Installation Manual

C-2145
ARNOTT
COIL SPRING CONVERSION KIT
LAND ROVER RANGE ROVER (L322)

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. (In the EU please call +31 (0)73 7850 580 or email info@arnotteurope.com)

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) or 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.

FRONT AIR STRUT REMOVAL

1. SET THE STEERING TO STRAIGHT AHEAD.

2. RAISE THE VEHICLE.

3. REMOVE WHEELS.

4. TO RELEASE THE AIR PRESSURE FROM THE FRONT STRUTS YOU WILL NEED TO REMOVE THE PASSENGER SIDE FRONT WHEEL WELL LINER. (FIGURE 10-1)

FIGURE 10-1

5. WITH THE WHEEL WELL LINER REMOVED YOU ARE ABLE TO ACCESS THE FRONT VALVE BLOCK LOCATED AT THE REAR OF THE WHEEL WELL. SLOWLY RELEASE THE AIR PRESSURE FROM THE FRONT STRUTS BY LOOSENING THE YELLOW AND BLACK AIR HOSES. (FIGURE 10-2)

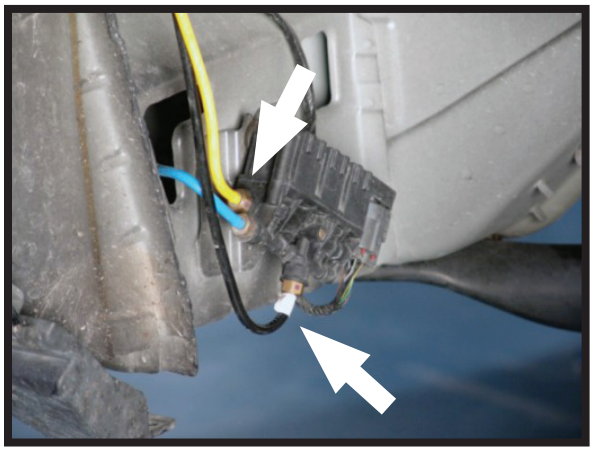

FIGURE 10-2

6. REMOVE THE BRAKE HOSE AND ABS SENSOR WIRE FROM THE RETENTION BRACKET ON THE STRUT. (FIGURE 10-3)

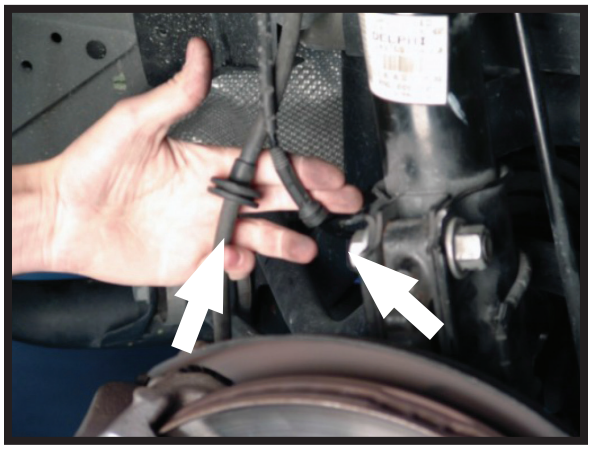

FIGURE 10-3

7. REMOVE THE SENSOR WIRE FROM THE FRONT SIDE OF THE STRUT HELD ON WITH A SMALL PLASTIC CLIP. (FIGURE 10-4)

