# For Vauxhall Astra Zafira 1.7CDTi A17DTJ Rocker Cover Injector Seals Repair Kit Install Instruction Guide

by x8rltd

## SYMPTOMS OF FAULT

You may notice that your engine begins to run less smoothly, juddering or stuttering when idling and a noticeable drop in power output.

You may notice oil leaks from various locations around the upper engine block.

Oil may begin to leak into the cylinder resulting in blue smoke coming from the exhaust.

## THE FAULT

Various seals fail causing these faults

Over time rubber seals within the engine can become brittle and lose their sealing capabilities resulting in leaks in various locations around the engine.

The common areas for these leaks to appear are:

The rocker cover gasket, when this leaks your engine will begin to consume oil and you may notice a burning oil smell from the engine bay.

Injector upper seals, these can fail and result in oil leaking from the top of the plastic rocker cover.

Injector union seals, these can perish over time and result in a failure of the seal, which will cause rough running as well as causing an oil leak.

Injector metallic seals, the engine relies on these seals to keep the combustion chamber sealed, if they fail then you will notice a drop in cylinder compression, as well as oil leaking onto the top of the piston, this could cause a puff of smoke when first starting the engine where oil has leaked through whilst the engine was off.

## THE SOLUTION

Install our new seals and gaskets and cure these leaks and vehicle faults

Our kit is comprehensive, it contains all of the seals, gaskets, specialist tools and sealant that you will need.

By renewing the old seals that have become brittle over time you can give your engine a breath of new life.

Our kit uniquely includes parts that are unavailable from the main dealer enabling an effective repair without having to buy whole components such as the complete rocker cover.

This type of maintenance often helps the engine run a lot smoother, if your existing seals have failed and allowed the engine to lose vacuum then your engine may be pre-maturely wearing.

**VEHICLES AFFECTED**

**VAUXHALL** and **OPEL**

All vehicles with the 1.7CDTi engine found in:

- Zafira 2005-2014
- Astra J 2009-2015
- Corsa D 2006-2014 (131hp)
- Mokka/Mokka X 2012-current

**Associated engine codes:**

A17DTC, A17DTE, A17DTJ, A17DTF, A17DTS, A17DTR

**YOU WILL RECEIVE**

- 4 x Injector Union Seals - Equivalent to OEM 97376304
- 4 x Rocker cover injector seals (not offered by OEM)
- 1 x Rocker Cover Gasket - Equivalent to OEM 5607252
- 10 x Rocker Cover Bolt Seals (not offered by OEM)
- 4 x Injector Base Metallic Gaskets - Equivalent to OEM 97324391
- 1 x Injector Pocket Cleaning Tool - Equivalent to EN-47632
- 8 x Injector Pocket Cleaning Felt Pads Equivalent to EN-47632
- 1 x Injector Alignment Tool - Equivalent to EN48560
- 1 x Complete Blanking and Plugging Kit - EN6368
- 1 x Pack of RTV gasket

**Supplies:**

In order to complete this job you will need a variety of commonly found tools.

There are no specialist tools needed for performing this restoration.

All you will need is a spanner/socket set, a screwdriver, a pair of pliers, a small blade, torque wrench

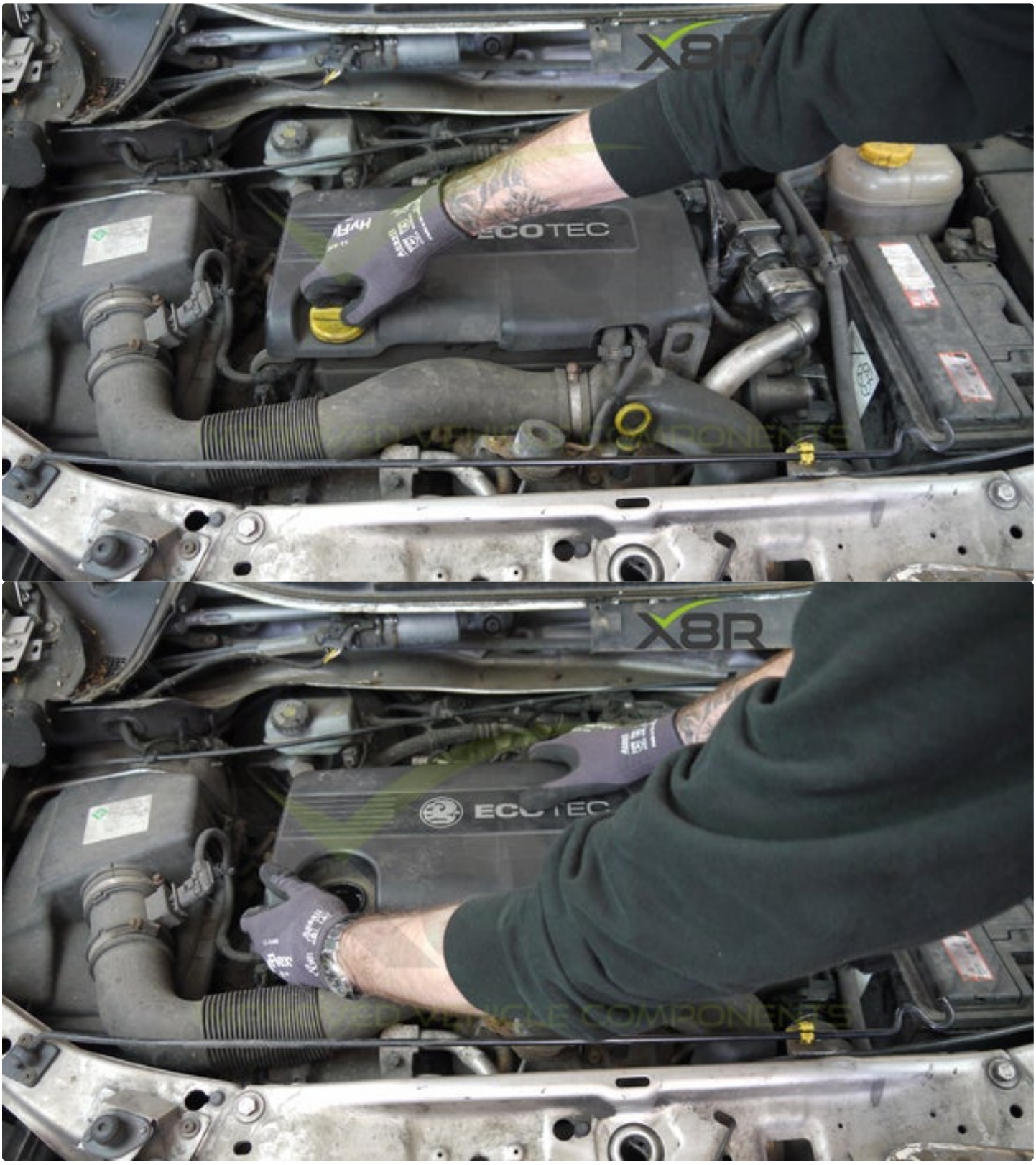

## Step 1: Disconnecting the Battery

Before you begin any kind of work on the vehicle it is important to disconnect the battery to avoid risk of electrocution.

