

Installation Manual

KIT # MC-3100, MC-3101, MC-3102, MC-3103
FOR 2008-PRESENT
HARLEY DAVIDSON DYNA 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 100 psi.

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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BILL OF MATERIALS MC-3100 - HARLEY-DAVIDSON DYNA, 2008-PRESENT, BLACK

20-10811 - INFLATION KIT, HARLEY-DAVIDSON DYNA, 2008-PRESENT

PARTS LIST

QTY	PART NO.	DESCRIPTION
1	21-2698	UNIVERSAL FUSE HOLDER ASSEMBLY KIT
1	21-2770	DYNA COMPRESSOR ASSY
1	21-3110	MICRO RELAY ASSEMBLY W/ HARNESS
1	21-7262	MANIFOLD BRACKET W/ FASTENER ACCY KIT
1	21-7266	BLACK BOLT COVERS ACCESSORY KIT
1	21-7267	1/4" NYLON TUBING ACCESSORY KIT
1	21-7268	4MM AIRLINE X 6FT. ACCESSORY KIT
1	21-7269	4MM VOSS AIR FITTING ACCESSORY KIT
1	21-7271	HARNESS CABLE TIES ACCESSORY KIT
1	21-7272	SPLIT LOOM ACCESSORY KIT
1	21-7324	DYNA SPACER KIT
1	21-7343	MOUNTING HARDWARE KIT
1	11-MC-DYNA	INSTALLATION MANUAL FOR MC-3100, 3101, 3102, & 3103
1	21-9761	90 DEGREE PUSH CONNECT MANIFOLD ASSY
1	21-9913	WIRE AND TERMINAL KIT

21-9764-REB-B - SHOCK KIT

PARTS LIST

QTY	PART NO.	DESCRIPTION
1	21-9253	LEFT SHOCK ASSY, BLACK
1	21-9254	RIGHT SHOCK ASSY, BLACK

HANDLE BAR SWITCH

PARTS LIST

QTY	PART NO.	DESCRIPTION
1	29-9749	HANDLE BAR SWITCH, BLACK

Installation Manual

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BILL OF MATERIALS MC-3101 - HARLEY-DAVIDSON DYNA, 2008-PRESENT, CHROME

20-10811 - INFLATION KIT, HARLEY-DAVIDSON DYNA, 2008-PRESENT

PARTS LIST

QTY	PART NO.	DESCRIPTION
1	21-2698	UNIVERSAL FUSE HOLDER ASSEMBLY
1	21-2770	DYNA COMPRESSOR ASSY
1	21-3110	MICRO RELAY ASSEMBLY W/ HARNESS
1	21-7262	MANIFOLD BRACKET W/ FASTENER ACCY KIT
1	21-7266	BLACK BOLT COVERS ACCESSORY KIT
1	21-7267	1/4" NYLON TUBING ACCESSORY KIT
1	21-7268	4MM AIRLINE X 6FT. ACCESSORY KIT
1	21-7269	4MM VOSS AIR FITTING ACCESSORY KIT
1	21-7271	HARNESS CABLE TIES ACCESSORY KIT
1	21-7272	SPLIT LOOM ACCESSORY KIT
1	21-7324	DYNA SPACER KIT
1	21-7343	MOUNTING HARDWARE KIT
1	11-MC-DYNA	INSTALLATION MANUAL FOR MC-3100, 3101, 3102, & 3103
1	21-9761	90 DEGREE PUSH CONNECT MANIFOLD ASSY
1	21-9913	WIRE AND TERMINAL KIT

21-9764-REB-C - SHOCK KIT

PARTS LIST

QTY	PART NO.	DESCRIPTION
1	21-9256	LEFT SHOCK ASSY, CHROME
1	21-9257	RIGHT SHOCK ASSY, CHROME

HANDLE BAR SWITCH

PARTS LIST

QTY	PART NO.	DESCRIPTION
1	29-9750	HANDLE BAR SWITCH, CHROME

Installation Manual

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HARLEY DAVIDSON DYNA SERIES



BILL OF MATERIALS MC-3102 - HARLEY-DAVIDSON DYNA, 2008-PRESENT, BLACK

20-10811 - INFLATION KIT, HARLEY-DAVIDSON DYNA, 2008-PRESENT

PARTS LIST

QTY	PART NO.	DESCRIPTION
1	21-2698	UNIVERSAL FUSE HOLDER ASSEMBLY KIT
1	21-2770	DYNA COMPRESSOR ASSY
1	21-3110	MICRO RELAY ASSEMBLY W/ HARNESS
1	21-7262	MANIFOLD BRACKET W/ FASTENER ACCY KIT
1	21-7266	BLACK BOLT COVERS ACCESSORY KIT
1	21-7267	1/4" NYLON TUBING ACCESSORY KIT
1	21-7268	4MM AIRLINE X 6FT. ACCESSORY KIT
1	21-7269	4MM VOSS AIR FITTING ACCESSORY KIT
1	21-7271	HARNESS CABLE TIES ACCESSORY KIT
1	21-7272	SPLIT LOOM ACCESSORY KIT
1	21-7324	DYNA SPACER KIT
1	21-7343	MOUNTING HARDWARE KIT
1	11-MC-DYNA	INSTALLATION MANUAL FOR MC-3100, 3101, 3102, & 3103
1	21-9761	90 DEGREE PUSH CONNECT MANIFOLD ASSY
1	21-9913	WIRE AND TERMINAL KIT

