Installation Manual

# C-2242
# ARNOTT
# COIL SPRING CONVERSION KIT
# MERCEDES-BENZ S-CLASS (W220)

Arnott® Air Suspension Products

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 powear 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. (In the EU please call +31 (0)73 7850 580 or email info@arnotteurope.com)**

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## 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°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.*

## FRONT AIR STRUT REMOVAL

1. SET STEERING TO STRAIGHT AHEAD.
2. RAISE THE VEHICLE.
3. REMOVE FRONT WHEELS.
4. DISCONNECT THE SHOCK CONTROL CABLE CONNECTOR LOCATED IN THE FENDER WELL. (FIGURE 1)

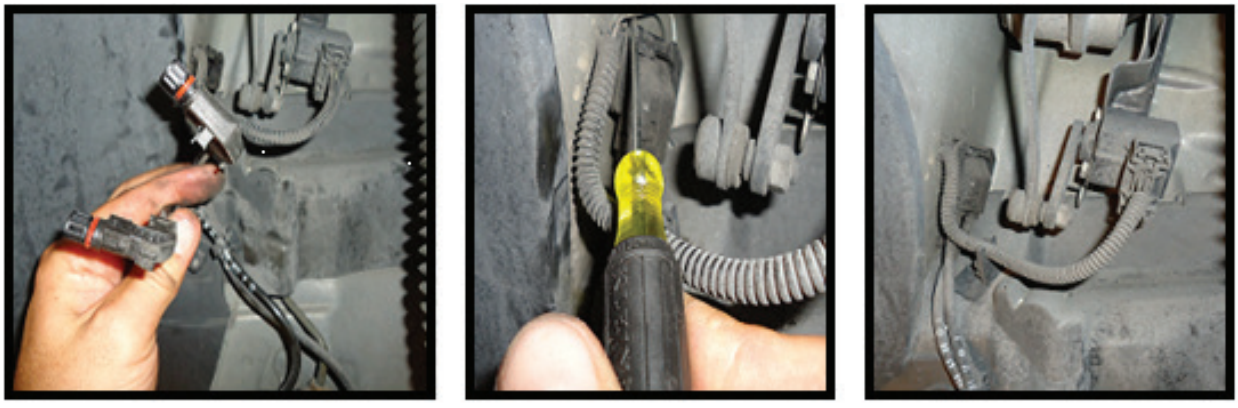

FIGURE 1

5. LOOSEN THE TWO (2) SET SCREWS (180 DEGREES APART) LOCATED ON THE BOTTOM OF THE STRUT ASSEMBLY. (FIGURE 2)

FIGURE 2

6. RAISE HOOD AND DISCONNECT THE AIR SUPPLY LINE TO THE STRUT ASSEMBLY. (FIGURE 3)

FIGURE 3

7. REMOVE THE THREE (3) NUTS HOLDING THE TOP MOUNT OF THE STRUT. (FIGURE 4)

FIGURE 4

8. SEPARATE UPPER CONTROL ARM BALL JOINT FROM THE SPINDLE ASSEMBLY AND REMOVE THE AIR STRUT. (FIGURE 5)

FIGURE 5

9. REMOVAL COMPLETE.

## FRONT COIL STRUT INSTALLATION

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

1. INSTALL THE STRUT INTO THE VEHICLE, BEING SURE TO SEAT THE THE BALL JOINT INTO THE LOWER MOUNT. (FIGURE 6, 7)

FIGURE 6

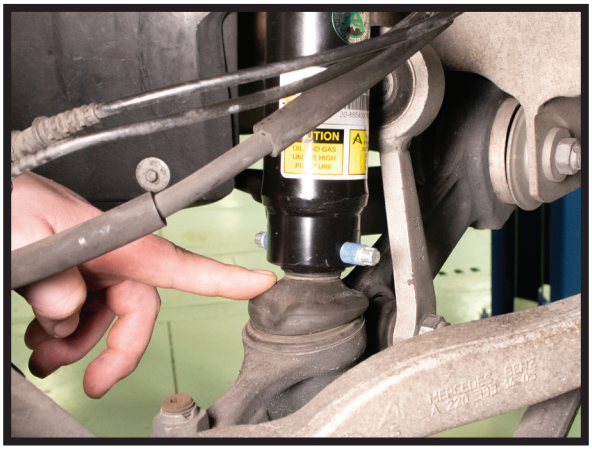

FIGURE 7

2. REATTACH THE UPPER CONTROL ARM TO THE SPINDLE ASSEMBLY AND REINSTALL THE NUT, TIGHTENING TO MANUFACTURER'S SPECIFICATIONS. (FIGURES 8, 9)

