Land Rover Discovery 2 MK2 II Defender TD5 2.5 Diesel Fuel Pressure Regulator Block Rebuild Leak Repair Fix Kit Install Instructions Guide

by x8rltd on June 29, 2016

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Intro: Land Rover Discovery 2 MK2 II Defender TD5 2.5 Diesel Fuel Pressure Regulator Block Rebuild Leak Repair Fix Kit Install Instructions Guide

A common fault on TD5 vehicles is a fuel leak from the fuel pressure regulator block. This is caused by a diaphragm and or seals within the block deteriorating. Our overhaul kit allows replacement of the failed seals curing the leak without having to replace the complete block at vast expense.

The Problem

The diaphragm within the fuel pressure regulator and / or the O-rings deteriorate within the fuel pressure regulator block causing fuel to leak from the fuel pressure block.

Within the fuel pressure block sits a fuel pressure regulator designed to keep the fuel pressure at a constant 4 bar pressure. Within the fuel pressure regulator is a small rubber diaphragm, this deteriorates and fails leading to fuel leaks from the fuel pressure block. Land Rover's solution to this is to replace the complete block at £150+. However, the block rarely fails just the pressure regulator unit and on occasions the O-rings seals.

Symptoms of the fault

Fuel leaking down from the fuel pressure block at the driver's side rear of the engine. Often collecting on the bellhousing, starter motor or on your driveway. A strong smell of Diesel under the bonnet is also a common indication of failure. To further diagnose; fuel leaking from the hole in the fuel pressure regulator is a sure indication that the diaphragm within the unit has failed.

Vehicles affected and compatibility

Discovery TD5 1998 - 2004 Defender TD5 1998 - 2007

Our kit is compatible with both early and late type fuel pressure regulator blocks, 2 pipe and 3 pipe. Type A Non EU3 models and Type B EU3 models.

TD5 Models only

Associated part numbers:

LR016319, LR016318, MSX000010, MSX100080, MSO000060.

Our solution

Replace just the components that fail within the fuel pressure block with improved components designed to last, a vast saving over replacing the complete block.

Save the cost of a complete fuel pressure block which rarely fails, replace just the components that fail. Our kit allows you to replace just the fuel pressure regulator and O-rings that fail. Our kit even includes O-rings that don't come with a replacement fuel pressure regulator block from Land Rover. Our solution provides a cost effective alternative to a complete new block with improved materials designed to outlast the OEM parts. Our kit includes all needed to overhaul including gaskets for both early and late types of fuel pressure regulator block.

You will receive

1x Fuel pressure regulator 3x Viton pipe seals 1x Gasket- regulator block to engine- early type MSX000010 1x Gasket- regulator block to engine- late type MSX100080 1x Viton seal- regulator block to engine

X8R Ltd www.x8r.co.uk

Step 1: Safety First

Check vehicle manufactures guidance for fuel pressure regulator removal.

Let engine sit for 30 minutes from last use before proceeding with repair. So that fuel pressure drops to an acceptable level.

Wear appropriate PPE.

Clean area around fuel pressure regulator before proceeding with repair. Steam cleaning is recommended to prevent any contaminates entering the fuel system.

Step 2: Locate Fuel Pressure Regulator Block

The fuel pressure regulator is located in the far Left hand corner looking at the front of the engine.

Remove engine acoustic cover, 3x 13mm bolts, 1 on driver's side 2 on passenger's side (RHD vehicles)

Space is tight, the repair in the instructions is carried out on an engine off of the vehicle to try to clearly show the location of connectors, bolts etc.

