Range Rover P38 1995-2002
Air to Coil Conversion.

Fitting Instructions (PM627)

Air to Coil Easy!

How to convert your Range Rover 38A 4.0\4.6 litre (1995-2002) into a consistent off-road performer with our new Rovers North Coil Spring Conversion kit.

WARNING! Air suspension is pressurized at 145 psi
WARNING! Wear safety goggles; ear and hand protection!
WARNING! Vehicle must be on jack stands on level ground or on a lift. Air suspension must be deactivated and depressurised BEFORE lifting vehicle.

Air Suspension to Coil Conversion Instructions

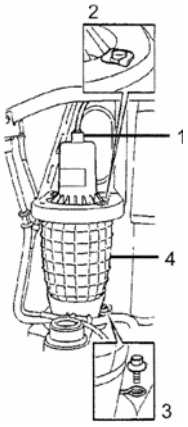
This is a simple conversion that can be performed by most DIY "occasional mechanics" and all shops.

Section 1:

1. **BEFORE** jacking up the vehicle, deactivate and depressurize the EAS system. This can be done with a ROVACOM Diagnostic unit (or similar). If you do not have a diagnostic tool, this can be done by setting the Air suspension into Access mode (outlined below) and then disabling the Air Suspension. Selecting "Access" mode 'Access' can be selected with the engine running and for up to 40 seconds after it has been switched off, provided the following conditions are met:

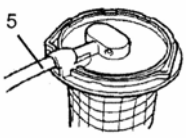
- The vehicle is stationary
- The handbrake is applied and gear selector moved to position "F"
- All doors and tailgate are closed
- The footbrake is NOT applied

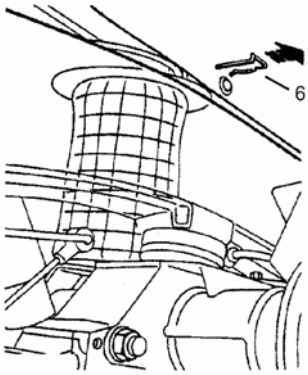
Once the above conditions are met, select "Access" mode by pressing and releasing the lower arrow on the Ride Height Selector rocker switch until the "Access" mode symbol lights. Once the vehicle has completely deflated, select "Inhibit Mode" by pressing on the "Inhibit" rocker switch until the switch light comes on. At this point, ensure the vehicle has been turned off and then disconnect the battery.



This section will address the mechanics of the coil spring conversion, removing the air springs and installing coil springs.

2. Put the vehicle in "Access Mode" and open the bonnet.
3. Pull the air lines from the top of the front air springs ONLY (figure 1 - #1), cap the air lines, and remove the retaining clips (figure l - #2). Disconnect the air lines from the top of each air spring by pushing the air line retainer in and polling the line out of the top of the spring.
4. Raise the vehicle, if working on the ground use jack stands under the chassis for support, and remove the bottom retaining clips from the front air springs (figure l - #3) and remove the front air springs (figure 1 - #4).
5. Remove the air lines from the rear air springs (#5), cap the air lines, and remove both the top and bottom retaining clips. (Figure 2 - #6 & #7).





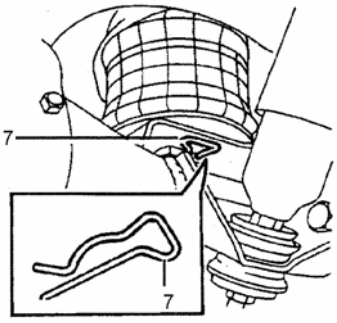


Figure 2: Rear air spring top and bottom clips

Rear Springs

6. Starting at the rear axle, disconnect the top of the rear shock (figure 3 -#8) from the shock mount then let the axle down and remove both rear air springs. Install the bottom aluminium adapter plates and coil springs, larger gaps at the bottom, with the top support

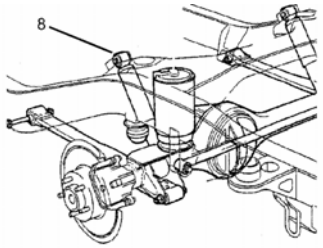
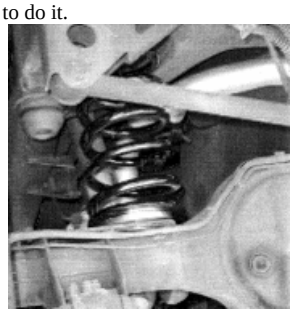


Figure 3:Rear air suspension

On the spring (figure 4). It may be necessary to push down on the wheel to allow for more room to install the coil spring. Next, install the spring retaining strap and

Figure 4: Rear coil springs layout.

reinstall the shock absorber. If you are installing new shock absorbers, now is the time to do it.