FIGURE 8

FIGURE 9

3. REINSTALL THE THREE TOP SHOCK MOUNTING NUTS AND TIGHTEN TO MANUFACTURER'S SPECIFICATIONS. (FIGURE 10)

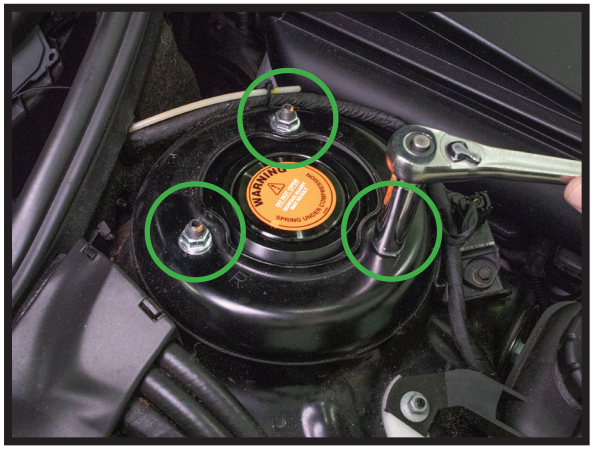

FIGURE 10

4. TIGHTEN THE TWO SET SCREWS TO MANUFACTURER'S SPECIFICATIONS. (FIGURE 11)

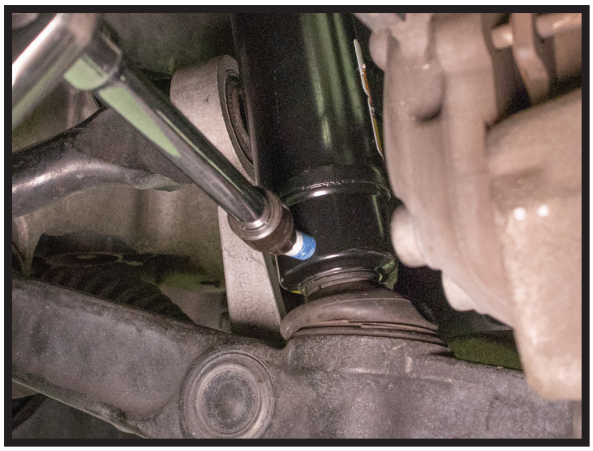

FIGURE 11

5. INSTALLATION COMPLETE.

## REAR AIR STRUT REMOVAL

1. REMOVE REAR WHEELS.

2. REMOVE THE SIDE COVER OF THE REAR DASH PANEL TO EXPOSE THE TOP OF THE AIR STRUT (LOCATED IN THE REAR WINDOW AREA). (FIGURE 12)