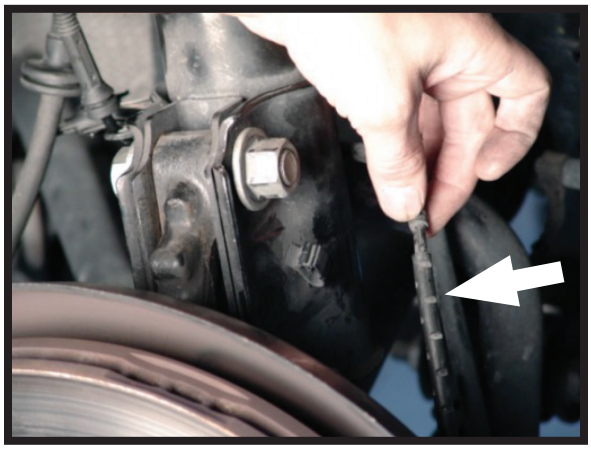

FIGURE 10-4

8. DISCONNECT THE SWAY BAR END 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 (2) FLATS OF THE BALL JOINT. (FIGURE 10-5)

FIGURE 10-5

9. REMOVE THE TWO (2) LARGE BOLTS THAT HOLD THE STRUT TO THE SPINDLE ASSEMBLY. (FIGURE 10-6)

FIGURE 10-6

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

FIGURE 10-7

11. UNDER THE HOOD ARE THE UPPER RETENTION FASTENERS, REMOVE ALL THREE (3) BEING CAREFUL NOT TO DROP THE STRUT. (FIGURE 10-8)

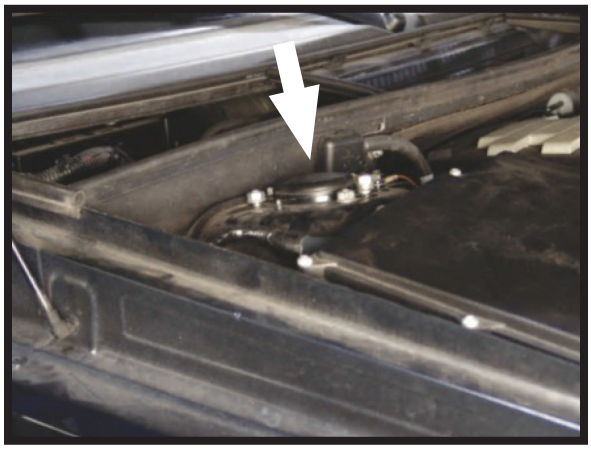

FIGURE 10-8

12. WITH THE STRUT REMOVED YOU CAN NOW GAIN ACCESS TO ITS AIR HOSE CONNECTION, REMOVE THE FITTING TO FREE THE ASSEMBLY. (FIGURE 10-9)

FIGURE 10-9

13. REMOVAL COMPLETE. (FIGURE 10-10)

FIGURE 10-10

FRONT AIR STRUT DISASSEMBLY

1. REMOVE THE SHOCK RETENTION NUT FROM THE TOP OF THE AIR STRUT ASSEMBLY. (FIGURE 20-1)

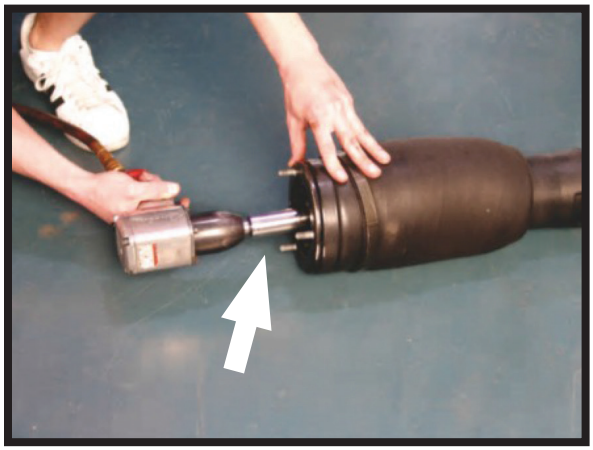

FIGURE 20-1

2. REMOVE THE NUT AND WASHER. (FIGURE 20-2)

FIGURE 20-2

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 20-3)

