

Installation Manual

C-2278 ARNOTT COIL SPRING CONVERSION KIT FOR 2002-2009 MERCEDES-BENZ E-CLASS



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 protective hand, ear, and eye protection when servicing the air suspension system.

KIT CONTAINS:

PARTS LIST

P/N	QTY	DESCRIPTION
21-6807	1	ARNOTT FRONT COIL SPRING CONVERSION
21-6808	1	ARNOTT REAR COIL SPRING CONVERSION
21-6838	1	ACCESSORY KIT

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

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) 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.

FRONT AIR STRUT REMOVAL



These air springs contain a solenoid valve. Once inflated, only the "Mercedes DAS Star" diagnostic computer can deflate the air springs.

1. SET THE STEERING TO STRAIGHT AHEAD.
2. RAISE THE VEHICLE.
3. REMOVE THE FRONT WHEELS. (FIGURE 10-1)



FIGURE 10-1

4. LOCATE AND REMOVE THE UPPER CONTROL ARM BALL JOINT NUT. (FIGURE 10-2)



FIGURE 10-2

5. SEPARATE THE BALL JOINT FROM THE SPINDLE ASSEMBLY. (FIGURE 10-3)



FIGURE 10-3

6. REMOVE THE SENSOR LINES FROM BRACKETS. (FIGURE 10-4)



FIGURE 10-4

7. REMOVE THE INNER FENDER WELL SCREWS. (FIGURE 10-5)



FIGURE 10-5

8. DISCONNECT THE STRUT'S ELECTRICAL PLUG LOCATED BEHIND THE INNER FENDER WELL. (FIGURE 10-6)



FIGURE 10-6

9. LOOSEN BUT DO NOT REMOVE THE LOWER STRUT MOUNTING BOLT. (FIGURE 10-7)



FIGURE 10-7

10. REMOVE THE AIR LINE. (FIGURE 10-8)



FIGURE 10-8

11. UNPLUG THE ELECTRICAL CONNECTOR. (FIGURE 10-9)



FIGURE 10-9

12. REMOVE THE THREE TOP MOUNTING BOLTS. (FIGURE 10-10)



FIGURE 10-10

13. REMOVE THE LOWER STRUT MOUNTING BOLT. (FIGURE 10-11)



FIGURE 10-11

14. REMOVE THE STRUT ASSEMBLY FROM THE VEHICLE. (FIGURE 10-12)



FIGURE 10-12

15. AIR STRUT REMOVAL COMPLETE.

FRONT AIR STRUT INSTALLATION



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

1. INSTALL THE STRUT INTO THE UPPER MOUNT CAVITY. (FIGURE 20-1)



FIGURE 20-1

2. POSITION THE BOTTOM MOUNT ONTO THE CONTROL ARM. (FIGURE 20-2)



FIGURE 20-2

3. INSTALL THE BOTTOM MOUNT NUT AND BOLT. (FIGURE 20-3)



FIGURE 20-3

4. RECONNECT THE BALL JOINT TO SPINDLE ASSEMBLY. (FIGURE 20-4)



FIGURE 20-4

5. INSTALL THE BALL JOINT NUT. (FIGURE 20-5)



FIGURE 20-5

6. INSTALL THE THREE TOP MOUNTING NUTS. (FIGURE 20-6)



FIGURE 20-6

7. FRONT STRUT INSTALLATION COMPLETE.

REAR AIR SPRING REMOVAL

1. REMOVE THE REAR WHEELS. (FIGURE 30-1)



FIGURE 30-1

2. REMOVE THE BOLTS FROM FENDER WELL. (FIGURE 30-2)



FIGURE 30-2

3. REMOVE THE PUSH PINS FROM FENDER WELL TO EXPOSE THE SENSOR JUNCTION BLOCK. (FIGURE 30-3)



FIGURE 30-3

4. MARK THE CONNECTIONS TO ENSURE PROPER PLACEMENT IN REASSEMBLY, REMOVE RETAINING CLIP AND UNPLUG SENSOR LINES. (FIGURE 30-4)

