Installation Manual

KIT # MC-2914, MC-2915, MC-2916, MC-2917
FOR 1980-2008
HARLEY-DAVIDSON®
TOURING SERIES

Arnott® MOTORCYCLE AIR SUSPENSION

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.*

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BILL OF MATERIALS
MC-2914 - FLT SUSPENSION SYSTEM, 1990-2008 , REB, BLACK

20-10246 - INFLATION KIT, 1990-2008, FLT

QTY	PART NO.	DESCRIPTION
1	21-3110	MICRO RELAY ASSEMBLY W/ HARNESS
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- 1 FT LENGTHS ACCESSORY KIT
1	21-8034	MOTORCYCLE HARDWARE INFLATION ACCESSORY KIT
1	21-2698	UNIVERSAL FUSE HOLDER ASSEMBLY KIT
1	21-7262	MANIFOLD BRACKET W/ FASTENER ACCESSORY KIT
1	21-7266	BLACK BOLT COVERS ACCESSORY KIT
1	21-7282	COMPRESSOR WIRE EXTENSION ACCESSORY KIT
1	21-9761	90 DEGREE PUSH CONNECT MANIFOLD ASSEMBLY
1	21-7267	1/4" NYLON TUBING ACCESSORY KIT
1	11-MC-FLT-2	11-MC-2914, 2915, 2916, 2917- INSTALL MANUAL
1	21-3312	1990-2008 FLT PUMP ASSY.

21-9764-REB-B - SHOCK KIT

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

HANDLE BAR SWITCH

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

BILL OF MATERIALS
MC-2915 - FLT SUSPENSION SYSTEM, 1990-2008 , REB, CHROME

20-10246 - INFLATION KIT, 1990-2008, FLT

QTY	PART NO.	DESCRIPTION
1	21-3110	MICRO RELAY ASSEMBLY W/ HARNESS
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- 1 FT LENGTHS ACCESSORY KIT
1	21-8034	MOTORCYCLE HARDWARE INFLATION ACCESSORY KIT
1	21-2698	UNIVERSAL FUSE HOLDER ASSEMBLY KIT
1	21-7262	MANIFOLD BRACKET W/ FASTENER ACCESSORY KIT
1	21-7266	BLACK BOLT COVERS ACCESSORY KIT
1	21-7282	COMPRESSOR WIRE EXTENSION ACCESSORY KIT
1	21-9761	90 DEGREE PUSH CONNECT MANIFOLD ASSEMBLY
1	21-7267	1/4" NYLON TUBING ACCESSORY KIT
1	11-MC-FLT-2	11-MC-2914, 2915, 2916, 2917- INSTALL MANUAL
1	21-3312	1990-2008 FLT PUMP ASSY.

21-9764-REB-C - SHOCK KIT

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

HANDLE BAR SWITCH

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

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BILL OF MATERIALS
MC-2916 - FLT SUSPENSION SYSTEM, 1990-2008, BLACK

20-10246 - INFLATION KIT, 1990-2008, FLT

QTY	PART NO.	DESCRIPTION
1	21-3110	MICRO RELAY ASSEMBLY W/ HARNESS
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- 1 FT LENGTHS ACCESSORY KIT
1	21-8034	MOTORCYCLE HARDWARE INFLATION ACCESSORY KIT
1	21-2698	UNIVERSAL FUSE HOLDER ASSEMBLY KIT
1	21-7262	MANIFOLD BRACKET W/ FASTENER ACCESSORY KIT
1	21-7266	BLACK BOLT COVERS ACCESSORY KIT
1	21-7282	COMPRESSOR WIRE EXTENSION ACCESSORY KIT
1	21-9761	90 DEGREE PUSH CONNECT MANIFOLD ASSEMBLY
1	21-7267	1/4" NYLON TUBING ACCESSORY KIT
1	11-MC-FLT-2	11-MC-2914, 2915, 2916, 2917- INSTALL MANUAL
1	21-3312	1990-2008 FLT PUMP ASSY.

