



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.





BILL OF MATERIALS MC-2904 - FLT SUSPENSION SYSTEM, 2009-PRESENT , REB, BLACK

20-9760 - INFLATION KIT, 2009-PRESENT, 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 CABLETIES 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	21-9753	FLT PUMP ASSEMBLY
1	21-9761	90 DEGREE PUSH CONNECT MANIFOLD ASSEMBLY
1	20-9754	FLT MOUNTING KIT
1	21-7267	1/4" NYLONTUBING ACCESSORY KIT
1	11-MC-FLT	11-MC-FLT- INSTALL MANUAL

21-9764-REB-C - SHOCK KIT

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

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





BILL OF MATERIALS MC-2905 - FLT SUSPENSION SYSTEM, 2009-PRESENT , REB, CHROME

20-9760 - INFLATION KIT, 2009-PRESENT, 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 CABLETIES 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	21-9753	FLT PUMP ASSEMBLY
1	21-9761	90 DEGREE PUSH CONNECT MANIFOLD ASSEMBLY
1	20-9754	FLT MOUNTING KIT
1	21-7267	1/4" NYLONTUBING ACCESSORY KIT
1	11-MC-FLT	11-MC-FLT- INSTALL MANUAL

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

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





BILL OF MATERIALS MC-2906 - FLT SUSPENSION SYSTEM, 2009-PRESENT, BLACK

20-9760 - INFLATION KIT, 2009-PRESENT, 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 CABLETIES 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	21-9753	FLT PUMP ASSEMBLY
1	21-9761	90 DEGREE PUSH CONNECT MANIFOLD ASSEMBLY
1	20-9754	FLT MOUNTING KIT
1	21-7267	1/4" NYLONTUBING ACCESSORY KIT
1	11-MC-FLT	11-MC-FLT- INSTALL MANUAL

21-9764-B - SHOCK KIT

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

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





BILL OF MATERIALS MC-2907 - FLT SUSPENSION SYSTEM, 2009-PRESENT, CHROME

20-9760 - INFLATION KIT, 2009-PRESENT, 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 CABLETIES 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	21-9753	FLT PUMP ASSEMBLY
1	21-9761	90 DEGREE PUSH CONNECT MANIFOLD ASSEMBLY
1	20-9754	FLT MOUNTING KIT
1	21-7267	1/4" NYLONTUBING ACCESSORY KIT
1	11-MC-FLT	11-MC-FLT- INSTALL MANUAL

21-9764-C - SHOCK KIT

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

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





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.

NOTE: The Arnott accessory kit K-2850 is necessary when installing Arnott Ultimate Ride Kits MC-2904, MC-2905, MC-2906 and MC-2907 or Smooth Ride Kit 9048 kit for 2014-Present Harley-Davidson® Touring motorcycles equipped with Harley-Davidson's Saddle Bag Guard Rails (P/N 90200561) or 2014-present CVOTM Touring motorcycles with 0.E. speakers in the saddle bags. This kit includes CNC Machined aluminum spacers and additional hardware that was designed to securely adjust the placement of the air suspension compressor so that it will not interfere with the Bag Rails or touch the CVO Speaker connection harness.





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 IT'S 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)

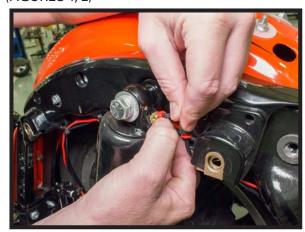




FIGURE 1

FIGURE 2



FIGURE 3

2.





3. IF THE MOTORCYCLE IS A MODEL YEAR 2009-2013, SKIP TO STEP #19. REMOVE THE TWO BOLTS ATTACHING THE LOWER SADDLE BAG SUPPORT ON EACH SIDE OF THE MOTORCYCLE. (FIGURES 4, 5)



FIGURE 4



FIGURE 5

4. IF THE MOTORCYCLE IS A MODEL YEAR 2014-PRESENT ULTRA WITH A REAR TOUR PACK, SKIP TO STEP #15. REMOVE THE 3 SADDLE BAG BRACKET BOLTS ON BOTH SIDES OF THE MOTORCYCLE. (FIGURE 6)



FIGURE 6





5. IF THE MOTORCYCLE STILL HAS THE STOCK SEAT STRAP BRACKET THOSE BOLTS WILL NEED TO BE REMOVED AS WELL. HOWEVER DON'T COMPLETELY REMOVE THEM FROM THE BRACKET. (FIGURE 7)



