

Disco3CLUB

**Land Rover
Discovery 3**

Anglefire's Guide to Intercooler Replacement

Disco3CLUB

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September 2011

Version 1.2

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Change Record.

[illegible]

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1. Introduction.

Welcome to Anglefire's Guide to Replacing the Intercooler. The aim of this 'Guide' is to provide a set of instructions to enable the average owner to be able to remove and replace the intercooler.

It can be used as a basis for the V6 TDv6. It may assist with the unit fitted to the 3.0l TDv6, but I cannot guarantee it will be exactly right for this variant. If you have used this guide on this model and have any updates we could use (inc pics) then please e-mail them to me mark@colston-online.co.uk and I will update this accordingly.

Please note that these are guidelines only and you should ensure that you are competent in the use of the tools required and take the necessary safety precautions. If you have any doubt of your competence, please contact your nearest Land Rover dealer or Land Rover independent garage who will be pleased to carry out this work for you.

Allow yourself around 6 hours to remove and replace the intercooler the first time, allowing for breaks for tea/coffee and a quick lunch.

Neither the author nor Disco3Club/Disco4Club can accept any responsibility for any accidents or injuries sustained whilst undertaking the work depicted in this guide.

All of the photos (unless otherwise indicated) are from my Discovery 3 MY06 TdV6 SE.

2. Tools

This is a list of tools that I used.

[illegible]

Optional additions to the tool kit are:-

- 1) Regular cups of tea/coffee.
- 2) Box of plasters for grazed knuckles.
- 3) A suitably sized swear box, depending on a combination of a) location b) weather c) temperature d) 'help' by young children/dog/neighbours 😊

I would also recommend some spare self locking clips are obtained in case some break when removing the various covers etc. These are the BLACK ones, not the white ones. It is possible the white clips will also break, but I didn't - though I had spares for them.

Part Number	Description	Quantity in Pack
DYC 101420	Wheel Arch Clips (White)	1
ANR 2224	Wheel Arch Liner Clips (Black)	5

3. Initial Preparation.

Raise the car to off road height if possible. This allows better access around the wheel arches. Drive the car onto ramps, or otherwise lift the front of the car to allow access underneath.

4. Removal of Sump Gaurd.

Support the sump guard and remove the 4 retaining bolts and remove the plate. If you don't have a plate, then remove the plastic clips and remove the plastic cover.



At this point, you can see more clearly how much dirt is in your IC.



5. Removal of Headlights and Grill.

First job to do is to remove the grill and headlights.

The grill is simply a case of unclipping the four clips on the top, and the two about ½ way down the grill at either side.

The headlights are removed by pulling the two clips on either side of each light – I use a claw hammer on the rear most clip and mine are really tight. Don't pull the clips too far up as they only need to be up about 3/8"

Once the two clips have released the headlight, pull it forward and release the electrical connector. There is a locking clip which just needs a little pressure to allow the connector to pull out.

6. Removal of Wheel Arches

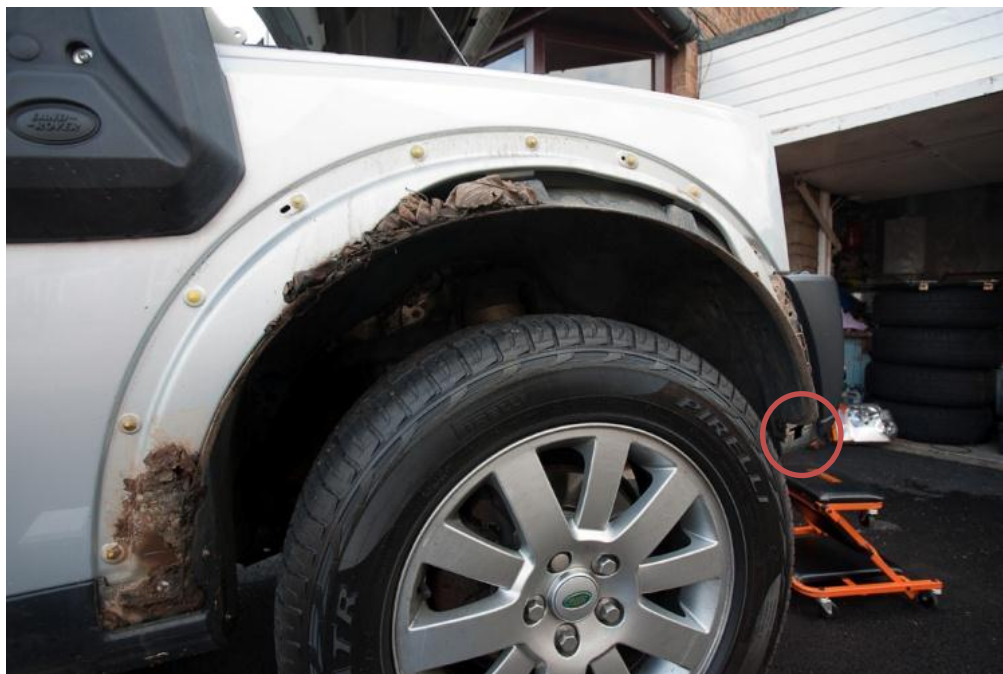
I believe it is possible to remove the one bolt that holds on the bumper at each side by releasing the end of the wheel arch trim – but I removed the complete trim.

