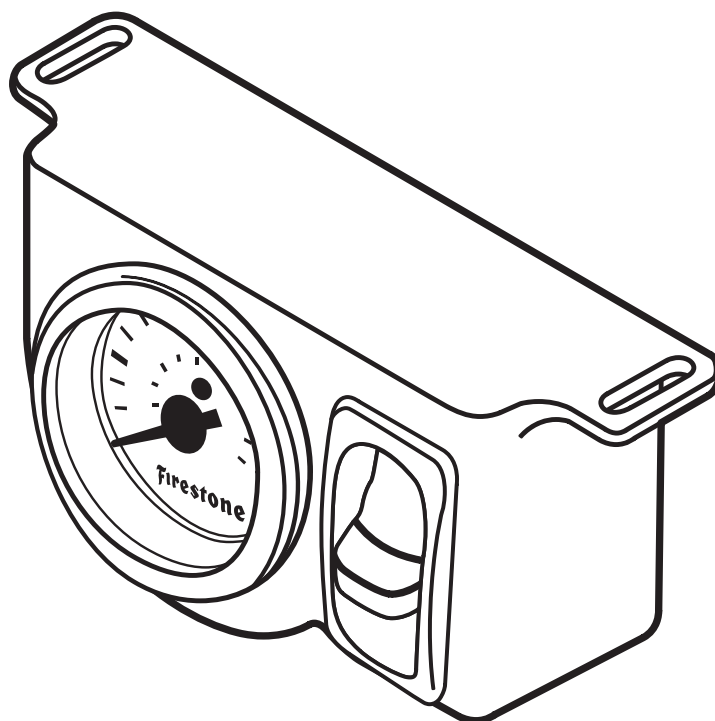




ride-rite.com

# INSTALLATION INSTRUCTIONS



**Firestone**

*World's Number 1  
Air Spring.*



FIRESTONE INDUSTRIAL PRODUCTS COMPANY

# ! IMPORTANT

*PLEASE DON'T HURT YOURSELF, YOUR KIT OR YOUR VEHICLE. TAKE A MINUTE TO READ THIS IMPORTANT INFORMATION.*

## **SAFE INSTALLATION**

Please take all safety precautions during installation. A hydraulic jack can fail, and if that happens, you can be seriously hurt, or worse, if you are relying on it to hold up the vehicle. If you use a hydraulic jack, secure jack stands in the appropriate locations and chock any tires still touching the ground.

Wear safety glasses or goggles. Your eyes may be lower than some parts and pieces, and you don't want to lose an eye.

Remove the possibility of any electrical issues by disconnecting the negative battery cable.

## **VEHICLE GVWR**

NEVER exceed the maximum load recommended by the vehicle manufacturer (GVWR). The GVWR can be found in your vehicle's owner's manual or on the data plate on the driver's side door.

## **INFLATING THE AIR SPRINGS**

When inflating Air Springs, add air pressure in small quantities, checking air pressure frequently. The Air Springs have much less air volume than a tire, so they inflate much more quickly.

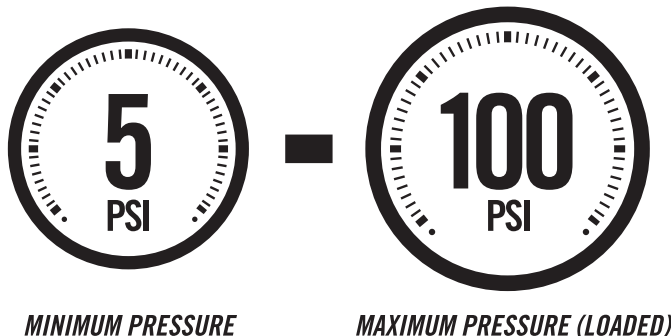
## **PRESSURE TO LOAD**

Be sure to review the load limits noted in the Air Spring Kit Installation Instructions (sold separately).

## **APPROPRIATE AIR PRESSURE**

For best ride, use only enough air pressure in the Air Springs to level the vehicle when viewed from the side (front to rear). This will vary, depending on the load, location of the load, condition of the existing suspension, and personal preference.

