



Part# **C-2145**
2003-2006 Range Rover HSE
Coil Spring Conversion



“Engineered to Ride, Built to Last”

PARTS LIST	PART NUMBER	QUANTITY
FRONT SPRINGS	29-3478	2
FRONT LOWER SEATS	20-3481	2
FRONT UPPER RIGHT MOUNT	20-3480	1
FRONT UPPER LEFT MOUNT	20-3483	1
FRONT UPPER SPACER WASHER	14-3476	4
STRUT DUST BOOT W/ BUMPSTOP	29-3450	2
M10 X 1.25 FLANGE NUTS	29-3487	6
5/16"-18 X 3/4" HHCS	29-2881	2
REAR SPRINGS	29-3479	2
REAR UPPER SEATS	14-3329	2
REAR LOWER SEATS	14-3330	2
REAR ISOLATORS	29-3488	4
5/16"-18 X 2 1/2" FLANGE HHCS	29-3419	2
5/16" FENDER WASHER	14-3415	2

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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 will familiarize you with the system.

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



SAFETY WARNING:



CAUTION

ALWAYS USE SAFE AND APPROPRIATE SPRING COMPRESSORS.

Take precautions not to exceed the Gross Vehicle Weight Rating (GVWR, or the maximum load) recommended by the manufacturer. It is important that all vehicle's Owner Manual recommendations are followed for your own safety and to prevent damage to the vehicle.

VEHICLE PREPARATION

1. Before you begin, you should take the necessary safety precaution into account when working on your vehicle.
2. First place your vehicle on a solid, even surface and chock the wheels.
3. Using a floor jack and jack stands, safely lift and secure the vehicle. (Refer to Owners Manual for proper lifting techniques and jacking points.)

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")
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")
3. Slowly release the air pressure from the front struts by loosening the yellow and black air hoses. (Refer to Fig. "B")
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 shock as well as the upper nut previously removed are to be reused during reinstallation.
8. Clean the shock of any debris before beginning installation of the coil springs. (Refer to Fig. "R")
9. REFER TO PAGE (6) FOR PROPER COIL STRUT ASSEMBLY.



Fig. "A"



Fig. "B"



Fig. "C"

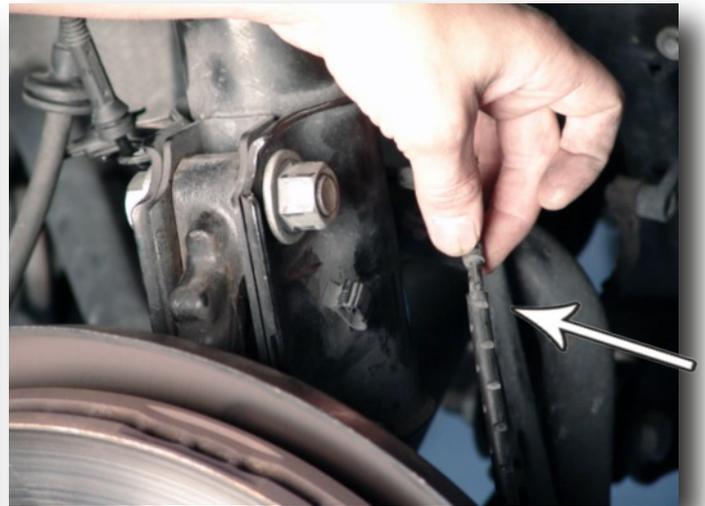


Fig. "D"



Fig. "E"

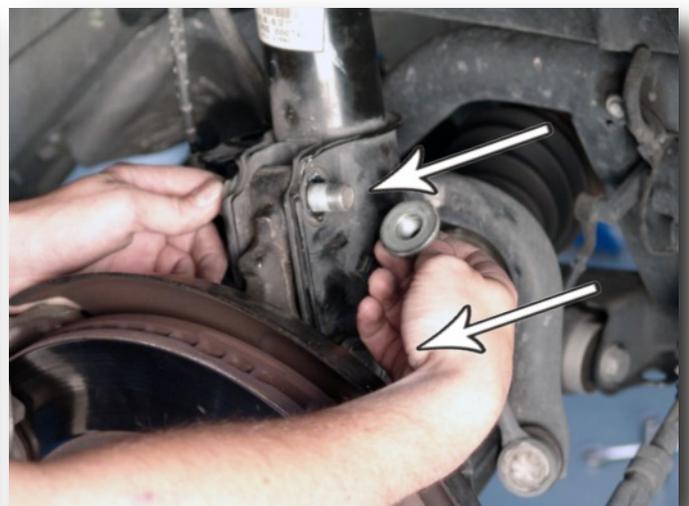


Fig. "F"

