

## **INSTALLATION MANUAL**

# C-3552 Arnott New Coil Spring Conversion Kit w/EBM Porsche Cayenne (92A 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 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.

This vehicle contains a "Closed Air Supply System". Replacement of components requires proper adherence to NOTE: procedures set forth within OE servicing literature. Failure to comply with the OE prescribed procedures can result in component damage and/or failure.

#### **FRONT REMOVAL**

- Disable and deflate the air suspension system per manufacturer's instructions.
- 2. Raise vehicle.
- 3. Remove front wheel. (Figure 1)



FIGURE 1

4. Open hood and remove applicable engine bay trim to access the strut's top mount and electrical connector. (Figures 2, 3, 4)





FIGURE 2 FIGURE 3



FIGURE 4

#### 5. Remove engine strut damper. (Figures 5, 6, 7)





FIGURE 5 FIGURE 6



FIGURE 7

6. Disconnect the electrical connection to the strut. (Figures 8, 9)





FIGURE 8 FIGURE 9

7. Loosen and remove the strut's top mounting nuts. (Figure 10)



FIGURE 10

#### 8. Loosen and remove air line, then remove and discard OE air fitting. (Figures 11, 12)



FIGURE 11

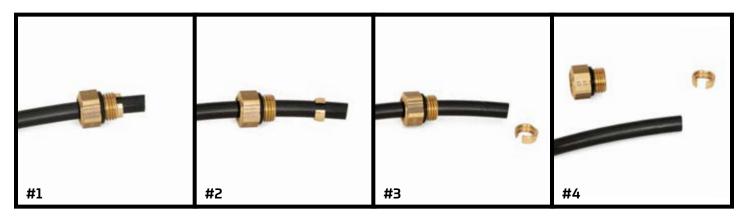
#### **OE AIR FITTING REMOVAL**



Prior to inserting the existing air line into the new air strut you will need to remove the old original equipment air line fitting and discard.

NOTE:

Scratches and/or deep cuts in the air line can result in possible leaks. Inspect the air line before insertion. Air line needs to be replaced if damaged.



**OE AIR LINE FITTING** 

SLIDE THE THREADED PORTION UP THE LINE AND SPREAD THE COLLET OPEN TO REMOVE SLIDE THE AIR FITTING OFF OF THE AIR LINE

DISCARD OE AIR LINE FITTING

FIGURE 12

#### 9. Disconnect the height sensor linkage. (Figures 13, 14)





FIGURE 13 FIGURE 14

#### 10. Disconnect the brake hose grommet. (Figure 15)

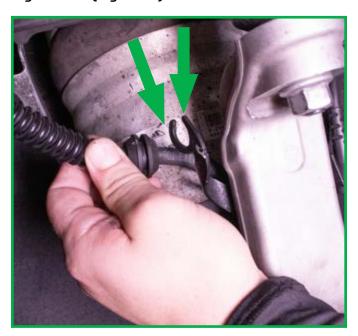


FIGURE 15

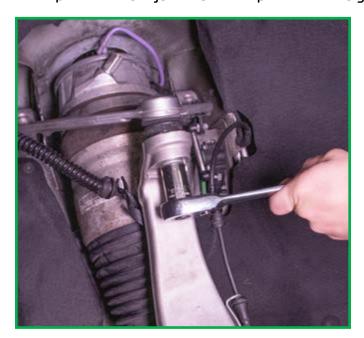
#### 11. Disconnect the ABS sensor grommet and connection. (Figures 16, 17)





FIGURE 16 FIGURE 17

#### 12. Separate the ball joint from the spindle assembly. (Figures 18, 19)





13. Loosen and remove the top sway bar end link bolt and nut. (Figures 20, 21)

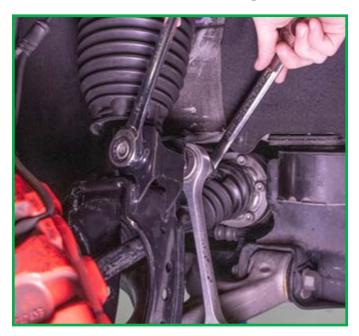




FIGURE 20 FIGURE 21

14. Loosen the bottom sway bar end link nut, but do not remove. (Figure 22)

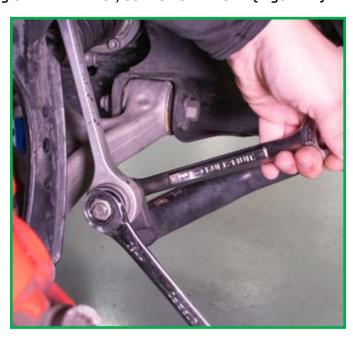


FIGURE 22

#### 15. Loosen and remove the lower strut bolt. (Figures 23, 24)





FIGURE 23 FIGURE 24

#### 16. Remove strut from vehicle. (Figure 25)

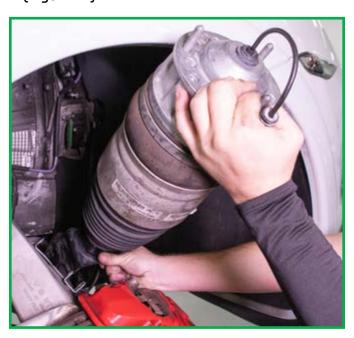


FIGURE 25

#### 17. 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 into the vehicle. (Figure 26, 27)





FIGURE 26 FIGURE 27

2. Position the strut lower mount to the lower control arm and insert the lower mount bolt. Do not tighten at this time. (Figure 28)



