

# Installation Manual

KIT # 9048-BL/BS-B  
FOR 2009-PRESENT  
HARLEY-DAVIDSON®  
TOURING 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.

## "Engineered to Ride, Built to Last®"



**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](tel:800-251-8993) during normal business hours or email [techassistance@arnottinc.com](mailto:techassistance@arnottinc.com).

# Installation Manual

**KIT # 9048-BL/BS-B  
FOR 2009-PRESENT  
HARLEY-DAVIDSON®  
TOURING SERIES**



## 21-7863 ARNOTT AIR SHOCK KIT CONTAINS:

### PARTS LIST

P/N	QTY	DESCRIPTION
21-2864-012	2	13" BLACK BILSTEIN MOTORCYCLE AIR SHOCK

## 21-7861 ARNOTT AIR SHOCK KIT CONTAINS:

### PARTS LIST

P/N	QTY	DESCRIPTION
21-2712-012	2	12" BLACK BILSTEIN MOTORCYCLE AIR SHOCK

## 20-7537 ARNOTT INFLATION KIT CONTAINS:

### PARTS LIST

P/N	QTY	DESCRIPTION
11-9048-BL/BS-B	1	INSTALLATION MANUAL FOR 9048-BL/BS-B
21-2698	1	UNIVERSAL FUSE HOLDER
21-2866	1	MANIFOLD ASSEMBLY WITH VALVE
21-3110	1	MICRO RELAY ASSEMBLY WITH HARNESS
21-9753	1	COMPRESSOR WITH BRACKET
21-7261	1	SPEED REDUCING MUFFLER
21-7262	1	MANIFOLD BRACKET WITH FASTENER
21-7266	1	BLACK BOLT COVERS
21-7267	1	1/4" NYLON TUBING
21-7268	1	4MM NYLON TUBING
21-7269	1	4MM AIR FITTING
21-7271	1	HARNESS CABLE TIES
21-7272	1	SPLIT LOOM
21-7275	1	TOGGLE SWITCH ASSEMBLY
21-7280	1	HARDWARE HD
21-7282	1	COMPRESSOR WIRE EXTENSION
20-9983	1	MOUNTING KIT

## 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](http://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.

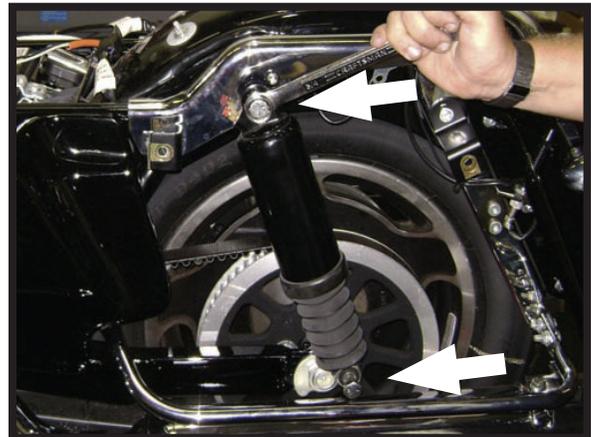
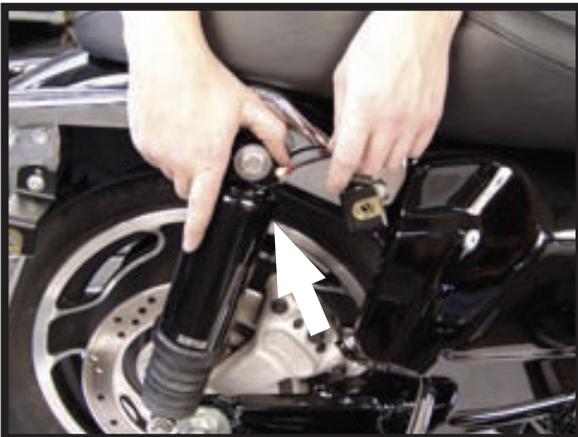
## NOTE:

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 O.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. To order this kit call 1-877-900-0247 or visit [www.arnottcycles.com](http://www.arnottcycles.com)

## 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 the air hose from the factory air shocks. To disconnect the air line, push down on the red plastic ring while pulling out on the air line at the same time.
2. Loosen and remove the upper and lower shock bolts.