21-9764-B - SHOCK KIT

PARTS LIST

QTY	PART NO.	DESCRIPTION
2	21-9255	SHOCK ASSY, BLACK

HANDLE BAR SWITCH

PARTS LIST

QTY	PART NO.	DESCRIPTION
1	29-9749	HANDLE BAR SWITCH, BLACK

Installation Manual

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BILL OF MATERIALS MC-3103 - HARLEY-DAVIDSON DYNA, 2008-PRESENT, CHROME

20-10811 - INFLATION KIT, HARLEY-DAVIDSON DYNA, 2008-PRESENT

PARTS LIST

QTY	PART NO.	DESCRIPTION
1	21-2698	UNIVERSAL FUSE HOLDER ASSEMBLY KIT
1	21-2770	DYNA COMPRESSOR ASSY
1	21-3110	MICRO RELAY ASSEMBLY W/ HARNESS
1	21-7262	MANIFOLD BRACKET W/ FASTENER ACCY KIT
1	21-7266	BLACK BOLT COVERS ACCESSORY KIT
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1	21-9761	90 DEGREE PUSH CONNECT MANIFOLD ASSY
1	21-9913	WIRE AND TERMINAL KIT

21-9764-C - SHOCK KIT

PARTS LIST

QTY	PART NO.	DESCRIPTION
2	21-9258	SHOCK ASSY, CHROME

HANDLE BAR SWITCH

PARTS LIST

QTY	PART NO.	DESCRIPTION
1	29-9750	HANDLE BAR SWITCH, CHROME

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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.arnottcycles.com.

- 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. REMOVE THE BATTERY COVER AND SEAT. (FIGURES 1, 2)



FIGURE 1



FIGURE 2

2. REMOVE THE BATTERY AND THE BATTERY BOX FROM THE FRAME. (FIGURES 3, 4)

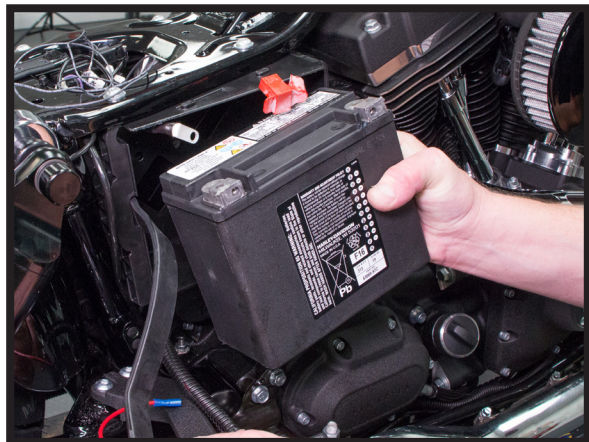


FIGURE 3

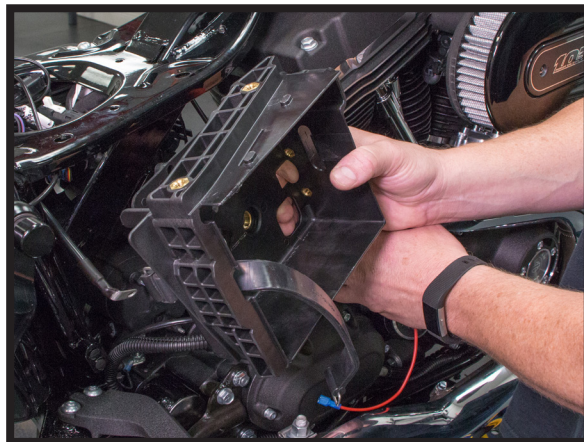


FIGURE 4

3. SUPPORT THE MOTORCYCLE UNDER THE MOTOR UNTIL THE REAR TIRE ALMOST LEAVES THE GROUND. REMOVE THE LOWER FRONT MOTOR MOUNT BOLT AND SET IT ASIDE. LOOSEN THE UPPER FRONT MOUNT BOLT JUST ENOUGH SO THAT THE PUMP BRACKET CAN EASILY SLIDE BETWEEN IT AND THE FRAME; DO NOT REMOVE THE BOLT COMPLETELY. (FIGURES 5, 6)

