



# INSTALLATION MANUAL

# C-3548

# Arnott Coil Spring Conversion Kit Mercedes-Benz ML/GL-Class (W/X166)



# Engineered to Ride, Built to Last<sup>®</sup>

# 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.

## REAR REMOVAL

1. Lift the vehicle.
2. Disable and deflate the air suspension system per manufacturer's instructions.
3. Remove the rear wheels.
4. Remove the wheel well cover.
5. Disconnect the air line from the back of the air spring. (Figure 1)

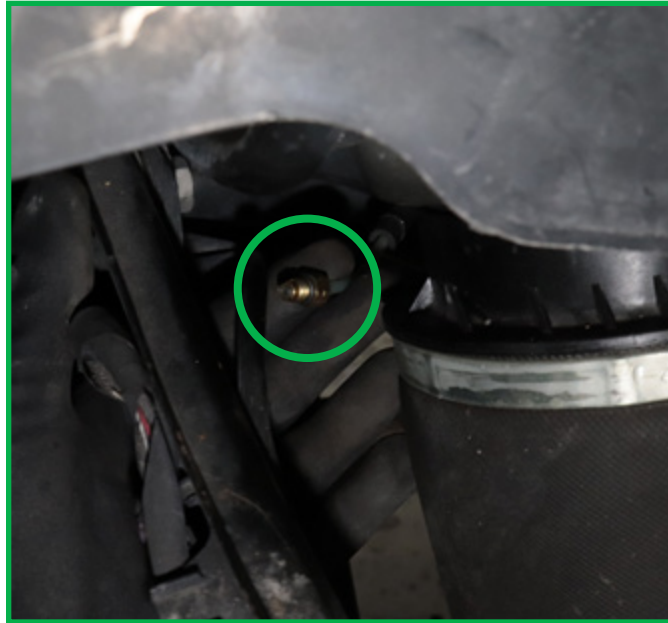


FIGURE 1

6. Pull down on the air spring or use a pry bar to disconnect the spring from the upper retaining clip. (Figures 2, 3)



FIGURE 2



FIGURE 3

7. Remove the air spring. (Figure 4)



FIGURE 4

8. Clean out any debris from the lower spring seat. (Figure 5)



FIGURE 5

9. Remove the retaining clip from the upper spring seat. (Figure 6)

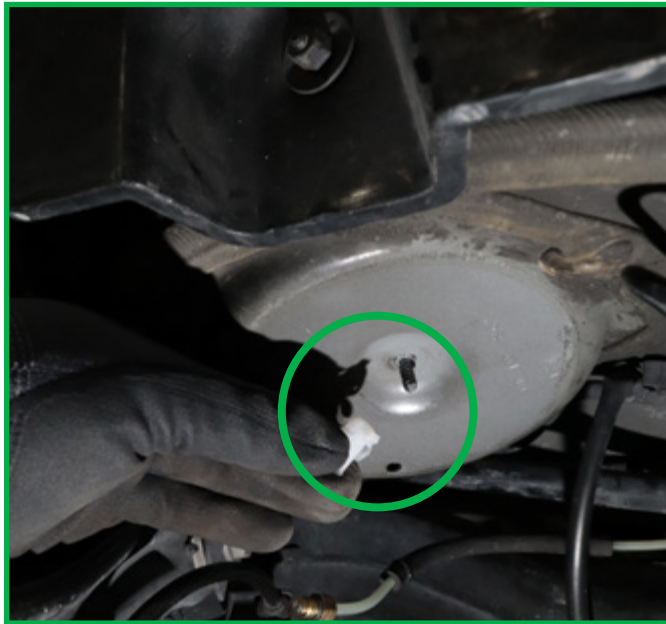


FIGURE 6

10. Disconnect the shock's electrical connector from the vehicle wiring harness. (Figure 7)

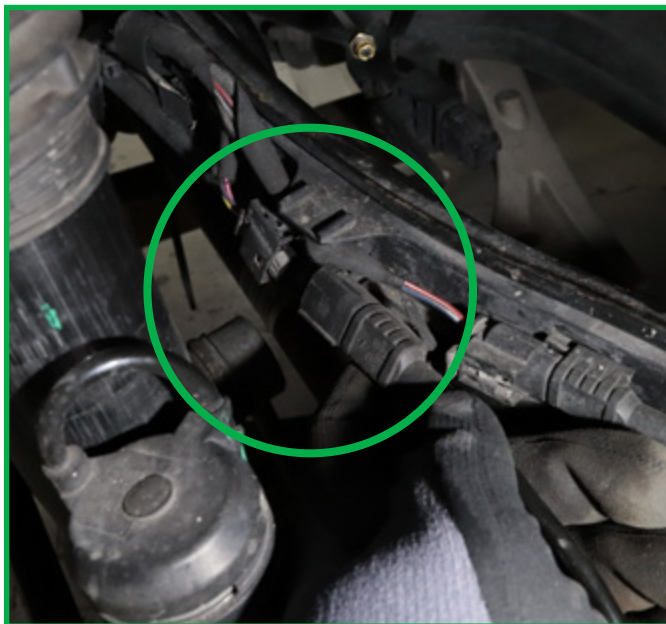


FIGURE 7



11. Remove the lower shock bolt. (Figures 8, 9)



FIGURE 8



FIGURE 9

12. Remove the interior trim from the rear cargo area to gain access to the shock top mount nuts. (Figures 10, 11)



FIGURE 10



FIGURE 11

13. Remove the two top mount nuts from the shock and remove the shock from the vehicle. (Figure 12)



FIGURE 12

14. Removal complete.

# REAR INSTALLATION



**WARNING:**

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

1. Place an appropriate jack underneath the lower control arm to support wheel hub for the remainder of the installation.
2. Install the new Arnott rear shock into the vehicle, securing the top mount with the provided top nuts. Do not install the lower shock bolt at this time. (Figure 13)



