Arnott®
Suspension Products

# INSTALLATION MANUAL

## C-3271
## Arnott Coil Spring Conversion Kit
## Mercedes-Benz S550 (W221)



**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.arnottsuspension.com and 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.

# AIR STRUT REMOVAL

1. Set steering to straight ahead.
2. Remove applicable front wheel. (Figures 1, 2)



FIGURE 1



FIGURE 2

3. Remove air line and three (3) upper mounting nuts. (Figures 3, 4)

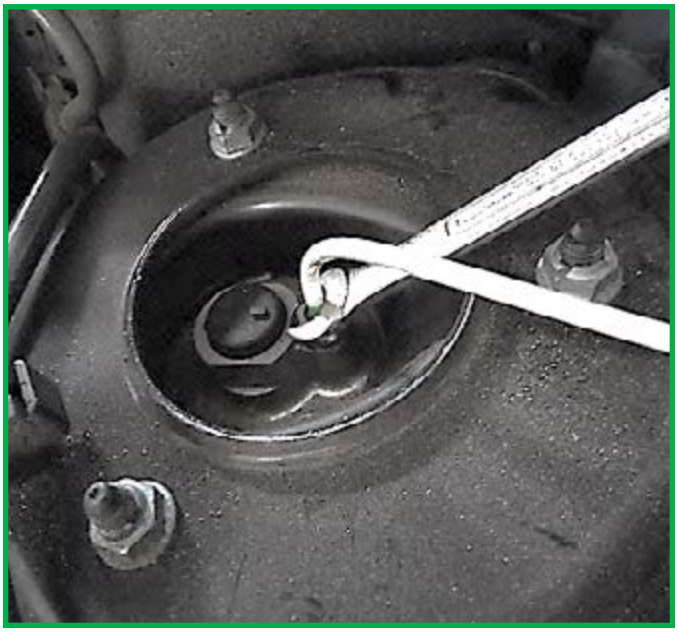


FIGURE 3

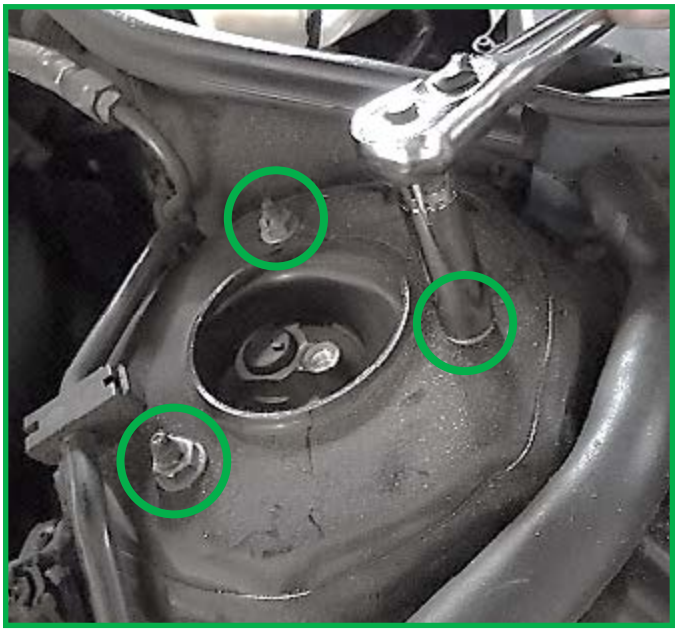


FIGURE 4

4. Locate the air strut's electrical connector and remove retaining clip. (Figure 5)

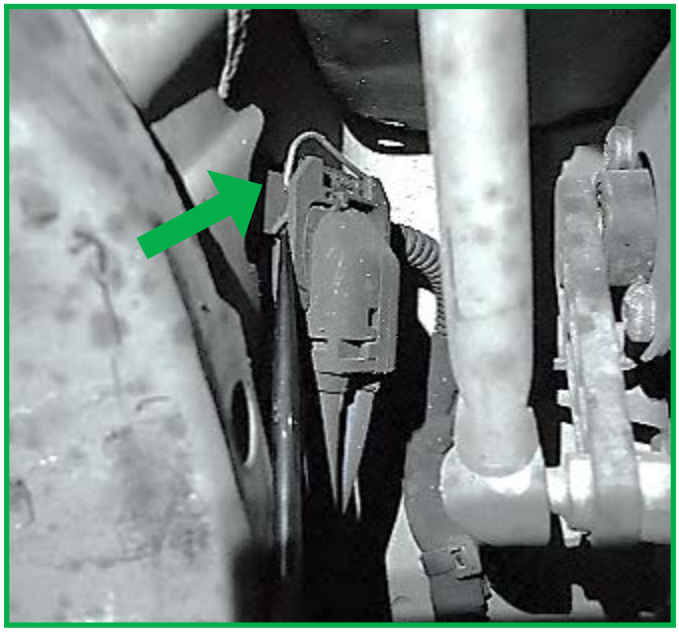


FIGURE 5

5. Disconnect and separate the two (2) electrical connectors. (Figures 6, 7)



FIGURE 6

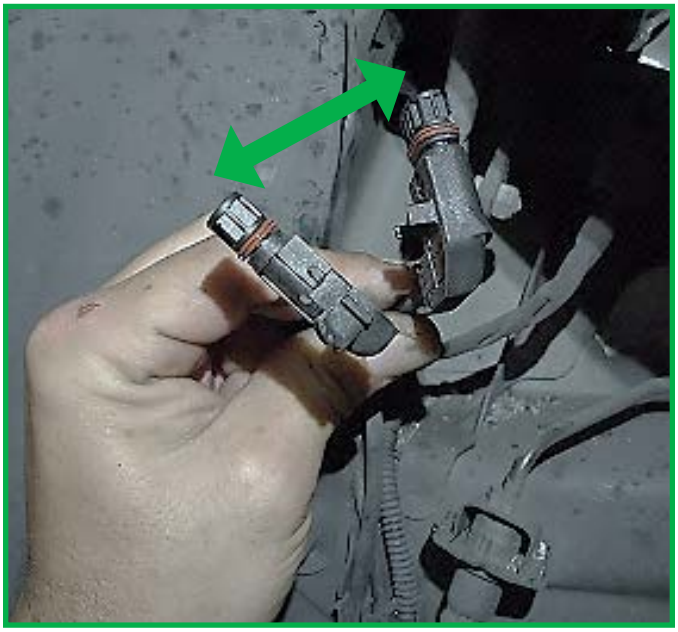


FIGURE 7

6. Cut cable ties and remove brake line bracket and bottom clip. (Figures 8, 9, 10, 11)

