

Installation Manual

KIT # MC-2908, MC-2909
FOR 2001-PRESENT
HARLEY-DAVIDSON®
SOFTAIL SERIES



Congratulations on your purchase of an Arnott® Motorcycle Air Suspension system. This system provides you with the ability to maintain your bike at a constant level regardless of load, resulting in enhanced vehicle ride, handling, and performance. 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 motorcycle. 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 motorcycle and isolation of any stored energy to prevent personal injury or property damage.

"Elevate Your Ride"



WARNING: *DO NOT* inflate the air suspension system until it is installed. Inflation of the air suspension system before both ends are supported by the motorcycle's frame and/or appropriate suspension components may result in serious personal injury and/or damage to the air suspension system. The maximum recommended air spring inflation pressure is 200 psi.

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BILL OF MATERIALS MC-2908 SOFTAIL SUSPENSION SYSTEM, BLACK

20-9894-B - INFLATION KIT, BLACK CONTAINS:

PARTS LIST

| QTY | PART NO. | DESCRIPTION |
|-----|---------------|--|
| 1 | 21-3110 | MICRO RELAY ASSEMBLY W/ HARNESS |
| 1 | 21-7268 | 4MM AIRLINE X 6FT. ACCESSORY KIT |
| 1 | 21-7271 | ZIPTIES ACCESSORY KIT |
| 1 | 21-7272 | SPLIT LOOM |
| 1 | 21-2698 | UNIVERSAL FUSE HOLDER ASSEMBLY KIT |
| 1 | 21-9723 | SOFTAIL PUMP ASSEMBLY |
| 1 | 21-10592 | SOFTAIL PUMP COVER ASSY., BLACK |
| 1 | 21-7715 | 4MM VOSS FITTING ACCESSORY KIT |
| 1 | 20-9914 | MOUNT KIT |
| 1 | 21-9913 | EXTRA WIRE & ENDS KIT |
| 1 | 11-MC-SOFTAIL | INSTALLATION MANUAL FOR MC-2908 & 2909 |
| 1 | 29-9749 | PUSH BUTTON SWITCH ASSEMBLY, BLACK |

21-9895 - SOFTAIL SHOCK KIT CONTAINS:

PARTS LIST

| QTY | PART NO. | DESCRIPTION |
|-----|----------|--------------------------|
| 1 | 21-9259 | FOX SOFTAIL DAMPER ASSY. |
| 1 | 21-9261 | SOFTAIL AIR SPRING ASSY. |

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BILL OF MATERIALS MC-2909 SOFTAIL SUSPENSION SYSTEM, CHROME

20-9894-C - INFLATION KIT, CHROME CONTAINS:

PARTS LIST

| QTY | PART NO. | DESCRIPTION |
|-----|---------------|--|
| 1 | 21-3110 | MICRO RELAY ASSEMBLY W/ HARNESS |
| 1 | 21-7268 | 4MM AIRLINE X 6FT. ACCESSORY KIT |
| 1 | 21-7271 | ZIPTIES ACCESSORY KIT |
| 1 | 21-7272 | SPLIT LOOM |
| 1 | 21-2698 | UNIVERSAL FUSE HOLDER ASSEMBLY KIT |
| 1 | 21-9723 | SOFTAIL PUMP ASSEMBLY |
| 1 | 21-10593 | SOFTAIL PUMP COVER ASSY., CHROME |
| 1 | 21-7715 | 4MM VOSS FITTING ACCESSORY KIT |
| 1 | 20-9914 | MOUNT KIT |
| 1 | 21-9913 | EXTRA WIRE & ENDS KIT |
| 1 | 11-MC-SOFTAIL | INSTALLATION MANUAL FOR MC-2908 & 2909 |
| 1 | 29-9750 | PUSH BUTTON SWITCH ASSEMBLY, CHROME |

21-9895 - SOFTAIL SHOCK KIT CONTAINS:

PARTS LIST

| QTY | PART NO. | DESCRIPTION |
|-----|----------|--------------------------|
| 1 | 21-9259 | FOX SOFTAIL DAMPER ASSY. |
| 1 | 21-9261 | SOFTAIL AIR SPRING ASSY. |

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.

- Not to be stored below 5°F (-15°C) or above 122°F (50°C).
- Avoid damage to air lines and electrical components.
- Removal and installation is only to be performed by fully qualified personnel.

CAUTION: *Damage to the motorcycle 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.*

Each owner or installer is unique, therefore installation of this system can be done many different ways. The mounting locations of the compressor and inflation switch are suggestions by our engineers. If proper wiring guidelines and instructions are followed, relocation of the compressor or switch will neither affect the system operation nor void your warranty.

Adjust air shock pressure as required for desired ride quality to maximize the benefits of your system. Excess pressure will result in a firmer ride, too little pressure will allow the suspension to bottom out.



To avoid the possibility of short circuits while working with electric components consult your owner's manual on how to disconnect your battery.



Refer to the Owner's Manual for the bike and instructions for the motorcycle lift for all correct lifting procedures. It is also recommended that you protect any chrome or painted surfaces that may be damaged during lifting, removal or installation process.

Use a solid, level surface to position the bike on a motorcycle lift and use all recommended safety techniques. Lift the bike so the rear wheel is just slightly off the ground.

