Installation Manual

A-2123
ARNOTT FRONT AIR SPRING
FOR 2003-2009
LAND ROVER RANGE ROVER

Arnott® Air Suspension Products

Congratulations on your purchase of an Arnott® air suspension product. We at Arnott Incorporated are proud to offer a high quality product at the industry's most competitive pricing. Thank you for your confidence in us and our product.

Proper installation is essential to experience and appreciate the benefits of this system. Please take a moment to review these installation instructions before you begin to install these components on your vehicle. The removal and installation of air suspension products should only be performed by a fully qualified, ASE Certified, professional.

It is equally important to be aware of all necessary safety measures while installing your new Air Suspension System. This includes proper lifting and immobilizing of the vehicle and isolation of any stored energy to prevent personal injury or property damage.

"Engineered to Ride, Built to Last®"

WARNING: *The air suspension system is under pressure (up to 10 bar, or 150 lbf/in). Verify pressure has been relieved and disconnect power to the air suspension system prior to disassembly. Do not allow dirt or grease to enter the system. Always wear standard hand, ear, and eye protection when servicing the air suspension system.*

Arnott® is committed to the quality of its products. If you have a question or problem with any Arnott product, please contact Arnott by calling 800-251-8993 during normal business hours or email techassistance@arnottinc.com.

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GENERAL INFORMATION:

Reading this manual signifies your agreement to the terms of the general release, waiver of liability, and hold harmless agreement, the full text of which is available at www.arnottinc.com.

- Not to be stored below 5°F (-15°C) and above 122°F (50°C).
- Avoid damage to air lines and cables.
- Removal and installation is only to be performed by fully qualified personnel.
- Use car manufacturer's diagnostic software.

CAUTION: *Damage to the vehicle and air suspension system can be incurred if work is carried out in a manner other than specified in the instructions or in a different sequence.*

To avoid the possibility of short circuits while working with electric components consult your owner's manual on how to disconnect your battery.

Consult your vehicle owner's manual, service manual, or car dealer for the correct jacking points on your vehicle and for additional care, safety and maintenance instructions. Under no circumstances should any work be completed underneath the vehicle if it is not adequately supported, as serious injuries and death can occur.

AIR STRUT REMOVAL

1. Set steering to straight ahead.
2. Raise vehicle.
3. Remove front wheels.
4. To release the air pressure from the front struts you will need to remove the right side front wheel well liner. (FIGURE A)

FIGURE A

5. With the wheel well liner removed you are able to access the front valve block located on the rear of the wheel well. Slowly release the air pressure from the front struts by loosening the yellow and black air hoses. (FIGURE B)

