

Installation Manual

C-2967 ARNOTT COIL SPRING CONVERSION KIT LAND ROVER RANGE ROVER (L322) W/VDS



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. (In the EU please call +31 (0)73 7850 580 or email 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.

- 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 THE STEERING TO STRAIGHT AHEAD.
2. RAISE THE VEHICLE.
3. REMOVE WHEELS.
4. TO RELEASE THE AIR PRESSURE FROM THE FRONT STRUTS YOU WILL NEED TO REMOVE THE PASSENGER SIDE FRONT WHEEL WELL LINER. (FIGURE 1)

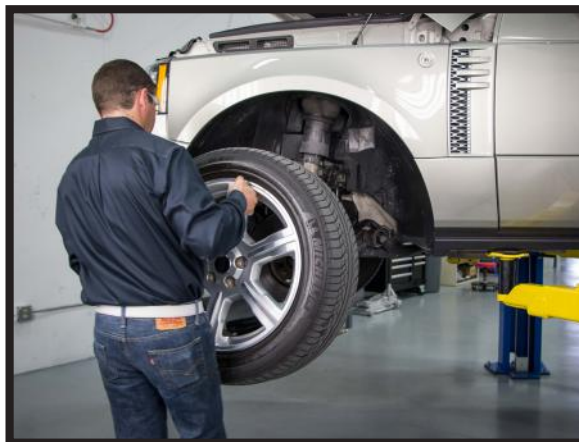


FIGURE 1

5. WITH THE WHEEL WELL LINER REMOVED YOU ARE ABLE TO ACCESS THE FRONT VALVE BLOCK LOCATED AT THE REAR OF THE WHEEL WELL. SLOWLY RELEASE THE AIR PRESSURE FROM THE FRONT STRUTS BY LOOSENING THE ORANGE AND BLACK AIR HOSES. (FIGURE 2)