1. **WARNING! DO NOT REMOVE ZIP TIE FROM THE DAMPER UNTIL STEP 10. (FIGURE 1)**



FIGURE 1

2. DISCONNECT BATTERY AND REMOVE FROM MOTORCYCLE. (FIGURES 2, 3)



FIGURE 2

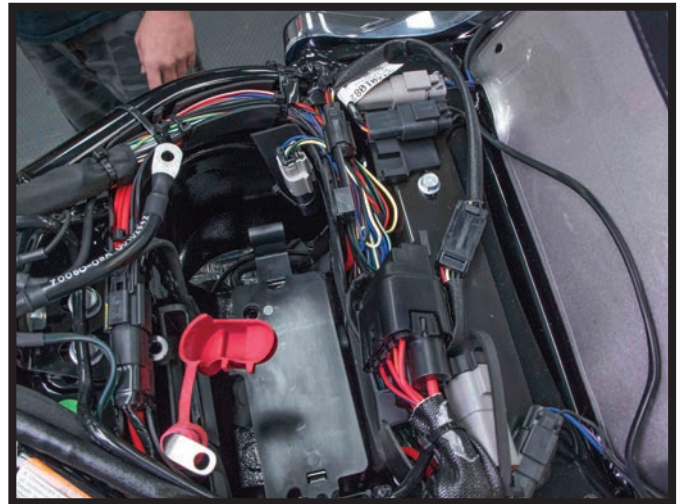


FIGURE 3

3. REMOVE THE TWO OE SHOCKS FROM UNDER THE BIKE, SAVING ALL OF THE MOUNTING HARDWARE AND BUSHINGS. (FIGURES 4, 5)

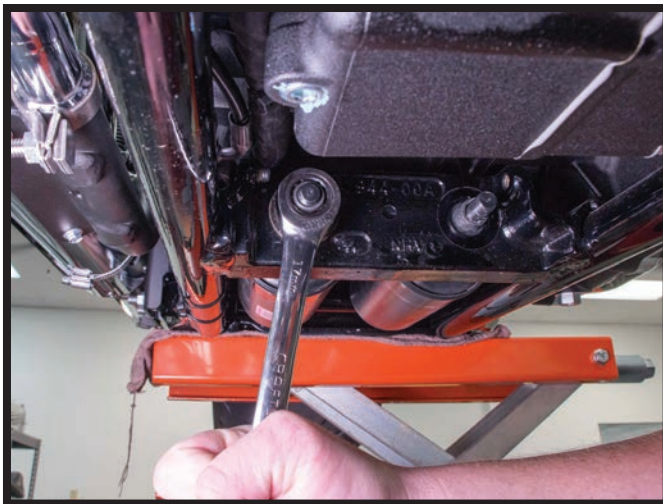


FIGURE 4



FIGURE 5

4. SCREW ONE OF THE VOSS FITTINGS INTO THE AIR SPRING JUST UNTIL THE O-RING SEATS. THEN PULL OFF THE WHITE PLUG. (FIGURES 6, 7)



FIGURE 6



FIGURE 7

5. PUSH THE 4MM AIR LINE INTO THE FITTING UNTIL YOU FEEL IT SEAT. UNSCREW THE FITTING AND CONFIRM THE KEEPER IS ATTACHED TO THE AIR LINE. REINSTALL IN THE AIR SPRING THEN SNUG TIGHT WITH A 10MM WRENCH. (FIGURES 8, 9)



FIGURE 8



FIGURE 9

6. ROUTE THE 4MM AIR LINE ALONG THE RIGHT FRAME RAIL TOWARD THE FRONT OF THE BIKE. THEN PUT ONE OF THE OE BUSHINGS ON THE AIR SPRING. (FIGURES 10, 11)



FIGURE 10



FIGURE 11

7. USING THE OE BUSHINGS AND NUT, MOUNT THE AIR SPRING TO THE LEFT SIDE OF THE FRAME. START THE NUT ON THE THREAD SO THAT THE REAR EYELET CAN BE EASILY LOCATED ON THE SWING ARM MOUNTING HOLE. (FIGURES 12, 13)



FIGURE 12



FIGURE 13

8. APPLY GREASE TO THE SHOULDER OF THE OE SHOCK BOLT AND BLUE LOCTITE TO THE THREADS. ATTACH THE AIR SPRING TO THE SWING ARM USING THE FACTORY RECOMMEND TORQUE. (FIGURES 14, 15)



