Installation Manual

KIT # MC-3110, MC-3111, MC-3112, MC-3113
FOR 2007-PRESENT
HARLEY-DAVIDSON®
V-ROD 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.*

BILL OF MATERIALS
MC-3110 - V-ROD SUSPENSION SYSTEM, 2007-PRESENT , REB, BLACK

20-10841 - INFLATION KIT, V-ROD

QTY	PART NO.	DESCRIPTION
1	21-2918	V-ROD PUMP ASSY.
1	21-7272	SPLIT LOOM- 1 FT LENGTHS ACCESSORY KIT
1	21-7271	HARNESS CABLE TIES ACCESSORY KIT
1	21-7269	4MM VOSS AIR FITTING ACCESSORY KIT
1	21-7268	4MM AIRLINE X 6FT. ACCESSORY KIT
1	21-7267	1/4" NYLON TUBING ACCESSORY KIT
1	21-7266	BLACK BOLT COVERS ACCESSORY KIT
1	21-7262	MANIFOLD BRACKET W/ FASTENER ACCESSORY KIT
1	21-3110	MICRO RELAY ASSEMBLY W/ HARNESS
1	21-9780	14 IN MANIFOLD WIRE EXTENSION
1	21-2698	UNIVERSAL FUSE HOLDER ASSEMBLY KIT
1	21-9761	90 DEGREE PUSH CONNECT MANIFOLD ASSEMBLY
1	20-9704	V-ROD MOUNTING KIT
1	11-MC-VROD2	11-MC-V-ROD2- INSTALL MANUAL

21-10836-REB-B - SHOCK KIT

QTY	PART NO.	DESCRIPTION
1	21-10830	SHOCK ASSY, LEFT, REB, BLACK
1	21-10831	SHOCK ASSY, RIGHT, REB, BLACK

HANDLE BAR SWITCH

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

BILL OF MATERIALS
MC-3111 - V-ROD SUSPENSION SYSTEM, 2007-PRESENT , REB, CHROME

20-10841 - INFLATION KIT, V-ROD

QTY	PART NO.	DESCRIPTION
1	21-2918	V-ROD PUMP ASSY.
1	21-7272	SPLIT LOOM- 1 FT LENGTHS ACCESSORY KIT
1	21-7271	HARNESS CABLE TIES ACCESSORY KIT
1	21-7269	4MM VOSS AIR FITTING ACCESSORY KIT
1	21-7268	4MM AIRLINE X 6FT. ACCESSORY KIT
1	21-7267	1/4" NYLON TUBING ACCESSORY KIT
1	21-7266	BLACK BOLT COVERS ACCESSORY KIT
1	21-7262	MANIFOLD BRACKET W/ FASTENER ACCESSORY KIT
1	21-3110	MICRO RELAY ASSEMBLY W/ HARNESS
1	21-9780	14 IN MANIFOLD WIRE EXTENSION
1	21-2698	UNIVERSAL FUSE HOLDER ASSEMBLY KIT
1	21-9761	90 DEGREE PUSH CONNECT MANIFOLD ASSEMBLY
1	20-9704	V-ROD MOUNTING KIT
1	11-MC-VROD2	11-MC-V-ROD2- INSTALL MANUAL

21-10836-REB-C - SHOCK KIT

QTY	PART NO.	DESCRIPTION
1	21-10833	SHOCK ASSY, LEFT, REB, CHROME
1	21-10834	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-3112 - V-ROD SUSPENSION SYSTEM, 2007-PRESENT, BLACK

20-10841 - INFLATION KIT, V-ROD

QTY	PART NO.	DESCRIPTION
1	21-2918	V-ROD PUMP ASSY.
1	21-7272	SPLIT LOOM- 1 FT LENGTHS ACCESSORY KIT
1	21-7271	HARNESS CABLE TIES ACCESSORY KIT
1	21-7269	4MM VOSS AIR FITTING ACCESSORY KIT
1	21-7268	4MM AIRLINE X 6FT. ACCESSORY KIT
1	21-7267	1/4" NYLON TUBING ACCESSORY KIT
1	21-7266	BLACK BOLT COVERS ACCESSORY KIT
1	21-7262	MANIFOLD BRACKET W/ FASTENER ACCESSORY KIT
1	21-3110	MICRO RELAY ASSEMBLY W/ HARNESS
1	21-9780	14 IN MANIFOLD WIRE EXTENSION
1	21-2698	UNIVERSAL FUSE HOLDER ASSEMBLY KIT
1	21-9761	90 DEGREE PUSH CONNECT MANIFOLD ASSEMBLY
1	20-9704	V-ROD MOUNTING KIT
1	11-MC-VROD2	11-MC-V-ROD2- INSTALL MANUAL

