



## Volvo Swirl Flap Blanking Kit for 2.4L D5 D5244T4 Engines P2015 Fault



by x8rltd

### **Symptoms of Fault**

Check engine light illuminated or flashing, rough idle, decreased fuel economy, reduced acceleration, increased fuel consumption, car going into limp mode, control arm disconnected from intake manifold

### **The Fault**

Carbon build-up causes the swirl flaps to not work efficiently

The intake manifolds on the Volvo 2.4L diesel engines clog up with carbon build-up which causes the swirl flap arm to disconnect from the intake manifold or completely seize, causing an array of issues such as engine lights, limp mode, rough idle and all the other symptoms as listed above.

### **The Solution**

Install the X8R swirl flap blanking kit to prevent carbon build-up and vastly improve airflow

Our X8R swirl flap blanking kit completely removes the swirl flaps and the arm to remove the possibility of the fault occurring again in the future. The removal of the swirl flaps drastically increases the airflow to the engine and improves performance and fuel economy.

The X8R blanks are made from fibre glass reinforced plastic, making them more durable than other swirl flap blanks on the market.

### **Vehicles Affected**

Volvo vehicles with 2.4L diesel engines:

C30 2006-2012 D5 T9

C70 2006-2010 T8 T9 T13

S40 2004-2010 T8 T9 T13

S60 2001-2010 D5 T4 T5 T7

S80 2007-2012 D5 AWD T4 T10

V50 2007-2011 T9

V70 2000-2009 D5 T2 T4 T5 T7

XC60 2008-2011 D5 AWD T4 T14

XC70 2007-2010 D5 AWD T4

XC90 2005-2015 D3 D5 AWD

*Associated part numbers:*

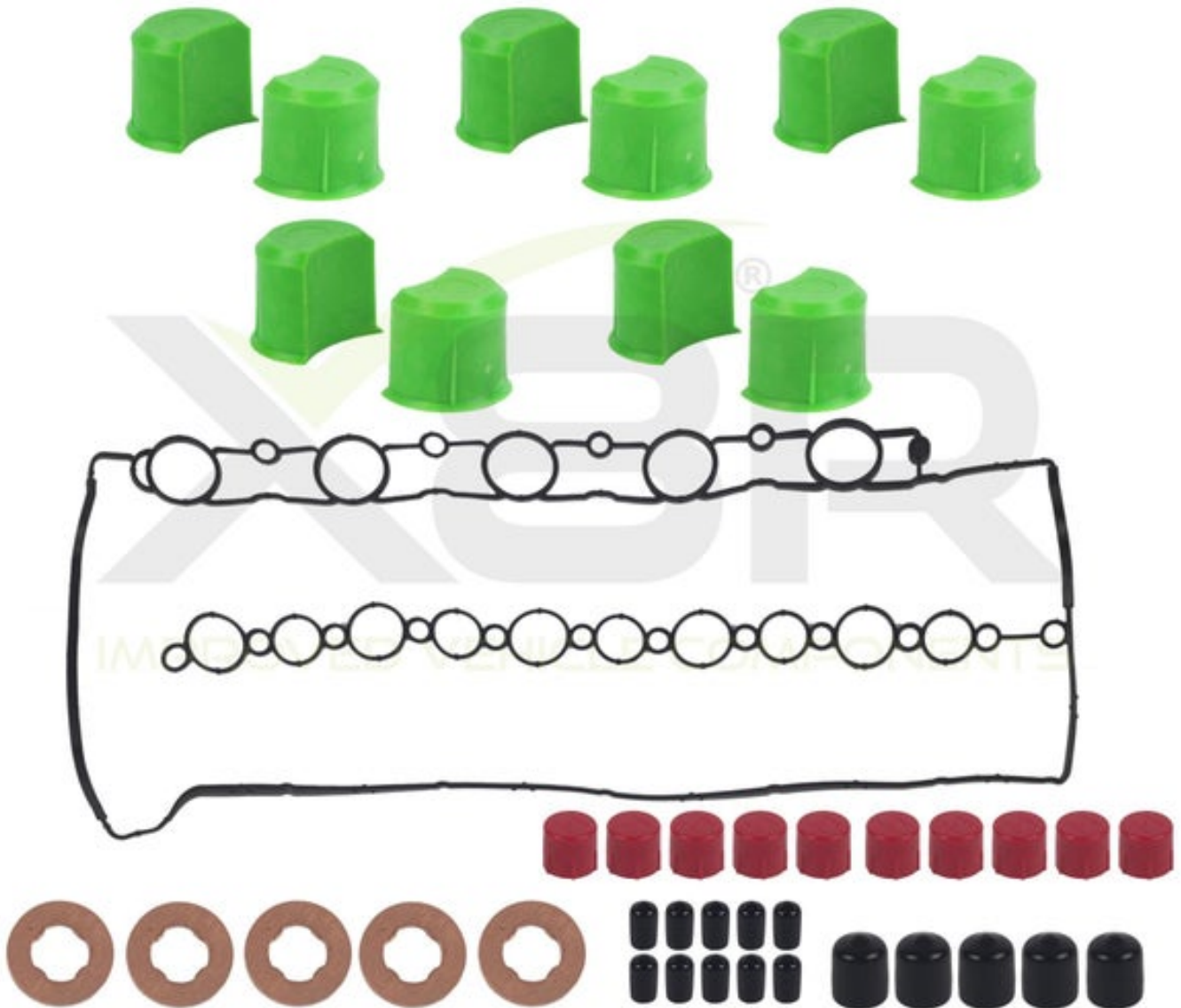
3121646, 30777650, 30713459, 31216460

**You Will Receive**

- 10 x Swirl flap blanks
- 5 x Injector copper washers
- 1 x Intake manifold gasket
- 10 x Threaded red caps
- 10 x Small round caps
- 5 x Large round caps

**Supplies:**

You will need various torx bits (T20, T27, T40), 8mm, 10mm, 13mm, 14mm socket sets with extensions. 15mm spanner.





