



Motorcycle Air Suspension

Install Kit 9030-BS/BL

Harley-Davidson®

2008 Dyna® Models

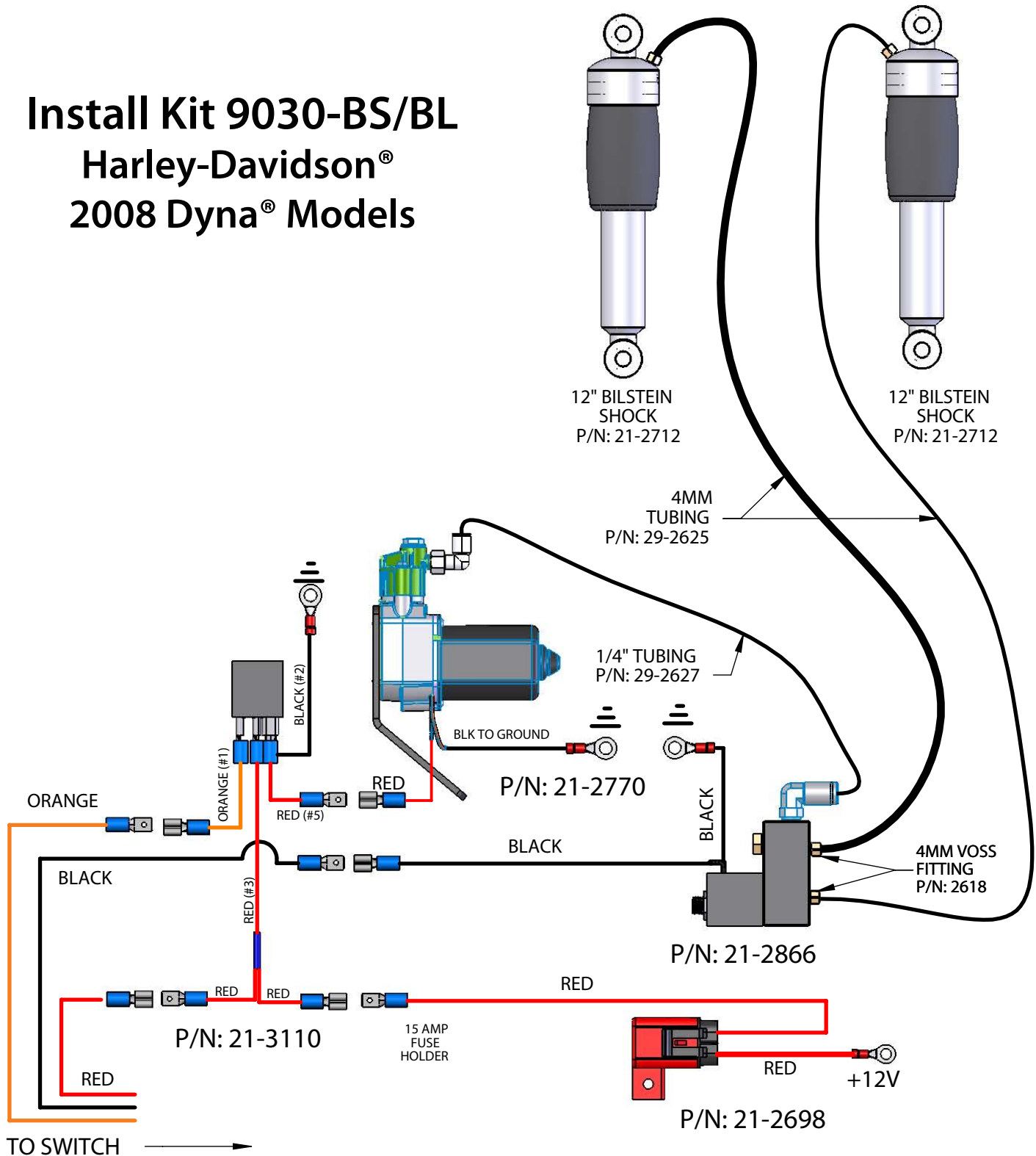


“Engineered to Ride, Built to Last”