21-10836-B - SHOCK KIT

QTY	PART NO.	DESCRIPTION
2	21-10832	SHOCK ASSY, BLACK

HANDLE BAR SWITCH

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

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BILL OF MATERIALS
MC-3113 - V-ROD SUSPENSION SYSTEM, 2007-PRESENT, CHROME

20-10841 - INFLATION KIT, V-ROD

QTY	PART NO.	DESCRIPTION
1	21-2918	V-ROD PUMP ASSY.
1	21-7272	SPLIT LOOM- 1 FT LENGTHS ACCESSORY KIT
1	21-7271	HARNESS CABLE TIES ACCESSORY KIT
1	21-7269	4MM VOSS AIR FITTING ACCESSORY KIT
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1	11-MC-VROD2	11-MC-V-ROD2- INSTALL MANUAL

21-10836-C - SHOCK KIT

QTY	PART NO.	DESCRIPTION
2	21-10835	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. REMOVE AIR BOX COVER AND AIR FILTER COVER. (FIGURE 1)

FIGURE 1

2. PLACE AIR PUMP BRACKET ASSEMBLY IN THE FRONT RIGHT SIDE OF THE AIR BOX. (FIGURE 2)

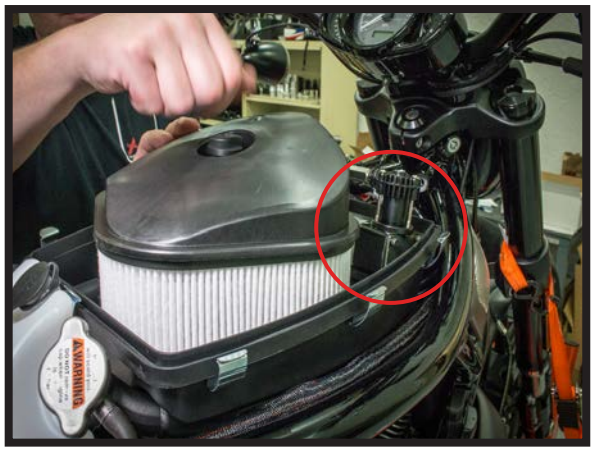

FIGURE 2

3. LOCATE THE AIR PUMP BRACKET ASSEMBLY IN THE AIR BOX SO THAT IT DOES NOT INTERFERE WITH THE AIR FILTER OR THE AIR BOX COVER WHEN CLOSED. THEN HOLDING THE ASSEMBLY IN PLACE SCRIBE THE LOCATION OF THE MOUNTING HOLES IN THE SIDE OF THE AIR BOX. (FIGURES 3)

