



instructables

Audi Seat Skoda VW Kia Hyundai TDI CRDI CRTD CDI VDO Siemens Throttle Body Flap Actuator Air Delivery New Gear Repair Kit Fix Overhaul Replacement Install Instructions Guide



by x8rltd

The Problem

The poor-quality gears within the throttle body wear, affecting valve function and cause vehicle faults.

The throttle body is integral to the air intake system and controls the amount of air flowing into the engine.

The butterfly valve within his mechanism often becomes coated in carbon deposits. This can affect the valves opening / closing or jam open / shut causing vehicle faults.

Often this is cleaned to restore function. If this doesn't resolve the fault the throttle body is replaced. This is rarely necessary.

Often the build up of deposits has stripped the poor-quality Nylon gears within the mechanism stopping correct function.

These gears can easily be replaced with our improved material gears resolving vehicle faults without having to replace the complete throttle body which would only fail again.

Symptoms of the fault

Poor engine performance, lack of power.

Vehicle idles poorly, rough, high or low idling and stalling.

Vehicle in limp home mode or reduced power warning or EPC light on / lit.

Revs not dropping back down after accelerating.
Throttle delay.

Poor MPG.

Vehicles affected and compatibility

For guidance only please check part number on the throttle body to confirm compatibility.

Audi A2 A3 A4 A5 A6 A8 Q5 Q7 TT TDI 1.4 1.9 2.0
2.7 3.0 4.2

SEAT Altera Cordoba Exeo Ibiza Leon Toledo TDI
1.4 1.9 2.0

Skoda Fabia Octavia Roomster Superb Yeti 1.4 1.9
2.0 TDI

Volkswagen VW Beetle Caddy Crafter Eos Golf Jetta
Passat Polo Phaeton Scirocco Tiguan Touran
Touareg Transporter T5 1.4 1.9 2.0 2.5 3.0 4.2 TDI
Hyundai Grandeur I30 IX55 Santa Fe Sonata Tucson
2.0 2.2 3.0 CRDI

Kia Carens Cee'd Magentis Optima Rio Soul
Sportage Venga 1.1 1.4 1.6 1.7 2.0 CRDI CRTD
Mercedes Benz Sprinter 2.1 2.2 CDI

Associated part numbers

03G128063A, 03G128063B, 03G128063C,
03G128063D, 03G128063F, 03G128063G,
03G128063J, 03G128063K, 03G128063L,
03G128063M, 03G128063Q, 03G128063R,
03G128063T, 03G128063V,

03L128063A, 03L128063B, 03L128063C,
03L128063D, 03L128063E, 03L128063G,

03L128063H, 03L128063K, 03L128063R,
03L128063S, 03L128063T,

045128063, 045128063G, 057128063B,
057128063C, 057128063H, 057128063D,
057128063E, 057128063G, 059128063A,
059128063B, 059128063E,

059145950A, 059145950AA, 059145950AF,
059145950AH, 059145950B, 059145950D,
059145950E, 059145950H, 059145950J,
059145950L, 059145950P, 059145950R,
059145950T,

075128063A, 45128063G, 4E0145950C,
4E0145950D, 4E0145950F, 4E0145950G, 4E0145
950 H, 4E0145950J, 8E0145950D, 8E0145950E,

Siemens-VDO

40824011001, 408240111001, 408240121001,
408240231001, A2C30247400, A2C31762900,
A2C32356700, A2C37524500, A2C53043714,
A2C53081714, A2C53085612, A2C53085614,
A2C53097542, A2C53099814, A2C53099814,
A2C53099815, A2C53099815, A2C53100873,
A2C53100874, A2C53100874, A2C53100874,
A2C53100874, A2C53100875, A2C53102656,
A2C53112154, A2C53210988, A2C53245205,
A2C53249824, A2C53249826, A2C53249829,
A2C53249890, A2C53249890, A2C53249891,
A2C53253875, A2C53302614, A2C53324665,
A2C53329083, A2C53337753, A2C53338105,
A2C53358421, A2C53358421, A2C53364206,
A2C53364207, A2C53364212, A2C53364213,
A2C53369978, A2C53369978, A2C53380146,
A2C53385161, A2C53385242, A2C82751600,
A2C83076400, A2C83592300, A2C85454800,
A2C87924200, A2C59515171

35100-27410, 35100-2A900, 1354652, 45128063,
A6460901470, 076128063A, A2C53090824,

Our solution

Install our improved design gears and restore your
vehicles throttle body.

Install our replacement gears and restore full function

of the throttle body.

Our gears are unique in design they can simply be
push fitted and can be installed very quickly please
check out our instructions guide.

Our gears work in exactly the same way as the OEM
components but are constructed from a far superior
material, a Carbon reinforced plastic, specifically
formulated for this application.

Our gears are injection moulded high quality parts, be
wary of 3D printed and metal gears which can cause
further issues.

We also include a replacement seal for the actuator
housing which is opened to replace the gears.

A full-term solution to this very common fault.

You will receive

2x Carbon reinforced plastic gears.

1x Throttle body actuator housing gasket



https://youtu.be/_5mJrHqiqAQ

Step 1: Prepare Your Tools and Clean Up the Unit

For this repair, you will need various items from your toolbox.

A T20 Torx screwdriver

A T10 Torx screwdriver

A couple of different sized flat head screwdrivers

A pick tool

The unit will more than likely be covered in a layer of carbon deposit from being sat next to the EGR in the vehicle's intake system. This can be cleaned off using brake cleaner and workshop tissue. A soft brush such as an old toothbrush would also be useful for this task.