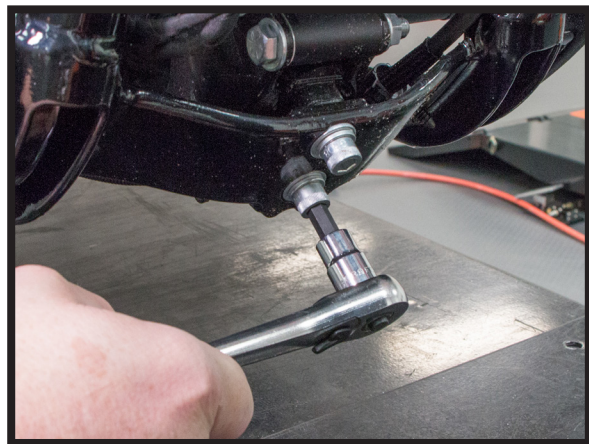


FIGURE 5



FIGURE 6

4. INSERT THE 1/4" AIR LINE INTO THE PUMP ASSEMBLY. THEN, WHILE PULLING THE HOSE AND THE PUMP WIRES BETWEEN THE FRAME AND THE MOTOR, GUIDE THE PUMP ASSEMBLY UP BETWEEN THE MOTOR AND THE FRAME RAIL AS DEPICTED BELOW. (FIGURES 7, 8)

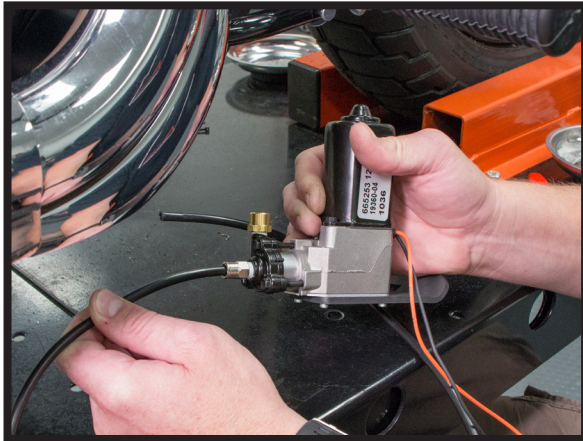


FIGURE 7

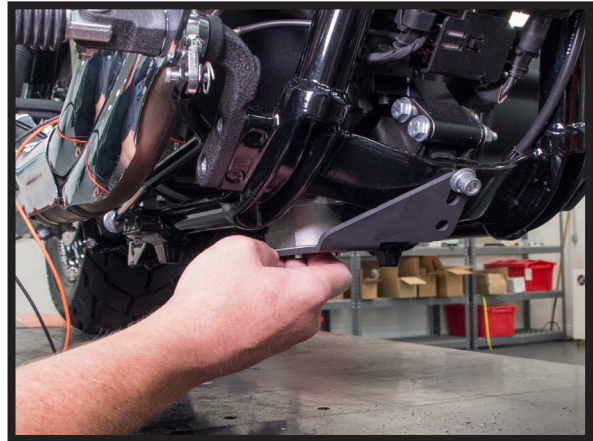


FIGURE 8

5. SECURE THE PUMP ASSEMBLY TO THE FRAME USING THE MOTOR MOUNT BOLTS AS DEPICTED BELOW. (FIGURES 9, 10)

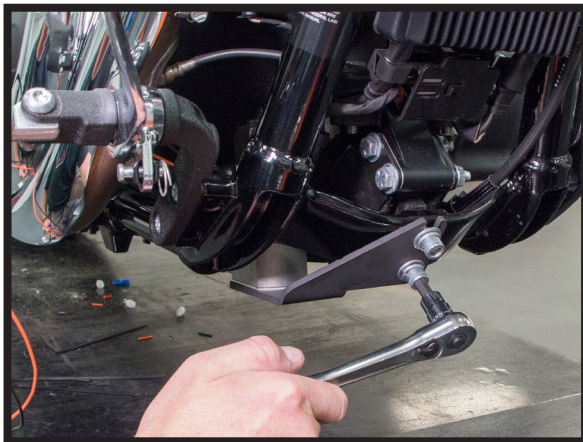


FIGURE 9

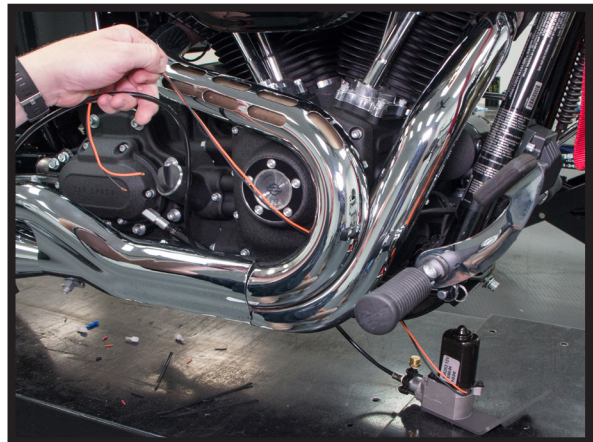


FIGURE 10

6. WRAP THE PUMP WIRES WITH THE SPLIT LOOM AND ZIP TIES. CUT THE RING TERMINAL OFF OF THE BLACK PUMP WIRE. USING THE INCLUDED WIRES AND TERMINALS, MAKE EXTENSIONS FOR BOTH THE RED AND BLACK PUMP WIRES. (FIGURES 11, 12)