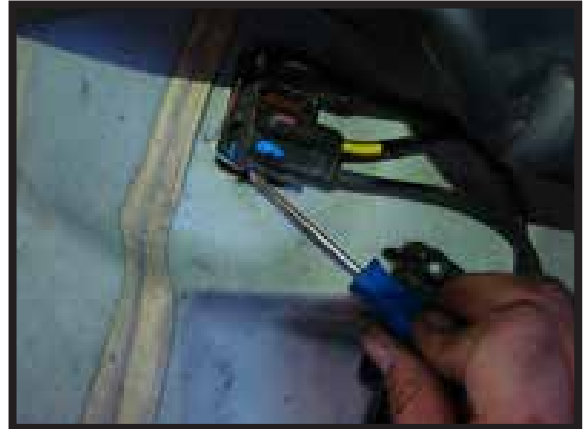


FIGURE 30-4

5. REMOVE THE SENSOR LINES FROM THE BRACKETS. (FIGURE 30-5)

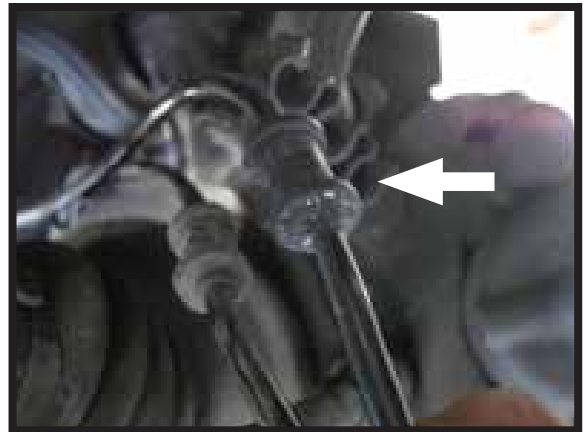


FIGURE 30-5

6. REMOVE THE AIR SPRING BOLTS FROM THE LOWER CONTROL ARMS. (FIGURE 30-6)



FIGURE 30-6

7. REMOVE THE LOWER SHOCK BOLTS. (FIGURE 30-7)



FIGURE 30-7

8. REMOVE THE MOUNTING NUT FROM THE AIR BLOCK. CLEARLY MARK THE AIRLINES ON THE AIR DISTRIBUTION BLOCK BEFORE DISCONNECTING. (FIGURE 30-8)

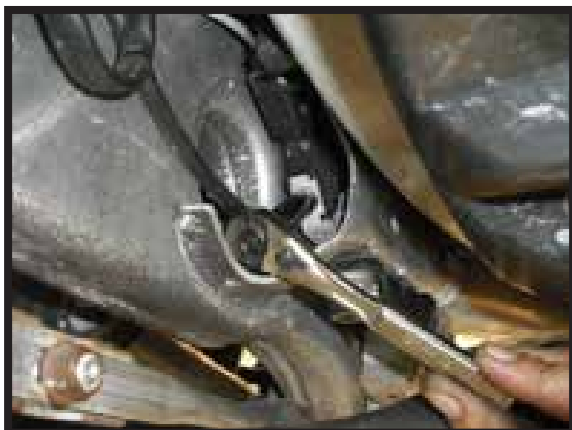


FIGURE 30-8

9. AFTER THE AIR LINES ARE REMOVED, UNPLUG THE AIR SPRINGS VALVE WIRING. (FIGURE 30-9)



FIGURE 30-9

10. SUPPORT EXHAUST, LOOSEN AND REMOVE EXHAUST FLANGE BOLTS. (FIGURE 30-10)



FIGURE 30-10

11. WITH THE EXHAUST STILL SUPPORTED, REMOVE THE RUBBER HANGERS. THEN REMOVE THE EXHAUST. (FIGURE 30-11)



FIGURE 30-11

12. REMOVE THE DRIVESHAFT SAFETY BAR, AND THE TWO-PIECE HEAT SHIELD TO EXPOSE THE DRIVE SHAFT CARRIER BEARING. (FIGURE 30-12)