FIGURE 14



FIGURE 15

9. WITHOUT REMOVING THE ZIP TIE, REPEAT STEPS 6 & 7 TO THE DAMPER ON RIGHT SIDE OF THE FRAME. (FIGURES 16, 17)

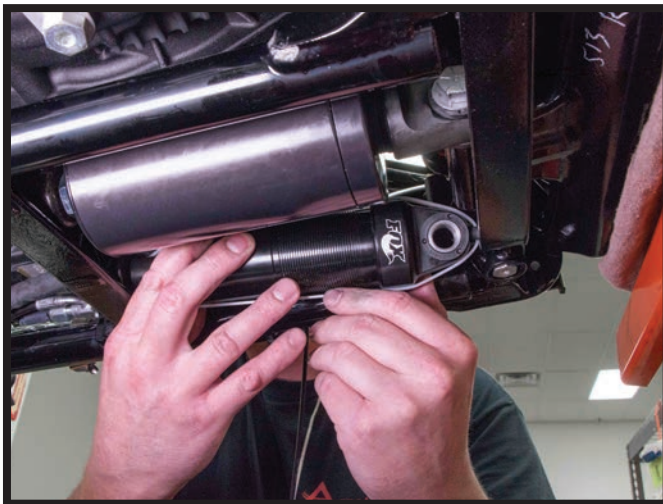


FIGURE 16

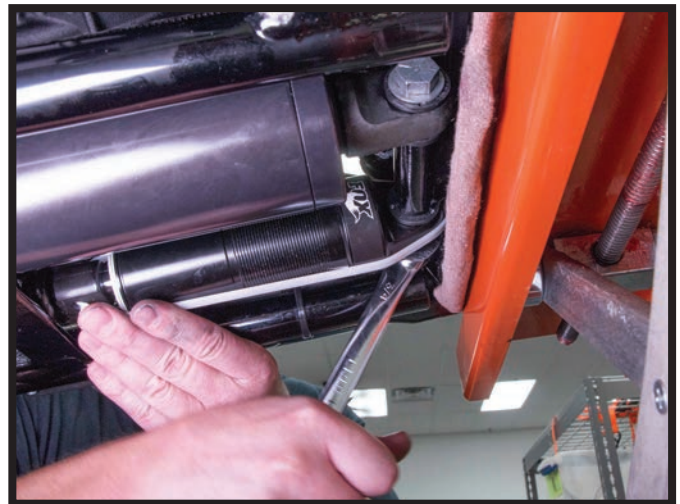


FIGURE 17

10. CUT AND REMOVE THE ZIP TIE FROM THE DAMPER. TORQUE ALL OF THE MOUNTING NUTS AND BOLTS, FOR BOTH THE AIR SPRING AND DAMPER, TO THE FACTORY RECOMMENDED TORQUE SPEC. (FIGURES 18, 19)



FIGURE 18



FIGURE 19

11. ROUTE THE 4MM HOSE UNDER THE ENGINE FROM THE AIR SPRING AND ZIP TIE IT ALONG THE RIGHT FRAME RAIL. (FIGURES 20, 21)



FIGURE 20

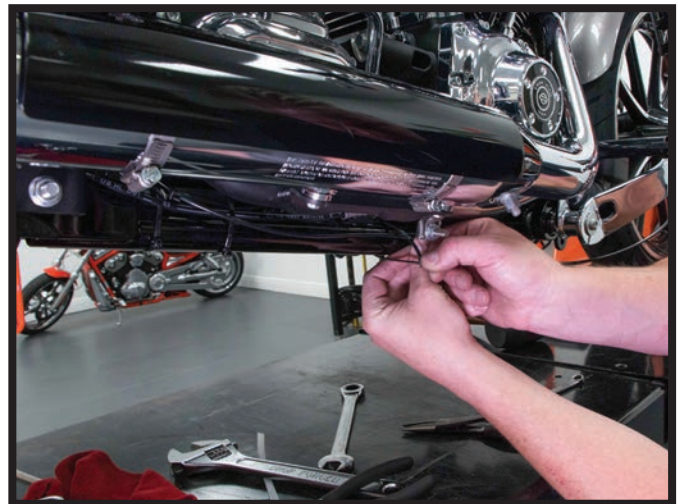


FIGURE 21

12. REMOVE THE REGULATOR/RECTIFIER & THE BRACKET FROM THE FRONT OF THE MOTORCYCLE. (FIGURES 22, 23)



FIGURE 22



FIGURE 23

13. UNPLUG THE CONNECTORS FROM THE REGULATOR/RECTIFIER. THIS IS ONLY APPLICABLE FOR NEWER SOFTAIL MODELS. (FIGURES 24, 25)

