

# Range Rover P38 EAS Air Suspension Valve Block O-rings and Diaphragm Seal Replacement Instructions

## Introduction



Leak from EAS system but no visable leaks when testing components, vehicle on bump stops? Slow leak? Complete failure of EAS system?

The O rings and or diaphragm wearing can lead to the compressor overworking and can cause complete EAS failure, we always recommend replacing the diaphragm seal when replacing the o-rings in the valve block as both can cause leaks and EAS failure.

Range Rover Classic 1993-1996

Range Rover P38 1994-2002

Many Citroen and LDV models

Fit our improved material O-rings and diaphragm seal and restore your EAS system to full health.

Fit our Viton O-rings and cure those leaks, importantly our O-rings are made from Viton 75, this material is suitable for the elevated and varying temperature range which the valve block endures. Viton rubber also has extremely good wear resistance far outlasting Silicone and Buna O-rings. Beware of cheap kits with Silicone and Buna O-rings we only ever use Viton.

Fit our diaphragm seal, this is made in the same way as the OEM seal, beware of aftermarket designs that cause the compressor to run on and burn out, this part is precision made to prevent this.

## Step 1: Removing EAS unit



De-pressurise the EAS system using a tool of your choice, much software is available for this, please contact us should you need any recommendations.

After De-pressurising the system ensure ignition is switched off until repair is complete.

Remove valve stems to stop any build up of pressure anywhere in the system.

Remove valve block from vehicle labeling air lines and bolts to speed up re-installation

## Step 2: Remove solenoid covers



Label solenoid covers 1-7 and remember orientation for reinstallation.

Remove 7x solenoid covers (5 on top side 2 on underside).

## Step 3: Remove solenoid bases





Label solenoid bases 1-7 and remember orientation for re-installation.

Remove 7x solenoid bases (5 on top side 2 on underside).

## Step 4: Remove diaphragm block



Remove 4x Allen bolts and remove diaphragm block.

Remove old diaphragm seal retain both parts, remove O-ring seal around diaphragm seal.

Retain diaphragm spring.

## Step 5: Remove Non Return Valves Block



Remove 4x Allen bolts shown and lift off block.

Take note of location and orientation of NRV's.

Remove NRV's and O-rings.

## Step 6: Remove collets and O-rings

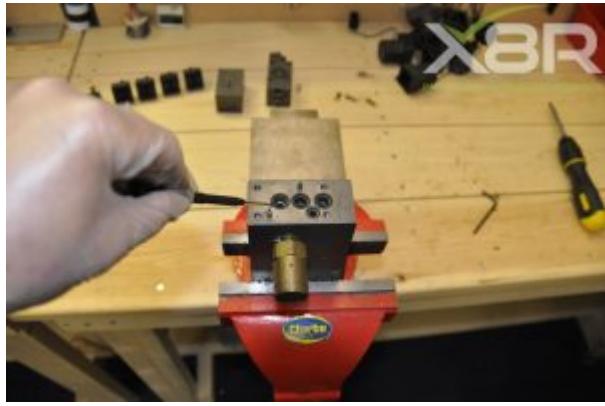


Prise out collets with screw driver.

Remove the 2x O-rings in each hole the collets were removed from, for this use a plastic screwdriver or a tool softer than the valve block.

Before fitting new O-rings give each of the holes a clean removing any dirt.

# Step 7: Replace O-rings Non Return Valve Block



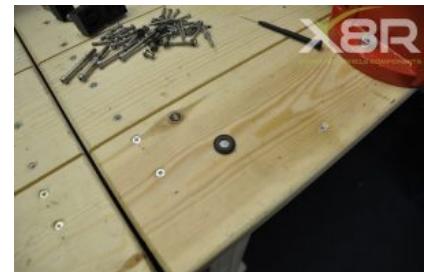
When replacing these O-rings and all other O-rings we recommend using lubrication on the O-rings to assist in sealing, di-electric grease or Vaseline are well suited.

Replace O-rings on the NRV block.

Replace O-rings on the NRV's, do not lubricate NRV's.

Refit NRV block and tighten bolts.

# Step 8: Replace Diaphragm O-ring and Diaphragm Seal



Replace O-ring around diaphragm seal.

Take old diaphragm seal, remove center part of seal (this part doesn't wear) separate this from outer rubber seal.

Insert this in to the center of our replacement seal, you will then see this looks almost identical to how the OEM seal looked (taking in to account wear).

Fit new seal and refit spring (important).

Refit block and tighten bolts.

## Step 9: Fit O-rings air line holes

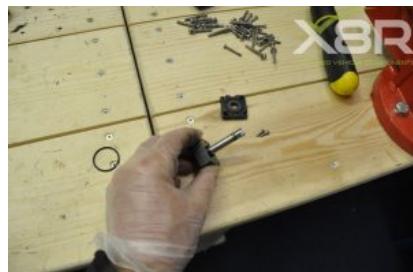


Fit O-rings in to airline holes, each hole takes 2x O-rings, it will be evident which holes take which sized O-rings.

Tap down O-rings with the blunt end of a drill bit or using a similar tool.

Push collets back in to holes.

## Step 10: Replace solenoid O-rings



Replace O-rings on solenoids one at a time.

Unscrew cover, remove valve stem and replace O-ring ensuring the O-ring doesn't bind and that it sits flush to the stem. Reassemble and replace 2x O-rings on base of solenoid and 1x O-ring on top of solenoid (small solenoid doesn't have top O-ring).

Repeat process for all 7 solenoids, repairing just one at a time.

## Step 11: Refit solenoids and covers



Refit solenoids and covers in same place and orientation as removed, remove any labels attached at start to remember orientation.

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](http://www.x8r.co.uk)

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