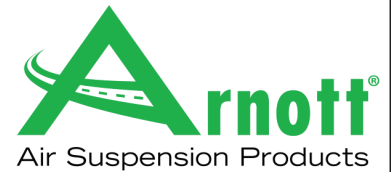


# Installation Manual

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



Congratulations on your purchase of an Arnott® air suspension product. We at Arnott Incorporated are proud to offer a high quality product at the industry's most competitive pricing. 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, 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® is committed to the quality of its products. If you have a question or problem with any Arnott product, please contact Arnott by calling **800-251-8993** during normal business hours or email [techassistance@arnottinc.com](mailto:techassistance@arnottinc.com). (In the EU please call +31 (0)73 7850 580 or email [info@arnotteurope.com](mailto:info@arnotteurope.com))

## 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).

- Not to be stored below 5°F (-15°C) or 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.

## AIR STRUT REMOVAL

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



FIGURE 1

4. LOCATE THE AIR STRUT'S WIRING BLOCK INSIDE THE WHEEL WELL. REMOVE THE METAL RETAINING CLIP AND THE TWO (2) ELECTRICAL PLUGS. SEPARATE THE TWO CONNECTORS AND REINSERT THE WHEEL SPEED SENSOR PLUG. (FIGURES 2, 3)



FIGURE 2



FIGURE 3

5. CUT THE CABLE TIE AND REMOVE THE WIRING BRACKET FROM THE AIR STRUT. (FIGURES 4, 5)

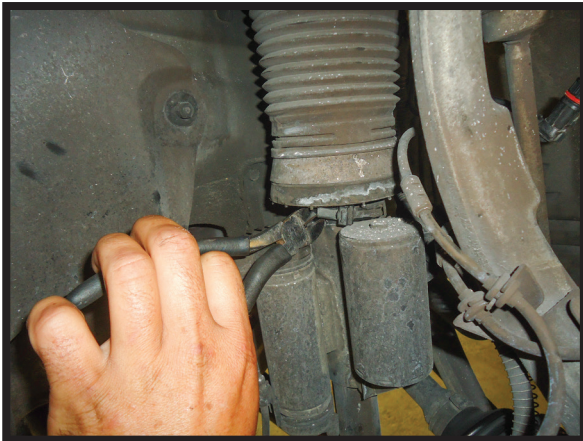


FIGURE 4

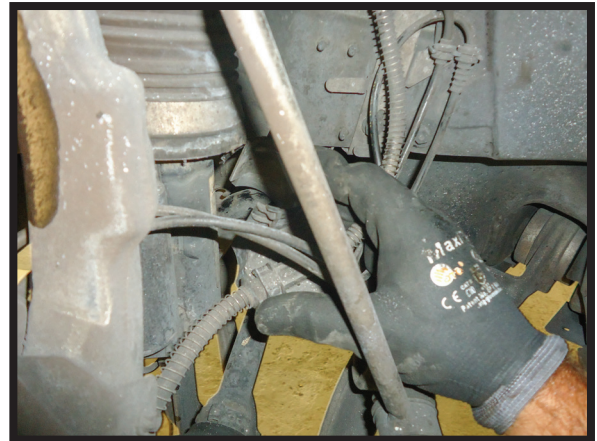


FIGURE 5

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)