FIGURE 13

3. Disconnect the ride height sensor bracket from the lower control arm. (Figure 14)



FIGURE 14



4. Disconnect the rear lower control arm. (Figure 15)



FIGURE 15

5. Disconnect the front and rear upper control arms. Un-route the brake line from the plastic bracket. Disconnect the wheel speed sensor and un-route the wire from the control arm. (Figure 16)



FIGURE 16

6. Disconnect the sway bar link from the sway bar. (Figure 17)



FIGURE 17

7. Place the lower spring perch into the lower spring seat on the control arm. (Figure 18)



FIGURE 18

8. Place the upper spring perch and rubber isolator into the top of the spring. (Figure 19)



FIGURE 19

9. Place the spring onto the lower spring perch and push down on the wheel hub to tip the spring upper perch into the upper spring seat.
10. Ensure that the spring is safely seated at the top and bottom, and that the jack is in a reliable position on the main lower control arm. Slowly jack the lower control arm into a position where the disconnected control arms can be reattached.
11. Reconnect the rear lower control arm. (Figure 20)

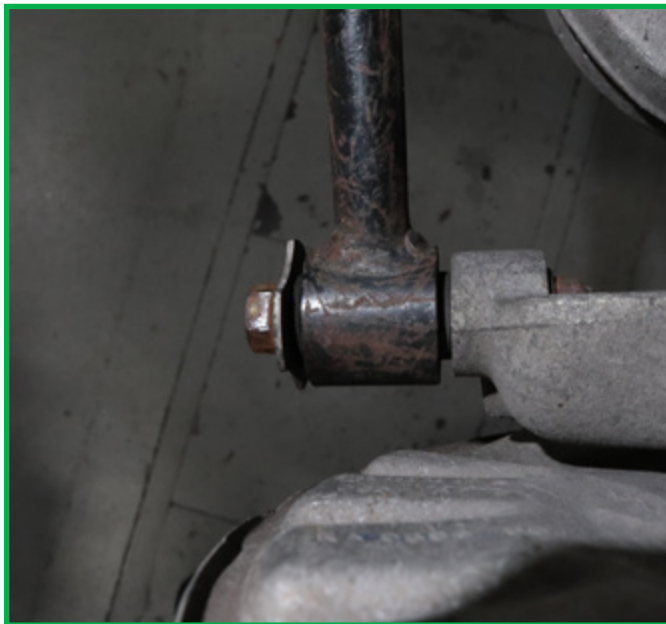


FIGURE 20

12. Reconnect the front and rear upper control arms. Re-route and connect the wheel speed sensor and brake line. (Figures 21, 22)

