Installation Manual

KIT # MC-2972
FOR 1990-2008
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.*

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).

BILL OF MATERIALS
MC-2972 - FLT SUSPENSION SYSTEM, 1990-2008 , SMOOTH RIDE

20-10552 - INFLATION KIT, 1990-2008, FLT, SMOOTH RIDE

QTY	PART NO.	DESCRIPTION
1	21-3312	TOURING BIKE COMPRESSOR ASSY 1990-2008
1	21-9761	90 DEGREE PUSH CONNECT MANIFOLD ASSY
1	21-3110	MICRO RELAY ASSEMBLY W/ HARNESS
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- 1 FT LENGTHS ACCESSORY KIT
1	21-7275	TOGGLE SWITCH ACCESSORY KIT
1	21-2698	UNIVERSAL FUSE HOLDER ASSEMBLY KIT
1	21-7262	MANIFOLD BRACKET W/ FASTENER ACCY KIT
1	21-7282	COMPRESSOR WIRE EXTENSION ACCESSORY KIT
1	11-MC-FLT2-SR	INSTALL MANUAL
1	21-7266	BLACK BOLT COVERS ACCESSORY KIT
1	21-8034	MOTORCYCLE BOLT KIT

21-13489 - SHOCK KIT

QTY	PART NO.	DESCRIPTION
2	21-13498	SHOCK ASSY, BLACK, SMOOTH RIDE

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.

SHOCK 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. REMOVE THE SADDLE BAGS, RIGHT SIDE COVER AND SEAT (FIGURES 1, 2, 3)

FIGURE 1

FIGURE 2

FIGURE 3

2. REMOVE BOTH OE SHOCKS. (FIGURE 4)

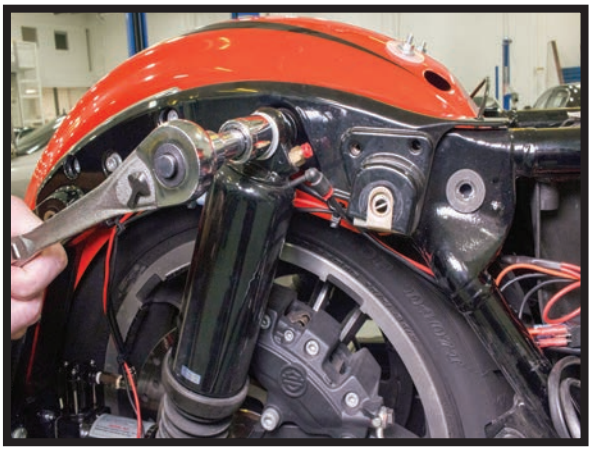


FIGURE 4

3. REMOVE BOTH OF THE FENDER SUPPORT BRACKET BOLTS AS INDICATED BY THE ARROWS. REUSING THE BOLTS, FASTEN THE COMPRESSOR TO THE BRACKET. (FIGURE 5, 6)