FIGURE 30-12

13. REMOVE THE TWO BOLTS HOLDING THE CARRIER BEARING. CAREFULLY LOWER. (FIGURE 30-13)



FIGURE 30-13

14. REMOVE THE REAR DRIVESHAFT BOLTS. (FIGURE 30-14)



FIGURE 30-14

15. SLIDE THE DRIVESHAFT TOWARD THE FRONT OF VEHICLE AND REMOVE. (FIGURE 30-15)



FIGURE 30-15

16. LOOSEN BOLTS AND REMOVE THE REAR HEAT SHIELDS. (FIGURE 30-16)



FIGURE 30-16

17. LOOSEN BOLTS AND REMOVE BOTH REAR ROCK GUARDS. (FIGURE 30-17)



FIGURE 30-17

18. REMOVE CALIPER CLIPS, AND THEN REMOVE BOLTS FROM BRAKE PAD WEAR SENSORS. (FIGURE 30-18)



FIGURE 30-18

19. UNPLUG THE BRAKE PAD WEAR SENSORS. (FIGURE 30-19)



FIGURE 30-19

20. REMOVE THE CAPS FROM THE CALIPER MOUNTING BOLTS, LOOSEN AND REMOVE BOLTS. (FIGURE 30-20)



FIGURE 30-20

21. REMOVE CALIPERS, AND SUSPEND WITH CABLE TIES. (FIGURE 30-21)



FIGURE 30-21



FIRE HAZARD: Use extreme caution when working on, or around, fuel tank as gas fumes may be present.

22. LOOSEN FILLER NECK CLAMP, AND REMOVE GASTANK FILLER HOSE. (FIGURE 30-22)



FIGURE 30-22



Use lifting platform (hoist) that is capable of raising the body separately from the wheels, lift body at the lifting points prescribed by the vehicle manufacturer.

23. THE REAR CROSSMEMBER BOLT POINTS. (FIGURE 30-23)

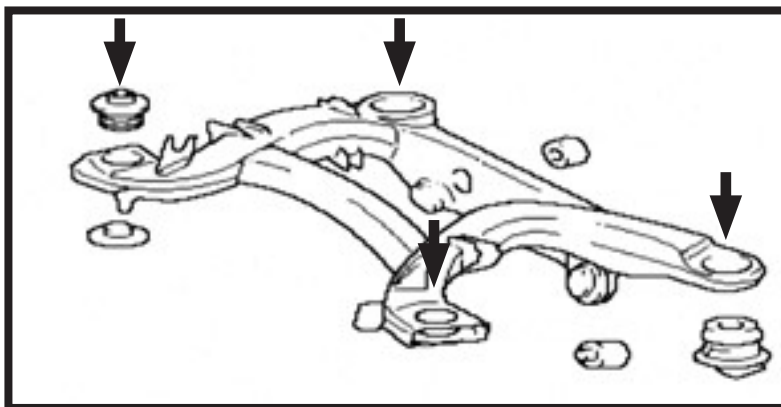


FIGURE 30-23

24. LOWER THE VEHICLE AND POSITION JACK STANDS TO SUPPORT THE REAR SUB FRAME. REMOVE THE FOUR (4) BOLTS HOLDING THE SUB FRAME TO THE VEHICLE. (FIGURE 30-24)