FIGURE 7

6. KEEPING THE SEAT STRAP BRACKET BOLT INSERTED IN THE SADDLE BAG BRACKET, SLIDE 3 OF THE SMALL SUPPLIED WASHERS OVER THE BOLT ON THE BACK SIDE OF THE BRACKET. (FIGURE 8)



FIGURE 8

7. THEN SCREW JUST THE FIRST FEW THREADS OF THE BOLT BACK INTO THE FRAME TO KEEP THE WASHERS FROM FALLING OFF THE BOLT. DO THIS ON BOTH SIDES OF THE MOTORCYCLE. (FIGURE 9)



FIGURE 9





8. IF THE MOTORCYCLE HAS A FACTORY ACCESSORY BACK REST SUPPORT SKIP TO STEP #12. INSERT THE SUPPLIED BAG SUPPORT SPACER IN THE ORIENTATION SHOWN, BETWEEN THE BAG SUPPORT AND THE FRAME.(FIGURE 10, 11)





FIGURE 10

FIGURE 11

HOLDING THE BAG SPACER IN PLACE, LINE UP THE CENTER HOLE ON THE BAG SPACER WITH THE 9. CENTER HOLE ON THE BAG SUPPORT. THREAD THE FACTORY SCREW THROUGH THE SPACER AND INTO THE FRAME LOOSELY. (FIGURE 12)



FIGURE 12

10. LINE UPTHE BAG SPACER HOLES WITHTHE HOLES ON THE FACTORY BAG SUPPORT COVER THEN INSTALLTHE FACTORY SCREWS BACK INTO THE FRAME. (FIGURE 13)



FIGURE 13





11. CONFIRM THAT EVERYTHING LINES UP. THEN TIGHTEN THE (3) BAG SUPPORT BOLTS AND THE (1) SEAT STRAP BRACKET BOLT ON EACH SIDE OF THE MOTORCYCLE. (FIGURE 14)



FIGURE 14

IF THE MOTORCYCLE DOES NOT HAVE A FACTORY ACCESSORY BACKREST SKIP TO STEP #15. 12. INSERT THE SUPPLIED BAG SUPPORT SPACER IN THE ORIENTATION SHOWN, BETWEEN THE BAG SUPPORT AND THE FRAME. (FIGURE 15)



FIGURE 15

13. SEE STEP #9. INSERT THE CENTER BOLT THROUGH THE CENTER OF THE BACK SPACER AND LOOSELY IN TO THE FRAME. (FIGURE 16)







14. ALIGN THE HOLES ON THE BACKREST SUPPORT WITH THE BAG SPACER AND INSTALL THE OTHER TWO FACTORY BOLTS. THESE BOLTS DO NOT GO THROUGH THE BAG SUPPORT SPACER. MAKE SURE THAT THE BACKREST SUPPORT IS NOT BINDING ON THE BAG SPACER AS YOU TIGHTEN ALL THREE BOLTS. ALSO TIGHTEN THE SEAT STRAP BRACKET BOLT. (FIGURE 17)



FIGURE 17

REINSTALL THE FACTORY SADDLE BAG SUPPORT BOLTS BACK INTO THE SUPPORT ON THE LEFT SIDE OF THE MOTORCYCLE. APPLY THE INCLUDED ADHESIVE BACK PAD STRIPS TO THE INSIDE OF THE SADDLE BAG AS SHOWN BELOW. (FIGURE 18, 19, 20) 15.



FIGURE 18

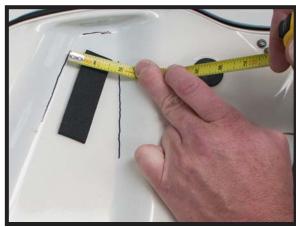


FIGURE 19



FIGURE 20





16. LOCATE THE SUPPLIED HEX BOLT AND NYLOC NUT. YOU WILL ALSO NEED THE LONGER FACTORY SADDLE BAG SUPPORT BOLT AND NUT THAT WAS REMOVED FROM THE RIGHT SIDE OF THE BIKE DURING STEP #3. (FIGURE 21)



FIGURE 21

17. INSERT THE SUPPLIED HEX BOLT THROUGH THE SUPPORT AS SHOWN BELOW. (FIGURES 22, 23)



FIGURE 22



FIGURE 23





NOTE: The Arnott accessory kit K-2850 is necessary when installing Arnott Ultimate Ride Kits MC-2904, MC-2905, MC-2906 and MC-2907 or Smooth Ride Kit 9048 kit for 2014-Present Harley-Davidson® Touring motorcycles equipped with Harley-Davidson's Saddle Bag Guard Rails (P/N 90200561) or 2014-present CVOTM Touring motorcycles with 0.E. speakers in the saddle bags. This kit includes CNC Machined aluminum spacers and additional hardware that was designed to securely adjust the placement of the air suspension compressor so that it will not interfere with the Bag Rails or touch the CVO Speaker connection harness.