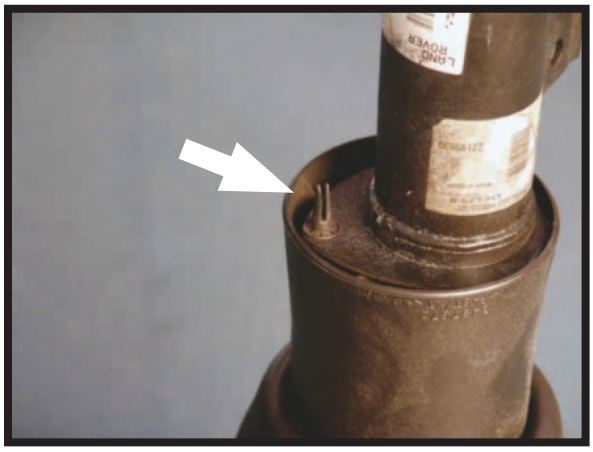

FIGURE 20-3

4. WITH A SLOTTED SCREWDRIVER OR OTHER ADEQUATE TOOL, REMOVE THE LOCK WASHER FROM THE ALIGNMENT PIN. (FIGURE 20-4)

FIGURE 20-4

5. TAP THE BOTTOM OF THE AIR SPRING WITH A SOFT FACED MALLET TO DISENGAGE THE O-RING SEALS. (FIGURE 20-5) *NOTE: Air spring as well as all o-rings and o-ring spacers are discarded. The shock is to be reused during reinstallation.*