PARTS LIST	PART NUMBER	PART NUMBER	QUANTITY
REAR AIR SUSPENSION SHOCKS	21-2712 (BS)	21-2864 (BL)	2
COMPRESSOR W/BRACKET ASSEMBLY	21-2770		1
DISTRIBUTION MANIFOLD	21-2866		1
SPEED REDUCING MUFFLER	29-2710		1
MANIFOLD BRACKET W/FASTNERS	14-2849		1
FUSED WIRING HARNESS	21-2698		1
RELAY ASSEMBLY	21-3110		1
TOGGLE SWITCH	20-2592		1
½" X 4.5" SOCKET HEAD BOLTS	29-2857		2
½" X 2.5" SOCKET HEAD BOLTS	29-2632		2
½" S.S. FLAT WASHERS	29-2631		4
CHROME UPPER SHOCK SPACERS	14-2775		2
BOLT COVERS	14-2680		4
1/4" NYLON TUBING	29-2627		6-FT
4mm VOSS® AIR FITTINGS	29-2618		5
4mm NYLON TUBING	29-2625		6-FT
HARNESS CABLE TIES	29-2617		8
SPLIT LOOM	29-3000		3-FT

BL = 13" BILSTEIN SHOCK ASSEMBLY (21-2864)
BS = 12" BILSTEIN SHOCK ASSEMBLY (SHOWN)

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DRAWING IS THE SOLE PROPERTY OF
ARNOTT, INC. ANY
REPRODUCTION IN PART OR AS A WHOLE
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DIMENSIONS ARE IN INCHES
TOLERANCES:
FRACTIONAL ±
ANGULAR: MACH ± BEND ±
TWO PLACE DECIMAL ±
THREE PLACE DECIMAL ±

MATERIAL

FINISH

DO NOT SCALE DRAWING

	NAME	DATE
DRAWN	KMD	07/14/08
CHECKED		
ENG APPR.		
MFG APPR.		
Q.A.		
COMMENTS:		

9008/9030 - BL&BS
DYNA
1991 - 2008

SIZE	DWG. NO.	REV.
A	35-2907	0

SCALE: NONE WEIGHT: SHEET 1 OF 1



THANK YOU!

Thank you for purchasing the Arnott Cycle Air 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.

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 this system on your bike. Reviewing the components and the parts list below will familiarize you with the system.

It is equally important to be aware of and take all necessary safety measures while installing your new Air Ride System. This includes proper lifting and immobilizing of the bike, and isolation of any stored energy to prevent personal injury or property damage.



SAFETY WARNING:

Do not inflate the air spring assembly unless it is supported on both ends by the vehicle frame and suspension system, or by another adequate means. Doing so may result in serious injury and damage to the air spring assembly and surrounding environment.

The maximum recommended inflation pressure of the air spring is 100 psi. Over-inflation of the air spring, as well as improper use or installation of the assembly, may result in serious injury and damage to the air spring assembly and the surrounding environment.

Take precautions not to exceed the Gross Vehicle Weight Rating (GVWR, or the maximum load) recommended by the manufacturer. The air springs are rated for a maximum pressure of 100 psi. This pressure may, however, allow too great a load to be carried on most vehicles. For best results, load the vehicle and have it weighed, then compare the vehicle weight with the maximum allowed. Consult your recommended load. It is important that all vehicle's Owner Manual recommendations are followed for your own safety and to prevent damage to the vehicle. Air Springs DO NOT increase the GVWR set by the manufacturer.



WARNING

NEVER MAKE ADJUSTMENTS TO THE AIR RIDE SYSTEM WHILE THE VEHICLE 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.



(A.) PREPARING THE BIKE:

On a solid level surface, position the bike on a motorcycle lift and use all the recommended safety techniques. Lift the bike so the rear wheel is just slightly off the ground. Be sure to refer to the Owner's Manual for the bike and the motorcycle lift for all correct lifting instructions. It is also recommended that you protect any chrome or painted surfaces that may be damaged during lifting or the installation procedure.

REMOVE THE SEAT BEFORE STARTING THE INSTALLATION

(B.) REMOVING THE FACTORY SHOCKS:



1. Loosen and remove the upper nut and lower shock bolt. Nut is used on the lower left side. Keep nut for installation.



2. Carefully remove factory shock absorbers from the rear suspension.



3. Loosen and remove the 1/2" nut located on the back side of the upper mounting stud.



4. Remove nut, washer, and stud from the bike. Keep hardened washer and nut for installation of new shocks.

(C.) INSTALLING THE REAR AIR SHOCKS:



1. Locate and remove the two lower 1/2" X 2.5" socket head bolts from the bolt pack. Apply two or three drops of blue (243) thread lock to the new shock bolts. Tighten both lower shock bolts to 30-40 ft-lbs (40.7-54.2 Nm). NOTE: **Factory nuts will have to be reused.**



2. To install the upper 4.5" shock bolts, install the washer on the bolt first, then slide the bolt through the top shock eyelet. Next, place the upper shock spacer bushing over the bolt. The larger diameter end of the bushing goes against the shock eyelet.