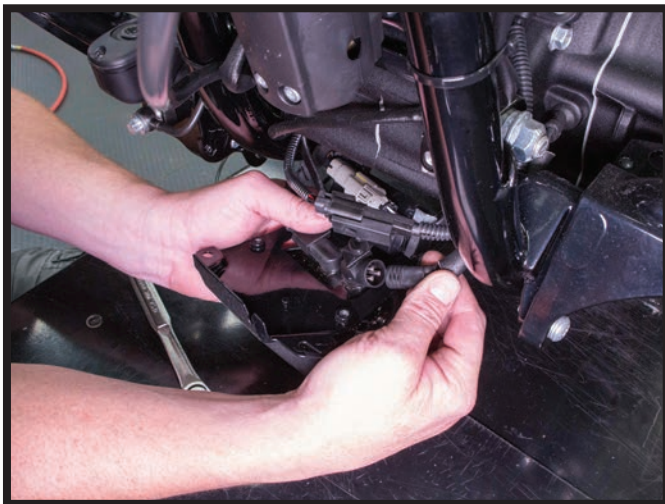


FIGURE 24



FIGURE 25

14. PULL THE OTHER CONNECTORS OUT OF THE OE MOUNTING BRACKET. PLUG THESE INTO THE PUMP BRACKET. (FIGURES 26, 27)

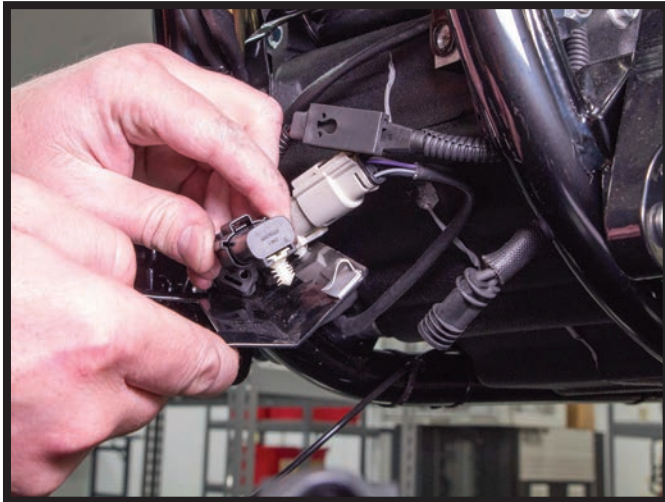


FIGURE 26



FIGURE 27

15. PULL THE REGULATOR/RECTIFIER PLUGS AROUND EITHER SIDE OF THE PUMP BRACKET. THEN SCREW THE PUMP BRACKET TO THE MOTOR USING THE SUPPLIED CAP SCREWS AND WASHERS. GROUND THE BLACK PUMP WIRE AND ONE OF THE SOLENOID WIRES WITH THE LEFT SCREW. (FIGURES 28, 29)

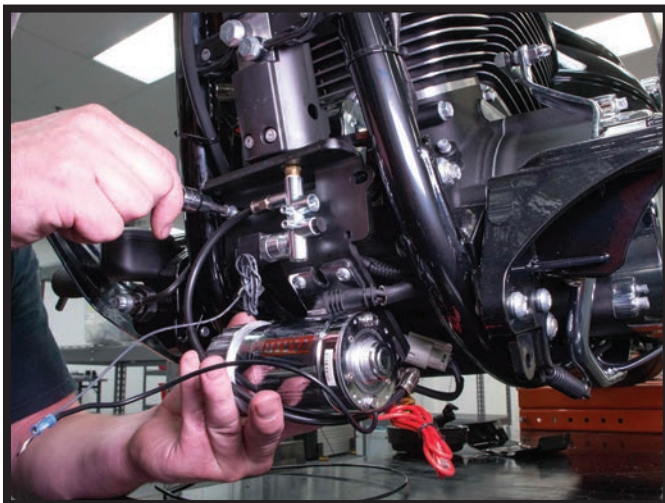


FIGURE 28

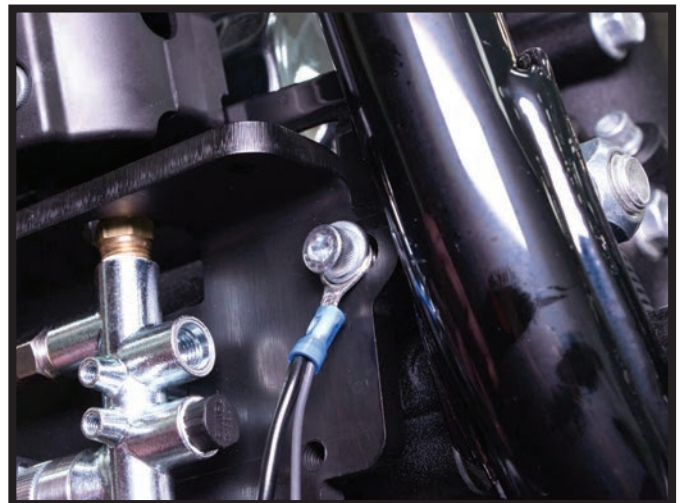


FIGURE 29

16. ROUTE THE 4MM AIR HOSE FROM THE FRAME AND UNDER THE ENGINE TO THE AIR MANIFOLD. TRIM THE HOSE TO LENGTH. THEN FOLLOWING THE SAME PROCEDURE AS BEFORE ATTACH THE VOSS FITTING TO THE HOSE AND SCREW IT INTO THE AIR MANIFOLD. (FIGURES 30, 31)