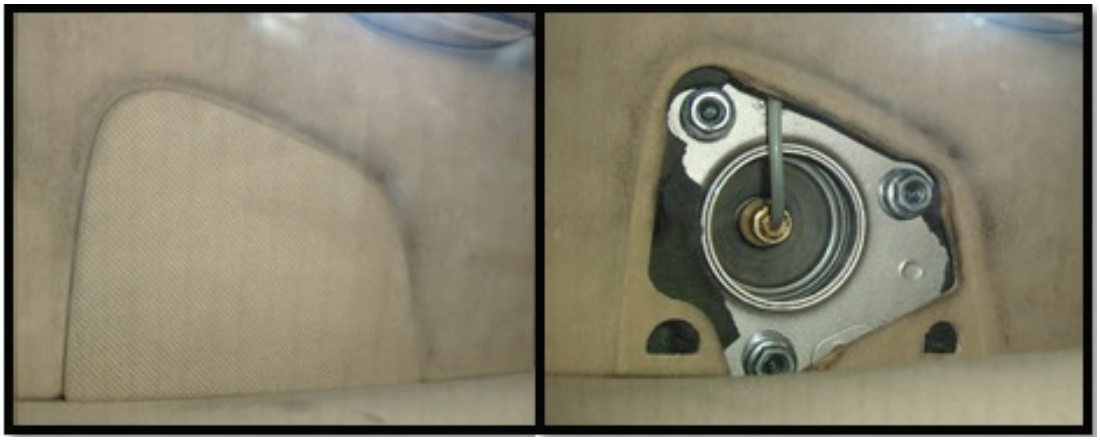

FIGURE 12

3. DISCONNECT THE AIRLINE AND REMOVE THE THREE (3) MOUNTING NUTS FROM THE TOP OF THE AIR STRUT. (FIGURE 13)

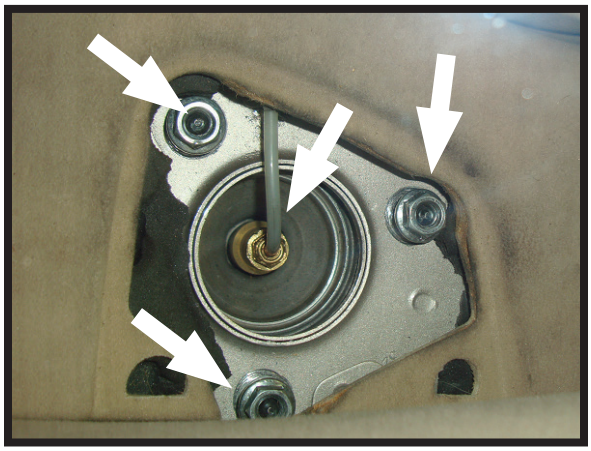

FIGURE 13

4. REMOVE RUBBER BOOT AND DISCONNECT ELECTRICAL CONNECTOR LEADING TO THE SHOCK DAMPER SOLENOID. (FIGURES 14, 15)

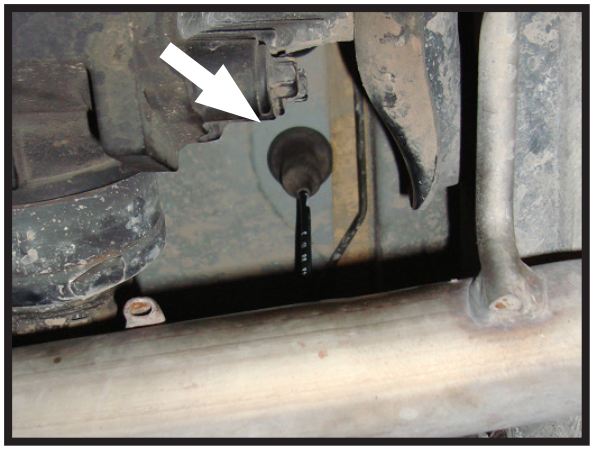

FIGURE 14

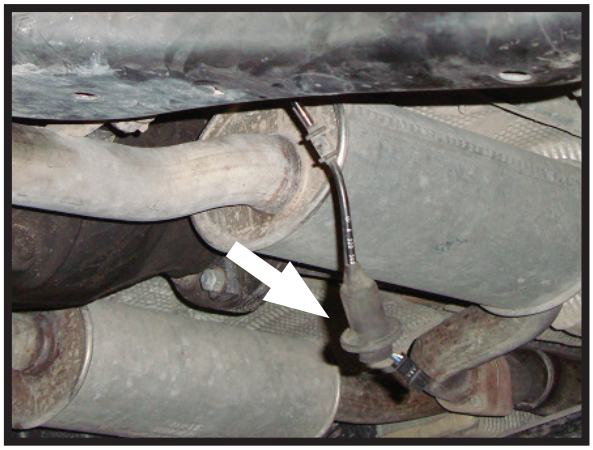

FIGURE 15

5. REMOVE THE BRAKE CALIPER RETAINING CLIP. (FIGURE 16)

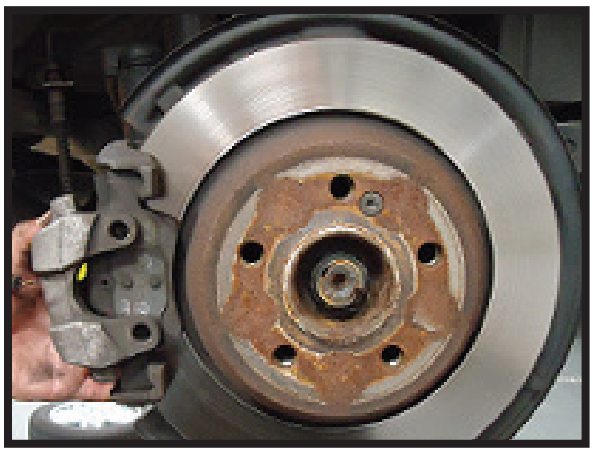

FIGURE 16

6. LOOSEN THE TWO (2) BOLTS ON THE BACKSIDE OF THE CALIPER. (FIGURE 17)

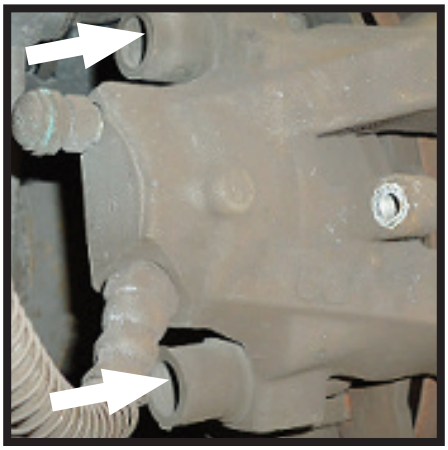

FIGURE 17