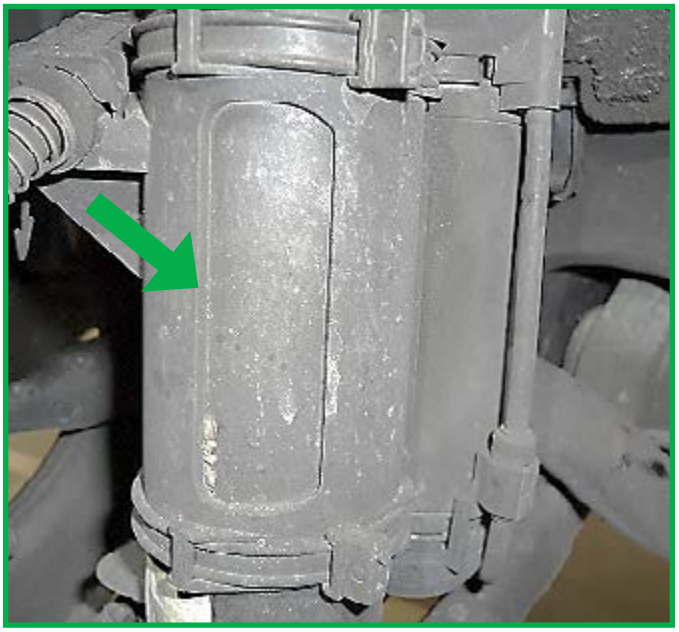


FIGURE 8



FIGURE 9

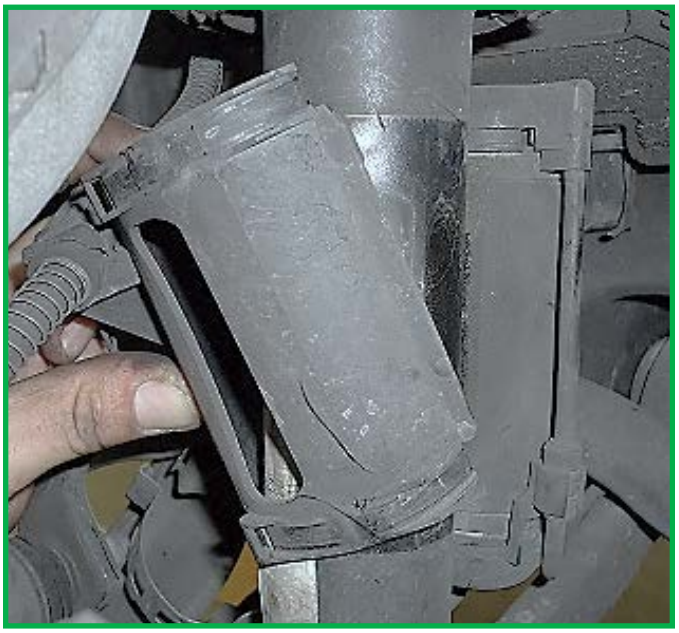


FIGURE 10

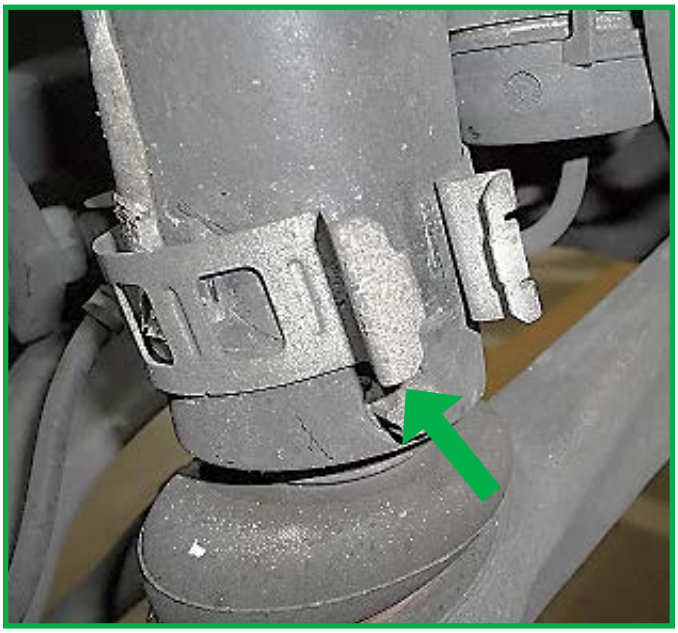


FIGURE 11

7. Locate and loosen lower mount set screws. (Figure 12)

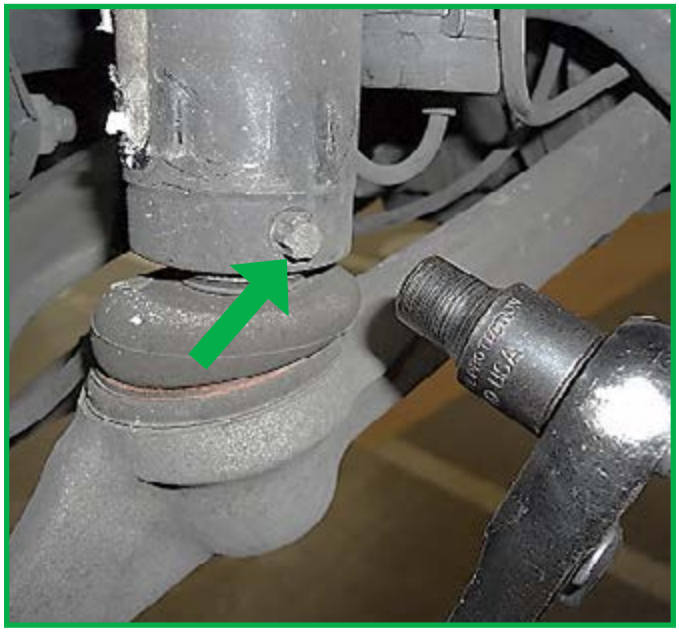


FIGURE 12

8. Loosen upper control arm nut. (Figure 13)



FIGURE 13

9. Separate the upper control arm from the spindle assembly. (Figures 14, 15)

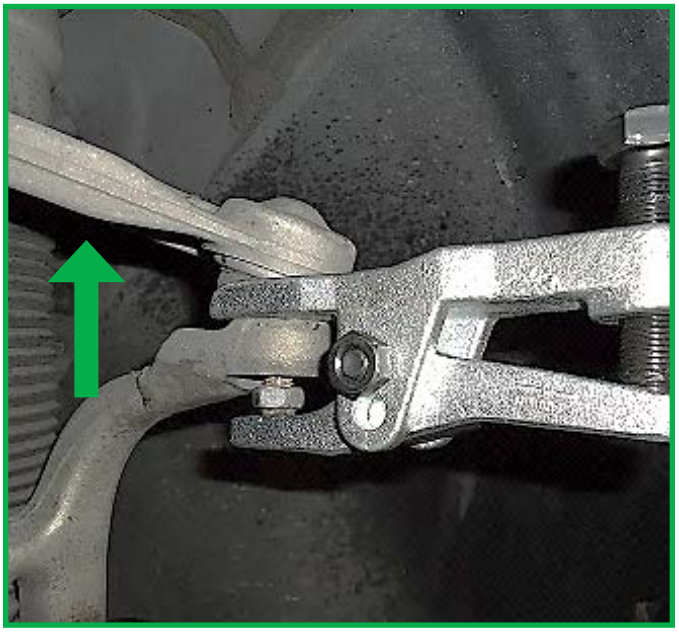


FIGURE 14



FIGURE 15

10. Pull down on the spindle assembly, and remove the air strut from the vehicle. (Figures 16, 17)

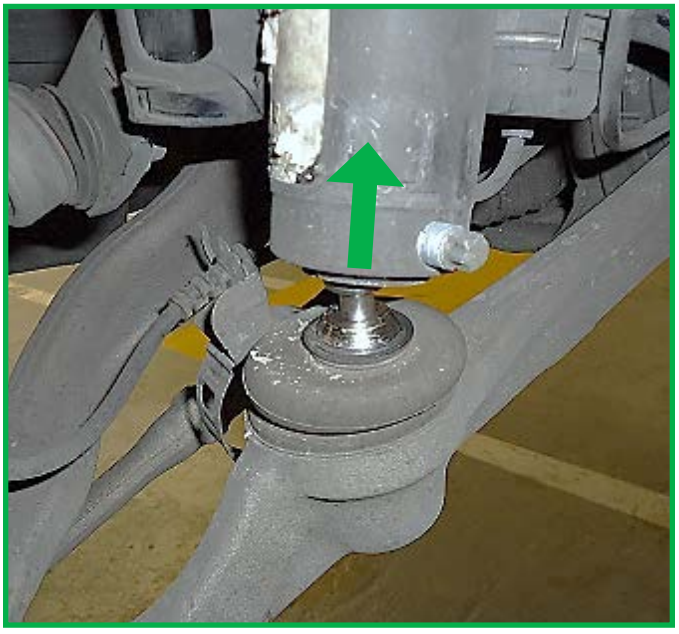


FIGURE 16



FIGURE 17

11. Air strut removal complete.

# FRONT COIL STRUT INSTALLATION

**WARNING:**

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

1. Position the front coil strut into the vehicle. (Figure 18)



**FIGURE 18**

2. Seat the coil strut onto the lower ball joint and tighten the lower set screws. (Figures 19, 20)



