

Audi A2 1.4 AUA Petrol Starter Motor Removal

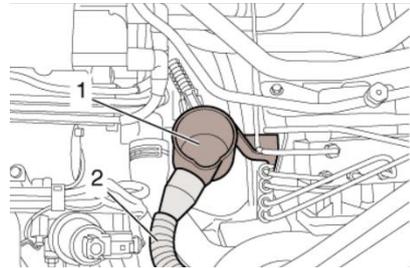
This guide details how to remove the starter motor from an Audi A2 1.4 AUA petrol and is based on the procedure described in the [Workshop Manual](#).

Note: Although not explicitly tried, it is likely this procedure will be the same on the later models fitted with the BBY engine

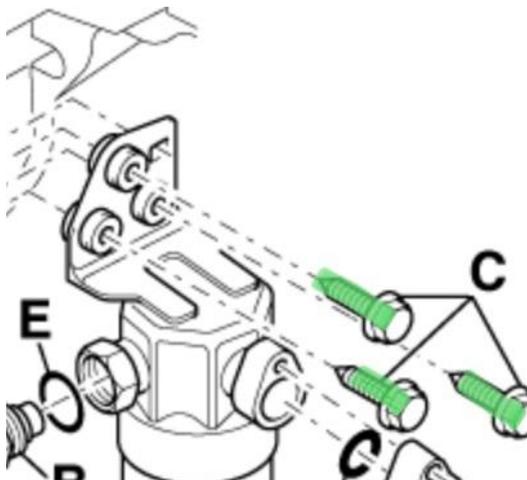
All positional references assume you are standing in front of the car looking into the engine bay. You will be locating the various parts to be removed or re-positioned on the right hand side of the car

1. Raise the front of the car onto axle stands (at a push you could jack the NSF of the car though this is not recommended for safety reasons) and remove the under tray.

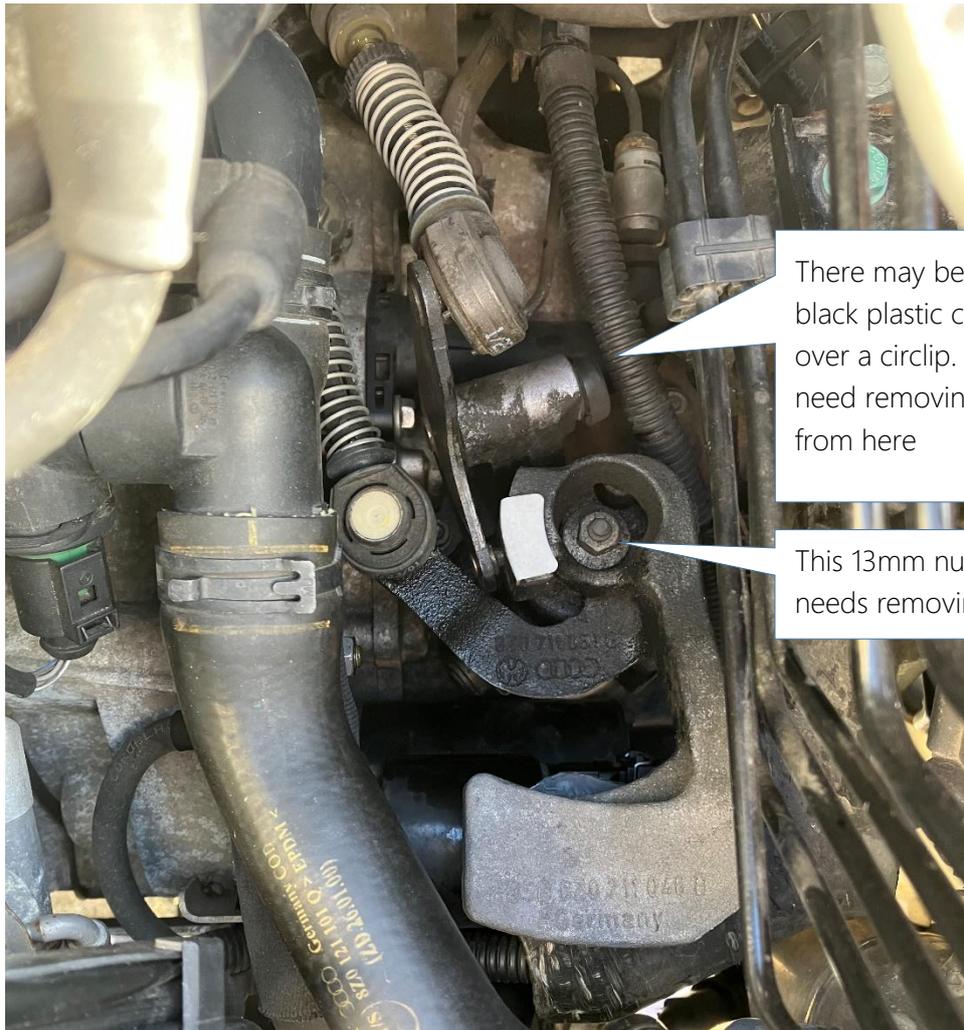
2. Remove the water collector which is positioned on the right side of the engine bay just above the gear selector tower/linkage and attached via a 10 mm socket to the ABS unit. You will need a socket extension for this. Once disconnected, it can be re-positioned out of the way behind the right hand headlight