7. DISCONNECT THE SENSOR CONNECTOR AND REMOVE THE SENSOR BRACKET. (FIGURES 18, 19)

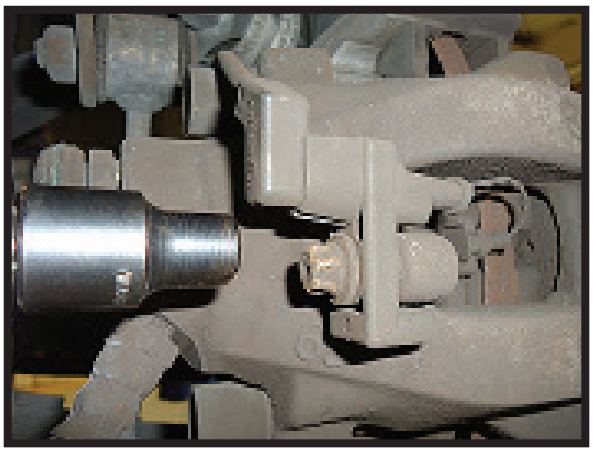

FIGURE 18

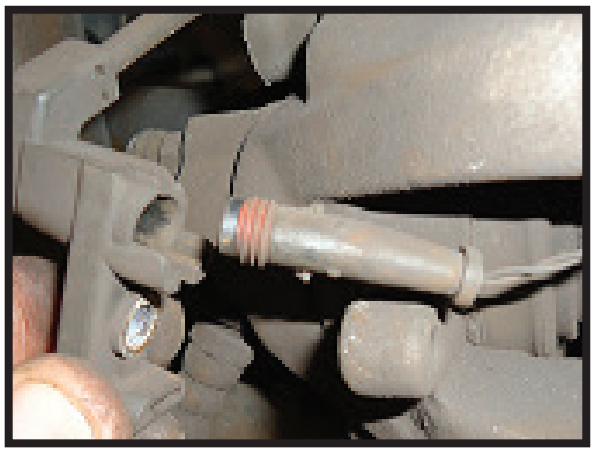

FIGURE 19

8. SECURE THE CALIPER. (FIGURE 20)

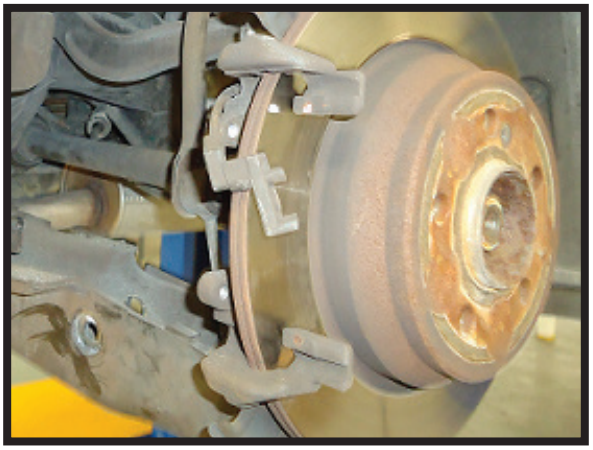

FIGURE 20

9. DISASSEMBLE THE OUTER SUSPENSION ARM. (FIGURE 21)

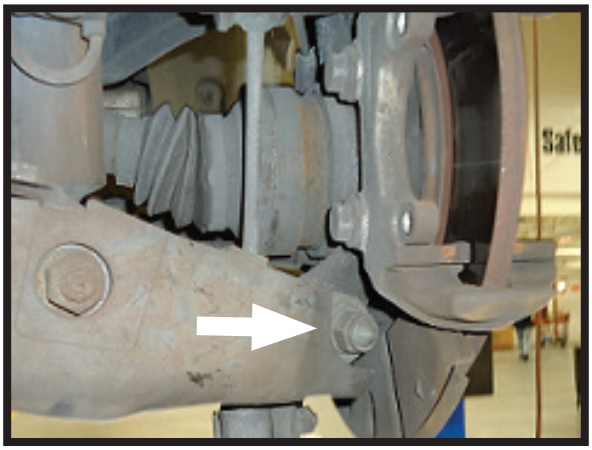

FIGURE 21

10. DISASSEMBLE THE SWAY BAR END LINK. (FIGURES 22, 23)

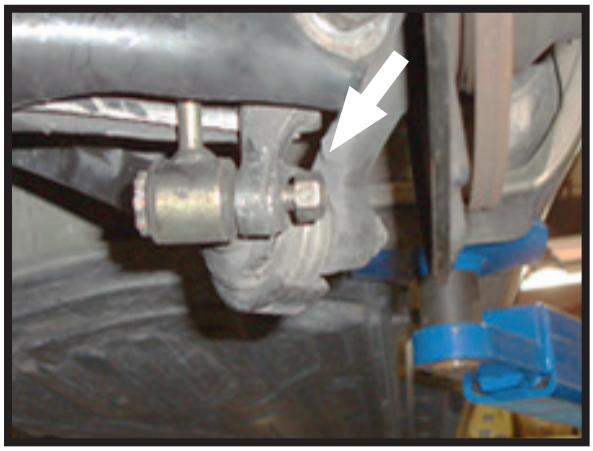

FIGURE 22

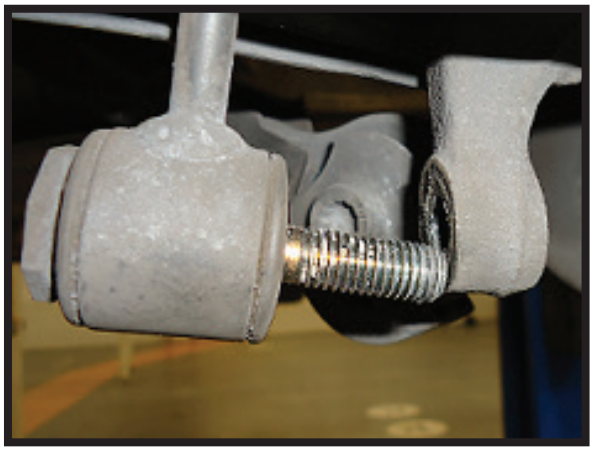

FIGURE 23

11. REMOVE THE NUT AND BOLT CONNECTING THE STRUT ASSEMBLY TO THE SUSPENSION ARM. (FIGURE 24)

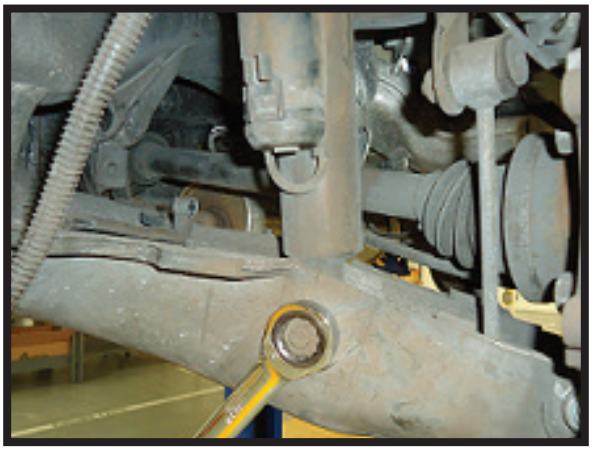

FIGURE 24