**PROTECTIVE CAPS INCLUDED**  
PLUS CAPS FOR THE METAL & BRAIDED FUEL LINES



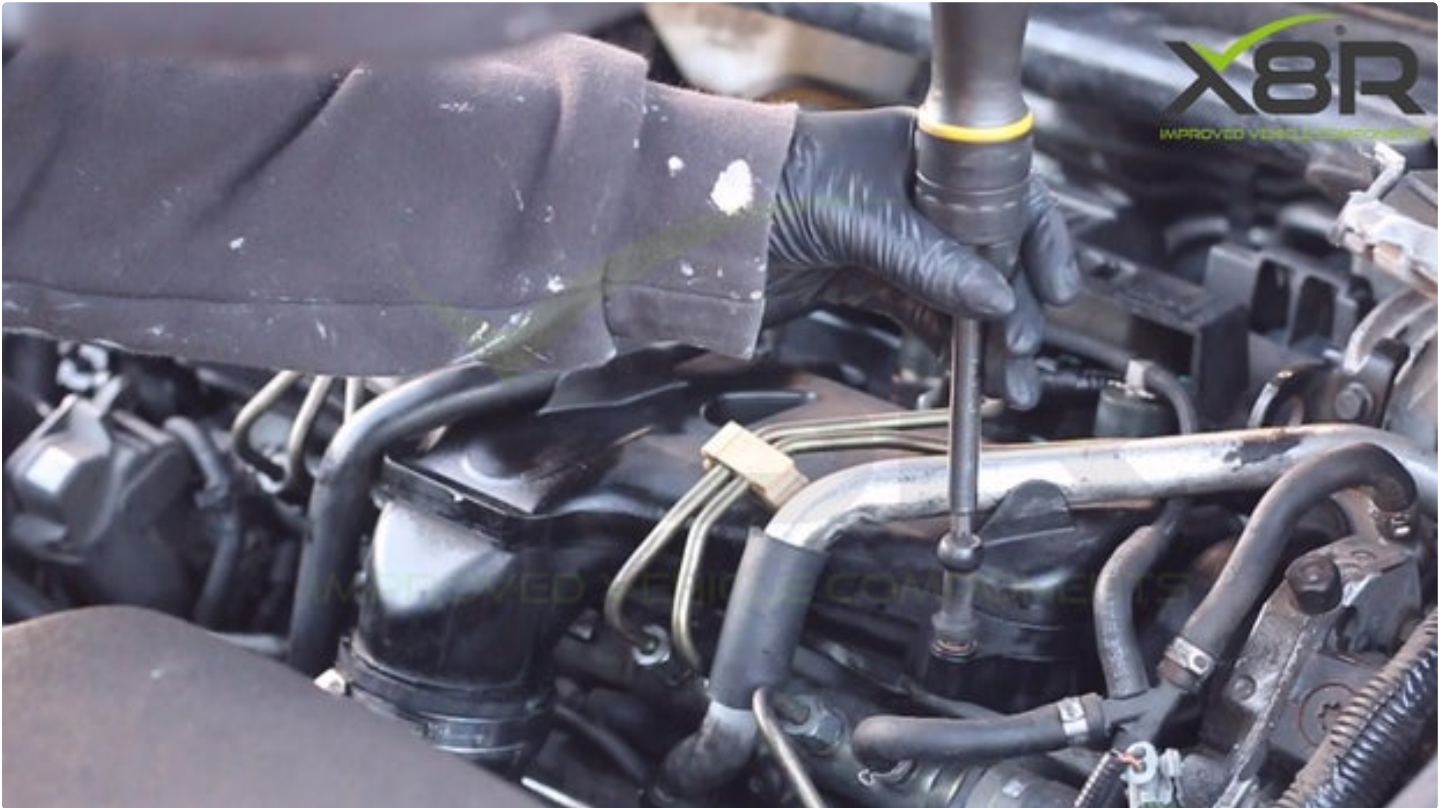
**Step 1:**

Pop the bonnet lift off the engine cover. Using a flathead screwdriver