It is important to disconnect the negative terminal first (the Black one) and then disconnect the positive terminal (the Red one) and tuck these cables away so that they cannot spring back and reconnect the battery.

## Step 2: Remove the Vanity Cover

Remove the oil filler cap and pull off the engine vanity cover, this is held on using rubber grommets and will come off by simply firmly pulling upwards on the cover.




## Step 3: Remove the Intake Ducting

To make some space in the engine bay you will need to remove the plastic air duct that feeds the turbocharger with clean, low pressure air.

Remove the Jubilee clips at either end of the duct and remove the first section. Once this is removed you can remove the retaining bolt and the rubber vacuum line. Use a 7mm socket with extension to loosen the clamp around the turbo, the vertical pipe can now be removed.

## Step 4: Pull Off and Blank the EGR and Vacuum Pipes

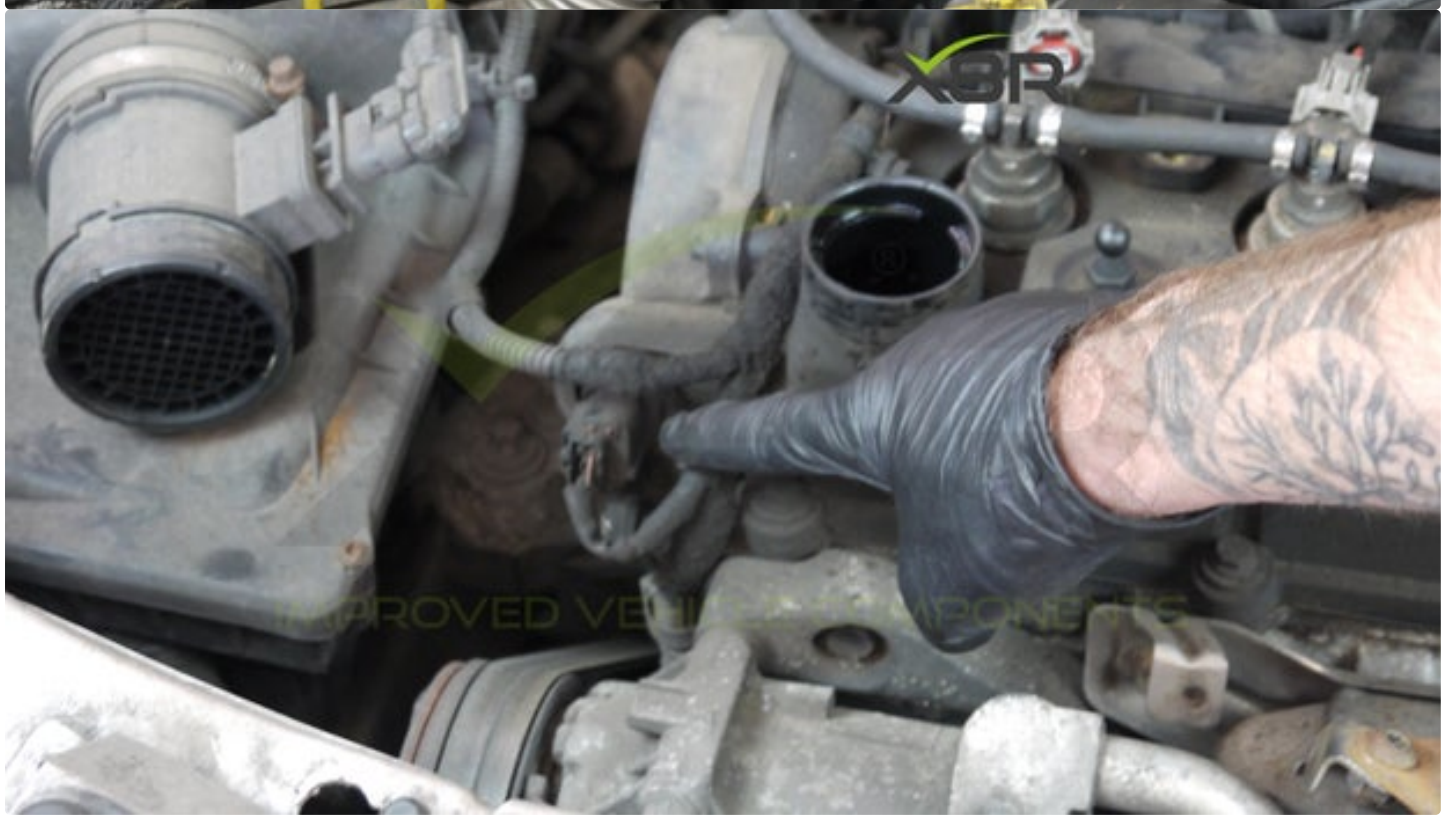
Remove the EGR vacuum line, be careful not to rip this when removing.

Plug the line, and blank off the elbow pipe.

## Step 5: Unplug All of the Electrical Connections

There are various electrical connections that come from the wiring harness on top of the valve cover, you will need to unplug all of these connections, you will not be able to unplug some of them but try to unplug as many as you can to make moving the wiring harness as easy as possible.

You will also need to disconnect the injector plugs as well as the glow plugs on the rear of the rocker cover.