12. LOOSEN THE LOWER CONTROL ARM NUT SLIGHTLY (THIS WILL ALLOW THE LOWER CONTROL ARM TO SWING DOWN). (FIGURE 25)

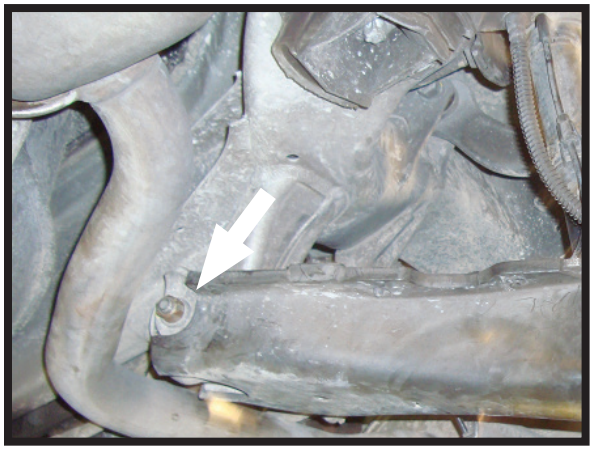

FIGURE 25

13. REMOVE STRUT ASSEMBLY FROM THE VEHICLE. (FIGURE 26)

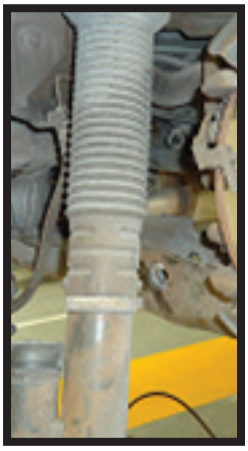

FIGURE 26

14. REMOVAL COMPLETE.

## REAR COIL STRUT INSTALLATION

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

1. INSTALL THE SHOCK INTO THE VEHICLE. (FIGURE 27)

FIGURE 27

2. INSTALL THE LOWER SHOCK MOUNTING BOLT AND NUT AND TIGHTEN TO MANUFACTURER'S SPECIFICATIONS. (FIGURE 28)

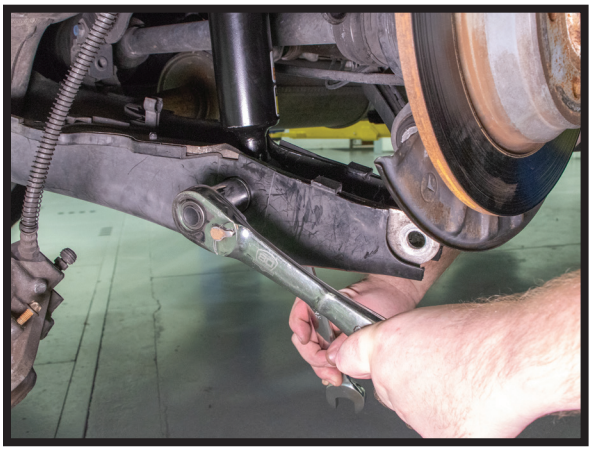

FIGURE 28

3. REINSTALL THE THREE TOP SHOCK MOUNTING NUTS AND TIGHTEN TO MANUFACTURER'S SPECIFICATIONS. (FIGURE 29)