FIGURE 8

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



FIGURE 9



10. REMOVE THE AIR STRUT FROM THE VEHICLE. (FIGURE 10)

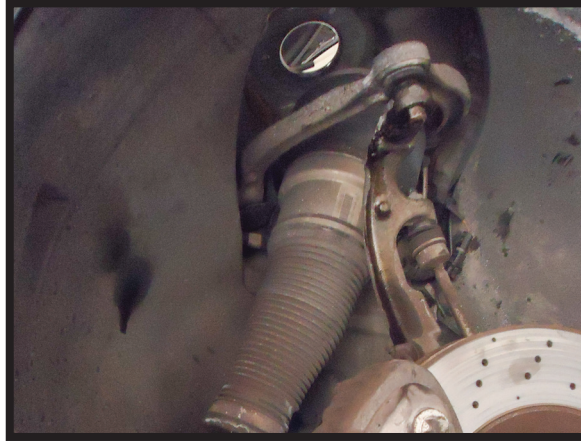


FIGURE 10

11. REMOVE THE OFFSET PLATE FROM THE TOP OF THE AIR STRUT. (FIGURE 11)



FIGURE 11

**NOTE:** *The offset plate will be reused on your Arnott strut in the same orientation from which it was removed.*

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



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



FIGURE 14

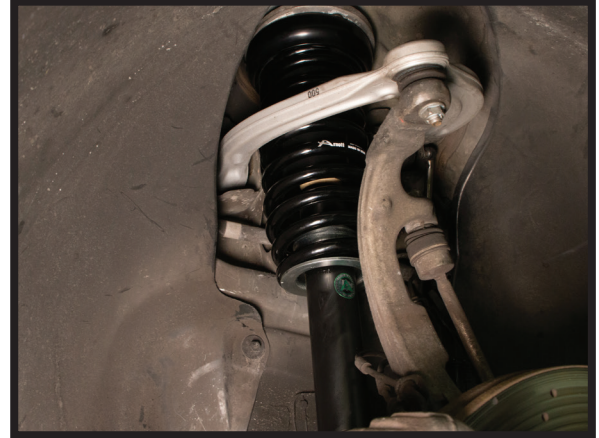


FIGURE 15

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



FIGURE 16



FIGURE 17

5. REPLACE THE WIRING BRACKET AND ZIP TIE INTO PLACE. (FIGURES 18, 19)



FIGURE 18



FIGURE 19



6. 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

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)

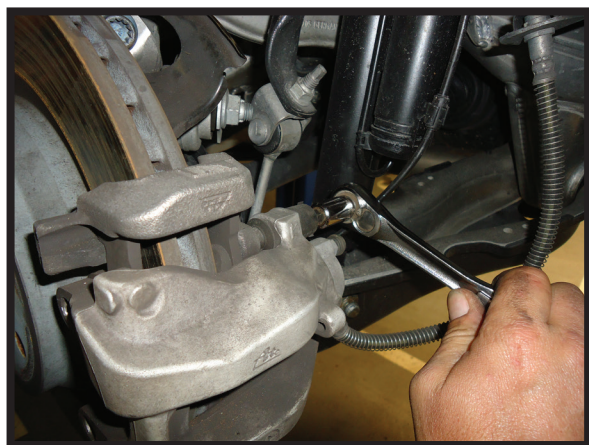


FIGURE 24



FIGURE 25

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



FIGURE 26



FIGURE 27



6. REMOVE THE METAL CLIP AND PLUG FOR THE REAR AIR STRUT'S DAMPENING COIL. BE SURE TO RECONNECT THE ABS WHEEL SPEED SENSOR PLUG. (FIGURES 28, 29)