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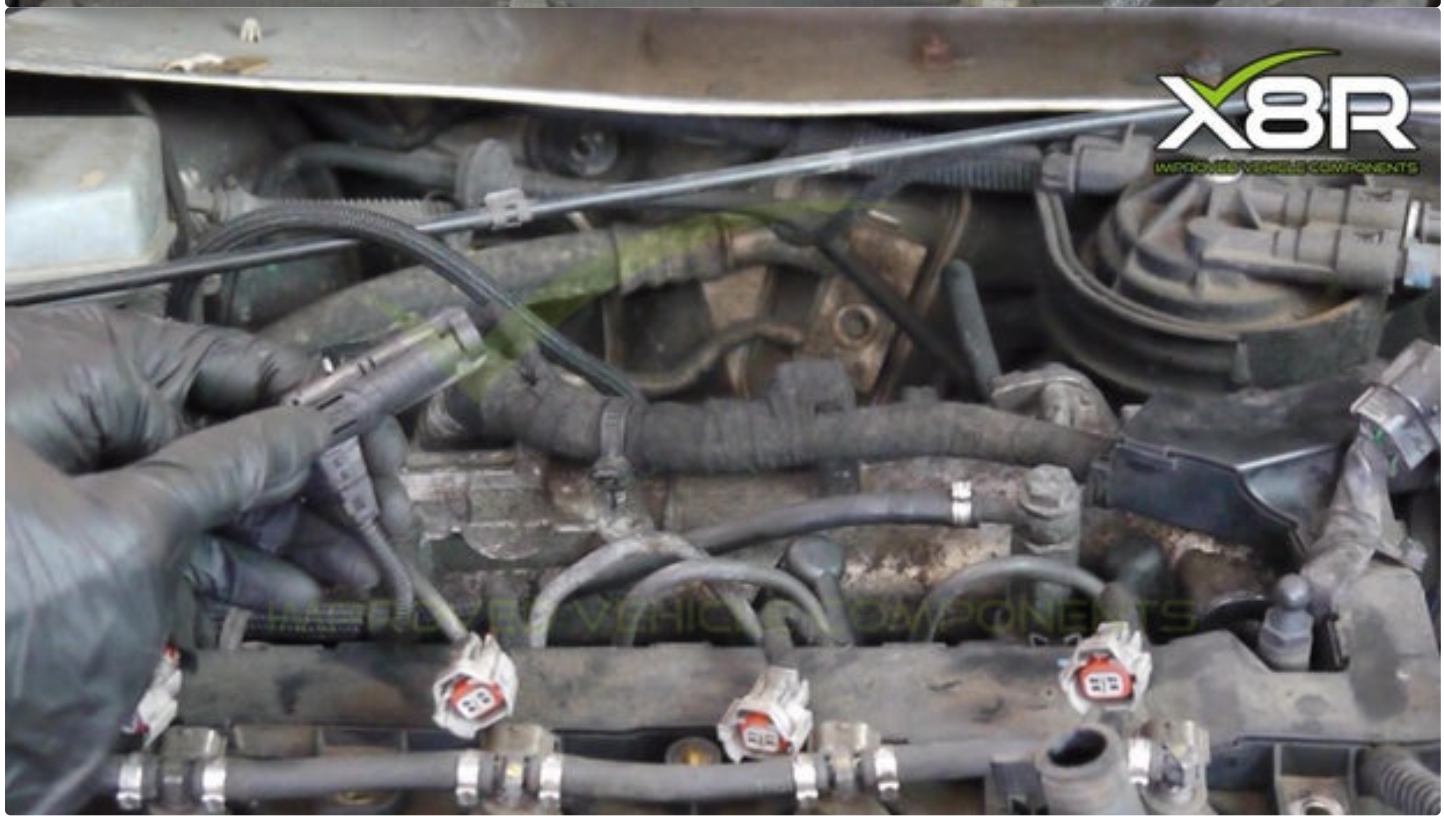
