

# Mercedes Benz V6 M272 and V8 M273 Intake Inlet Manifold Air Flap Runner Lever Repair Kit Install Instructions Guide

by **x8r1td** on August 18, 2016

## **Intro:** Mercedes Benz V6 M272 and V8 M273 Intake Inlet Manifold Air Flap Runner Lever Repair Kit Install Instructions Guide

### **The Problem**

A plastic lever on the intake manifold snaps which leads to malfunction of the tumble / swirl flaps and causes vehicle faults.

Mercedes-Benz vehicles with the V6 M272 and V8 M273 engines commonly suffer from failure of the intake manifold. These manifolds are fitted with tumble / swirl flaps. The purpose of these is to increase air speed / tumble at low RPM which creates better torque for the motor at low RPM, enhanced fuel economy and reduces emissions. Unfortunately, the design of this mechanism is flawed and commonly fails. Previously necessitating replacement of the complete intake manifold at vast expense. In reality it is only a small part of the manifold that fails due to poor quality construction. On the intake manifold below the secondary air injection pump sits a plastic lever integral to the manifolds function. As carbon builds up in the inside of the manifold over time this puts more pressure on the air doors / swirl flaps which connect to the lever, this inevitably cracks the plastic lever which is the inferior quality component. This leads to the lever no longer moving the air doors / swirl flaps inside the manifold runners. This is what causes the symptoms noted.

### **Symptoms of the fault**

Symptoms can include some or all of the below:

Check engine light (CEL) is lit / on with P code P2004, P2005 or P2006 stored in the system.

Engine control module has stored pending codes for intake manifold, air flap or runner control system.

Error messages; tumble flap stuck in activated position, intake manifold runner control stuck closed.

Emissions test failure.

Poor idle, loss of power, delayed acceleration, increased fuel consumption.

To diagnose this fault; you can visually inspect the manifold, remove engine covers and inspect intake manifold from above, using a torch you should be able to see down the front of the manifold and see if the lever is damaged.

### **Vehicles affected and compatibility**

This information should be used for guidance only, please inspect the intake manifold to ensure the lever is the fault:

Mercedes C 230 2006, 2007

Mercedes C 230 4MATIC Sedan 2008, 2009, 2010, 2011, 2012

Mercedes C 230 RWD Sedan 2008, 2009, 2010, 2011, 2012

Mercedes C 230 Sedan 2006, 2007, 2008, 2009, 2010, 2011

Mercedes C 250 4MATIC Sedan 2008, 2009, 2010, 2011, 2012

Mercedes C 250 RWD Sedan 2008, 2009, 2010, 2011, 2012

Mercedes C 250 Sedan 2008, 2009, 2010, 2011

Mercedes C 280 4MATIC Sedan 2006, 2007, 2008, 2009, 2010, 2011, 2012

Mercedes C 280 RWD Sedan 2006, 2007, 2008, 2009, 2010, 2011, 2012

Mercedes C 280 Sedan 2006, 2007, 2008, 2009, 2010, 2011

Mercedes C 300 4MATIC Sedan 2008, 2009, 2010, 2011, 2012

Mercedes C 300 RWD Sedan 2008, 2009, 2010, 2011, 2012

Mercedes C 300 Sedan 2008, 2009, 2010, 2011

Mercedes C 350 4MATIC Sedan 2006, 2007, 2008, 2009, 2010, 2011

Mercedes C 350 RWD Sedan 2006, 2007, 2008, 2009, 2010, 2011

Mercedes C 350 Sedan 2006, 2007, 2008, 2009, 2010, 2011

Mercedes CLC 230 2006

Mercedes CLK 350 Convertible 2006, 2007, 2008, 2009

Mercedes CLK 350 Coupe 2006, 2007, 2008, 2009

Mercedes E 280 4MATIC Sedan 2007, 2008, 2009

Mercedes E 280 RWD Sedan 2007, 2008, 2009

Mercedes E 350 4MATIC Sedan 2006, 2007, 2008, 2009, 2010, 2011

<http://www.instructables.com/id/Mercedes-Benz-V6-M272-and-V8-M273-Intake-Inlet-Man/>

Mercedes E 350 4MATIC Wagon 2005, 2006, 2007, 2008, 2009, 2011

Mercedes E 350 Convertible 2011

Mercedes E 350 Coupe 2010, 2011

Mercedes E 350 RWD Sedan 2006, 2007, 2008, 2009, 2010, 2011

Mercedes E 350 RWD Wagon 2005, 2006, 2007, 2008, 2009, 2011

Mercedes E 350 Sedan 2006, 2007, 2008, 2009, 2010, 2011

Mercedes E 350 Wagon 2006

Mercedes GL450 2007 2008

Mercedes GLK 350 2009, 2010, 2011, 2012

Mercedes GLK 350 4MATIC 2009, 2010, 2011, 2012

Mercedes GLK 350 RWD 2009, 2010, 2011, 2012

Mercedes ML 300 2010, 2011

Mercedes ML 350 2009, 2010, 2011

Mercedes ML 350 4MATIC 2005, 2006, 2007, 2008, 2009, 2010, 2011

Mercedes ML 350 RWD 2005, 2006, 2007, 2008, 2009, 2010, 2011

Mercedes ML 450 HYBRID 4MATIC 2010, 2011

Mercedes ML 450 HYBRID RWD 2010, 2011

Mercedes R 280 2005, 2006, 2007, 2008, 2009, 2010, 2011

Mercedes R 300 2005, 2006, 2007, 2008, 2009, 2010, 2011

Mercedes R 350 2005, 2006, 2007, 2008, 2009, 2010, 2011

Mercedes R 350 4MATIC 2005, 2006, 2007, 2008, 2009, 2010, 2011

Mercedes R 350 RWD 2005, 2006, 2007, 2008, 2009, 2010, 2011

Mercedes S 400 HYBRID Sedan 2010, 2011, 2012

Mercedes SLK 280 Convertible 2006, 2007, 2008, 2009, 2010, 2011

Mercedes SLK 300 Convertible 2006, 2007, 2008, 2009, 2010, 2011

Mercedes SLK 350 Convertible 2005, 2006, 2007, 2008

**Mercedes-Benz V6 M272 and V8 M273 engines only.**

Associated part numbers:

2721402401, 2721402201, 14433043001, 2721402401, 2721402401, 2721402201, 2721402201, 2721402101, 2731400701, 2721412280, 2721412080, 2721412380, 2721412180, A2721402401, A2721402101, A2721402201, A2731400701, A2721412280, A2721412080, A2721412380, A2721412180.

#### **Our solution**

Install our metal replacement lever and restore full function to the intake manifold, avoid the cost of a complete new manifold. An improved design part which won't fail.

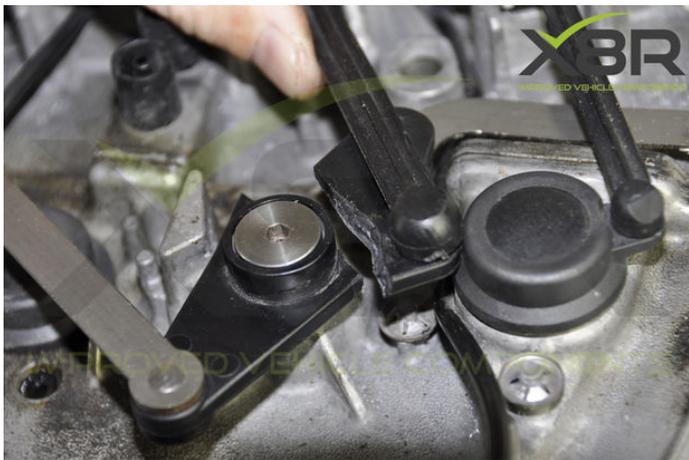
Mercedes-Benz solution to this common fault is to replace the complete intake manifold, not only is this extremely expensive but also a replacement manifold will have the same plastic lever which would just fail again. Our solution allows you to replace just the lever that fails. Our replacement lever is precision machined from high quality billet aluminium, meaning it will never fail like the OEM part. We provide this at a massive saving compared to a complete new manifold which would just fail again. Our part is perfectly machined to fit in the same way as the OEM part and takes moments to exchange once the manifold is removed. Our part will restore full function to the mechanism, check out our videos and instructions. We also include a repair for the vacuum actuator arm in case the original has snapped or the ball joint has worn.

#### **You will receive**

1x Billet aluminium CNC machined lever

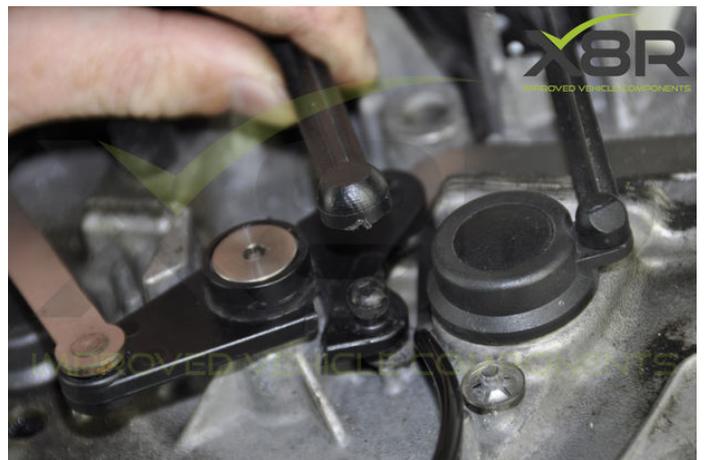
2x Linkage arms

1x Actuator arm repair



**Step 1: Remove lever arms and actuator arm ball joint**

Using a pry tool or flat bladed screw driver gently pry the arms and the actuator ball loose from the lever.



**Step 2: Remove lever bolt and remove lever**

Using a T30 Torx screwdriver remove the bolt retaining the lever.

Remove the lever and operating arms.



**Step 3: Grease the ball joints on the new lever and arms**

Apply a light covering of grease to all ball joints / ball joint receivers on the lever and linkage arms. Do not apply too much grease as this will inhibit fitting.







**Step 4: Mount the new lever**

Mount the new lever and refasten the bolt. Apply thread lock compound to the bolt thread and torque up to 9nm / 80in lbs.



### Step 5: Press fit linkage arms and actuator arm.

Press the linkage arms in to the plastic receivers using a pair of pliers.

Press the actuator arm on to the ball joint on the lever.



### Step 6: Actuator arm repair

We also include in our repair kit a replacement actuator arm. This is rarely required as the lever is normally the fault, however on occasions this can snap or the ball joint receiver can wear causing issues. In this instance cut the arm off 25mm from the actuator end of the arm. Fit the new arm over the top and screw tight to fasten.



### Step 7: Test function of the mechanism

This completes the repair, test the function of the lever and check all clearances are OK.

Before refitting to the vehicle we recommend cleaning the internals of the manifold to remove as much of the carbon build up as possible, this will reduce the strain on the swirl / tumble flaps.

Upon refitting the manifold to the vehicle the fault codes will need to be reset.

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. All images and texts are copyright X8R Ltd 2016

