



Part# **A-2123**
2003-2009 Range Rover
Front Air Spring Assembly



“Engineered to Ride, Built to Last”

PARTS LIST

PART NUMBER

QUANTITY

FRONT AIR SPRING ASSEMBLY	20-2122	1
RUBBER UPPER SHOCK MOUNT	20-3631	1
OUTSIDE BLACK STEEL WASHER	14-2985	1
INSIDE GOLD STEEL WASHER	14-3011	1
M16-1.5 NYLON LOCK NUT	29-3115	1
RUBBER BUMP STOP	14-3852	1
3/8"-16 X 5/8" FLANGE BOLT	29-3951	3
EXTERNAL SELF LOCKING CLIP	29-3112	1

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Front Air Spring Assembly

Thank you for purchasing the Arnott Air Suspension product! This system provides you with the ability to maintain your vehicle at a constant level, resulting in enhanced vehicle ride, handling, and performance.

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 this system on your vehicle. Reviewing the components and the parts list below will familiarize you with the system.

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



SAFETY WARNING:

Do not inflate the air spring assembly unless it is supported on both ends by the vehicle frame and suspension system, or by another adequate means. Doing so may result in serious injury and damage to the air spring assembly and surrounding environment.

The maximum recommended inflation pressure of the air spring is 100 psi. Over-inflation of the air spring, as well as improper use or installation of the assembly, may result in serious injury and damage to the air spring assembly and the surrounding environment.

Take precautions not to exceed the Gross Vehicle Weight Rating (GVWR, or the maximum load) recommended by the manufacturer. The air springs are rated for a maximum pressure of 100 psi. This pressure may, however, allow too great a load to be carried on most vehicles. For best results, load the vehicle and have it weighed, then compare the vehicle weight with the maximum allowed. It is important that all vehicle's Owner Manual recommendations are followed for your own safety and to prevent damage to the vehicle. Air Springs DO NOT increase the GVWR set by the manufacture.

Front Suspension - These operations are the same for both left and right sides.

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REMOVAL OF THE FRONT AIR STRUTS

1. To release the air pressure from the front struts you will need to remove the passenger side front wheel well liner. (Refer to Fig. "A") **(THIS STEP MAY BE SKIPPED IF YOUR FRONT AIR SPRING IS ALREADY FLAT)**
2. With the wheel well liner removed you are able to access the front valve block located on the rear of the wheel well. (Refer to Fig. "B") **(THIS STEP MAY BE SKIPPED IF YOUR FRONT AIR SPRING IS ALREADY FLAT)**
3. Slowly release the air pressure from the front struts by loosening the yellow and black air hoses. (Refer to Fig. "B") **(THIS STEP MAY BE SKIPPED IF YOUR FRONT AIR SPRING IS ALREADY FLAT)**
4. Next, remove the brake hose and ABS sensor wire from the retention bracket on the strut. (Refer to Fig. "C")
5. Also remove the sensor wire from the front side of the strut held on with a small plastic clip. (Refer to Fig. "D")
6. 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. (Refer to Fig. "E")
7. Remove the two large bolts that hold the strut to the spindle assembly. (Refer to Fig. "F")
8. With the nuts and bolts removed from the spindle assembly, pull the spindle outward while pushing the strut inward to disengage them. (Refer to Fig. "G")
9. Under the hood are the upper retention fasteners, remove all three being careful not to drop the strut. (Refer to Fig. "H")
10. With the strut removed you can now gain access to its hose connection, remove the fitting to free the assembly. (Refer to Fig. "I")
11. Complete front assembly shown removed from vehicle. (Refer to Fig. "J")

DISASSEMBLY OF THE FRONT AIR STRUT

1. Remove the shock retention nut from the top of the air strut assembly. (Refer to Fig. "K")
2. Remove the nut and washer as illustrated. (Refer to Fig. "L")
3. With the upper retention hardware removed, flip the strut over and locate the locating pin on the bottom of the air spring assembly. (Refer to Fig. "M")
4. With a slotted screwdriver or other adequate tool, remove the lock washer from the locating post. (Refer to Fig. "N")
5. Remove the lock washer as illustrated. (Refer to Fig. "O")
6. Tap the bottom of the air spring with a soft faced mallet to disengage the o-ring seals. (Refer to Fig. "P")
7. Disassembled view of shock. (Refer to Fig. "Q")
8. Air spring as well as all O-rings and o-ring spacers are discarded. The only thing you will reuse is the shock itself.
8. Clean the shock of any debris before beginning installation of the air spring. (Refer to Fig. "R")
9. REFER TO PAGE (6) FOR PROPER AIR SPRING ASSEMBLY.