FIGURE 30-24

25. SUPPORT CROSSMEMBER ASSEMBLY ON JACK STANDS, AND RAISE VEHICLE TO ACCESS THE AIR SPRINGS. (FIGURE 30-25)



FIGURE 30-25

26. LOCATE, LOOSEN, AND REMOVE THE SWAYBAR BOLTS. (FIGURE 30-26)



FIGURE 30-26

27. RAISE SWAY BAR TOWARDS REAR OF VEHICLE. (FIGURE 30-27)



FIGURE 30-27

28. LOOSEN, AND REMOVE THE BOLTS FOR THE AIR RESEVOIRS. (FIGURE 30-28)



FIGURE 30-28

29. REMOVE BOTH AIR SPRINGS AND RESERVOIRS. (FIGURE 30-29)



FIGURE 30-29

30. WITH THE AIR SPRINGS REMOVED, REMOVE THE AIR LINES FROM THE TOP MOUNT OF THE AIR SPRINGS. (FIGURE 30-30)



FIGURE 30-30

31. TO REMOVE THE REAR SHOCKS, GAIN ACCESS TO THE TRUNK AND PULL HANDLES TO FOLD THE REAR SEATS DOWN. (FIGURE 30-31)



FIGURE 30-31

32. REMOVE THE D-RING TIE DOWN ON THE TRUNK FLOOR AND PULL BACK THE CARPET TO ACCESS THE REAR TOP SHOCK MOUNT. (FIGURE 30-32)