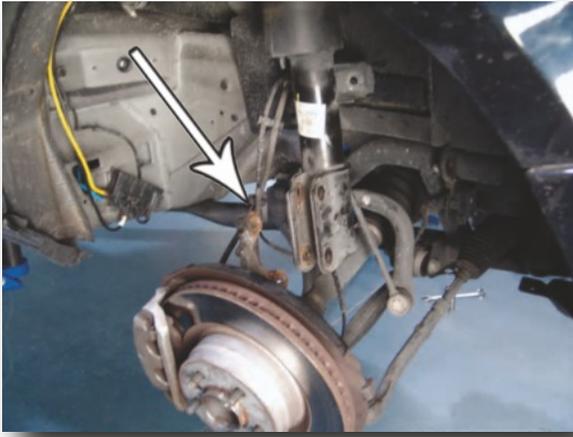


Fig. "G"

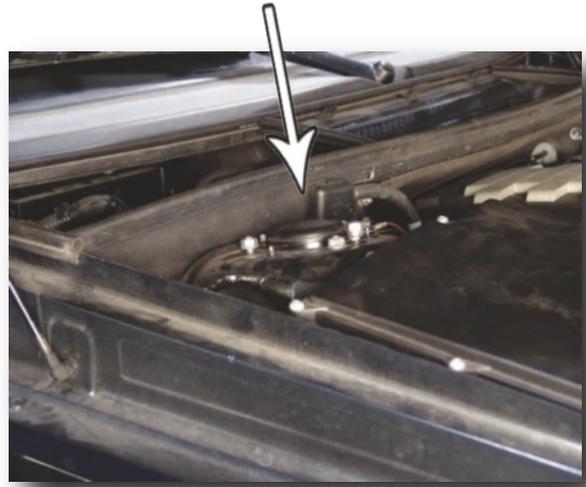


Fig. "H"

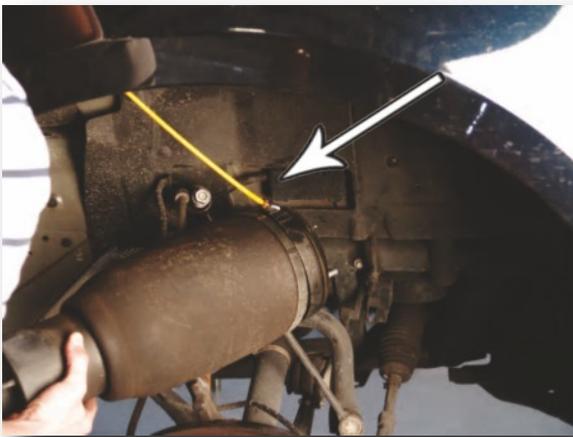


Fig. "I"



Fig. "J"



Fig. "K"



Fig. "L"

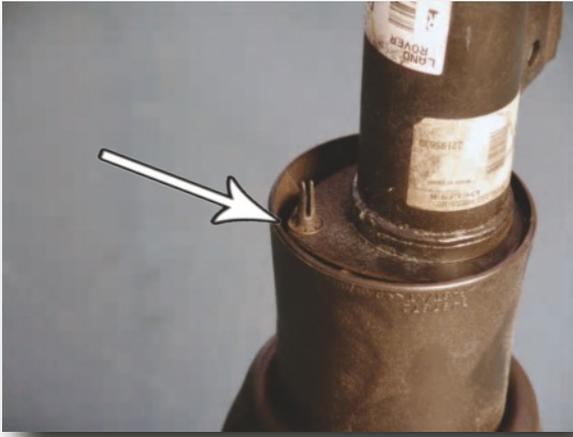


Fig. "M"