FIGURE 28



FIGURE 29

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

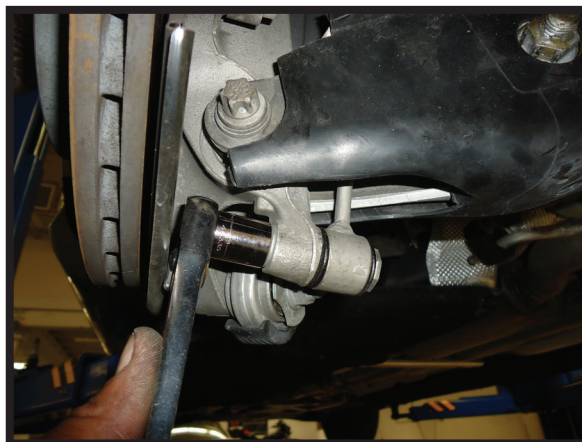


FIGURE 30

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

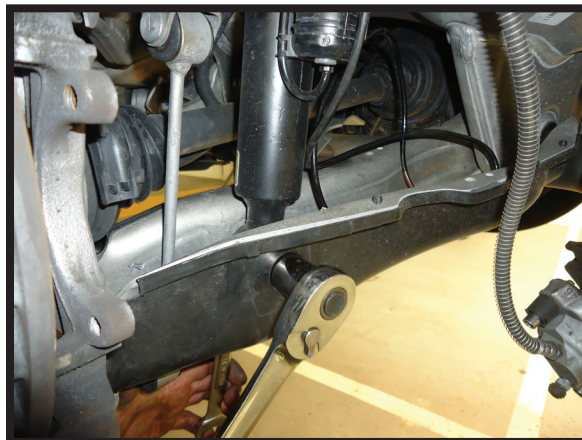


FIGURE 31



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

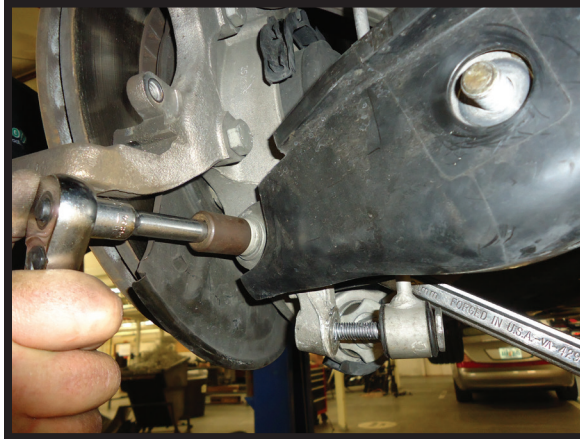


FIGURE 32

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



FIGURE 33

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



FIGURE 34

12. REMOVE THE AIR LINE. (FIGURE 35, 36)



FIGURE 35



FIGURE 36

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

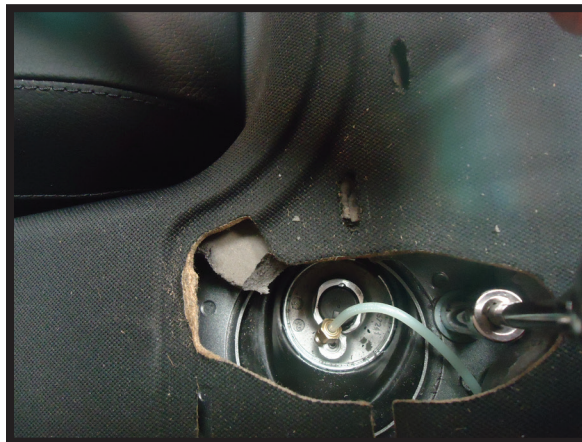


FIGURE 37

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



FIGURE 38



15. PULL DOWN ON THE LOWER CONTROL ARM AND REMOVE THE AIR STRUT FROM THE VEHICLE. (FIGURE 39)



FIGURE 39

16. REMOVAL COMPLETE.

## REAR COIL STRUT INSTALLATION



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

1. INSTALL COIL SHOCK ONTO VEHICLE. (FIGURE 40)

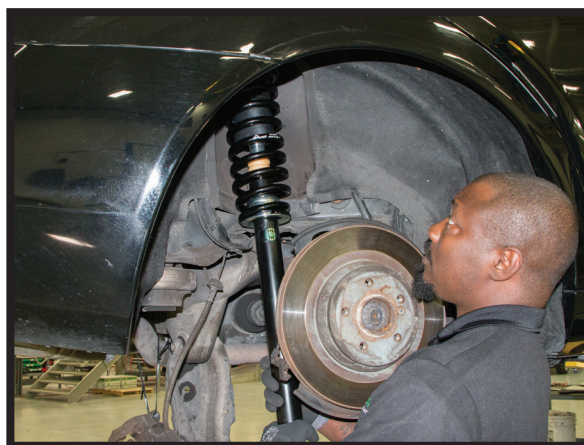


FIGURE 40



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



FIGURE 41



FIGURE 42

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



FIGURE 43



FIGURE 44

5. 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

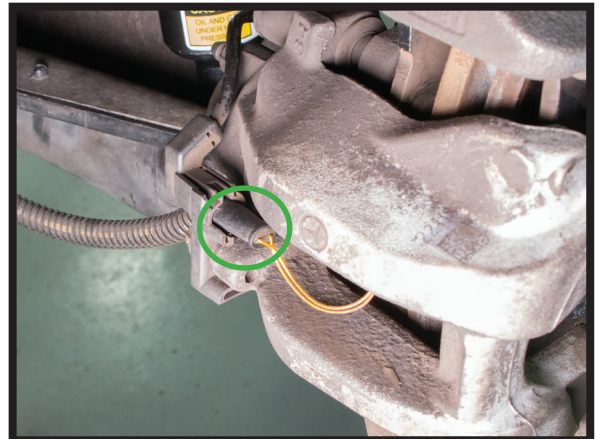


FIGURE 53



9. REPLACE FENDER LINER. (FIGURE 54)



FIGURE 54

10. REPLACE BRAKE RETENTION CLIP. (FIGURE 55)



FIGURE 55

11. TIGHTEN TOP MOUNTING NUTS. (FIGURE 56)

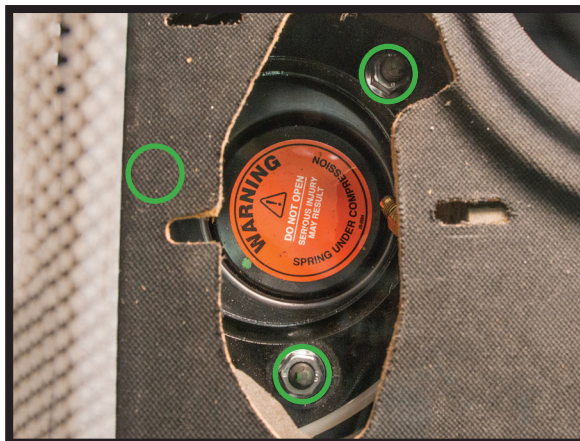


FIGURE 56

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



FIGURE 57

13. REPLACE REAR DECK. (FIGURE 58)



FIGURE 58

## EBM INSTALLATION

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



FIGURE 59



FIGURE 60



2. 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)

