



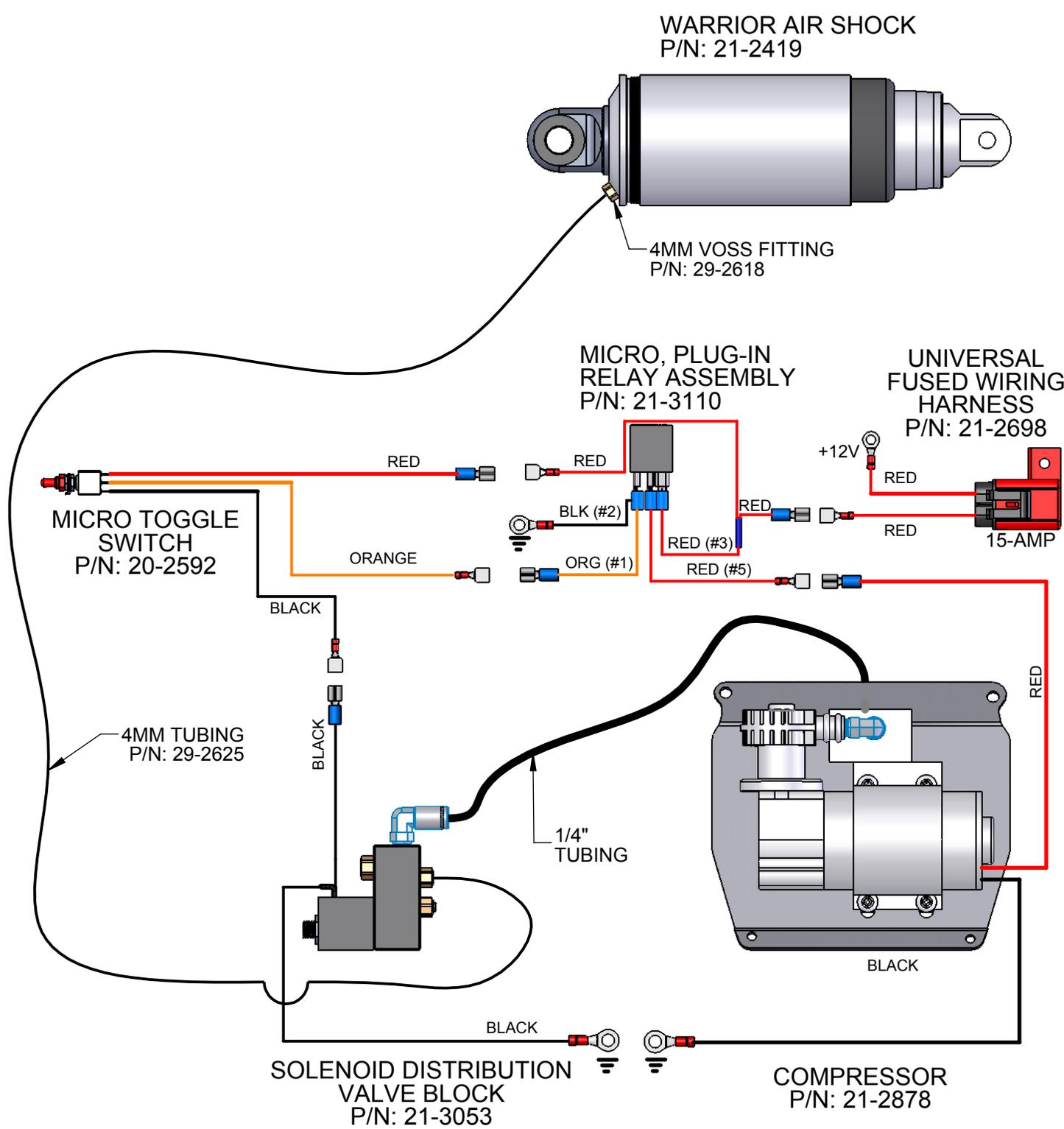
Motorcycle Air Suspension

Kit #9011  
Yamaha® Warrior®  
2002 - 2008 Models



*“Engineered to Ride, Built to Last”*

PARTS LIST	PART NUMBER	QUANTITY
REAR AIR SUSPENSION SHOCK	21-2419	1
COMPRESSOR ASSEMBLY	21-2878	1
FUSED WIRING HARNESS	21-2698	1
DISTRIBUTION VALVE BLOCK	21-3053	1
SPEED REDUCING MUFFLER	29-2710	1
MANIFOLD BRACKET W/ FASTENERS	14-2849	1
MACHINED BOLT w/WASHERS & LOCKNUT	21-3143	1
TOGGLE SWITCH	20-2592	1
RELAY ASSEMBLY	21-3110	1
THRUST WASHERS	14-2405	2
4mm VOSS® AIR FITTING	29-2618	3
¼" NYLON TUBING, GRAY	29-2627	3-FT
4mm NYLON TUBING	29-2625	6-FT
HARNESS CABLE TIES	29-2617	8
SPLIT LOOM	29-3000	3-FT