Fig. "A"



Fig. "B"



Fig. "C"



Fig. "D"



Fig. "E"

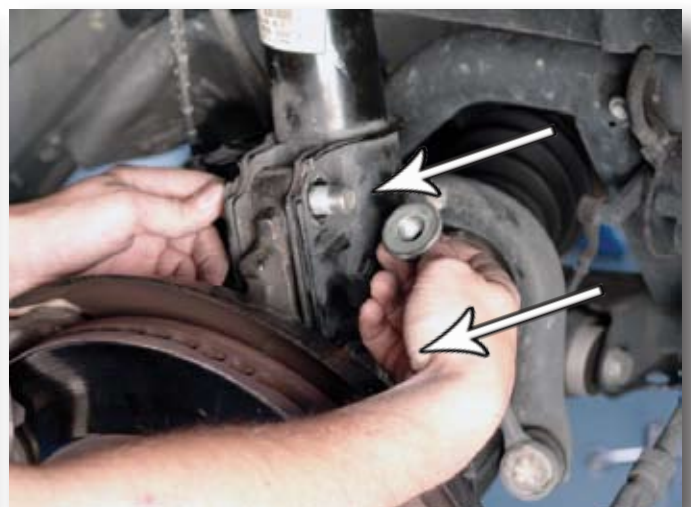


Fig. "F"



Fig. "G"



Fig. "H"

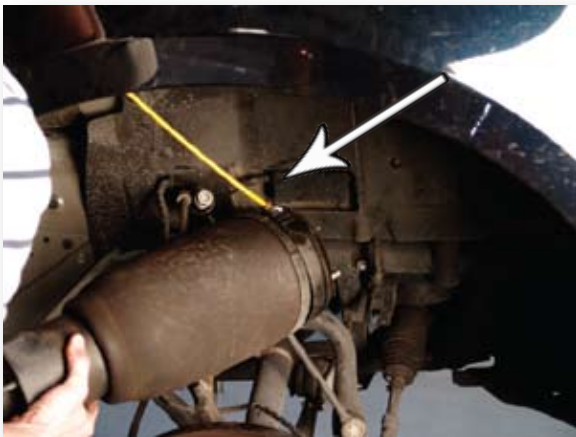


Fig. "I"



Fig. "J"



Fig. "K"



Fig. "L"



Fig. "M"

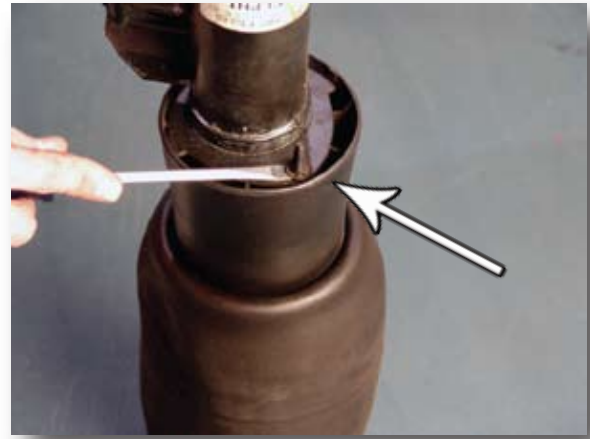


Fig. "N"



Fig. "O"