FIGURE 11

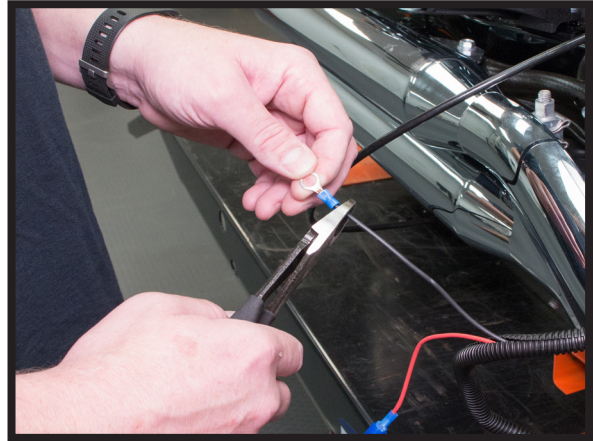


FIGURE 12

7. TRIM THE BLACK PUMP WIRE EXTENSION TO LENGTH. CRIMP A RING TERMINAL TO THE END AND GROUND TO THE LOCATION SHOWN BELOW. (FIGURES 13, 14)



FIGURE 13

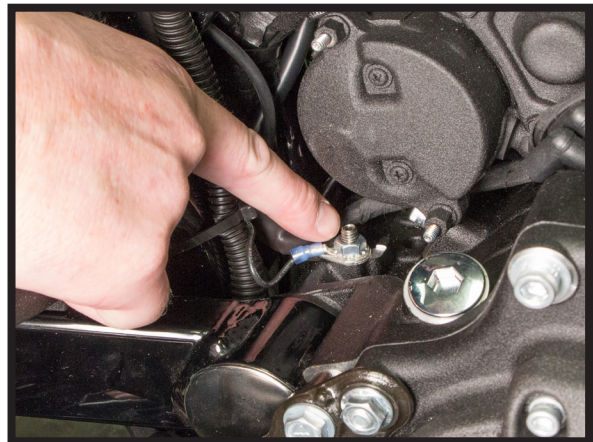


FIGURE 14

8. ROUTE THE RED PUMP WIRE AND THE 1/4" HOSE UP BEHIND THE BATTERY BOX. THEN, REINSTALL THE BATTERY BOX BACK INTO THE FRAME. REFER TO THE WIRING DIAGRAM IN THE BACK OF THIS MANUAL. YOU WILL WANT TO ROUTE THE POSITIVE AND GROUND WIRES THROUGH THE BACK OF THE BOX BEFORE REINSTALLING THE BATTERY. (FIGURES 15, 16)

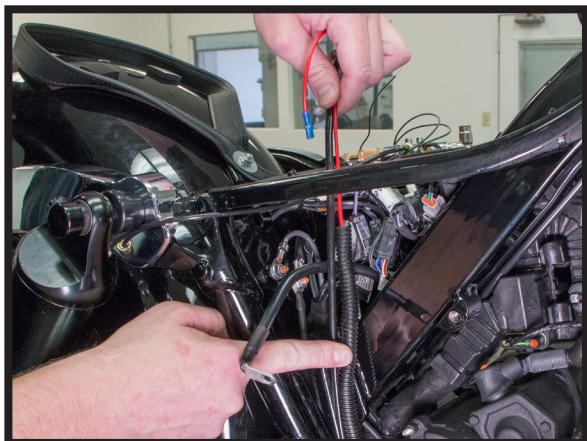


FIGURE 15

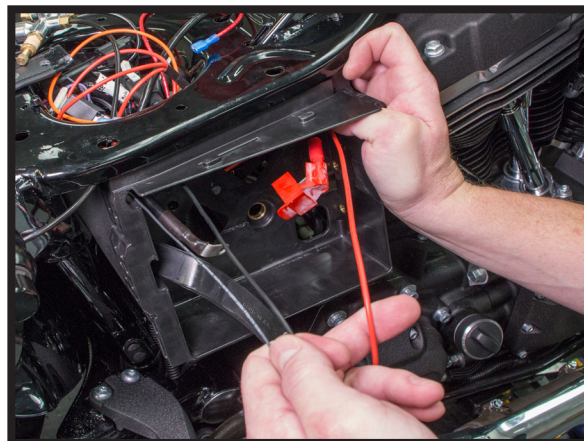


FIGURE 16

9. MOUNT THE HANDLEBAR SWITCH TO THE CLUTCH PERCH USING THE OE BOLT. ROUTE THE WIRES UNDER THE INSTRUMENT COVER ON TOP OF THE FUEL TANK OR UNDER THE FUEL TANK ALONG THE FRAME. REINSTALL THE BATTERY AND COMPLETE THE ELECTRICAL CONNECTIONS FOLLOWING THE WIRING DIAGRAM. (FIGURES 17, 18)