18. SLIDE THE AIR PUMP AND BRACKET ASSEMBLY ONTO THE HEX BOLT. THEN THREAD ON THE NYLOC NUT. INSERT THE LONGER FACTORY BOLT THROUGH THE OTHER HOLE/SLOT IN THE BRACKET. TIGHTEN BOTH BOLTS AND CONFIRM THAT THE PUMP IS AT LEAST ½" FROM TOUCHING THE REAR BRAKE ROTOR. IF THE PUMP IS TOO CLOSE TO THE ROTOR YOU MAY NEED TO PLACE A WASHER OVER THE HEX BOLT, BETWEEN THE PUMP BRACKET AND THE FRAME. THEN RETIGHTEN THE NUTS AND BOLTS. (FIGURE 24)



FIGURE 24

19. IF THE MOTORCYCLE MODEL YEAR IS 2014 TO PRESENT SKIP TO STEP #21. IF THE MOTORCYCLE IS A MODEL YEAR 2009-2013 YOU WILL NEED TO INSTALL THEN TIGHTEN THE SUPPLIED HEX BOLT AND NON-NYLOC NUT INTO THE AIR PUMP BRACKET AS SHOWN BELOW. (FIGURE 25)

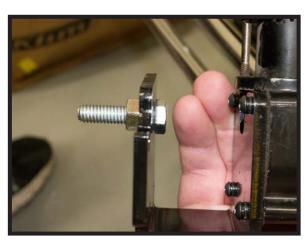


FIGURE 25





20. REMOVETHE FACTORY BAG SUPPORT BOLT ONTHE RIGHT SIDE OF THE MOTORCYCLE AND INSTALLTHE PUMP BRACKET BOLTTHROUGHTHE HOLE. TIGHTENTHE SUPPLIED NYLOC HEX NUT ON THE BACK SIDE. (FIGURES 26, 27)







FIGURE 27

21. INSERT THE 1/4" AIR HOSE INTO THE PUSH-TO-CONNECT FITTING ON AIR PUMP. THEN PLUG THE INCLUDED RED WIRE EXTENSION INTO THE RED PUMP WIRE. USING THE SUPPLIED ZIP TIES AND SPLIT LOOM, ROUTE/ATTACH THE AIR HOSE AND PUMP WIRES UP ALONG THE FRAME TOWARD THE RIGHT SIDE BATTERY COVER. BE SURE THAT THE WHEEL WILL NOT RUB THE HOSE OR WIRES WHEN THE MOTORCYCLE IS IN MOTION. (FIGURES 28, 29)



FIGURE 28



FIGURE 29





22. 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 30, 31)



FIGURE 30



FIGURE 31

23. 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 32, 33)

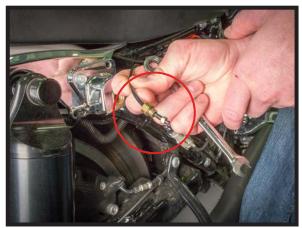


FIGURE 32



FIGURE 33





24. 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 UNTILL 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 34, 35, 36)



FIGURE 34



FIGURE 35



FIGURE 36

25. 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 37)

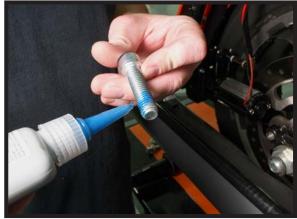


FIGURE 37





26. PRESSTHE 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 38, 39)







FIGURE 39

27. 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 ON THIS MANUAL, CONNECT THE WIRES TO THE RELAY AND AIR MANIFOLD SOLENOID.(FIGURES 40, 41)



FIGURE 40

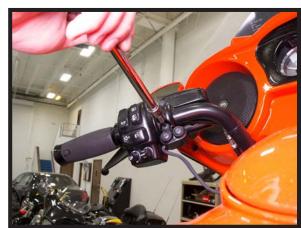


FIGURE 41





28. THE CLOCKING OF THE SHOCK EYES CAN BE CHANGED TO SUITTHE 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. (FIGURES 42, 43)