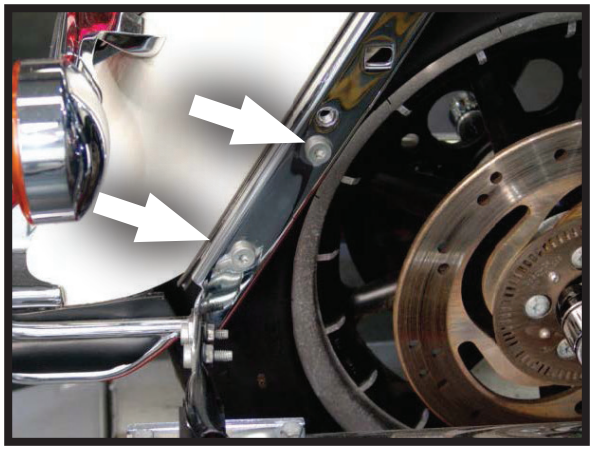


FIGURE 5

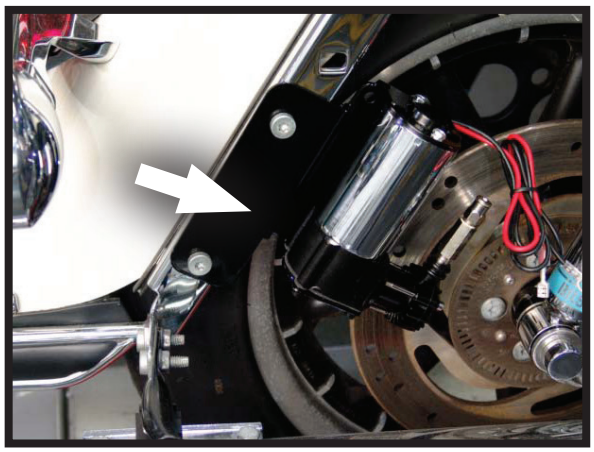


FIGURE 6

4. ATTACH THE INCLUDED WIRE EXTENSION TO THE COMPRESSOR AND WRAP THE WIRES WITH THE INCLUDED SPLIT LOOM. INSERT THE INCLUDED ¼" AIR HOSE INTO THE PUSH-TO-CONNECT FITTING ON THE COMPRESSOR. ROUTE THE WIRES AND AIR HOSE TOWARD THE RIGHT SIDE BATTERY COVER ATTACHING THEM TO THE FRAME WITH THE INCLUDED ZIP TIES. (FIGURE 7, 8)

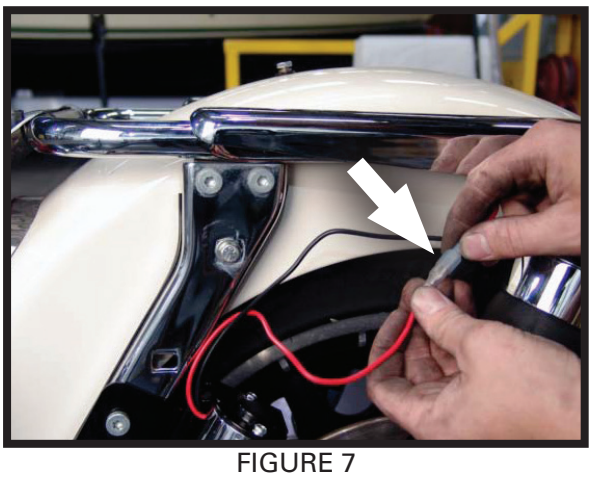


FIGURE 7

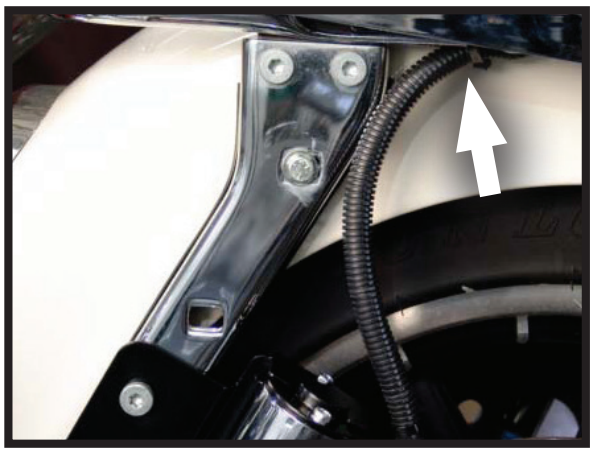


FIGURE 8

5. SCREW A VOSS FITTING INTO ONE OF THE AIR SHOCKS. PULL OUT THE WHITE PLUG AND INSERT THE 4MM AIR HOSE UNTIL YOU FEEL IT SEAT. UNSCREW THE VOSS FITTING FROM THE SHOCK AND VERIFY THAT THE KEEPER IS ATTACHED TO THE HOSE. SCREW THE FITTING BACK INTO THE SHOCK AND SNUG TIGHT WITH A 10MM WRENCH. (FIGURE 9, 10, 11)