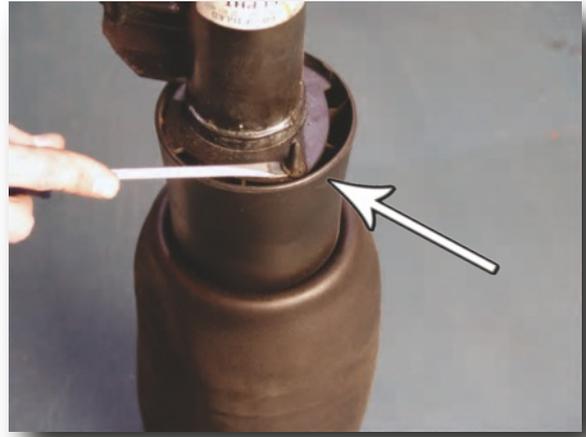


Fig. "N"



Fig. "O"



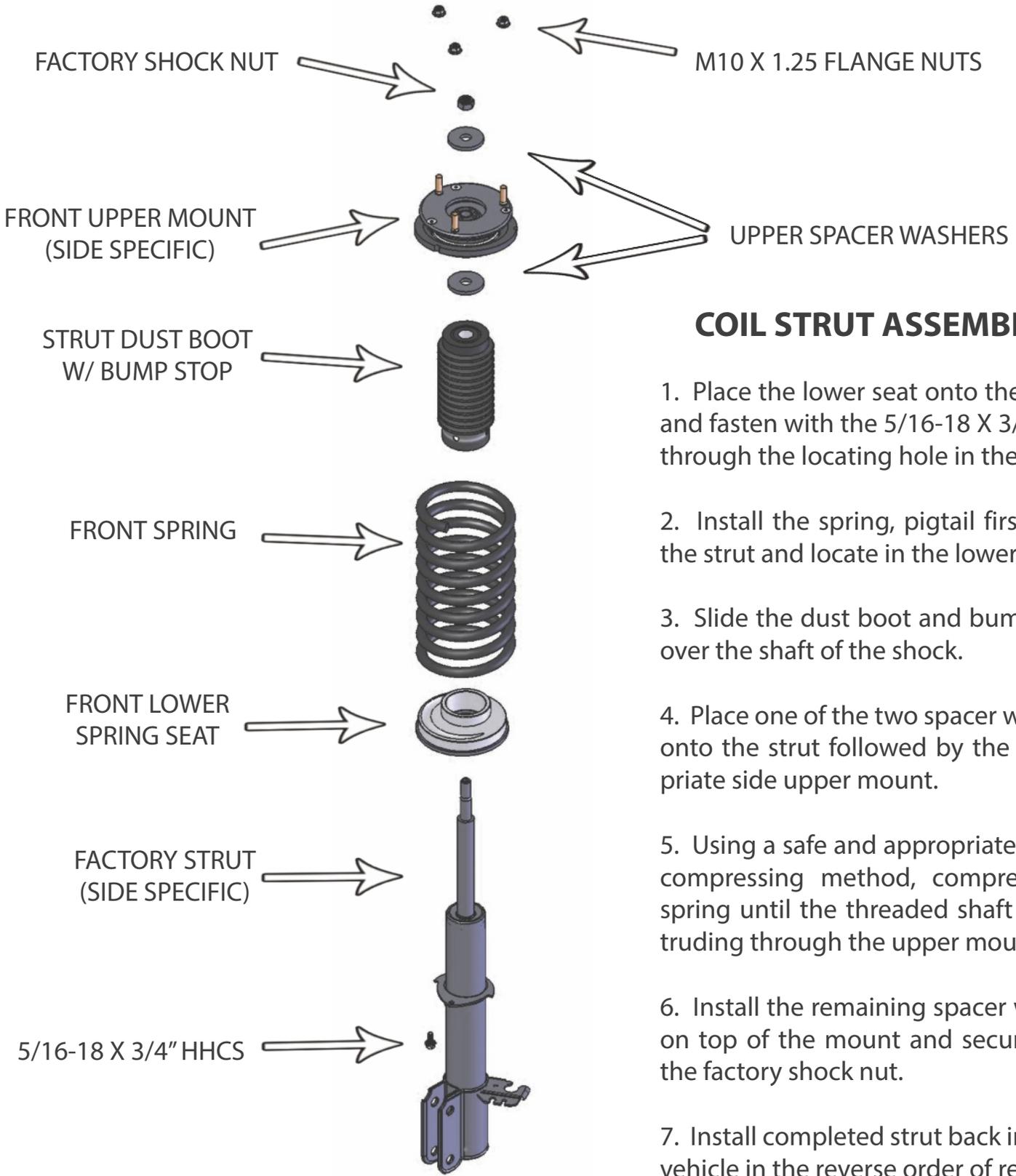
Fig. "P"