# Installation Manual

KIT # 9048-BL/BS-B  
FOR 2009-PRESENT  
HARLEY-DAVIDSON®  
TOURING SERIES



3. Carefully remove factory air shocks from the rear suspension.



4. Remove the factory air line and valve.



## AIR SHOCKS INSTALLATION



*Tighten all nuts and bolts to manufacturer's specifications during the installation process.*

1. Locate the ½"-13 X 2.5" socket head bolts from the kit. Before installing, apply two or three drops of blue threadlock to the threads of the new shock bolts.



2. Install the new air shocks one at a time. Start the lower bolts first. Then adjust the height of the bike to line up the upper bolt holes.

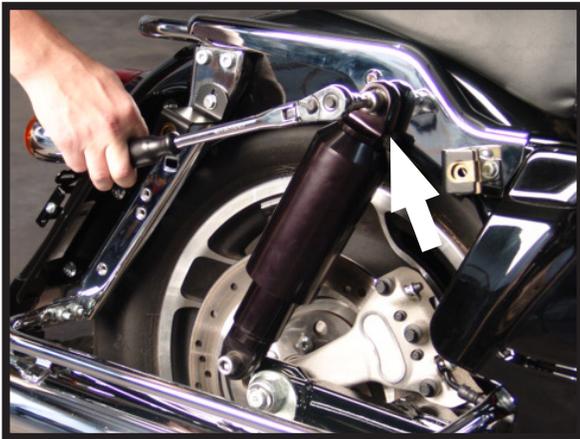


# Installation Manual

KIT # 9048-BL/BS-B  
FOR 2009-PRESENT  
HARLEY-DAVIDSON®  
TOURING SERIES



3. Use a 3/8" Allen head driver and torque wrench to tighten the upper and lower shock bolts.



4. Install the bolt covers onto the shock absorber bolts. Lubricate the o-ring inside with an appropriate lube. Gently press the cover on with a slight twisting motion until you feel the caps drawn solidly onto the bolt head and firmly seated.



5. Installation complete.

## INFLATION SYSTEM INSTALLATION



*Tighten all nuts and bolts to manufacturer's specifications during the installation process.*

**NOTE:** *The inflation system consists of a compressor with a separate distribution manifold along with an inflation switch and compressor relay. Pump locations may be affected by emissions control components. If equipped, an alternate pump location will need to be found.*

1. Remove the seat.



2. Remove both side cover panels.



# Installation Manual

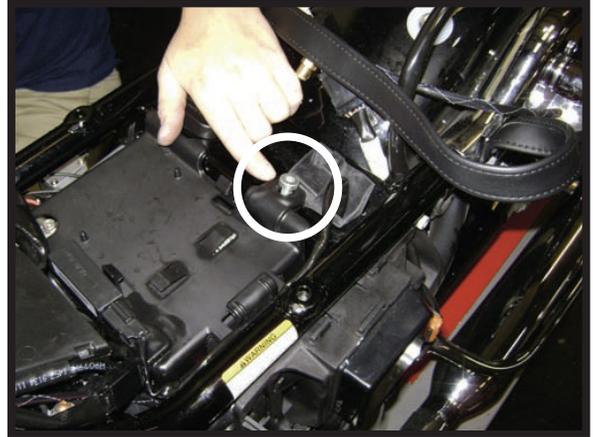
KIT # 9048-BL/BS-B  
FOR 2009-PRESENT  
HARLEY-DAVIDSON®  
TOURING SERIES



3. The Electronic Control Module is located directly under the seat. Remove the clip and lift the ECM out of the way (you will not need to disconnect it), to access the battery.



4. Loosen and remove the torx bolt retaining the battery cover. Remove the plastic cover after removing the torx bolt.



5. If the motorcycle is a model year 2009-2013 skip to step #9. Remove the two bolts attaching the lower saddle bag support on the right side of the motorcycle.



6. 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 #5.