FIGURE 28

- 3. Using an appropriate jack, raise the wheel hub to normal ride height. Ensure the top mount seats properly in the strut tower.
- 4. Connect the spindle to the upper control arm. Tighten to manufacturer's specifications. (Figure 29)



FIGURE 29

5. Connect the sway bar link to the strut. Tighten to manufacturer's specifications. (Figure 30)



FIGURE 30

6. Tighten the bottom sway bar end link nut to manufacturer's specifications. (Figure 31)



FIGURE 31

7. Reroute the wiring harnesses and brake lines. Reconnect the height sensor link and ABS sensor harness. (Figure 32)



FIGURE 32

8. Install the three supplied top strut mounting nuts and tighten to manufacturer's specifications. (Figure 33)



FIGURE 33

9. Reinstall engine strut damper. (Figures 34, 35, 36)







FIGURE 35



FIGURE 36

10. Under the hood, reinstall the side trim cover. (Figure 37)



FIGURE 37

- 11. Seal off and secure unused air lines and harness connections.
- 12. Reinstall wheels.
- 13. Installation complete.

#### **REAR REMOVAL**

1. Open rear cargo hatch and remove applicable side paneling. (Figures 38, 39, 40, 41)

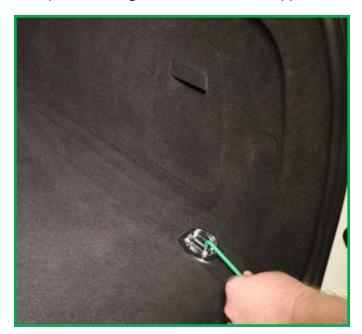






FIGURE 39



FIGURE 40



FIGURE 41

2. Ensure the air suspension system has been disabled and deflated.

3. Raise the vehicle and remove the rear wheels. (Figure 42)



FIGURE 42

#### 4. Remove the air line. (Figure 43)



FIGURE 43

#### 5. Disconnect the electrical connection to the strut. (Figure 44)



FIGURE 44

#### 6. Remove the bottom mount bolt. (Figures 45, 46)







FIGURE 46

7. Remove the bottom mount of the strut from the wheel carrier. (Figure 47)

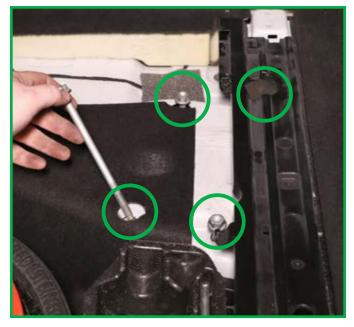


FIGURE 47

8. Remove the four (4) top mount screws. Note the positions of the different length screws for installation. It may be necessary to use a hydraulic jack for assistance. (Figures 48, 49, 50, 51)







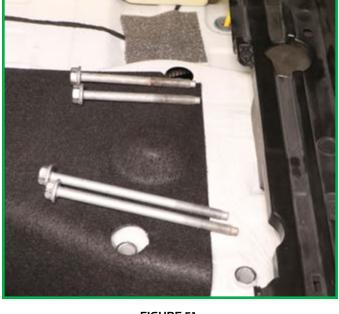


FIGURE 50 FIGURE 51

#### 9. Remove the strut from the vehicle. (Figures 52, 53)



FIGURE 52



FIGURE 53

#### 10. Removal complete.

#### **REAR INSTALLATION**



**WARNING:** 

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

1. Install the new Arnott coil strut into the vehicle. (Figures 54, 55)





FIGURE 54 FIGURE 55

2. With an assistant, pull down on the wheel hub to position the lower strut mount into the wheel knuckle. Install the lower mount bolt; do not tighten at this time. (Figure 56)



FIGURE 56

- 3. Use an appropriate jack to lift the wheel hub to normal ride height. Ensure the upper mounts seat into the body properly.
- 4. Install the upper mount bolts. Tighten to manufacturer's specifications. (Figure 57)



FIGURE 57

5. Tighten the lower mount bolt to manufacturer's specifications. (Figure 58)



FIGURE 58

- 6. Seal off and secure unused air lines and electrical connections.
- 7. Reinstall the wheels.
- 8. Installation complete.

### **ELECTRONIC BYPASS MODULE (EBM) INSTALLATION**

 Remove the trim panel from the passenger side rear cargo area to gain access to the air suspension module. (Figure 59)



FIGURE 59

2. Disconnect the two harnesses from the module. The modules will remain unplugged while the EBM is in service. (Figure 60)



FIGURE 60

3. Using the table below, tap the wires and connect to the EBM harness. (Figures 61, 62, 63)





FIGURE 61 FIGURE 62



FIGURE 63

| ЕВМ | From  | То           | Pin# | Harness #                   |         |
|-----|-------|--------------|------|-----------------------------|---------|
|     | Black | Brown        | 21   | В                           | VEHICLE |
|     | Red   | Black/Blue   | 8    | Right Taillight<br>assembly |         |
|     | Blue  | Orange/Brown | 1    | Α                           |         |
|     | Green | Orange/Red   | 2    | Α                           |         |

4. Connect the EBM to the EBM harness. Secure in a suitable location. (Figure 64)



FIGURE 64

- 5. Do not plug the suspension module back in.
- 6. Reassemble the cargo area.
- 7. Installation complete.



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Air Springs



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Shocks



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Ride Height Sensors