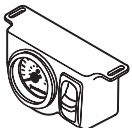
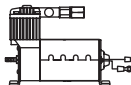
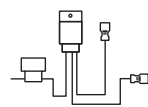

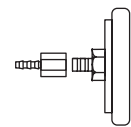
***ONCE INSTALLED SUCCESSFULLY, FOLLOW THESE PRESSURE REQUIREMENTS FOR THE AIR SPRINGS:***



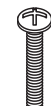

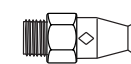






# PARTS AND TOOLS

Compare the parts below to your kit. Assure you have all pieces, and organize them for an easier installation.

## MAIN KIT CONTENTS

PART # 2572		x 1 SINGLE AIR CONTROL PANEL	PART # 9284		x 1 AIR COMPRESSOR	PART # 9307		x 1 RELAY HARNESS
PART # 9008		x 1 AIR LINE TUBE (30 FEET)	PART # 9350		x 1 AIR FILTER AND FITTING			

## A21-760-2158 HARDWARE PACK

PART # 3087		x 7 10-32 x 1" MACHINE SCREW	PART # 9078		x 1 SMALL RING TERMINAL	PART # 3055		x 1 1/8 NPT PUSH-TO-CONNECT STRAIGHT FITTING
PART # 3008		x 7 10-32 LOCK NUT	PART # 9083		x 2 WIRE CONNECTOR	PART # 9041		x 1 LARGE RING TERMINAL
PART # 3086		x 14 #10 FLAT WASHER	PART # 3025		x 1 PUSH-TO-CONNECT T-FITTING	PART # 9036		x 15 NYLON TIE

