

AUTODESK
Instructables

Jaguar XF 2008-2015 Air Vent Stepper Motor Improved Design Cog

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Introduction: Jaguar XF 2008-2015 Air Vent Stepper Motor Improved Design Cog



Symptoms of Fault

Air vents not rotating upon startup, air vents jamming, not opening/closing via manual button or buttons on the screen.

The Fault

The air vents failing to rotate upon startup, caused by an inferior plastic cog controlling the motor

The Jaguar XF's have a unique feature where the interior air vents rotate upon startup, a great feature when working correctly. Unfortunately the cog which mates the rotating mechanism in the air vents to the motor is made of weak nylon and has a poor structural design, this cog can snap which causes the rotating mechanism to fail.

The cog has a large cut-out, to visually inspect if it is mated correctly. However this cut-out provides structural weakness and often snaps here. The cog also has a thin and weak stopper which breaks and is the most common reason for failure.

Jaguar have recognised this fault and have begun to sell the cog (known as a "stepper motor clutch") separately, however the part is scarcely improved and the fault will reoccur time and time again.

The Solution

Install the X8R stepper cog to provide a life time fix for this common issue

Here at X8R Ltd we have designed an improved stepper cog which is guaranteed to fix this issue for the life of the vehicle. Our cog is made from injection moulded carbon fibre reinforced plastic which is a far superior material. Our cog also has two fins incorporated into the design to increase the rotating surface. Not 3D printed. We have seen 3D printed versions of this gear fail prematurely. We have invested in injection moulding this part to make it the most durable gear in the market.

We have dramatically reduced the large cut-out window from a 30mm window to a 3.5mm circular cut-out which is large enough to easily locate into the mating surface and compact enough to not create structural weakness. The X8R cog also has the stopper width increased from 2mm to 2.7mm to prevent damage.

Vehicles Affected

Jaguar XF 2008-2015, all models affected

OEM part number: C2Z31321

This cog is the same for all four air vents on the dashboard

You Will Receive

1 x Improved design Jaguar XF air vent cog

Supplies

You will need:

1. T20 torx bit
2. Interior trim pry tools
3. Pick or very small flathead screwdriver

Step 1:



Please note: we demonstrate this installation on the driver's side air vent. This process is identical to all vents, but different trim panels will need to be removed. Please watch the following video for a demonstration on removing the passenger side trim panels: <https://www.youtube.com/watch?v=Gd-MPudBQuU>

Pull the rubber door seal away from the door frame (only the section next to the air vent)

Step 2:



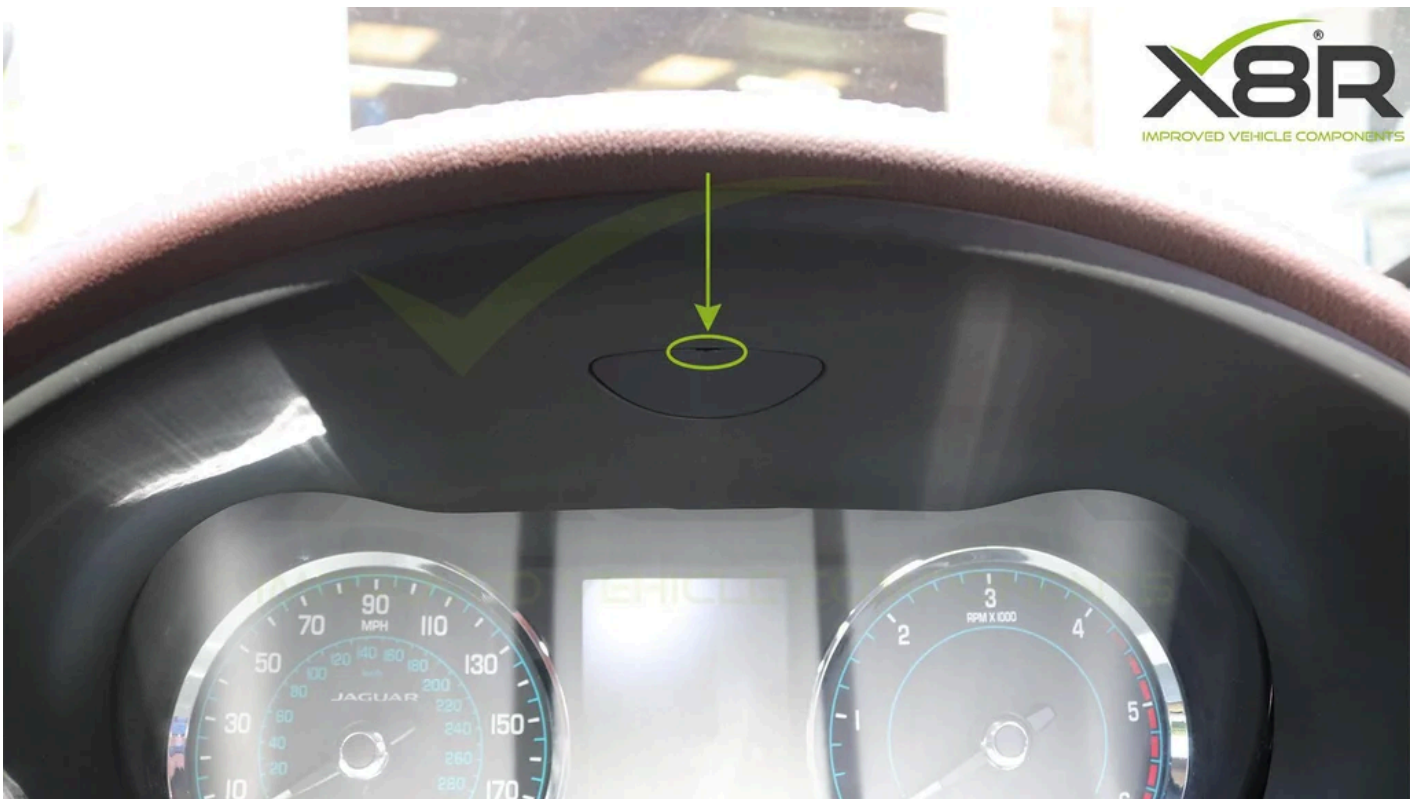
Use a trim removal tool to remove the trim on the side of the dash. Do so gently.

Step 3:



Use a trim removal tool to pry off the front fascia of the air vent.

Step 4:



Use a pick or very small flathead screwdriver to pry off the cover at the top of the speed surround. Then use a T20 to remove the screw behind it.

Step 5:



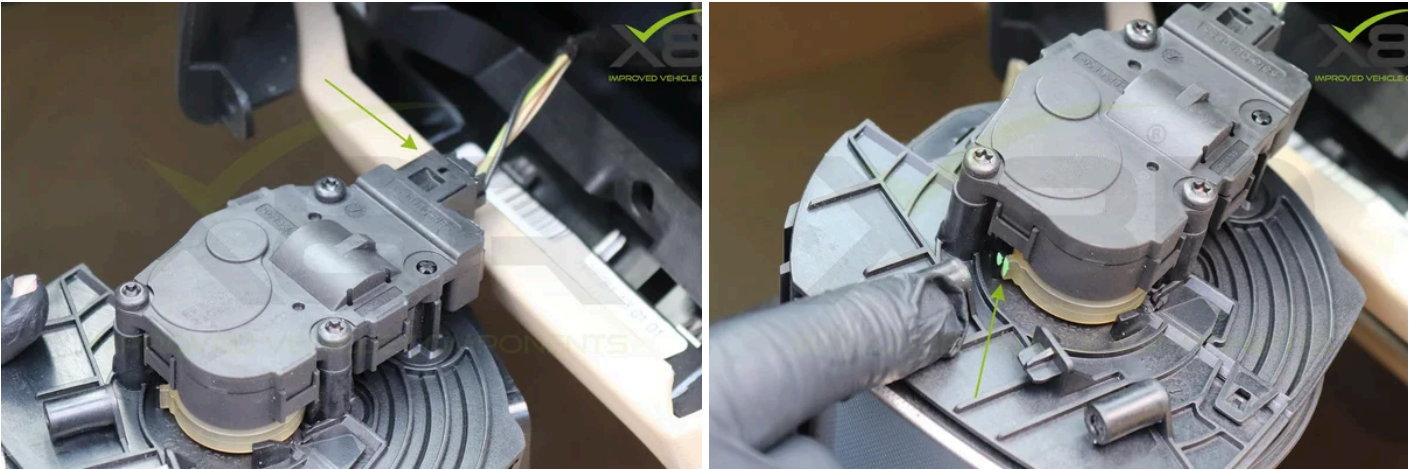
Pull the trim that surrounds the speed dials, the steering wheel and indicator stalks away from the vent. Remove the two screws behind this piece of trim using a T20. Also remove the other screws on the front and side of the air vent.

