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-2994 - CUSTOM BAGGER SUSPENSION SYSTEM, 2009-PRESENT, SMOOTH RIDE

### 20-12844 - INFLATION KIT, 2009-PRESENT, CUSTOM BAGGER, SMOOTH RIDE

<table>
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<tr>
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<tr>
<td>1</td>
<td>21-9753</td>
<td>FLT PUMP ASSEMBLY</td>
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<tr>
<td>1</td>
<td>21-9761</td>
<td>90 DEGREE PUSH CONNECT MANIFOLD ASSY</td>
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<tr>
<td>1</td>
<td>21-3110</td>
<td>MICRO RELAY ASSEMBLY W/ HARNESS</td>
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<tr>
<td>1</td>
<td>21-7267</td>
<td>1/4&quot; NYLON TUBING ACCESSORY KIT</td>
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<td>1</td>
<td>21-7268</td>
<td>4MM AIRLINE X 6FT. ACCESSORY KIT</td>
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<td>1</td>
<td>21-7269</td>
<td>4MM VOSS AIR FITTING ACCESSORY KIT</td>
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<td>21-7271</td>
<td>HARNESS CABLE TIES ACCESSORY KIT</td>
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<td>SPLIT LOOM- 1 FT LENGTHS ACCESSORY KIT</td>
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<td>TOGGLE SWITCH ACCESSORY KIT</td>
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<td>UNIVERSAL FUSE HOLDER ASSEMBLY KIT</td>
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<td>COMPRESSOR WIRE EXTENSION ACCESSORY KIT</td>
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<td>1</td>
<td>11-MC-FLT-CUST</td>
<td>INSTALL MANUAL</td>
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<td>1</td>
<td>20-9983</td>
<td>FLT MOUNTING KIT</td>
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<td>1</td>
<td>20-12358</td>
<td>FLT BAG SPACER KIT</td>
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<td>BLACK BOLT COVERS ACCESSORY KIT</td>
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<td>1</td>
<td>21-8034</td>
<td>MOTORCYCLE HARDWARE INFLATION ACCY KIT</td>
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### 21-10910-B - SHOCK KIT

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<td>21-10907</td>
<td>SHOCK ASSY, BLACK, SMOOTH RIDE, 14&quot;</td>
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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 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.

NOTE: This kit (MC-2994) is intended for 2009-2018 Harley-Davidson touring motorcycles that have aftermarket stretched saddle bags (see below). These bags can easily scrape the ground at stock ride height during turns. It should also be noted that these shocks will allow the rear axle to come into contact with any exhaust that is routed in the OE configuration below the saddle bags. For maximum ride height benefit, it is recommended that they be coupled with an aftermarket side dump exhaust (see below).
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 3, 4, 5)

2. REMOVE BOTH OE SHOCKS. (FIGURE 6, 7)

![FIGURE 3](image1)
![FIGURE 4](image2)
![FIGURE 5](image3)
![FIGURE 6](image4)
![FIGURE 7](image5)
3. IF THE MOTORCYCLE IS A MODEL YEAR 2009-2013 GO TO STEP #6. FOR A MODEL YEAR 2014-PRESENT REMOVE THE TWO BOLTS AT THE REAR OF THE RIGHT SADDLE BAG SUPPORT. YOU WILL NEED TO REUSE THE LARGER BOLT AND NUT ON THE FAR RIGHT OF THE MOTORCYCLE. LOCATE THE INCLUDED 5/16 BOLT & LOCK NUT. (FIGURES 8, 9, 10)

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
4. MOUNT THE COMPRESSOR TO THE FRAME WITH THE 5/16 BOLT, LOCK NUT, THE LARGER OE BOLT, AND OE NUT. TIGHTEN BOTH BOLTS. (FIGURE 11, 12, 13, 14)
6. IF THE MOTORCYCLE IS A MODEL YEAR 2014-PRESENT GO TO STEP #8. FOR A MODEL YEAR 2009-2013 YOU WILL NEED TO INSTALL THEN TIGHTEN THE SUPPLIED HEX BOLT AND NON-LOCK NUT ONTO THE AIR COMPRESSOR BRACKET AS SHOWN BELOW. (FIGURE 19)

![FIGURE 19](image19.jpg)

7. 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 LOCK NUT ON THE BACK SIDE. THE PREVIOUSLY INSTALLED HEX NUT ACTS AS A SPACER TO PROPERLY ALIGN THE COMPRESSOR ASSEMBLY. (FIGURE 20, 21)

![FIGURE 20](image20.jpg)  ![FIGURE 21](image21.jpg)
8. 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 22, 23, 24, 25)
10. 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 AND 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. (FIGURE 29, 30, 31)
11. 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 #9 ATTACH THE 4MM AIR LINES. (FIGURES 32, 33)

12. 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 34)

13. 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.
15. THE QUARTER TURN FASTENERS ARE NOT NEEDED IF THE BAGS ARE HELD IN PLACE WITH SCREW STYLE MOUNTS FROM THE FACTORY. SIMPLY SLIDE THE SPACER OVER THE SCREW AND USE THE O-RING TO KEEP THE SPACER IN PLACE. (FIGURE 39, 40, 41, 42)

FIGURE 43

FIGURE 44

FIGURE 45

FIGURE 46
KIT # MC-2994
FOR 2009-PRESENT
HARLEY-DAVIDSON®
CUSTOM BAGGER

UNIVERSAL FUSED WIRING HARNESS

1/4" TUBING

SHOCK

4MM TUBING

4MM AIR FITTINGS

SHOCK

12V

RED

RED 15-AMP

BLACK (#2)

RED (#3)

RED (#1)

RED (#5)

ORANGE (#4)

POWER EXTENTION WIRE

BLACK

BLACK

BLACK

BLACK

COMPRRESSOR

SOLENOID DISTRIBUTION VALVE BLOCK

SPEED REDUCING MUFFLER