3. Install the upper shock bolt, it may be necessary to adjust the height of the bike to line up the upper shock bolt mounting hole. Re-using the factory nuts, torque the upper shock bolts to 30-40 ft-lbs. (40.7-54.2 Nm)



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

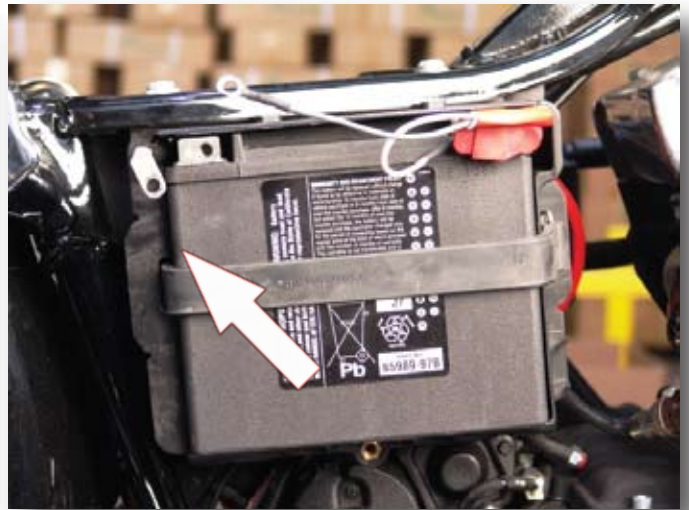
(D.) INSTALLING THE INFLATION SYSTEM:

The inflation system consists of a compressor with a remote solenoid vent valve. The basic system comes with a toggle switch that can be installed on your horn. The final location of the switch is your choice.

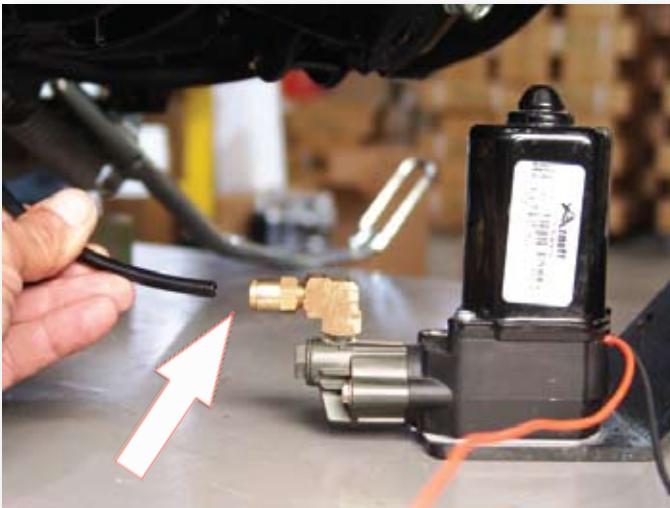


1. Remove the battery cover on the right side of the bike.

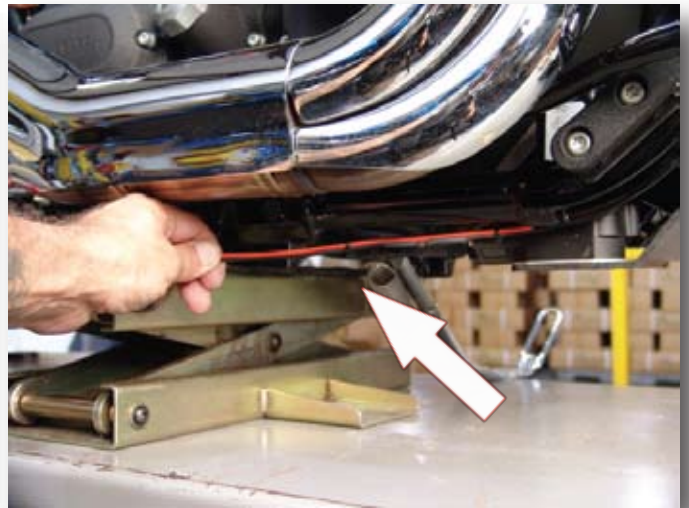
NOTE: Battery covers operate several different ways between 1999 - 2007. Consult the service manual for your particular model year for removal and replacement.