loosen the jubilee clips on the intake hose at the base of the intake manifold.



## Step 2:

Use a T40 to remove the two ball studs.





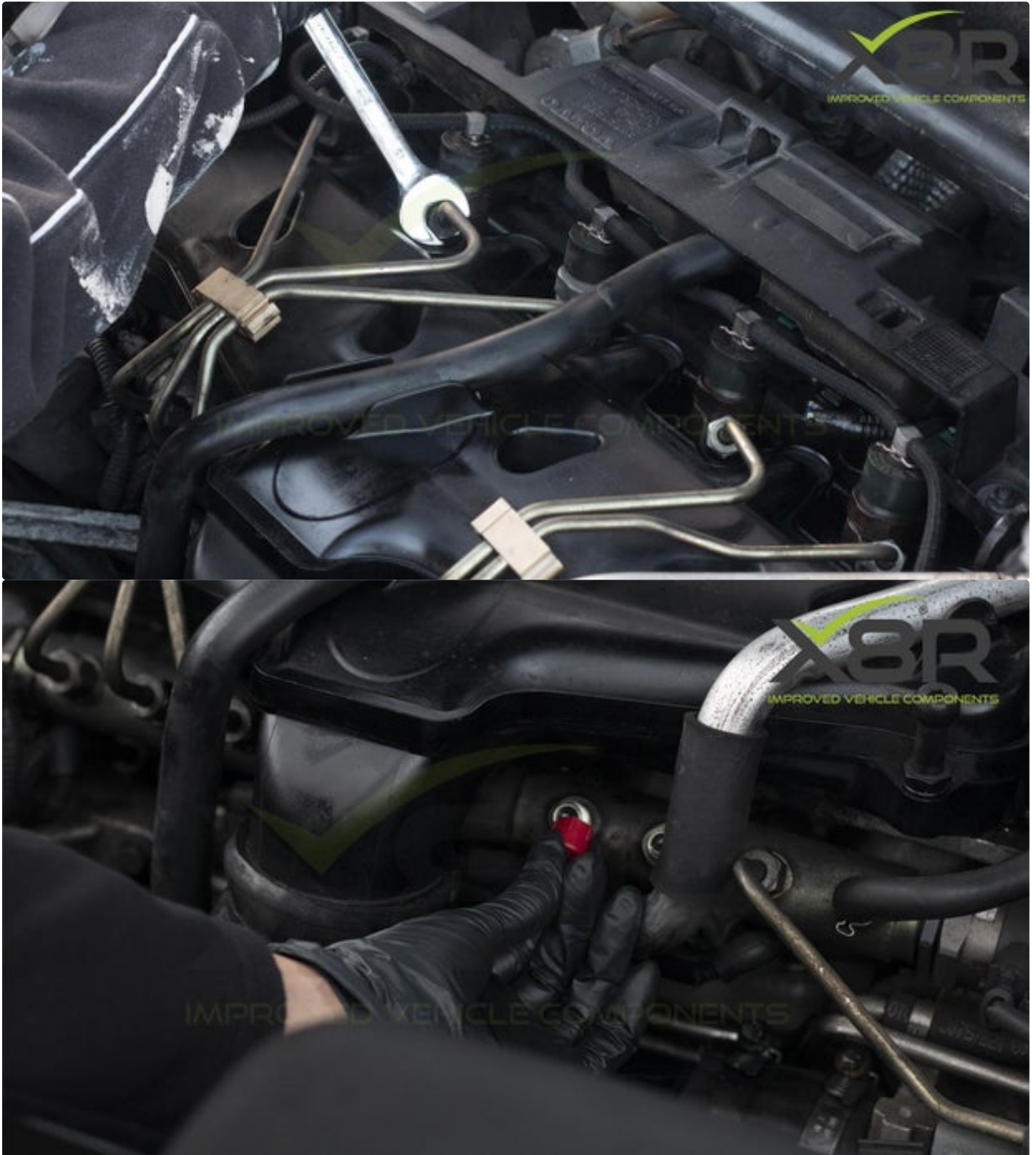
### Step 3:

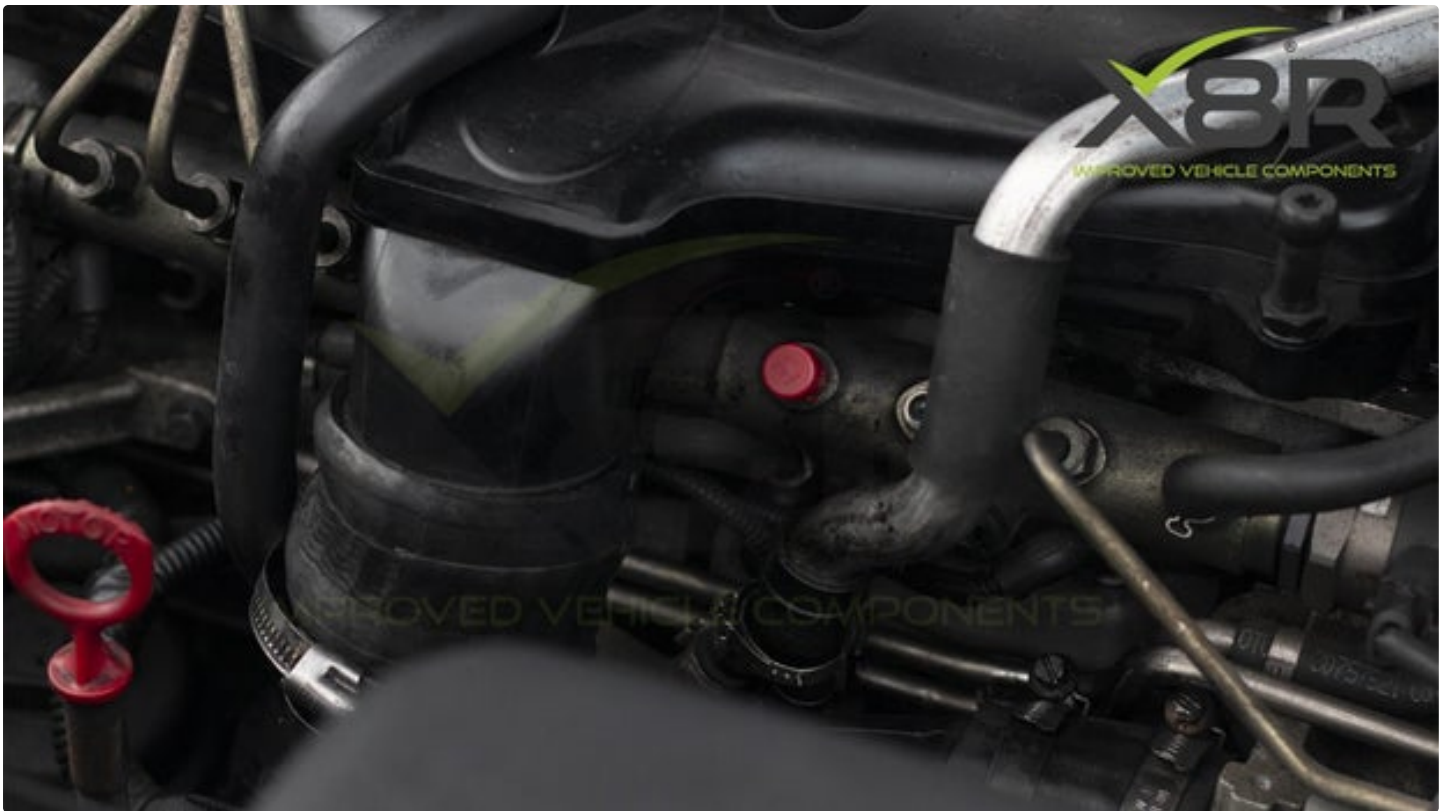
Use a T30 to remove the screws that retain the intake manifold.



