



# INSTALLATION MANUAL

## C-2664 Arnott New Coil Spring Conversion Kit BMW X5 (E53 Chassis)



**Engineered to Ride, Built to Last®**

# CONGRATULATIONS ON YOUR PURCHASE OF AN ARNOTT® SUSPENSION PRODUCT

WE AT ARNOTT LLC ARE PROUD TO OFFER A HIGH QUALITY PRODUCT WITH ALL THE TECHNICAL SUPPORT YOU NEED. 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 and certified automotive 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.

## 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) and [www.arnotteurope.com](http://www.arnotteurope.com).



### 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.

- 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.

For vehicles with a "Closed Air Supply System," replacement of components requires proper adherence to procedures set forth within OE servicing literature. Failure to comply with the OE prescribed procedures can result in component damage and/or failure.

**NOTE: UPON COMPLETION OF INSTALLATION, A 4 WHEEL ALIGNMENT IS REQUIRED.**

## FRONT AIR SPRING REMOVAL

1. Set steering to straight ahead.
2. Raise vehicle.
3. Remove front wheel(s).
4. Remove the brake hose from the retention bracket on the strut. (Figure 1)



FIGURE 1

5. 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 on the back side of the bracket. (Figure 2)



FIGURE 2

6. Open the hood and remove the three (3) upper mount nuts. (Figure 3)



FIGURE 3

7. Remove the two large bolts that hold the strut to the spindle assembly. (Figure 4)  
With the nuts and bolts removed from the spindle assembly, pull the spindle outward while pushing the strut. (Figure 5)



FIGURE 4



FIGURE 5

8. With the air strut removed you can now gain access to its hose connection, slowly remove the fitting to deflate and free the assembly. (Figure 6)  
Remove the air line fitting from the air hose and discard. Once disconnected, remove air strut from vehicle.



FIGURE 6

9. Removal complete.



# FRONT COIL SPRING CONVERSION INSTALLATION



**WARNING:**

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



**WARNING:**

Do not remove the air fitting from the air strut. Doing so may cause damage and/or void warranty. Remove the white shipping pin from the new air fitting and insert the air line until fully seated.

1. Insert coil conversion into vehicle, ensuring that the alignment pin on the top mount is justified towards the wheel. Install top mount nuts and tighten to manufacturer's specifications. (Figures 7, 8)



FIGURE 7

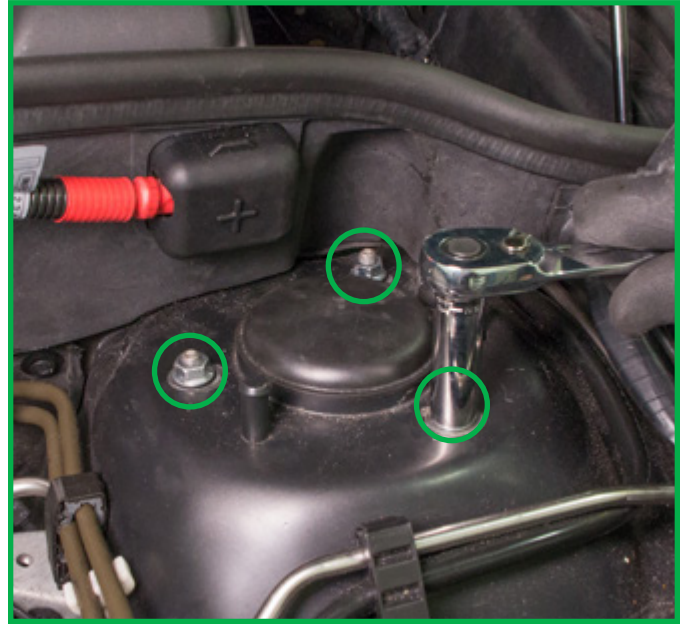


FIGURE 8

2. Install two (2) bottom mount bolts and nuts ensuring that the wire retainer bracket is reused in the installation; tighten to manufacturer's specifications. (Figures 9, 10)