FIGURE 29

4. REINSTALL THE LOWER CONTROL ARM NUT AND BOLT AND TIGHTEN TO MANUFACTURER'S SPECIFICATIONS. (FIGURE 30)

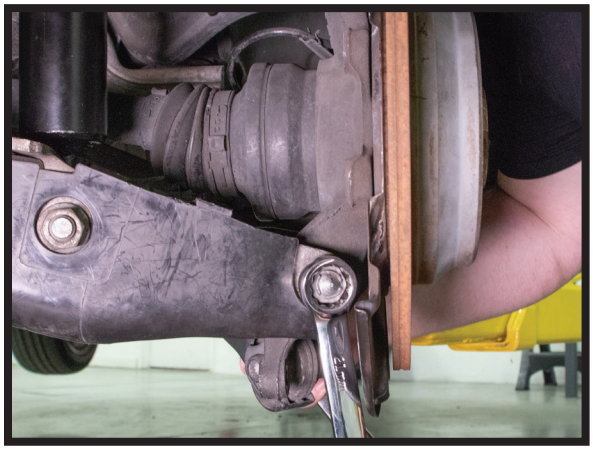

FIGURE 30

5. REINSTALL THE UPPER AND LOWER SWAY BAR END LINK NUTS AND TIGHTEN TO MANUFACTURER'S SPECIFICATIONS. (FIGURES 31, 32)

FIGURE 31

FIGURE 32

6. RETIGHTEN THE OUTER SUSPENSION ARM NUT AND TIGHTEN TO MANUFACTURER'S SPECIFICATIONS. (FIGURE 33)

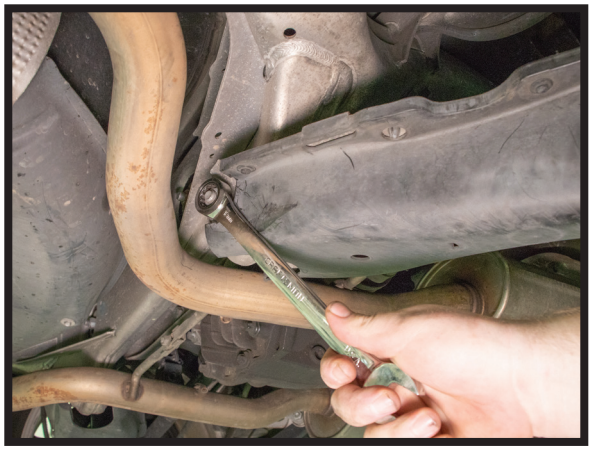

FIGURE 33

7. REINSTALL THE BRAKE CALIPER. (FIGURE 34)

FIGURE 34

8. INSTALL THE BRAKE CALIPER BOLTS AND TIGHTEN TO MANUFACTURER'S SPECIFICATIONS. (FIGURE 35)

FIGURE 35

9. INSTALL THE BRAKE CALIPER CLIP. (FIGURE 36)