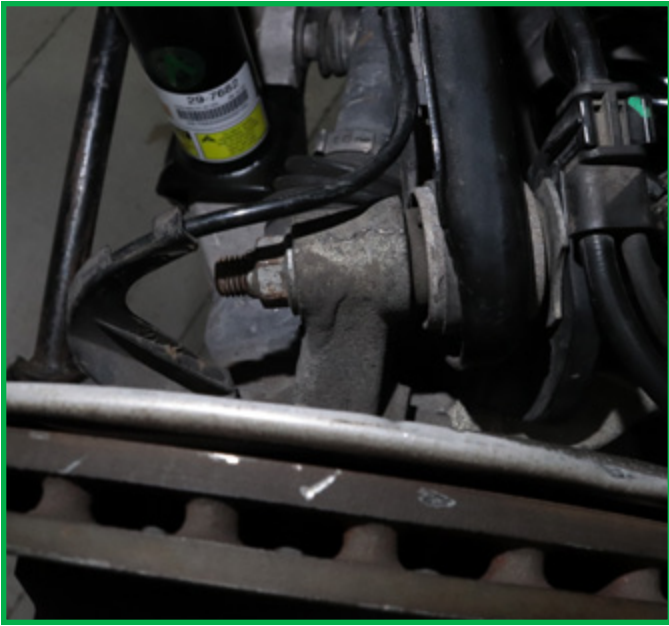


FIGURE 21

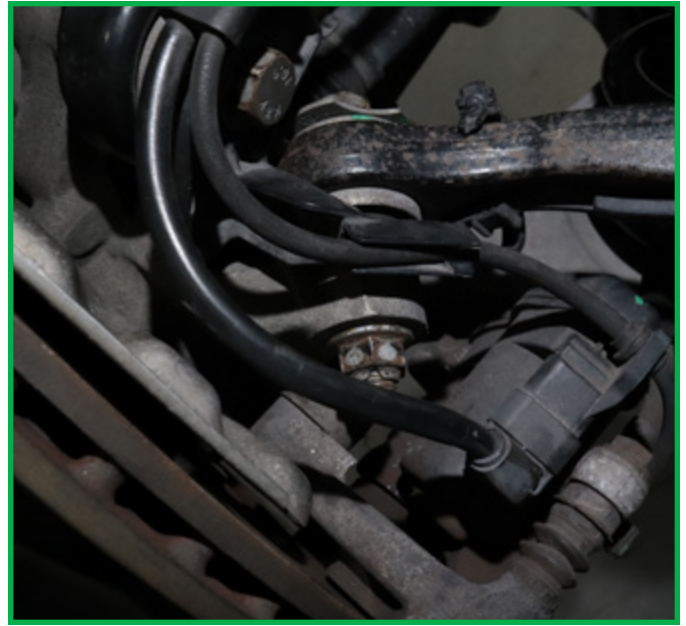


FIGURE 22

13. Install the lower shock bolt. (Figure 23)



FIGURE 23

14. Reconnect the sway bar link to the sway bar. (Figure 24)



FIGURE 24

15. Reconnect the ride height sensor bracket. (Figure 25)



FIGURE 25



16. Tighten all hardware to manufacturer's specifications. (Figure 26)



FIGURE 26

17. Reinstall the wheel well liner.

18. Reassemble the cargo area trim.

19. Seal off and secure unused air lines and electrical connections.

20. Installation complete.

# FRONT REMOVAL

## DISCLAIMER:

The product shown in the installation steps below may look different than the part you are installing. The installation steps are the same (unless otherwise noted) and all notices and warnings should be adhered to in the same manner.