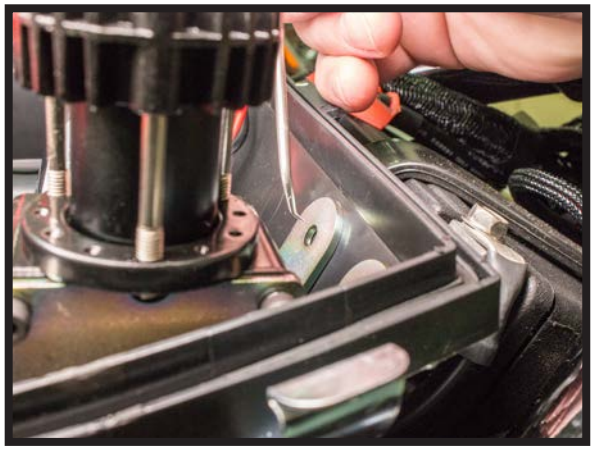

FIGURE 3

4. REMOVE THE AIR FILTER & PLUG THE AIR INTAKES TO KEEP DEBRIS FROM FALLING IN. (FIGURE 4, 5)

FIGURE 4

FIGURE 5

5. DRILL THE SCRIBED MOUNTING HOLES WITH A 6MM DRILL BIT. (FIGURE 6, 7)

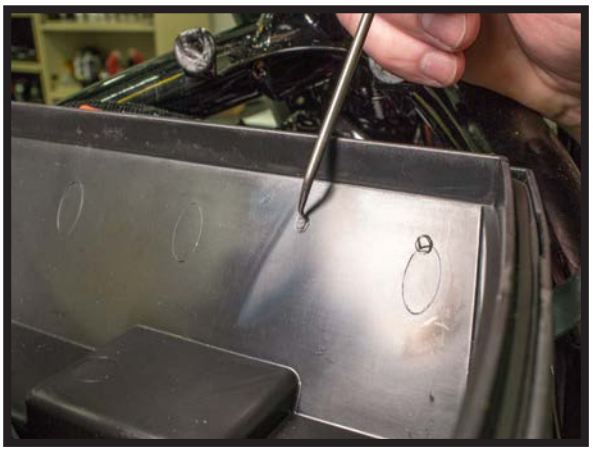

FIGURE 6

FIGURE 7

6. MOUNT THE PUMP TO THE AIR BOX USING THE SUPPLIED 6MM BUTTON HEAD SCREWS AND NYLOC NUTS. (FIGURE 8, 9)

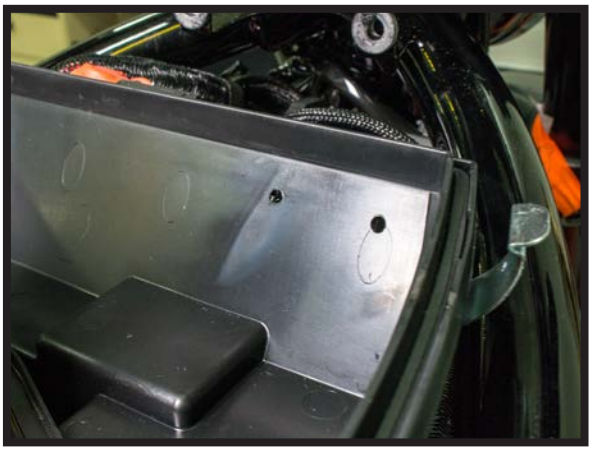

FIGURE 8

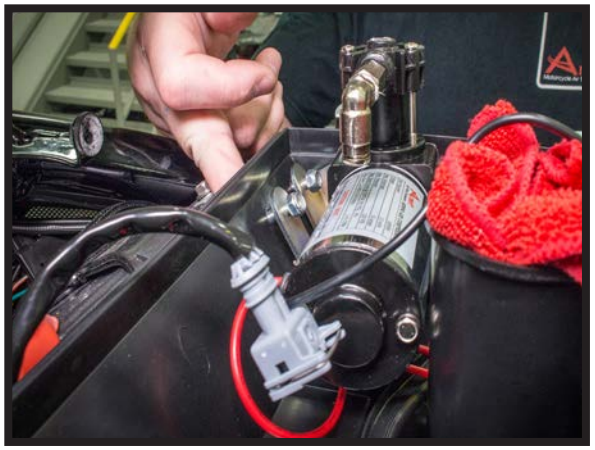

FIGURE 9

7. REMOVE THE BATTERY COVERS FROM BOTH SIDES OF THE MOTORCYCLE. (FIGURE 10, 11)

FIGURE 10

FIGURE 11

8. INSERT THE ¼" HOSE INTO THE PUSH-TO-CONNECT FITTING ON THE AIR PUMP. (FIGURE 12)

FIGURE 12

9. PUSH THE ¼" HOSE AND THE PUMP WIRES THROUGH THE SNORKEL ON THE AIR FILTER COVER. (FIGURE 13)

FIGURE 13

10. REINSTALL THE AIR BOX COVER MAKING SURE NOT TO PINCH THE HOSE OR THE WIRES. (FIGURE 14)

FIGURE 14

11. ROUTE THE ¼" HOSE BETWEEN THE LEFT SIDE OF THE AIR BOX AND THE FRAME TOWARD THE FUEL TANK. (FIGURE 15)

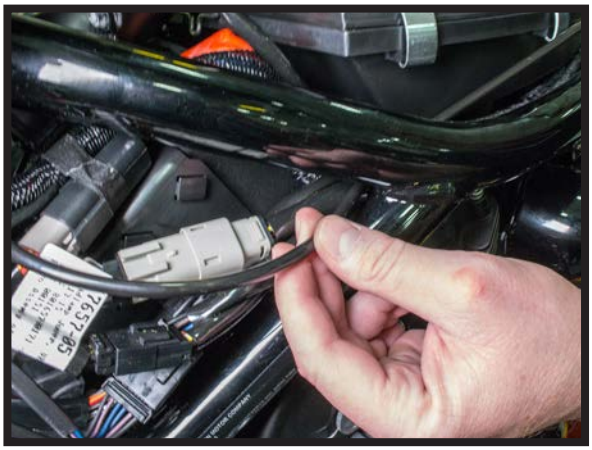

FIGURE 15

12. ROUTE THE 4MM AIR LINES UNDER THE SEAT FROM BOTH SIDES OF THE BIKE. THIS ROUTING WILL VARY WITH DIFFERENT MODELS OF V-ROD. MAKE SURE THAT THE HOSE DOES NOT GET PINCHED OR KINKED. (FIGURE 16, 17, 18)

FIGURE 16

FIGURE 17

FIGURE 18

13. SLIDE A VOSS AIR FITTING OVER THE 4MM AIR HOSES 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 AIR MANIFOLD. (FIGURE 19)