21-9764-B - SHOCK KIT

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

HANDLE BAR SWITCH

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

BILL OF MATERIALS
MC-2917 - FLT SUSPENSION SYSTEM, 1990-2008, CHROME

20-10246 - INFLATION KIT, 1990-2008, FLT

QTY	PART NO.	DESCRIPTION
1	21-3110	MICRO RELAY ASSEMBLY W/ HARNESS
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- 1 FT LENGTHS ACCESSORY KIT
1	21-8034	MOTORCYCLE HARDWARE INFLATION ACCESSORY KIT
1	21-2698	UNIVERSAL FUSE HOLDER ASSEMBLY KIT
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1	11-MC-FLT-2	11-MC-2914, 2915, 2916, 2917- INSTALL MANUAL
1	21-3312	1990-2008 FLT PUMP ASSY.

21-9764-C - SHOCK KIT

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

HANDLE BAR SWITCH

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.

- 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.

AIR SHOCKS REMOVAL

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. SUPPORT THE MOTORCYCLE UNDER ITS FRAME, THEN REMOVE BOTH SADDLE BAGS AND BATTERY COVERS. IF THE MOTORCYCLE HAS FACTORY AIR-ASSIST SHOCKS, AS SHOWN BELOW, REMOVE THE HOSES FROM THE PUSH-TO-CONNECT FITTINGS. THESE SHOCKS MUST REMAIN UPRIGHT OR OIL WILL LEAK OUT. (FIGURES 1, 2)