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		DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL ± ANGULAR: MACH ± BEND ± TWO PLACE DECIMAL ± THREE PLACE DECIMAL ±	
		MATERIAL	
		FINISH	
NEXT ASSY	USED ON		
APPLICATION		DO NOT SCALE DRAWING	

NAME	DATE
DRAWN KMD	08/15/08
CHECKED	
ENG APPR.	
MFG APPR.	
Q.A.	
COMMENTS:	

# 9011 WARRIOR SCHEMATIC

SIZE <b>A</b>	DWG. NO. 35-2879	REV. 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 on the front page of this manual will familiarize you with the system. Additionally, there is a system schematic on the inside cover to aid you in the installation process.

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



### 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.

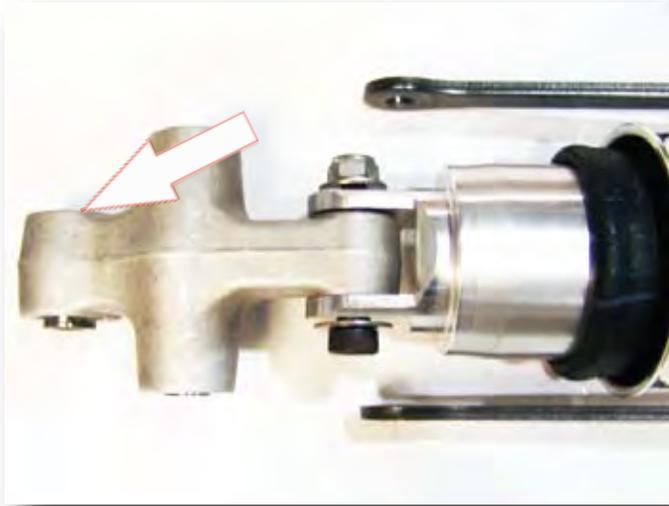
Take precautions not to exceed the Gross Vehicle Weight Rating (GVWR, or the maximum load) recommended by the manufacturer. The air springs are rated for a maximum pressure of 100 psi. This pressure may, however, allow too great a load to be carried on most vehicles. For best results, load the vehicle 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.**





5. Remove the bolt that passes through the bottom tab of the relay arm and swingarm.



6. After the relay arm has been removed, slide the shock absorber to the rear, drop the front of the shock down and remove from the chassis.