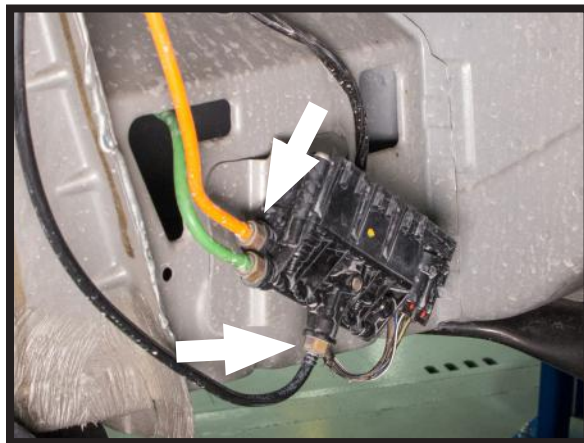


FIGURE 2

6. REMOVE THE BRAKE HOSE AND ABS SENSOR WIRE FROM THE RETENTION BRACKET ON THE STRUT. (FIGURE 3)

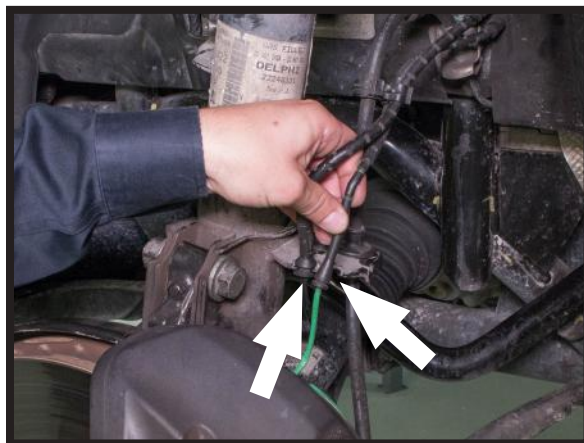


FIGURE 3

7. REMOVE THE SENSOR WIRE FROM THE FRONT SIDE OF THE STRUT HELD ON WITH A SMALL PLASTIC CLIP. (FIGURE 4)

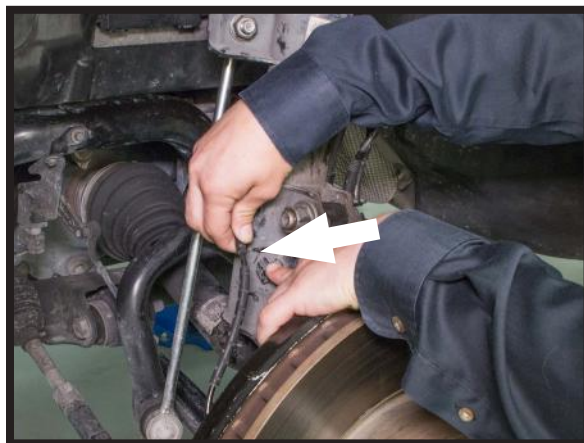


FIGURE 4

8. DISCONNECT THE SWAY BAR END LINK BY REMOVING THE NUT HOLDING THE BALL JOINT TO THE STRUT. YOU MAY NEED TO HOLD THE BALL JOINT FROM SPINNING BY PLACING A WRENCH ON THE TWO (2) FLATS OF THE BALL JOINT. (FIGURE 5)



FIGURE 5

9. REMOVE THE TWO (2) LARGE BOLTS THAT HOLD THE STRUT TO THE SPINDLE ASSEMBLY. (FIGURE 6)



FIGURE 6

10. WITH THE NUTS AND BOLTS REMOVED FROM THE SPINDLE ASSEMBLY, PULL THE SPINDLE OUTWARD WHILE PUSHING THE STRUT INWARD TO DISENGAGE THEM. (FIGURE 7)



FIGURE 7

11. REMOVE THE MASS DAMPER ASSEMBLY AND THEN REMOVE THE ELECTRICAL CONNECTOR. (FIGURES 8, 9, 10)



FIGURE 8



FIGURE 9



FIGURE 10

12. REMOVE THE THREE UPPER MOUNTING NUTS FROM THE TOP OF THE STRUT, BEING CAREFUL NOT TO DROP THE STRUT. THEN, REMOVE THE RUBBER GROMMET. (FIGURES 11, 12)



FIGURE 11



FIGURE 12

13. WITH THE STRUT REMOVED YOU CAN NOW GAIN ACCESS TO ITS AIR HOSE CONNECTION, REMOVE THE FITTING TO FREE THE ASSEMBLY. (FIGURE 13)

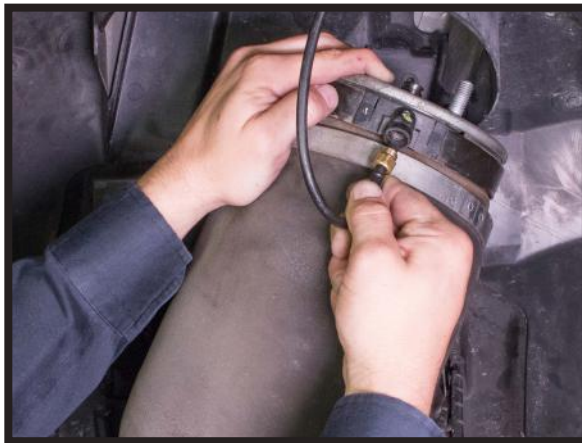


FIGURE 13

14. REMOVAL COMPLETE. (FIGURE 14)



FIGURE 14

FRONT COIL STRUT INSTALLATION



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

1. INSTALL THE COIL STRUT INTO THE VEHICLE. (FIGURE 15)



FIGURE 15

2. INSTALL THE LOWER MOUNTING BOLTS AND NUTS AND TIGHTEN TO MANUFACTURER'S SPECIFICATIONS. (FIGURE 16)



FIGURE 16

3. INSTALL THE SWAY BAR END LINK. (FIGURES 17, 18)



FIGURE 17



FIGURE 18

4. INSTALL THE BRAKE LINE, THE BRAKE PAD WEAR WIRE (GREEN WIRE), AND THE WHEEL SPEED SENSOR WIRE. (FIGURES 19, 20, 21)



FIGURE 19



FIGURE 20



FIGURE 21

5. INSTALL THE UPPER MOUNTING NUTS ONTO THE SHOCK AND REINSTALL THE RUBBER GROMMET. (FIGURES 22, 23)



FIGURE 22



FIGURE 23

NOTE: SECURE THE AIR LINE AND ELECTRICAL CONNECTOR AWAY FROM HEAT AND MOVING PARTS.