1. Set steering to straight ahead.
2. Raise vehicle.
3. Remove front wheel. (Figure 27)

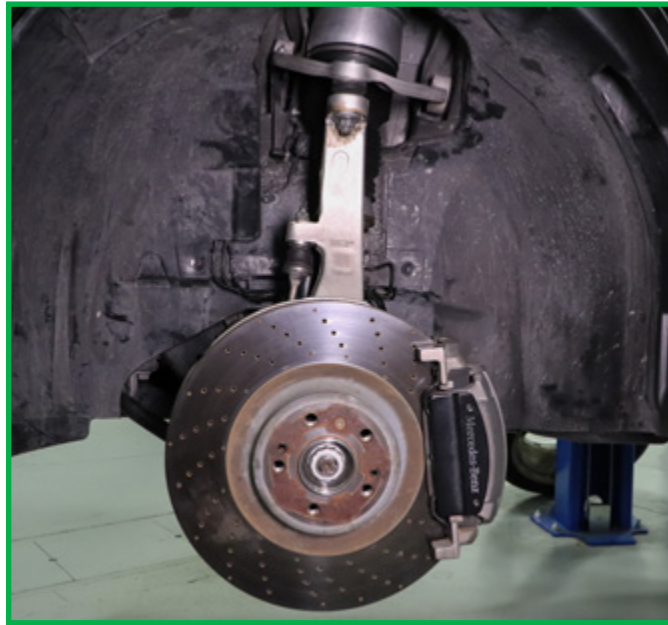


FIGURE 27

4. Remove engine bay trim panel to access top of air strut. (Figure 28)



FIGURE 28

5. Remove the air line fitting. (Figure 29)

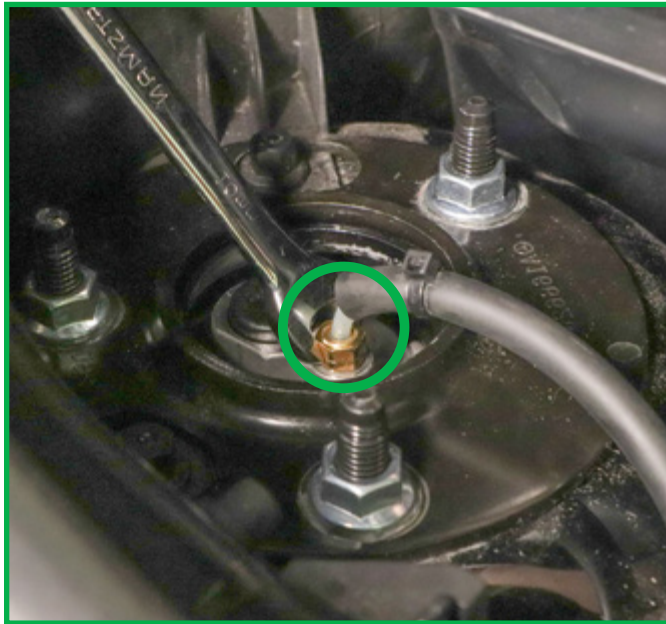


FIGURE 29

6. Remove the three (3) top mount nuts. (Figure 30)

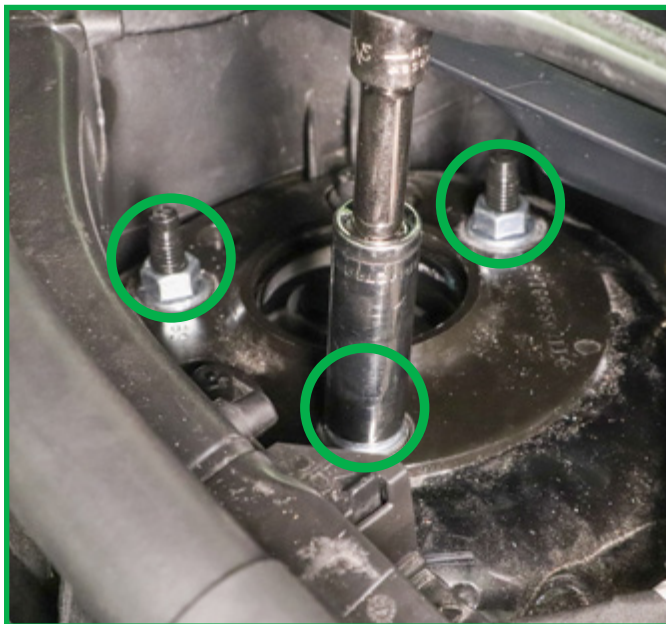


FIGURE 30

7. Disconnect steering knuckle joint. (Figures 31, 32)

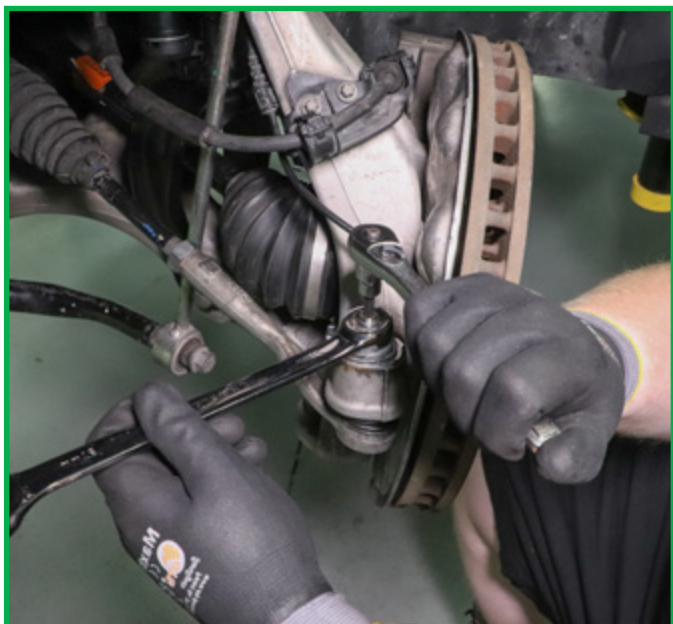


FIGURE 31

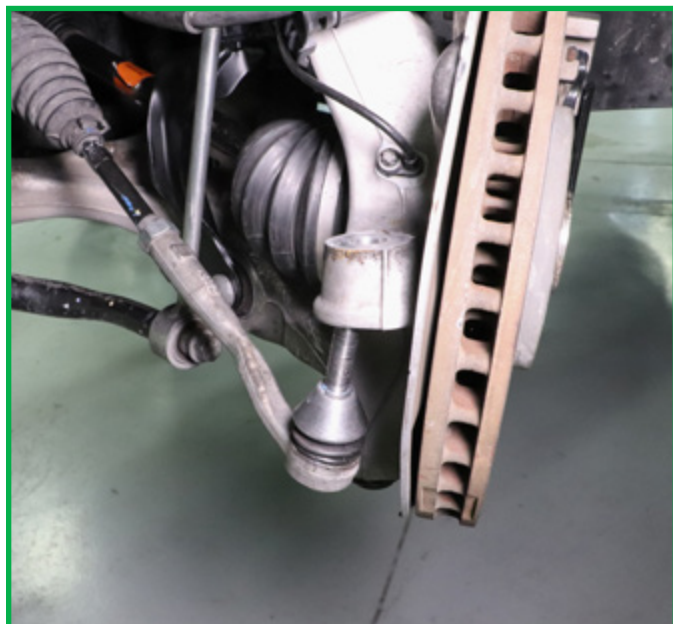


FIGURE 32

8. Disconnect sway bar linkage and remove. (Figures 33, 34)

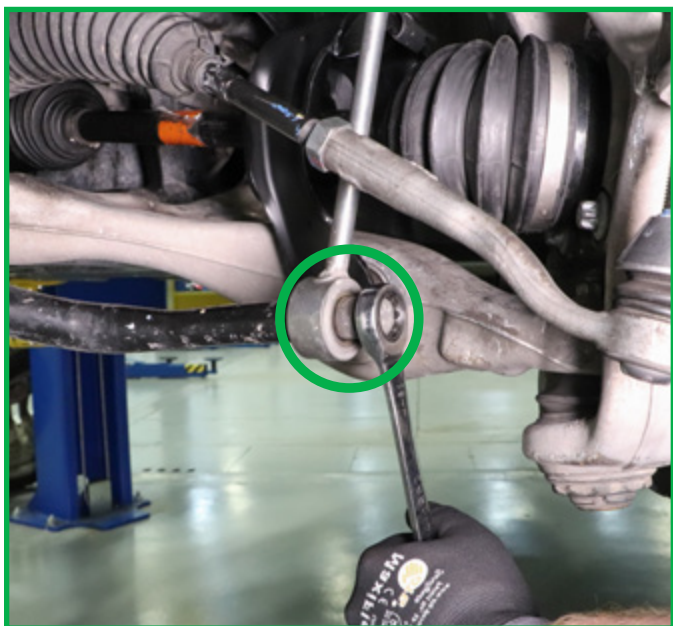


FIGURE 33

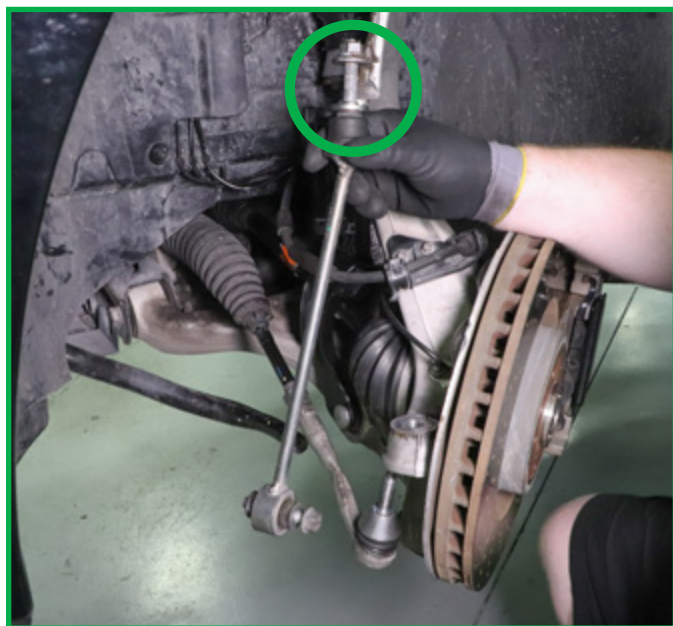