There is a screw each side, that screws from the headlight aperture outwards. This needs to be removed. A short cross head screwdriver or a ratchet with a cross head bit will be required.

There is one screw on the drivers side (UK cars) and two screws on the passenger side that need to be removed at the bottom of the leading edge of the arch.

Then carefully remove the 4 or 5 self-locking clips around the edge of the arch holding the plastic liner and arch together – they are very prone to breaking and are really designed to be discarded and replaced.

Once they are all removed, the arch can be pulled off.



At the front leading edge of the arch, there is a plastic Tee which slots into the bumper – care needs to be taken not to cause damage. The slot is shown ringed in red.

As you can see, mine has a fair amount of muck and rubbish behind it!

7. Bumper Removal.

On the top of the bumper, there are 6 fixings. Remove all of these.



Two of them are not show in the photographs, but are similar and obvious.

Once they are removed, the 4 torx headed screws should be removed from the bottom of the bumper.



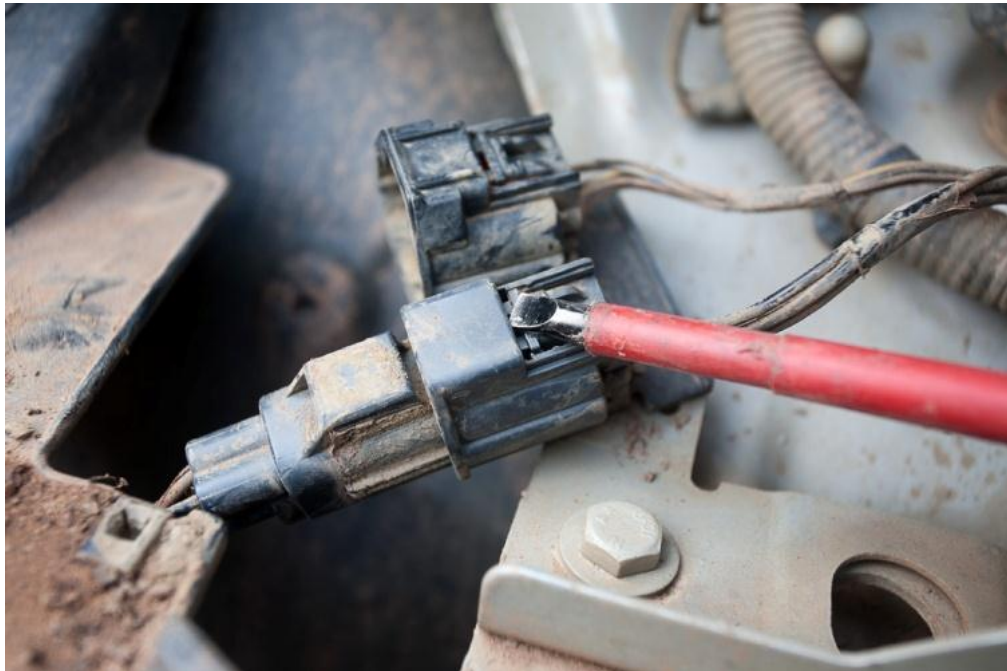
On each side of the bumper, there is a screw that should also be removed.



Finally remove the two Torx screws (One each side) that have already been uncovered when the wheel arches were taken off.



Before removing the bumper, if you have fog lamps and/or PDC, disconnect the plugs, located on the left hand side as you face the car. I used a screwdriver, as seen below, to release the clip.