FIGURE 19

14. NEXT MOUNT THE AIR MANIFOLD, WITH THE TWO 4MM AIR LINES ATTACHED, TO THE FRAME. A GOOD PLACE FOR THIS IS THE POCKET BETWEEN THE FRAME AND THE FUEL TANK. THIS AREA IS TIGHT SO IT IS HELPFUL TO ATTACH THE SUPPLIED 6MM NYLOC NUT TO THE BACK OF THE MANIFOLD BRACKET WITH A PIECE OF TAPE. THIS WILL KEEP THE NUT IN PLACE UNTIL YOU CAN START THE THREADS OF THE SUPPLIED 6MM BUTTON HEAD CAP SCREW. WHEN THE SCREW STARTS TO ENGAGE THE NUT YOU CAN REMOVE THE TAPE AND PUT A WRENCH ON THE NUT TO SNUG THE ASSEMBLY TO THE FRAME. (FIGURES 20, 21, 22, 23)

FIGURE 21

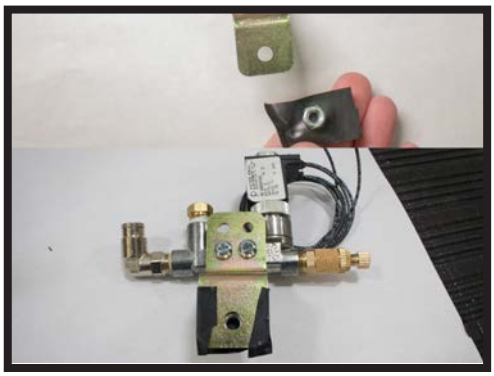

FIGURE 22

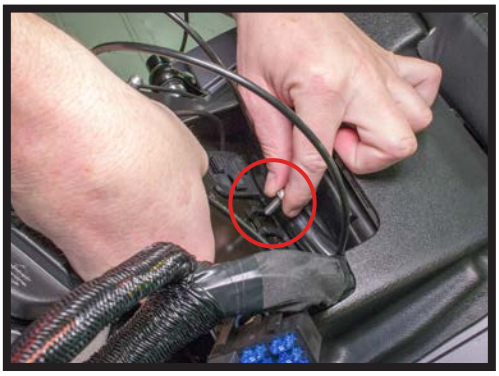

FIGURE 23

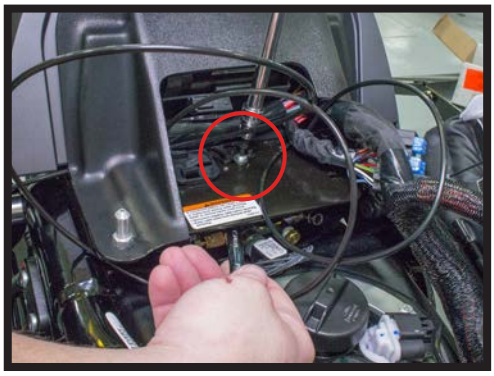

FIGURE 24

15. CUT THE ¼" HOSE TO LENGTH & INSERT IT INTO THE PUSH-TO-CONNECT FITTING IN THE AIR MANIFOLD ASSEMBLY. PULL SOME OF THE SLACK OF THE 4MM LINES OUT FROM UNDER THE SEAT. MAKE SURE NONE OF THE LINES ARE KINKED OR PINCHED. (FIGURES 24, 25)

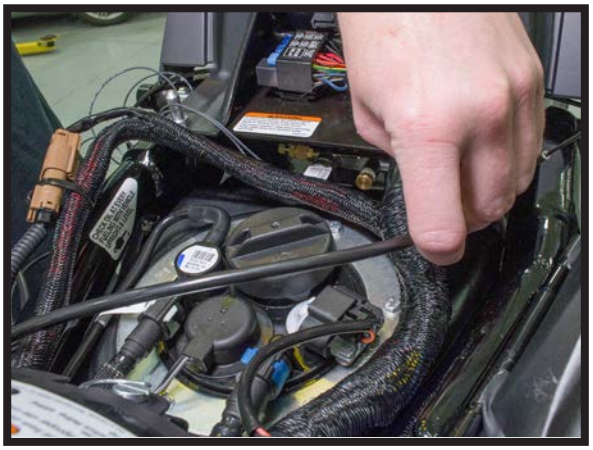

FIGURE 24

FIGURE 25

16. REMOVE THE LOWER CLUTCH BRACKET BOLT. THEN MOUNT THE HANDLE BAR SWITCH WITH THE FACTORY SCREW. ROUTE THE WIRE DOWN THE HANDLE BAR SECURING IT WITH THE SUPPLIED ZIP TIES. (FIGURES 26, 27, 28, 29, 30)