FIGURE 17

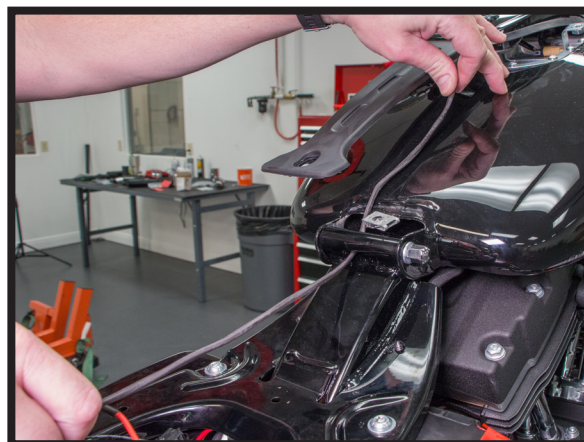


FIGURE 18

10. REMOVE THE OE SHOCKS AND THE UPPER SHOCK MOUNT POSTS. SAVE THE NUT AND WASHER FROM THE POST; YOU WILL NEED TO REUSE THESE. (FIGURES 19, 20)

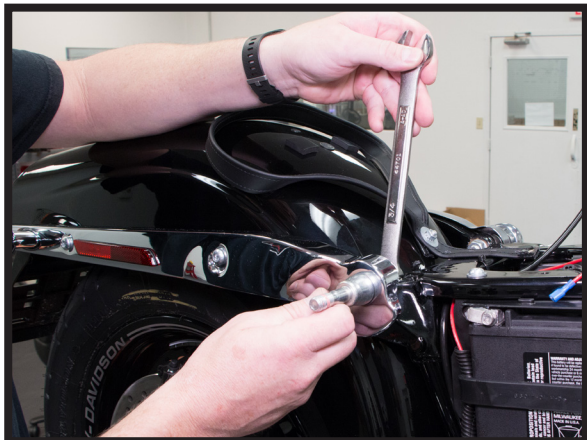


FIGURE 19

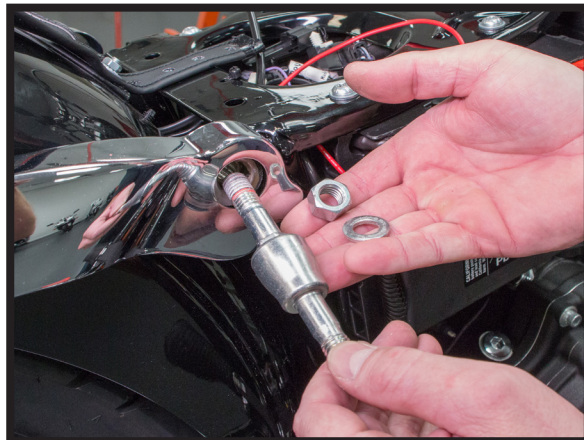


FIGURE 20

11. CUT THE LENGTH OF THE 4MM AIR HOSE IN HALF. SCREW A VOSS FITTING INTO THE RIGHT AIR SHOCK. REMOVE THE WHITE PLUG. INSERT ONE OF THE LENGTHS OF 4MM AIR HOSE UNTIL YOU FEEL IT SEAT. REMOVE THE FITTING FROM THE SHOCK AND CONFIRM THAT THE KEEPER IS ON THE HOSE. SCREW THE FITTING BACK INTO THE SHOCK AND SNUG TIGHT WITH A 10MM WRENCH. (FIGURES 21, 22, 23, 24)



FIGURE 21



FIGURE 22



FIGURE 23



FIGURE 24

12. DEPENDING ON YOUR EXHAUST CONFIGURATION, YOU MAY NEED TO MOUNT THE RIGHT SHOCK TO THE MOTORCYCLE FIRST. START WITH THE LOWER BOLT. APPLY BLUE LOCK-TITE TO THE INCLUDED BOLT. LINE UP THE SHOCK WITH THE UPPER SHOCK MOUNTING HOLE AND TIGHTEN THE LOWER SHOCK BOLT TO THE FACTORY RECOMMENDED TORQUE. (FIGURES 25, 26)



FIGURE 25



FIGURE 26

13. PUT THE INCLUDED BOLT CAP ON THE BOLT. YOU MAY NEED TO LUBRICATE THE INTERNAL O-RING WITH WATER TO ALLOW THE CAP TO SLIDE ON EASILY. (FIGURES 27, 28)