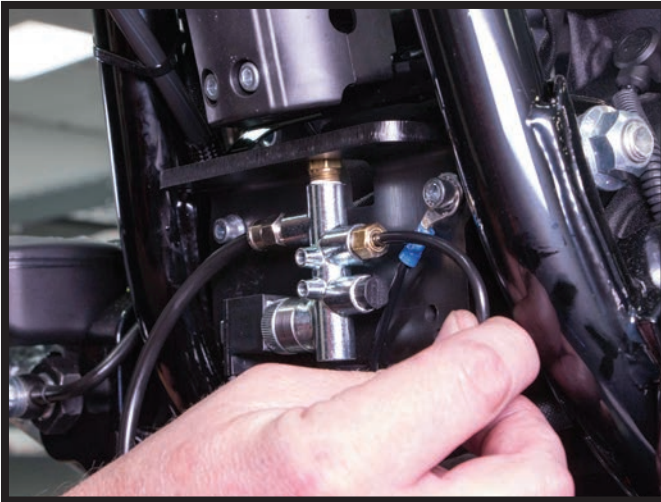


FIGURE 30

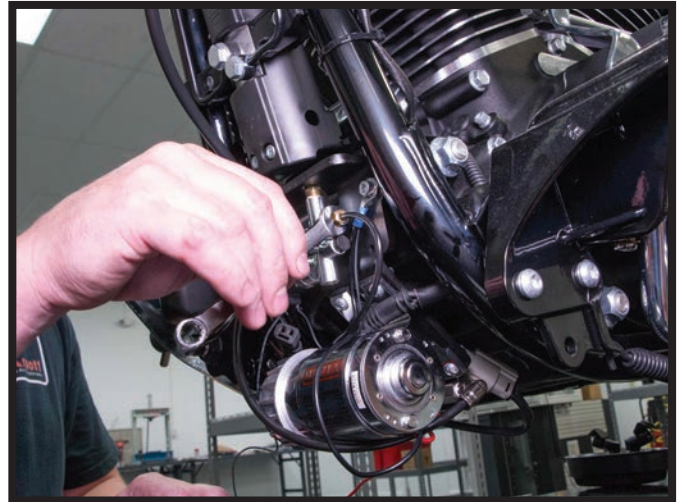


FIGURE 31

17. PLUG THE CONNECTORS BACK INTO THE REGULATOR/RECTIFIER. (FIGURES 32, 33)



FIGURE 32

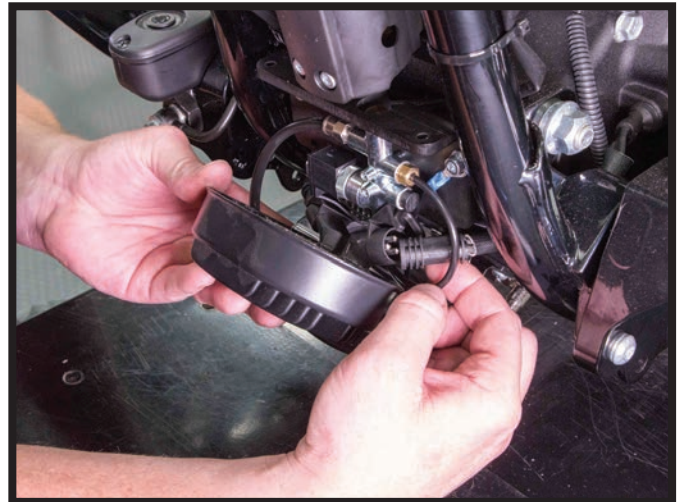


FIGURE 33

18. USING THE INCLUDED CAP SCREWS AND SPACERS, MOUNT THE REGULATOR/RECTIFIER TO THE PUMP BRACKET. (FIGURES 34, 35)



FIGURE 34

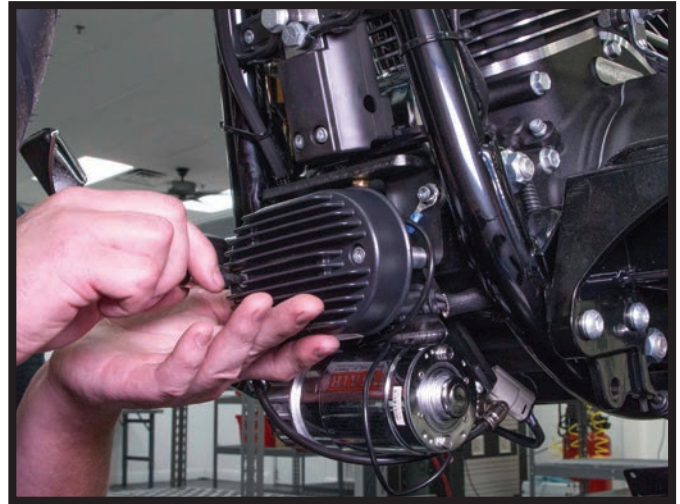


FIGURE 35

19. USING THE INCLUDED WIRE AND CONNECTORS, MAKE EXTENSIONS FOR THE PUMP & SOLENOID WIRE. (FIGURES 36, 37)

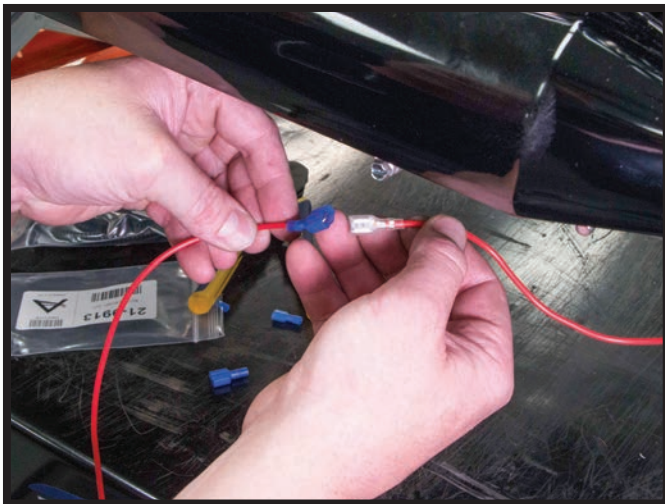


FIGURE 36



FIGURE 37

20. COVER THE WIRES WITH THE INCLUDED SPLIT LOOM. ATTACH THEM WITH THE INCLUDED ZIP TIES TO THE FRAME. (FIGURES 38, 39)



FIGURE 38



FIGURE 39

21. ROUTE THE WIRES UP INTO THE BATTERY BOX. (FIGURES 40, 41)



FIGURE 40

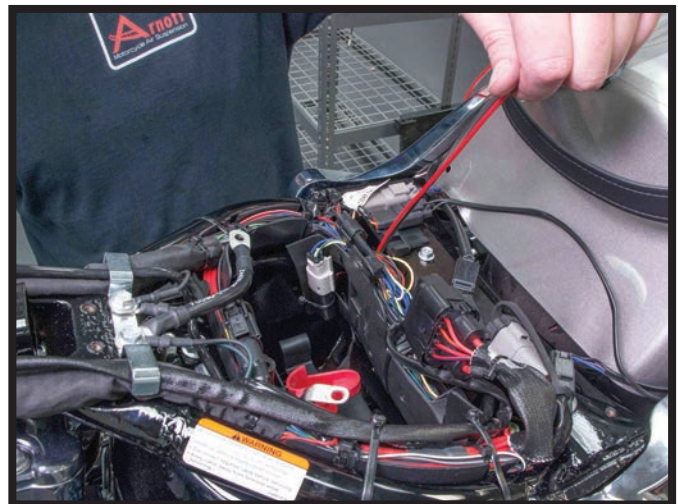


FIGURE 41