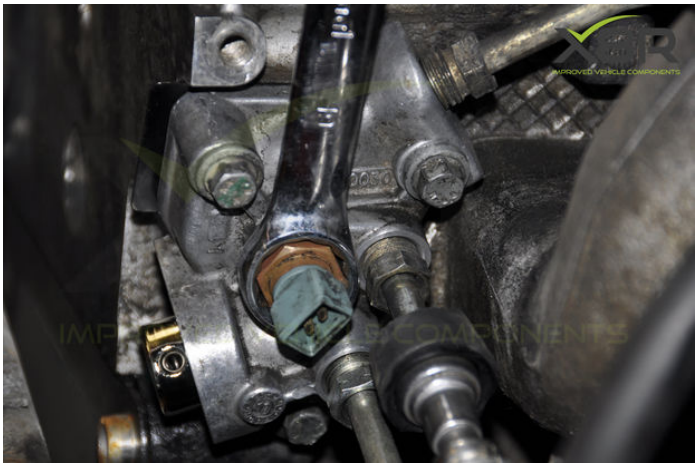
Step 3: Remove Engine Lift Bracket

To allow better access remove the engine lift bracket 2x 10mm bolts.

Step 4: Remove Fuel Temperature Sensor

Again to provide better access; remove temperature sensor electrical connector. Push in metal clip on connector and pull off.

Using a 19mm spanner remove the temperature sensor, taking care to retain the washer.

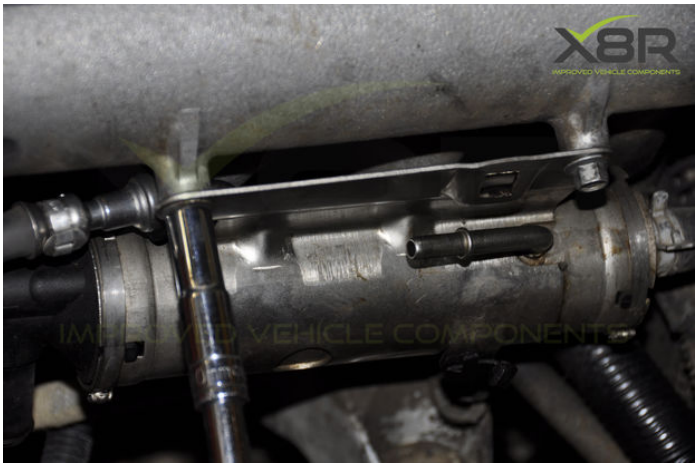


Step 5: Remove 1st Fuel Line

Remove fuel line. Slide up rubber grommet pull back on black plastic connector and pull pipe away to release.

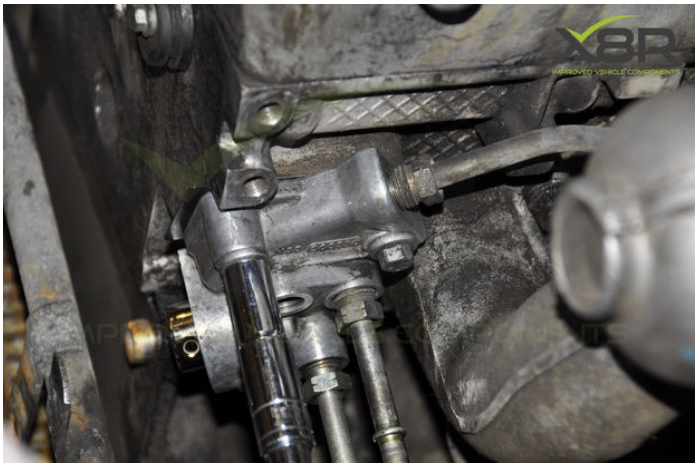
Step 6: Remove 2nd Fuel Line

Remove second fuel line. This fuel line is easiest to remove from the fuel cooler end. To enable removal slacken off the two 10mm bolts on the fuel cooler, this will allow access to remove the fuel line. This releases in the same way as the first fuel line; slide up rubber grommet pull back on black plastic connector and pull pipe away to release.



Step 7: Remove Fuel Pressure Regulator Block

Remove 3x bolts to remove the block using a 10mm socket. Access is tricky but the bolts can be accessed for removal.



Step 8: Remove Block And 3rd Fuel Line If Present

Remove block from the engine, take care to locate the black metal gasket that sits between the block and the engine. Between the block and the engine sits an O-ring and fuel strainer, this will likely stay mounted to the engine and will be dealt with later. If it doesn't take care to retain the strainer and the O-ring if possible.

