

# Installation Manual

A-2934  
ARNOTT  
FRONT LEFT AIR SPRING  
LAND ROVER RANGE ROVER (L322)



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](mailto:techassistance@arnottinc.com). (In the EU please call +31 (0)73 7850 580 or email [info@arnotteurope.com](mailto:info@arnotteurope.com))

## IMPORTANT INFORMATION:

Depending on vehicle model, there are three possible build methods for your rebuilt Arnott strut. Before proceeding with the build process, be sure to differentiate which air strut you are rebuilding and select the correct option.



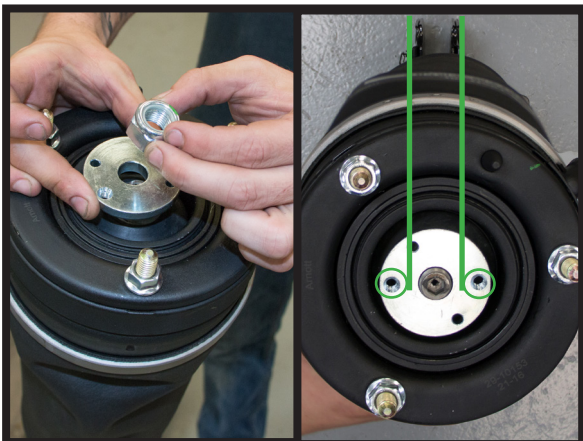
INSTALL BLACK WASHER WITH LIP FACING UP. THEN, INSTALL NUT AND TIGHTEN.

2003-2005, 2006-2012 EXC. SUPERCHARGED CHASSIS L322



REINSTALL THE LOWER CUP AND NUT. TIGHTEN THE NUT AND RE-INSTALL YOUR EXISTING TOP CHUCK.

2006-2009 SUPERCHARGED ONLY



RE-USE AND INSTALL YOUR EXISTING SILVER WASHER AND ALIGN THE THREADED HOLES WITH THE LOWER FORK OF THE SHOCK.

2010-2012 WITH VDS

## 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](http://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 1)



FIGURE 1

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 2)

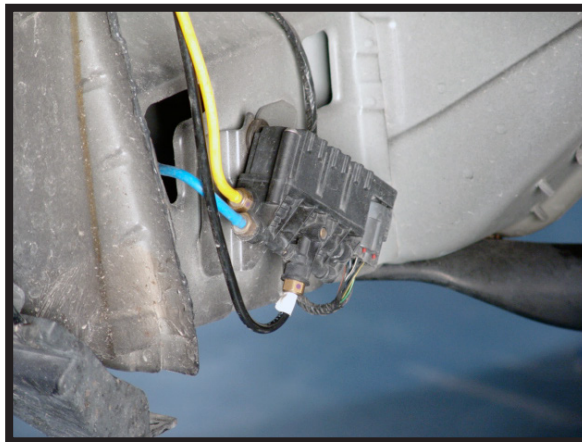


FIGURE 2

6. NEXT, REMOVE THE BRAKE HOSE AND ABS SENSOR WIRE FROM THE RETENTION BRACKET ON THE STRUT. (FIGURE 3)



FIGURE 3

7. ALSO REMOVE THE SENSOR WIRE FROM THE FRONT SIDE OF THE STRUT HELD ON WITH A SMALL PLASTIC CLIP. (FIGURE 4)



FIGURE 4

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 5)



FIGURE 5

9. REMOVE THE TWO LARGE BOLTS THAT HOLD THE STRUT TO THE SPINDLE ASSEMBLY. (FIGURE 6)



FIGURE 6

10. WITH THE NUTS AND BOLTS REMOVED FROM THE SPINDLE ASSEMBLY, PULL THE SPINDLE OUTWARD WHILE PUSHING THE STRUT INWARD TO DISENGAGE THEM. (FIGURE 7)



FIGURE 7

11. FOR MODELS EQUIPPED WITH VDS, RAISE THE HOOD TO ACCESS THE AIR STRUT'S TOP DAMPER; FOR MODELS WITHOUT, SKIP TO STEP 16.
12. REMOVE THE TWO (2) BOLTS HOLDING THE DAMPER TO THE TOP OF THE AIR STRUT. (FIGURES 8, 9)



