

# Land Rover Discovery II

## Rear Air Spring Assembly Instructions (RKB101200)



**\*\* Failure to comply with the instructions provided by this sheet will invalidate your warranty! \*\***

**\*\* EXTREMELY IMPORTANT \*\***

**! AFTER FITTING REPLACEMENT SPRINGS AND BEFORE DRIVING THE VEHICLE, IT IS IMPERATIVE TO ENSURE THAT THE SPRINGS INFLATE TO THE CORRECT PROFILE (I.E. NO BUCKLING, TWISTING OR CREASING OF THE SPRING WALL. NEAT AND EVEN ROLL OVER THE PISTON AT THE BOTTOM END – SEE PHOTOGRAPHS OVERLEAF). FAILURE TO DO SO MAY RESULT IN THE SPRINGS BECOMING DISLODGED WITH THE VEHICLE IN MOTION.**

### REMOVAL

**! WARNING: The air suspension system can be pressurised up to 10 bar (145 lbf/in<sup>2</sup>). It is always important to make sure that dirt or grease do not enter the system. Always wear hand, ear and eye protection when servicing the air suspension system.**

**! WARNING: Do not inflate the air spring assembly unless it is supported at both ends by the vehicle frame and suspension system. Failure to observe this warning may result in serious injury and damage to the air spring assembly. NEVER ATTEMPT TO DISMANTLE THE AIR SPRINGS.**

1. Raise the vehicle on a hoist or other suitable structure. **WARNING: Always support the vehicle on safety stands. Refer to your owner's manual for correct lifting instructions.** Remove the rear road wheels.
2. Remove the two clips securing the top of the air spring to the chassis - Figure (a)
3. Depressurise the air spring - **use safety eyewear when working near the air springs...**  
Original Equipment Air Spring  
 Unscrew the nut at the top - Figure (b) - and pull the pipe clear of the spring  
Dunlop Air Spring  
 Push the metal 'Collet' - Figure (c) - fully inwards towards the connector (e.g. using a thumbnail or soft tool) and, whilst holding it in this position, carefully pull -out the pipe
4. Seal off the pipe to prevent dirt or grease from entering the system
5. Collapse the air spring
6. Rotate the spring piston anticlockwise at the base to unlock it from the axle and remove it from the vehicle
7. Original Equipment Air Spring Only...  
 Remove the existing air connector from the pipe: There is a metal olive attached close to the end. Slide the connector clear of the olive, cut the pipe behind the olive to remove it and then slide off the connector. If available, a dedicated tubing cutter is recommended in order to achieve the type of neat, square cut required to provide for good connection to the new spring.

### EQUIPMENT REQUIRED

#### Essential...



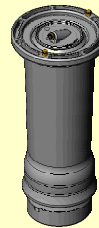
Vehicle Jack



Axle Stands



Spanner Set



#### Replacement Springs

Part No. 00173A (RKB101200)

#### Important Notes...

1. The spring is supplied rolled over the piston at the bottom end and should be fitted in this state.
2. It is strongly recommended that both rear springs are replaced at the same time.

#### Strongly Recommended...



Safety Eyewear

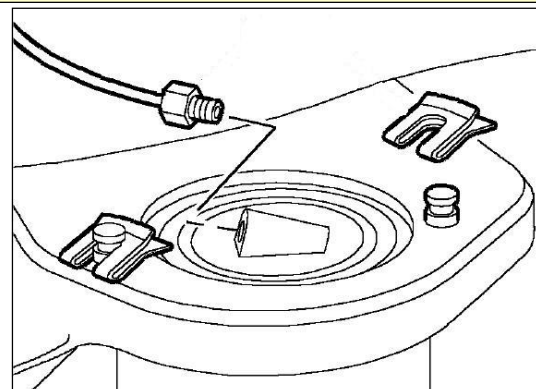


Dedicated Tubing Cutter

#### Important Note...



Ensure that OEM standard specification rear dampers are fitted. Non-standard dampers may lead to damage of the air springs.