FIGURE 30-32

33. REMOVE THE TOP NUTS, AND PULL THE SHOCKS FROM UNDERNEATH THE VEHICLE. (FIGURE 30-33)



FIGURE 30-33

34. AIR SPRING AND SHOCK REMOVAL IS COMPLETE.

REAR COIL SPRING AND SHOCK INSTALLATION



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

1. INSTALL THE NEW SHOCKS INTO THE TOP MOUNTS AND SECURE. (FIGURE 40-1)



FIGURE 40-1

2. REMOVE OLD TOP MOUNT CLIPS AND REPLACE WITH THE ONES PROVIDED IN THE KIT. (FIGURE 40-2)



FIGURE 40-2

3. INSTALL THE UPPER SPRING PERCHES ONTO THE NEW CLIPS. (FIGURE 40-3)



FIGURE 40-3

4. INSTALL THE LOWER SPRING PERCHES INTO THE LOWER CONTROL ARMS, AND SECURE. (FIGURE 40-4)



FIGURE 40-4

5. REINSTALL THE FOUR SUB FRAME BOLTS AND SECURE. (FIGURE 40-5)

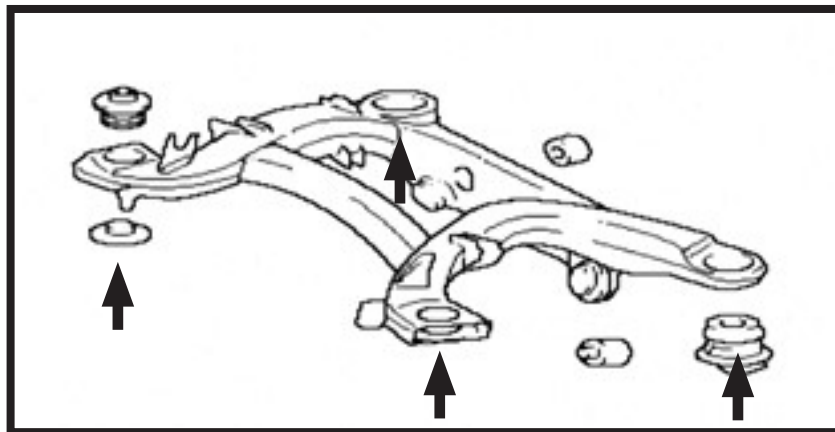


FIGURE 40-5

6. WITH THE SUB FRAME MOUNTED BACK ONTO THE VEHICLE, REMOVE THE LOWER SWAY BAR END LINK BOLT. (FIGURE 40-6)



FIGURE 40-6

7. LOOSEN AND REMOVE REAR TRAILING ARM BOLT. (FIGURE 40-7)



FIGURE 40-7

8. LOOSEN AND REMOVE FRONT TRAILING ARM BOLT. (FIGURE 40-8)

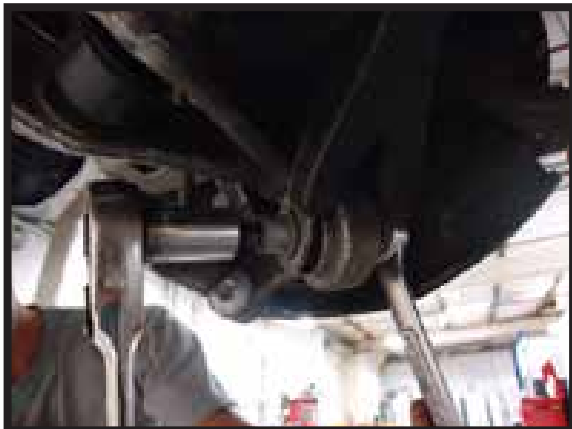


FIGURE 40-8

9. LOOSEN AND REMOVE UPPER CONTROL ARM BOLT. (FIGURE 40-9)



FIGURE 40-9

10. LOOSEN AND REMOVE LOWER CONTROL ARM BOLT. (FIGURE 40-10)



FIGURE 40-10

11. PULL DOWN ON LOWER CONTROL ARM AND INSTALL SPRING INTO THE TOP SPRING PERCH. (FIGURE 40-11)



FIGURE 40-11

12. SLIDE SPRING OVER THE HUMP OF THE LOWER SPRING PERCH. (FIGURE 40-12)



FIGURE 40-12

13. USING A STAND OR JACK, RAISE THE LOWER CONTROL ARM TO COMPRESS THE SPRING AND INSTALL THE LOWER SHOCK BOLT TO HOLD IN PLACE. (FIGURE 40-13)



FIGURE 40-13

14. INSTALLATION OF CONTROL ARMS, TRAILING ARMS, TIE ROD END LINKS, ELECTRICAL PLUGS, BRAKE CALIPERS, BRAKE SENSORS, ROCK GUARDS, HEAT SHEILDS, DRIVE SHAFT, EXHAUST, WHEEL WELLS, WHEELS AND TIRES, ECT. ARE IN REVERSE ORDER OF WHICH THEY WERE DISASSEMBLED.

NOTE: THE LOWER CONTROL ARM BOLT SLEEVE MAY NEED TO BE ADJUSTED WHEN INSTALLING THE LOWER CONTROL ARM.



15. INSTALLATION OF REAR SPRINGS AND SHOCKS COMPLETE.



It is necessary to have your vehicle aligned after installing this kit.

ELECTRONIC BYPASS MODULE INSTALLATION

1. BEGIN BY REMOVING THE FRONT PASSENGER SIDE FLOOR MAT. (FIGURE 50-1)



FIGURE 50-1

2. PULL BACK THE KICK PANEL AND REMOVE THE FOAM INSULATION BENEATH. (FIGURE 50-2)



FIGURE 50-2

3. LOCATE AND REMOVE THE THREE NUTS HOLDING THE METAL SHIELD. (FIGURE 50-3)



FIGURE 50-3

4. REMOVE THE METAL SHIELD AND REST IT ON THE FLOOR TO EXPOSE THE VEHICLES AIR SUSPENSION CONTROL MODULE. (FIGURE 50-5)



FIGURE 30-16

5. LOCATE THE VEHICLES AIR SUSPENSION CONTROL MODULE MOUNTED ON THE METAL SHIELD. DISCONNECT ALL THREE (TWO LARGE AND ONE SMALL) PLUGS CONNECTED TO THE SIDE. (FIGURE 50-5)



FIGURE 30-17

6. LOCATE A SUITABLE GROUND AND INSTALL THE BLACK WIRE FROM THE ELECTRONIC BYPASS MODULES WIRING HARNESS. (FIGURE 50-6)



FIGURE 30-18

7. LOCATE THE POSITIVE 12 VOLT POWER SOURCE AND INSTALL THE RED WIRE FROM THE ELECTRONIC BYPASS MODULES WIRING HARNESS. (FIGURE 50-7)