22. USING THE INCLUDED BUTTON HEAD CAP SCREWS AND WASHERS, ATTACH THE PUMP COVER TO THE PUMP BRACKET AND SECURE IT TO THE FRAME WITH THE INCLUDED ZIP TIES. (FIGURES 42, 43)



FIGURE 42

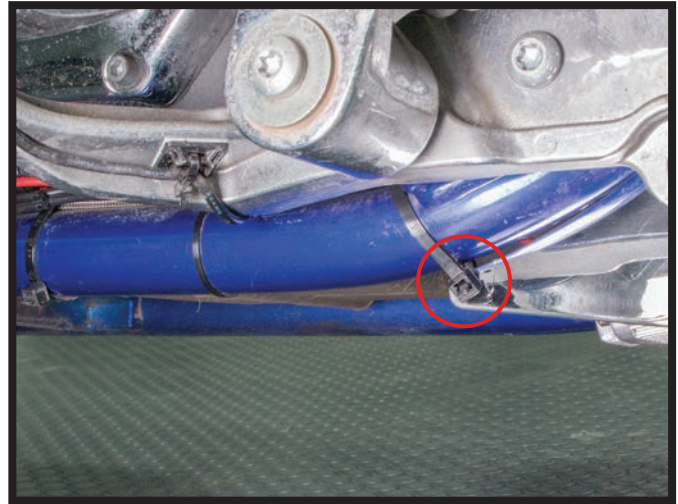


FIGURE 43

23. REMOVE THE LOWER CLUTCH MOUNT BOLT. REUSING THE BOLT, ATTACH THE HANDLE BAR SWITCH TO THE MOUNT. RUN THE WIRE DOWN THE HANDLE BAR SECURING IT WITH THE INCLUDED SMALL ZIP TIES. (FIGURES 44, 45)



FIGURE 44

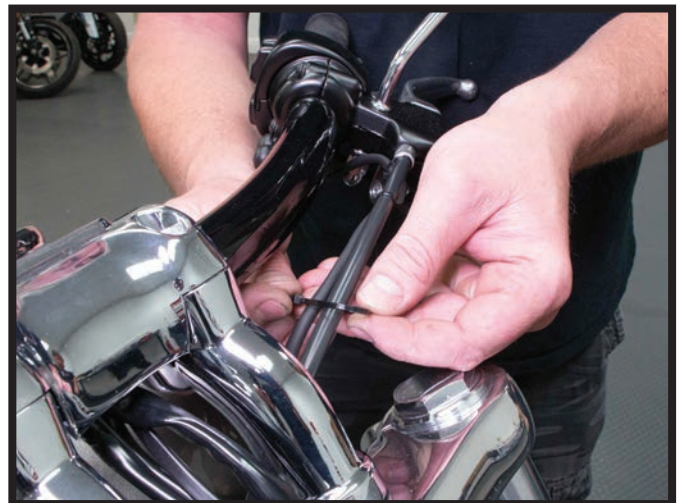


FIGURE 45

24. RUN THE WIRE UNDER THE FUEL TANK OR UNDER THE TANK COVER TOWARD THE BATTERY BOX.
(FIGURES 46, 47)



FIGURE 46



FIGURE 47

25. TRIM THE WIRES TO THE DESIRED LENGTHS AND FINISH ALL CONNECTIONS FOLLOWING THE WIRING DIAGRAMS IN THE BACK OF THIS MANUAL. BUNDLE THE WIRES WITH THE SUPPLIED ZIP TIES AND TUCK THEM INTO THE POCKET NEXT TO THE BATTERY. INSTALL THE BATTERY. (FIGURES 48, 49)

