Land Rover Range Rover L322 2006 +, Range Rover Sport, Discovery 3 EAS Air Compressor Repair Kit Instructions.

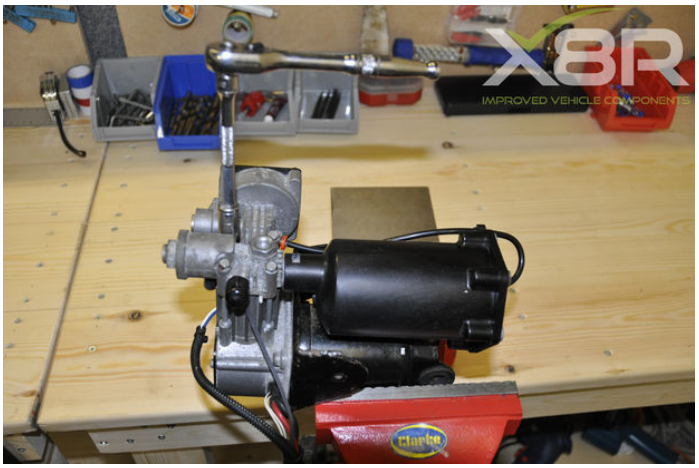
by **x8rltd** on March 4, 2014

Intro: Land Rover Range Rover L322 2006 +, Range Rover Sport, Discovery 3 EAS Air Compressor Repair Kit Instructions.

Is your vehicles air suspension rising slowly, noisily, or perhaps failing to rise at all? EAS Amber light lit, Fault code C1A20, C1A1364, C50, or C1A20-64 showing? One or more of these errors: “Suspension error only normal height available. ”“Suspension fault; pressure not rising quick enough.” Or “Pressure does not decrease when venting gallery.”.

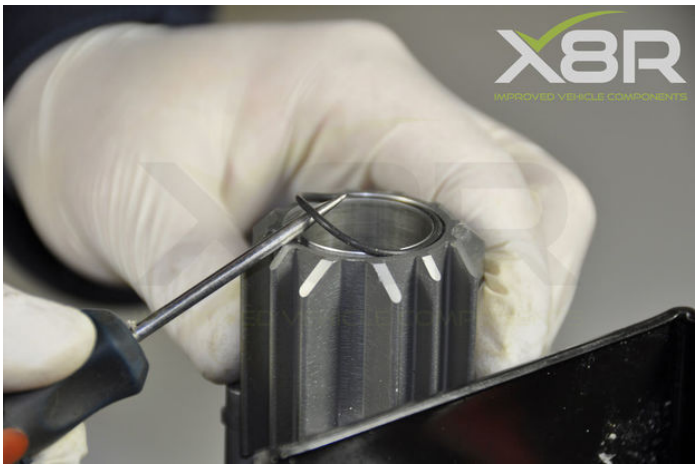
If so the chances are your compressors piston ring and glide ring has deteriorated reducing the output of your EAS air compressor, or your air compressors filters are full (please see our other instructions for this problem). Our replacement piston ring seal and glide ring kit will repair this fault and restore your compressor to good health, as follows are instructions guiding the install of our compressor repair kit available exclusively from us X8R Ltd.

For the additional O-ring instructions please follow this link:
http://www.instructables.com/id/Placement-of-addit...



Step 1: Placement of Additional O-rings in Kit

Please refer to the images in this step for the placement of the additional O-rings we have started to supply in our kits from 2015 on wards.