FIGURE 9

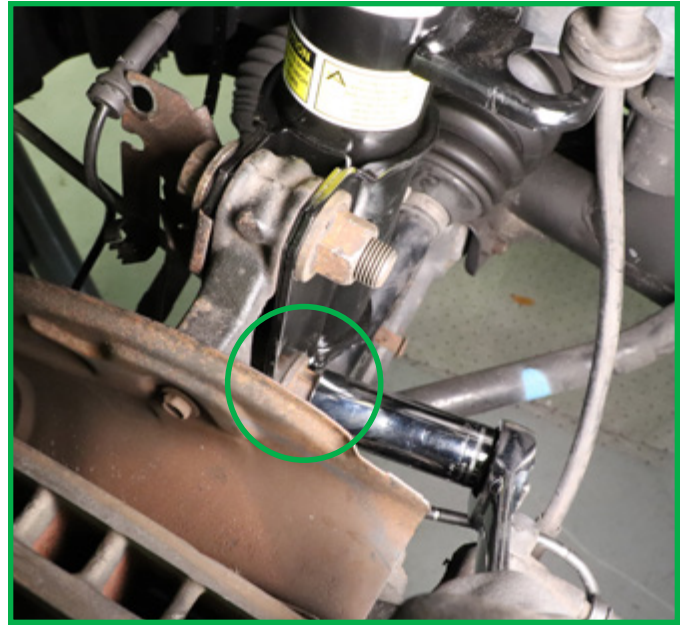


FIGURE 10

3. Reinstall sway bar link. Tighten to manufacturer's specifications. (Figures 11, 12)



FIGURE 11

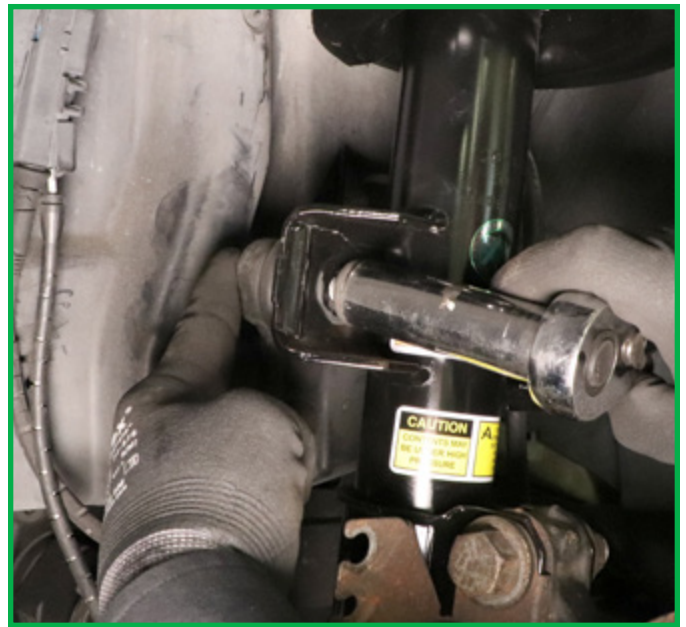


FIGURE 12

4. Place the brake line and clip on the strut retainer bracket. (Figures 13, 14)

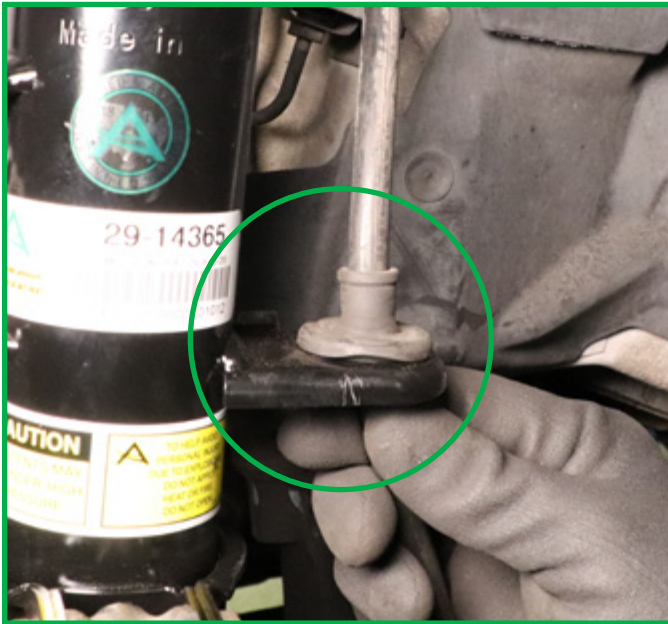


FIGURE 13

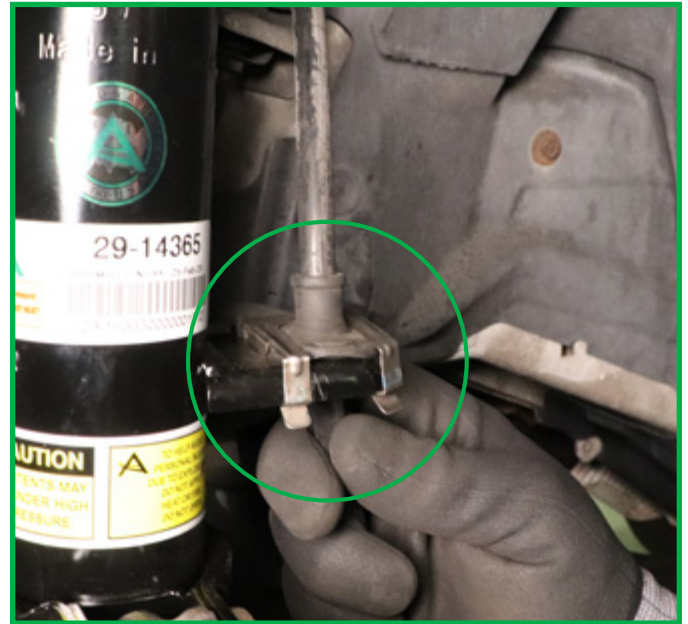


FIGURE 14

5. Place the unused air line in a suitable location free from movement or friction. (Figure 15)



FIGURE 15

6. Front coil spring conversion complete.



# REAR AIR SPRING REMOVAL

1. Open trunk lid, unlock luggage compartment floor trim panel (1) at handle (2) and remove. (Figure 16)

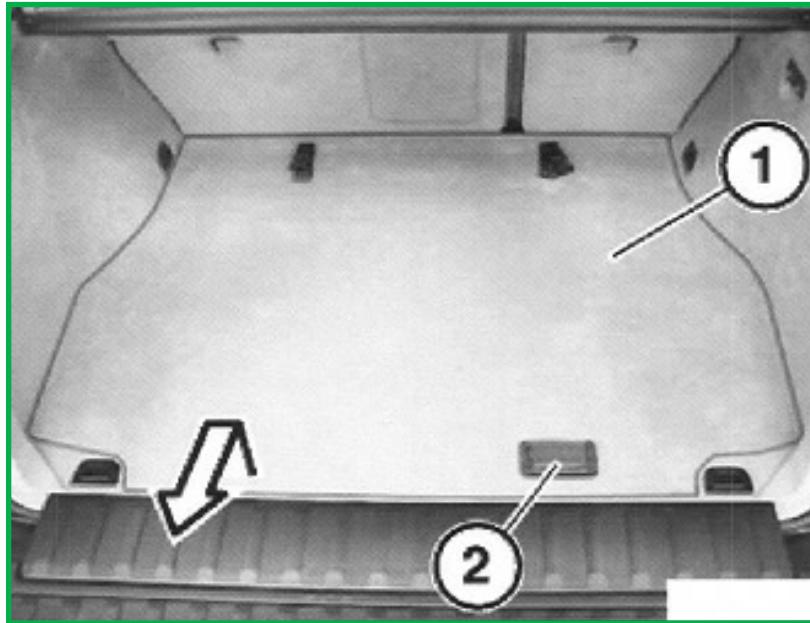


FIGURE 16

2. Raise the vehicle.
3. Remove the rear wheel(s).
4. Remove support for side members (1) and (2) to gain access to air reservoir. (Figure 17)