## TOOLS REQUIRED:

3/16" DRILL BIT  
 (2) 7/16" WRENCHES OR SOCKETS  
 9/16" WRENCH OR SOCKET  
 WIRE CRIMPER/STRIPPER

PHILLIPS SCREW DRIVER  
 POWER DRILL  
 ELECTRICAL TAPE

PLIERS  
 UTILITY KNIFE  
 CENTER PUNCH OR MARKING TOOL

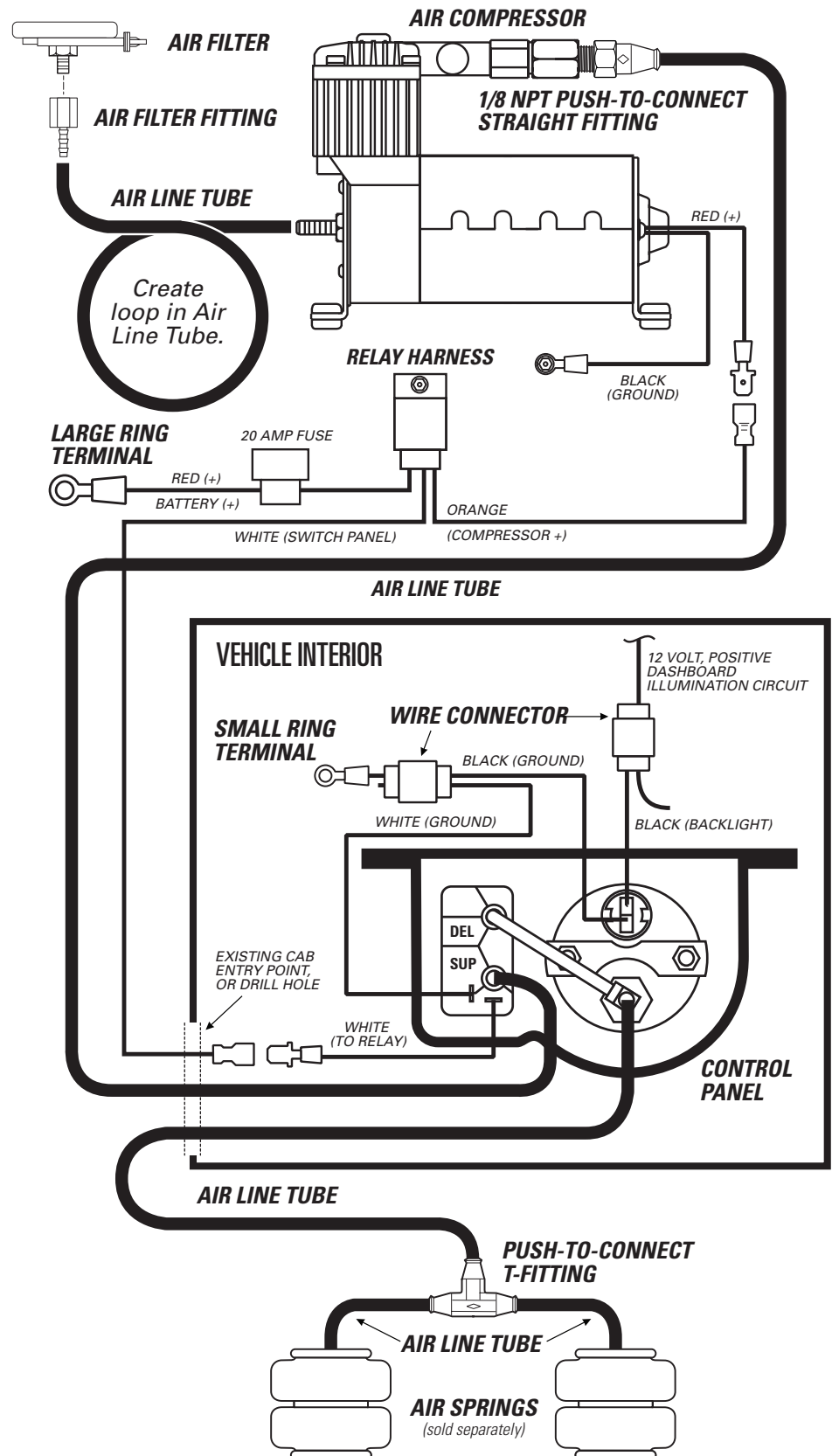
## OPTIONAL:

EXTRA 18 GAUGE MULTI-STRANDED WIRE  
 EXTRA 12 GAUGE MULTI-STRANDED WIRE

EXTRA CRIMP CONNECTORS  
 3/16" DRILL BIT (If drilling through firewall)

# CONTENTS AND OVERVIEW

PAGE 4	PLANNING THE INSTALL
PAGE 5	PREPARE AIR COMPRESSOR & CONTROL PANEL
PAGE 6	DRILL HOLES FOR AIR COMPRESSOR INSTALLATION
PAGE 7	INSTALL THE AIR COMPRESSOR
PAGE 8	AIR COMPRESSOR TO CONTROL PANEL AIR LINE TUBE
PAGE 9	AIR SPRINGS TO CONTROL PANEL AIR LINE TUBE
PAGE 10	INSTALL RELAY HARNESS
PAGE 11	FINISH CONTROL PANEL WIRING & INSTALLATION
PAGE 12	INSTALL THE AIR FILTER & CLEAN UP INSTALLATION
PAGE 13	TEST THE SYSTEM
PAGE 14	FIXING AN AIR LEAK

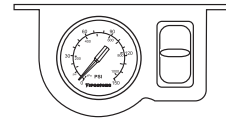


# PLANNING THE INSTALL

THESE PLANNING STEPS WILL HELP YOU SAVE TIME AND WILL MAKE THE INSTALLATION EASIER.

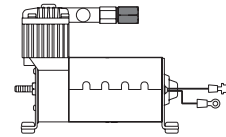
## **DETERMINE THE MOUNTING LOCATION FOR THE CONTROL PANEL**

- Mount inside the vehicle cab, in a place where you will not hit or kick it.
- Allow room for the Air Line Tube to run without sharp curves or bends.
- Do not obstruct your view or ability to safely operate the vehicle.



## **DETERMINE THE MOUNTING LOCATION FOR THE AIR COMPRESSOR**

- Provide ample air flow.
- Protect from airborne debris and moisture.
- If using the optional Frame Installation Kit (Part # 2497), consider the guidelines above, and follow Kit's instructions.