3. Remove the three bolts securing the air conditioning collector to allow it to be moved a bit if needed. It is positioned on the right hand inner wing just in front of and below the ABS unit. This needs a 10 mm socket and a longer socket extension.



4. Next up you need to remove the gear selector linkage counter balance from the selector tower. This is held in place by a nut and will require a 13mm socket to remove. With this nut removed, all the videos I found showed sharp yanking upwards on the counter weight would release this from the splines. Despite 2 weeks of spraying with PB Blaster this was having none of it!



There may be a black plastic cover over a circlip. Both need removing from here

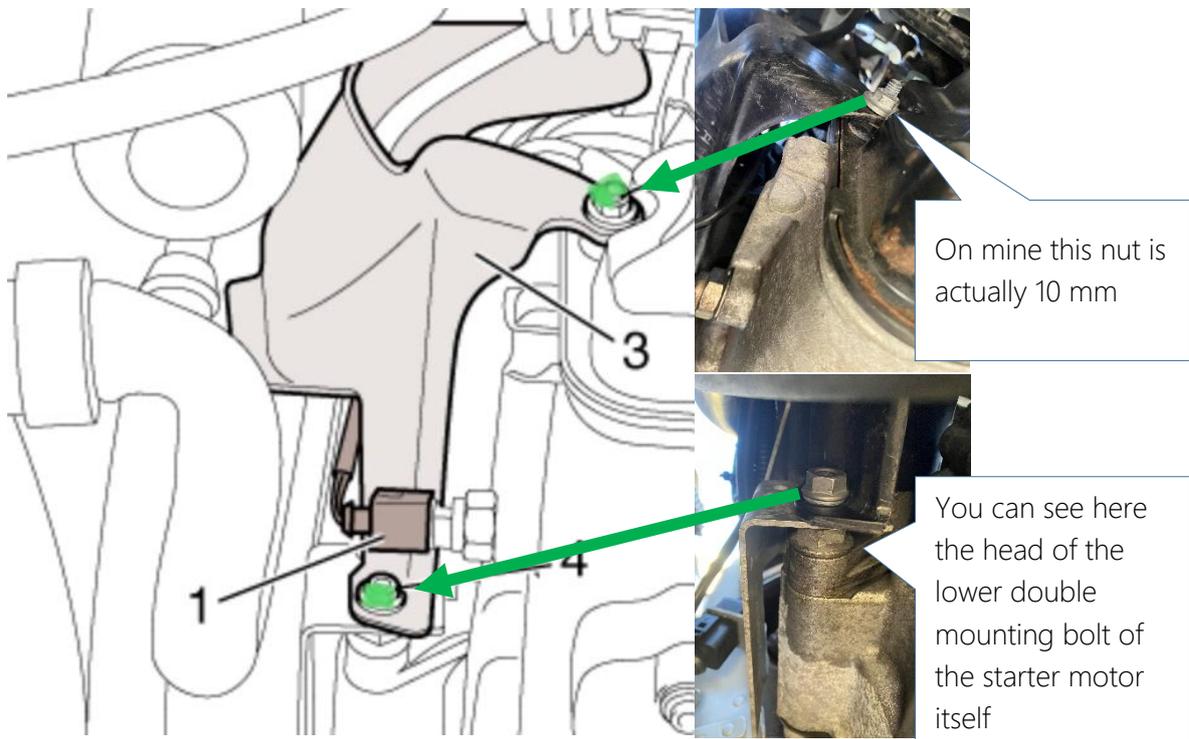
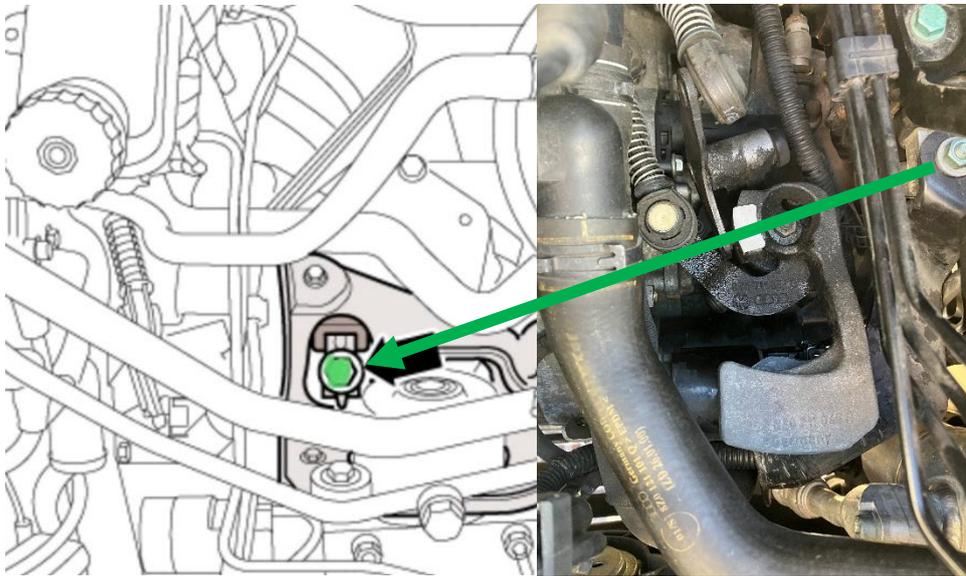
This 13mm nut needs removing