Fig. "Q"



Fig. "R"



COIL STRUT ASSEMBLY

1. Place the lower seat onto the shock and fasten with the 5/16-18 X 3/4" bolt through the locating 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 factory shock nut.
7. Install completed strut back into the vehicle in the reverse order of removal.

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

REMOVAL OF REAR AIR SPRINGS

1. Begin by removing both rear wheels.
2. The rear air suspension valve block is located in the passenger wheel well, removal of the inner fender well is necessary. (Refer to Fig. "1")
3. 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. (Refer to Fig. "2")
4. With all of the air evacuated from the air springs, remove the lower air spring retention screw from the bottom control arm. (Refer to Fig. "3")
5. Using a pick or similar tool, remove the clip holding the top of the air spring onto the frame. (Refer to Fig. "4")
6. After both upper and lower retention fasteners are removed you can pull the air spring loose and disconnect the airline. (Refer to Fig. "5")
7. Shown is the rear air spring removed from vehicle. (Refer to Fig. "6")

INSTALLATION OF REAR COIL SPRINGS

1. To install the coil springs you will need to first remove the lower shock bolt. (Refer to Fig. "7")
2. Loosen and remove the height sensor pivot point on the lower control arm. (Refer to Fig. "8")
3. Loosen and remove the sway bar end link using a wrench to keep the ball joint from spinning. (Refer to Fig. "9")
4. Loosen and remove the spindle to lower control arm bolt to free the lower control arm. (Refer to Fig. "10")
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. (Refer to Fig. "11")
6. With everything done properly the lower control arm should move freely without binding. (Refer to Fig. "12")
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. (Refer to Fig. "13")
8. Install the upper spring seat into the upper mounting reusing the hitch pin. (Refer to Fig. "14")
9. Fit the upper and lower rubber isolators onto the coil spring. (Refer to Fig. "15")
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. (Refer to Fig. "16")
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. (Refer to Figs. "17, 18")



Fig. "1"



Fig. "2"



Fig. "3"



Fig. "4"



Fig. "5"



Fig. "6"

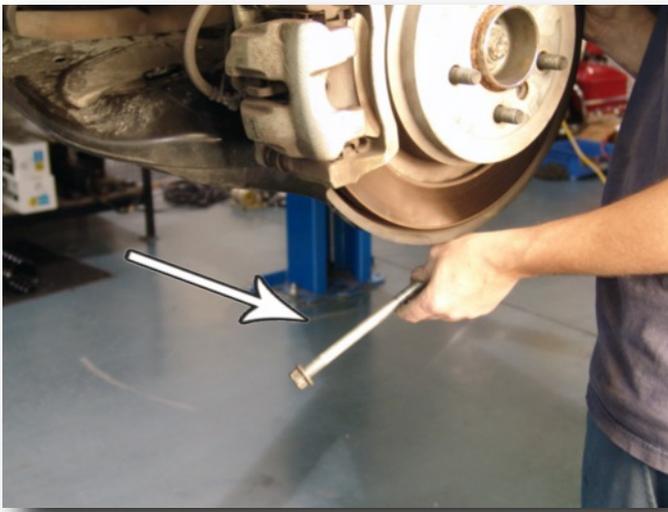


Fig. "7"



Fig. "8"



Fig. "9"



Fig. "10"



Fig. "11"

