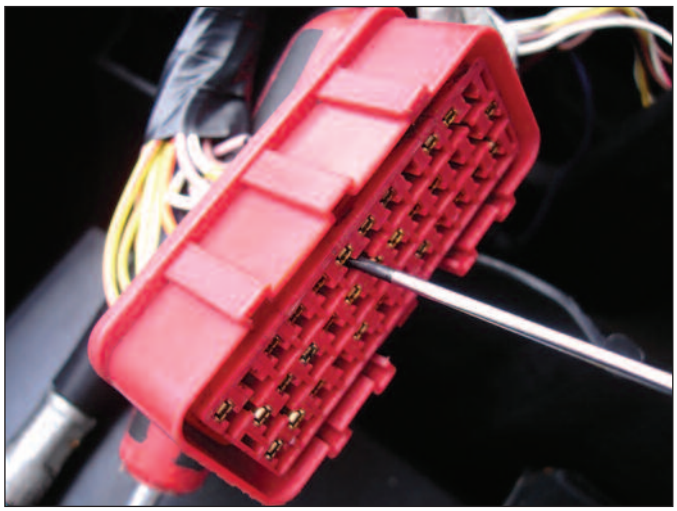


Later vehicles have the following wire type...
WHITE wire with **YELLOW TRACER.**



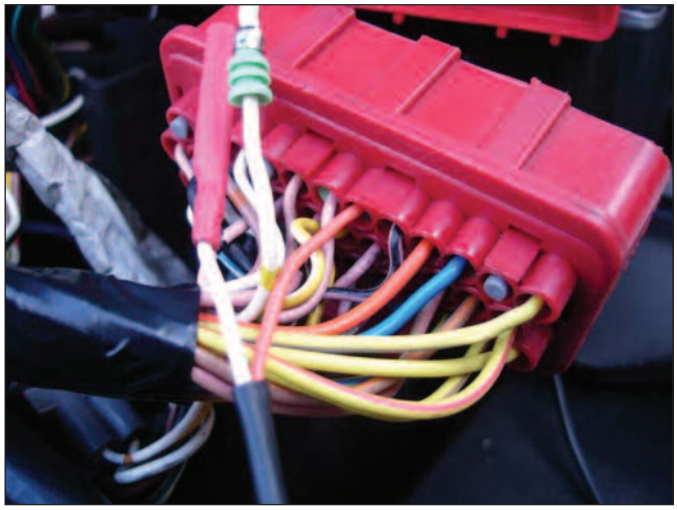
NOTE: On both wiring types, pin 10 also has the same coloured wire! **Don't mix them up!!!**

Now we are confident we have the right wire, using a very small screwdriver, or a pin, release the connector from the plug by prising gently on the small retainer.



Once the connector has been released, pull it right out of it's hole.

Now put the female type connector from the Turbo Boost Box into this hole. Push it right in and you should hear or feel a click as it locates. Give it a gentle tug, and it should stay put.



Take the lead from the Turbo Boost Box with the heat shrink tubing, and push the White/Yellow cable you took out of the red plug, in to mate up with the male connector inside.

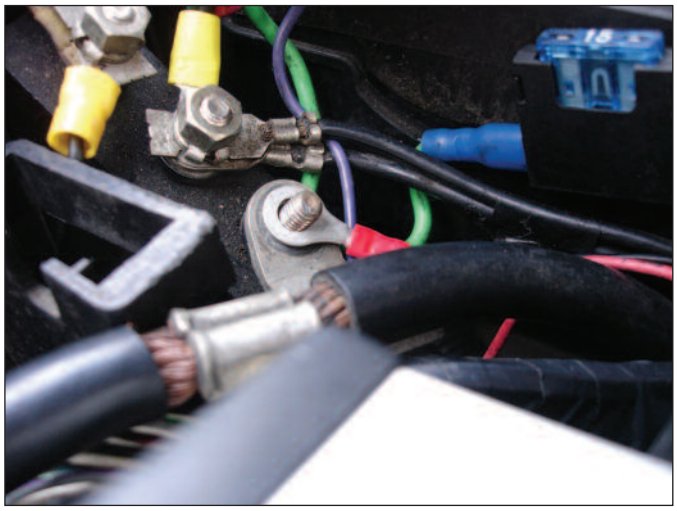
ENSURE YOU LINE THE CONNECTORS UP FIRST!

Once you're happy it's pushed in all the way, you need to shrink this plastic tubing to seal the join and also to prevent it coming lose. You can use something such as a gas cigarette lighter. Take care not to let the flame touch any of the plastic. Heat shrink tubing is quite sensitive to heat, so you should only have to flash the heat over it a few times for it all to contract. As an additional precaution, you could wrap this connection with some electrical insulating tape.

Refit the ECU, and replace the battery earth lead onto the chassis earth post.