Rear coil springs installed

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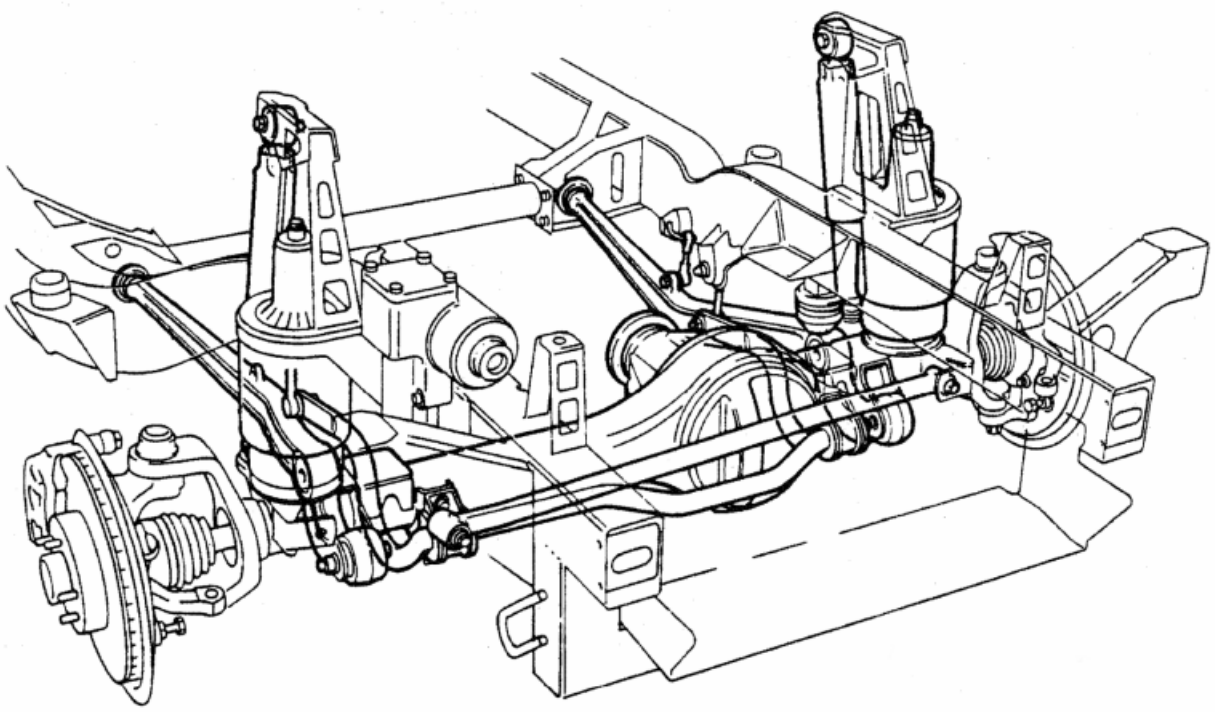
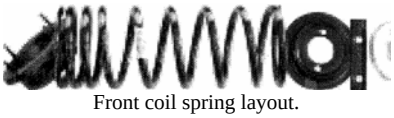
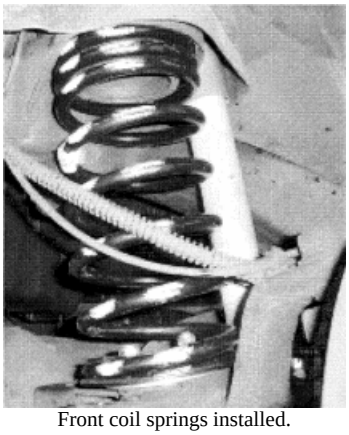




Front coil spring layout.

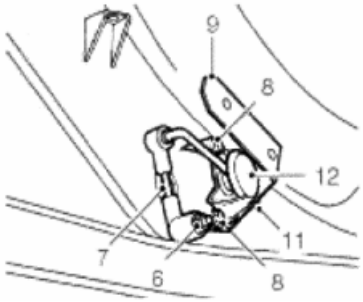


Front coil springs installed.