6. REINSTALL THE WHEEL. (FIGURE 24)



FIGURE 24

7. INSTALLATION COMPLETE.

REAR AIR SPRING REMOVAL

1. THE REAR AIR SUSPENSION VALVE BLOCK IS LOCATED IN THE RIGHT WHEEL WELL, REMOVAL OF THE INNER FENDER WELL IS NECESSARY. (FIGURE 25)



FIGURE 25

2. WITH THE WHEEL WELL REMOVED, LOCATE THE VALVE BLOCK AND AGAIN DRAIN THE AIR FROM THE AIR SPRINGS BY LOOSENING THE ORANGE AND BLACK AIR LINES. (FIGURE 26)



FIGURE 26

3. WITH ALL OF THE AIR EVACUATED FROM THE AIR SPRINGS, REMOVE THE LOWER AIR SPRING RETENTION SCREW FROM THE BOTTOM CONTROL ARM. (FIGURE 27)

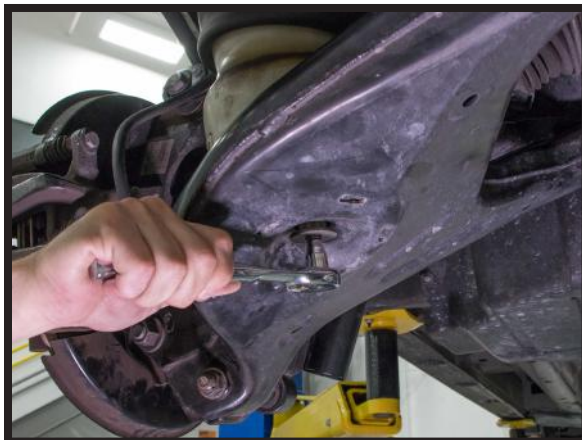


FIGURE 27

4. USING A PICK OR SIMILAR TOOL, REMOVE THE CLIP HOLDING THE TOP OF THE AIR SPRING ONTO THE FRAME. (FIGURE 28)



FIGURE 28

5. AFTER BOTH UPPER AND LOWER RETENTION FASTENERS ARE REMOVED YOU CAN PULL THE AIR SPRING LOOSE AND DISCONNECT THE AIRLINE. (FIGURE 29)