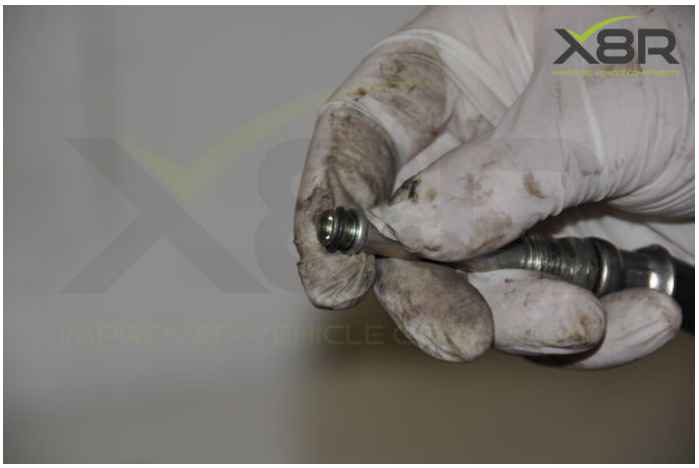
Your fuel pressure regulator may have a 3rd fuel line as shown here, if present remove using a 14mm spanner (a brake line spanner is the best tool)

Step 9: Remove Fuel Line Studs And Replace O-rings

Release both fuel line studs using a 14mm spanner and replace O-rings with our new O-rings.

If your vehicle had a 3rd fuel line please also replace that O-ring with the O-ring from our kit.

On refitting pipe studs these should be nipped up tight taking care not to over-tighten, this will damage the O-ring seal.



Step 10: Remove Old Fuel Pressure Regulator

Using a set of cir-clip pliers remove the cir-clip retaining the fuel pressure regulator.

Using grips pull out the old fuel pressure regulator.

Step 11: Install Our New Fuel Pressure Regulator

Push in our replacement fuel pressure regulator, you will feel the O-rings engage as it is pushed in firmly. Refit cir-clip.

Step 12: Choose And Fit New Gasket

Locate the old gasket and match up to our new gasket. We supply a gasket for both the older and newer fuel pressure regulator blocks, you should only fit one gasket. Compare our new gasket to the old and the block to ensure you fit the correct gasket, only 1 of the 2 supplied will line up correctly, this one should be fitted.

Step 13: Refit Fuel Strainer And O-ring

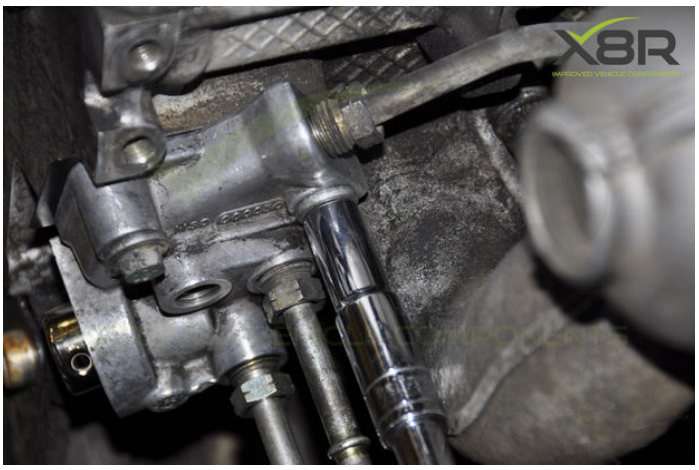
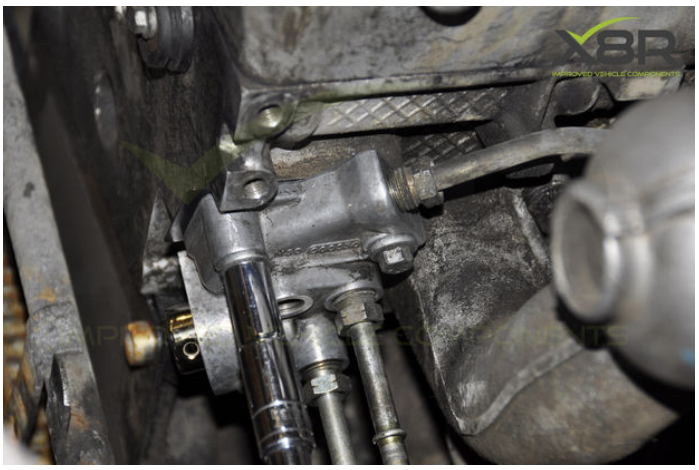
If the fuel strainer worked loose on removal; this needs to be refitted. Along with our replacement O-ring. If you wish to clean the strainer (new ones are surprisingly expensive) use white spirits and leave time to air dry before refitting.