FIGURE 26

FIGURE 27

FIGURE 28

FIGURE 29

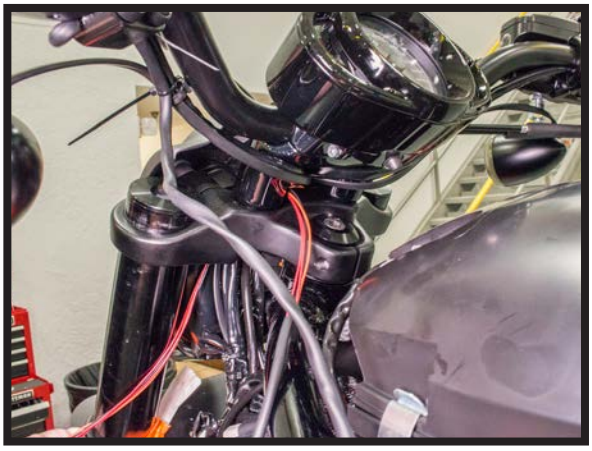

FIGURE 30

17. ROUTE THE AIR MANIFOLD SOLENOID WIRES ALONG THE RIGHT SIDE OF THE AIR BOX AND THE FRAME. ATTACH THE WIRE ENDS TO THE SOLENOID WIRE THEN PLUG INTO THE SUPPLIED WIRE EXTENSIONS. CONTINUE WIRES ALONG THE AIR BOX AND FRAME TOWARD THE BATTERY. (FIGURE 31, 32)

FIGURE 31

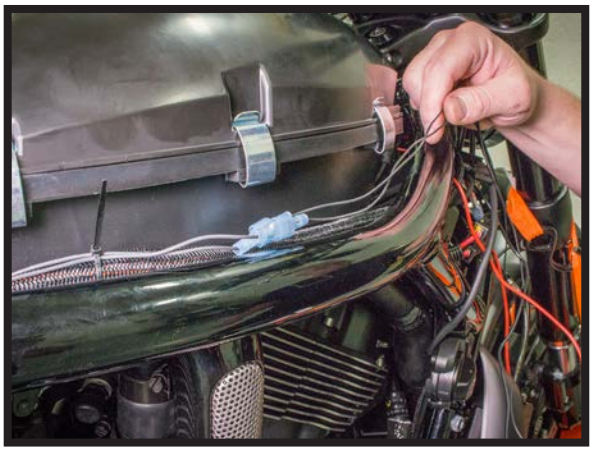

FIGURE 32

18. FOLLOWING THE WIRING DIAGRAMS IN THE BACK OF THIS MANUAL, TRIM ALL WIRES TO LENGTH AND CONNECT TO THE BATTERY. BUNDLE WIRES WITH THE SUPPLIED ZIP TIES AND TUCK AWAY IN FRONT OF THE BATTERY. (FIGURE 33, 34, 35)