## **PLAN INSTALLATION ROUTES FOR WIRING AND AIR LINES INTO CAB**

- If possible, use existing factory grommet, such as where a wiring harness enters the cab.
- If not possible, drill a hole large enough for two Air Line Tubes and a ground wire. Make sure the wiring and Air Line Tubes are not exposed to sharp metal edges that can damage them.

## **SOAK AIR LINE TUBE ENDS IN HOT WATER BEFORE INSTALLING ONTO BARBED FITTINGS**

- The hot water makes the air line tube easier to work with and enables it to shrink onto the barbed fitting for a better seal.



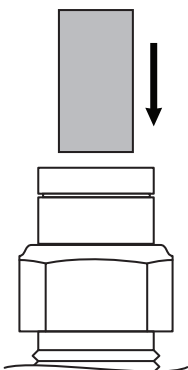
## **TAPE ALL ELECTRICAL CONNECTIONS**

Use electrical tape to appropriately secure and protect all electrical connections.

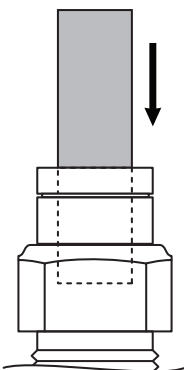
## **USING PUSH-TO-CONNECT FITTINGS FOR AIR LINES**

Your kit includes push-to-connect fittings to connect the Air Line Tubes to hardware. Use the instructions below when using the air line.

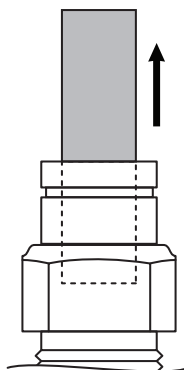
- 1** Insert end of Air Line Tube into Air Fitting.



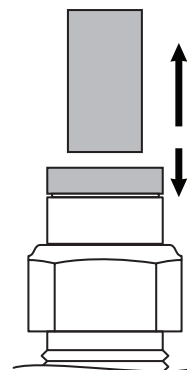
- 2** Push Air Line Tube into Air Fitting as far as possible.



- 3** Gently pull on the Air Line Tube to check for a secure fit.



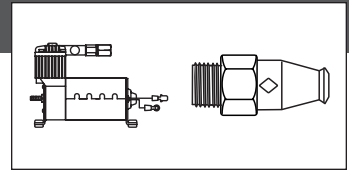
- 4** To remove, push down collar and gently pull Air Line Tube away.



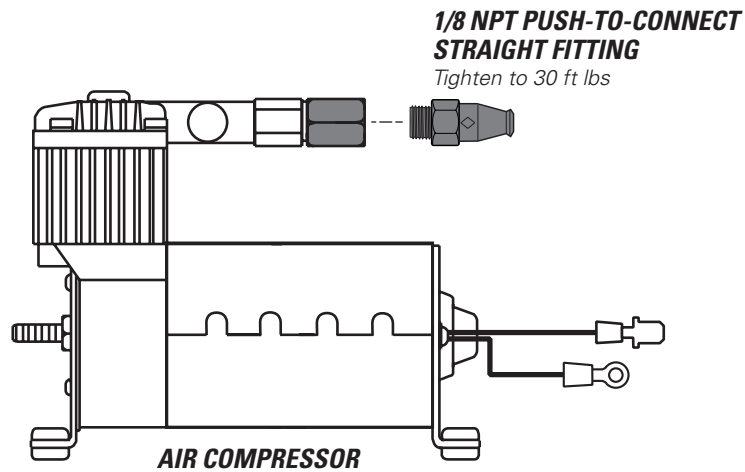
**Removal Tip:** Use a 1/4", 5/16" or 6mm open-ended wrench to push the collar down.

# 1

## PREPARE THE AIR COMPRESSOR



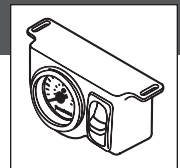
- 1 Install 1/8 NPT Push-to-Connect Straight Fitting to the head of the Air Compressor.