Once clean, the task of repairing can start.



Step 2: Release the Motor From the Flap Housing

The first step is to locate the 4 x T20 Torx screws securing the motor housing to the flap housing. Unscrew these and safely store the screws.

Once the 4 screws are released, use one of the flat headed screwdrivers (start with the smaller one) to gently pry open the casing. If the casing is stiff to come away, pry it slightly and then use a stronger, larger flat head screw driver to get it the rest of the

way. There are two small prongs for the electrical connection that may cause some resistance when pulling apart. Be careful not to damage these when separating the unit.

Once it is split into two pieces it will reveal the gear cogs and the electrical connections.



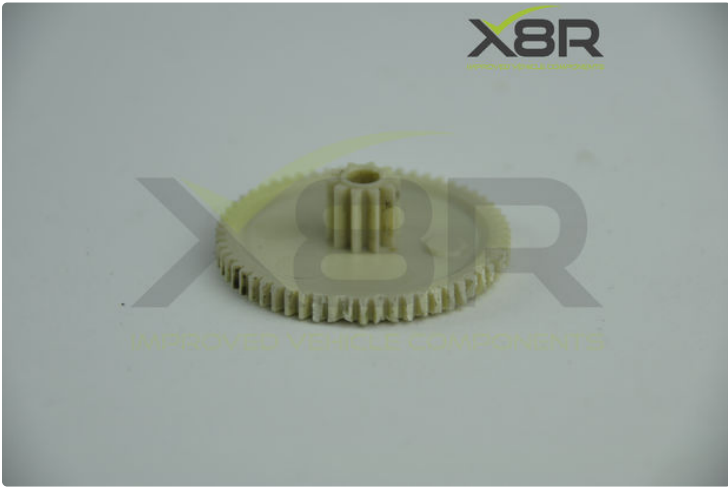


Step 3: Prepare to Remove the Main Cog

There are two T10 Torx screws on the inside of the housing which help to hold the cogs in place. Remove these and then the old main cog can be lifted upwards off of its spindle.

Once the cog is removed, you can see the damage caused to the Nylon plastic part caused by years of use.





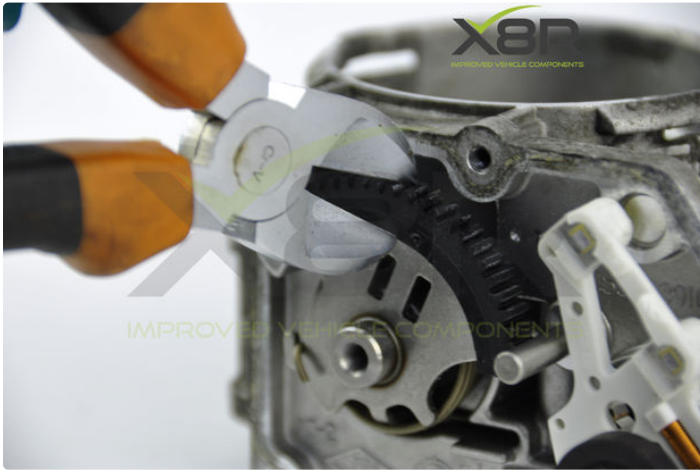
Step 4: Remove the Semi Circular Cog

The next step is to remove the semi circular cog on the flap spindle.

The only way to do this is to cut it away which will need to be done with either a cutting tool such as a Dremmel or with a pair of pliers/snips.

Be careful not to damage the metal work underneath.

Once this is fully cut away, you will notice some holes in the metal piece. Make sure that any debris is cleared away from these holes before our item is fitted.



Step 5: Fit Our New Semi Circular Cog Piece

Its time to start the install of the new pieces.

Firstly install the improved carbon fiber infused semi circular cog. This fits in exactly the same place as the old piece and has prongs on the underside which fit through the holes left in the metal and will just clip strongly into place.



Step 6: Fit the Main Cog

Once the semi circular cog is secured in place, move onto the main cog. Again, this is Carbon fiber infused for strength and durability.

Lift up the small round black piece in the corner until the main cog can be slid down onto its spindle with the small cog piece underneath the main larger cog.

Once fitted, all the cogs should line up precisely.

The final step on this part is to replace the two T10 Torx screws on the corner piece of the unit.

Once the screws are in place, and everything is secure, test the function of the cogs by manually twisting the flap back and forwards to make sure the cogs rotate and then return to their starting position.



Step 7: Replace the Gasket

With the repair kit we also provide a new gasket for sealing the unit back together as the old one is usually worn and squashed having been in position for many years.

Using the pick tool mentioned before, gently lever up and pull the old gasket away from the rim of the casing. Clear any debris that may have gathered in the space left.

Our new gasket is precision made to fit directly in place of the original.



TDI CRDI CRTD CDI VDO Siemens Throttle Body Flap Actuator Air Delivery New Gear Repair Kit Fix Overhaul Replacement

Step 8: Refit the Two Halves Back Together

Now that both halves have had their respective parts replaced, it is time to place them back together. Thankfully, there is only one way round that these parts can fit.

Use the electrical connector prongs to line up the two halves. These prongs slide into locating holes on the opposing half of the unit. Gently press these halves together making sure the gasket stays in its place.

Once the two halves are neatly pushed back together, you can then refit the 4 x T20 Torx screws. Any gaps that can be seen between the two halves prior to the screws being fitted should close up when the screws are tightly secured.

This now concludes the repair of the flap motor and this can be refitted to the vehicle.

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

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