FIGURE 9

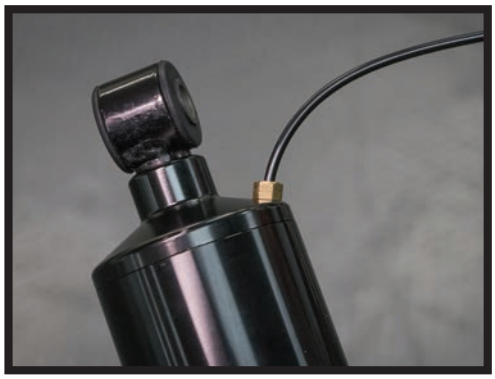


FIGURE 10

FIGURE 11

6. APPLY BLUE THREAD LOCK TO THE INCLUDED ½" CAP SCREWS. MOUNT THE RIGHT SHOCK TO THE MOTORCYCLE WITH THE VOSS FITTING POINTING TOWARD THE MOTORCYCLE. ROUTE THE AIR LINE TOWARD THE RIGHT-SIDE BATTERY COVER. TRIM THE AIR LINE & REPEAT WITH THE LEFT SHOCK. ROUTE THE AIR LINE TO THE RIGHT-SIDE BATTERY COVER.MAKE SURE THE AIR LINE WILL NOT BE PINCHED WHEN THE SEAT IS PLACED BACK ON THE MOTORCYCLE. APPLY SOME SOAPY WATER TO THE O-RINGS INSIDE THE INCLUDED BOLT COVERS AND SLIDE THEM OVER THE HEADS OF THE BOLTS. (FIGURES 12, 13, 14)

FIGURE 12

FIGURE 13

FIGURE 14

7. MOUNT THE INCLUDED AIR MANIFOLD UNDER THE RIGHT-SIDE BATTERY COVER. THE IMAGES BELOW SHOW SOME OPTIONS WITH THE INCLUDED MOUNTING HARDWARE. TRIM THE ¼" COMPRESSOR HOSE AND INSERT IT INTO THE PUSH-TO-CONNECT FITTING ON THE AIR MANIFOLD. SCREW THE 2 VOSS FITTINGS INTO THE MANIFOLD AND FOLLOWING THE SAME PROCEDURE AS IN STEP #5 ATTACH THE 4MM AIR LINES. (FIGURES 15, 16)