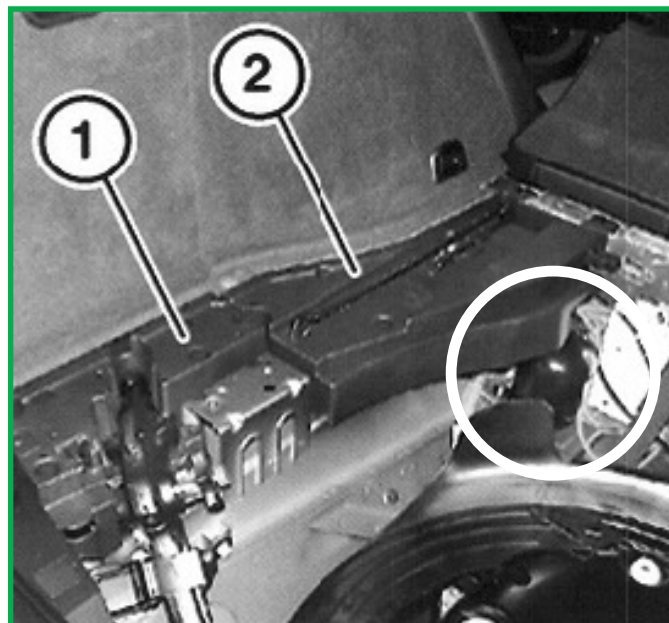


FIGURE 17

5. Carefully loosen the air fitting to deflate the air spring. (Figure 18)

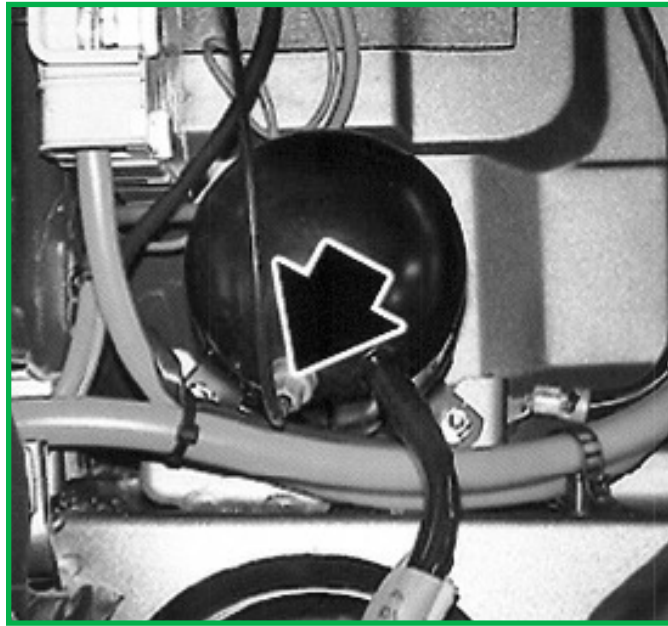


FIGURE 18

6. Disconnect the top of the air spring by pressing quick coupling (1) downwards, press retaining ring (2) together and detach the air line. Remove the retaining clips (3). (Figure 19)