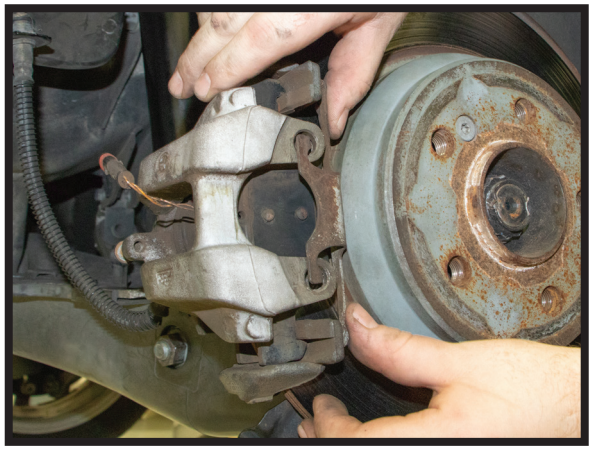

FIGURE 36

10. INSTALL THE SENSOR BRACKET. (FIGURES 37, 38)

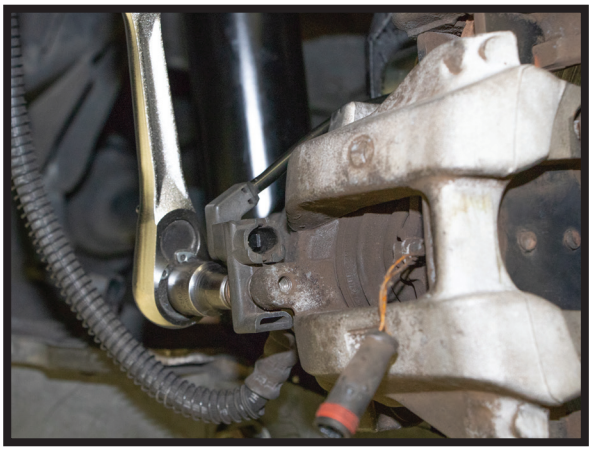

FIGURE 37

FIGURE 38

11. REINSTALL THE WHEEL.

12. LOWER THE VEHICLE.

13. INSTALLATION COMPLETE.

## ELECTRONIC BYPASS MODULE INSTALLATION

1. LOCATE THE N51 CONTROL MODULE (LOCATED IN THE LEFT SIDE FUSE BOX) VERIFY THAT IT READS "TEMIC". (FIGURE 39)


FIGURE 39

2. AFTER VERIFYING COMPUTER, DISCONNECT ALL THREE (3) MULTI-PIN CONNECTORS PERMANENTLY. (FIGURE 40)

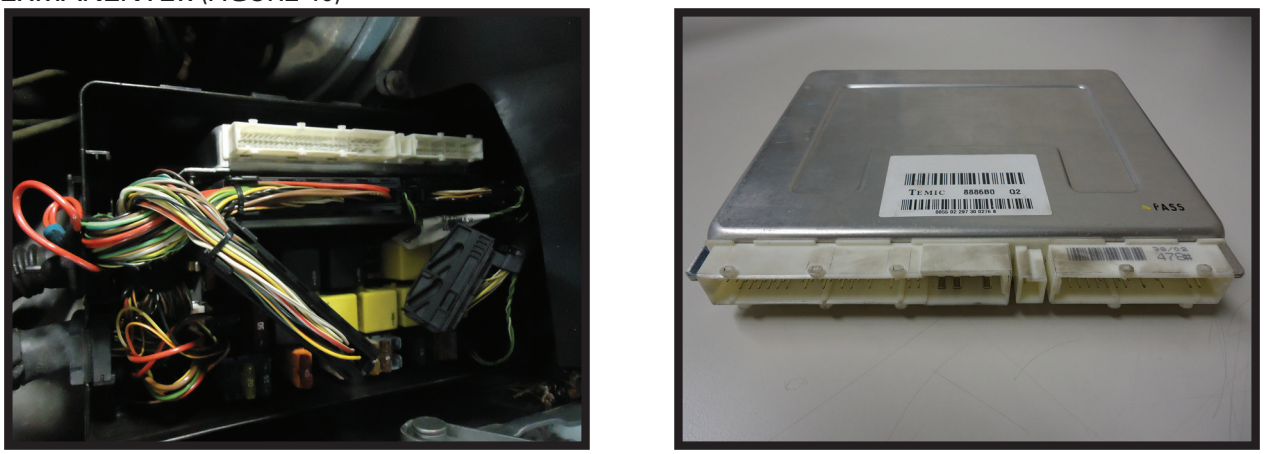

FIGURE 40

3. CONNECT LIGHT BLUE CONNECTOR FROM ELECTRONIC BYPASS MODULE TO THE WIRE HARNESS SIDE OF THE VEHICLE N-51 CAN-BUS 2 PIN CONNECTOR. (FIGURE 41)