Step 14: Refit Fuel Pressure Regulator Block

If third fuel line is present refit to the block using a 14mm spanner. Nip up so as not to damage O-ring.

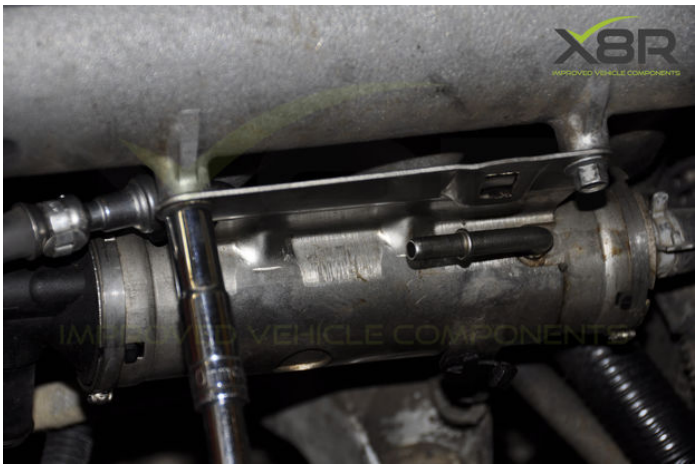
Fit the new gasket between the fuel pressure regulator block and the engine.

Refit block holding bolts x3 10mm to 25Nm.

Step 15: Refit 2nd Fuel Line

Refit 2nd fuel line to fuel cooler, this will simply push and click in to position. Re-fastener the 2x 10mm bolts on the fuel cooler.



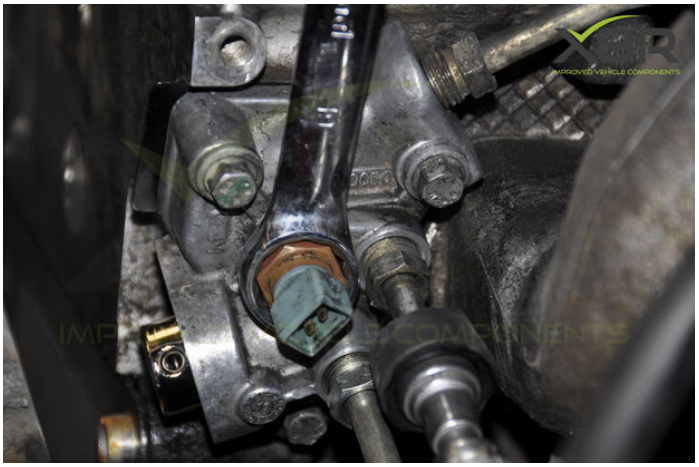
Step 16: Refit 1st Fuel Line

Refit the 1st fuel line to the block, again this will just push on and click in to position, remember to refit the rubber grommet and slide back in to position.

Step 17: Refit Fuel Temperature Sensor

Refit the fuel temperature sensor using a 19mm spanner and torque up to 14Nm.

Push electrical connector plug back in to position.



Step 18: Refit Engine Lift Bracket

Refit the engine lift bracket.

Step 19: Test Install

Refit the engine acoustic covers; 3x 13mm bolts, 1 on driver's side 2 on passenger's side (RHD vehicles).

Switch on ignition but don't start the engine.

Pump the accelerator 5 times.

The engine light will flash until system bleeding is complete. If not complete after pumping accelerator 5 times. Repeat process until engine light stops flashing.

Start the vehicles engine and check for any leaks around the fuel pressure regulator block area.

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

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