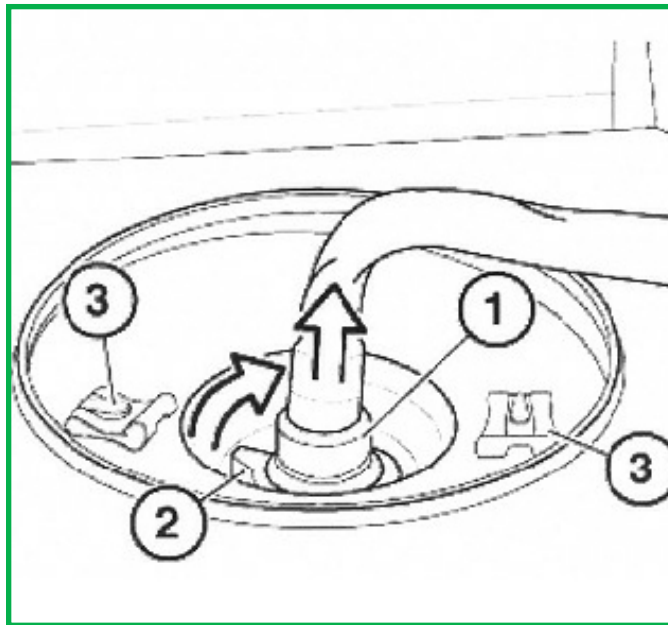


FIGURE 19

7. Detach locking clip (1) from the bottom of the air spring mount and remove air spring. (Figure 20)

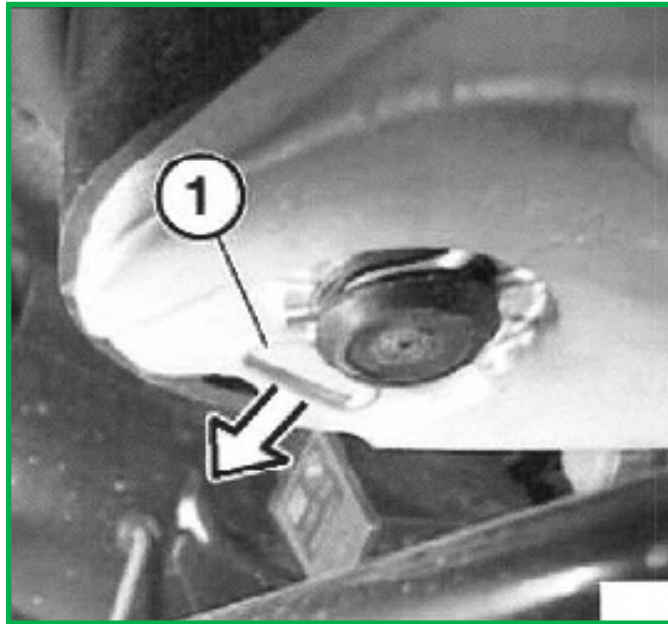


FIGURE 20

8. Remove air spring from the vehicle.
9. Removal complete.

## REAR SHOCK REMOVAL

1. Support the rear axle with a hydraulic jack or stand. (Figure 21)

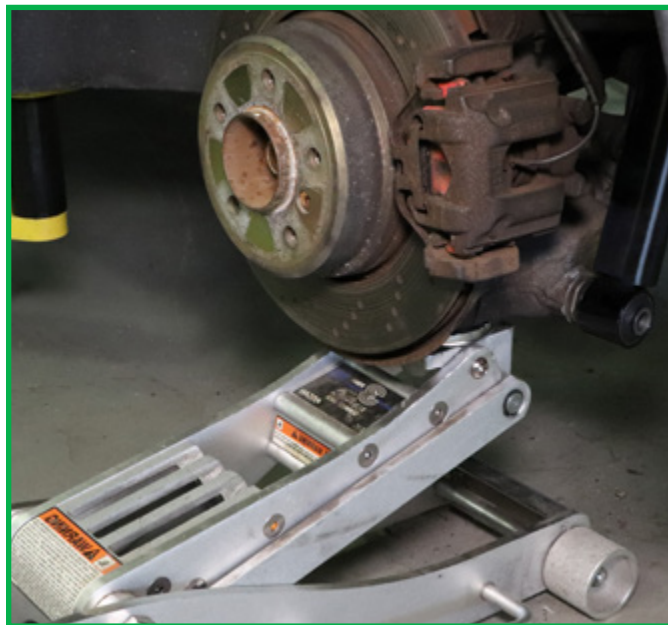


FIGURE 21

2. Locate and remove the rubber cap covering the top shock mount bolts. (Figure 22)

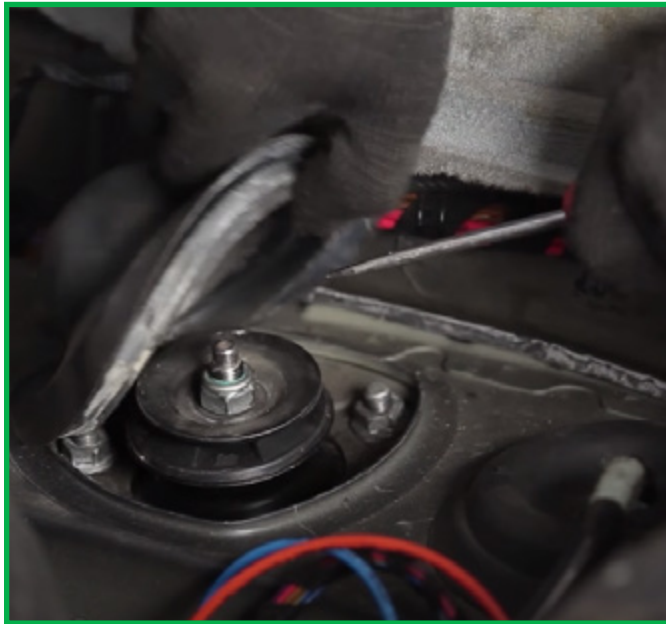


FIGURE 22

3. Remove the three (3) top mount nuts. (Figure 23)

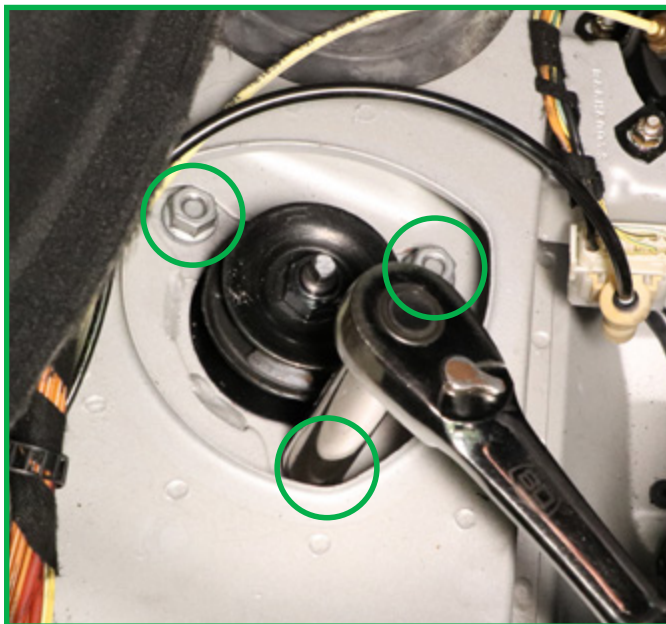


FIGURE 23



4. Remove the lower shock bolt. (Figures 24, 25)

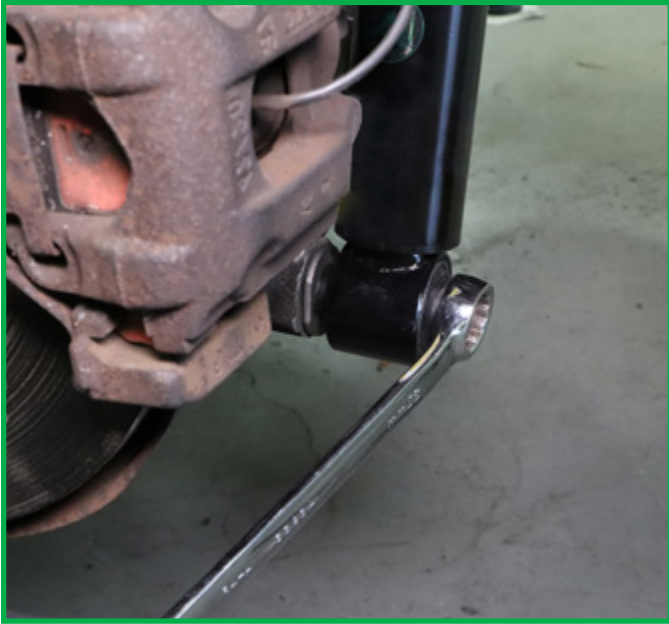


FIGURE 24