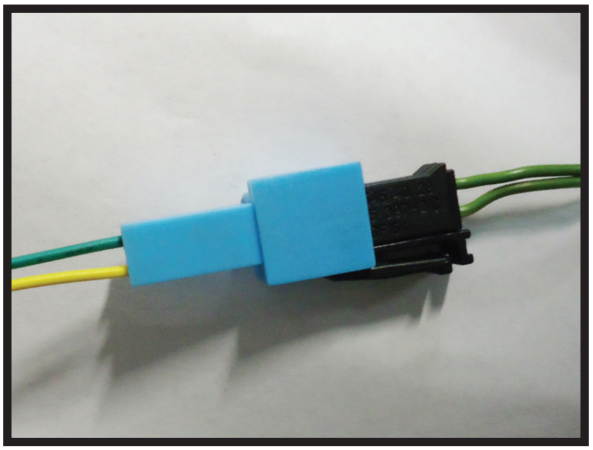

FIGURE 41

4. RUN THE GROUND WIRE FROM THE ELECTRONIC BYPASS MODULE TO THE NEAREST VEHICLE GROUND TERMINAL. (FIGURE 42)

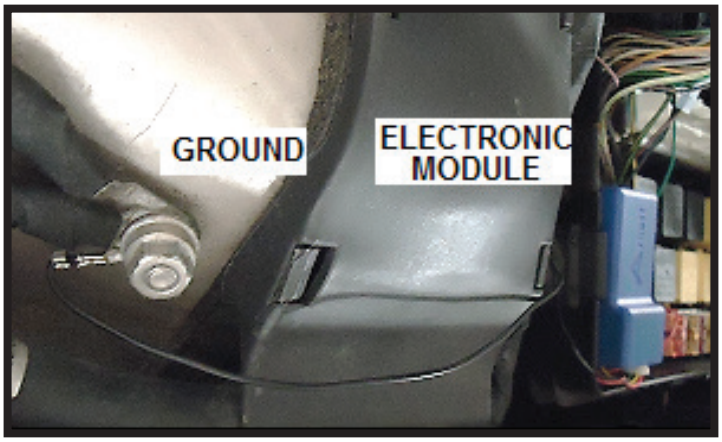


FIGURE 42

5. LOCATE AN AVAILABLE SWITCHED IGNITION POWER SOURCE IN THE FUSE PANEL, AND INSTALL THE FUSE HOLDER (12+V). (FIGURE 43)

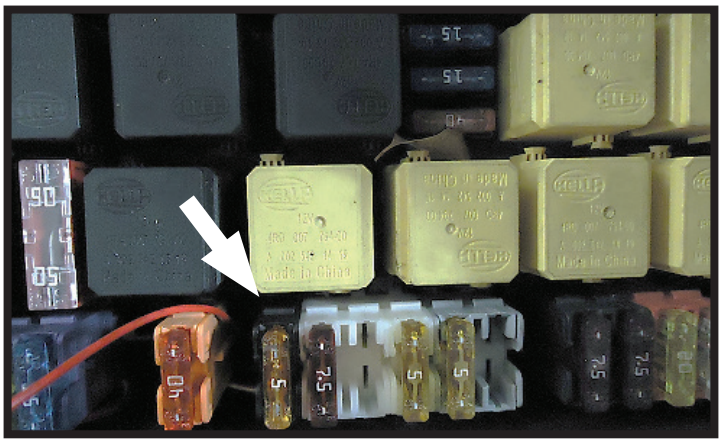

FIGURE 43

6. RE-INSTALL FUSE BOX COVER. (FIGURE 44)

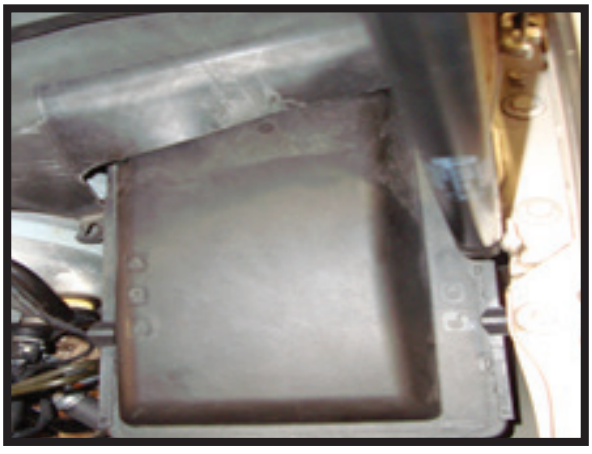

FIGURE 44

7. INSTALLATION COMPLETE.