Place a 20mm socket underneath the counter balance and resting on the selector tower

I found a single entry on a VAG forum that suggested placing a 20mm socket between the selector counter weight and the top of the selector tower to raise it up a bit and prevent downward movement. Then screw the 13mm nut back on, but not fully. You can then place a long socket extension on top of the nut and hit sharply with a hammer. Go carefully - not too hard - but this did eventually release the counter weight from the splines. It is then possible to position this counterweight out of the way to gain access.

5. The next step is to remove a complex thick plastic cover that covers the power connections to the starter motor, one accessible from the top of the engine bay and two from underneath. They are pretty accessible and removed with a 13mm socket.



6. The same cannot be said of the cover itself! The manual says just push it aside and eventually remove. Well I wiggled and jiggled it and found I just couldn't find a position for it that made this possible. It is made of quite thick hard plastic so just getting it clear of the underbody bolts

was pretty tough. It maybe with higher ambient temperatures this might have had more flex but at 12 degrees and with arthritic hands it was beyond me.

My solution? Very amateur I'm not proud to say; I cut off one of its 'legs' and then was able to pull it clear. In my defence I found one on eBay for £5 before doing this so will look at fitting the cover back retrospectively.

Note: The arrangement for the diesels seems to be much simpler. Given that - from what I can see - this cover is to prevent spray getting to the electrical connections of the starter, I am going to look at fabricating a simpler arrangement or whether the diesel cover can be used.

7. So now that the starter motor can be got at, it is fairly straight forward. First disconnect the battery. Then you can disconnect the power and control to the starter motor. In the photo below you can see the bolt removed and the order in which the two cables and the anti rotation bracket are fitted. These need to be removed and pulled clear and the Terminal 50 connector detached.



8. Next remove the lower starter motor bolt. I have shown this in an earlier picture in item 5. The nut that holds the protective cover in place has already been removed and you will need to slide a connector mounting bracket off the bolt to fully expose it. To remove the connector bolt you will need an 18mm socket.

This will need to be quite tall so that it clears the double element of this bolt. The picture to the right shows what one of these bolts looks like when removed. It will give you an idea of the size of socket you will need.



9. Home straight now. The picture below shows the starter motor top mount double bolt. The nut you can see is 13mm and connects an earth strap to the engine. This picture was taken before any of the previous steps had been undertaken but it shows the location clearly

You need to remove the 13mm retaining nut and pull the earth strap clear. I took the opportunity to give it a good clean up. You then have access to get your tall 18mm socket and remove the top starter motor retaining bolt.



10. And that's it, the motor is now loose. It takes a bit of fettling to extract out of the engine casing and upwards passed various hoses so take you time.
11. Fitting a replacement or indeed the original if you are going down the refurbishment route the reverse of this procedure. Outcome, the squeal on start up has gone!!

Notes: I chose to fit a Bosch refurbished motor as I only have one A2 (unusual I know) as a daily driver so couldn't have the car off the road whilst I refurbished the original. As I have the luxury of taking my time now with the motor I removed, I will look at refurbishing so I have a good one on the shelf as a spare!

When fitting the gear selector counter balance back onto the selector shaft splines, two of the splines have been merged into one to ensure correct location, so double check you have this correctly lined up before gently tapping it into place. I found out after the event that the 13mm nut that holds this in place should be replaced, so I did that retrospectively