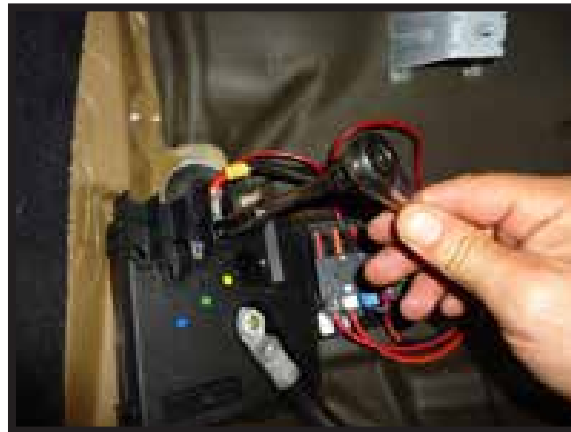
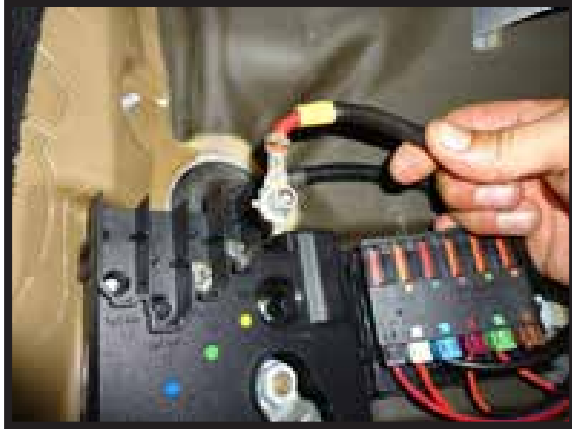


FIGURE 50-7

8. LOCATE THE SMALL, TWO WIRE PLUG FROM THE VEHICLE'S WIRING HARNESS AND PLUG IT INTO THE ELECTRONIC BYPASS MODULE'S WIRING HARNESS. (FIGURE 50-8)



FIGURE 50-8

9. PLUG THE NEW WIRING HARNESS INTO THE ELECTRONIC BYPASS MODULE. (FIGURE 50-9)

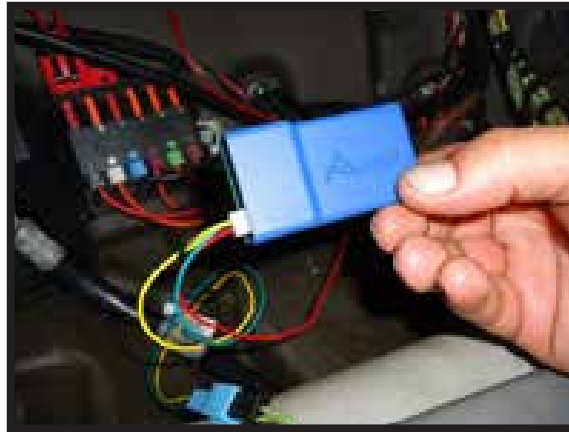


FIGURE 50-9

10. SECURE THE ELECTRONIC BYPASS MODULE IN A SUITABLE LOCATION AND REINSTALL ALL PANELS IN REVERSE ORDER OF WHICH THEY WERE DISASSEMBLED. (FIGURE 50-10)

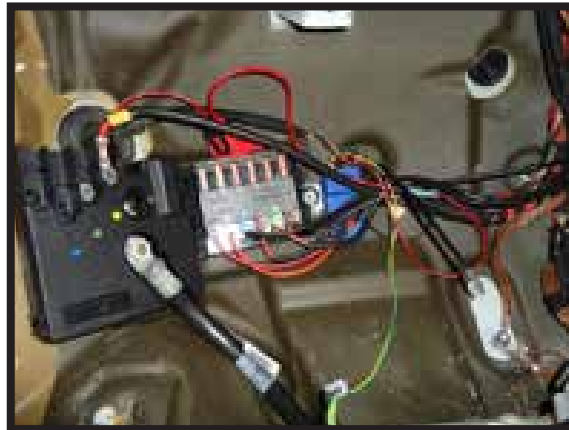


FIGURE 50-10

11. ELECTRONIC BYPASS MODULE INSTALLATION COMPLETE.

NOTE: DO NOT PLUG THE FACTORY WIRING HARNESS BACK INTO THE VEHICLE'S AIR SUSPENSION CONTROL MODULE.