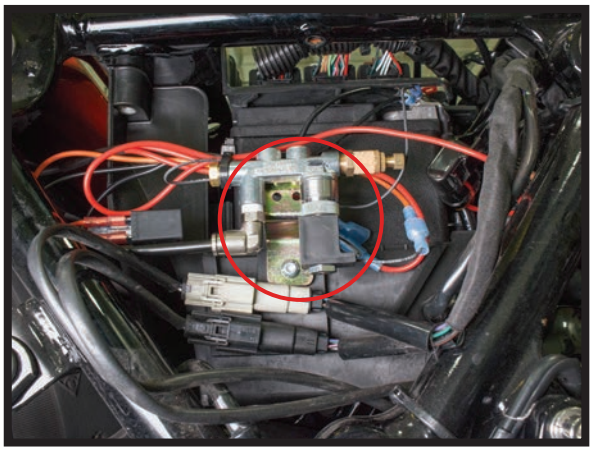


FIGURE 15

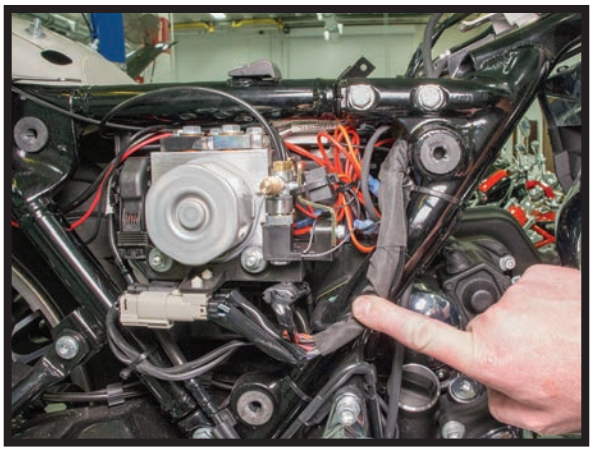


FIGURE 16

8. LOCATE A SUITABLE MOUNTING LOCATION FOR THE INCLUDED TOGGLE SWITCH. MOUNT IN A LOCATION THAT WILL PROVIDE EASE OF ACCESS. SUCH AS BEHIND OF THE REAR CYLINDER ON THE LEFT SIDE COVER. ROUTE THE SWITCH WIRES TO THE MANIFOLD. USING THE WIRING DIAGRAM IN THE BACK OF THIS MANUAL COMPLETE THE ELECTRICAL CONNECTIONS. (FIGURE 17)

FIGURE 17

9. BEFORE PUTTING THE MOTORCYCLE COMPLETELY BACK TOGETHER, IT IS RECOMMENDED THAT YOU AIR UP THE SYSTEM. SPRAY ALL THE HOSE CONNECTIONS AND FITTINGS WITH SOAPY WATER. IF THERE ARE ANY AIR LEAKS IN THE SYSTEM BUBBLES WILL FORM AT THESE LOCATIONS.

10. THE ORIENTATION OF THE VOSS FILL PORT CAN BE CHANGED IN RELATION TO THE SHOCK MOUNTING EYELETS. UNSCREW AND REMOVE THE SHOCK CAN. SNUG THE LOWER SHOCK EYE IN A VISE. GRASPING THE LOWER PORTION OF THE AIR SPRING AND TWIST IT ON THE SHOCK BODY UNTIL THE DESIRED CLOCKING IS REACHED. FLIP THE SHOCK IN THE VISE. THIS TIME GRIPPING THE OTHER END OF THE AIR SPRING. TWIST TO REALIGN THE SHOCK EYES. (FIGURES 18, 19, 20, 21)