FIGURE 34



9. Disconnect air strut solenoid wire. Remove wire guide and unroute brake lines. (Figures 35, 36)



FIGURE 35



FIGURE 36

10. Remove lower strut mount nut. Leave the bolt in place. (Figure 37)

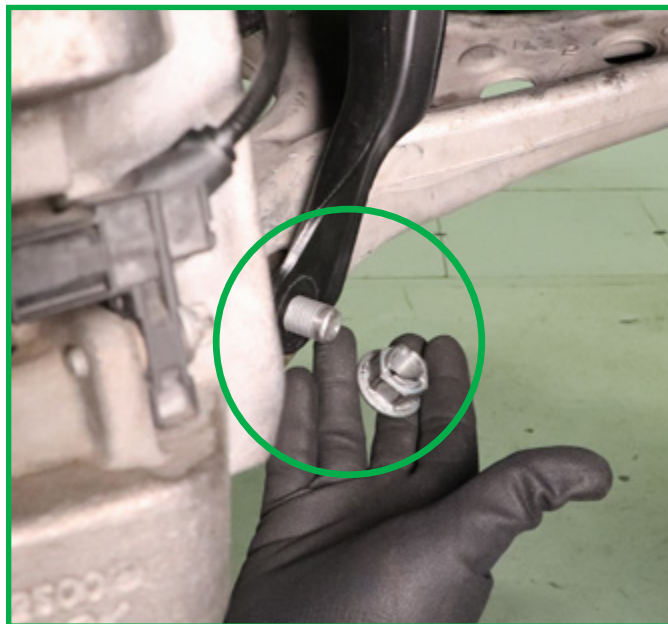


FIGURE 37



11. Remove axle nut. (Figures 38, 39)



FIGURE 38

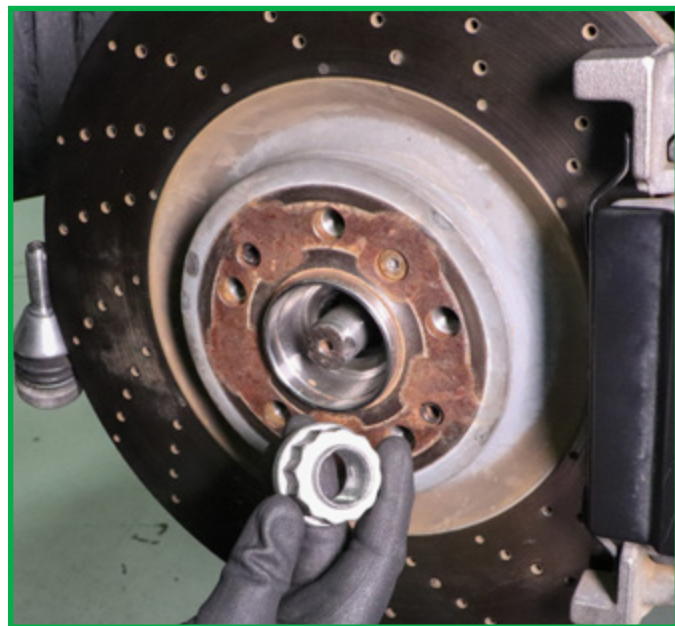


FIGURE 39

12. Disconnect upper wishbone ball joint from spindle. (Figures 40, 41)



FIGURE 40



FIGURE 41

13. Separate axle from front wheel bearing. (Figure 42)

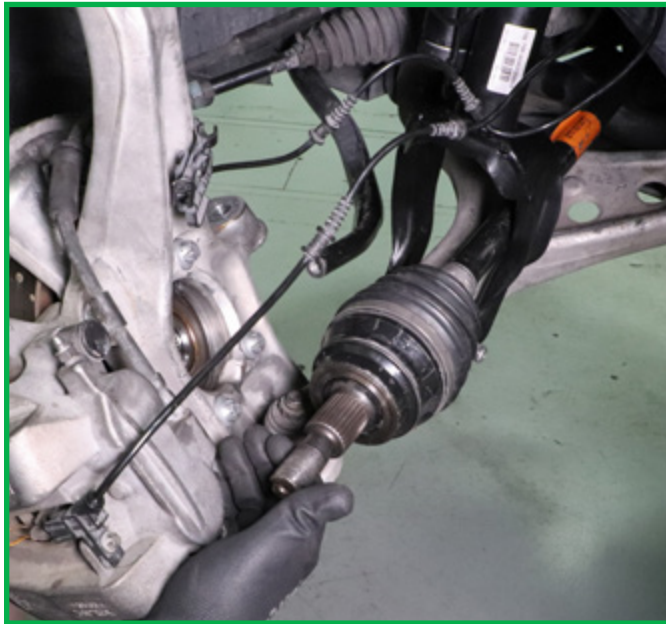


FIGURE 42

14. Remove bottom strut mount bolt. (Figure 43)



FIGURE 43

15. Pull out axle and remove air strut. (Figures 44, 45)

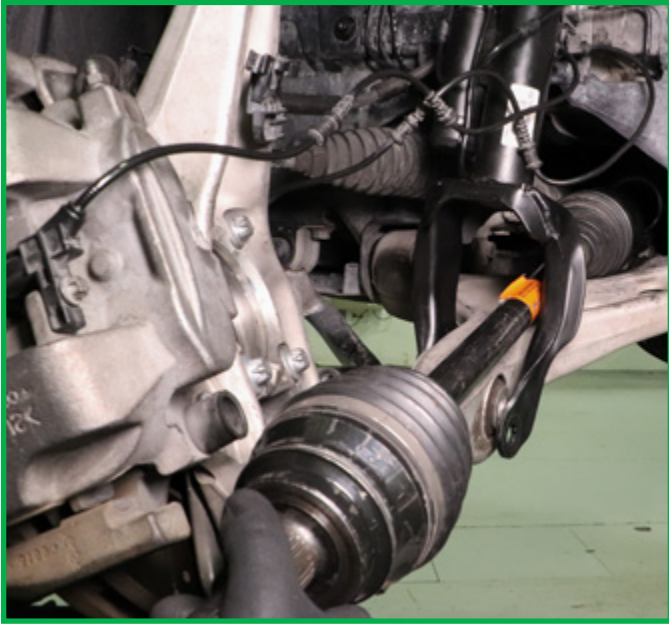