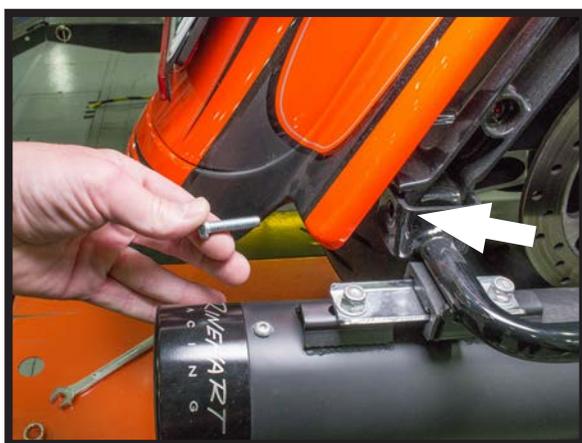
# Installation Manual

KIT # 9048-BL/BS-B  
FOR 2009-PRESENT  
HARLEY-DAVIDSON®  
TOURING SERIES



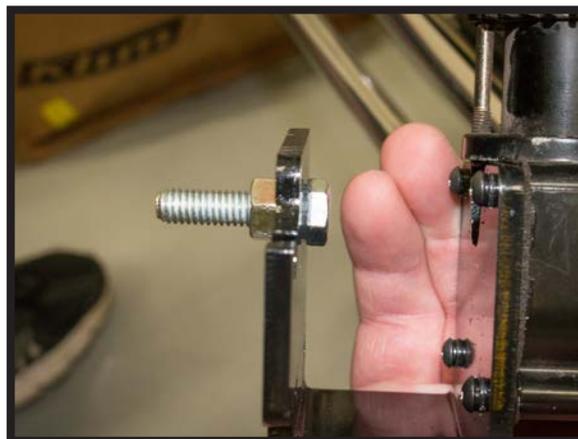
**NOTE:** The Arnott accessory kit K-2850 is necessary when installing Arnott Ultimate Ride Kits MC-2904, MC-2905, MC-2906 and MC-2907 or Smooth Ride Kit 9048 kit for 2014-Present Harley-Davidson® Touring motorcycles equipped with Harley-Davidson's Saddle Bag Guard Rails (P/N 90200561) or 2014-present CVOTM Touring motorcycles with O.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. To order this kit call 1-877-900-0247 or visit [www.arnottcycles.com](http://www.arnottcycles.com)

7. Insert the supplied hex bolt through the support as shown below.



8. 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 1/2" from touching the 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.

9. If the motorcycle model year is 2014 to present, skip to step #11. If the motorcycle is a model year 2009-2013 you will need to install then tighten the supplied hex bolt and non-nyloc nut onto the air pump bracket as shown below.



# Installation Manual

KIT # 9048-BL/BS-B  
FOR 2009-PRESENT  
HARLEY-DAVIDSON®  
TOURING SERIES



10. Remove the factory bag support bolt on the right side of the motorcycle and install the pump bracket bolt through the hole. Tighten the supplied nyloc hex nut on the back side.

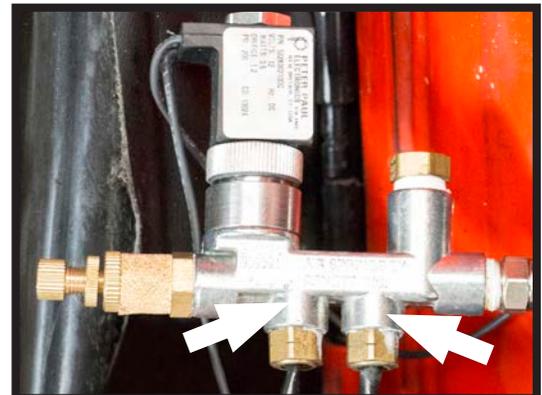
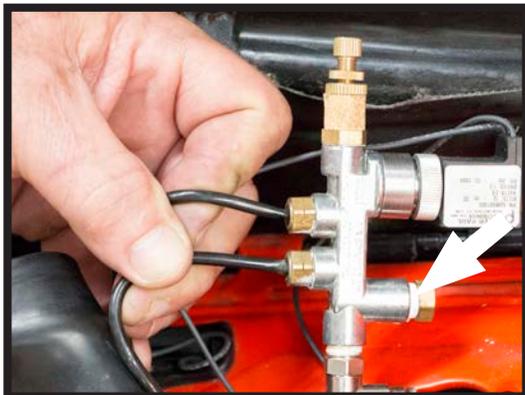


11. Insert the 1/4" air hose into the push-to-connect fitting on air pump. Then plug the included red wire extension into the red pump wire. Using the supplied zip ties and split loom, route/attach the air hose and pump wires up along the frame toward the right side battery cover. Be sure that the wheel will not rub the hose or wires when the motorcycle is in motion.