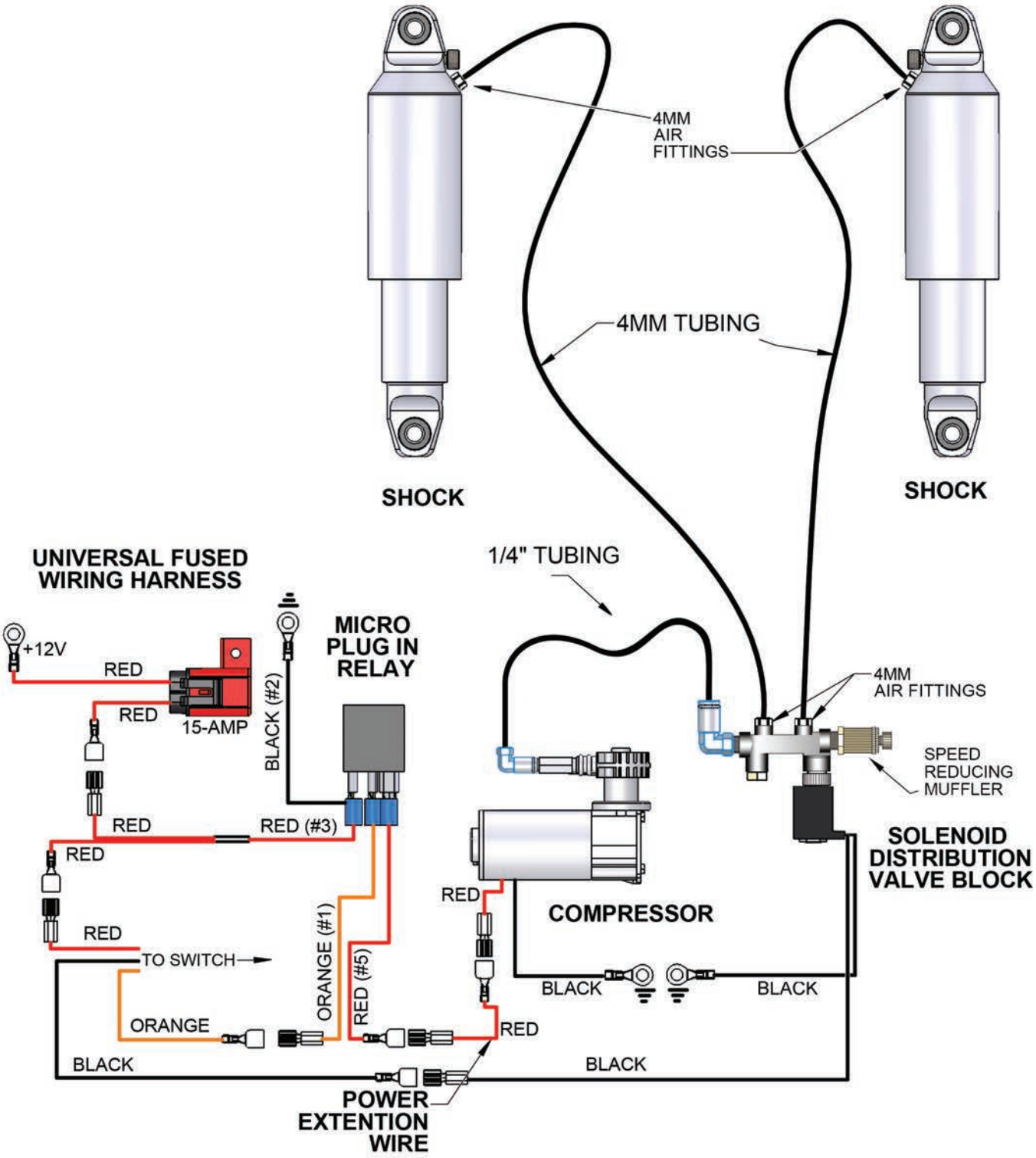
FIGURE 18

FIGURE 19

FIGURE 20

FIGURE 21

The terms Harley-Davidson®, Harley®, H-D®, Buell®, Softail®, Dyna®, V-Rod®, Tri-Glide®, and Sportster® are used for reference only. Arnott Air Suspension products are in no way authorized by nor associated with the Harley-Davidson Motor Company. All references to Harley-Davidson terms and models are for reference and identification purposes only. The use and installation of any Arnott Air Suspension product or kit may adversely affect or void your Harley-Davidson® factory warranty. It is the responsibility of the motorcycle owner to check federal, state and local laws and ordinances before modifying or customizing his or her motorcycle. It is the exclusive and total responsibility of the motorcycle owner to determine the suitability of this product for his or her use. The user shall assume all legal obligations, personal injury risk and all liability duties and risk associated with the use of this product. Arnott Air Suspension products are designed and intended for the experienced on-road motorcyclists only and intended for closed course operation. Arnott Air Suspension products and kits are designed exclusively for OEM manufactured and equipped motorcycles with no modifications. Any installation of aftermarket or customized components may adversely affect the operation and performance of Arnott Air suspension kits and components and may void the manufacturer's warranty. These directions are accurate at time of publication. Arnott Inc. reserves the right to revise specifications without notice.


4MM
AIR
FITTINGS
4MM TUBING
SHOCK
SHOCK
UNIVERSAL FUSED
WIRING HARNESS
1/4" TUBING
+12V
RED
RED
15-AMP
BLACK (#2)
MICRO
PLUG IN
RELAY
4MM
AIR FITTINGS
SPEED
REDUCING
MUFFLER
RED
RED (#3)
RED
SOLENOID
DISTRIBUTION
VALVE BLOCK
RED
COMPRESSOR
RED
TO SWITCH
ORANGE (#1)
RED (#5)
BLACK
BLACK
ORANGE
RED
BLACK
BLACK
POWER
EXTENTION
WIRE