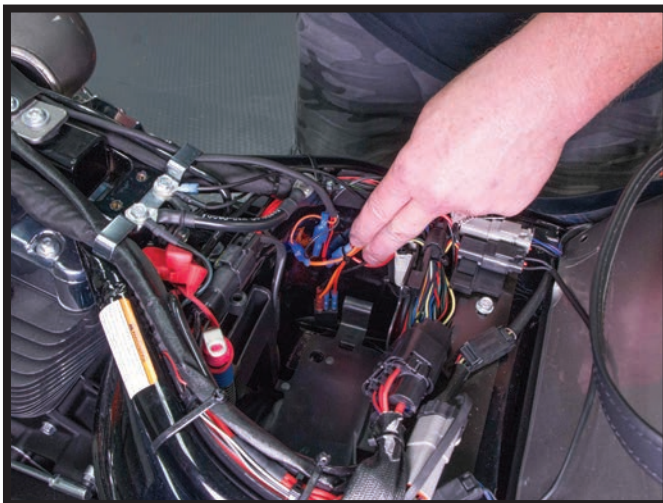


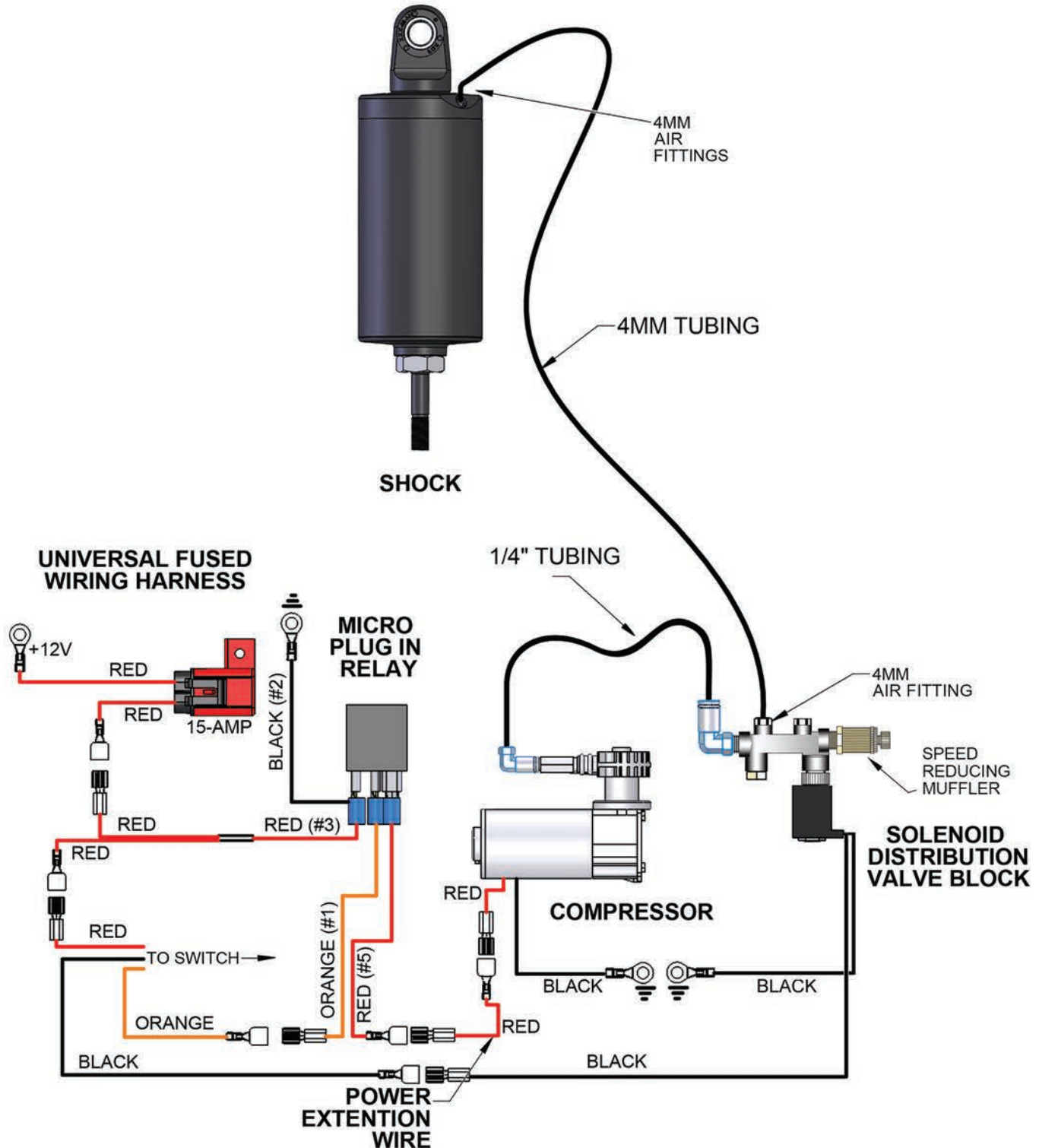
FIGURE 48



FIGURE 49

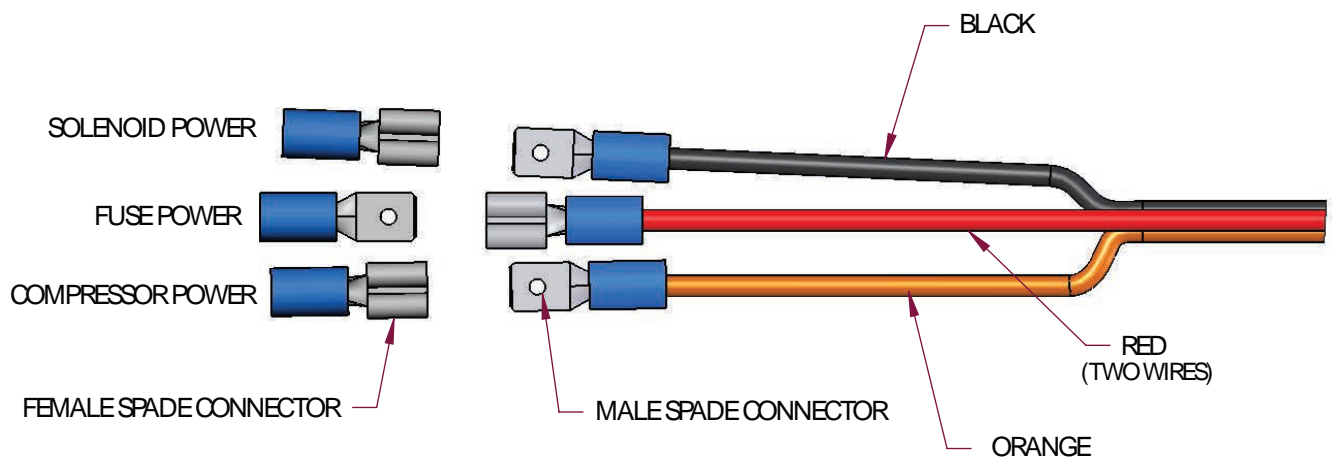
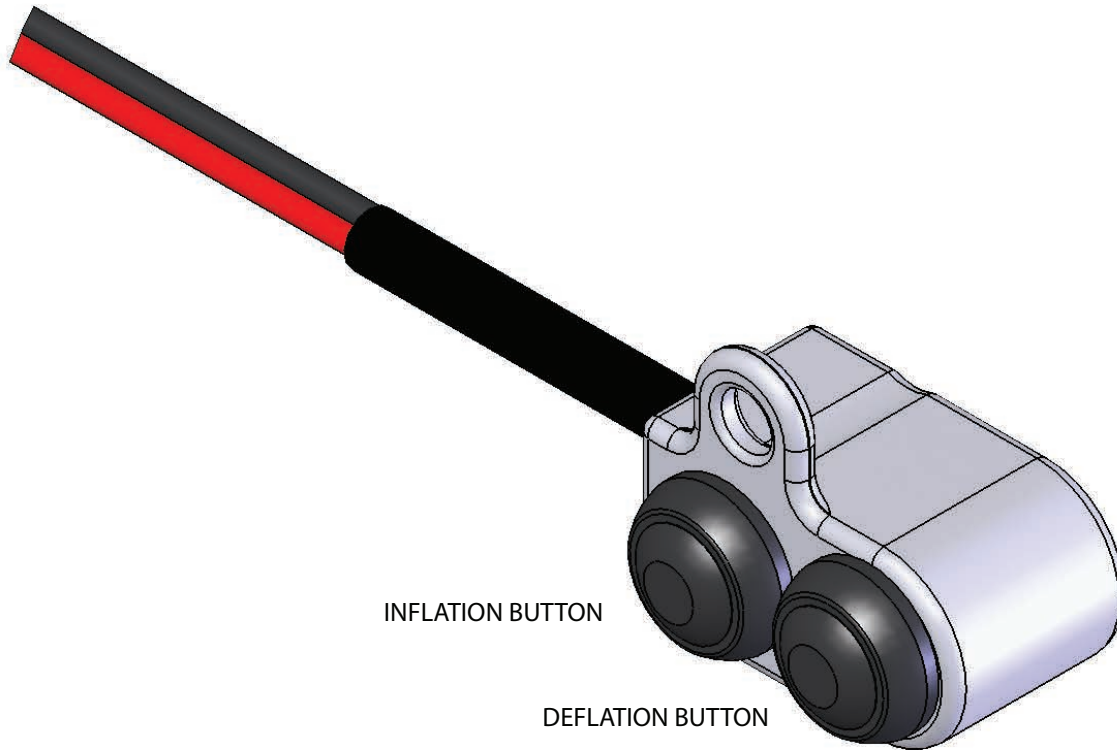
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- AS SHOWN IN ILLUSTRATION ABOVE:
1. CUT SWITCH WIRING TO APPROPRIATE LENGTH.
 2. CRIMP THE TWO MALE SPADE CONNECTORS TO THE ORANGE WIRE AND TO THE BLACK WIRE.
 3. CRIMP THE FEMALE SPADE CONNECTOR TO THE DOUBLE RED WIRE.