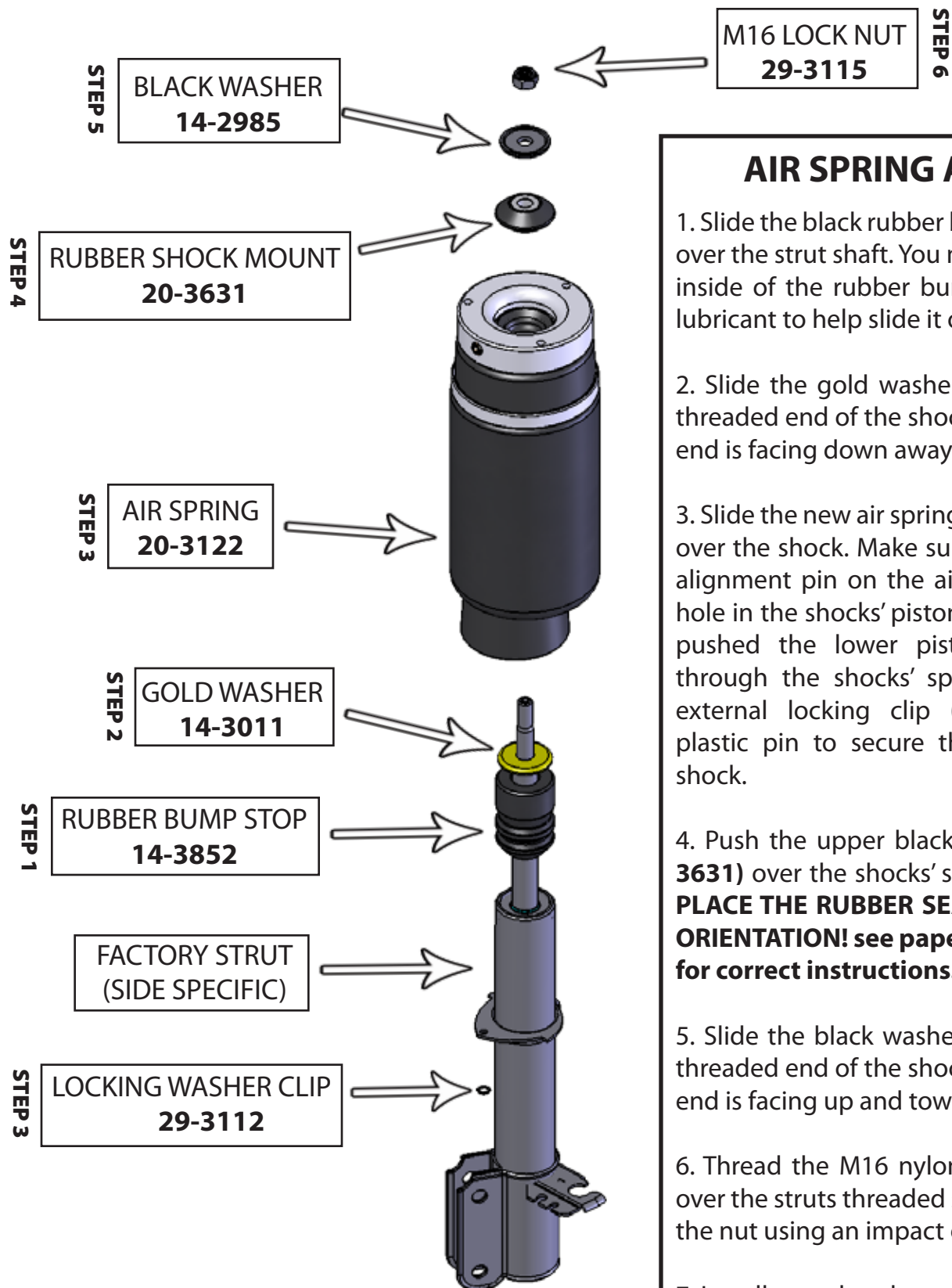
Fig. "P"



Fig. "Q"