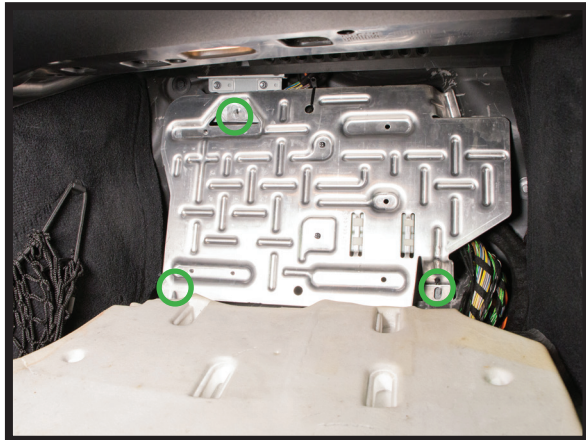


FIGURE 61



FIGURE 62

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

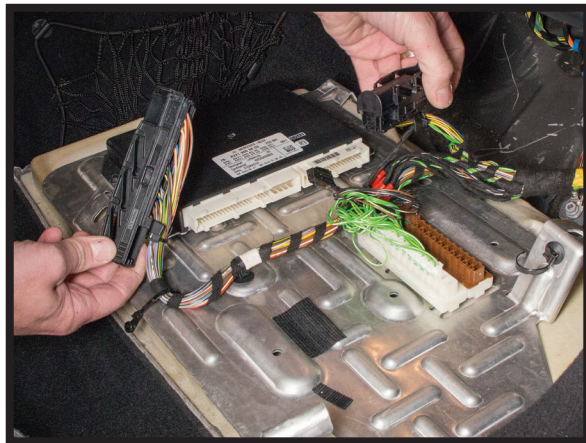


FIGURE 63

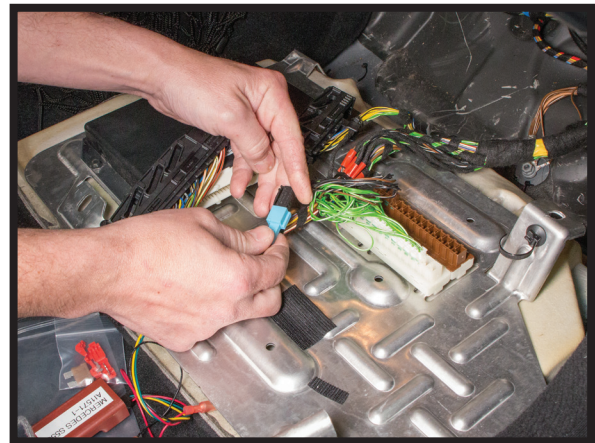


FIGURE 64



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



FIGURE 65

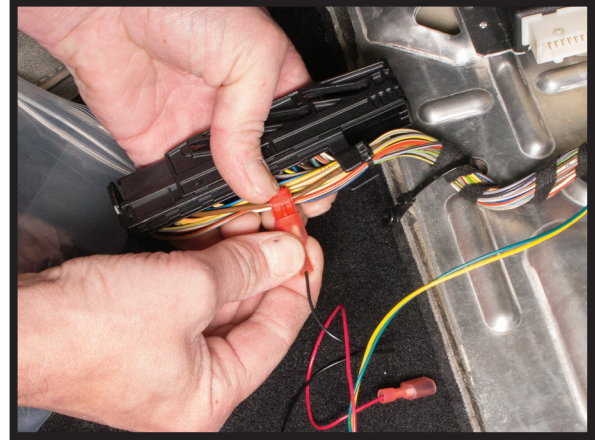


FIGURE 66

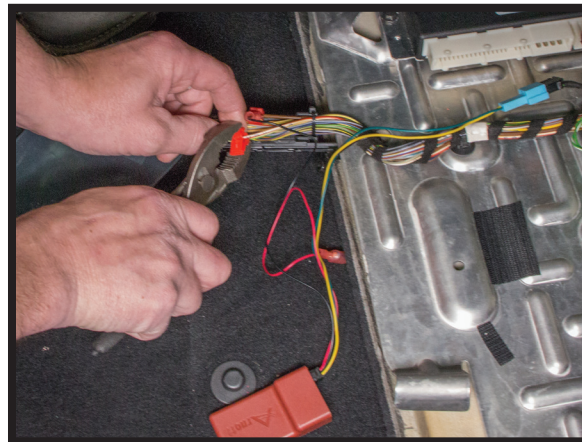