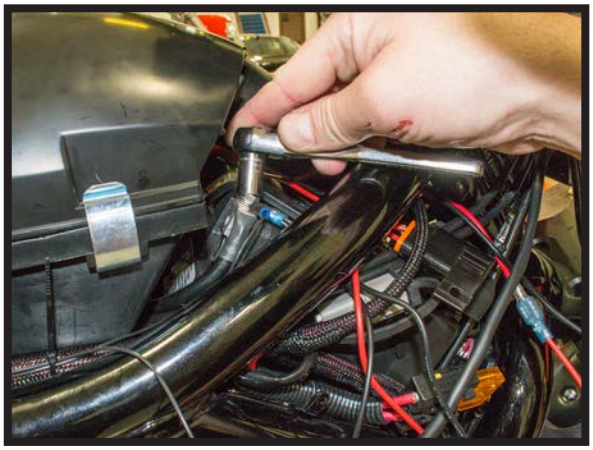

FIGURE 33

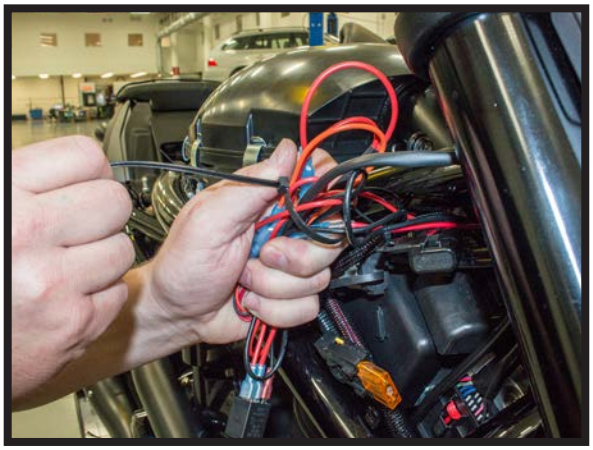

FIGURE 34

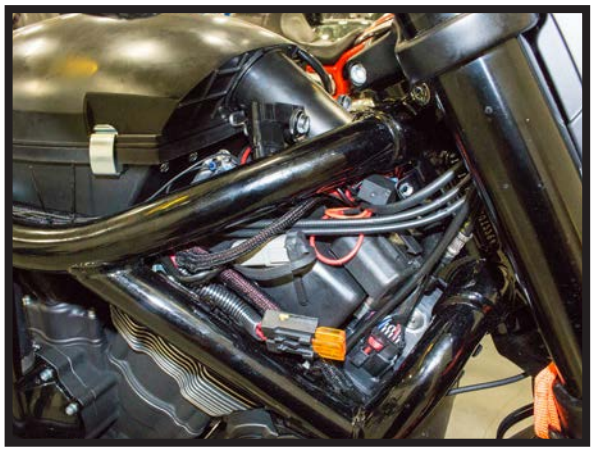

FIGURE 35

19. REINSTALL THE AIR BOX COVER AND BOTH BATTERY COVERS. (FIGURES 36)

FIGURE 36

20. ON THE DX MODELS REMOVE THE LEFT SIDE PASSENGER FOOT PEG BRACKET. REPLACE THE FACTORY SCREWS WITH THE LONGER SUPPLIED 45MM SCREWS. PLACE THE LONG 10MM ID SPACERS OVER THE SCREWS THEN REMOUNT THE FOOT PEG BRACKET TO THE FRAME. (FIGURES 37)

FIGURE 37

21. REMOVE THE STOCK SHOCKS. TRIM THE 4MM AIR HOSES TO LENGTH. MAKE SURE THAT THEY ARE LONG ENOUGH THAT THEY WON'T GET KINKED OR PINCHED. BUT NOT SO LONG THAT THEY WILL RUB ON THE WHEEL. IT IS HELPFUL IF YOU CAN COIL THE HOSE ONCE AND PUSH THE COIL UP INTO THE FENDER. (FIGURE 38)

FIGURE 38

22. WITH THE WHITE PLUG STILL IN PLACE SCREW THE VOSS FITTING INTO THE SHOCK UNTIL THE O-RING JUST TOUCHES. PULL THE PLUG FROM THE FITTING THEN PUSH IN THE AIR HOSE UNTIL YOU FEEL IT SEAT. UNSCREW THE FITTING FROM THE SHOCK TO CONFIRM THAT THE KEEPER IS ATTACHED TO THE HOSE. THEN SCREW IT BACK INTO THE SHOCK AND SNUG TIGHT WITH A 10MM WRENCH. (FIGURES 39)

FIGURE 39

23. PUT ONE OF THE SUPPLIED 12MM SCREWS THROUGH THE UPPER EYE OF THE SHOCK. THEN SLIDE ON THE SUPPLIED LONGER 12MM ID SPACER. PUT BLUE LOCTITE ON THE SCREW THEN THREAD INTO THE FRAME. REPEAT THESE STEPS FOR THE LOWER SHOCK EYE. HOWEVER THIS TIME USE THE SHORTER 12MM ID SPACER. TIGHTEN BOTH SCREWS TO THE FACTORY RECOMMEND TORQUE. (FIGURES 40, 41)

FIGURE 40

FIGURE 41

24. FINALLY, INSTALL THE SUPPLIED SCREW HEAD COVERS TO ALL 4 SCREWS. YOU MAY NEED TO PUT A LITTLE SOAPY WATER ON THE HEAD OF THE SCREW SO THE COVER WILL SLIDE ON SMOOTHLY. (FIGURES 42, 43)

FIGURE 42

FIGURE 43

25. 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 SLEEVAE AS SHOWN BELOW. TWIST THE SLEEVE ON THE SHOCK BODY. (FIGURES 44, 45)

FIGURE 44

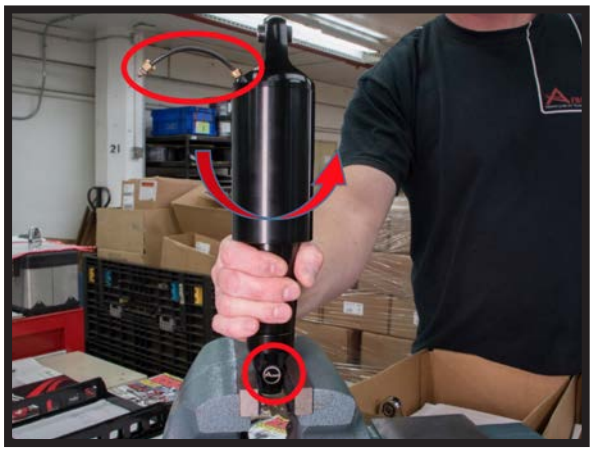

FIGURE 45

26. 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 46, 47)