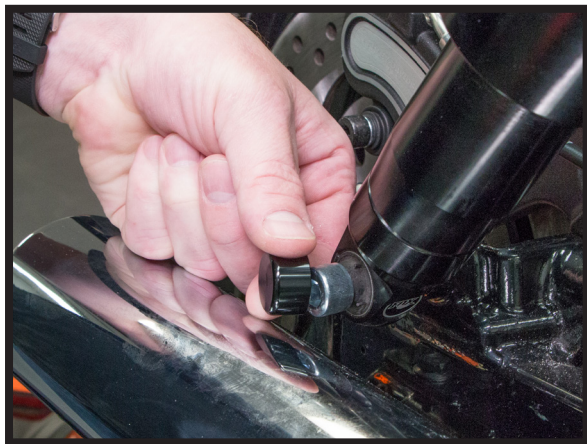


FIGURE 27



FIGURE 28

14. JACK THE MOTORCYCLE UP TO ALIGN THE UPPER SHOCK EYE TO THE MOUNT HOLE IN THE FRAME. USING THE INCLUDED LONGER BOLT AND SPACER, ATTACH THE UPPER SHOCK EYE TO THE FRAME AS SHOWN BELOW. APPLY BLUE LOCK-TITE TO THE BOLT BEFORE TIGHTENING THE NUT TO THE FACTORY RECOMMENDED TORQUE. (FIGURES 29, 30)



FIGURE 29

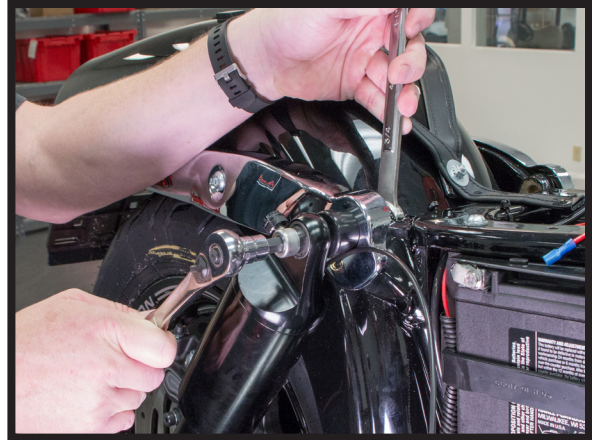


FIGURE 30

15. TRIM THE 1/4" HOSE TO LENGTH AND INSERT INTO THE AIR MANIFOLD. TRIM THE 4MM LINES TO LENGTH. FOLLOWING THE SAME PROCEDURES AS IN STEP 11, ATTACH THE AIR LINES TO THE MANIFOLD. (FIGURES 31, 32)

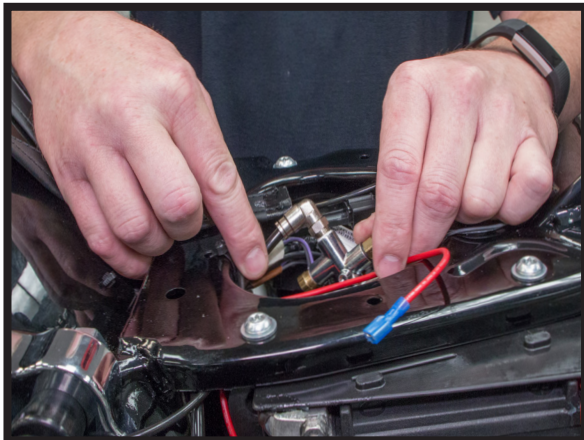


FIGURE 31



FIGURE 32

Installation Manual

KIT # MC-3100, MC-3101, MC-3102, MC-3103
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16. THE CLOCKING OF THE SHOCK EYES CAN BE ADJUSTED. SIMPLY FIX THE LOWER EYE IN A VISE TO KEEP IT FROM MOVING. THEN GRASP THE DAMPER SLEEVE AS SHOWN BELOW. TWIST THE SLEEVE ON THE SHOCK BODY. (FIGURES 33, 34)



FIGURE 33



FIGURE 34

17. ON REBOUND ADJUSTABLE SHOCKS, THE REBOUND DAMPING FORCE CAN BE INCREASED OR DECREASED TO SUIT THE RIDER'S PREFERENCE. INCREASING THE REBOUND DAMPING WILL SLOW THE SPEED AT WHICH THE SHOCK EXTENDS AFTER IT IS COMPRESSED. THIS IS USUALLY DESIRABLE WHEN RUNNING HIGHER AIR PRESSURES THAN NORMAL FOR A SINGLE RIDER. FOR EXAMPLE, RIDING 1 UP WOULD REQUIRE LOWER AIR PRESSURE AND LESS REBOUND DAMPING THAN RIDING 2 UP WITH A FULLY LOADED MOTORCYCLE. THE INCREASED AIR PRESSURE IS TRYING TO EXTEND THE SHOCK FASTER. THIS CAN LEAD TO AN UNCONTROLLED BOUNCY FEELING IN THE REAR OF THE MOTORCYCLE. INCREASING THE REBOUND DAMPING WILL HELP SLOW DOWN THE EXTENSION AND MAKE A MORE CONTROLLED FEELING. (FIGURES 35, 36)