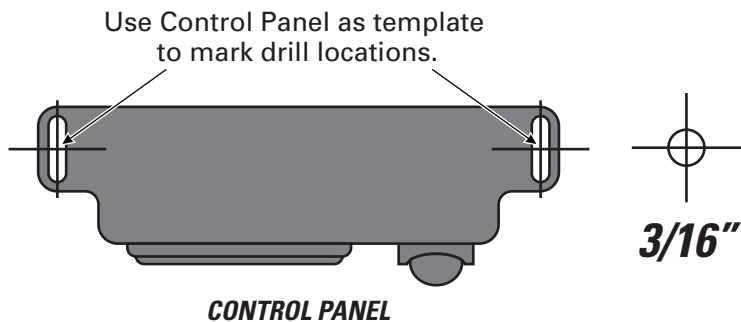
# 2

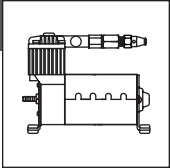
## DRILL HOLES FOR CONTROL PANEL INSTALLATION

Use the location you selected during the Planning the Installation step on Page 4.



- 1 Using the Control Panel slots as a template, mark two drill locations with a punch or marking tool.
- 2 Drill a 3/16" diameter hole on each center mark.
- 3 Do not mount the Control Panel until Step 8.





IF YOU ARE USING THE OPTIONAL FIRESTONE AIR COMPRESSOR MOUNTING KIT (PART # 2497), SKIP THIS STEP AND REFER TO THE MOUNTING KIT'S INSTRUCTIONS.

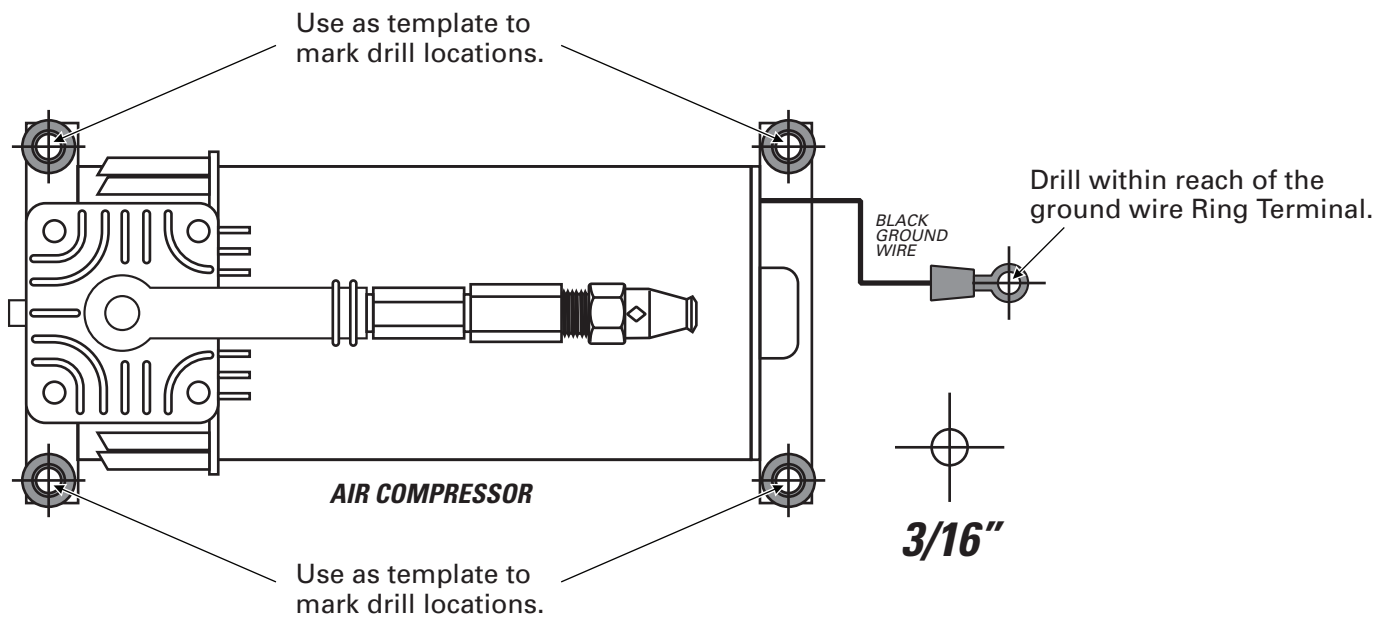


CHECK SURROUNDING AREA AND BACK SIDE OF MOUNTING LOCATION TO AVOID DRILLING INTO EXISTING LINES OR WIRING.

