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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, ASE Certified, 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.

### "Engineered to Ride, Built to Last®"





**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.

Arnott<sup>®</sup> is committed to the quality of its products. If you have a question or problem with any Arnott product, please contact Arnott by calling <u>800-251-8993</u> during normal business hours or email <u>techassistance@arnottinc.com</u>. (In the EU please call +31 (0)73 7850 580 or email <u>info@arnotteurope.com</u>)

# Manual

#### C-2956 Installation ARNOTT COIL SPRING CONVERSION KIT MERCEDES-BENZ S550 (W221)



#### **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.

- Not to be stored below  $5^{\circ}F(-15^{\circ}C)$  or above  $122^{\circ}F(50^{\circ}C)$ .
- 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.

#### **AIR STRUT REMOVAL**

- 1. SET STEERING TO STRAIGHT AHEAD.
- 2. RAISE THE VEHICLE.
- 3. **REMOVE APPLICABLE FRONT WHEEL. (FIGURE 1)**



FIGURE 1

# Installation Manual

4.

#### C-2956 ARNOTT COIL SPRING CONVERSION KIT MERCEDES-BENZ S550 (W221)



LOCATE THE AIR STRUT'S WIRING BLOCK INSIDE THE WHEEL WELL. REMOVE THE METAL RETAINING CLIP AND THE TWO (2) ELECTRICAL PLUGS. (FIGURES 2, 3)









**FIGURE 4** 



FIGURE 5

6. LOOSEN AND REMOVE THE LOWER MOUNTING NUT. (FIGURE 6)



FIGURE 6





7. SEPARATE THE LOWER BALL JOINT FROM THE LOWER CONTROL ARM. (FIGURE 7)



**FIGURE 7** 

8. LOOSEN AND REMOVE THE AIR LINE FROM THE TOP OF THE AIR STRUT. (FIGURE 8)





9. LOOSEN AND REMOVE THE THREE (3) TOP MOUNTING NUTS. (FIGURE 9)







12. REMOVAL COMPLETE.



#### FRONT COIL STRUT INSTALLATION



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

1. REMOVE NUT FROM THE BALL JOINT. (FIGURE 12)



FIGURE 12

2. PLACE THE OFFSET PLATE ON THE TOP MOUNT; ALIGN THE OFFSET STUD WITH THE THICK SIDE OF THE PLATE. (FIGURE 13)



FIGURE 13

## Installation Manual

3.

#### C-2956 **ARNOTT COIL SPRING CONVERSION KIT** MERCEDES-BENZ S550 (W221)



INSTALL THE COIL STRUT INTO THE VEHICLE AND ALIGN THE TOP STUDS WITH THE MOUNTING HOLES. (FIGURES 14, 15)





**FIGURE 15** 

FIGURE 14

INSTALL THE BALL JOINT INTO THE LOWER CONTROL ARM AND TIGHTEN THE LOWER MOUNTING NUT 4. ONTO THE BALL JOINT. (FIGURES 16, 17)



FIGURE 16



FIGURE 17

5.

7







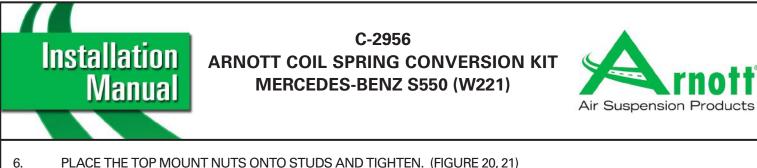
FIGURE 19

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PLACE THE TOP MOUNT NUTS ONTO STUDS AND TIGHTEN. (FIGURE 20, 21)



**FIGURE 20** 



FIGURE 21

#### **REAR AIR STRUT REMOVAL**

- 1. SET STEERING TO STRAIGHT AHEAD.
- 2. LIFT VEHICLE AND REMOVE THE REAR WHEELS. (FIGURE 22)



FIGURE 22

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3. REMOVE THE BRAKE CALIPER CLIP. (FIGURE 23)



FIGURE 23

4. REMOVE THE TWO (2) BOLTS HOLDING THE BRAKE CALIPER. REMOVE THE BRAKE CALIPER AND SUSPEND TO PREVENT DAMAGE TO BRAKE LINES. (FIGURES 24, 25)



**FIGURE 24** 

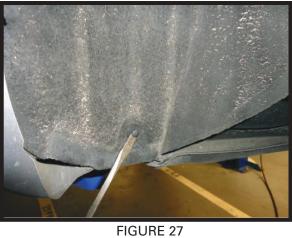


**FIGURE 25** 

REMOVE THE FASTENERS AND INNER WHEEL LINER TO EXPOSE THE REAR AIR STRUT'S WIRING BLOCK. (FIGURES 26, 27)



FIGURE 26



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6.