FIGURE 35

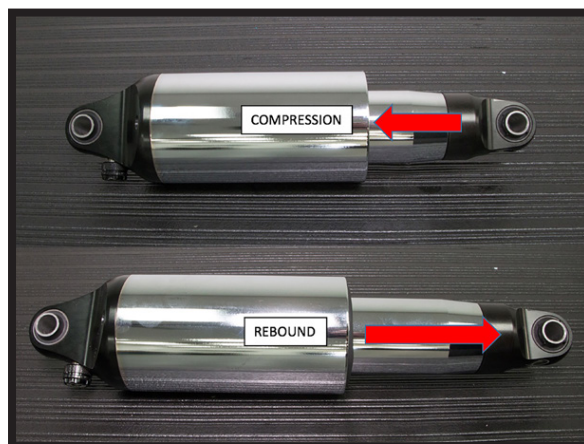
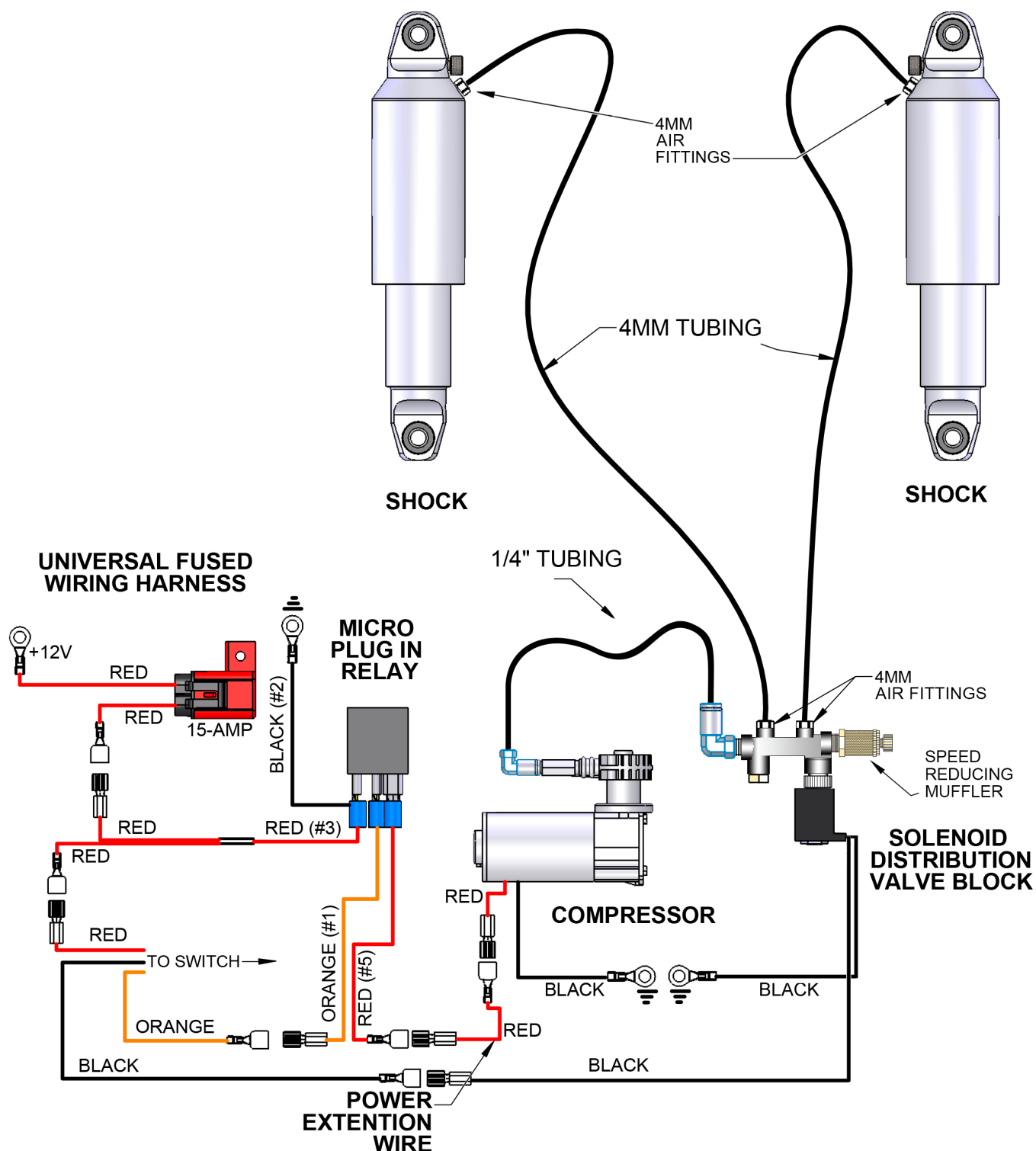