FIGURE 8



FIGURE 9

13. REMOVE THE DAMPER FROM THE WIRE. (FIGURE 10)

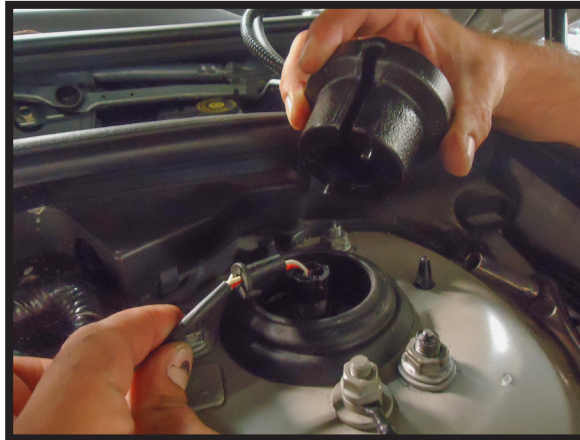


FIGURE 10

14. REMOVE THE ELECTRICAL PLUG FROM THE TOP OF THE SHOCK ROD BY PRESSING IN ON THE TWO (2) SIDES AND PULLING UP. (FIGURE 11)



FIGURE 11

15. UNDER THE HOOD ARE THE UPPER RETENTION FASTENERS, REMOVE ALL THREE BEING CAREFUL NOT TO DROP THE STRUT. (FIGURE 12)



FIGURE 12

16. WITH THE STRUT REMOVED YOU CAN NOW GAIN ACCESS TO ITS HOSE CONNECTION, REMOVE THE FITTING TO FREE THE ASSEMBLY. (FIGURE 13)

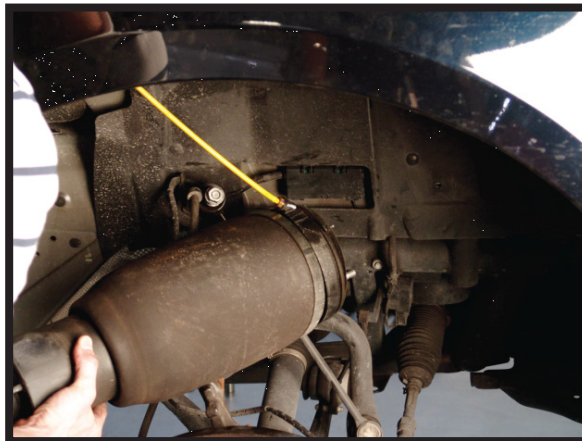


FIGURE 13

17. REMOVAL COMPLETE. (FIGURE 14)



FIGURE 14

## AIR SPRING REMOVAL

1. REMOVE THE SHOCK RETENTION NUT FROM THE TOP OF THE AIR STRUT ASSEMBLY. (FIGURE 15)



FIGURE 15

2. REMOVE THE NUT AND WASHER AS ILLUSTRATED. (FIGURE 16)



FIGURE 16

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 17)



FIGURE 17



4. WITH A SLOTTED SCREWDRIVER OR OTHER ADEQUATE TOOL, REMOVE THE LOCK WASHER FROM THE LOCATING POST. (FIGURE 18)



FIGURE 18

5. REMOVE THE LOCK WASHER AS ILLUSTRATED. (FIGURE 19)



FIGURE 19

6. TAP THE BOTTOM OF THE AIR SPRING WITH A SOFT FACED Mallet TO DISENGAGE THE O-RING SEALS. (FIGURE 20)



FIGURE 20

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 21)



FIGURE 21

8. CLEAN THE SHOCK OF ANY DEBRIS BEFORE BEGINNING INSTALLATION OF THE AIR SPRING. (FIGURE 22)



FIGURE 22

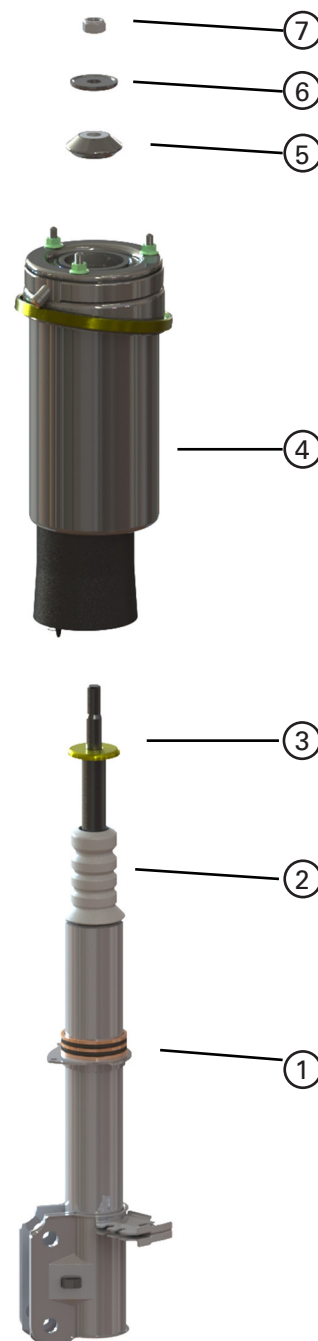
9. REMOVAL COMPLETE.