**Figure (a).** Top Plate showing Clips



**Figure (b).**  
Original Equipment  
Air Spring Top Plate



**Figure (c).**  
Dunlop  
Air Spring Top Plate

## Land Rover Discovery II Rear Air Spring Assembly Instructions (RKB101200)

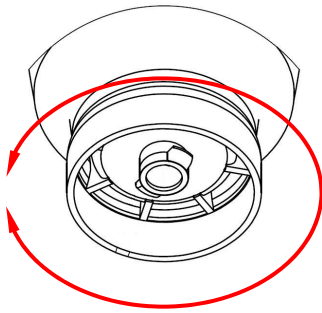


Figure (d). Piston Attachment

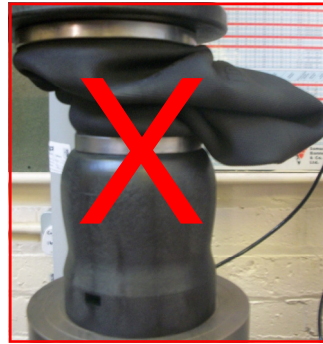


Figure (e). Three air spring views: inflating correctly (✓), buckled and uninflated (X), and buckled and inflating incorrectly (X)

### REFIT



**CAUTIONS:** (1) Do not attempt to unroll the replacement spring from the piston, (2) When refitting the new air spring, do not allow the vehicle to rest on the deflated air spring. The chassis must be supported until the new air spring is inflated, (3) If applying under body protection compounds (e.g. Waxoyl®), cover the air springs to protect them!

- Clean off the surface of the air spring, axle and chassis
  - Inspect the end of the pipe to be fitted to the air spring. Clean and trim as necessary to ensure that the end of the pipe is square, there are no blockages in the opening, and the pipe wall near the end is free of any dirt or areas of damage (scuffs, scratches etc.). If trimming the pipe, a dedicated tubing cutter is recommended in order to achieve a neat, square cut.
  - Push the end of the pipe firmly and squarely into the replacement spring connector collet (Figure (c)) until it comes to a natural stop. Note that resistance will be felt essentially in two stages: firstly during the insertion process as the internal parts of the connector take a grip on the pipe wall and secondly once the limit of the pipe insertion has been reached.
  - Ensure that a good connection has been made by pulling the connected pipe lightly to check that it is not easily freed.
  - Place the new air spring piston onto the seat on the axle and rotate it clockwise to fully engage the lower bayonet fitting - Figure (d)
  - Refit the air pipe connector to the air spring
  - Remove the support from under the chassis and lower the chassis onto the top of the air spring. Re-support the chassis with safety stands.
  - Refit the clips to secure the top of the air spring to the chassis. It is recommended that two new clips are fitted. Do not extend the suspension until you have re-inflated the new air spring!
  - Refit the road wheel and tighten the nuts to 140Nm (103 lbs.ft)
- Remove all safety stands and slowly lower the vehicle until the rear of the vehicle stands just below the intended ride height. Replace safety stands.



**WARNING: DO NOT LOWER THE VEHICLE TO THE BUMP STOPS!**

Re-inflate the air spring in small amounts, frequently stopping to make sure the air spring is rolled all around the piston at the lower end and that it is completely free of kinks or bends...

- Reinflate the air springs in stages in order to ensure that they inflate to the correct shape (i.e. no buckling, twisting or creasing of the spring wall. Neat and even roll over the piston at the bottom end). Ideally employ two people for the following steps: one to toggle the ignition and the other to observe the air spring - **use safety eyewear when working near the air springs...**
  - Open the front driver's side window to allow access to the vehicle ignition switch from outside of the vehicle, then close all of the vehicle doors
  - From outside of the vehicle, reach-in and switch-on the engine. Provided that the vehicle rear was correctly set to just below ride height in the previous step, the compressor should now run and thereby begin to inflate the springs. Allow the compressor to run for about 15 seconds initially and then switch-off the engine and check the spring profile.
  - Provided that the spring was observed to be inflating correctly in the previous step (see Figure (e) above), remove the safety stands and lower the vehicle a little more
  - Repeat step ii
  - Again provided that the spring was observed to be inflating correctly in the previous step (see Figure (e) above), leak test the air spring and connector with a soapy water solution
- Remove the safety stands, switch-on the engine and gradually lower the vehicle fully via the jack until it is supported at the rear by the air springs only and the jack can be pulled clear. The rear suspension will automatically adjust to ride height.