BMW N47 Intake Inlet Manifold Swirl Flap Removal Delete Metal Blank Plug Bung Repair Fix Kit Install Instruction Guide

by x8rltd

Symptoms

Smoke and fluttery/uneven idle when starting up, "misfire" or engine rocking. Rough running even under a light load, lack of power, boost leak from manifold, engine ‘hunting’.

Fault

The swirl flaps within the intake manifold become covered in carbon deposits restricting air flow and can fail.

BMW introduced swirl flaps into all of their diesel engines from 1998. The swirl flaps are designed to close at lower speeds to improve torque and then to open at higher revs for an improved fuel to air ratio. However, over the years soot builds up on these moving parts and within the intake ports. Images can be seen across the internet showing these manifolds completed coked up with carbon deposits, putting excess stress on the swirl flap components. Not only does this restrict air flow and performance in some instances it has led to failure of the swirl flap components and these parts entering the engine.

Solution

Remove the swirl flaps and seal with our kit, improve air flow and prevent any future issues.

Remove the swirl flaps and never worry about your engines swirl flaps ever again! Our part is designed to block the hole created by the removal of the swirl flaps. Please check out our instructions and video showing this process. Our unique bung with its double Viton seal (Viton is the correct material to use here to prevent future issues, check what you buy) perfectly seals the manifold after removing the swirl flaps stopping any boost leaks.

The swirl flap actuating motor is left connected and running as normal so will not trigger any fault codes. Removal of these parts does not affect vehicle performance and in some instances performance is improved as these components (and lumps of carbon build up attached thereto) are removed.

Our kit also comes with a aluminium spacer. This is essential as in some instances a small piece of plastic is missing from the actuator motor. If this is missing without this spacer the bung will not work. Please check you will receive this if buying elsewhere, many don’t understand what they are selling.

Vehicles Affected

N47 2.0 ltr engines

1 Series E81 (02/2006 — 12/2011)

1 Series E81, 120d, 3 doors, N47

1 Series E81, 123d, 3 doors, N47S

1 Series E87 LCI (01/2006 — 06/2011)

1 Series E87 LCI, 118d, 5 doors, N47

1 Series E87 LCI, 120d, 5 doors, N47

1 Series E87 LCI, 123d, 5 doors, N47S

1 Series E88 (09/2007 — 10/2013)

1 Series E88, 120d, Convertible, N47

1 Series E88, 123d, Convertible, N47S

1 Series E82 (11/2006 — 10/2013)

1 Series E82, 120d, Coupe, N47

1 Series E82, 123d, Coupe, N47S

3 Series E90 (03/2007 — 09/2008)

3 Series E90, 320d, Sedan, N47

3 Series E90 LCI (07/2007 — 03/2010)

3 Series E90 LCI, 320d, Sedan, N47

3 Series E90 LCI, 320xd, Sedan, N47

3 Series E91 (02/2007 — 08/2008)

3 Series E91, 320d, Touring, N47

3 Series E91 LCI (07/2007 — 02/2010)

3 Series E91 LCI, 320d, Touring, N47

3 Series E91 LCI, 320xd, Touring, N47

3 Series E92 (06/2005 — 02/2010)

3 Series E92, 320d, Coupe, N47

3 Series E92, 320xd, Coupe, N47

3 Series E93 (09/2007 — 02/2010)

3 Series E93, 320d, Convertible, N47

5 Series E60 LCI (04/2006 — 12/2009)

5 Series E60 LCI, 520d, Sedan, N47

5 Series E61 LCI (04/2006 — 05/2010)

5 Series E61 LCI, 520d, Touring, N47

X1 E84 (09/2008 — 06/2012)

X1 E84, X1 20d, SUV, N47

X1 E84, X1 20dX, SUV, N47

X1 E84, X1 23dX, SUV, N47S

X3 E83 LCI (11/2006 — 08/2010)

X3 E83 LCI, X3 1.8d, SUV, N47

X3 E83 LCI, X3 2.0d, SUV, N47

To check if your vehicle is affected:

Visit real OEM website, input vehicle VIN, select Engine, then “Intake manifold AGR with flap control”, Item 1 on the list shows the part number, please compare this to the part numbers listed below to confirm compatibility.