FIGURE 67

5. WIRING DIAGRAM. (FIGURE 68)

ELECTRONIC BYPASS MODULE	FROM	TO	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.

6. 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

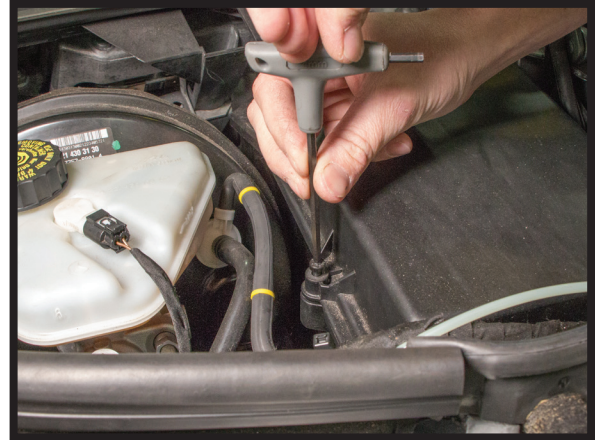


FIGURE 70

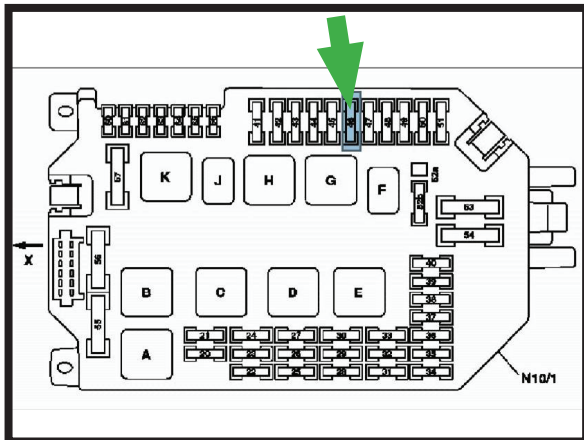


FIGURE 71

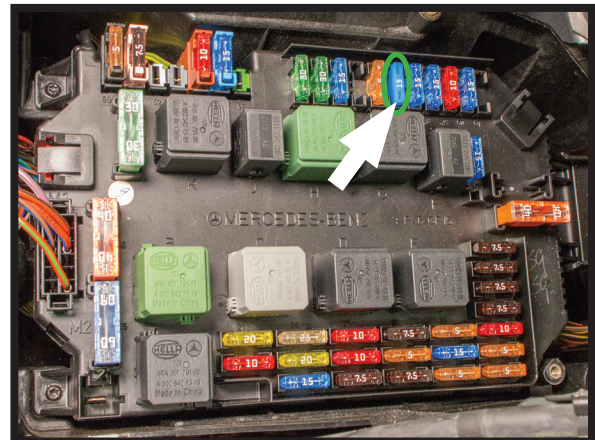


FIGURE 72

7. EBM INSTALLATION COMPLETE.