FIGURE 1

FIGURE 2

2. REMOVE THE SHOCKS AND THE FACTORY AIR LINES. (FIGURE 3)

FIGURE 3

3. REMOVE BOTH OF THE FENDER SUPPORT BRACKET BOLTS AS INDICATED BY ARROWS. (FIGURE 4)

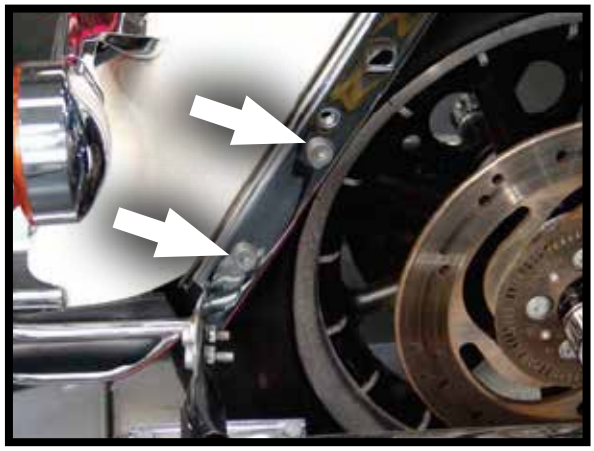

FIGURE 4

4. REUSING THE FACTORY BOLTS PREVIOSLY REMOVED, FASTEN THE COMPRESSOR TO THE BRACKET, AS SHOWN (FIGURE 5)

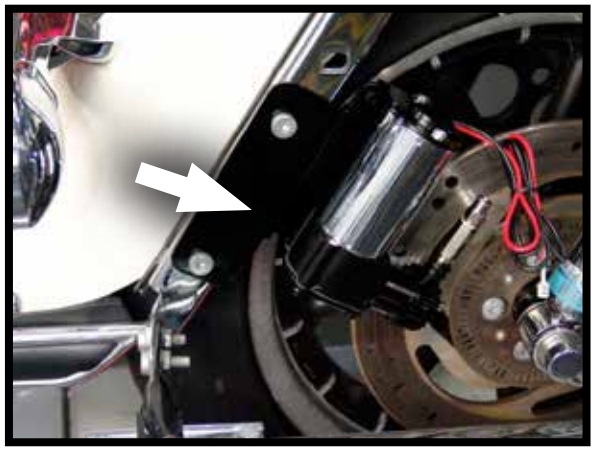

FIGURE 5

5. ATTACH THE COMPRESSOR POWER WIRE EXTENSION TO THE RED WIRE OF THE COMPRESSOR. (FIGURE 6)

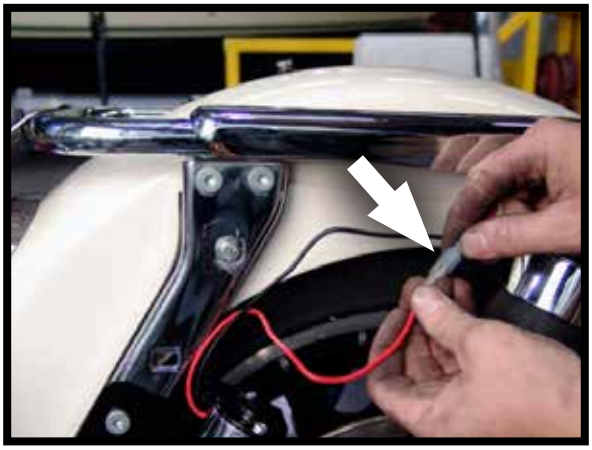

FIGURE 6

6. RUN BOTH COMPRESSOR WIRES ALONG WITH THE 1/4" HOSE UP TOWARDS THE FENDER STRUT AND FORWARD TOWARDS THE BATTERY BOX. (FIGURE 7)

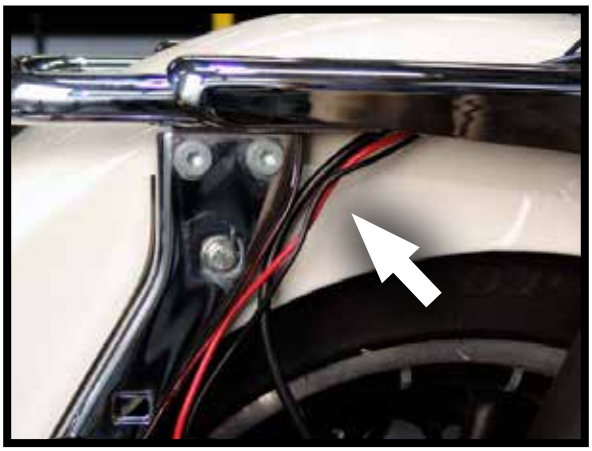

FIGURE 7

7. USING THE SUPPLIED WIRE LOOM AND CABLE TIES, WRAP THE WIRES AND HOSE TOGETHER BEING SURE TO KEEP DISTANCE FROM THE BRAKE SYSTEM. (FIGURE 8)

FIGURE 8

8. MOUNT THE AIR MANIFOLD UNDER THE RIGHT SIDE BATTERY COVER. THE IMAGES BELOW SHOW SOME OPTIONS WITH THE INCLUDED HARDWARE. TRIM THE PUMP HOSE AND INSERT IT INTO THE PUSH-TO-CONNECT FITTING ON THE AIR MANIFOLD. WIRE THE PUMP AND RELAY TO THE MOTORCYCLE BATTERY FOLLOWING THE WIRING DIAGRAM IN THE BACK OF THIS MANUAL. (FIGURES 9, 10)

FIGURE 9

FIGURE 10

9. SLIDE A VOSS AIR FITTING OVER THE 4MM AIR HOSE FOLLOWED BY THE BRASS KEEPER CIRCLED BELOW. BE VERY CAREFUL WHEN SLIDING THE KEEPER OVER THE HOSE. IT IS VERY FRAGILE AND WILL BREAK IF FORCED TOO HARD. THE TAPERED END OF THE KEEPER POINTS TO THE VOSS FITTING.
SCREW BOTH OF THE FITTINGS INTO THE MANIFOLD AND ROUTE THE OTHER ENDS OF THE HOSE TOWARD THE UPPER SHOCK MOUNTING HOLES. (FIGURES 11, 12)