Step 2: Remove compressor head

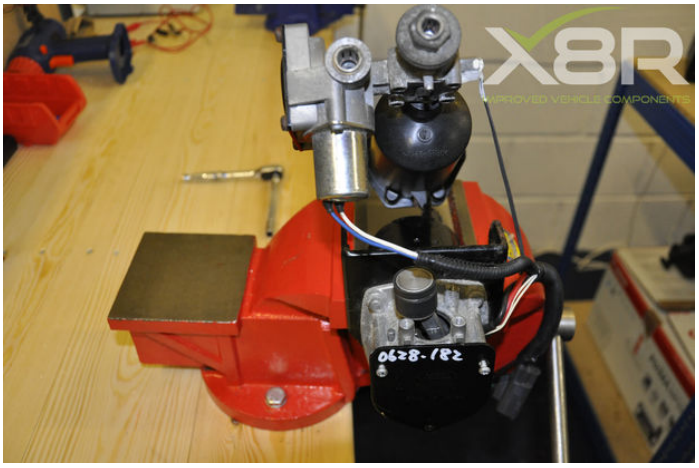
Take a 8mm socket and remove the 4 bolts holding down the head of the compressor, it is good practice to remember which bolt came from which hole for re-installation. The threads which these bolts screw in to are very soft so this is an important step to prevent damage when reattaching head.

Step 3: Tilt head off of compressor

Tilt head off of cylinder, to facilitate this you may need to loosen the bolt on the pivot point a few turns. When doing this take note of the temperature sensor wire on the head do not put pressure on this. Remove black pipe and set aside for reinstall later. There is a shim gasket inside the head which may remain in place, if it doesn't remove and make note of orientation for reinstall (take a look at our video if you do not know how to orientate this part)

Step 4: Remove piston cylinder and motor cover

Lift up piston cylinder and remove, you will now be able to see the offending piston ring and glide ring. Using a cross head screw driver remove the front cover of the compressor motor to allow removal of the piston. It is good practice to remember the order of the 3 screws.

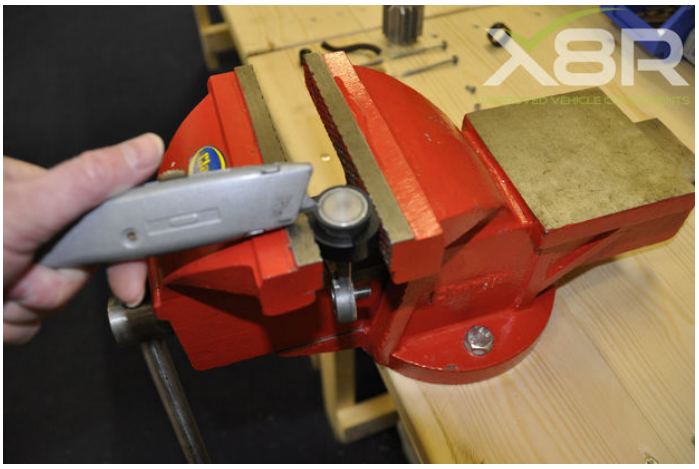


Step 5: Remove piston

Slip our piston removal tool on to the piston (orientate so that the recess in the tool is pointing upwards; the piston seats in this recess), this will stop the piston travelling downwards and will allow you to loosen the bolt holding the piston in place. Using a T25 Torx loosen this bolt, remove the piston removal tool and take the piston down and out of the large motor face opening. You may need to remove the glide ring to facilitate removal of the piston from the compressor unit. Always remember to fit our new glide ring to the piston before refitting.