If you have headlight washers, then when you remove the bumper by sliding it forward, after first releasing the locating lugs, one per side, you will have to then swing it to the right. I rested it on a dustbin to avoid the tube from the washer bottle, that is now exposed, from being strained.



The next stage is to remove the metal bumper bar. Before doing that, the washer bottle needs to be unbolted from the one end and the control box from the other.

There are two bolts on the washer that need to be removed.



The suspension control box is just lifted up and off.

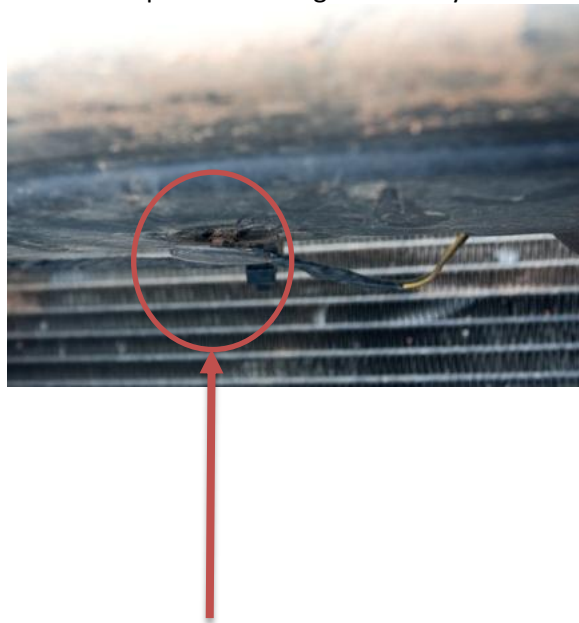


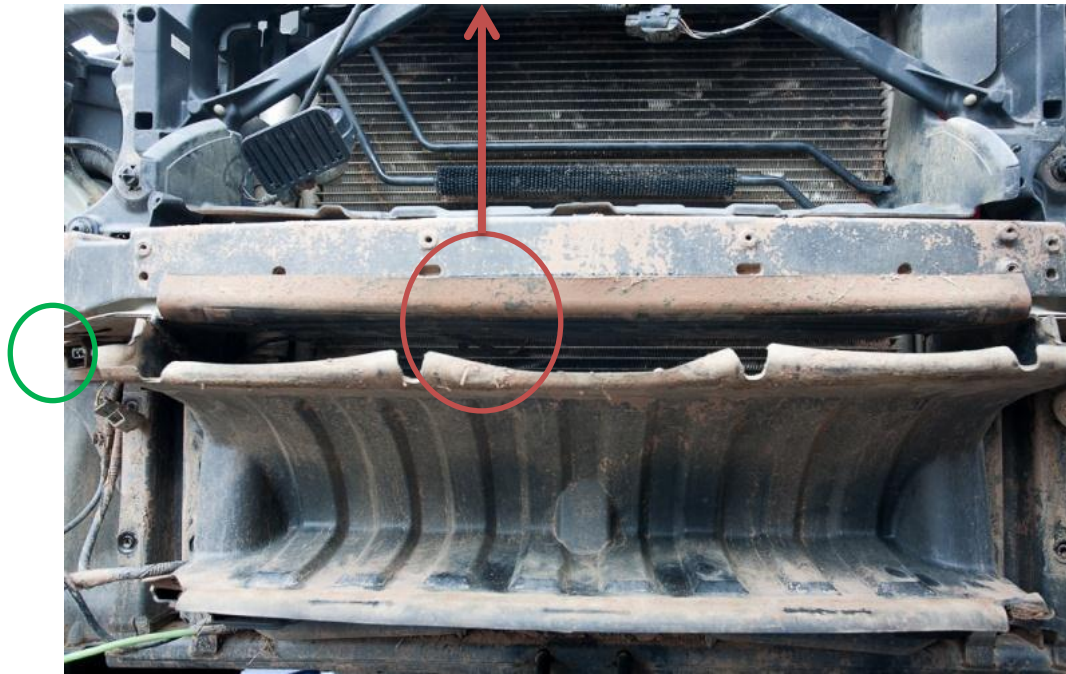
There are 4 13mm bolts each side, which hold on the bumper bar. You can undo all the bolts without fear that it will fall off, because there is a clip that holds it onto the bracket. One of the bolts also holds the washer bottle.