FIGURE 11

FIGURE 12

10. TRIM THE 4MM HOSE TO LENGTH. BE MINDFUL TO TRIM IT JUST LONG/SHORT ENOUGH SO THAT IT WON'T KINK OR RUB ON THE REAR WHEEL. WITH THE WHITE PLUG STILL INSTALLED, THREAD THE VOSS FITTING INTO THE SHOCK JUST UNTIL THE O-RING TOUCHES, THEN REMOVE THE PLUG FROM THE FITTING. INSERT THE AIR HOSE AND PUSH UNTIL YOU FEEL IT SEAT INTO THE FITTING. UNSCREW THE FITTING FROM THE SHOCK AND CONFIRM THAT THE KEEPER IS ON THE HOSE PROPERLY. SCREW THE FITTING BACK INTO THE SHOCK AND SNUG IT TIGHT. (FIGURES 13, 14, 15)

FIGURE 13

FIGURE 14

FIGURE 15

11. PUT BLUE LOCTITE ON THE SUPPLIED ½" CAP SCREWS AND THREAD THEM THROUGH THE SHOCKS INTO THE FRAME/SWING ARM. TORQUE THE SCREWS TO THE FACTORY RECOMMEND TORQUE. (FIGURE 16)

FIGURE 16

12. PRESS THE SUPPLIED CAP SCREW COVERS ONTO THE HEAD OF THE CAP SCREWS. YOU MAY NEED TO PUT A LITTLE SOAP/WATER ON THE HEAD OF THE SCREW SO THE CAP CAN SLIDE ON SMOOTHLY. (FIGURES 17, 18)

FIGURE 17

FIGURE 18

13. REMOVE THE LOWER CLUTCH LEVER MOUNT BOLT. USING THE FACTORY SCREW, MOUNT THE HANDLE BAR SWITCH. ROUTE THE SWITCH WIRES DOWN THE HANDLE BARS, UNDER THE FUEL TANK TO THE MANIFOLD AND THE RELAY. THEN TRIM THE SWITCH WIRES TO THE PROPER LENGTH. USING THE WIRING DIAGRAM IN THE BACK OF THIS MANUAL, CONNECT THE WIRES TO THE RELAY AND AIR MANIFOLD SOLENOID.(FIGURES 19, 20)

FIGURE 19

FIGURE 20

THE CLOCKING OF THE SHOCK EYES CAN BE CHANGED TO SUIT THE OWNER'S TASTES. 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.

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.