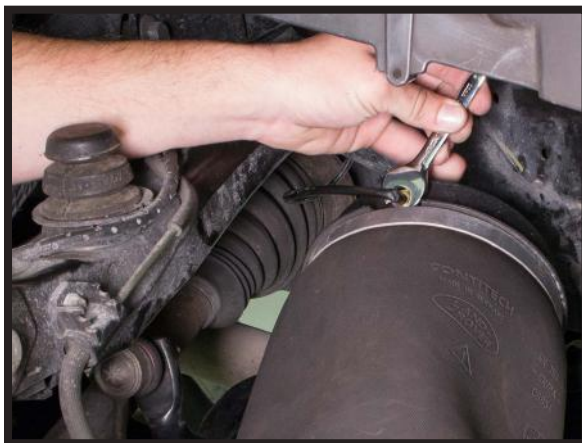


FIGURE 29

6. REMOVE THE CARGO DECK LID. (FIGURE 30)



FIGURE 30

7. DISCONNECT THE ELECTRICAL CONNECTOR FROM THE TOP OF THE SHOCK ROD. (FIGURE 31)



FIGURE 31

8. REMOVE THE THREE UPPER MOUNTING NUTS. (FIGURE 32)



FIGURE 32

9. REMOVE THE LOWER SHOCK MOUNTING NUT AND BOLT (FIGURES 33, 34)



FIGURE 33



FIGURE 34

10. DISCONNECT THE SHOCK FROM THE LOWER CONTROL ARM AND REMOVE. (FIGURES 35, 36)



FIGURE 35



FIGURE 36

11. REMOVE THE RIDE HEIGHT SENSOR FROM THE LOWER CONTROL ARM. (FIGURES 37, 38)



FIGURE 37



FIGURE 38

12. REMOVE THE SWAY BAR END LINK. (FIGURES 39, 40)



FIGURE 39



FIGURE 40

13. LOOSEN AND REMOVE THE OUTER LOWER SPINDLE NUT AND BOLT. (FIGURES 41, 42)

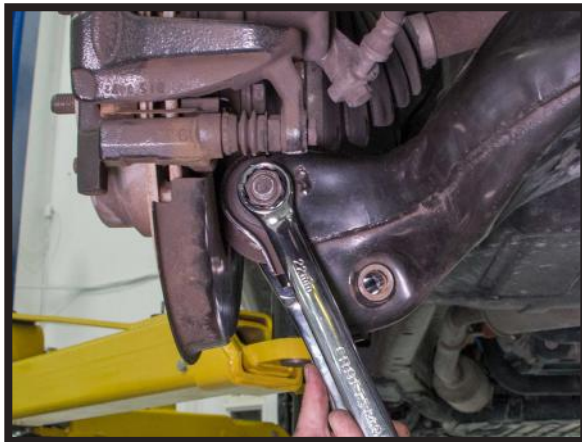


FIGURE 41



FIGURE 42

14. LOOSEN BUT DO NOT REMOVE THE LOWER INNER CONTROL ARM BOLTS. (FIGURES 43, 44)



FIGURE 43



FIGURE 44

15. SEPARATE THE SPINDLE FROM THE LOWER CONTROL ARM. (FIGURE 45)

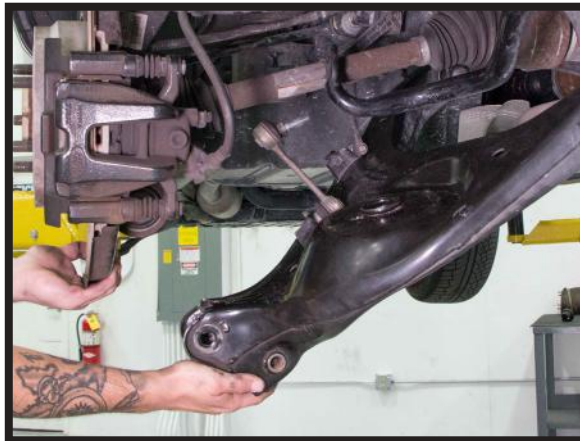


FIGURE 45

16. REMOVAL COMPLETE.

REAR COIL SPRING INSTALLATION

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

1. INSTALL THE LOWER SPRING SEAT ONTO THE LOWER CONTROL ARM AND SECURE IN PLACE USING THE SUPPLIED 5/16"-18 X 2 1/2" BOLTS AND FENDER WASHER THROUGH THE HOLE IN THE CENTER. (FIGURE 46)



FIGURE 46

2. INSTALL THE UPPER SPRING SEAT INTO THE UPPER MOUNTING REUSING THE HITCH PIN. (FIGURE 47)



FIGURE 47

3. COAT THE LOWER ISOLATOR AND SEAT IN A LUBRICANT TO AID IN INSTALLATION. (FIGURE 48)



FIGURE 48

4. PLACE THE COIL SPRING ASSEMBLY INTO THE UPPER PERCH CENTERING THE UPPER SEAT. WHILE PRESSING DOWN ON THE CONTROL ARM, SLIDE THE BOTTOM OF THE SPRING OVER THE LOWER SEAT. (FIGURE 49)