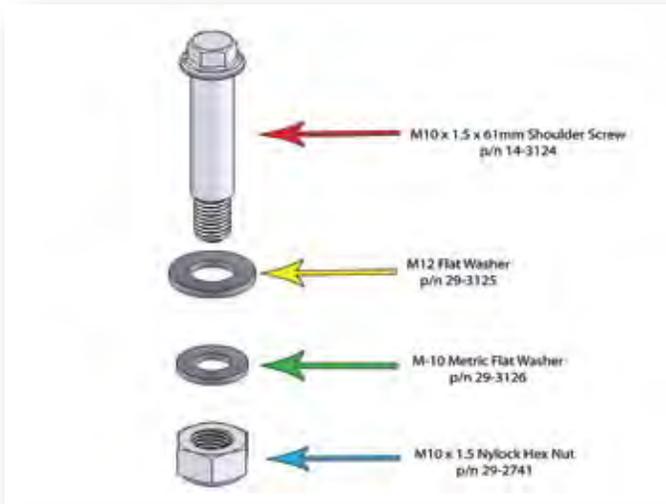


7. Before final assembly, apply 2-3 drops of Loctite® 243 (Blue), to the threads of all shock mounting hardware.

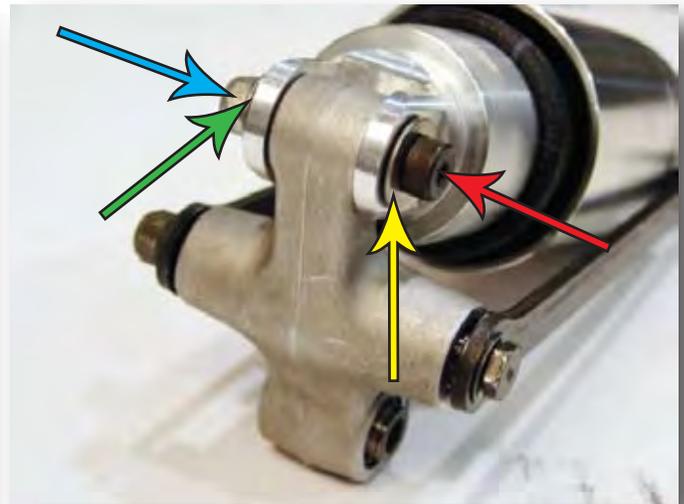


8. Using the black air line from the kit, assemble a VOSS® fitting to the line and connect it to the shock absorber before bolting the shock into place. Otherwise, the shock will need to be removed later in order to connect the air line. Route entire line, don't trim length yet.

NOTE: Assembly instructions for VOSS® fittings are included in the kit. Do not overtighten!



8. Example of new, shock bolt, (p/n 14-3124), M12 flat washer, (p/n 29-3125), M10 flat washer, (p/n 29-3126) and nylock hex nut, (p/n 29-2741) provided in kit. This bolt replaces the OEM bottom shock bolt.



9. To install the new air shock, bolt the shock absorber to the upper tab of the relay arm using the new bolt from the kit. Torque to 43 ft lbs, (59 Nm). Slide the shock and relay arm into place under the bike. Bolt the relay arm to the bike's swingarm, and torque to 43 ft-lbs, (59 Nm).



10. Next, bolt the rear of the connecting arms to the center of the relay arm and torque to 29 ft-lbs, (40 Nm).

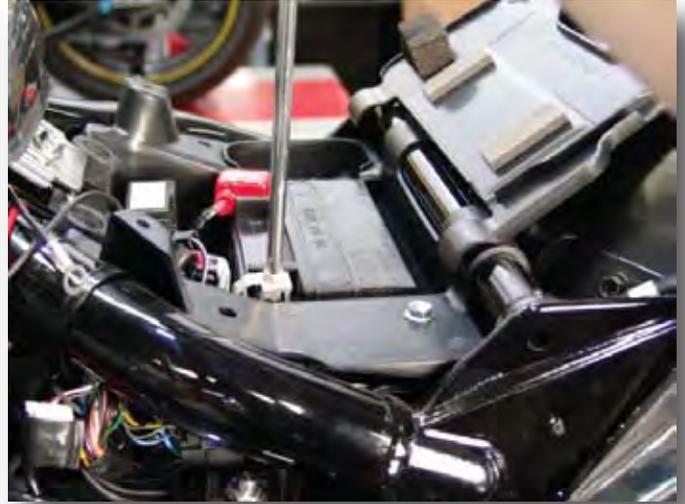


12. Thrust washers are provided in the kit, they are indicated in the picture above. They should be installed on both sides of the front shock eyelet. Next, install the long bushing, shown next to the long bolt on the right above, into the connecting arms, both thrust washers and the shock eyelet. Insert bolt and torque to 43 ft-lbs, (59 Nm). Reinstall the horn, torque horn mount to 5.1 ft-lbs (7 Nm).

## (D.) INSTALLING THE INFLATION SYSTEM:

The inflation system consists of a on board compressor with a remote solenoid vent valve. The compressor assembly is designed to fit inside the air cleaner cover.

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



1. In order to install this kit in the manner shown here, a hi-flow air cleaner kit will need to be installed. The compressor mounting location is inside the air cleaner cover. A bracket to facilitate this mounting location is bolted to the compressor.

2. Disconnect the battery. Negative (-) cable first.



3. Remove the stock air cleaner cover from the right side of the bike by removing the allen head screws that bolt the assembly to each cylinder head.

4. Once removed, the air cleaner assembly can be opened by removing the three screws from the rear of the assembly. The air cleaner element can then be removed.

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



5. The compressor comes mounted on the bracket that can be used for the air cleaner cover mounting.



6. Route the compressor power wire ,the ground wire and the gray 1/4" air line out of the back of the backing plate for later connection.