FIGURE 46

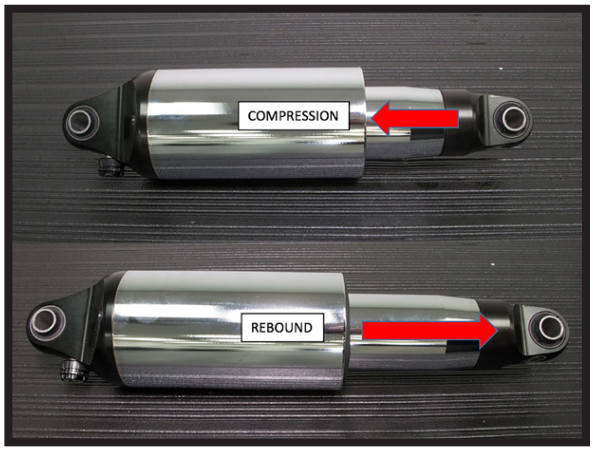

FIGURE 47

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FOR 2007-PRESENT
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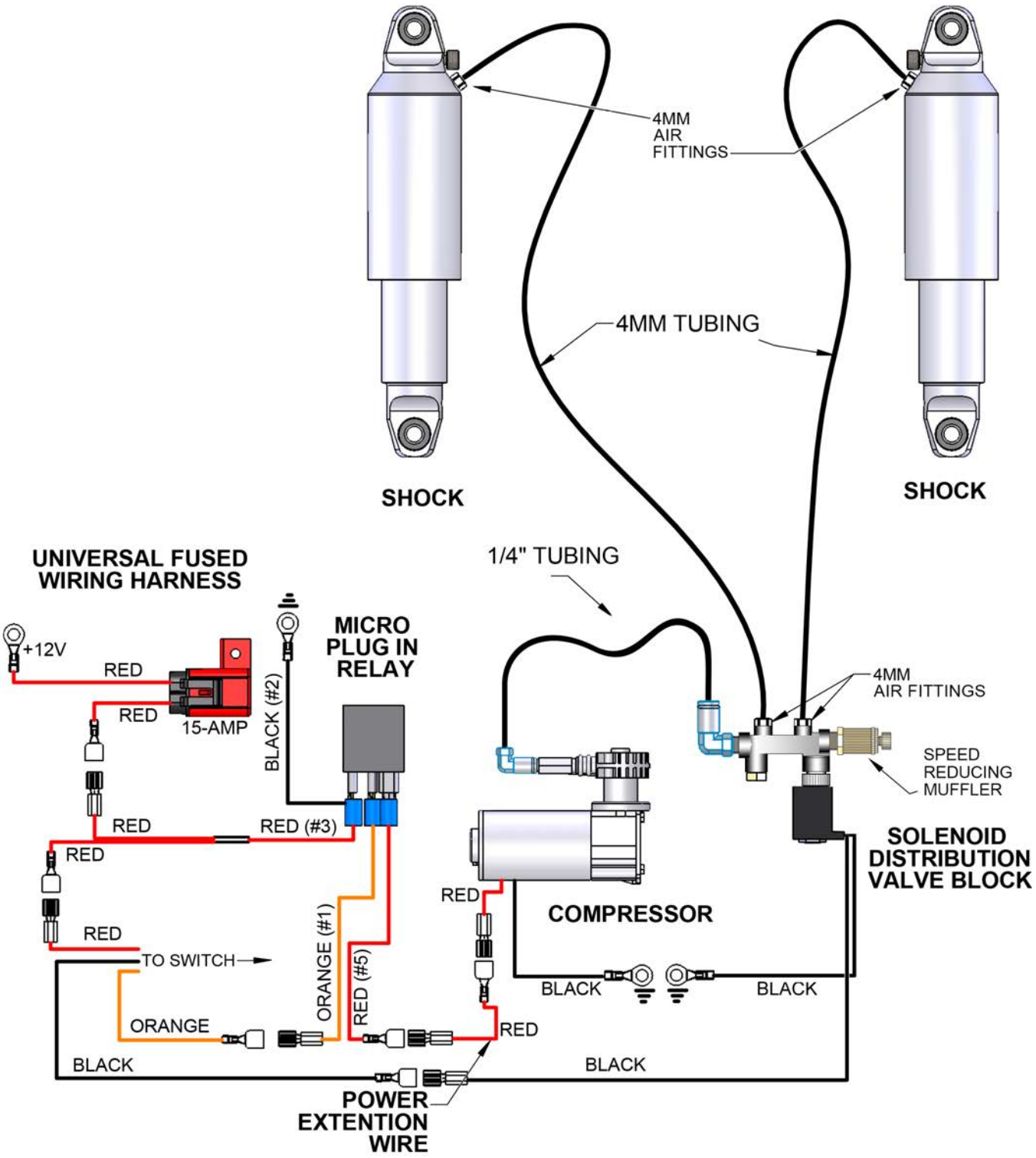