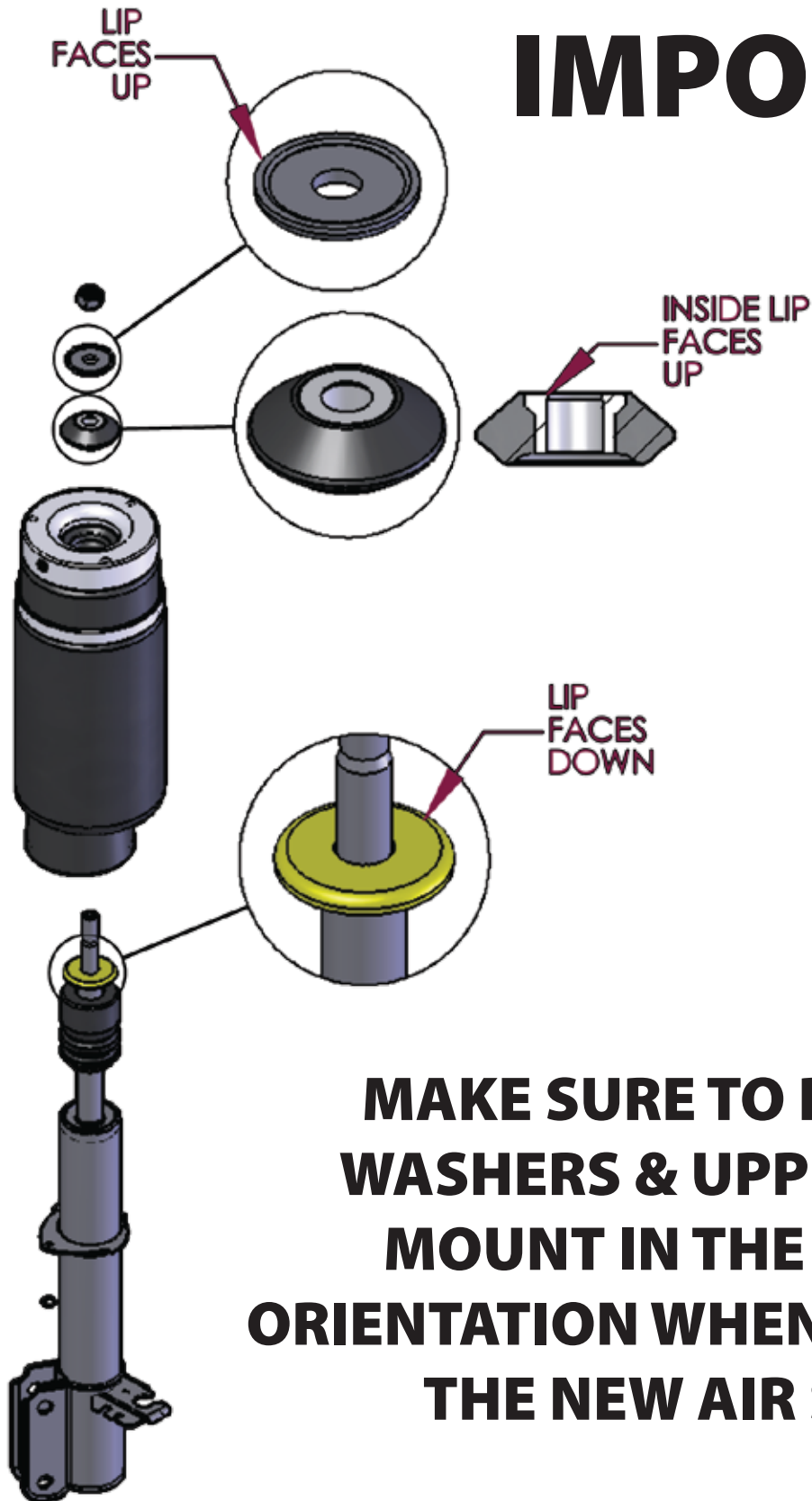
Fig. "R"



AIR SPRING ASSEMBLY

1. Slide the black rubber bump stop (**14-3852**) over the strut shaft. You may have to spray the inside of the rubber bump stop with a light lubricant to help slide it over the shock.
2. Slide the gold washer (**14-3011**) over the threaded end of the shock. Make sure the cup end is facing down away from the threads.
3. Slide the new air spring assembly (**20-3122**) over the shock. Make sure to align the plastic alignment pin on the air spring through the hole in the shocks' piston seat. After you have pushed the lower pistons' alignment pin through the shocks' spring plate, slide the external locking clip (**29-3112**) over the plastic pin to secure the air spring to the shock.
4. Push the upper black rubber mount (**20-3631**) over the shocks' shaft. **MAKE SURE TO PLACE THE RUBBER SEAL IN THE CORRECT ORIENTATION! see paper included with seal for correct instructions.**
5. Slide the black washer (**14-2985**) over the threaded end of the shock. Make sure the cup end is facing up and towards the nut.
6. Thread the M16 nylon lock nut (**29-3115**) over the struts threaded shaft. You can tighten the nut using an impact gun.
7. Install completed strut back into the vehicle in the reverse order of removal.

IMPORTANT!



**MAKE SURE TO PLACE THE
WASHERS & UPPER RUBBER
MOUNT IN THE CORRECT
ORIENTATION WHEN ASSEMBLING
THE NEW AIR SPRING!**