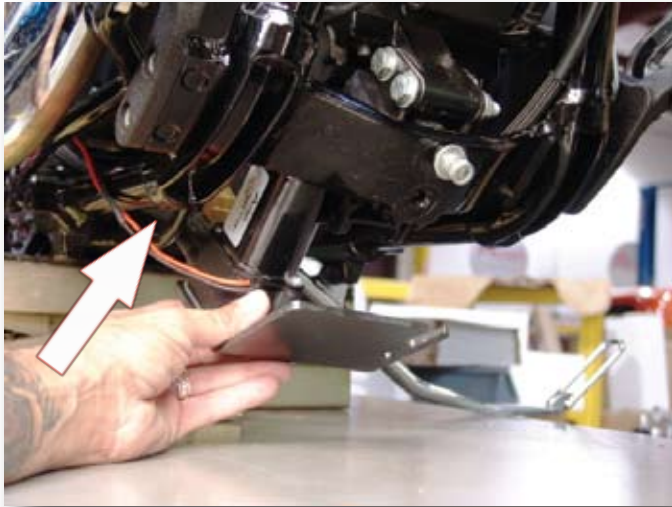
2. Use a 10mm wrench to disconnect the battery. **ALWAYS DISCONNECT THE NEGATIVE (-) CABLE FIRST.**



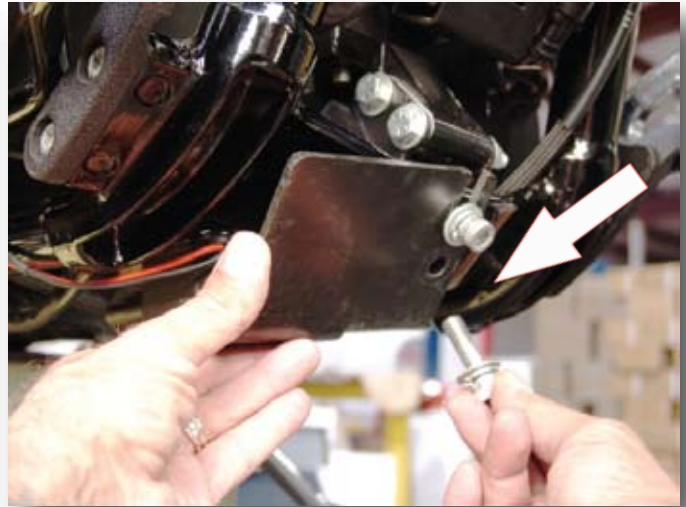
3. Preassemble the 1/4" air line to the compressor by pushing one end of the tubing into the fitting leading from the air compressor. Route the air line along the lower right side of the frame to the rear of the transmission and up to the inboard side of the battery box.



4. Route the orange power feed wire for the compressor along the same path that was used for the air line. Find a suitable ground for the black wire.



5. Slip the compressor up into the area just to the right of the motor, inside the frame rails.



6. Install the compressor mounting plate by removing the lower motor mount bolt and loosening the upper one. Use the slot in the plate and slide mount underneath. Re-install the lower bolt through the hole provided and torque both bolts to 21-27 ft-lbs (28-36 Nm).



7. Once location of valve block has been determined, trim $\frac{1}{4}$ " line to appropriate length. Install solenoid valve block in the area under the seat and inboard of the battery. Connect the $\frac{1}{4}$ " air line to the **push to connect** fitting. The valve block will distribute air to both shocks.



8. Use the smaller air line and 4mm VOSS® fittings provided in the kit to connect the shock absorbers to the solenoid valve block. Assembly instructions for the fittings are provided in the kit. VOSS® fittings use a o-ring to seal, use a 10mm wrench to snug the fittings, do not overtighten. **NOTE: Fittings seal with an o-ring, DO NOT OVERTIGHTEN!**



9. The location of the switch is the installers option, an example of a good location would be in the left side cover as shown .

NOTE: If the optional handlebar mounted switch is used, refer to the wiring instructions provided in kit for proper installation



10. Refer to the included schematic for switch and relay wiring diagram. The preferred location for the fuse assembly is under the seat, near the battery. Connect the red wire with the ring terminal to 12V battery positive.

Split loom is provided to cover the air hose as well as protect and hide any exposed wiring.



11. Once the system is operational, check all hose connections for leaks with a soap and water solution. Reinstall the battery cover.



12. Replace the seat being sure the front locating tab is securely in place.

NOTE: A system schematic is included for reference.



13. With the system deflated, roll the bike back and forth checking for any rubbing of the tire on the fender. Be sure to check the center and sides of the tire for contact. Also check the left side shock for interference with the belt guard, space as needed with washers.

Thank you for purchasing an Arnott Air Ride Suspension Product!

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 spring 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.



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DISCLAIMER

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