Step 6:



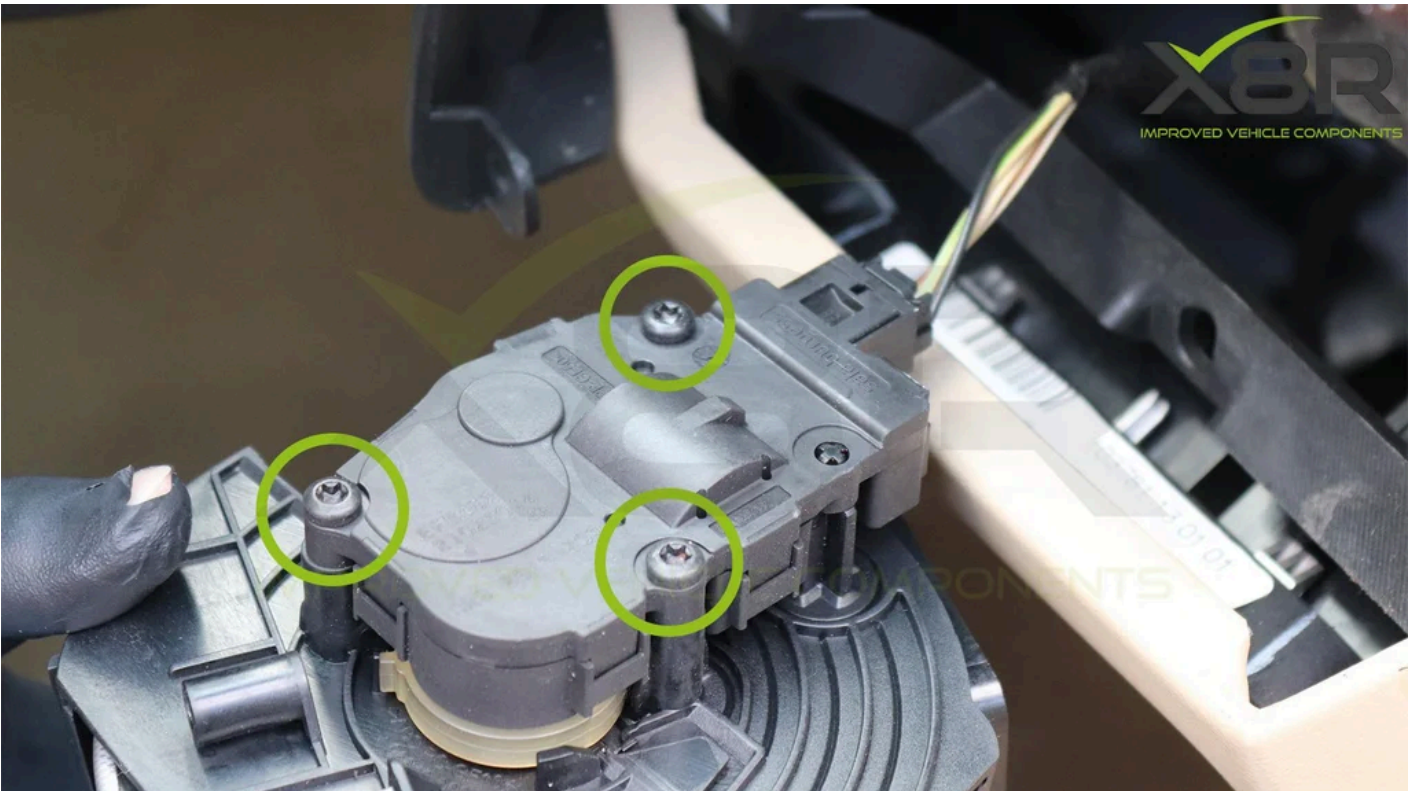
Pull the air vent away from the dashboard. Lever off the inner fascia, do so gently as to not snap it.