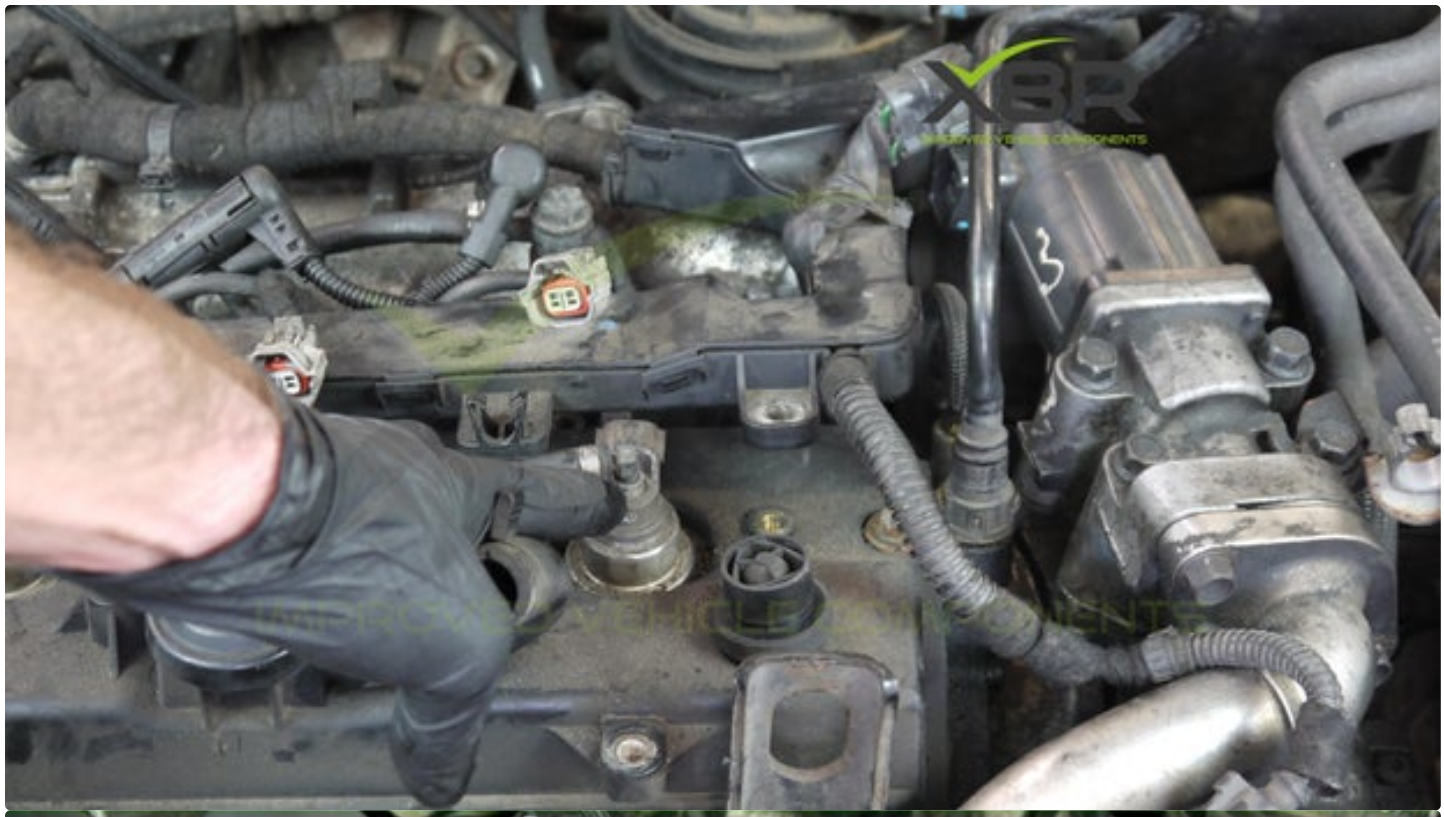
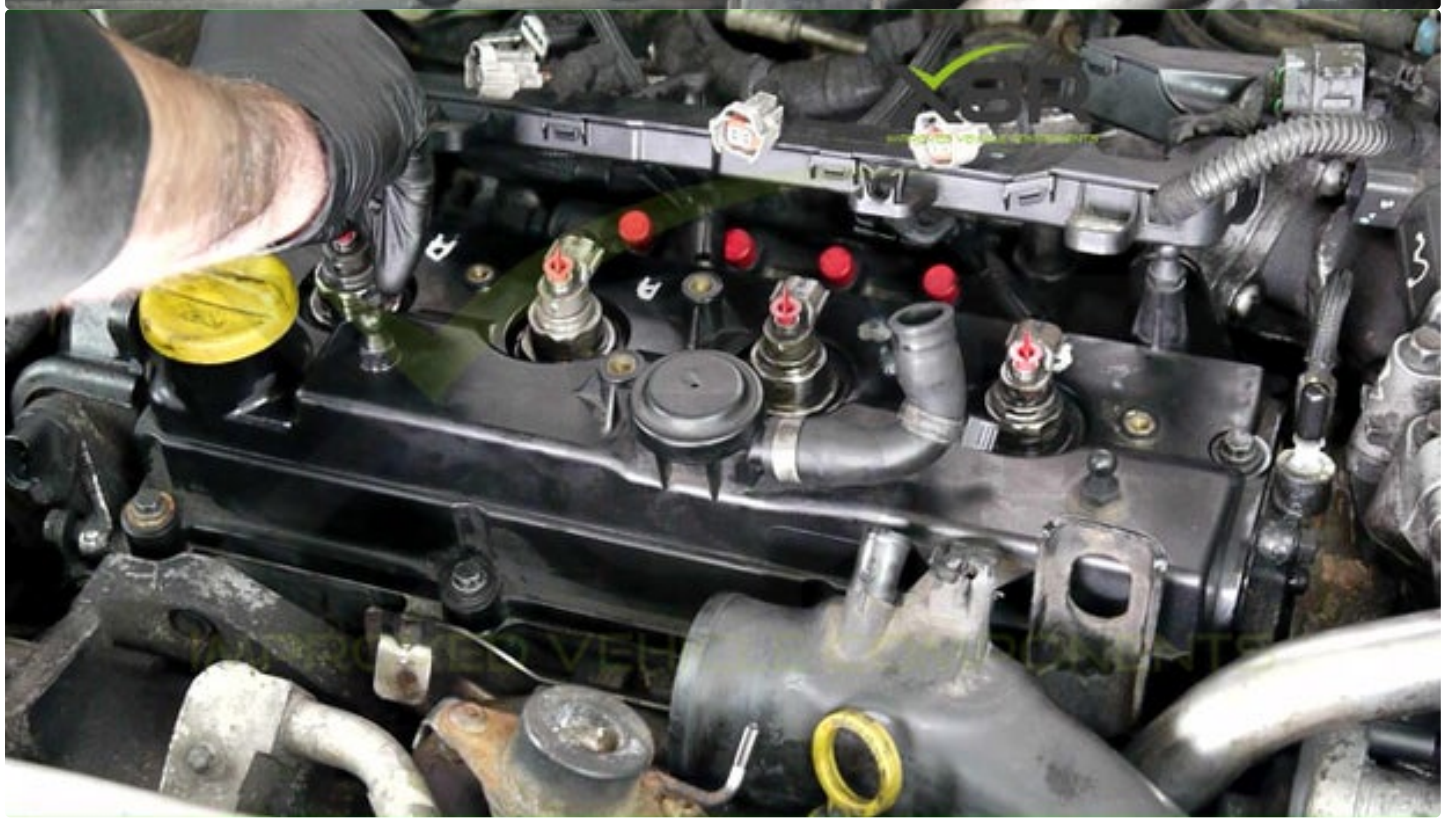