FIGURE 44



FIGURE 45

16. Removal complete.

## FRONT INSTALLATION



**WARNING:**

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

1. Install the new Arnott coil strut and guide the axle back into place. Install the top mount nuts loosely to hold the strut in position. (Figure 46)



FIGURE 46



2. Reinstall the bottom strut mount bolt, aligning the hex collar on the bolt to the hex on the lower strut mount. (Figure 47)

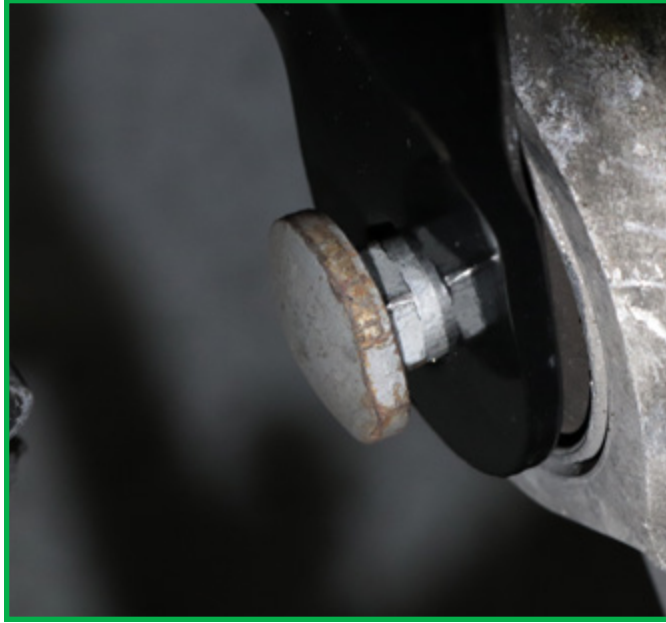


FIGURE 47

3. Using an appropriate jack, raise the lower control arm to normal trim height to facilitate the remainder of the installation process.
4. Reinstall the spindle assembly and tighten to manufacturer's specifications. (Figure 48)