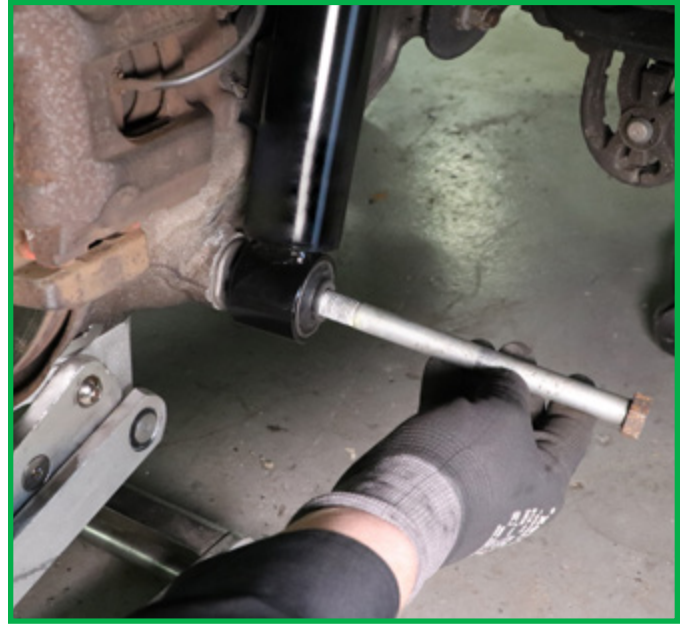


FIGURE 25

5. Remove the shock from the vehicle. (Figure 26)

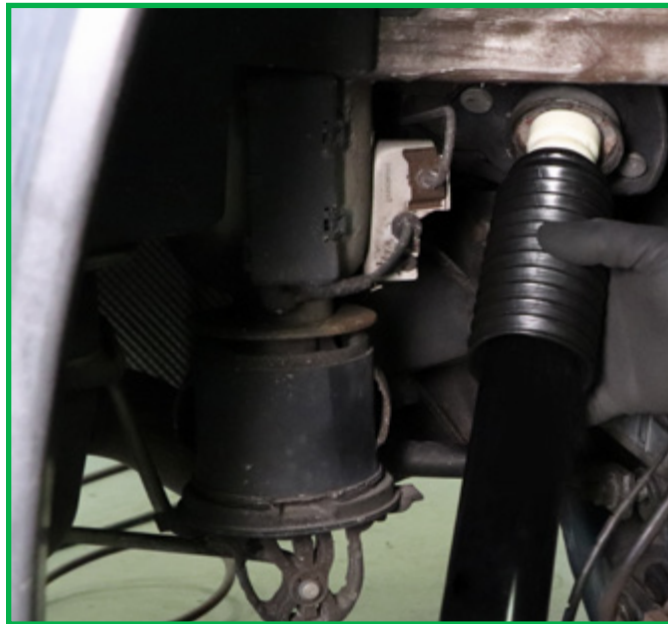


FIGURE 26

6. Removal complete.

# REAR COIL SPRING CONVERSION INSTALLATION



## WARNING:

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

### 1. Remove sway bar link. (Figures 27, 28)

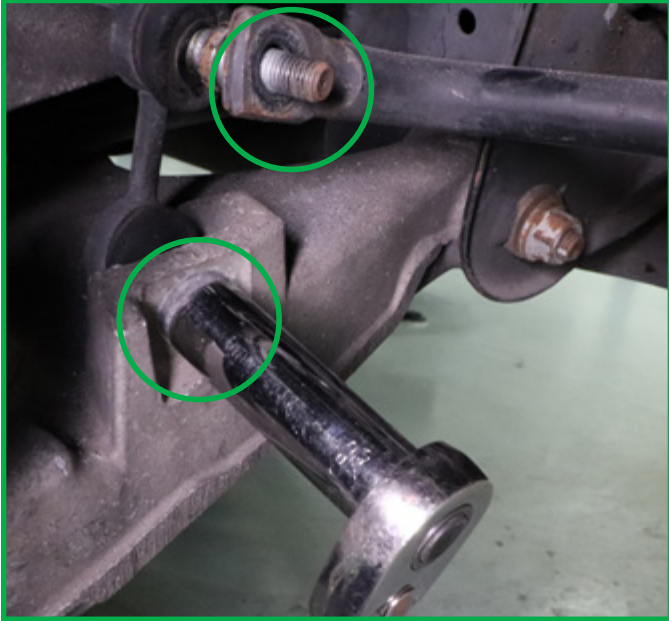


FIGURE 27

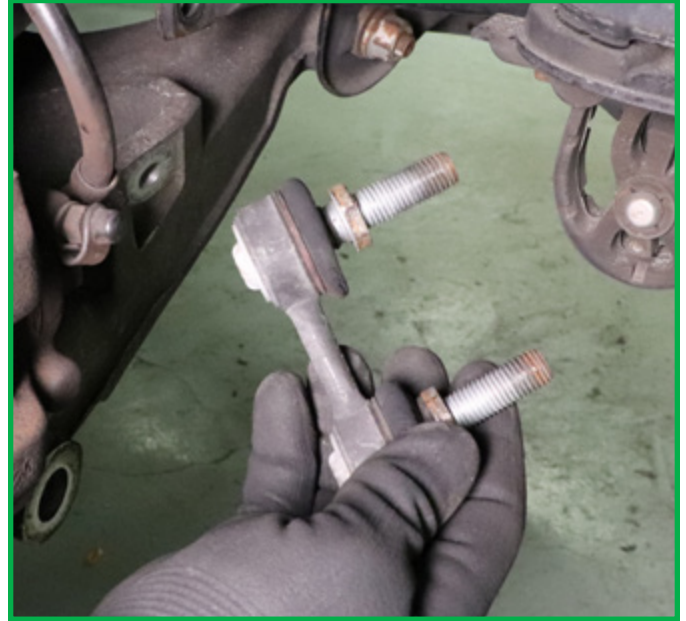


FIGURE 28

### 2. Disconnect upper control arm. (Figures 29, 30)



FIGURE 29



FIGURE 30

3. Install bottom coil perch on vehicle. (Figures 31, 32, 33)

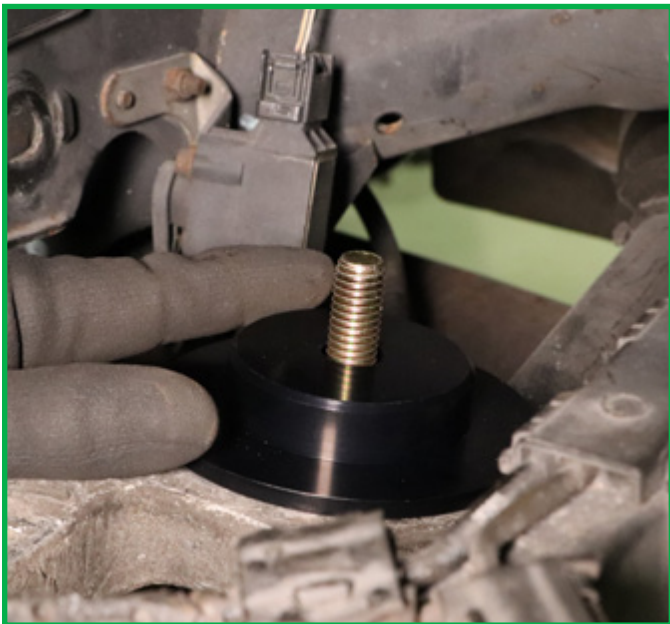


FIGURE 31

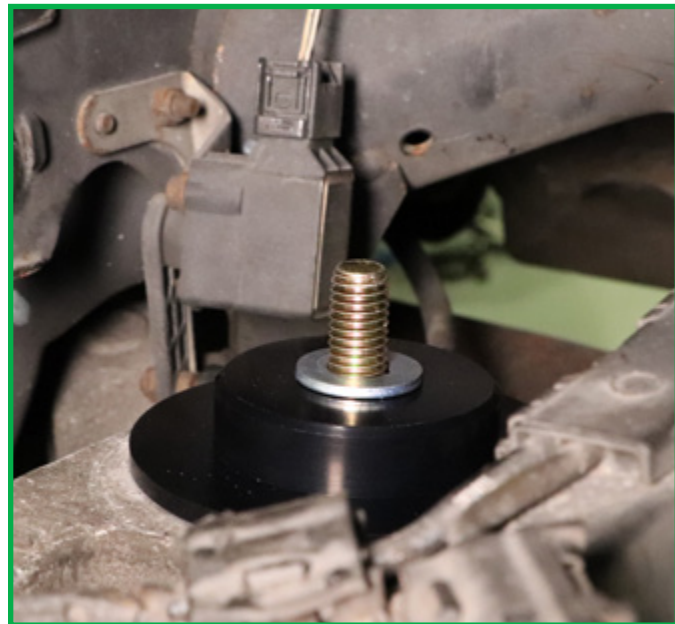


FIGURE 32



FIGURE 33



4. Place top perch on coil and insert coil into vehicle. (Figures 34, 35)