**FIGURE 19**



**FIGURE 20**

3. Reinstall the upper control arm nut and tighten to the manufacturer's specifications. (Figures 21, 22)



FIGURE 21

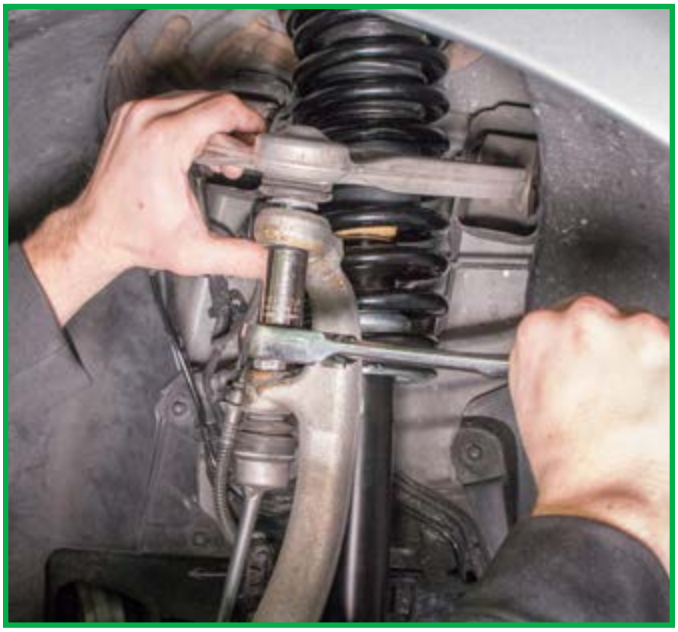


FIGURE 22

4. Reinstall the brake line holder and secure it with the supplied hardware. (Figures 23, 24, 25, 26)




FIGURE 23

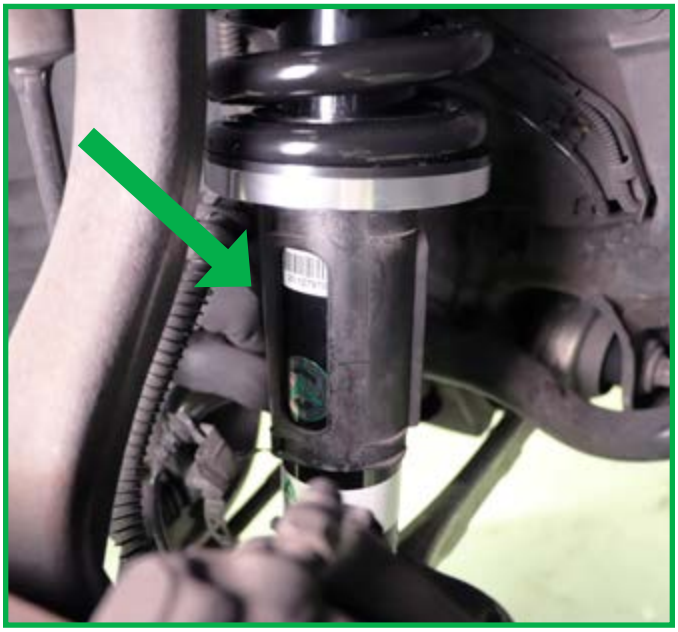


FIGURE 24



FIGURE 25



FIGURE 26

5. Install the upper mounting nuts. (Figures 27, 28)



FIGURE 27

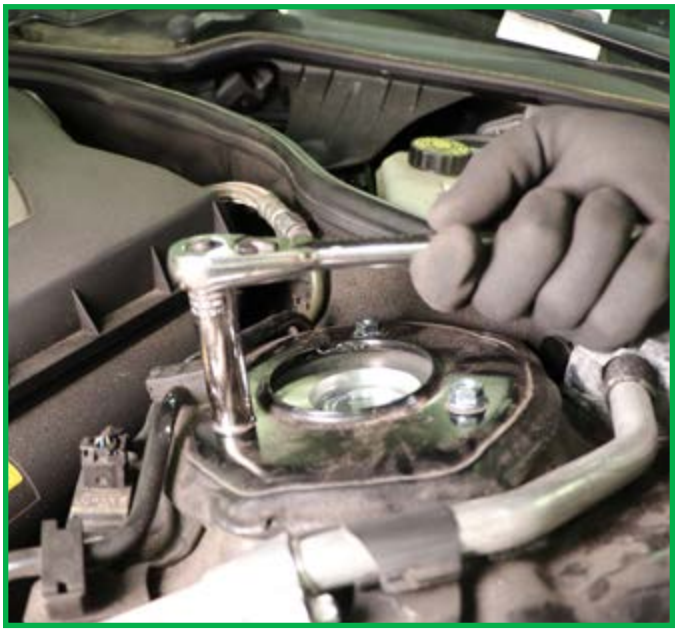


FIGURE 28

6. Front coil strut installation complete.

# REAR AIR STRUT REMOVAL

1. Set the steering to straight ahead.
2. Lift the vehicle and remove the rear wheels. (Figure 29)



FIGURE 29

3. Remove the brake caliper retaining clip. (Figure 30)



FIGURE 30

4. Disconnect and remove the brake pad wear sensor. Remove the two (2) bolts holding the brake caliper. Remove the brake caliper and suspend to prevent damage to brake lines. (Figures 31, 32)