8. Air Duct Removal.

There are two plastic push clips that hold the plastic duct together. They are located near the (outside?) sensor.





The sensor needs to be disconnected at the point shown in the **Green** circle above. There are also two 8mm hex screws that hold the duct into the car. The left hand screw is easily removable via the headlamp aperture and by the radiator.

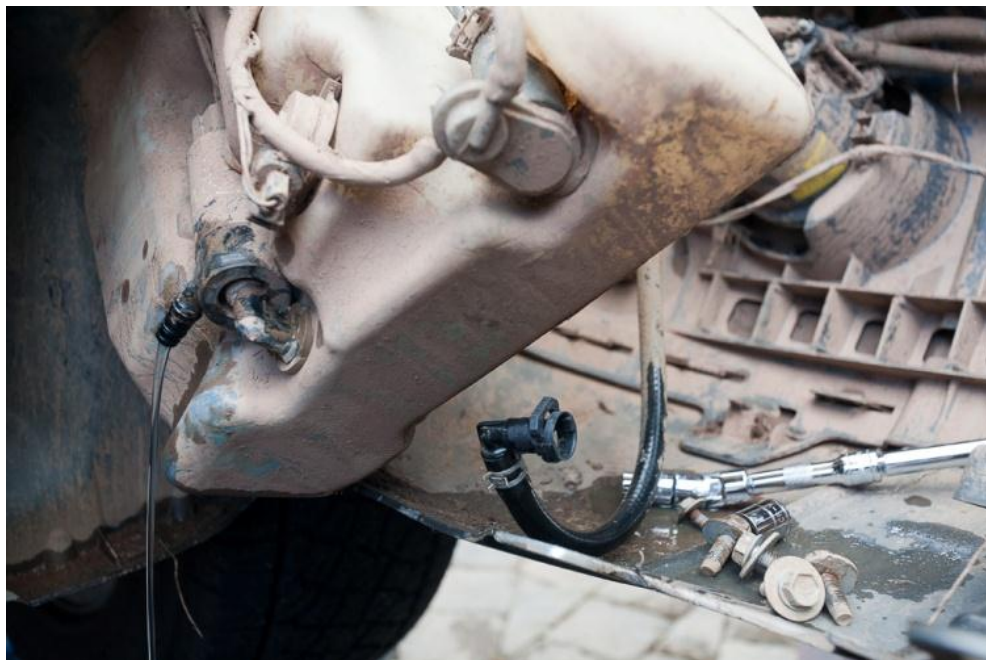


The screw on the other side is not so easily accessed. The picture below, is taken looking up from the front of the car, once the washer bottle has been removed.



To remove the washer bottle, remove the two remaining fixings. A 10mm socket and universal joint and extension bar will be required.

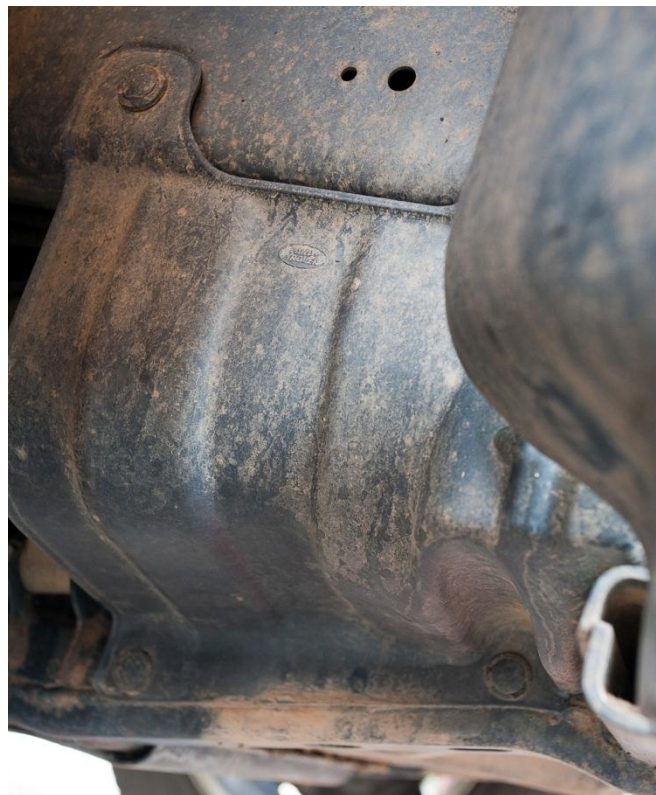
At this point, I also disconnected the headlamp washer hose and drained the fluid into a bucket.