FIGURE 34

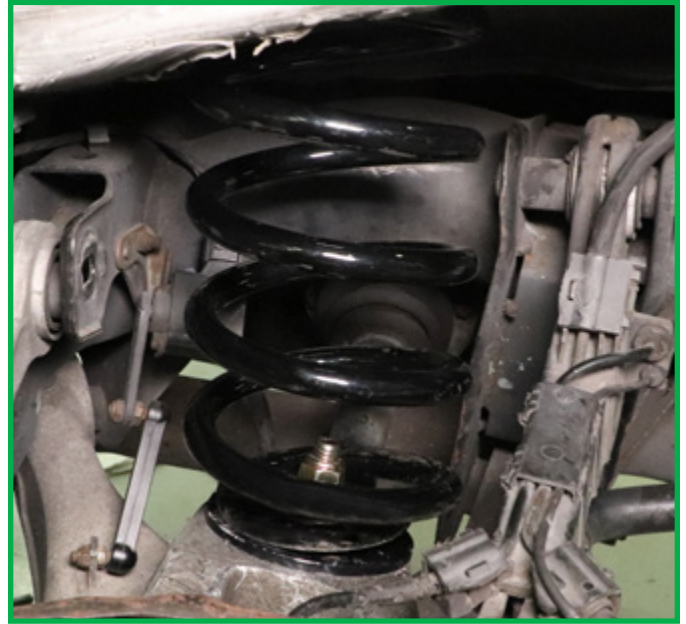


FIGURE 35

5. Reconnect upper control arm. Tighten to manufacturer's specifications. (Figure 36)

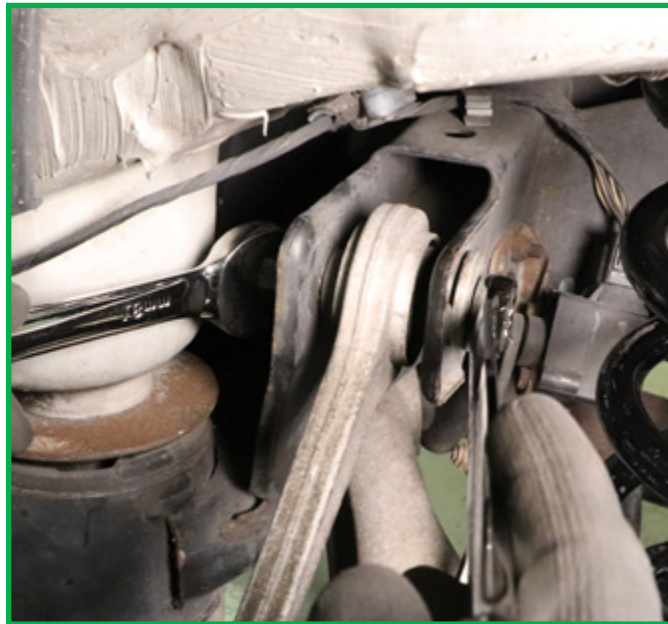


FIGURE 36



6. Reconnect sway bar link. Tighten to manufacturer's specifications. (Figures 37, 38)

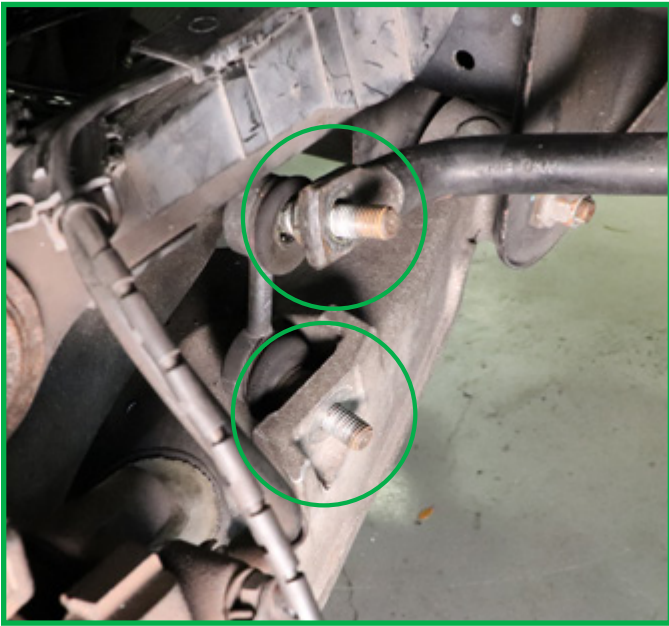


FIGURE 37

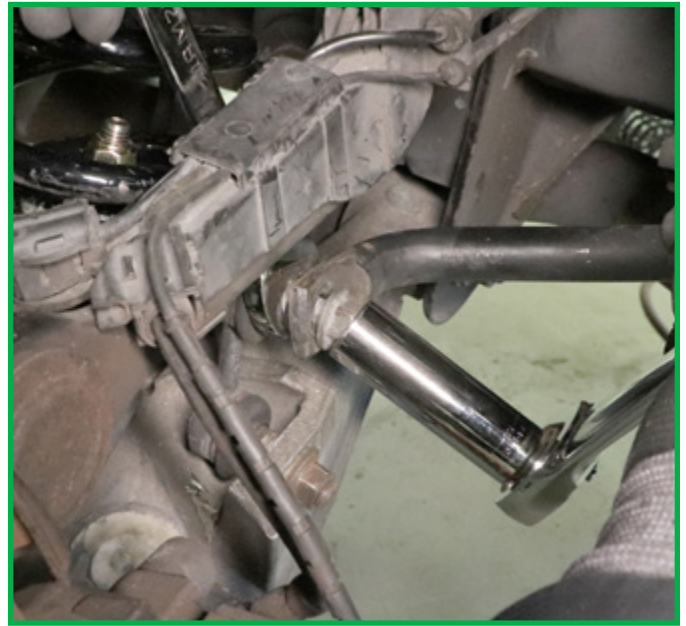


FIGURE 38

7. Remove the top mount from the OE shock and place it on the new arnott shock. (Figures 39, 40, 41, 42)



FIGURE 39



FIGURE 40



FIGURE 41



FIGURE 42

8. Insert new shock into vehicle. (Figure 43)

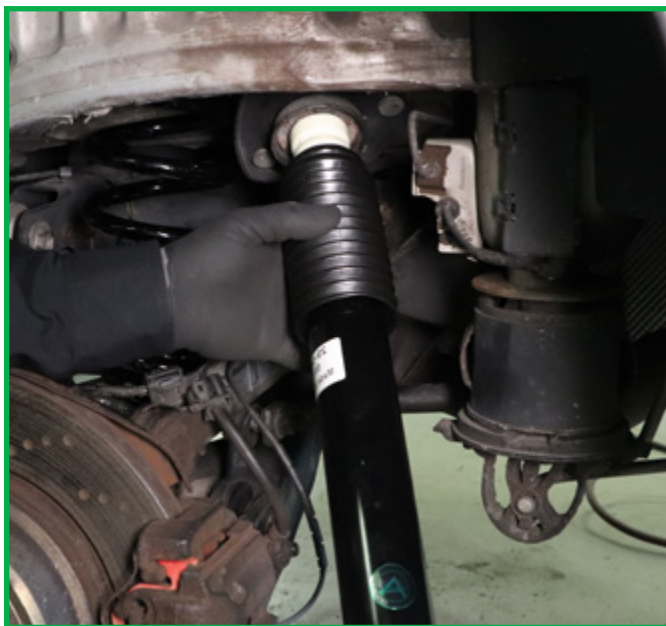


FIGURE 43

9. Install three (3) shock top mount nuts. Tighten to manufacturer's specifications. (Figure 44)