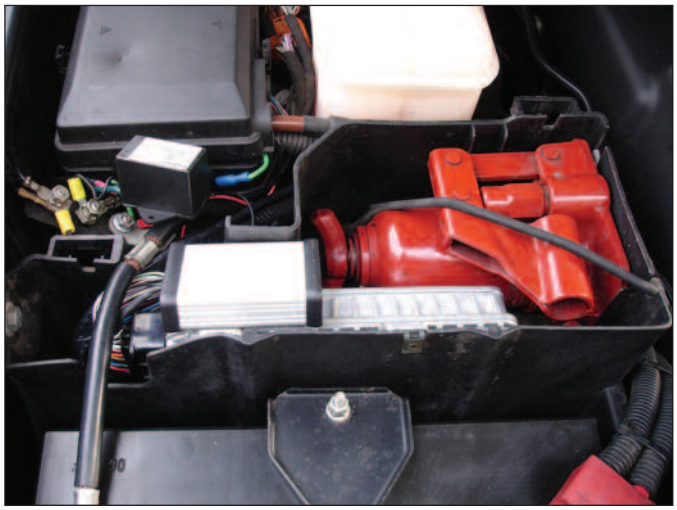
You need to connect the earth wire from the Turbo Boost Box to a suitable chassis earth point. The ideal location for this is on the chassis earth point you've just put the battery lead onto.

Don't forget to fasten it down with the 10mm nut.



Fasten the ECU in place with it's retaining screw, then replace the bottle jack into it's housing.

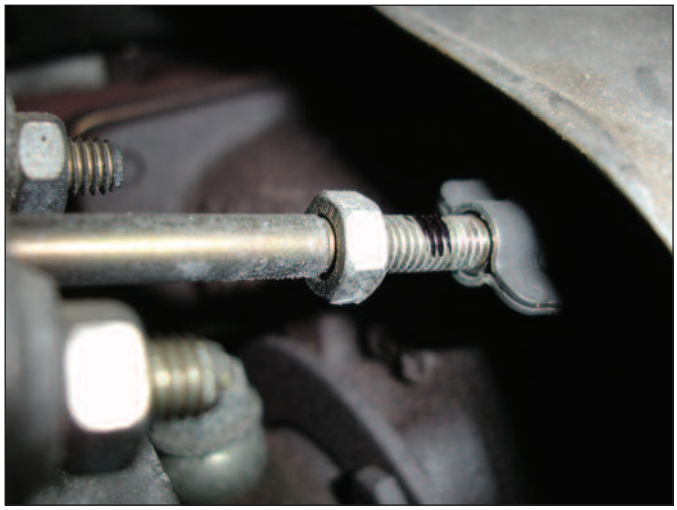
With everything refitted, this is something like what it should look like!



Now that all the electrics are in place, and assuming you have a standard specification turbocharger, we need to adjust the wastegate actuator, to allow extra boost to be generated.

Fully undo the locknut on the turbo wastegate actuator rod, and then measure between 5mm and 7mm from the adjustment collar and mark the threads.

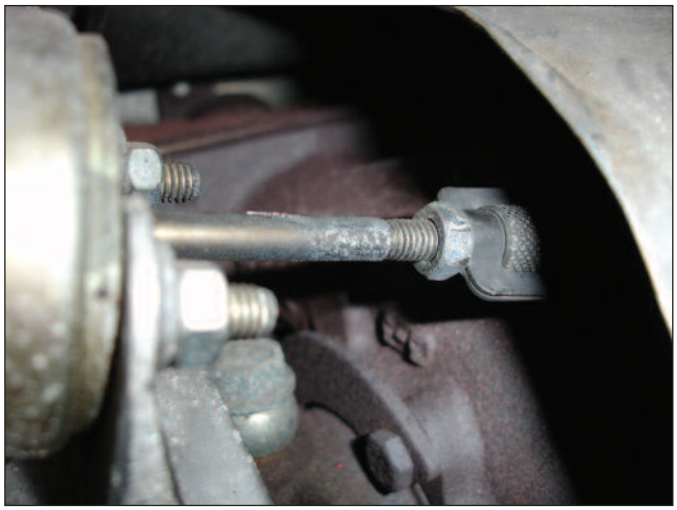
This 5mm – 7mm adjustment will be more than adequate for normal road usage. If you have a turbo boost gauge, you should aim for an optimal boost of about 18psi.



You need to turn the knurled adjuster on the actuator, in order to make your adjustment. However, it can be quite stiff so to prevent damage to the diaphragm inside the wastegate actuator, clamp the actuator rod in place with some mole grips.

If the knurled adjuster is tight, use some pliers to turn it. You could use a squirt of WD-40 as well, but be prepared for some smoking when it all gets hot!!!

Once you have wound the adjuster up to the mark you had made on the actuator rod (approx 5 - 7mm), tighten the locknut back against the collar to prevent it from moving.



Now your ready to experience the Turbo Boost Box in action!