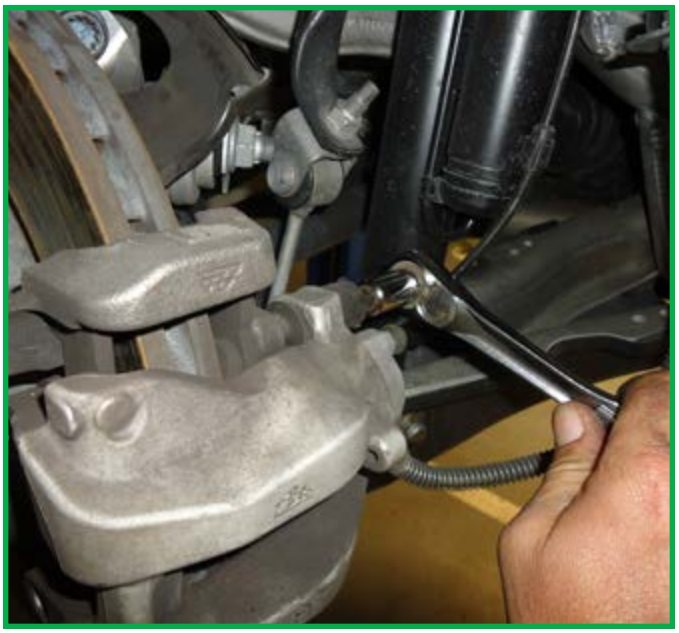


FIGURE 31



FIGURE 32

5. Remove the fasteners and inner wheel liner to expose the rear air strut's wiring block. (Figures 33, 34)



FIGURE 33



FIGURE 34

6. Remove the metal clip and plug for the rear air strut's dampening coil. (Figures 35, 36)



FIGURE 35



FIGURE 36

7. Remove the lower sway bar end link nut and separate. (Figure 37)

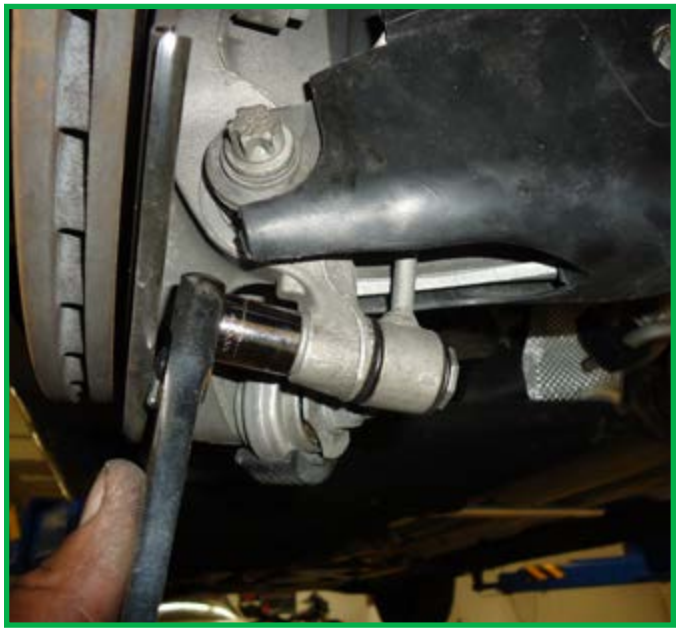


FIGURE 37

8. Remove the lower air strut mounting nut. (Figure 38)



**FIGURE 38**

9. Remove the lower control arm nut. (Figure 39)



**FIGURE 39**

10. Remove the rear dash cover from inside the vehicle. (Figure 40)

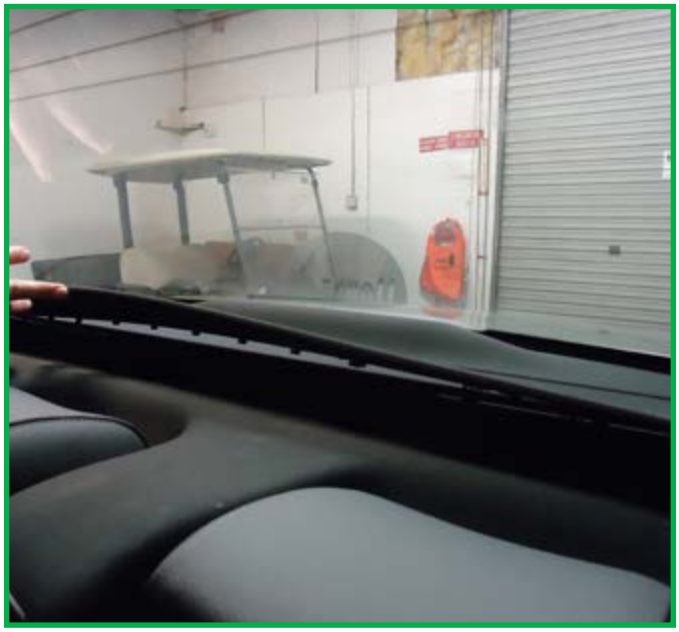


**FIGURE 40**

11. Pull back the foam insulation to expose the air strut top mount. (Figure 41)



**FIGURE 41**

12. Remove the air line. (Figures 42, 43)



FIGURE 42



FIGURE 43

13. Remove the three (3) top mounting nuts. (Figure 44)