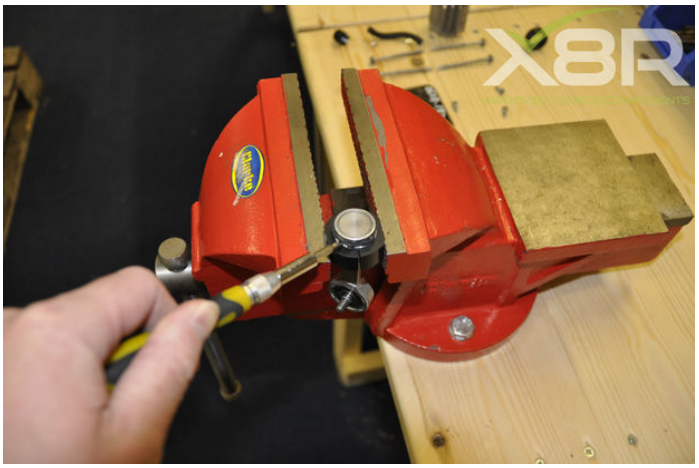
Step 6: Remove old piston ring seal

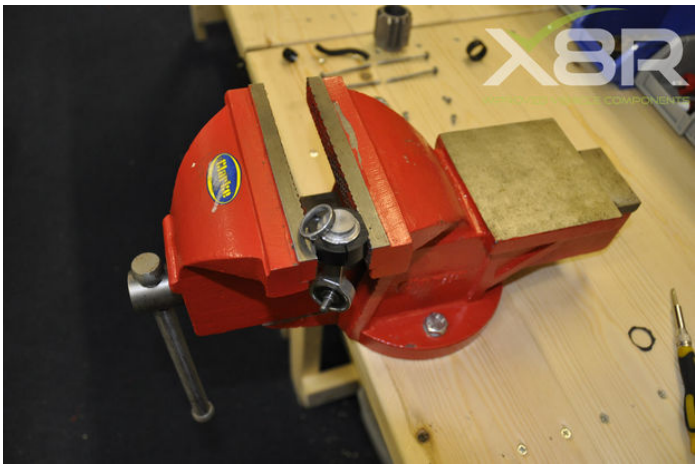
Take our piston holding tool and position the piston in a vice; do not over tighten vice and damage tool or piston. Take a knife and cut away the old seal taking care not to damage the piston. If the seal is stubborn you can use a small screw driver to lever away the old seal.



Step 7: Remove seal retaining ring

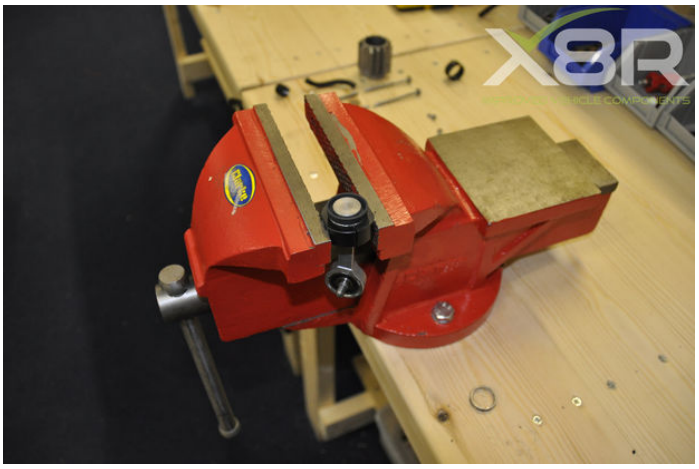
Cut away as much of the seal as possible from under the retaining ring which holds the piston seal in position. Using a small screw driver lever the retaining ring off slowly and in small increments, increasing the size of the screw driver as room allows, this will allow you to raise the ring and release the remnants of the seal.

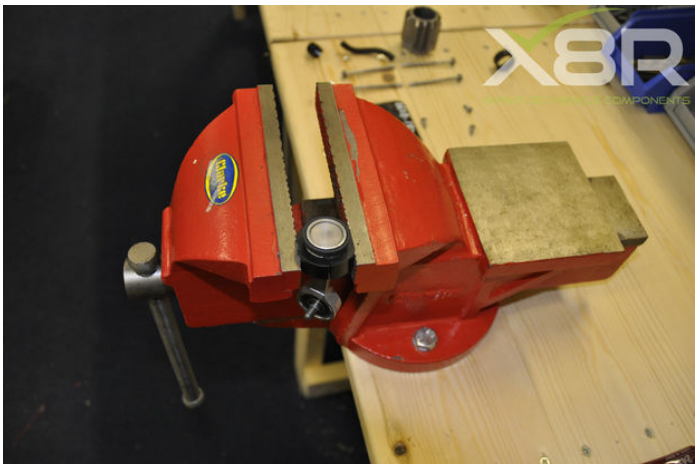




Step 8: Fit new piston ring seal

Clean the piston seal retaining ring and remove any burrs that may later damage the new seal. Repeat this process with the piston ensuring that all of the old seal is removed and that the surface where the new seal will seat is clean and burr free. Fit our new seal in the same position as the old one. Refit the piston retaining ring applying a little lock tight on the bottom of the ring. Push down the ring on to the seal, take a socket with a similar circumference to the ring (we use a 17mm socket) position this on top of the ring and use a rubber mallet to tap the ring back in to its original position.