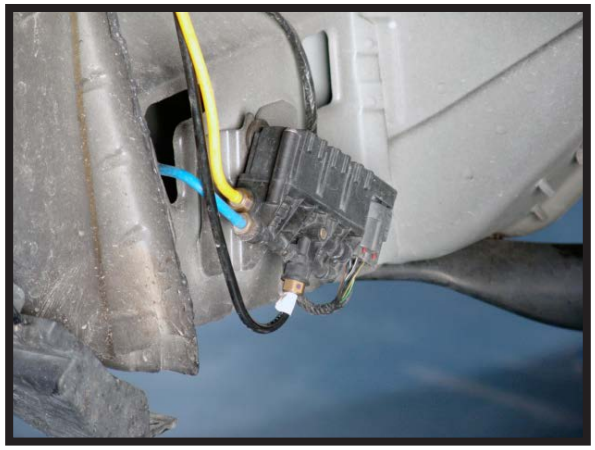

FIGURE B

6. Next, remove the brake hose and ABS sensor wire from the retention bracket on the strut. (FIGURE C)

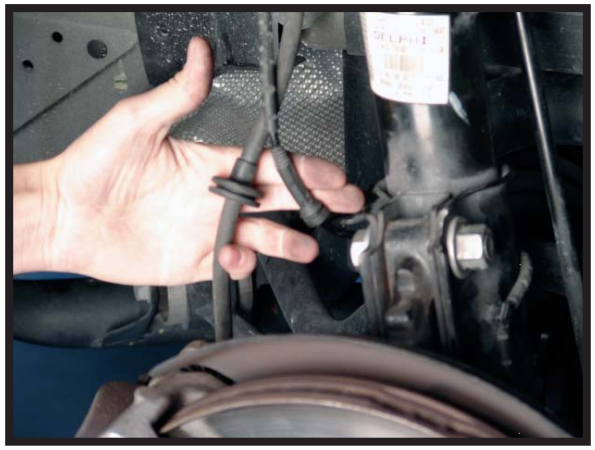

FIGURE C

7. Also remove the sensor wire from the front side of the strut held on with a small plastic clip. (FIGURE D)

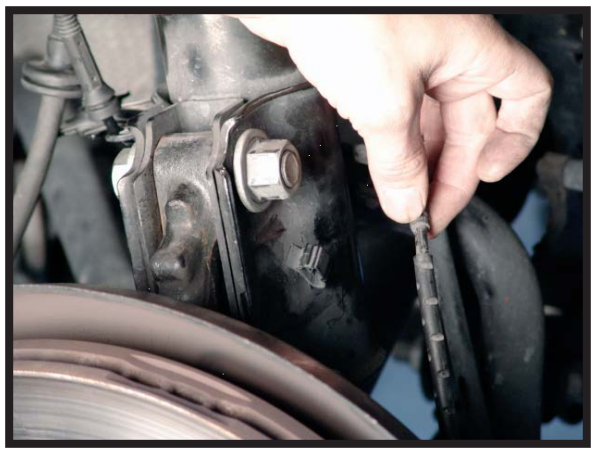

FIGURE D

8. Disconnect the sway bar link by removing the nut holding the ball joint to the strut. You may need to hold the ball joint from spinning by placing a wrench on the two flats of the ball joint. (FIGURE E)

FIGURE E

9. Remove the two large bolts that hold the strut to the spindle assembly. (FIGURE F)

FIGURE F

10. With the nuts and bolts removed from the spindle assembly, pull the spindle outward while pushing the strut inward to disengage them. (FIGURE G)

FIGURE G

11. Under the hood are the upper retention fasteners, remove all three being careful not to drop the strut. (FIGURE H)

FIGURE H

12. With the strut removed you can now gain access to its hose connection, remove the fitting to free the assembly. (FIGURE I)

FIGURE I

13. Removal complete. (FIGURE J)

FIGURE J

AIR SPRING REMOVAL

1. Remove the shock retention nut from the top of the air strut assembly. (FIGURE K)

FIGURE K

2. Remove the nut and washer as illustrated. (FIGURE L)

FIGURE L

3. With the upper retention hardware removed, flip the strut over and locate the alignment pin on the bottom of the air spring assembly. (FIGURE M)

FIGURE M

4. With a slotted screwdriver or other adequate tool, remove the lock washer from the locating post. (FIGURE N)

FIGURE N

5. Remove the lock washer as illustrated. (FIGURE O)

FIGURE O

6. Tap the bottom of the air spring with a soft faced mallet to disengage the o-ring seals. (FIGURE P)

FIGURE P

7. Air spring as well as all o-rings and o-ring spacers are discarded. The only thing you will reuse is the shock itself. Disassembled view of shock. (FIGURE Q)

FIGURE Q

8. Clean the shock of any debris before beginning installation of the air spring. (FIGURE R)

FIGURE R

9. Removal complete.

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AIR SPRING INSTALLATION

Tighten all nuts and bolts to manufacturer's specifications during the installation process.

1. Install the new o-rings and o-ring spacers provided in the kit in the same orientation as removed in step 7.
2. Slide the black rubber bumpstop over the strut shaft. You may have to spray the inside of the rubber bump stop with a lubricant to help slide it over the shock.
3. Slide the gold washer over the threaded end of the shock. Make sure the cup end is facing down away from the threads.
4. Slide the new air spring assembly over the shock. Make sure to align the plastic alignment pin on the air spring through the hole in the shock's piston seat. After you have pushed the lower piston's alignment pin through the shock's spring plate, slide the external locking clip over the plastic pin to secure the air spring to the shock.
5. Push the upper black rubber mount over the shock's shaft. Make sure to place the rubber seal in the correct orientation.
6. Slide the black washer over the treaded end of the shock. Make sure the cup end is facing up and towards the nut.
7. Thread the M16Nylon lock nut over the strut's threaded shaft. You can tighten the nut using an impact gun.
8. Install completed strut back into the vehicle in the reverse order of removal.

