

Range Rover P38 EAS Air Suspension Compressor Piston Seal and Filter Replacement Instructions

by **x8rftd** on July 2, 2014

Intro: Range Rover P38 EAS Air Suspension Compressor Piston Seal and Filter Replacement Instructions

Is your vehicles air suspension rising slowly, noisily, or perhaps failing to rise at all? EAS fault message, "Warning do not exceed 35 mph" message, lights just flashing on height adjustment switch? Hard fault stored, vehicle on bump stops and not rising, taking too long to reach pressure, excessive compressor running?

The likely cause of the faults noted above and most common cause is a worn piston seal and or liner within the air suspensions compressor unit. Coupled with saturation of the filters in the compressors filter unit. This results in reduction of compressor output and triggers vehicle faults as well as extending the time taken to lift the vehicle.

Range Rover Classic 1993-1996

Range Rover P38 1994–2002

Many Citroen and LDV models

Our complete kit includes all needed to restore your compressor to full health. Our kit includes a new improved design piston seal constructed to the finest of tolerances from improved materials to restore full output.

Full filter replacement kit to allow you to replace all filters, the original filters saturate quickly and drastically effect output, our improved replacements will solve this problem.

If your piston liner is also worn or damaged (we recommend changing this at same time as piston seal) we also supply these, please check out our website.



Step 1: Replace filters

Unscrew filter unit from compressor.

Lift lid off of filters, remove old filters, clean filter unit and fit new filters.

Reattach filter unit to compressor.







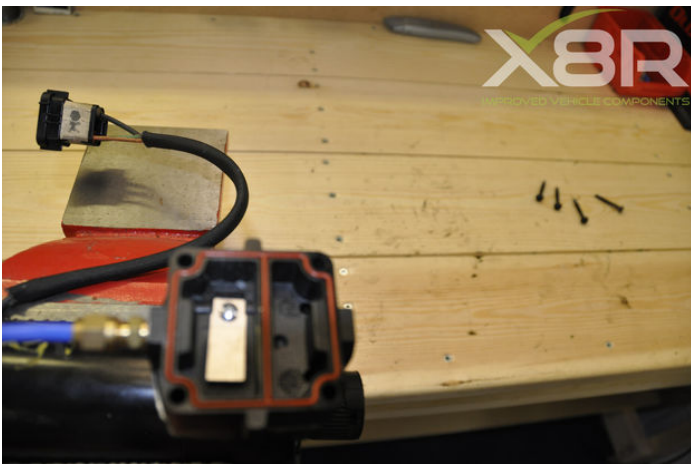
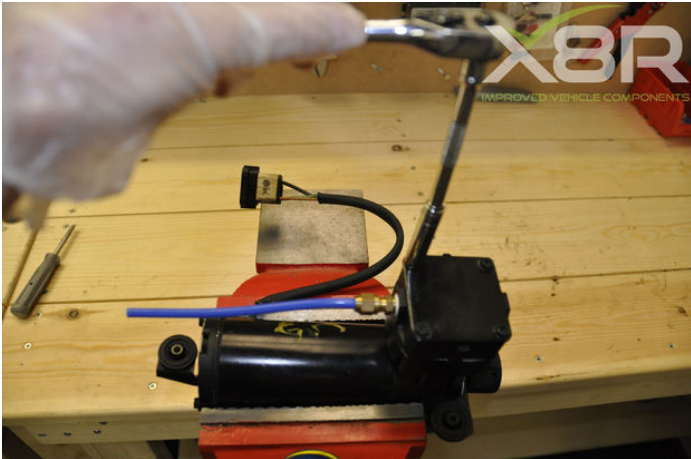
Step 2: Remove compressor head

Remove 4 bolts on cylinder head, it is good practice to label each bolt so that they can be refitted in their original position. Use a socket rather than a Torx screwdriver to remove as the bolts are relatively soft.

Remove cylinder head cover.

Remove head, locate O-ring and remove, we shall replace that later.

Remove piston liner.