FIGURE 44

14. Remove the lower control arm bolt and the lower air strut mounting bolt. (Figure 45)

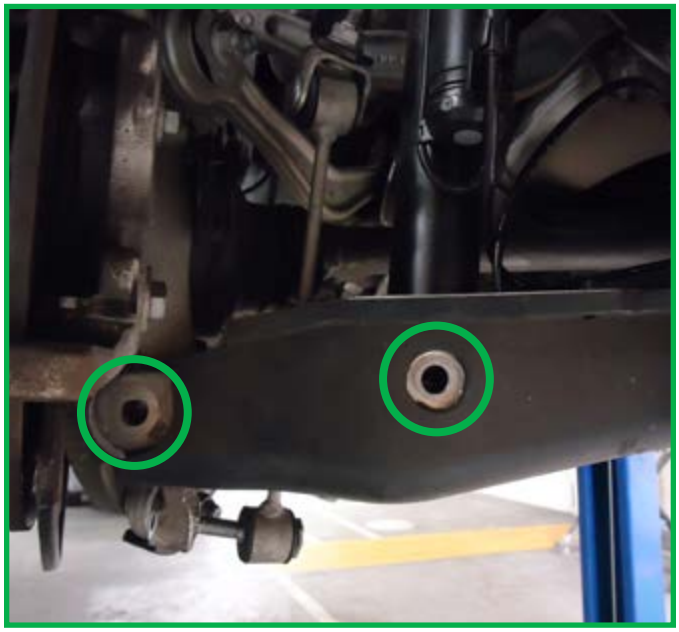


FIGURE 45

15. Pull down on the lower control arm and remove the air strut from the vehicle. (Figure 46)



FIGURE 46

16. Rear air strut removal complete.

# REAR COIL STRUT INSTALLATION

**WARNING:**

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

1. Position the coil strut onto the vehicle. (Figure 47)



**FIGURE 47**

2. Reinstall the lower strut mounting nut and bolt. (Figures 48, 49)

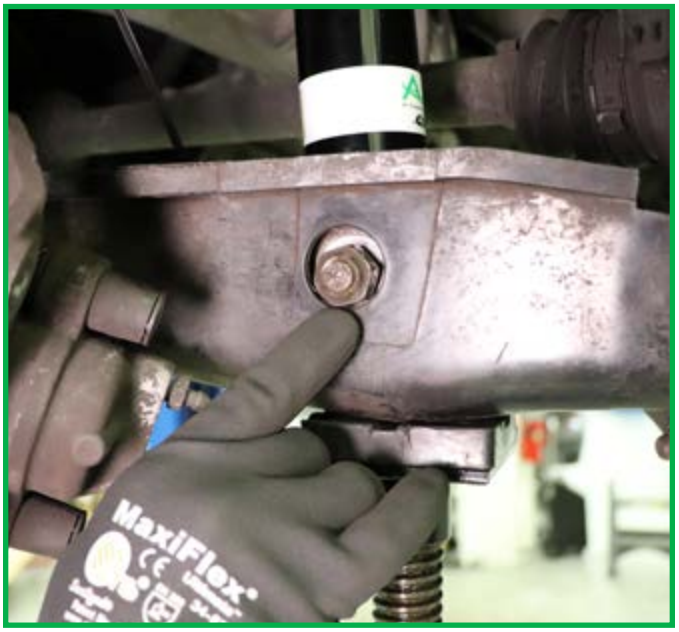



**FIGURE 48**



**FIGURE 49**

3. Raise the lower control arm and reinstall the mounting nut and bolt. (Figures 50, 51)



FIGURE 50

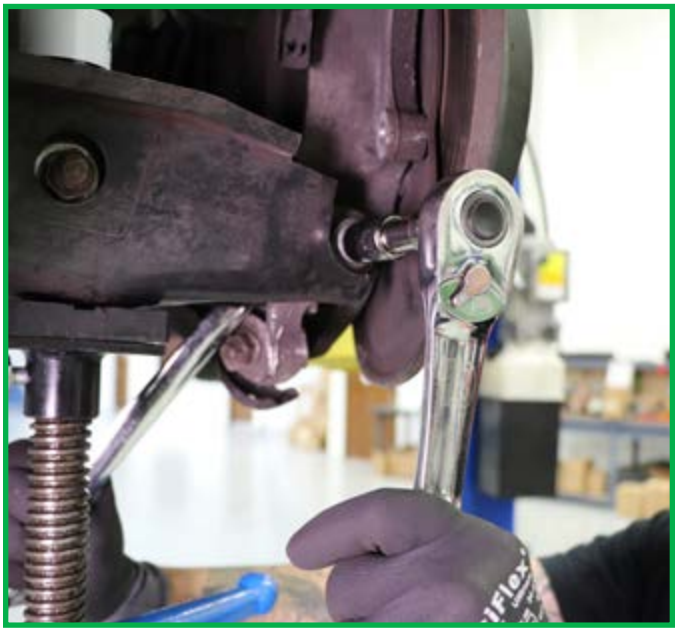


FIGURE 51

4. Reinstall the sway bar end-links. (Figures 52, 53)



FIGURE 52



FIGURE 53

5. Reattach the brake caliper and bolt into place. (Figures 54, 55, 56)