FIGURE 49

5. INSTALL THE SHOCK AND THREE UPPER MOUNTING NUTS. (FIGURE 50, 51)

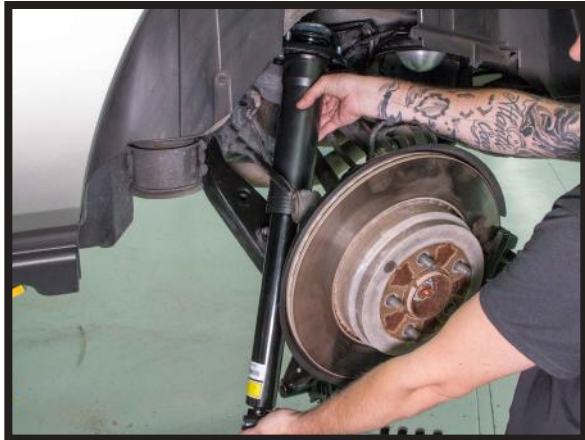


FIGURE 50



FIGURE 51

6. USING A FLOOR JACK, RAISE THE LOWER CONTROL ARM TO REALIGN WITH THE SPINDLE BEING SURE THE SPRING IS SECURELY SEATED. REINSTALL THE LOWER CONTROL ARM TO SPINDLE BOLT FOLLOWED BY THE REMAINING SUSPENSION FASTENERS. (FIGURE 52, 53)