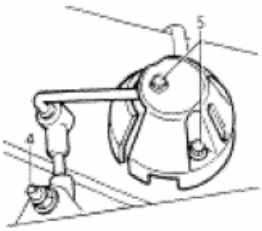
Front Springs

7. Moving to the front of the vehicle, install the front spring isolator mounting to the four existing holes, where the upper pins for the air springs were, using the lock- nuts provided. Reach in from the top, pull the isolator excess rubber up through the hole in order to ease installation of the front coil springs. Install the lower alloy plates with the bottom ring. Install the coil springs using the same procedure as the rear. When installing the coil springs, it may be necessary to remove both ends of the sway bar off the frame in order to gain enough access to install the front coil springs. Install the spring retaining strap, reattach the sway bay and tighten all necessary bolts. Lower the vehicle to the ground.

Note: Remove the ride height sensors, anus, linkages, and secure the wiring using the supplied tie wraps.



Height sensors, arms and linkages - Remove



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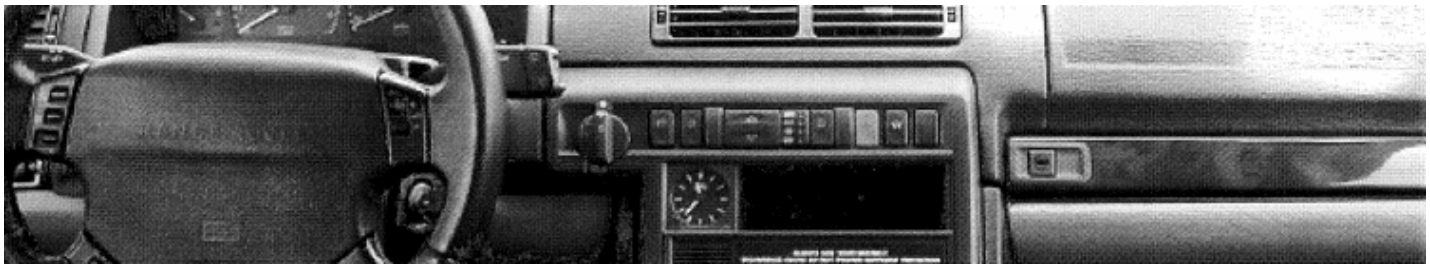
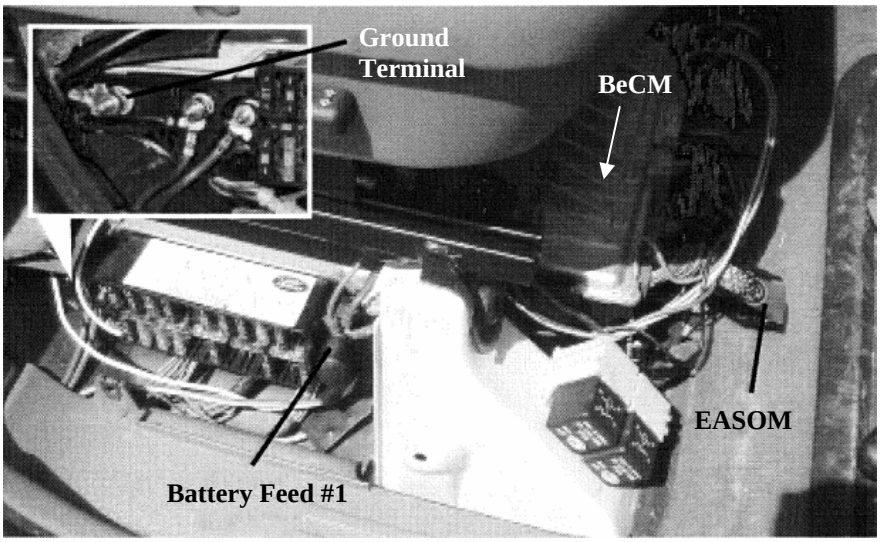
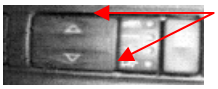




Slide in a thin bladed tool here-



SECTION 3:

This section will address electronics under the bonnet.

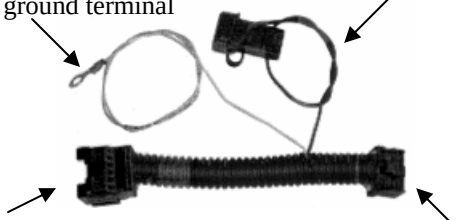
14. Locate the fuse/relay box on the passenger side and remove the cover. Locate and remove relay RL2O, It is the third from the left starting at the right fender, yellow and right next to the maxi fuses. “RL2O” will be stamped in the fuse box underneath the relay. Replace the cover.
15. On the driver’s side, locate the compressor box and remove the cover. Next, unplug the compressor; the connector has four wires in it. Replace the compressor box cover.
16. Reconnect the battery.
17. Recode the radio.