## Step 6: Unplug and Bung Injector Leak Off Hoses

Remove the small metal clips, pull out the push-fit connections, and bung the holes to prevent any debris from entering the injector.





## Step 7: Remove the Fuel Pipes

Using a 17mm spanner, remove the high pressure fuel pipes.

Use the caps to cover the open ports in the fuel manifold.

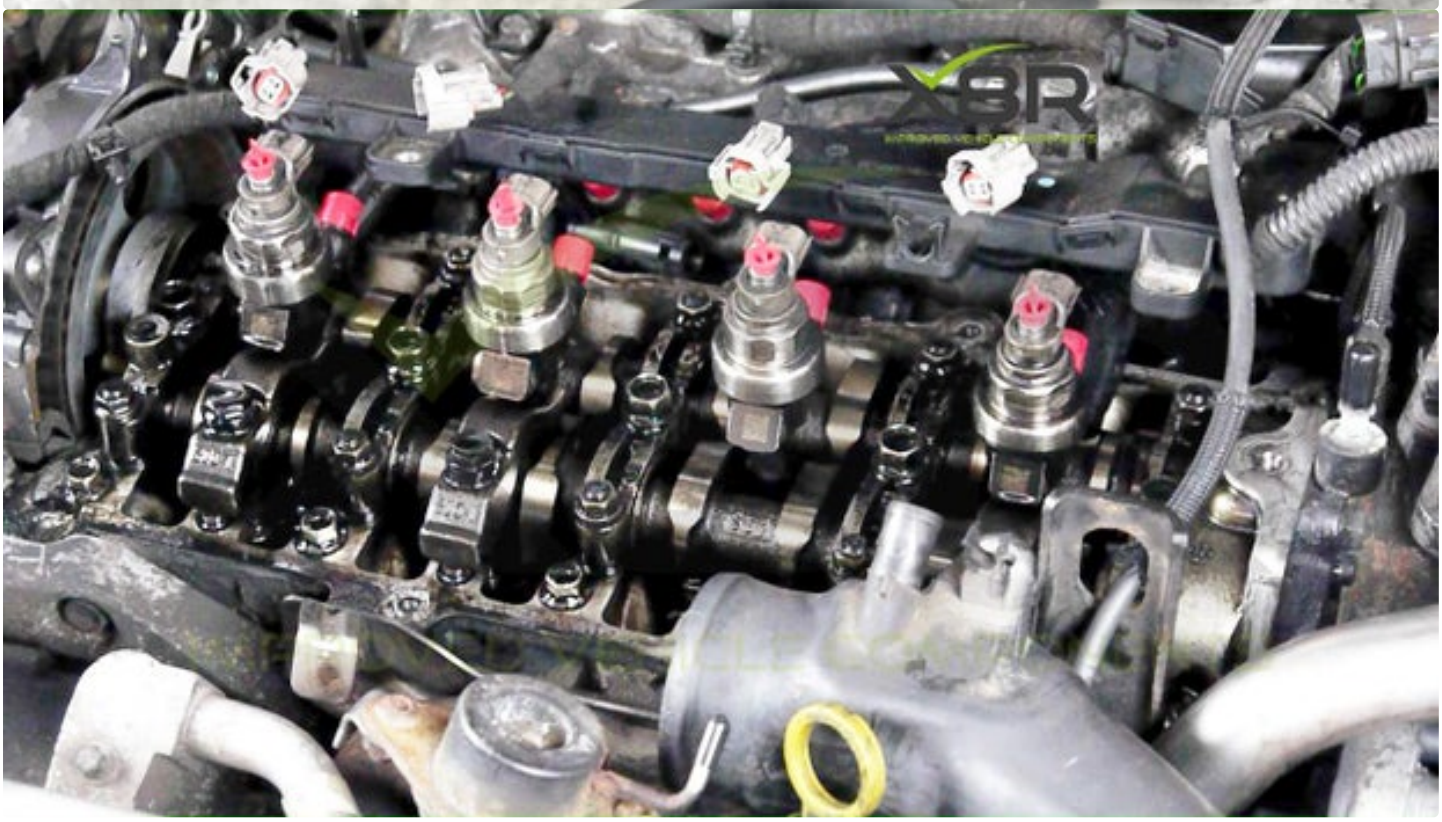
Use a flat-head screwdriver to pry out the round seals in the back of the rocker cover.


## Step 8: Unbolt and Remove the Valve Cover

There are 10 bolts on top of the rocker cover, and 2 on the left hand side, these are captive screws so they will not fully come out.

Once these are all undone, gently remove the valve cover.

Use the blanks to cover the open ports on the injectors.



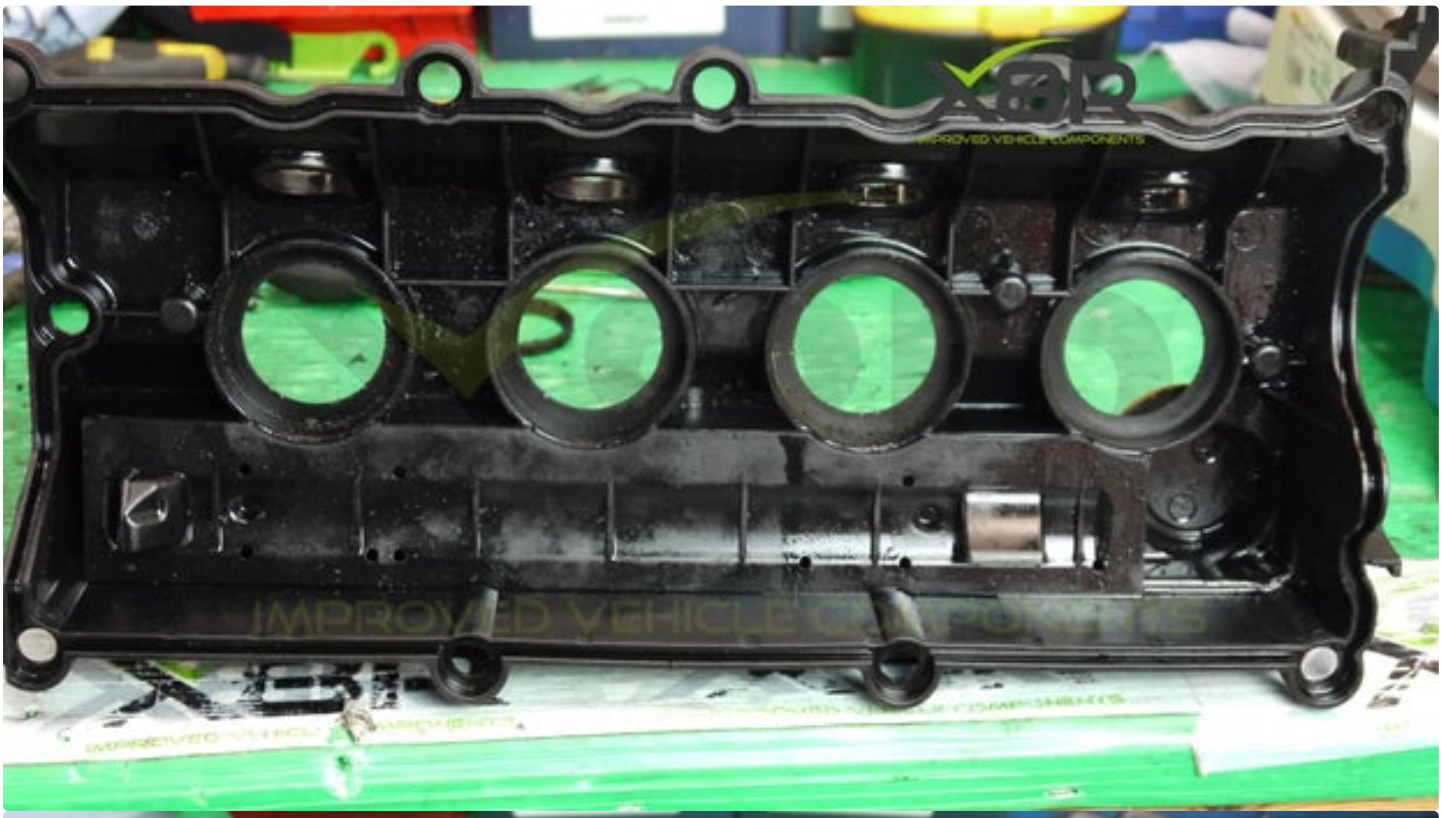
## Step 9: Remove and Replace Seals

Now that the valve cover is removed you can renew the rubber seals within the valve cover.

Gently pry out the injector seals, clean the sealing face and insert new seals.

Remove the rocker cover gasket, make sure there is no debris in the groove that it sits, then install the new one.