## Step 4:

Use a 15mm spanner to crack the nuts retaining the fuel injector pipes. Loosen them by hand then remove the pipes. Place the threaded caps over them, this protects the fuel system from dirt ingress.





### Step 5:

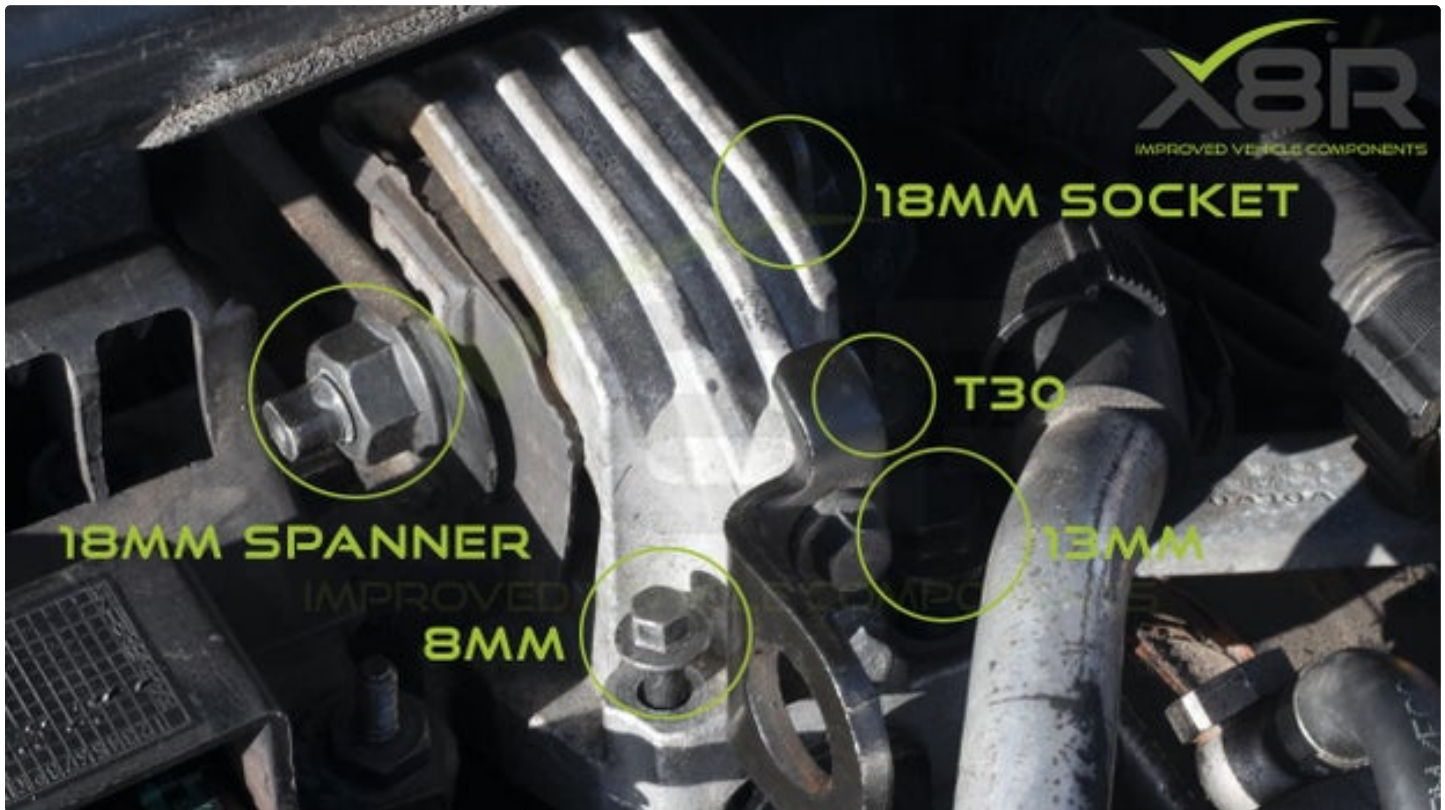
Hold the bottom nut on the strut brace with an 18mm spanner and use a 15mm socket on the top of the bolt. Crack the nut then loosen it by hand. Do this on both sides of the struct brace.