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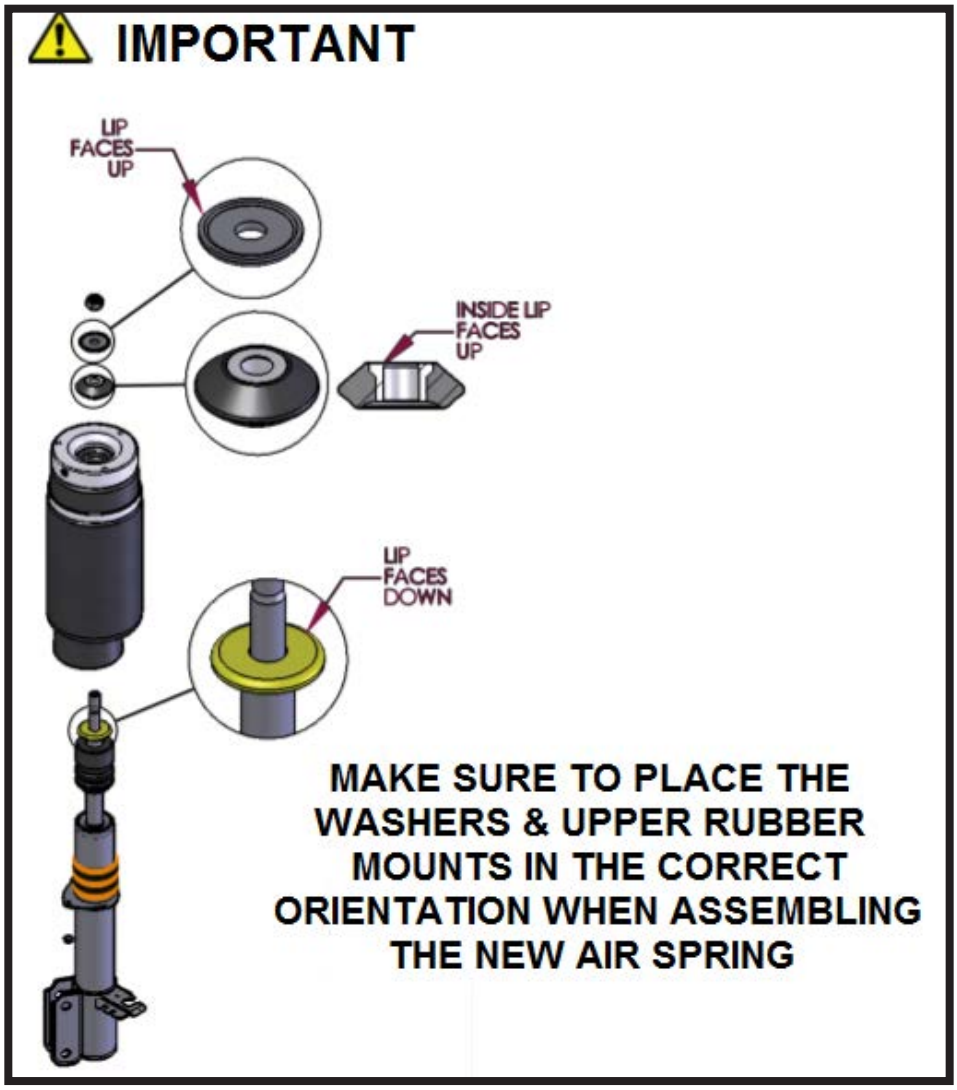

AIR STRUT INSTALLATION

Tighten all nuts and bolts to manufacturer's specifications during the installation process.

1. Installation is in reverse order of air strut removal.