FIGURE 48

5. Reinstall the wire guide and route the speed sensor wire and brake line.

6. Reinstall the sway bar link and tighten to manufacturer's specifications. (Figures 49, 50)

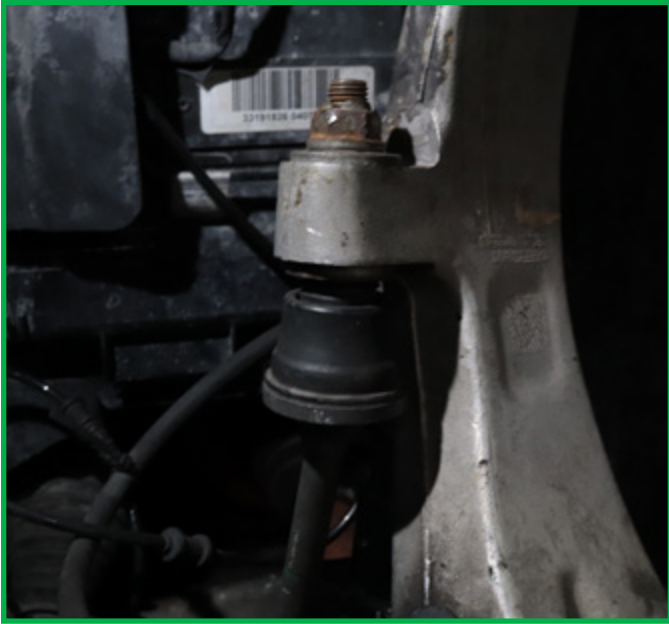


FIGURE 49



FIGURE 50

7. Reinstall the steering knuckle link and tighten to manufacturer's specifications. (Figure 51)



FIGURE 51



8. Reinstall the wheel speed sensor. (Figure 52)



FIGURE 52

9. Reinstall the axle nut and tighten to manufacturer's specifications. (Figure 53)



FIGURE 53

10. Tighten the lower strut mount bolt to manufacturer's specifications. The clevis on the strut will bend together to sit flush against the bushing. (Figure 54)



FIGURE 54

11. Tighten the top mount nuts to manufacturer's specifications. (Figure 55)

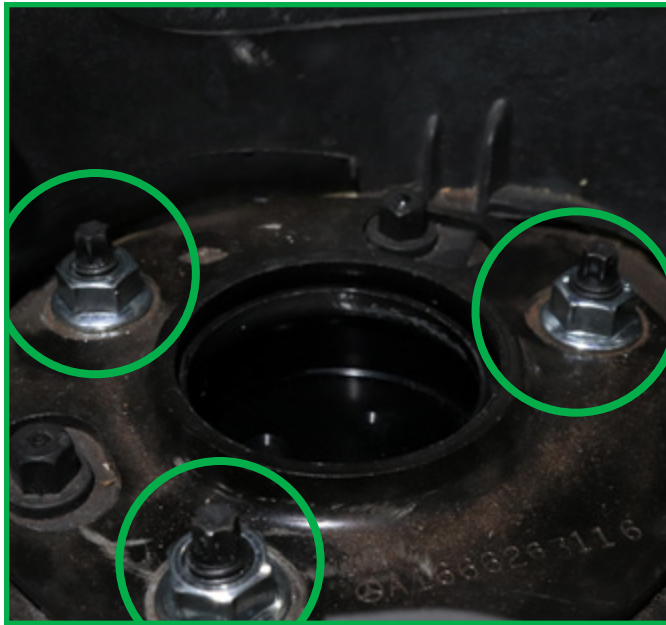


FIGURE 55

12. Seal off and secure unused air lines and wire harnesses.
13. Reinstall engine bay trim.
14. Reinstall wheels.
15. Installation complete.

# EBM INSTALLATION

1. Remove the applicable trim around the driver's seat footwell. Peel back the insulation and remove the panel to gain access to the suspension control module. (Figures 56, 57)



FIGURE 56



FIGURE 57

2. Disconnect the harness from the suspension control module. (Figure 58)

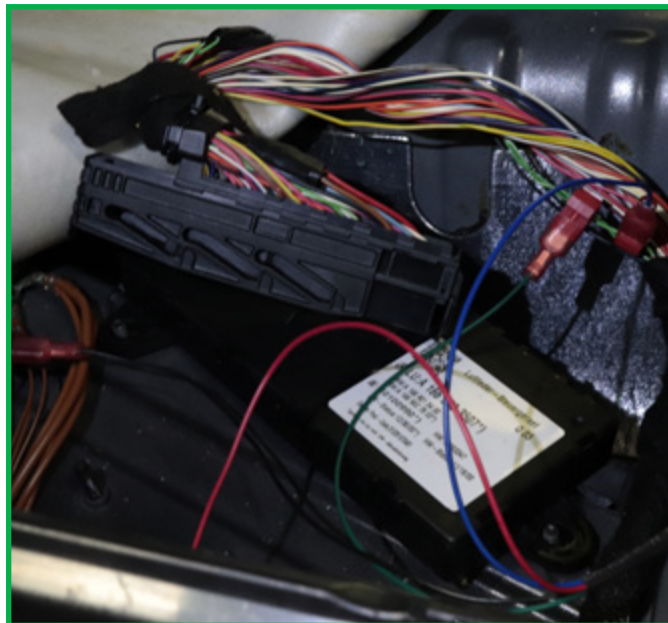


FIGURE 58

3. Using the table below, splice the included T-Taps into the indicated wires. Connect the EBM harness to the T-Taps. (Figures 59, 60, 61)

EBM WIRE	VEHICLE HARNESS	HARNESS PIN #	PIN WIRE COLOR
Blue	M	20	Green/White
Green	M	19	Green
Red	M	47	Red
Black	Ground Terminal	-	Brown