**1** Using the Air Compressor as a template, mark four drill locations with a punch or marking tool.

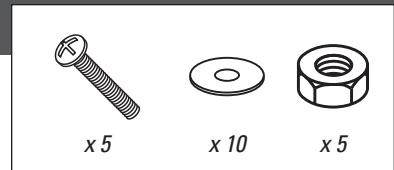
**2** Drill ground wire fastening location within reach of the ground wire Ring Terminal.

**3** Remove any burrs and debris from drill holes.



# 4

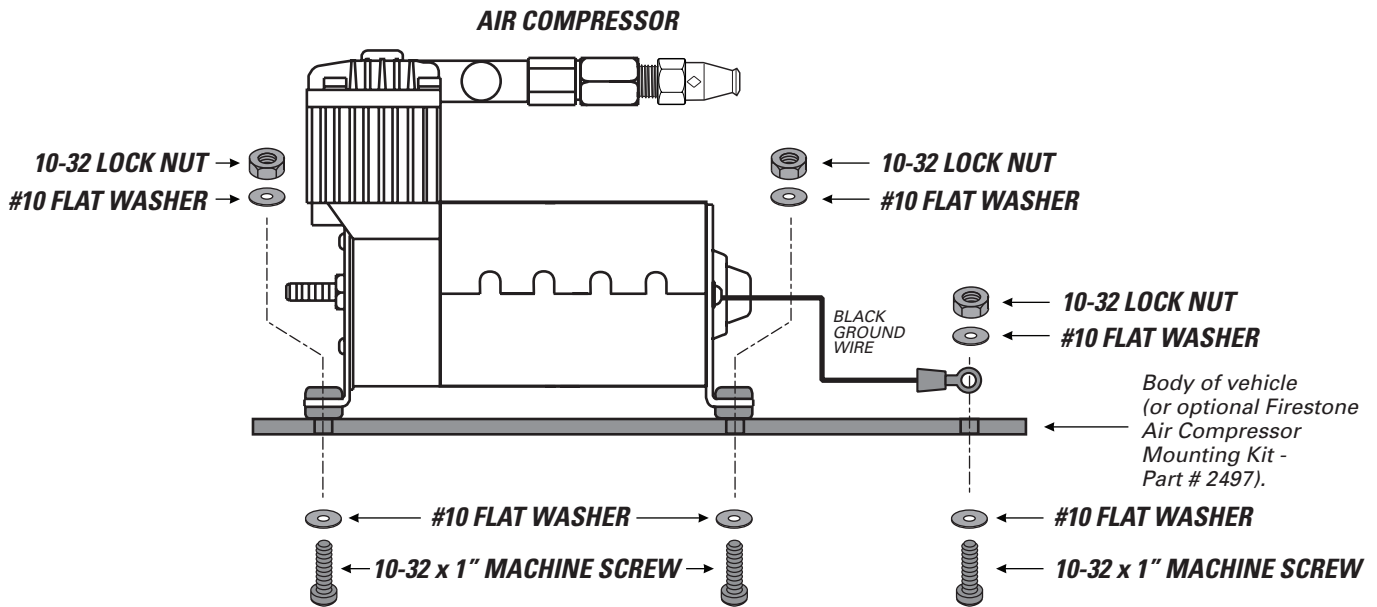
## INSTALL AIR COMPRESSOR



DO NOT OVER TIGHTEN MOUNTING BOLTS AND NUTS. TOO MUCH TORQUE CAN CRUSH THE BRASS INSERT AND RUBBER ISOLATORS.