Associated part numbers

11618507239, 11617811214, 11614728712, 11617797384

7797384, 7810178, 7810179, 4728712, 7811214, 8507239.

You will receive

1 x aluminium plug with Viton o-rings (this material is essential for this application)

1 x aluminium spacer

4 x replacement intake manifold gaskets

https://youtu.be/IIVwD5KwyGc

Step 1: Remove Actuator Motor

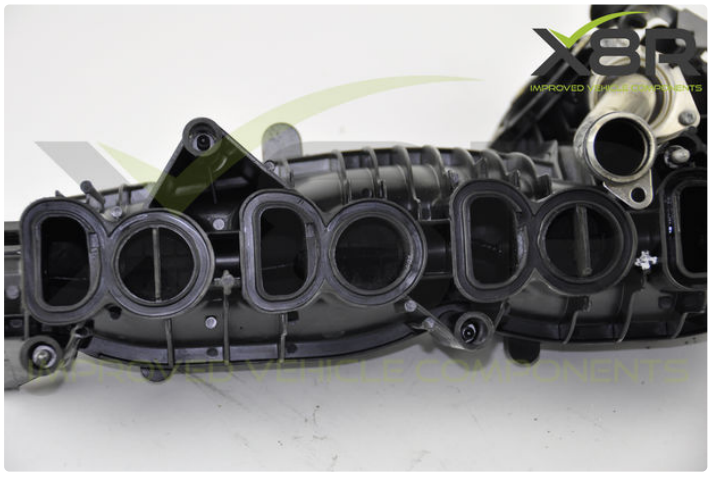
Using a T30 Torx screwdriver remove the 3 screws that hold the motor in place.

You can remove the hanging arm on the motor (this should just pull off) as this will not be needed during reassembly.

You can now turn the swirl flap rod by hand and see the swirl flaps moving in the manifold (note the carbon deposit build up).





Step 2: Remove Rod

Remove the Silver colour retaining clip that holds the rod in place. This can be done by pulling downwards and then outwards.

Once this clip is removed you can pull the rod out. It is likely to be quite sticky because of the deposits so may take some effort. The plastic end of the rod will likely pop off, use a pair of pliers to grip the end of the rod and pull it out. You will likely need to hold the manifold firm in a vice to do this.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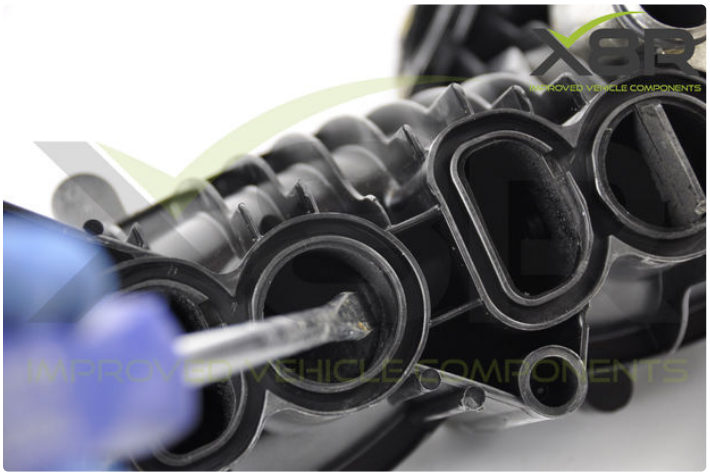
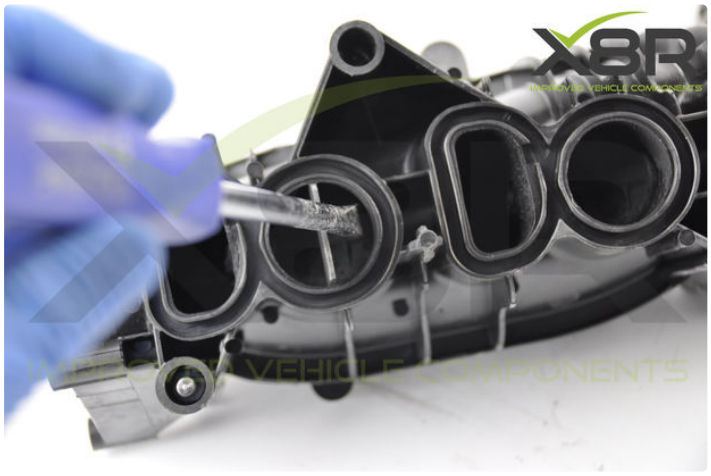
Step 3: Remove Small Seal