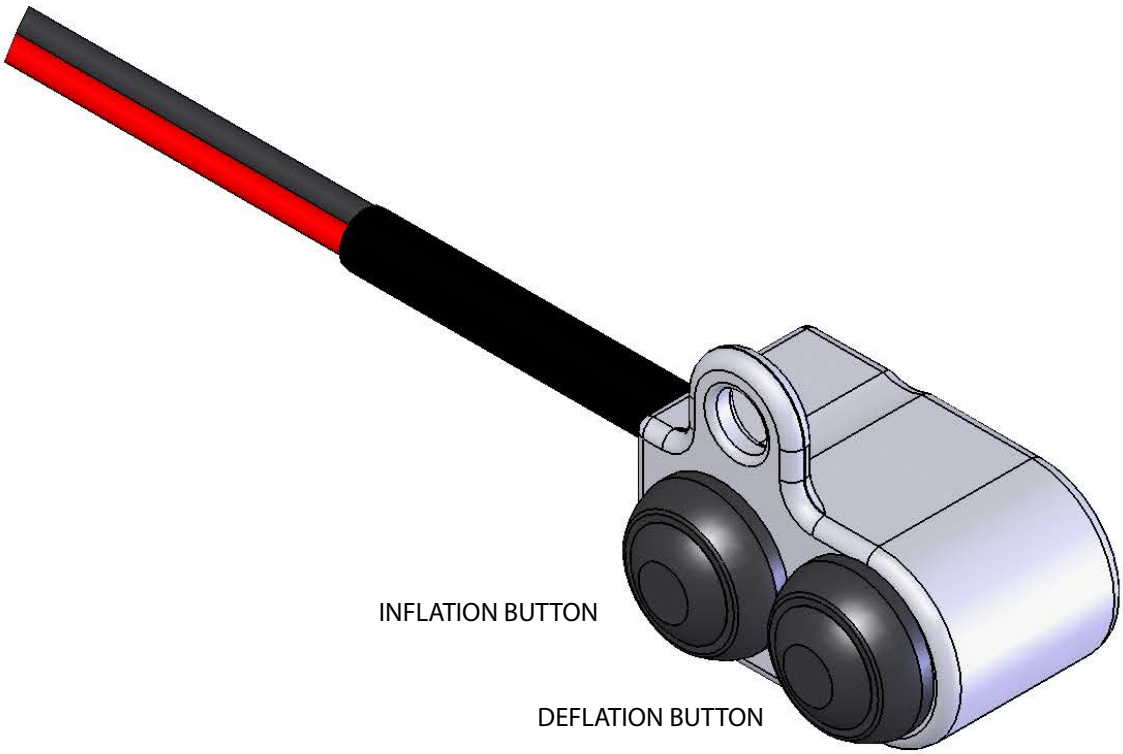
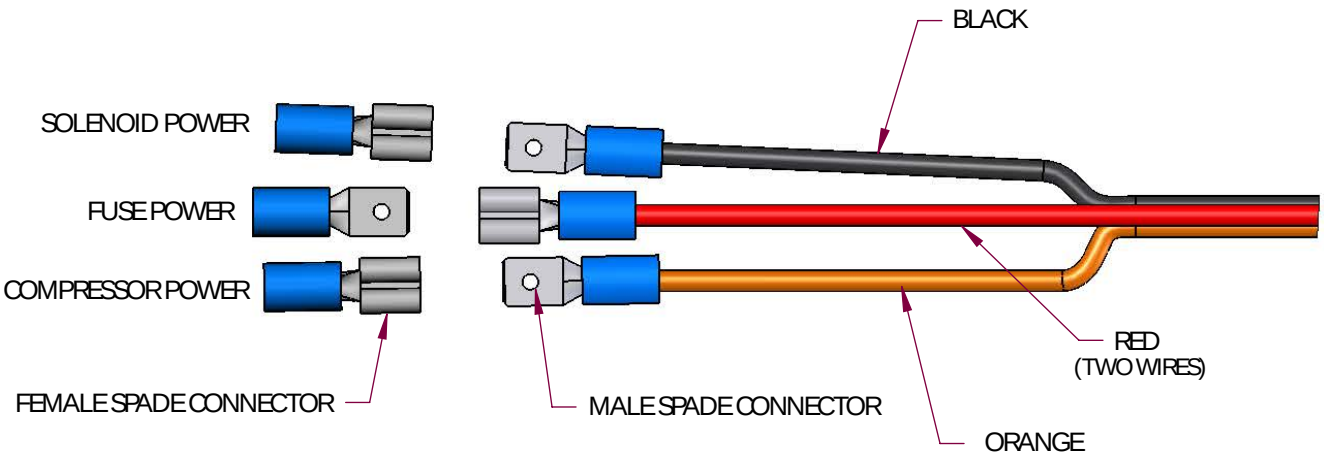
V-ROD SERIES







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. CRIMP THE FEMALE SPADE CONNECTOR TO THE DOUBLE RED WIRE.