Next, remove the two cover plates giving access to the intercooler hose connections.



Again, these are held on with the plastic self locking clips. One is circled above. The picture above is the right hand one, with the metal heat shield for protection against the FBH exhaust.



Now the right hand cover is removed, it is possible to access the second screw holding the air duct into the car.

I was unable to get a picture of exactly where you have to squeeze your hand, but essentially, you need a 8mm socket on a 2" extension and a small ratchet. The one in the Halfords 100 piece professional set is ideal.

Put the socket and ratchet through the hole that has appeared now the side plate is removed and undo the screw as best you can – it's fiddly!

Once it's got to a point when it's getting loose, you can put your right hand up through the hole. Put just the socket and extension with the other hand into your right hand – with your left, hold the socket on the screw and undo it.



You can now wiggle the air duct out to give you access to the intercooler.

9. Intercooler Removal.

The intercooler is actually suspended from the radiator above it. There are two, one per side, self-locking pins that need to be removed. From the front, knock the centre pin through.



You then need to remove the sleeve – I used a 9mm socket over the end and tapped it with a hammer to compress the end to allow it to come out. Pull them out from the rear.



The picture above shows the principle using the socket on the end of the sleeve to compress the end.
From under the car, remove the two clips that hold on the hoses to the intercooler.



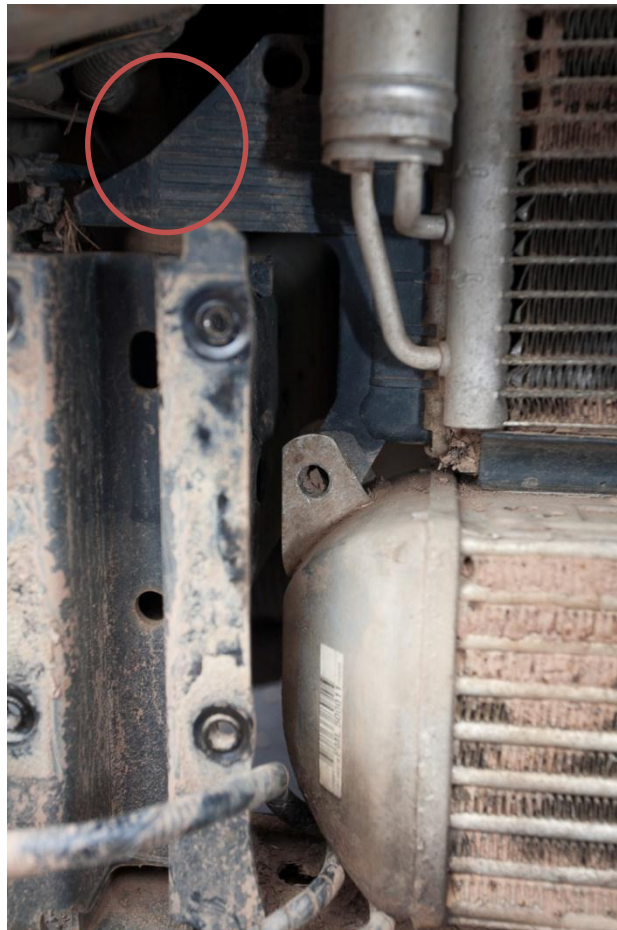
Once the side cover is unclipped, return to the underside of the car and unclip the two clips that hold the radiator cowl onto the intercooler.



The radiator needs to be lifted about ½ " to allow the intercooler to be removed.

There are two bolts, one each side that hold the radiator into the chassis. Undo these most of the way. They shouldn't need to be removed completely.

The bolt is behind the bracket shown in the picture below.



Using a crow bar, lift the radiator enough to release the intercooler from its bracket. The intercooler will slide across to give a little more room to help its removal. The picture below shows where the bar is located to lift the radiator. (After the new one was fitted)



Once the old intercooler is removed, clean around the area to remove the mud and dust.



Replacement, as they say, is the reverse of removal.

10. Acknowledgements.

Spiderbaby for providing the initial instructions.

Ian Bodsworth (Bodsy) for the document design and proof reading and comments.