12. Find a suitable location for the distribution manifold. Locate the larger 1/4" tubing, connect the manifold to the compressor via the 1/4" push to connect fittings.

13. Next, attach the 4mm air line fittings to the 4mm tubing provided in the kit and insert into the two ports on the manifold as depicted. **NOTE:** Inserting the hose too far through the fitting may result in blockage of air flow.



# Installation Manual

KIT # 9048-BL/BS-B  
FOR 2009-PRESENT  
HARLEY-DAVIDSON®  
TOURING SERIES

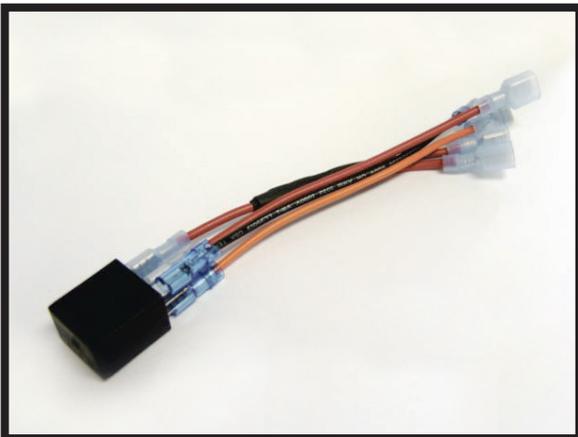


14. Route the airlines, from the previously installed manifold, to the rear air shocks. Install two more fittings on the hose and insert into the rear air shocks.



**NOTE:** Air line fittings seal with O-rings, do not overtighten!

16. Included in the kit is a system relay, refer to the schematic for a wiring diagram.



**NOTE:** At this time reinstall the battery.

15. Locate a suitable mounting location for your toggle switch. Mount in a location that will provide ease of access. Such as behind the rear cylinder on the left side cover.



**NOTE:** If installing the upgraded handlebar mounted control switch, follow the wiring instructions included with upgraded switch.

17. A preferred location for the universal fused wiring harness is under the seat, near the battery. Connect the red wire, (with the ring terminal), to battery positive. Reconnect the battery cables, torque the terminals.



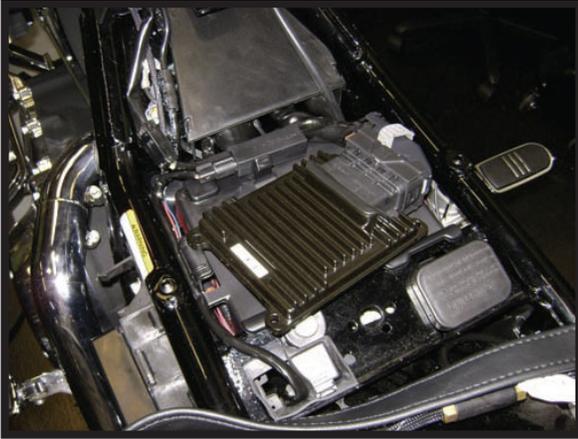
**NOTE:** A system schematic is included for reference.

# Installation Manual

KIT # 9048-BL/BS-B  
FOR 2009-PRESENT  
HARLEY-DAVIDSON®  
TOURING SERIES



18. Replace the plastic battery cover and electronic control module.



19. Replace the side panels.



20. Replace the seat and saddlebags.



21. Installation complete.



*Never make adjustments to the air suspension system while the motorcycle is in motion. Adjusting the air suspension while vehicle is in motion can affect the stability and handling, which could result in death or serious injury.*

The terms Harley-Davidson®, Harley®, H-D®, Buell®, Softail®, Dyna®, V-Rod® 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 o-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 manufacturers warranty. These directions are accurate at time of publication. Arnott Inc. reserves the right to revise specifications without notice.