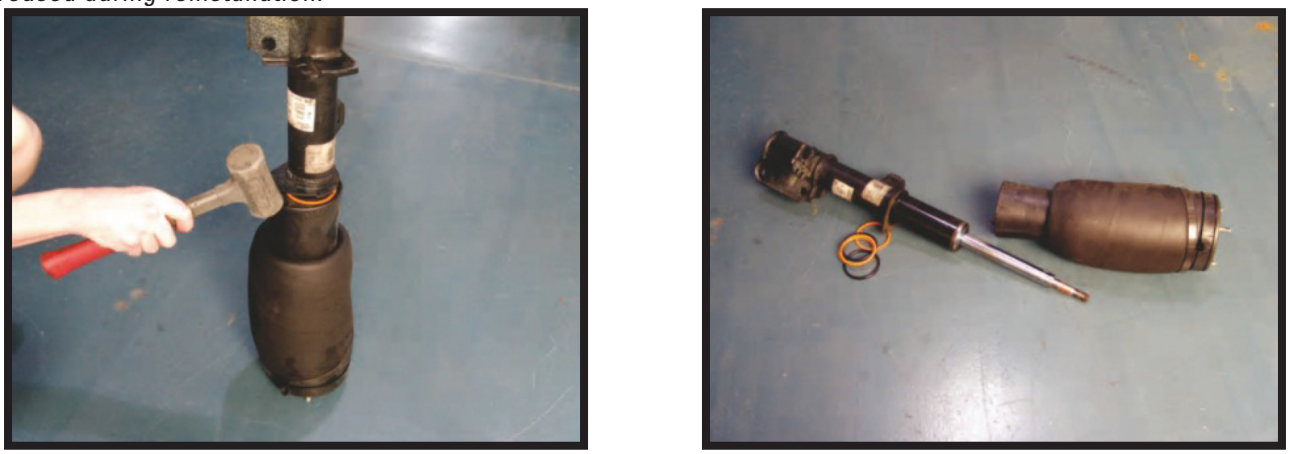

FIGURE 20-5

6. CLEAN THE SHOCK OF ANY DEBRIS BEFORE BEGINNING INSTALLATION OF THE COIL SPRINGS. (FIGURE 20-6)

FIGURE 20-6

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FRONT COIL STRUT ASSEMBLY

1. PLACE THE LOWER SEAT ONTO THE SHOCK AND FASTEN WITH THE 5/16-18 X 3/4" BOLT THROUGH THE ALIGNMENT HOLE IN THE SHOCK.

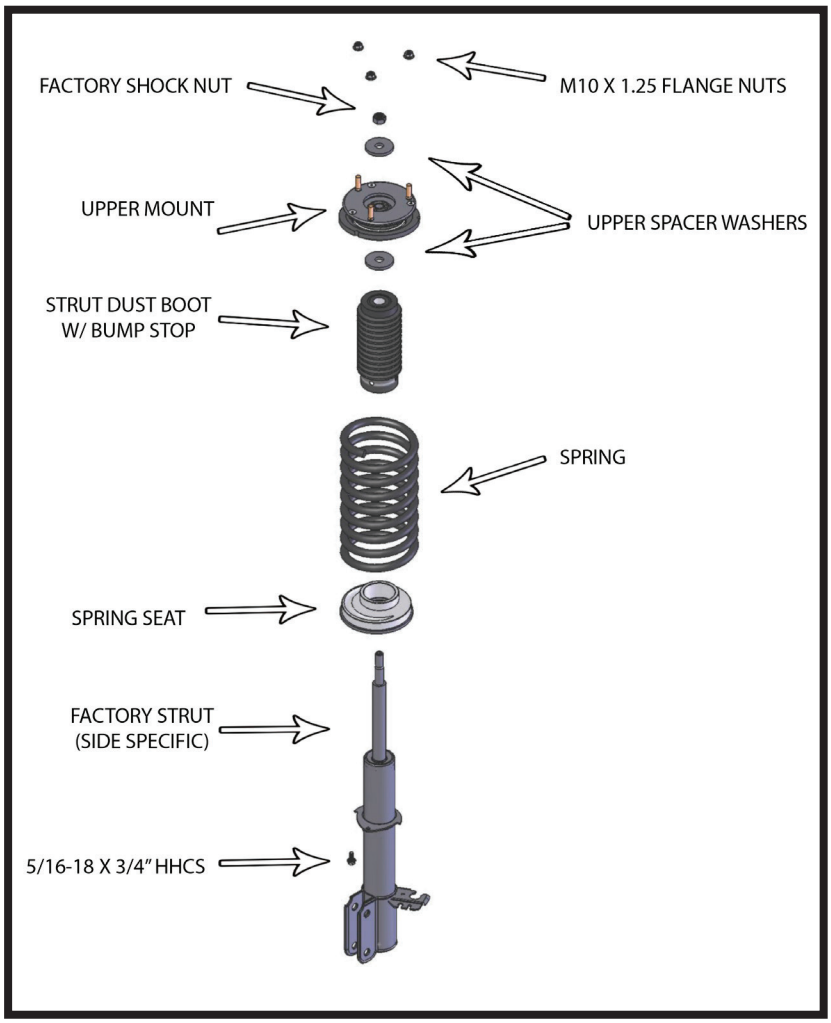
2. INSTALL THE SPRING, PIGTAIL FIRST, ONTO THE STRUT AND LOCATE IN THE LOWER SEAT.

3. SLIDE THE DUST BOOT AND BUMP STOP OVER THE SHAFT OF THE SHOCK.

4. PLACE ONE OF THE TWO SPACER WASHERS ONTO THE STRUT FOLLOWED BY THE APPROPRIATE SIDE UPPER MOUNT.

5. USING A SAFE AND APPROPRIATE SPRING COMPRESSING METHOD, COMPRESS THE SPRING UNTIL THE THREADED SHAFT IS PROTRUDING THROUGH THE UPPER MOUNT.