There are 10 bolts in the rocker cover, these all have a rubber sleeve over them, these rubber sleeves can be replaced with new ones, they will need to be installed the correct way round or they will not seal properly.

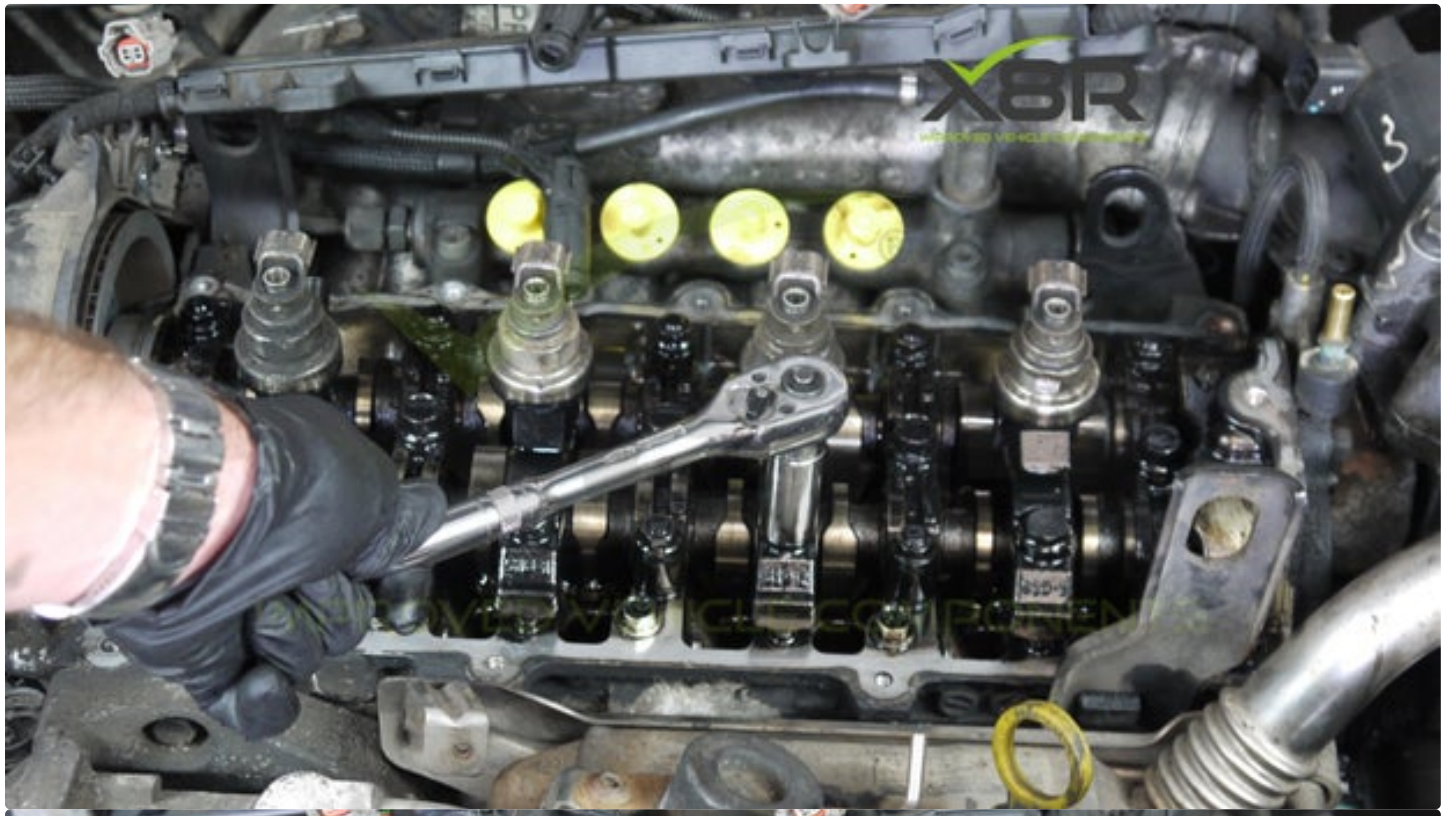


## Step 10: Remove the Injectors

The injectors are held in with bolts and clamps.

Unscrew these bolts, remove the clamps and gently lift out each injector from their pockets, take extra care not to damage the delicate tip of these injectors as they are expensive and easy to damage.

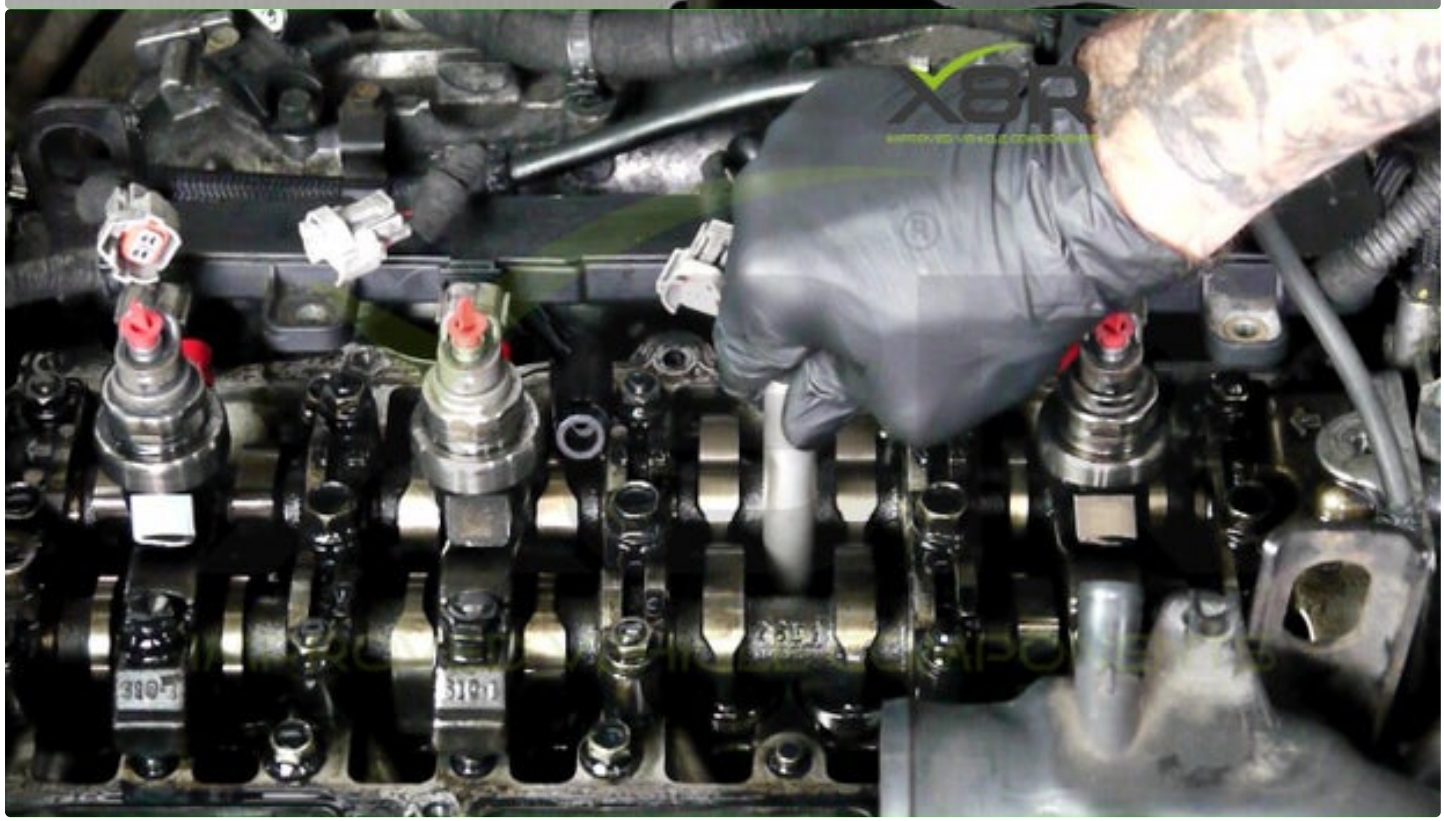
Ensure that the metallic seal comes out with the injector, if it does not come out with the injector, you will need to use a long screwdriver to remove this seal.