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## Step 6:

Remove the bolts retaining the upper engine mount. The tool sizes are listed above. Once the central bolt is removed you can remove the strut brace. Once the engine mount is loose, push it out of view.



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## Step 7:

Use an 13mm socket to remove the two bolts that hold on the upper back engine cover. Remove the cover.





### Step 8:

Unclip the electrical connectors on the top of the injectors using a flathead screwdriver. Remove the injector leak off retaining clips also using a flathead screwdriver. Pull the braided injector hose off from each injector. Fit the bungs over the fuel nozzles.





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### Step 9:

Number the injectors one to five, it is important to ensure the injectors go back in the same order they were removed.



## Step 10:

Use an 8mm socket to undo the ten bolts holding in the injectors. Then pull out the injectors one by one (It is advisable to cover the injectors ports with blue roll to prevent any foreign objects from falling inside them). Remove the old copper washers from the injectors.



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## Step 11:

Install all the caps onto the injectors. This protects them from dirt ingress.



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## Step 12:

Remove the remaining bolts holding on the intake manifold using a T30. These bolts sit behind the injectors, refer to the diagram in step 2 to see locations. Pull away intake manifold.





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### Step 13:

Remove the intake manifold gasket. Use a pick or small flathead to do so.



## Step 14:

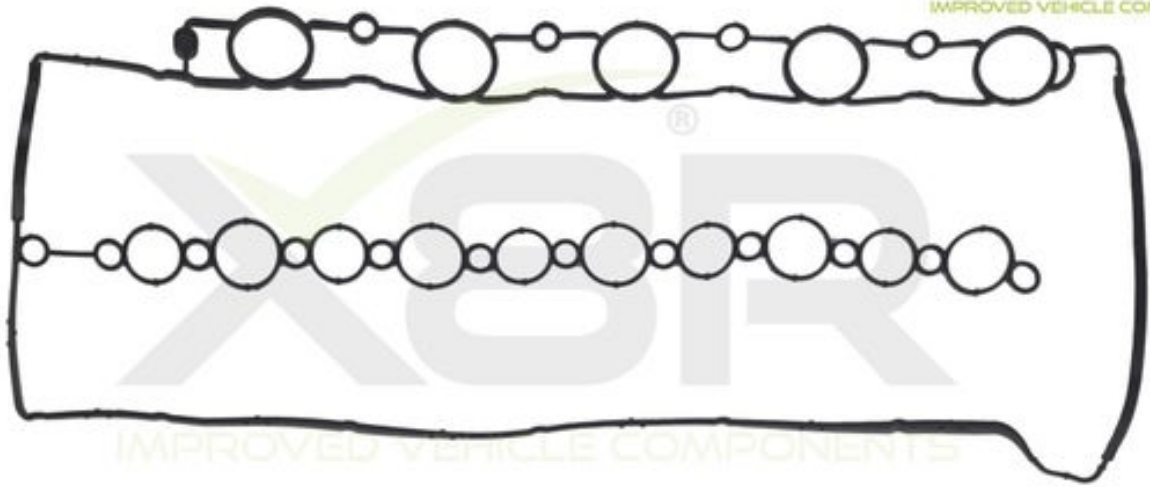
Use an engine degreasing spray and disposable cloths to clean out the intake manifold. If it is heavily blocked this may take a while. This is worthwhile spending time on as it will help your engine breathe.



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## Step 15:

Fit the new intake manifold gasket by pressing it into the manifold.







**Step 16:**

Remove swirl flap arm.