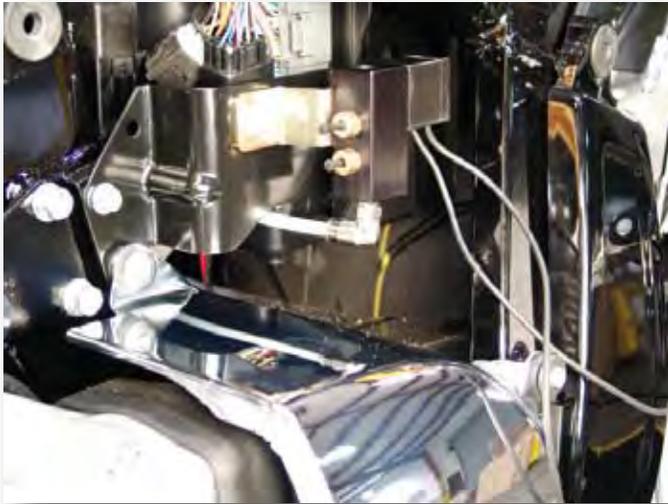
7. The compressor/bracket bolts into place where the a/c element was and uses the same retention hardware. Once compressor is secure, bolt the cover back into place using the three screws that thread in from the rear of the assembly. Reattach to engine with the factory hardware and torque to 5.1 ft-lbs, (7 Nm).



8. Route the gray 1/4" line from the compressor to the area where you plan to mount the distribution valve block. Route the air line in a manner that it is not likely to result in a kinked line or exposure to excess heat. Insert the air line into the 90° "push to connect" fitting.

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

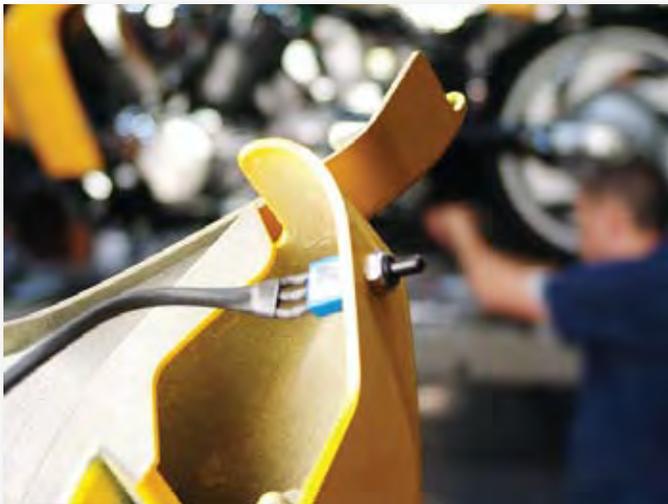
## (D.) INSTALLING THE INFLATION SYSTEM:



9. Find a suitable location for the distribution valve block. A location as close to the compressor as possible is best. Trim away any excess air line, make sure to cut the ends straight across as to ensure a good seal on the “push to connect” fittings (used on the valve block and compressor) and connect air line to valve block.

10. The 6mm air line is already connected to the shock, route the line to the distribution valve block. Route the line in a manner as to avoid any kinks in the air line. Assemble another 6mm VOSS® fitting to the line and connect to the distribution valve block.

*NOTE: VOSS fittings seal with o-rings, do not overtighten!*



11. Find a suitable location to mount the toggle switch. There are a number of locations the can be utilized to mount the toggle switch. Ultimately the location of the switch is up to the installer.



12. The system is equipped with a micro relay, refer to included schematic for a wiring diagram. Locate the fuse assembly close to the battery. Connect the red wire, (with the ring terminal), to 12 volt battery positive. Reconnect the battery cables, tighten to 60-96 in-lbs. (6.8-10.9 Nm).

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



13. Make sure that there is adequate tire to rear fender clearance. Check both the center of the tire and the sides with the system in the lowered position, with zero air pressure.

14. Make sure that the final drive belt is adjusted properly. Reinstall the seat, make sure its properly secured to the frame and experience what it's like to "Ride on Air!"

### **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.



**DO NOT ADJUST THE AIR RIDE SYSTEM WHILE THE BIKE IS IN MOTION, DOING SO CAN AFFECT STABILITY AND HANDLING, THIS COULD RESULT IN DEATH OR SERIOUS INJURY.**

#### DISCLAIMER

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The use and installation of any Arnott Air Suspension product or kit may adversely affect or void your 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 off-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.