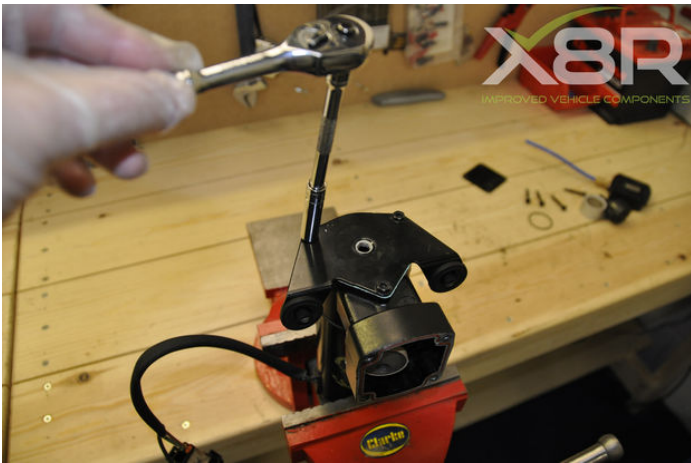




Step 3: Remove face plate

Again using a socket and remembering location for respective bolts remove 3x bolts on face plate.

Remove gasket and remember orientation for reinstallation.



Step 4: Remove piston.

Remove grub screw shown on side of compressor.

Rotate piston through face plate opening and look down the hole left from the removal of the grub screw until you can see a bolt head through the hole.

Loosen this bolt so as the piston is loose enough to move off of its shaft.

This will release the piston, slide off of shaft and remove through face plate opening, take care not to bend the piston if you need to lever out of position.





Step 5: Replace piston seal.

Take a sharp knife and cut away as much of the old seal as you can.

Cut away as much of the seal as you can between the clamp ring and the piston.

Using a screw driver incrementing in size, lever away at gap between clamp ring and piston.

Raise the clamp ring slowly and in increments making sure not to damage the piston or clamp ring.

Once clamp ring is removed clean clamp ring and piston removing old seal and any remnants.

Fit new piston seal from our kit.

Apply Loctite to clamp ring and refit over seal.

Use a socket a similar size in circumference to the clamp ring and tap this down so that it retains the new seal, the clamp ring should sit the same as it did with the old seal.

Fit piston liner to shape seal (if using one of our replacement piston liners fit this and dispose of old liner)

Fit liner at 45 degree angle and slowly rotate to fully engage seal, do so slowly and in increments to shape the seal.







Step 6: Refit piston

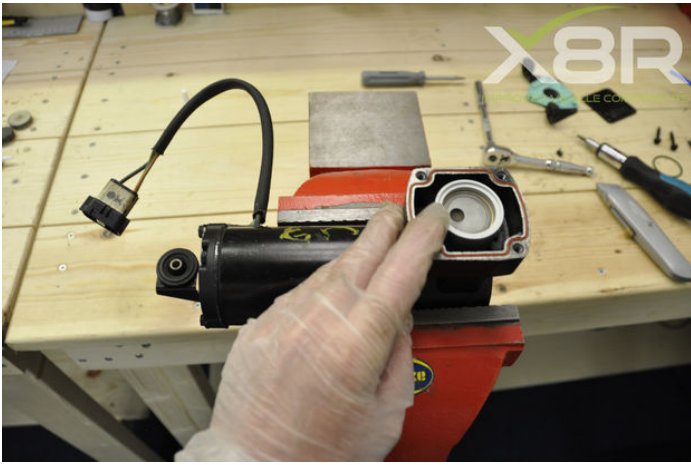
Refit piston to shaft.

Tighten grub screw to tighten piston on shaft.

Screw back in place larger grub screw on side of compressor.

Refit piston liner.





Step 7: Replace o-rings in head

Remove two shims as shown.

Take note of orientation of shims.

Clean up shims removing residue of old O-ring.