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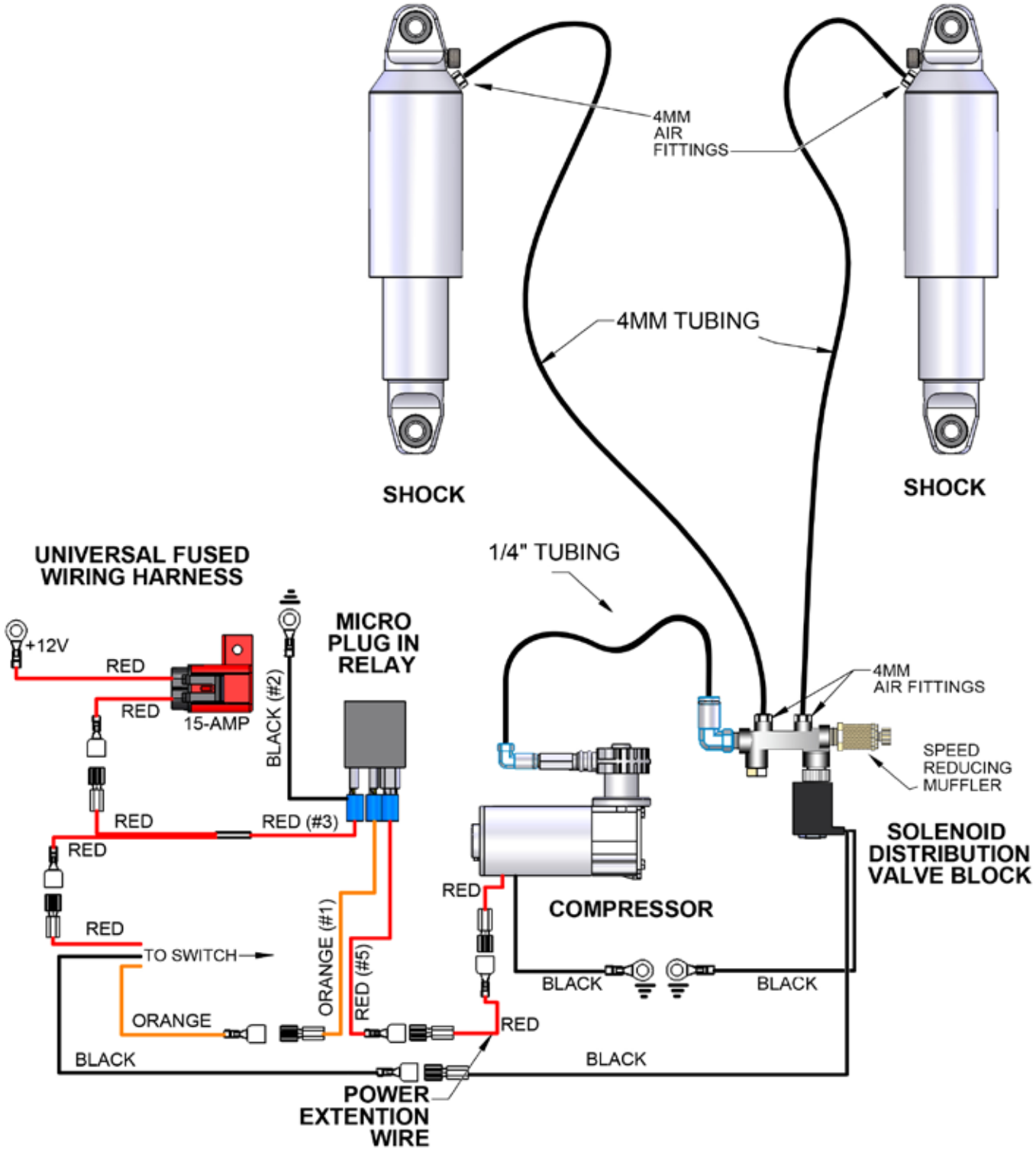