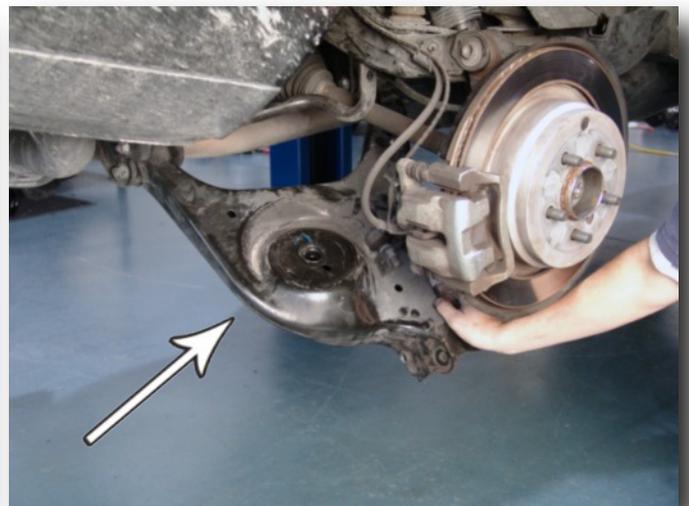


Fig. "12"



Fig. "13"



Fig. "14"

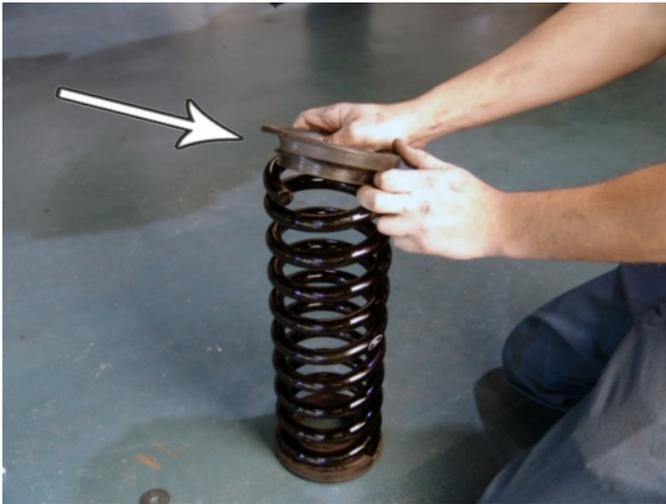


Fig. "15"



Fig. "16"

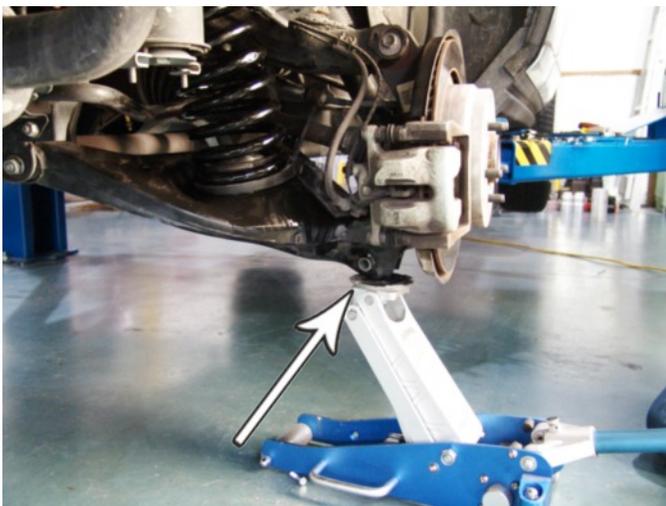


Fig. "17"

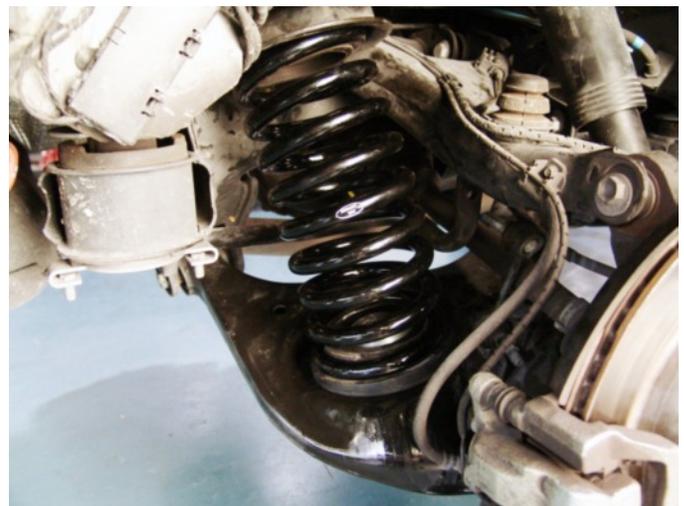


Fig. "18"