FIGURE 44

10. Replace rubber shock mount trim. (Figure 45)



FIGURE 45



11. Use a hydraulic jack to support the rear axle for bottom mount bolt insertion. (Figure 46)

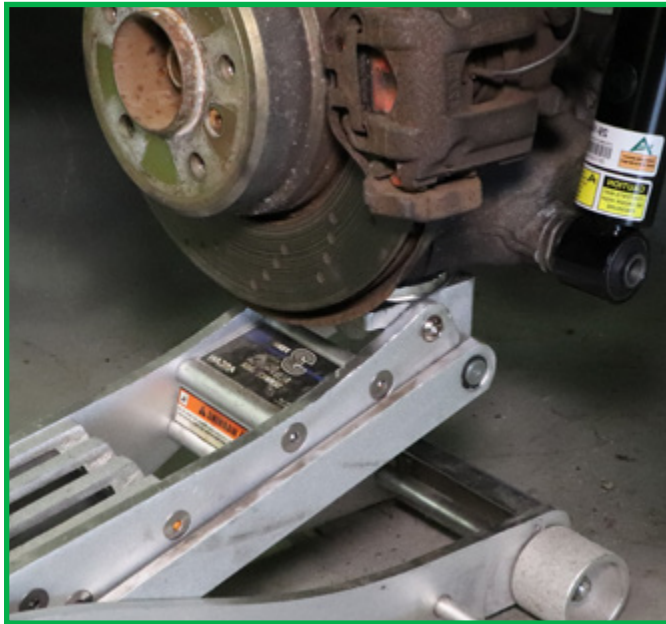


FIGURE 46

12. Install bottom mount bolt and tighten to manufacturer's specifications. (Figures 47, 48)



FIGURE 47



FIGURE 48

13. Rear coil spring conversion complete.

14. Reinstall wheels. Lower vehicle.

**NOTE: UPON COMPLETION OF INSTALLATION, A 4 WHEEL ALIGNMENT IS REQUIRED.**



# ELECTRONIC BYPASS MODULE INSTALLATION

## VEHICLES EQUIPPED WITH 4-CORNER LEVELING

1. Remove glovebox to gain access to the air suspension control and body control modules. (Figure 49) - Figure 53 of this manual shows exact location.