Air Suspension Prod



**FIGURE 28** 



FIGURE 29

7. REMOVE THE LOWER SWAY BAR END LINK NUT AND SEPARATE. (FIGURE 30)



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FIGURE 30

REMOVE THE LOWER AIR STRUT MOUNTING NUT. (FIGURE 31) 8.



FIGURE 31





9. REMOVE THE LOWER CONTROL ARM NUT. (FIGURE 32)



FIGURE 32

10. REMOVE THE REAR DASH COVER FROM INSIDE OF THE VEHICLE. (FIGURE 33)





11. PULL BACK THE FOAM INSULATION TO EXPOSE THE AIR STRUT TOP MOUNT. (FIGURE 34)



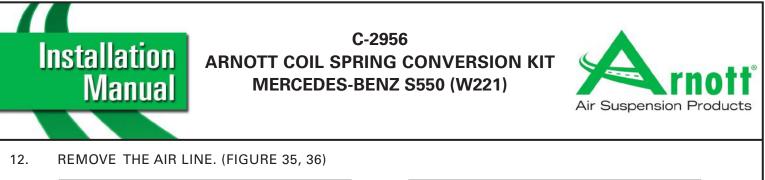




FIGURE 35



FIGURE 36

13. REMOVE THE THREE (3) TOP MOUNTING NUTS. (FIGURE 37)

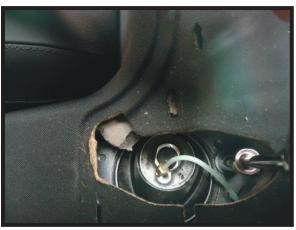
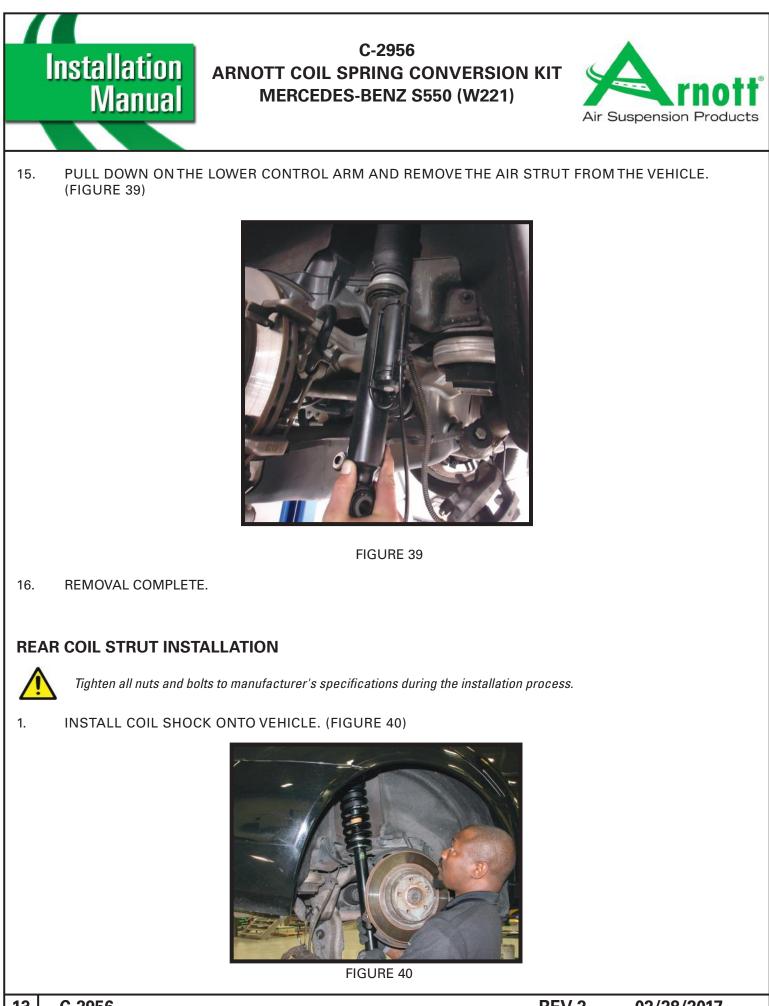


FIGURE 37

14. REMOVE THE LOWER CONTROL ARM BOLT AND THE LOWER AIR STRUT MOUNTING BOLT. (FIGURE 38)



FIGURE 38



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2. REINSTALL THE LOWER STRUT MOUNTING NUT AND BOLT AND TIGHTEN TO MANUFACTURER SPECIFICATIONS. (FIGURE 41, 42)



FIGURE 41



FIGURE 42

RAISE THE LOWER CONTROL ARM AND REINSTALL THE MOUNTING NUT AND BOLT AND TIGHTEN TO MANUFACTURER SPECIFICATIONS. (FIGURE 43, 44)



FIGURE 43



FIGURE 44

3.