FIGURE 54

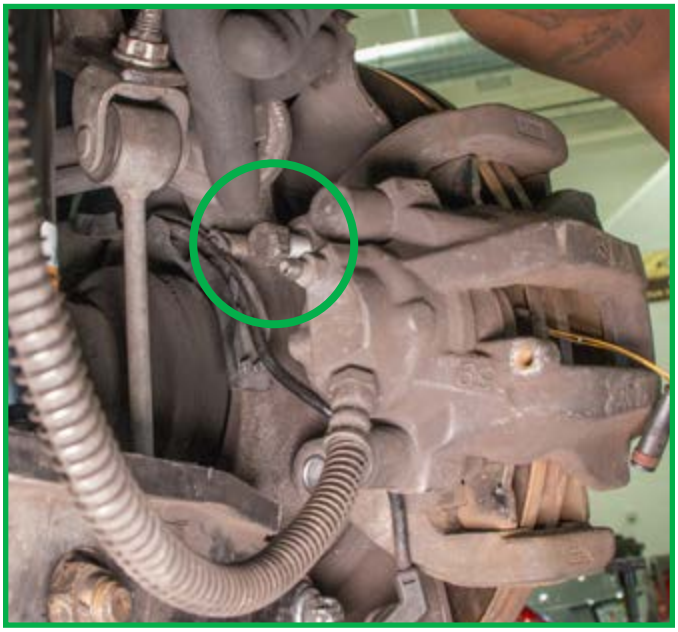


FIGURE 55

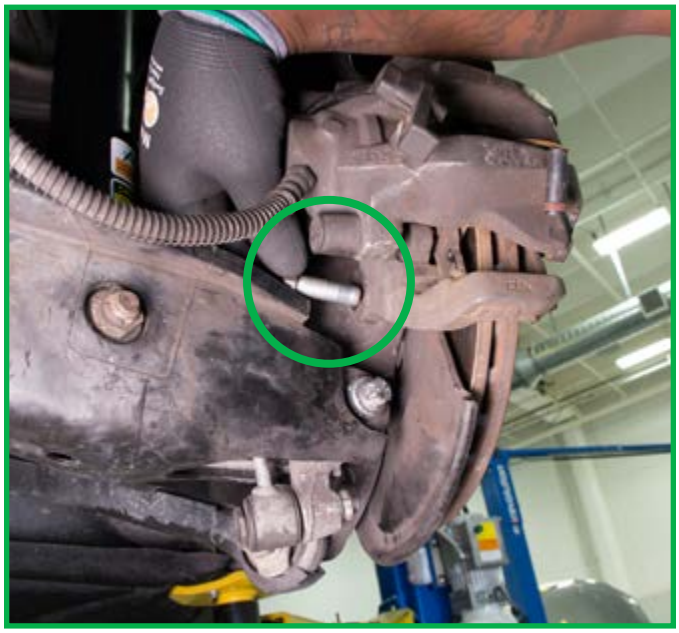


FIGURE 56

6. On the right rear, reattach brake sensor and plug in. (Figures 57, 58, 59, 60)

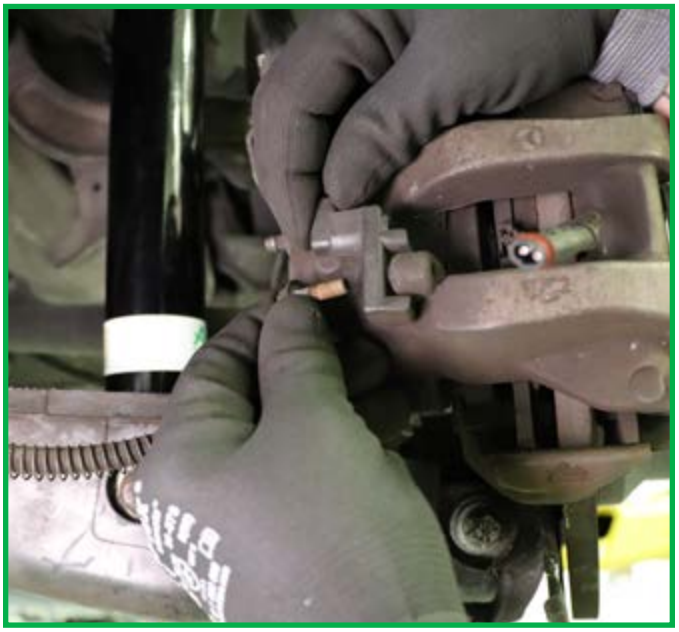


FIGURE 57



FIGURE 58




FIGURE 59




FIGURE 60

7. Reinstall the inner wheel well liner. (Figure 61)



FIGURE 61

8. Reinstall the brake caliper retaining clip. (Figure 62)



FIGURE 62

9. Secure the three (3) top mounting nuts. (Figure 63)




FIGURE 63

10. Repack foam. Air line remains disconnected. (Figure 64)



FIGURE 64

11. Replace rear deck lid. (Figure 65)



FIGURE 65

12. Rear coil strut installation complete.

# ELECTRONIC BYPASS MODLULE (EBM) INSTALLATION

1. Remove the passenger side floor mat to access the kick plate. (Figures 66, 67)




FIGURE 66



FIGURE 67

2. Loosen and remove the (3) fasteners, then lay the kick plate down on the floor board to expose the vehicle air suspension control module. (Figures 68, 69)