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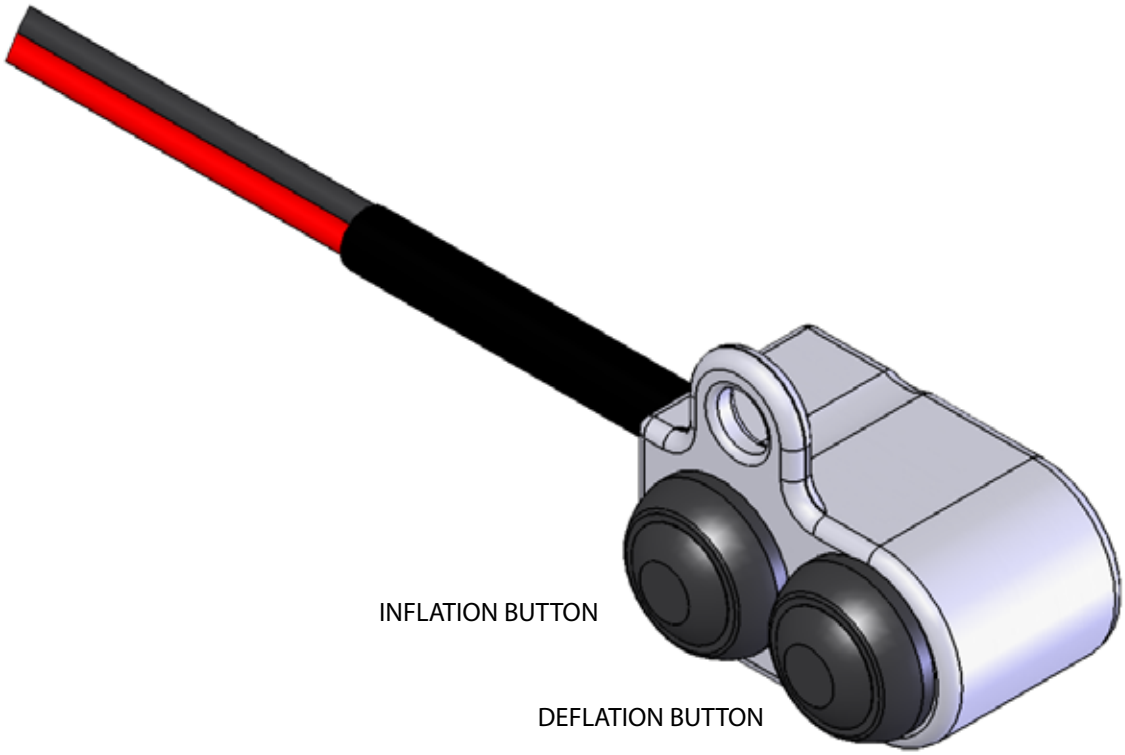

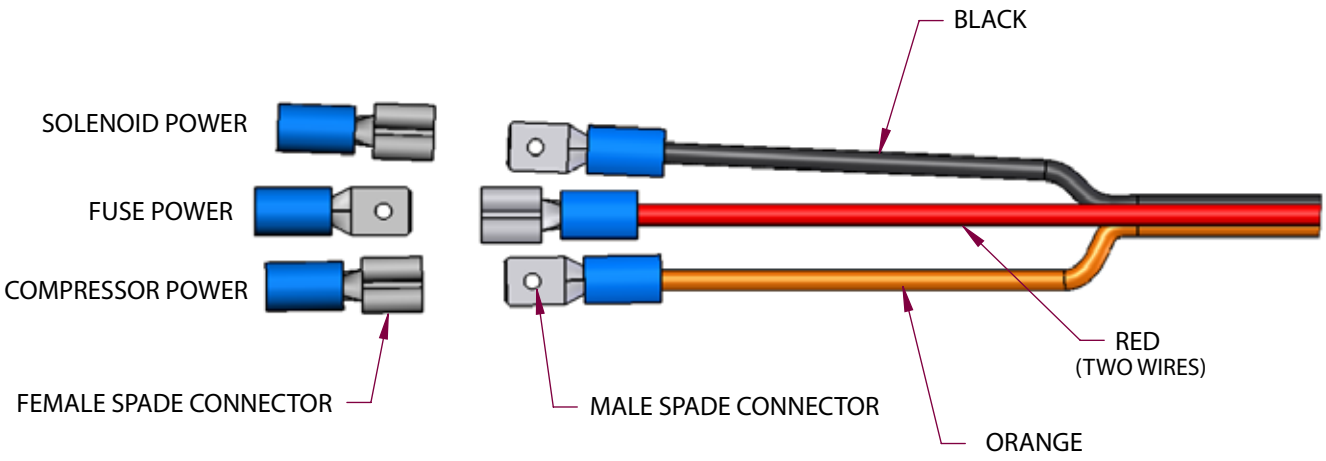

AS SHOWN IN ILLUSTRATION ABOVE;
1. CUT SWITCH WIRING TO APPROPRIATE LENGTH.
2. CRIMP THE TWO MALE SPADE CONNECTORS TO THE ORANGE WIRE AND TO THE BLACK WIRE.
3. CRIMP THE FEMALE SPADE CONNECTOR TO THE DOUBLE RED WIRE.