5.

#### C-2956 ARNOTT COIL SPRING CONVERSION KIT MERCEDES-BENZ S550 (W221)



REINSTALL THE SWAY BAR END-LINKS AND TIGHTEN TO MANUFACTURER SPECIFICATIONS. (FIGURES 45, 46)





FIGURE 45

FIGURE 46

6. REATTACH BRAKE CALIPER AND BOLT INTO PLACE. (FIGURE 47, 48, 49)



FIGURE 47

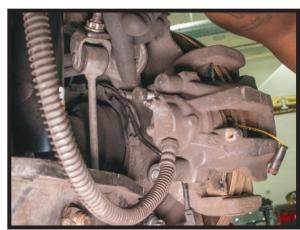


FIGURE 48



FIGURE 49





7. ON THE RIGHT REAR, REATTACH BRAKE SENSOR AND PLUG IN. (FIGURES 50, 51, 52, 53)



FIGURE 50

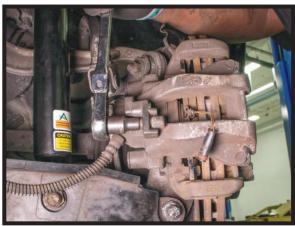


FIGURE 51



FIGURE 52



FIGURE 53





9. REPLACE FENDER LINER. (FIGURE 54)

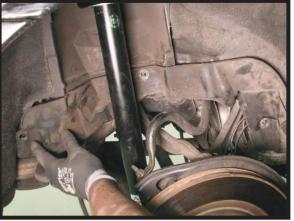


FIGURE 54

10. REPLACE BRAKE RETENTION CLIP. (FIGURE 55)



FIGURE 55

11. TIGHTEN TOP MOUNTING NUTS. (FIGURE 56)

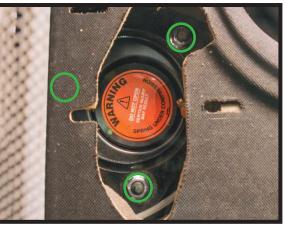


FIGURE 56

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12. REPACK FOAM. AIR LINE REMAINS DISCONNECTED. (FIGURE 57)



FIGURE 57

**REPLACE REAR DECK. (FIGURE 58)** 13.



**FIGURE 58** 

#### **EBM INSTALLATION**

REMOVE PASSENGER SIDE FLOOR MAT TO ACCESS THE KICK PLATE. (FIGURES 59, 60) 1.



FIGURE 59



FIGURE 60

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LOOSEN AND REMOVE THE (3) FASTENERS, THEN LAY THE KICK PLATE DOWN ON THE FLOOR BOARD TO EXPOSE THE VEHICLES AIR SUSPENSION CONTROL MODULE. (FIGURE 61, 62)



Installation

2.

3.

Manual

FIGURE 61



**FIGURE 62** 

UNPLUG THE MODULE FROM THE VEHICLE AND INSTALL THE EBM USING THE SUPPLIED HARDWARE AND WIRING DIAGRAM. (FIGURES 63, 64)



FIGURE 63



FIGURE 64



### C-2956 Installation Manual ARNOTT COIL SPRING CONVERSION KIT MERCEDES-BENZ S550 (W221)



4. SPLICE WIRES USING WIRING DIAGRAM IN STEP 5. (FIGURES 65, 66, 67)



FIGURE 65



**FIGURE 66** 



FIGURE 67

#### 5. WIRING DIAGRAM. (FIGURE 68)

ELECTRONIC BYPASS MODULE	FROM	то	VEHICLE'S WIRING HARNESS
	YELLOW	TWO PIN CONNECTOR (Pin 24)	
	BLUE	TWO PIN CONNECTOR (Pin 25)	
	RED	RED/WHITE (Pin 47)	
	BLACK	BROWN (Pin 21)	

FIGURE 68

**NOTE:** Leave air suspension control module disconnected.

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6.

#### C-2956 **ARNOTT COIL SPRING CONVERSION KIT** MERCEDES-BENZ S550 (W221)



INSIDE THE ENGINE COMPARTMENT, OPEN THE FUSE BOX AND REPLACE THE BELOW INDICATED FUSE (#46) WITH THE INCLUDED FUSE. (FIGURES 69, 70, 71, 72)



**FIGURE 69** 



**FIGURE 70** 

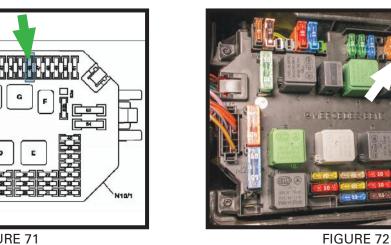


FIGURE 71

7. EBM INSTALLATION COMPLETE.

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