FIGURE 52



FIGURE 53

7. INSTALL THE LOWER OUTER SPINDLE NUT AND BOLT. (FIGURE 54, 55)



FIGURE 54



FIGURE 55

8. INSTALL THE LOWER SHOCK MOUNT NUT AND BOLT. (FIGURE 56, 57)

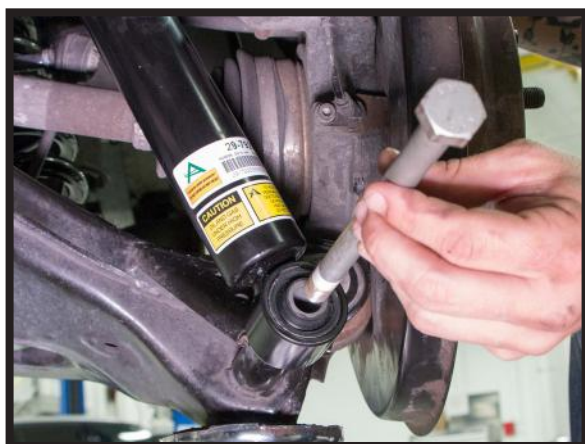


FIGURE 56

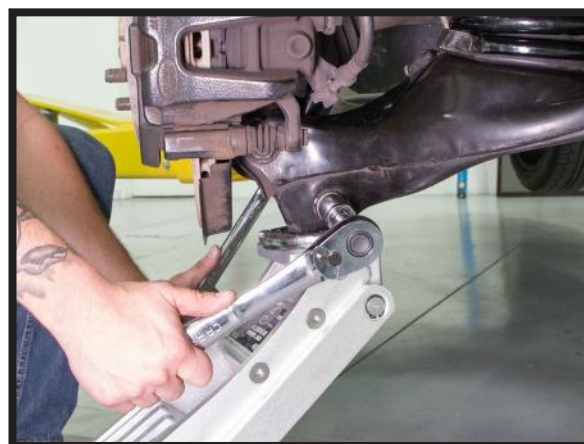


FIGURE 57

9. INSTALL THE SWAY BAR END LINK. (FIGURE 58, 59)



FIGURE 58

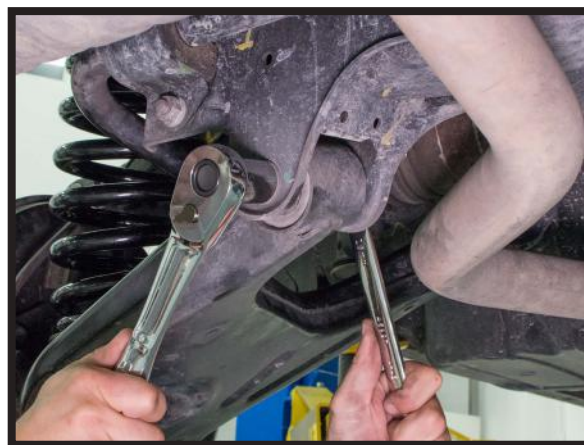


FIGURE 59

10. TIGHTEN THE INNER CONTROL ARM BOLTS. (FIGURE 60)

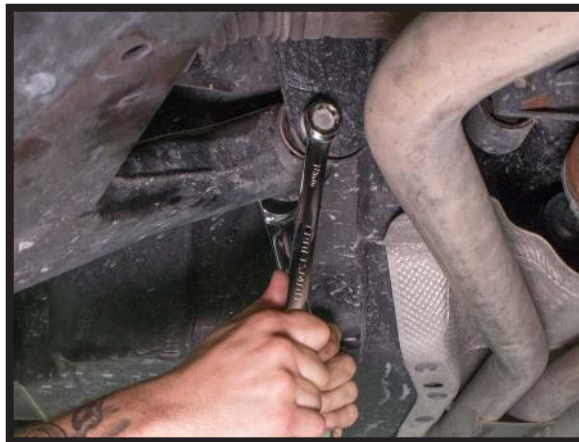


FIGURE 60

11. REINSTALL THE RIDE HEIGHT SENSOR. (FIGURE 61)



FIGURE 61

12. REINSTALL THE WHEEL AND FENDER WELL. (FIGURES 62, 63)



FIGURE 62



FIGURE 63

13. INSTALLATION COMPLETE.

ELECTRONIC BYPASS MODULE INSTALLATION

1. LOCATE THE ACCESS PANEL IN THE RIGHT SIDE OF THE LUGGAGE COMPARTMENT. (FIGURE 64, 65)



FIGURE 64



FIGURE 65

2. REMOVE THE (3) SCREWS HOLDING THE FUSE PANEL IN PLACE TO ACCESS THE REVERSE SIDE. (FIGURE 66)

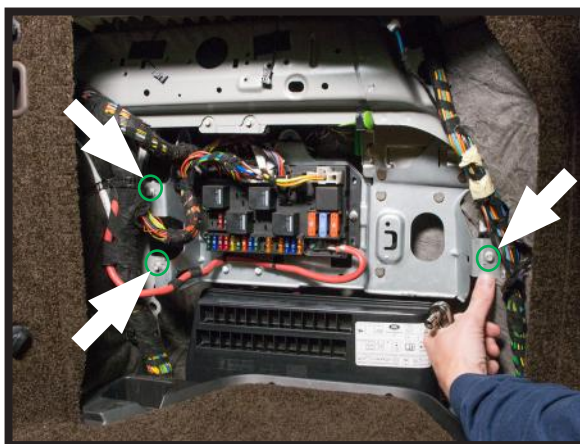


FIGURE 66

3. LOCATE THE AIR SUSPENSION CONTROL MODULE BEHIND THE FUSE PANEL. MAKE NOTE OF THE BLACK 20-PIN CONNECTOR. (FIGURES 67, 68)