**1** Mount the Air Compressor to the drill hole location using the supplied fasteners. DO NOT OVER TIGHTEN.

**2** Mount the black ground wire using the supplied fasteners. Assure that the Ring Terminal makes a solid contact with bare metal for a proper ground. (Optionally, you can run the negative to the negative battery terminal.)



TO CREATE A PROPER GROUND, ASSURE THE GROUND RING TERMINAL CONTACTS BARE METAL AND IS FASTENED SECURELY. AFTER INSTALLATION, YOU MAY OPTIONALLY COAT THE RING TERMINAL IN SILICONE TO PROTECT IT FROM CORRODING.





Use the route you selected during the Planning the Installation step on Page 4.

**1** Route the Air Line Tube from the Air Compressor to the Control Panel, leaving room to secure line safely. Use guidelines below to cut.



EXHAUST ALL AIR FROM THE SYSTEM PRIOR TO RELEASING AIR TUBES FROM AIR FITTINGS.



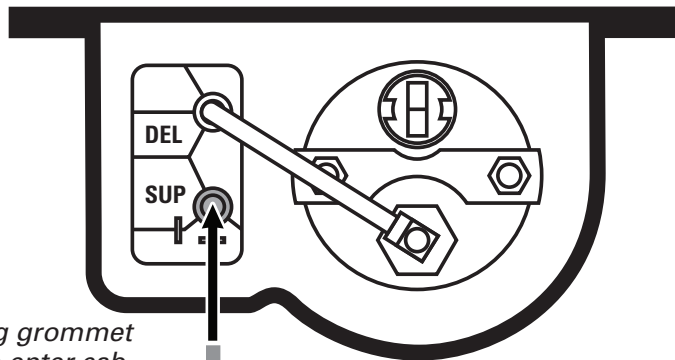
**2** Install the Air Line Tube end onto the barbed fitting on the back of the Control Panel switch as shown.



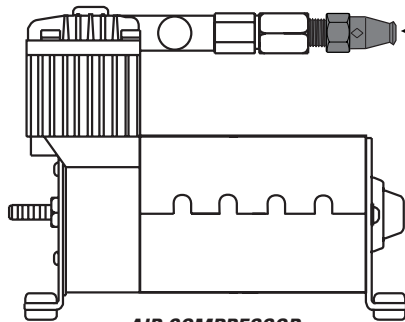
FOR PROPER INSTALLATION, SOAK AIR LINE TUBE ENDS IN HOT WATER BEFORE INSTALLING ONTO BARBED FITTINGS.

**3** Install the Air Line Tube end into the 1/8 NPT Push-to-Connect Straight Fitting on the top of the Air Compressor.

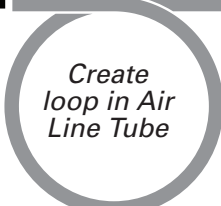
CONTROL PANEL



Pass through existing grommet or drilled hole to enter cab.



AIR COMPRESSOR



AIR LINE TUBE



THE AIR LOOP CREATES A TRAP FOR CONDENSATION TO GATHER. WITHOUT THIS TRAP, THE AIR COMPRESSOR COULD BE DAMAGED BY WATER INTAKE.

**DO**

Make sure the cut is as square as possible. Use a tube cutter or sharp utility knife.

**DON'T**

Fold or kink the Air Line Tube. Cut the Air Line Tube at an angle. Use pliers, scissors, snips, saws, or side cutters.

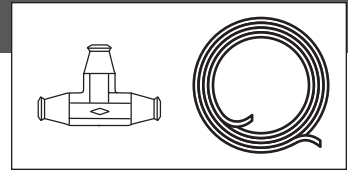
PROPER AND IMPROPER CUTS IN THE AIR LINE TUBE

<p>Square cut AIR LINE TUBE 90°</p>	<p>AIR LINE TUBE</p>	<p>AIR LINE TUBE</p>	<p>AIR LINE TUBE</p>
---------------------------------------------	----------------------	----------------------	----------------------

# 6

## INSTALL T-FITTING AND ROUTE AIR LINE TUBE TO CONTROL PANEL

Use the route you selected during the Planning the Installation step on Page 4.