6. INSTALL THE REMAINING SPACER WASHER ON TOP OF THE MOUNT AND SECURE WITH THE SHOCK NUT.



FRONT COIL STRUT INSTALLATION

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

1. INSTALLATION IS IN THE REVERSE ORDER OF AIR STRUT REMOVAL.

REAR AIR SPRING REMOVAL

1. THE REAR AIR SUSPENSION VALVE BLOCK IS LOCATED IN THE RIGHT WHEEL WELL, REMOVAL OF THE INNER FENDER WELL IS NECESSARY. (FIGURE 30-1)

FIGURE 20-1

2. WITH THE WHEEL WELL REMOVED, LOCATE THE VALVE BLOCK AND AGAIN DRAIN THE AIR FROM THE AIR SPRINGS BY LOOSENING THE YELLOW AND BLACK AIR LINES. (FIGURE 30-2)

FIGURE 30-2

3. WITH ALL OF THE AIR EVACUATED FROM THE AIR SPRINGS, REMOVE THE LOWER AIR SPRING RETENTION SCREW FROM THE BOTTOM CONTROL ARM. (FIGURE 30-3)

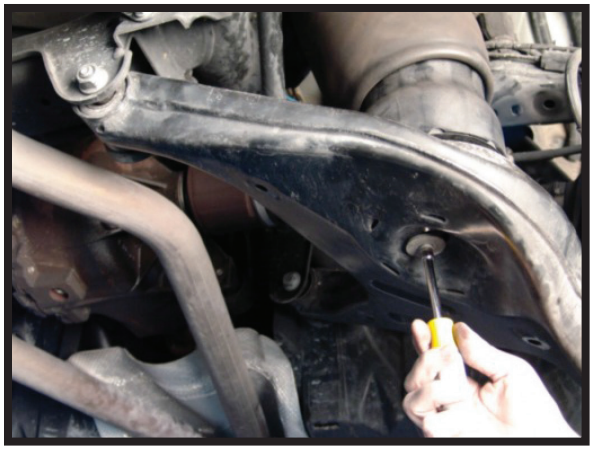


FIGURE 30-3

4. USING A PICK OR SIMILAR TOOL, REMOVE THE CLIP HOLDING THE TOP OF THE AIR SPRING ONTO THE FRAME. (FIGURE 30-4)

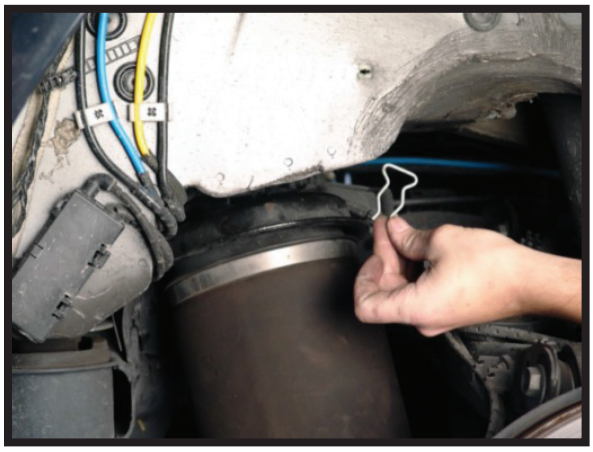


FIGURE 30-4

5. AFTER BOTH UPPER AND LOWER RETENTION FASTENERS ARE REMOVED YOU CAN PULL THE AIR SPRING LOOSE AND DISCONNECT THE AIRLINE. (FIGURE 30-5)