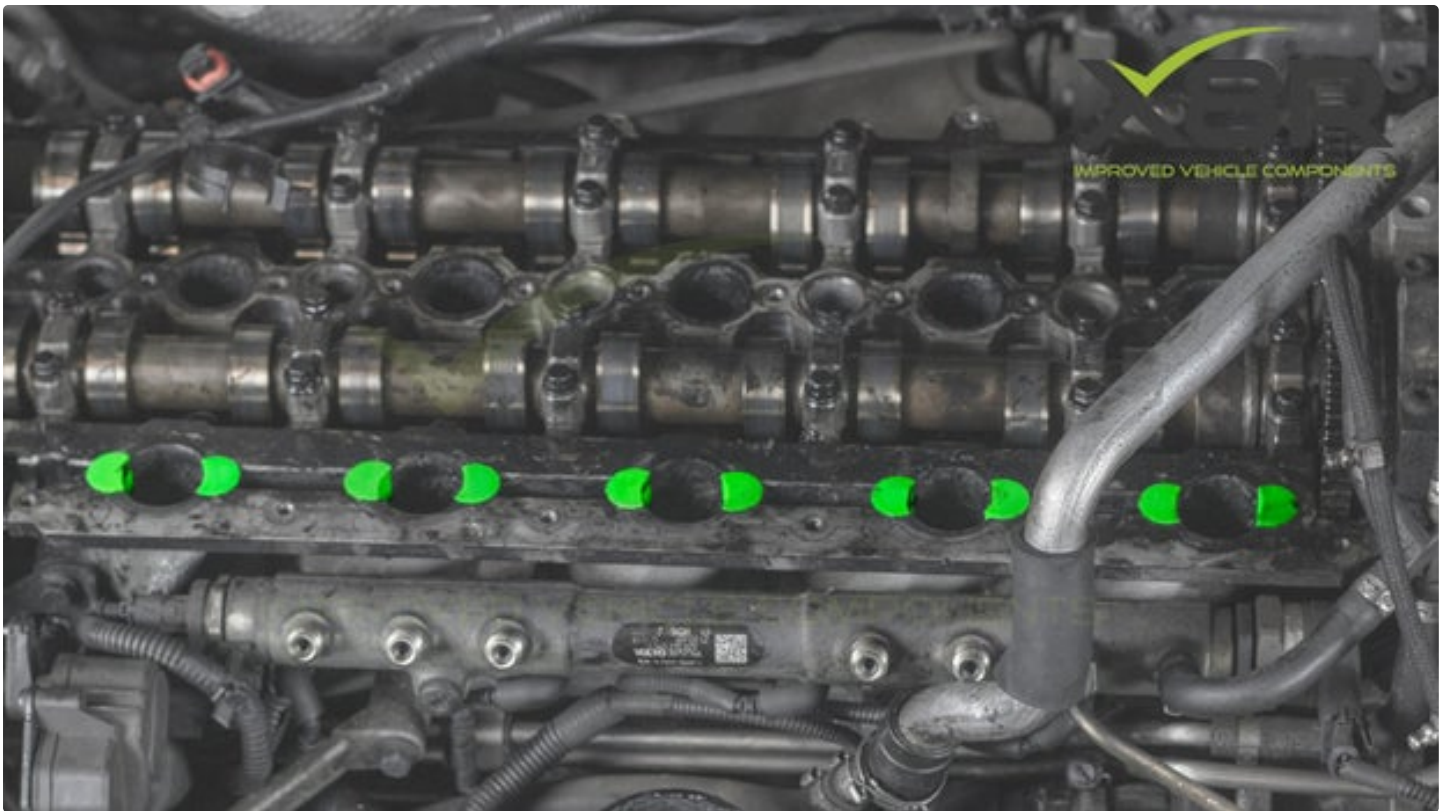




**Step 17:**

Press in all 10 swirl flap blanks.





### Step 18:

Refit the intake manifold. Remove the caps from the injectors and fit the copper washers.





## Step 19:

Repeat step 10-step 1 in reverse to build the intake manifold back together. Here are some of the torque settings we have found online:

### **Engine mount:**

Bolts: Torque to 25 Nm

Center nut: Torque to 180 Nm

### **Fuel lines:**

Torque to 10 Nm

### **Injector bolts:**

Torque to 13 Nm

### **Intake manifold:**

Torque to 19 Nm

### **Strut brace:**

Torque to 50 Nm

This completes the installation. 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](mailto:sales@x8r.co.uk). Please also check out our instruction guide on YouTube. [www.x8r.co.uk](http://www.x8r.co.uk) Installation is carried out at installers risk, if unsure please contact us or a professional, X8R Ltd

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