FIGURE 49

2. Unplug air suspension control module. (Figure 50)

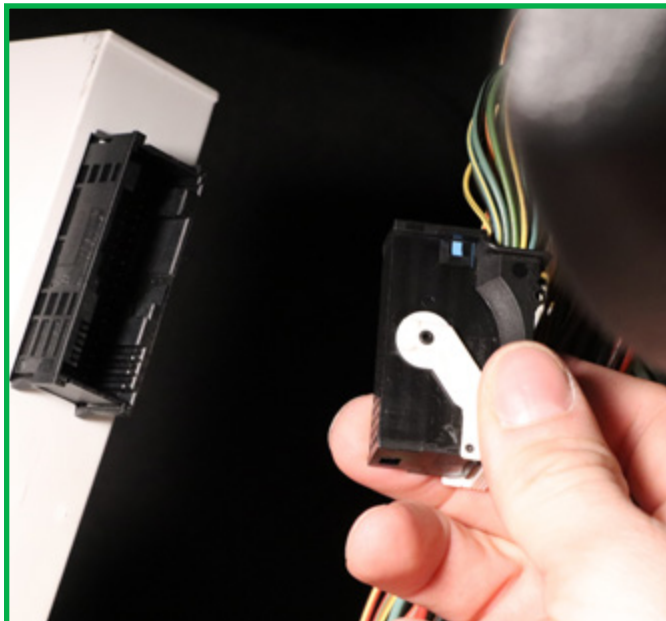


FIGURE 50

3. Install the three (3) connector splice to male spade terminals onto the wire harness using the diagram provided. (Figures 51, 52, 53)



FIGURE 51

ARNOTT ELECTRONIC BYPASS MODULE	FROM	TO	PIN LOCATION	AIR SUSPENSION CONTROL UNIT
	BLUE	WHITE/RED/ YELLOW	37	
	RED	BROWN	36	BODY CONTROL MODULE (GENERAL MODULE)
	BLACK	VIOLET/WHITE	23	

FIGURE 52

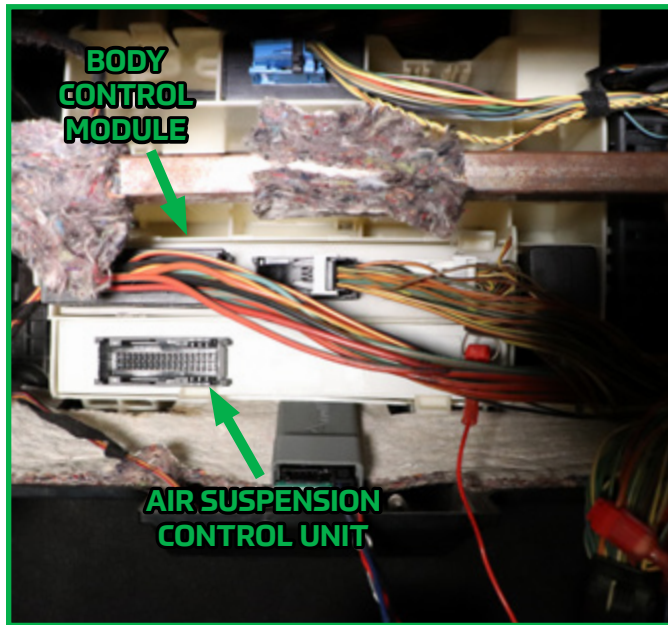


FIGURE 53

4. Do not plug the air suspension control unit back in.
5. Place EBM in suitable location.
6. Reassemble glove box.
7. Installation complete.

#### VEHICLES EQUIPPED WITH 2-CORNER LEVELING

1. Locate the air suspension control and body control modules on the rear right side of the luggage compartment under the spare tire to the right side of the battery.
2. Unplug air suspension control module. (Figure 54)



FIGURE 54

3. Install the three (3) connector splice to male spade terminals onto the wire harness using the diagram provided. (Figures 55, 56)

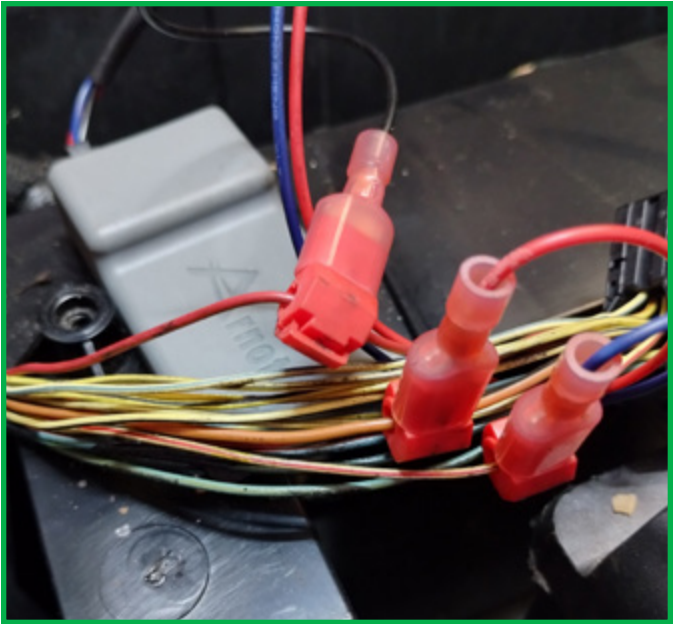


FIGURE 55

ARNOTT ELECTRONIC BYPASS MODULE	FROM	TO	PIN LOCATION	AIR SUSPENSION CONTROL UNIT
	BLUE	WHITE/RED/ YELLOW	15	
	RED	BROWN/BLACK	6	BODY CONTROL MODULE (GENERAL MODULE)
	BLACK	SWITCHED IGNITION SOURCE		

FIGURE 56

4. Do not plug the air suspension control unit back in.
5. Place EBM in suitable location.
6. Installation complete.



# Arnott®

## Suspension Products

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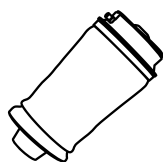
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**BE Phone:** +32 258 846 90

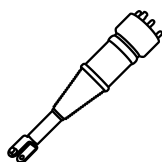
**ES Phone:** +34 91 901 10 56

**FR Phone:** +32 78 48 46 93

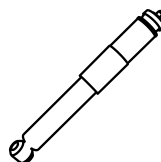
**Email:** [info@arnotteurope.com](mailto:info@arnotteurope.com)



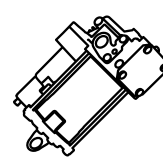
Air Springs



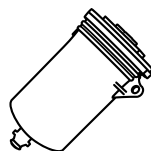
Struts



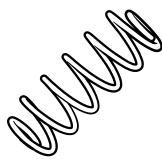
Shocks



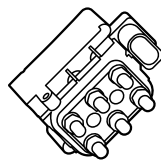
Compressors



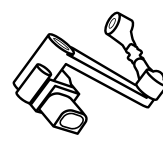
Dryers



Coil Spring  
Conversion Kits



Valve Blocks



Ride Height  
Sensors