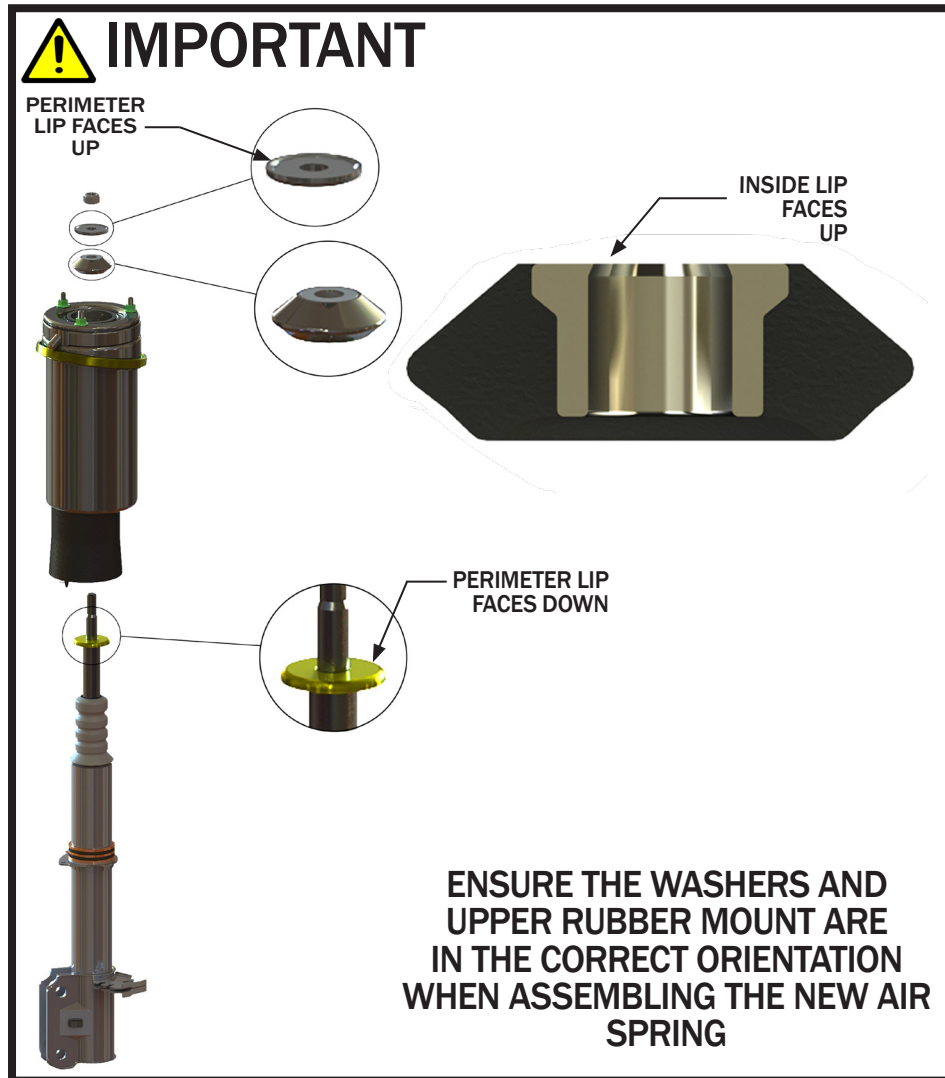
## AIR SPRING INSTALLATION



*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. Install the provided bumpstop over the strut shaft in the depicted orientation.
3. Slide the gold washer over the threaded end of the shock. Ensure the perimeter "lip" is facing downward 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 as depicted on page 11.
6. Slide the black washer over the treaded end of the shock. Ensure the perimeter "lip" is facing upward and towards the nut.
7. Thread the M16Nylon lock nut over the strut's threaded shaft. You can tighten the nut using an impact wrench.
8. Install completed strut back into the vehicle in the reverse order of removal.





## 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, USING THE SUPPLIED HARDWARE.