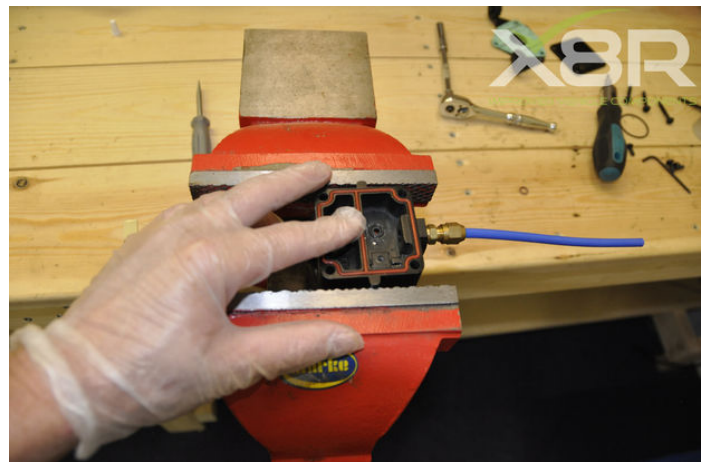
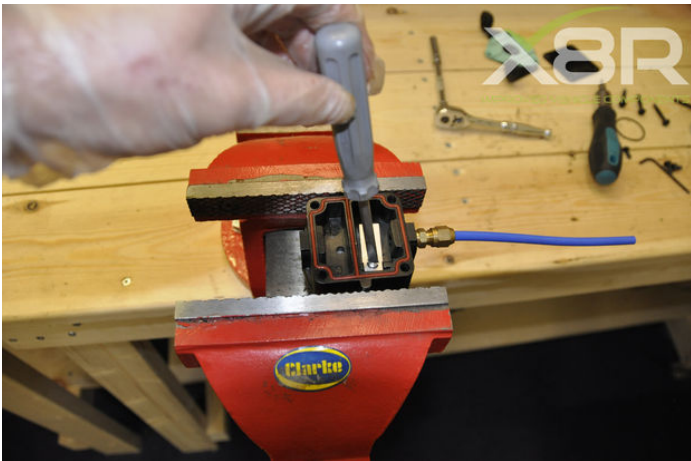
Pry out old O-ring and clean recess.

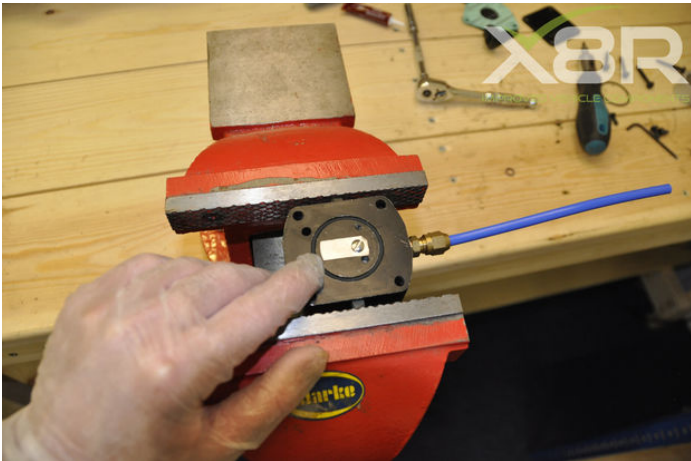
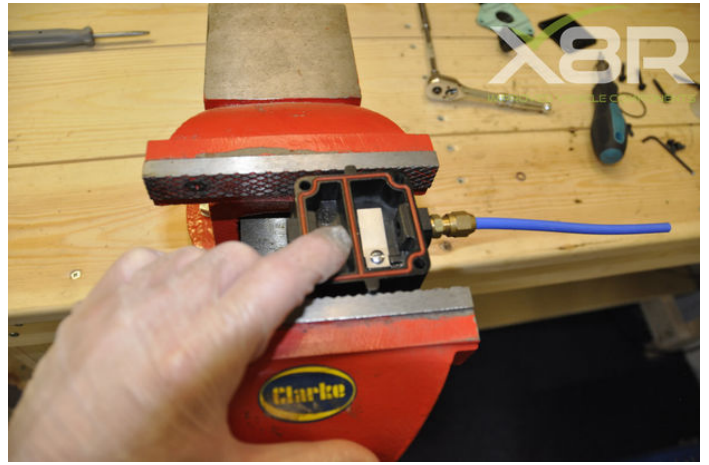
Fit our new O-ring with a small amount of silicone sealant.

Apply Loctite to the screw and reattach shims.

Make sure shims are parallel and together.

Replace larger O-ring with our new O-ring, location shown.





Step 8: Re-fit head and face plate and test.

Apply Loctite to bolts and refit head.

Apply Loctite to bolts and refit face plate -remembering gasket.

Refit filter unit.

Test unit on bench to confirm successful repair.

Connect lead from 12v battery positive terminal to Green wire from compressor, connect negative terminal lead to Black wire from compressor, this will run the compressor. Check for good output and proceed to refit to vehicle.