FIGURE 30-5

13. REMOVAL COMPLETE. (FIGURE 30-6)

FIGURE 30-6

REAR COIL SPRING INSTALLATION

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

1. REMOVE THE LOWER SHOCK BOLT.

FIGURE 40-1

2. LOOSEN AND REMOVE THE HEIGHT SENSOR PIVOT POINT ON THE LOWER CONTROL ARM. (FIGURE 40-2)

FIGURE 40-2

3. LOOSEN AND REMOVE THE SWAY BAR END LINK USING A WRENCH TO KEEP THE BALL JOINT FROM SPINNING. (FIGURE 40-3)

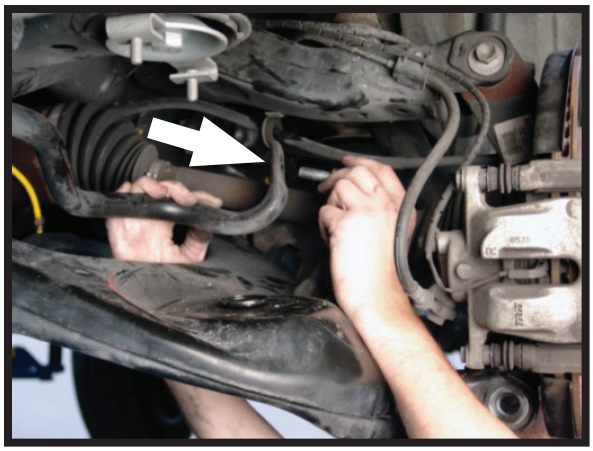


FIGURE 40-3

4. LOOSEN AND REMOVE THE SPINDLE TO LOWER CONTROL ARM BOLT AND FREE THE LOWER CONTROL ARM. (FIGURE 40-4)

FIGURE 40-4

5. LOOSEN BUT DO NOT REMOVE THE TWO REAR BOLTS HOLDING THE CONTROL ARM, LOOSENING THEM WILL ALLOW THE CONTROL ARM TO MOVE MORE FREELY. (FIGURE 40-5)

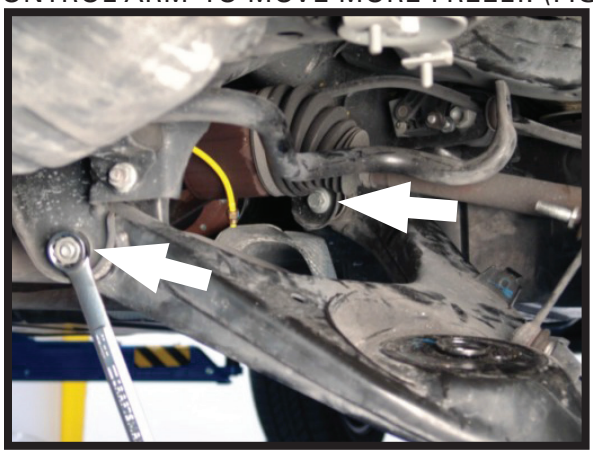


FIGURE 40-5

6. WITH EVERYTHING DONE PROPERLY THE LOWER CONTROL ARM SHOULD MOVE FREELY WITHOUT BINDING. (FIGURE40-6)

FIGURE 40-6

7. INSTALL THE LOWER SPRING SEAT ONTO THE LOWER CONTROL ARM AND SECURE IN PLACE USING THE SUPPLIED 5/16"-18 X 2 1/2" BOLTS AND FENDER WASHER THROUGH THE HOLE IN THE CENTER. (FIGURE 40-7)

FIGURE 40-7

8. INSTALL THE UPPER SPRING SEAT INTO THE UPPER MOUNTING REUSING THE HITCH PIN. (FIGURE 40-8)

FIGURE 40-8

9. FIT THE UPPER AND LOWER RUBBER ISOLATORS ONTO THE COIL SPRING. (FIGURE 40-9)

FIGURE 40-9

10. COAT THE LOWER ISOLATOR AND SEAT IN A LUBRICANT TO AID IN INSTALLATION. PLACE THE COIL SPRING ASSEMBLY INTO THE UPPER PERCH CENTERING THE UPPER SEAT. WHILE PRESSING DOWN ON THE CONTROL ARM, SLIDE THE BOTTOM OF THE SPRING OVER THE LOWER SEAT. (FIGURE40-10)