FIGURE 67

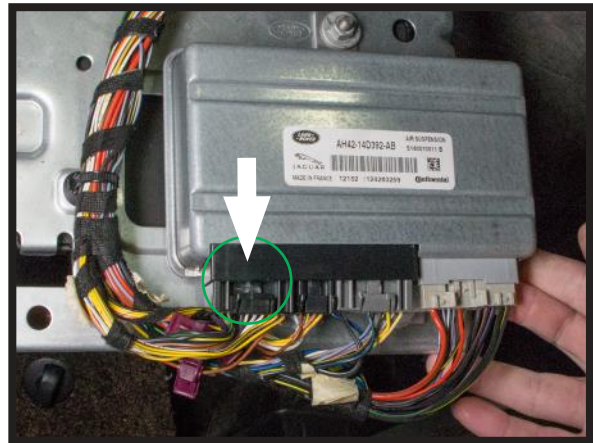


FIGURE 68

4. DISCONNECT THE AIR SUSPENSION CONTROL MODULE. (FIGURE 69)



FIGURE 69

5. LOCATE SUITABLE GROUND AND INSTALL BLACK WIRE FROM EBM. (FIGURE 70)

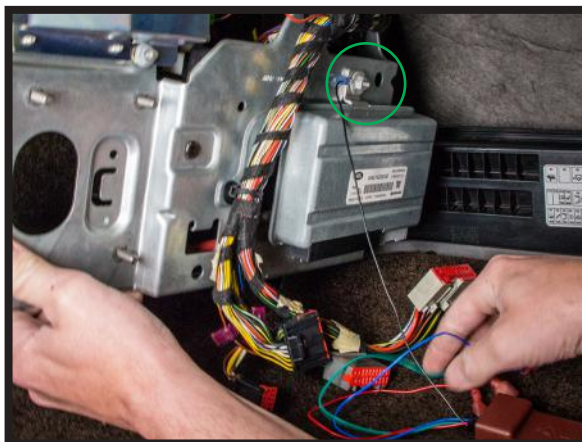


FIGURE 70

6. INSTALL EACH 3-WAY WIRE SPLICE ON THE BLACK 20-PIN CONNECTOR. SEE DIAGRAM BELOW. (FIGURE 71, 72)

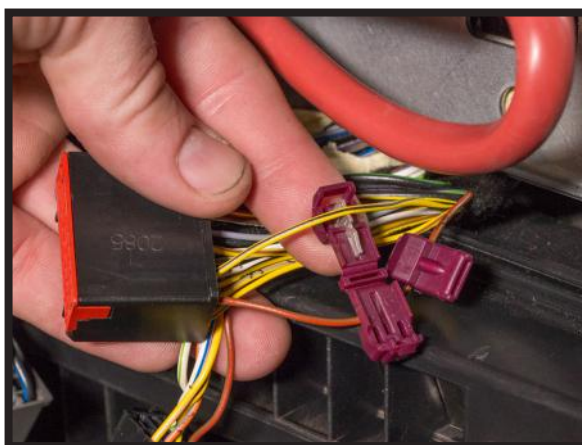


FIGURE 71

ELECTRONIC BYPASS MODULE	FROM	TO (PIN)	VEHICLE'S WIRING HARNESS
	BLACK	GROUND	
	RED	BROWN/RED (20)	
	BLUE	YELLOW/BROWN (16)	
	GREEN	YELLOW/BLACK (19)	

FIGURE 72

NOTE:

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

7. SECURE IN SUITABLE LOCATION. (FIGURE 73)

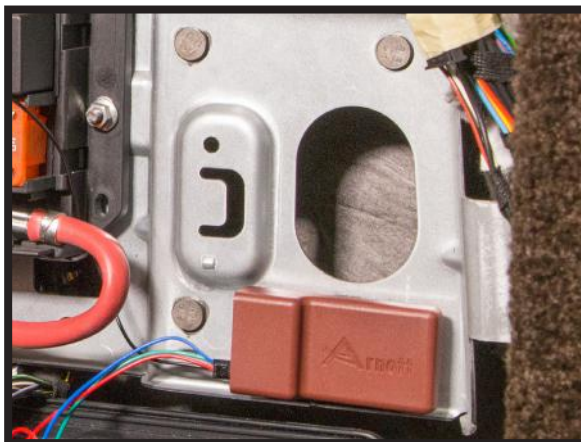


FIGURE 73

8. REMOVE THE VDS FUSE. (FIGURE 74)

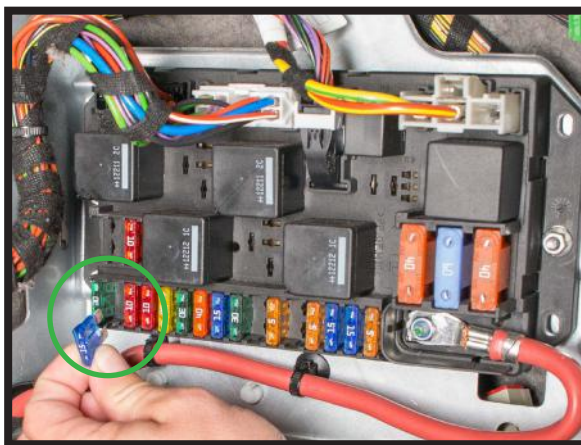


FIGURE 74

9. REINSTALL FUSE PANEL AND ACCESS COVER PRIOR TO RECONNECTION OF THE BATTERY.
10. INSTALLATION COMPLETE.