Step 7:



Unplug the electrical connector. Note where the broken cog mates to the air vent, you may want to mark this with a chalk pen.

Step 8:



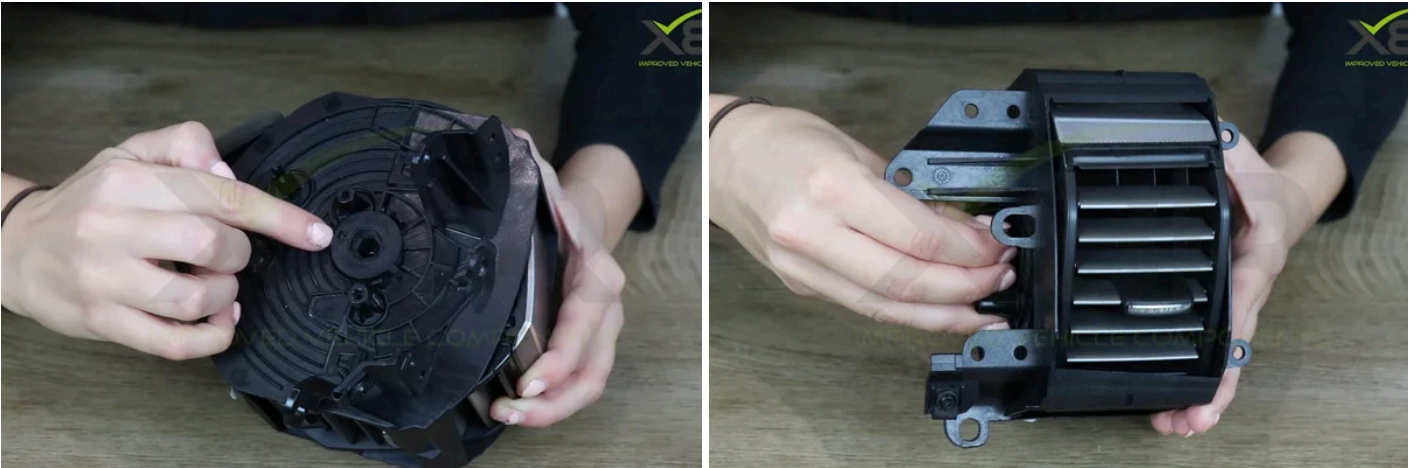
Remove the three T20 screws retaining the motor.

Step 9:



Remove the motor to expose the original cog. Remove the cog. The red arrows show the connecting surfaces.

Step 10:



Press in the new X8R cog, ensuring it mates to the connecting surfaces from the previous step. Once fitted, test by rotating and ensuring the vent turns with it.

Step 11:



Fit the motor and repeat steps 1-8 in reverse to put the vehicle back together.

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. 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 2024.