Once the rod is out, use a pick tool to hook out a small rubber seal left behind in the hole. If this is not done our replacement bung will not seat correctly.



Step 4: Remove the Swirl Flaps

Lightly tap near the edge of the swirl flaps where the rod would have once been to loosen them. Do this with a flat head screwdriver and a mallet. Take care to remove ALL remnants of the swirl flaps from the manifold.

Step 5: Install Our Bung

This is a simple push fit install. Insert the bung into the hole and push firmly until it stays in place on its own. The twin o-rings not only make it secure, they also provide a good seal for the manifold, you should feel this.






Step 6: Reattach Motor and Install Small Spacer (If Needed)

You can now reinstall the actuator motor. Our bung should fit tightly against the motor casing but if it doesn't, as shown in the pictures, it means that the motor casing has broken over time.

This is where our supplied small spacer is used.

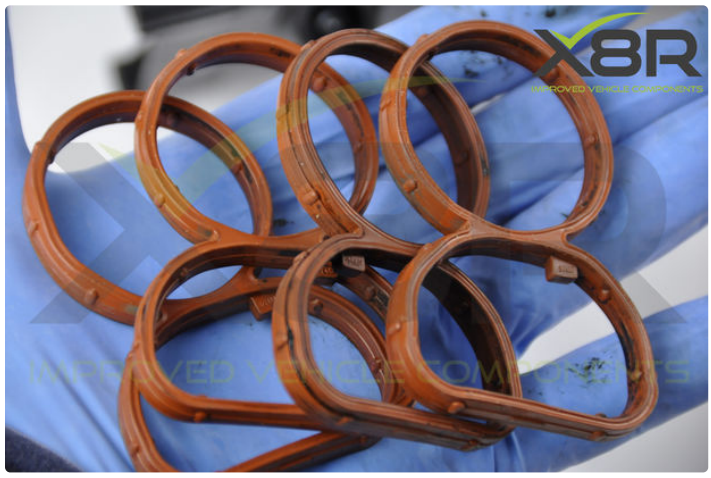
Install our small spacer by pushing into the end of the metal bung as shown in the photos. Making sure this stays in place, line up the actuator motor to the manifold to make sure of fitment.

Fitted correctly, the spacer should line up and then press against the actuator motor.

Once the motor is on and the spacer is securely held in place, screw back in the 3 x T30 torx screws from earlier. Make sure the screws are done up tightly so that the spacer and bung are held in position securely.

Step 7: Install New Manifold Gaskets

Fit the new gaskets. Once again, these are a simple push fit design.These will only go in one way as there is a small notch on the gasket which fits into a small cut out on the manifold. Push these into place securely.



Step 8: Modification Complete

This concludes the modification to remove the swirl flaps from the manifold.

When refitting the manifold to the engine, make sure the electrical connection is refitted to the actuator motor. This will make the ECU think that the flaps and motor are working as they should and will not bring up error codes or warning lights.

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

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