Step 9: Test seal and refit piston

Test the new seal install by trying to rotate the seal, the seal should not rotate under the retaining ring, if it does the ring needs to be pushed down further using the socket and mallet method.

Take the piston cylinder and test the piston with the new seal and glide ring. Insert at an angle and push the piston up and down, this should feel like a snug air tight fit.

Reattach the piston to the compressor motor, add a little lock tight to the piston bolt and tighten using our tool used for removal.

Refit piston liner and test piston movement in liner.

Step 10: Refit motor cover plate

Remove old silicone sealant remnants from the compressor motor face plate and mating surface. Take some instant gasket sealant and apply to the mating surfaces, do not apply too much as this can leak in the compressor motor and cause damage. Reattach the face plate using the 3 cross head screws again remembering the order of the screws.

Step 11: Refit compressor head and test output

Lower head of compressor back on to piston liner, making sure shim gasket is installed and orientated correctly. Apply lock tight and reinsert 4x retaining bolts in correct order, as mentioned previously tighten these slowly and increments as the threads they screw in to are very soft and easy to damage. Refit temperature sensor cover and pipe between compressor head and motor. This completes the repair; at this point it is a good idea to test the compressor on the bench.

Connect a 12v positive feed from a car battery to the Red wire to the compressor and a feed from the negative terminal of the battery to the Black wire to the compressor. The compressor will now run, check that output is good, you shouldn't be able to stop air being pushed out of the unit when putting thumb over output pipe, if you can stop flow there is a problem with install, if not output is good and you can proceed to reinstall.

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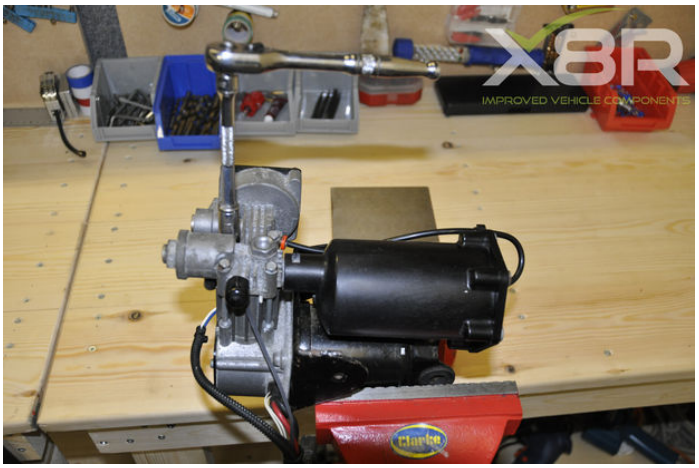
LOCK 'N' SEAL


IMPROVED VEHICLE COMPONENTS
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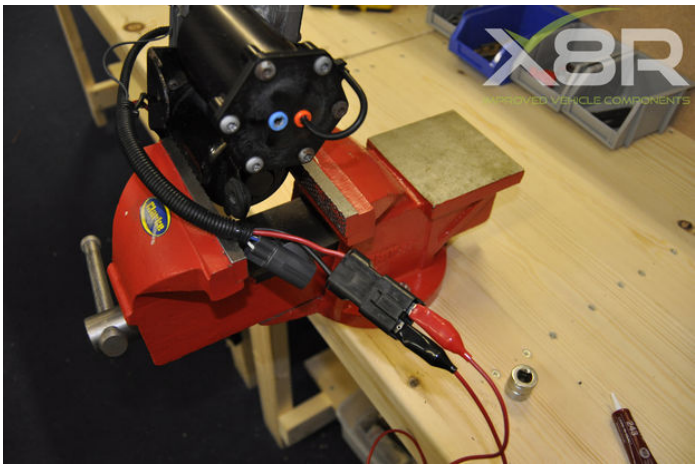
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