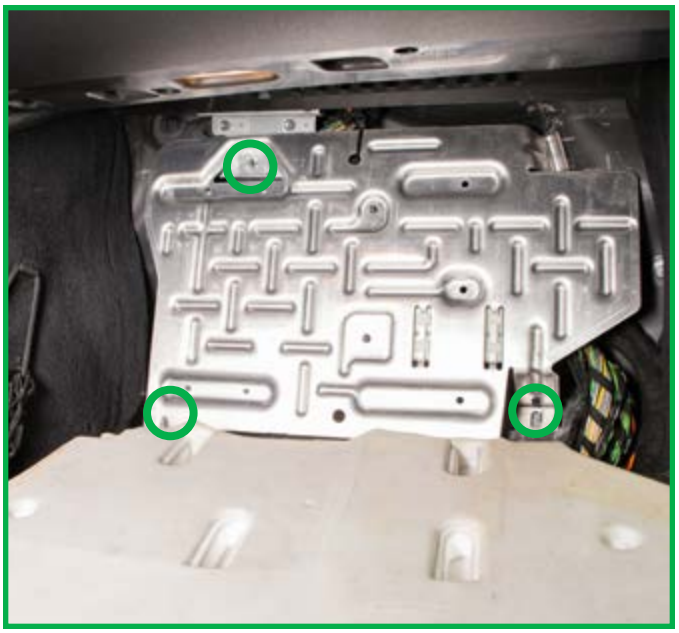


FIGURE 68



FIGURE 69

3. Disconnect the three (3) plugs from the suspension control module. (Figure 70)

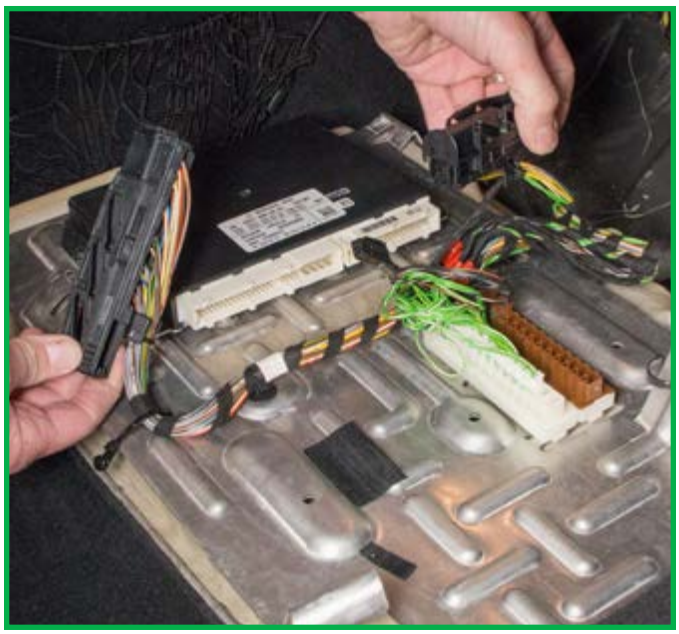


FIGURE 70

4. According to the table below, splice the EBM harness wires to the applicable vehicle control module harness wires using the four (4) supplied heat-shrink butt connectors. (Figures 71, 72)

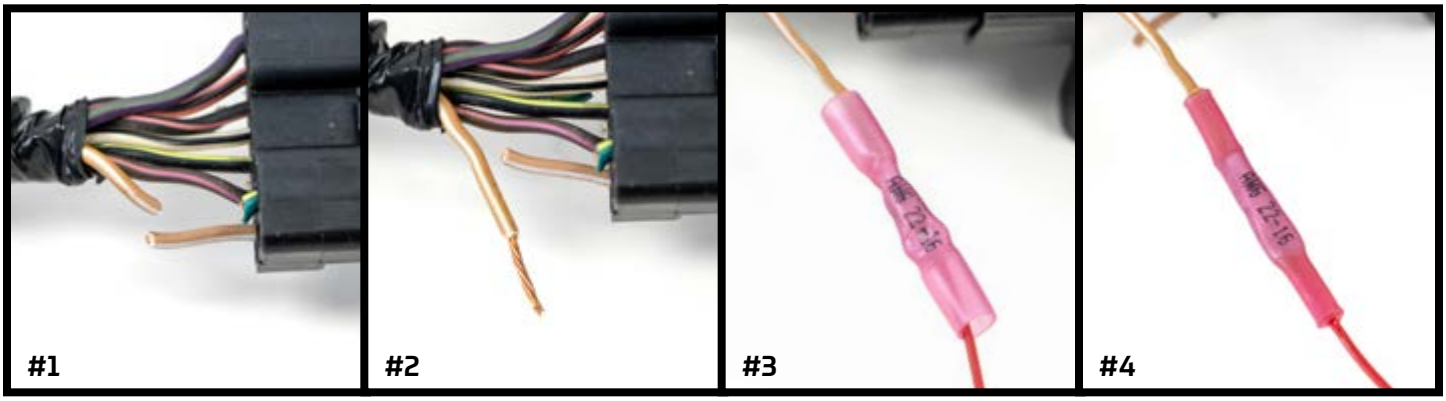
| | From | To | |
|---|---|---|---|
| ELECTRONIC BYPASS MODULE | Yellow | Two Pin Connector (Pin 24) | VEHICLE'S WIRING HARNESS |
| | Blue | Two Pin Connector (Pin 25) | |
| | Red | Red/White (Pin 47) | |
| | Black | Brown (Pin 21) | |

FIGURE 71

## HEAT-SHRINK BUTT CONNECTOR INSTALLATION

**BEFORE CUTTING**
Verify you are working with the correct wires. Check the manufacturer's wiring diagram for your specific vehicle.