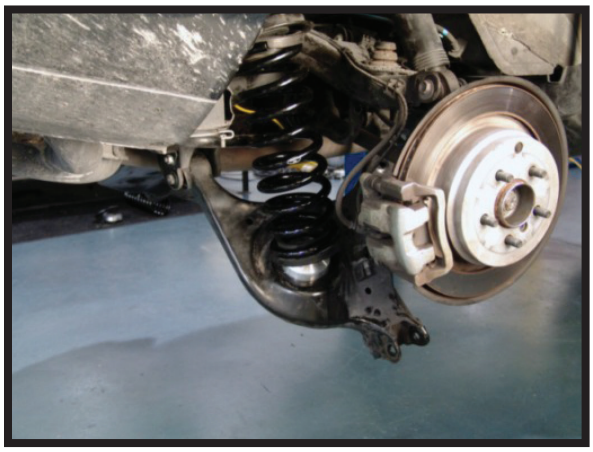
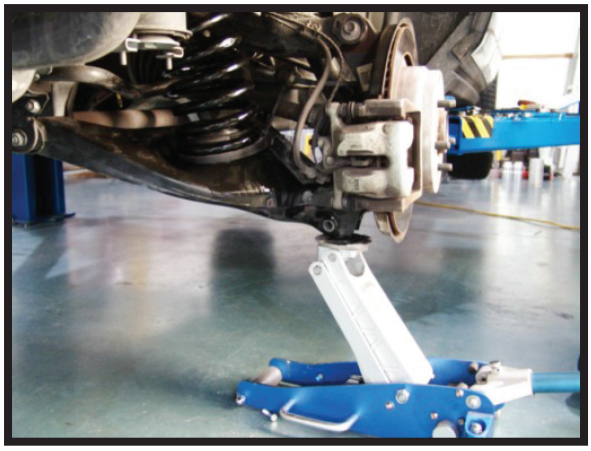


FIGURE 40-10

11. USING A FLOOR JACK, RAISE THE LOWER CONTROL ARM TO REALIGN WITH THE SPINDLE BEING SURE THE SPRING IS SECURELY SEATED. REINSTALL THE LOWER CONTROL ARM TO SPINDLE BOLT FOLLOWED BY THE REMAINING SUSPENSION FASTENERS. (FIGURE 40-11)



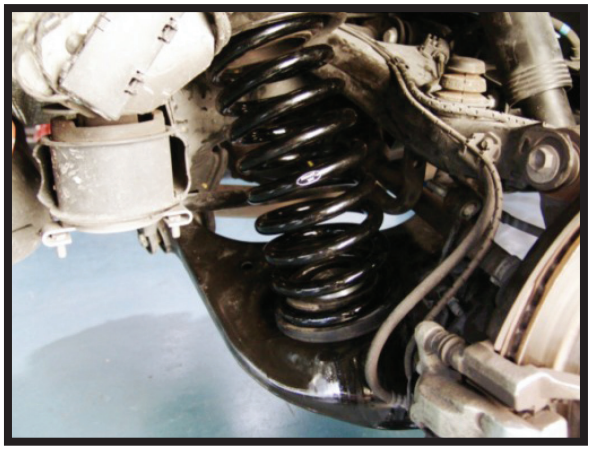


FIGURE 40-11

12. INSTALLATION COMPLETE.

DISARMING VEHICLE'S AIR SUSPENSION

1. LOCATE THE FUSE PANEL IN THE BACK OF THE GLOVEBOX.
2. REMOVE THE RECTANGULAR COVER OF THE FUSE PANEL.
3. ON THE BACK SIDE OF THE COVER IS A MAP OF THE FUSE BOX.
4. LOCATE THE FUSES WITH THIS SYMBOL. 
5. REMOVE THE FUSES, IN MOST CASES THERE ARE ONLY TWO (2).
6. LEAVE FUSES OUT OF THESE LOCATIONS AND REINSTALL FUSE BOX COVER.
7. WHEN VEHICLE IS SWITCHED ON THE EAS CONTROL PANEL SHOULD NOT ILLUMINATE AS WELL AS THERE SHOULD NOT BE ANY WARNING LIGHTS IN THE GAUGE CLUSTER.