## Step 11: Clean the Injector Pockets

Use our injector cleaning tool to clean the injector pockets.

Ensure that there is no debris remaining in the pocket after cleaning them, any remaining debris will potentially cause the injector seal to leak.



## Step 12: Replace the Seals and Reinstall the Injectors

Place a new metallic seal into each of the ports and check that they are sitting flat inside of the pocket.

When replacing the injectors, be sure not to drop them when doing this as it will damage the injector.

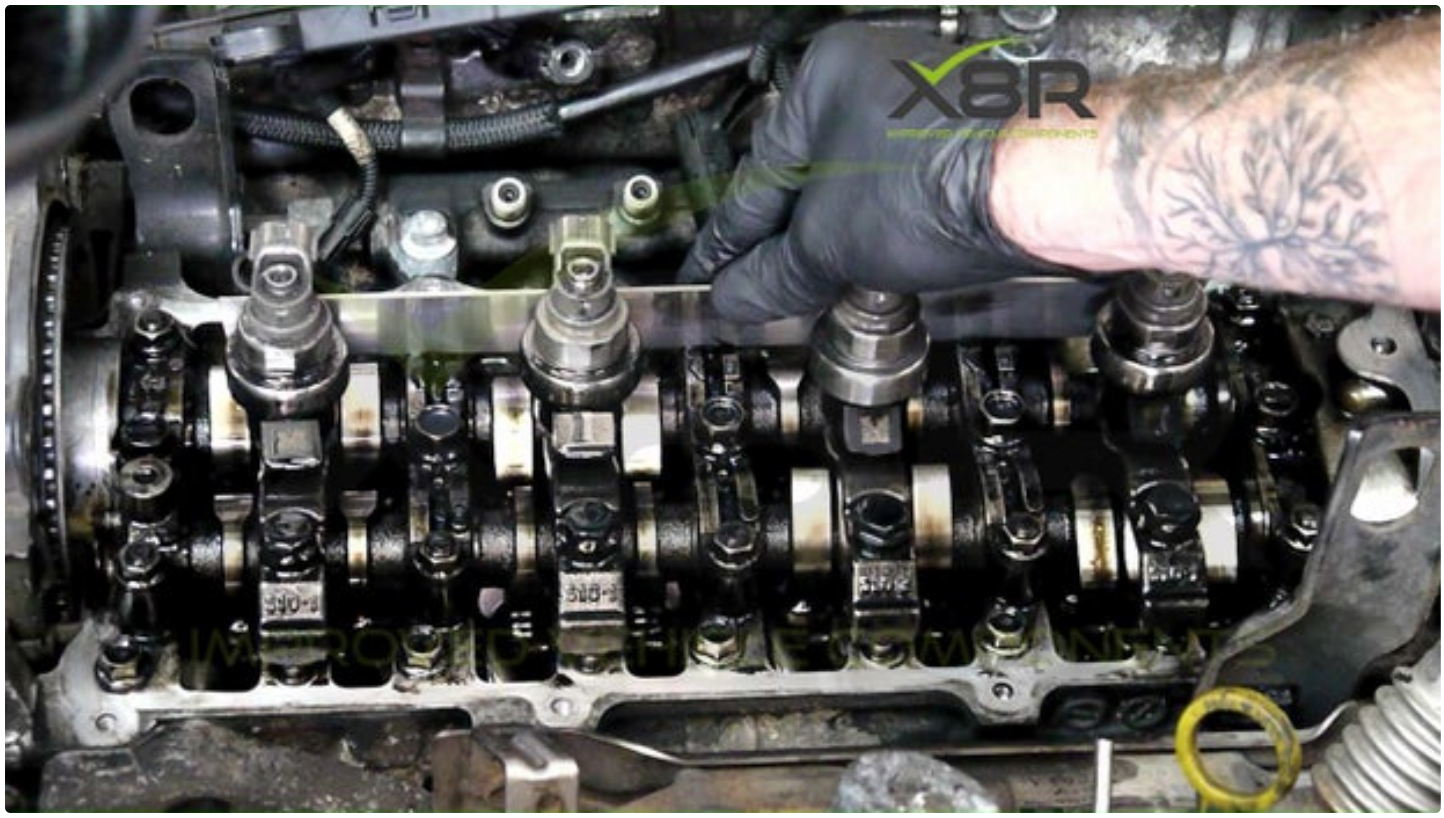
## Step 13: Align and Tighten the Injector Clamps

Loosely place the clamps and bolts on the injectors.

Place the injector alignment tool over the elbows of the injectors, when they are all firmly located in the tool you can begin the torquing procedure.