**NOTE:** Make all new connections to the **HARNESS SIDE**, not the connector side.




IDENTIFY AND CUT THE APPLICABLE WIRE TO THE CONTROL MODULE.

STRIP 10MM OF INSULATION WITH A SUITABLE TOOL. TWIST EXPOSED WIRE.

INSERT THE WIRE INTO THE BUTT CONNECTOR AND CRIMP ACCORDING TO THE TABLE ABOVE.

USE AN APPROPRIATE TOOL TO HEAT SHRINK.

FIGURE 72

**NOTE:** **Do not plug the suspension control module back in.** It remains unplugged. There should be no suspension error lights present in the instrument cluster.

5. Secure the EBM in a suitable location, away from friction or pinch points.
6. Inside the engine compartment, open the fuse box. (Figures 73, 74)



FIGURE 73



FIGURE 74

7. Replace the below indicated fuse (#46) with the included fuse. (Figures 75, 76)

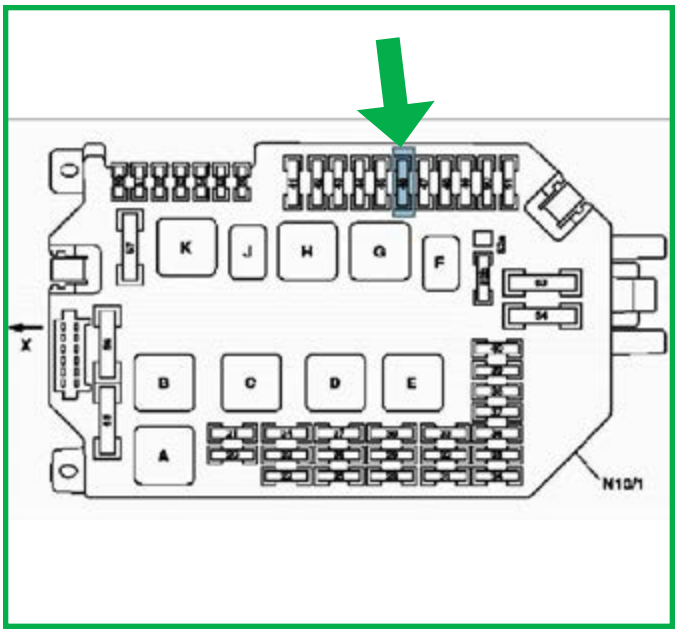



FIGURE 75

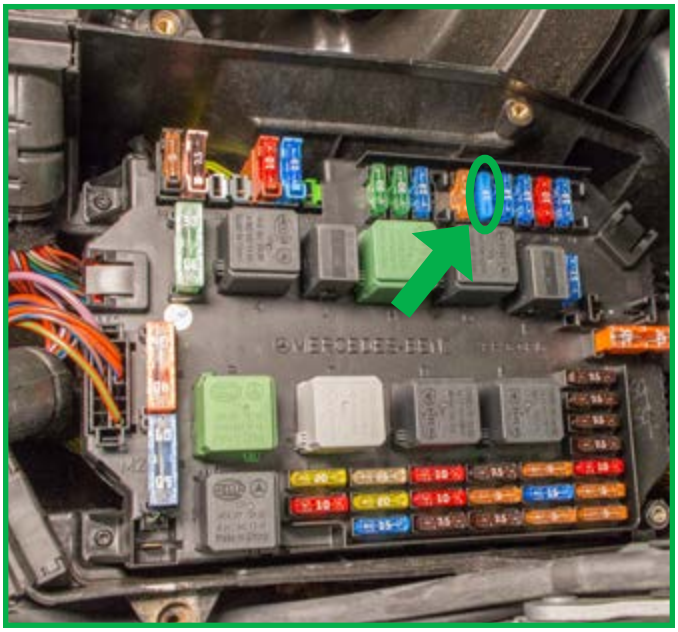


FIGURE 76

8. EBM installation complete.

**A 4-WHEEL ALIGNMENT**
**IS RECOMMENDED AFTER INSTALLATION**

**HOW HELPFUL WAS THIS MANUAL?**

Scan the QR code or click the link below to let us know.

https://bit.ly/4unUgRO

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**Fax:** 321.868.3703
**Email:** techassistance@arnottinc.com

## Arnott Europe Business Office:

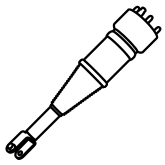
www.arnotteurope.com

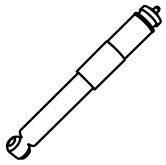
Industrieweg 19
5145 PD, Waalwijk (NL)

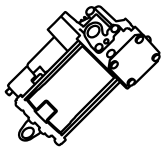
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**FR Phone:** +32 78 48 46 93
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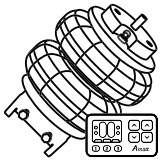


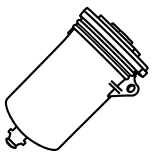
Air Springs

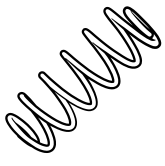

Struts

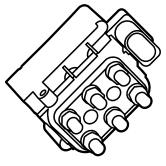

Shocks

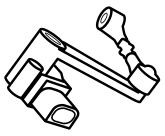

Compressors

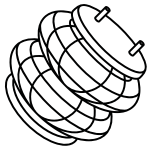

LCV Air Helper Spring Kits


Dryers


Coil Spring Conversion Kits


Valve Blocks


Ride Height Sensors


Pickup Truck Air Helper Springs