FIGURE 42

FIGURE 43

29. 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 44, 45)





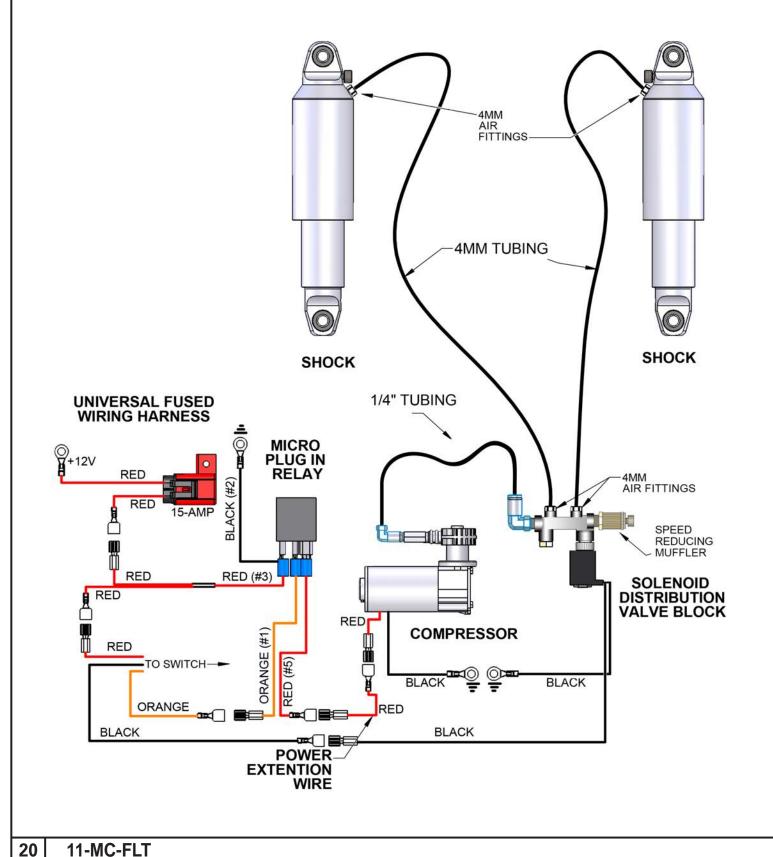


FIGURE 45

Installation Manual

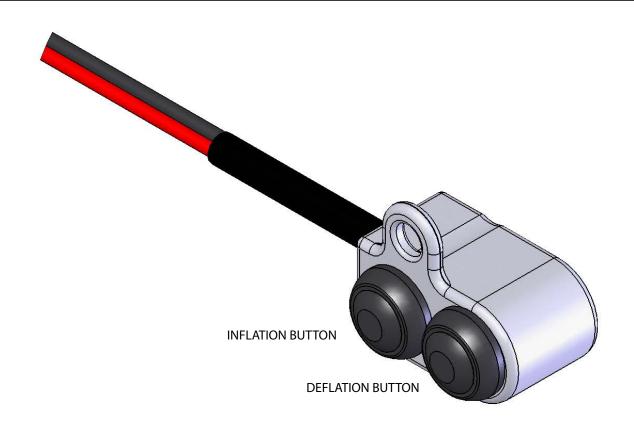
KIT # MC-2904, MC-2905, MC-2906, MC-2907 **FOR 2009-PRESENT** HARLEY-DAVIDSON® **TOURING SERIES**

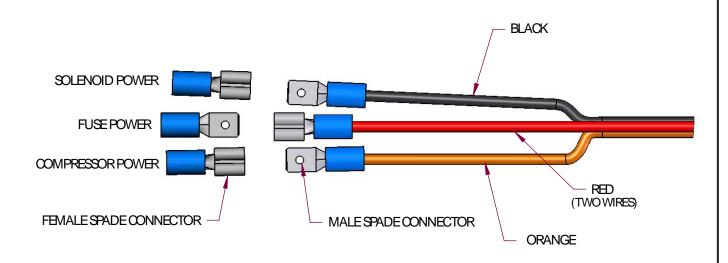












AS SHOWN IN ILLUSTRATION ABOVE;

- 1. CUT SWITCH WIRING TO APPROPRIATE LENGTH.
- 2. CRIMP THE TWO MALE SPADE CONNECTORS TO THE ORANGE WIRE AND TO THE BLACK WIRE.
- 3. CRIMPTHE FEMALE SPADE CONNECTOR TO THE DOUBLE RED WIRE.