The torque procedure is as follows:

tighten to 40nm to bed the seal - then slightly slacken then off - tighten to 32nm



## Step 14: Replace the Valve Cover

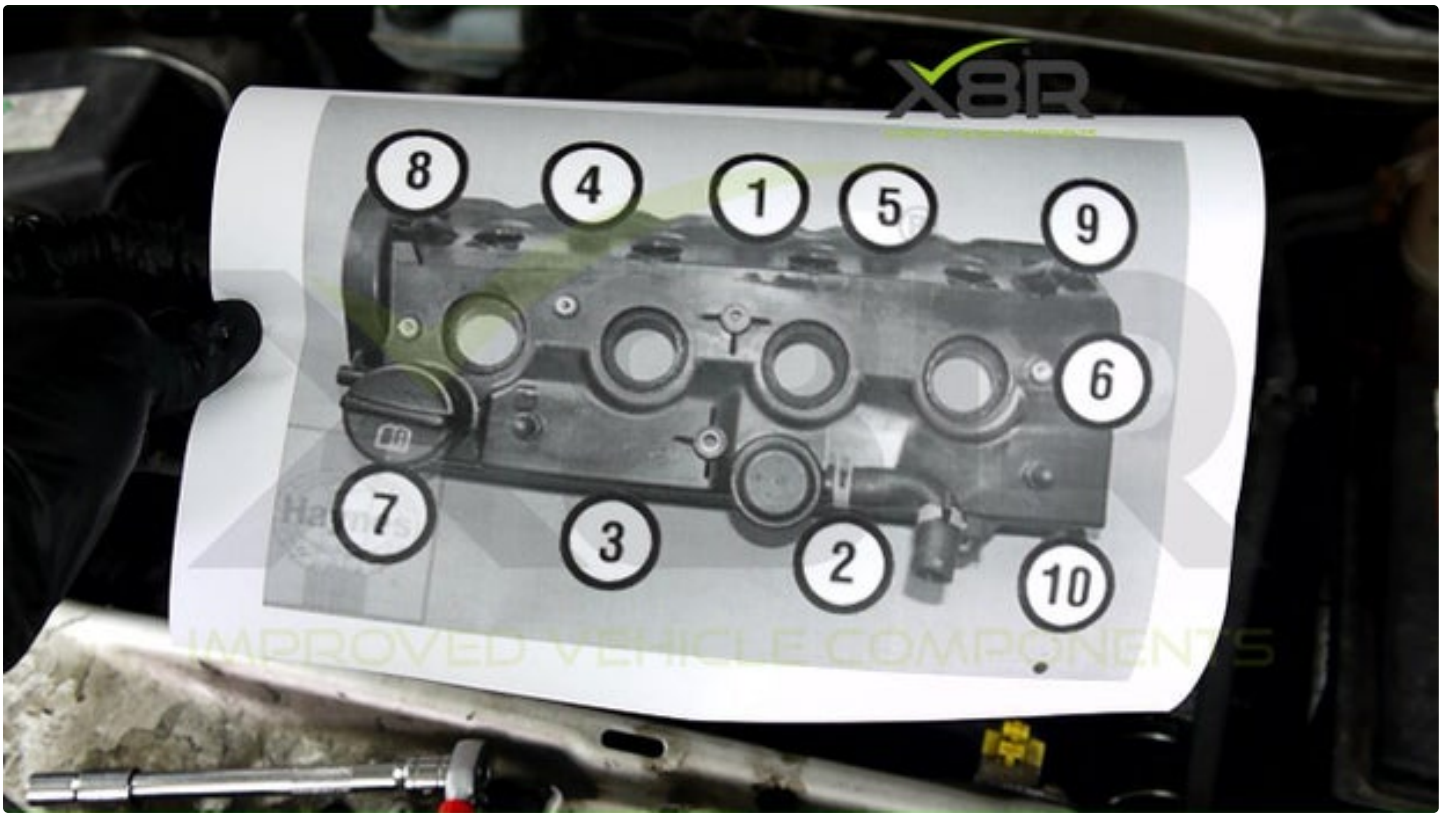
Before you reinstall the valve cover, you will need to clean all around the camshafts and the injectors making sure that there are no pieces of dirt or debris left as these will cause damage when the engine is started later on.

Use a small amount of RTV sealant at the 4 sharp angles around the sealing face of the rocker cover gasket, this is a precautionary measure and helps the valve cover seal at the points where the gasket has an angle.

## Step 15: Torque the Valve Cover

The torque you will need to apply to the valve cover is 10nm.

There is a specific pattern for torquing the valve cover, it does not have to be exactly in this pattern but it is important that you begin at the centre and evenly spread out around the centre.




## Step 16: Install the New Injector Seals and Fuel Pipes

Replace the four injector seals, you will need to tap these all the way in to ensure a proper seal, but be careful not to crack the plastic valve cover when doing this. We used a socket that fitted around the outer edge of the seal and gently tapped this with a rubber mallet.

Reinstall the fuel pipes, you will need to torque these to 25nm using a crows-foot adapter, if you are confident with these fittings then you should just be able to use a spanner, but is always better to use a torque wrench.

When using a crows foot adapter, it is important to remember that you need to have it at 90degrees to the torque wrench handle so that the torque is accurate to the setting on the wrench.


## Step 17: Reinstall the Battery

You are now ready to reconnect the battery and begin the starting process.

Connect the positive terminal first, and then connect the negative.

## Step 18: Prime the Injectors and Start the Engine

In order to restart the car, you will need to purge out all of the air inside of the fuel pipes and displace it with fuel.

To do this, you will need to insert the keys into the ignition, switch on the ignition but do not start the engine, leave the ignition switched on for about 15 seconds, then switch off the ignition.

Repeat that 3 times.

Now you should be ready to start the engine, when you crank the engine it will probably try for about 10-15 seconds and then it should start to run, if it keeps struggling try pushing on the accelerator peddle a small amount in order to get a little more fuel flowing.

When the engine starts, let it run for a minute or so, and then raise the revs to approx 1,800rpm in order to fully purge the fuel lines.

## Step 19: Check for Leaks and Finish Up

Now that the engine is running again, you now need to check for leaks around the engine and fuel pipes.

If it all seems fine and there are no leaks present you can now take the vehicle for a road test, keep this to about 5-10 mins driving time, and then check for leaks again.

You can now replace the engine cover and that is the installation finished.

This completes the repair. If you need any further guidance on this install or would like to purchase the parts shown please call us on +44 01843 446643 or email us at sales@x8r.co.uk. Please also check out our instruction guide on YouTube. www.x8r.co.uk Installation is carried out at installers risk, if unsure please contact us or a professional, X8R Ltd cannot be held responsible for any adverse result of installing this product or any injuries caused by install, if in doubt ask a professional. 