FIGURE 36

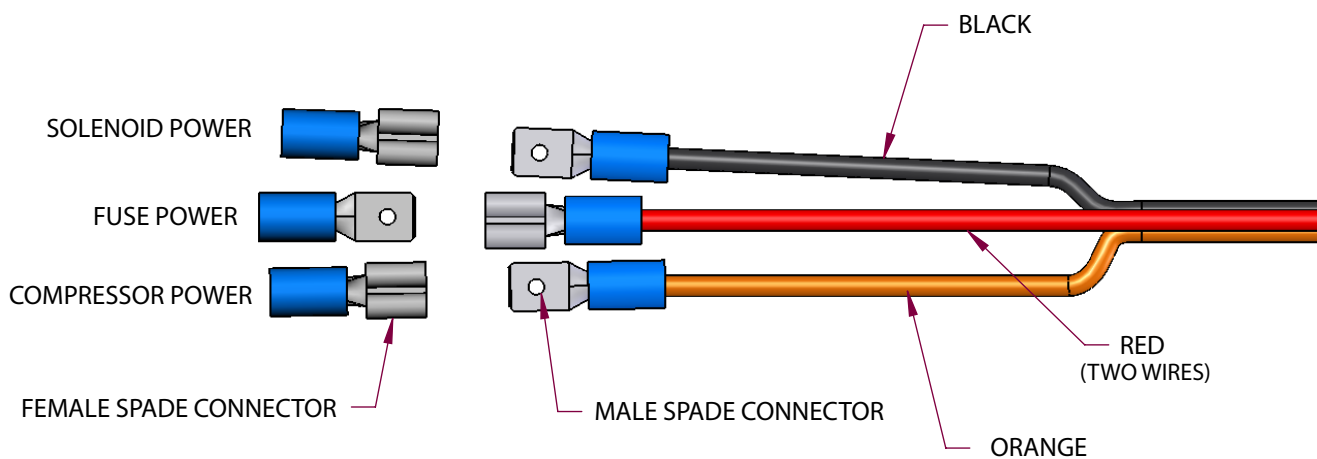
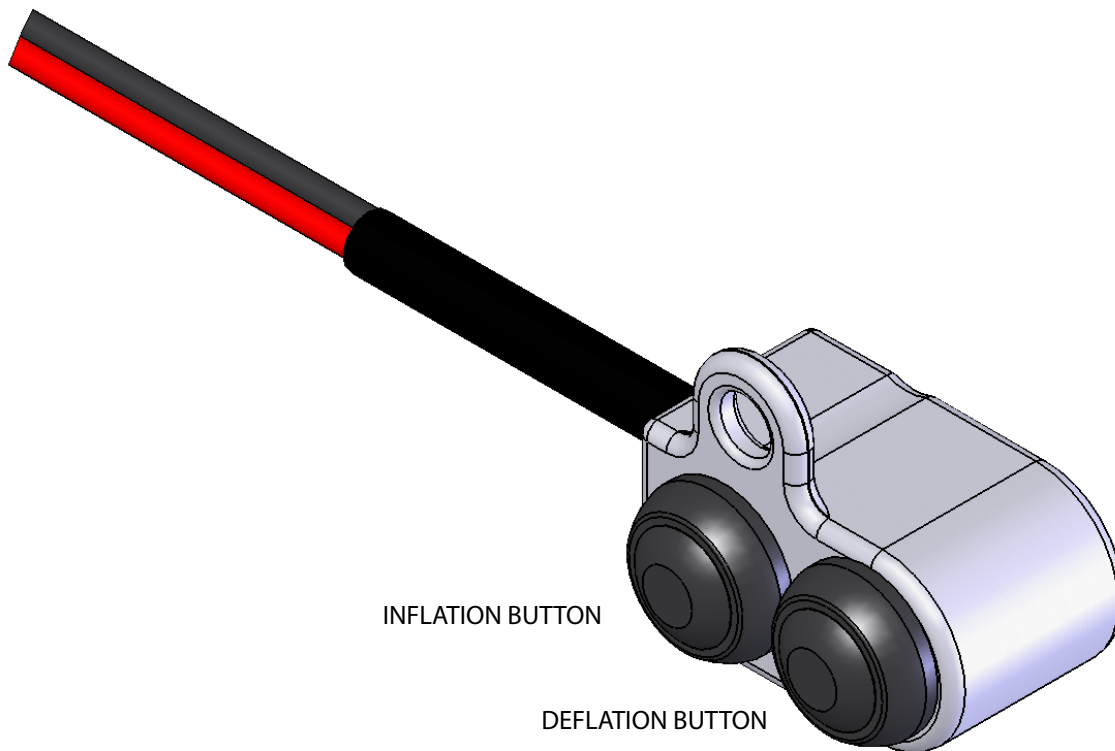
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- AS SHOWN IN ILLUSTRATION ABOVE;
1. CUT SWITCH WIRING TO APPROPRIATE LENGTH.
 2. CRIMP THE TWO MALE SPADE CONNECTORS TO THE ORANGE WIRE AND TO THE BLACK WIRE.
 3. CRIMP THE FEMALE SPADE CONNECTOR TO THE DOUBLE RED WIRE.