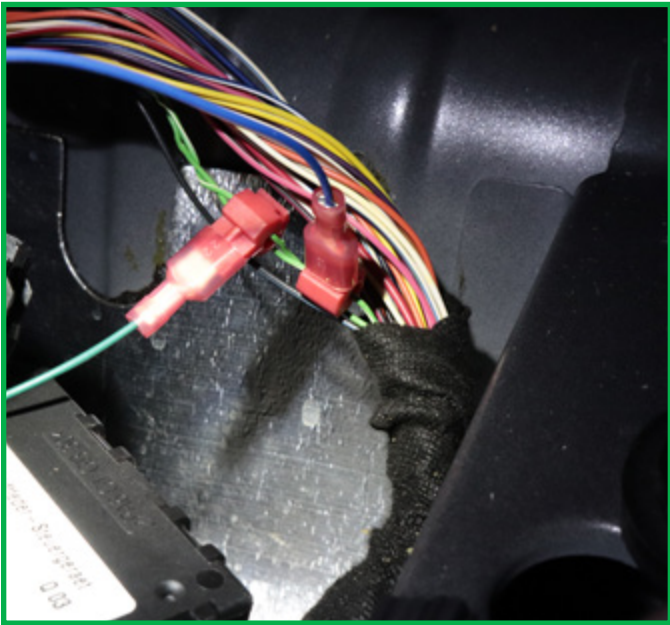


FIGURE 59

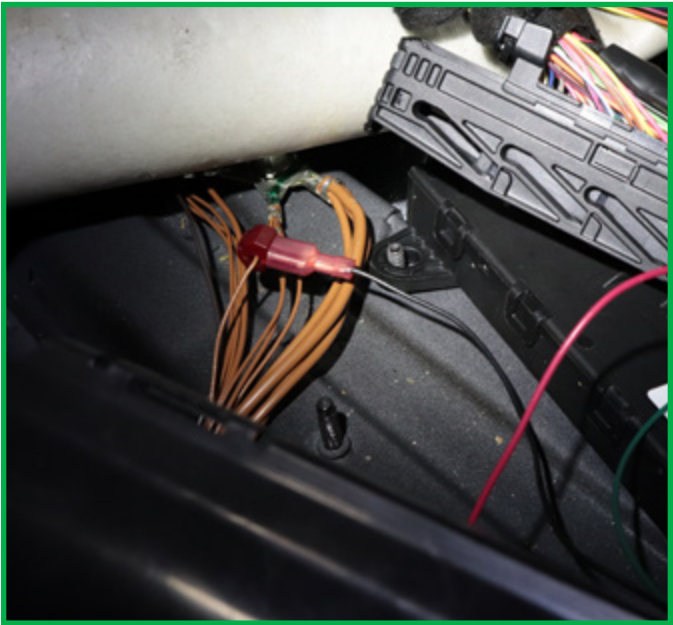


FIGURE 60



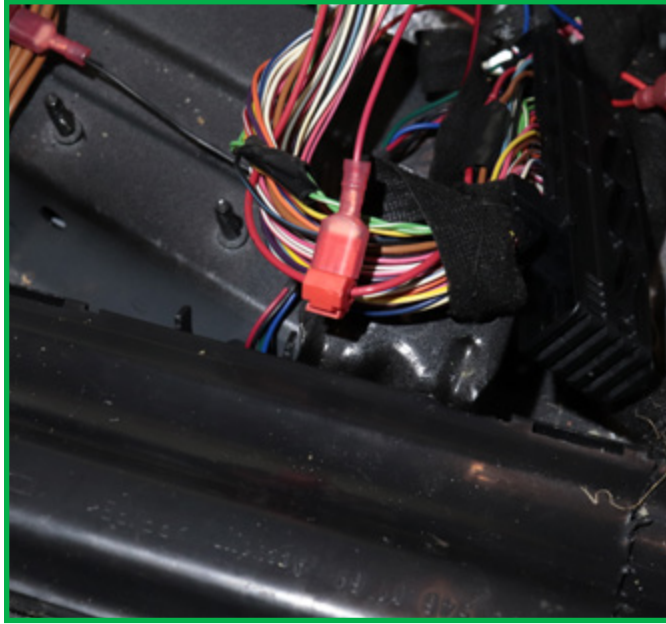


FIGURE 61

4. Do not plug the module back in.
5. Connect the EBM to the EBM harness. Secure the EBM in a suitable location. (Figure 62)



FIGURE 62

6. Reassemble the footwell.
7. Installation complete.



# Arnott™

## Suspension Products

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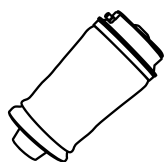
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**BE Phone:** +32 258 846 90

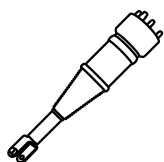
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**FR Phone:** +32 78 48 46 93

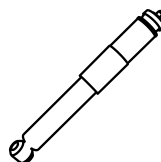
**Email:** [info@arnotteurope.com](mailto:info@arnotteurope.com)



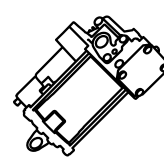
Air Springs



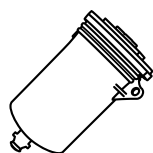
Struts



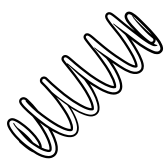
Shocks



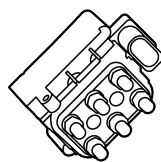
Compressors



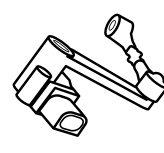
Dryers



Coil Spring  
Conversion Kits



Valve Blocks



Ride Height  
Sensors