SECTION 2: Electronics

The section below describes how to disable all the warning lights and switches relevant to the conversion. The result will prevent the lights on the console from flashing while leaving the message board operational.
8. Disconnect the battery making certain to have the radio code first-see owner’s manual.
9. Remove the lower seat facia surrounding the right front seat: Remove the fuse door and the screw retaining the facia. (figure 5)
10. Remove the three fir tree nails securing the facia in place. This will expose the Body Electrical Control Module (BeCM) and fuse box. Looking at the Electronic Air Suspension Override Module (EASOM) replacement (figure 6), locate battery feed #1 (brown/pink wire) to the right of the fuse box and the ground feed to the BeCM, farthest to the left, or rear, of the vehicle. Locate connector C114, a green 20-way connector at the front of the BeCM (bottom row second one in on the left).
11. Connect the EASOM override pigtail replacement: Unplug connector Cl14 (big green 20-pin on BeCM) and plug it into the corresponding connector on the EAS Override Module. Plug the other connector on the EAS Override Module into the socket where you removed connector C114. Remove the nut at battery feed #1. Install the red wire with the fused link to the line feed

White wire to ground terminal

Red wire to positive Battery feed #1



BeCM connector C114 (big green 20-pin) connects into here

Plugs into BeCM

and reinstall the nut. Remove the nut at the ground feed and attach the white wire to it. Replace the nut, replace the trim.

12. Next you will need to remove the ride height switch located in the centre of the dashboard to disable it (figure 7). At the top and bottom of the switch there are two latches that need to be compressed to remove the switch. Slide a thin blade type tool along the top and bottom to push the locks in while sliding the switch all the way out. Unplug the connector from the back of the switch, leaving it unplugged. Replace the switch in its original location. It is unnecessary to do anything to the inhibit switch.

18. Reset the windows and sunroof, restoring the “one-touch” feature. To do this, start with the window closed then run the window all the way down and back up to the closed position. Fluid in the switch in the “UP” position momentarily. The message board should read “WINDOW SET.” Repeat this procedure with all of the windows and sunroof, The key remote will need to be resynchronized by locking the car with the key and pushing the “LOCK” button. Next, unlock the car with the key and push the “UNLOCK” button; this will restore the remote function.

Note: Once this procedure is complete, upon each start up, the “EAS MANUAL” message will momentarily appear. If the light message stays on, recheck all procedures in the electronics section.

IMPORTANT! The vehicle must be road tested, check for any suspension noises.

Estimated Time Of Procedure: 6-7 Hours.

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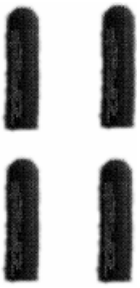
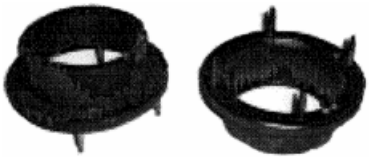
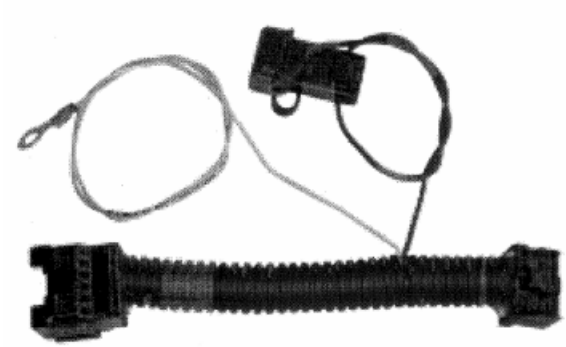


4 Air Liner Caps

10 Plastic Ties



2 Front Coil Isolators



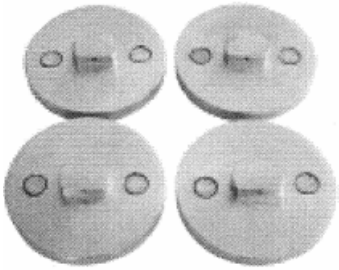
1 EAS Override Pigtail

2 Front coil spring – White Paint

8 M8 Nuts For Coil Isolator

8 M10 Lock Nuts For Spring Perch Adapters

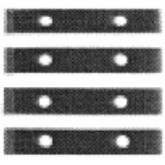
2 Rear Coil Isolators



4 Aluminium Spring Perch Adapters

4 Coil Spring Seats

2 Rear Coil Springs – Purple Paint



4 Spring Retainers

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