EXHAUST ALL AIR FROM THE SYSTEM PRIOR TO RELEASING AIR TUBES FROM AIR FITTINGS.



FOR PROPER INSTALLATION, SOAK AIR LINE TUBE ENDS IN HOT WATER BEFORE INSTALLING ONTO BARBED FITTINGS.

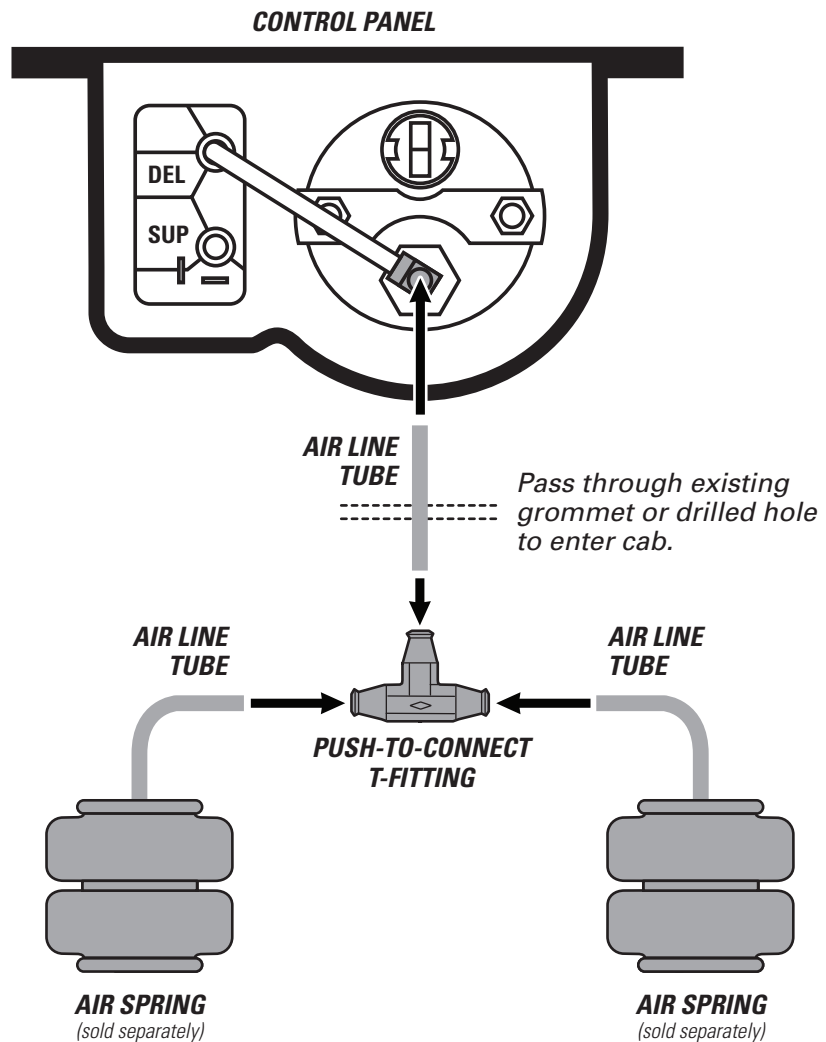
**1** Route the Air Line Tube from the Control Panel to the Air Springs.

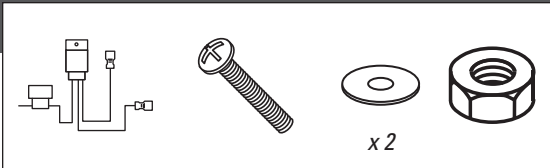
**2** Install the Air Line Tube end onto the barbed fitting on the back of the Control Panel pressure gauge as shown.

**3** Determine a safe location for the Push-to-Connect T-fitting, where Air Line Tubes from the Air Springs and the Control Panel can safely meet.

**4** Install the Air Line Tubes from the Air Springs into opposite ends on the Push-to-Connect T-fitting as shown.

**5** Install the Air Line Tube from the Control Panel to the single end on the Push-to-Connect T-fitting.

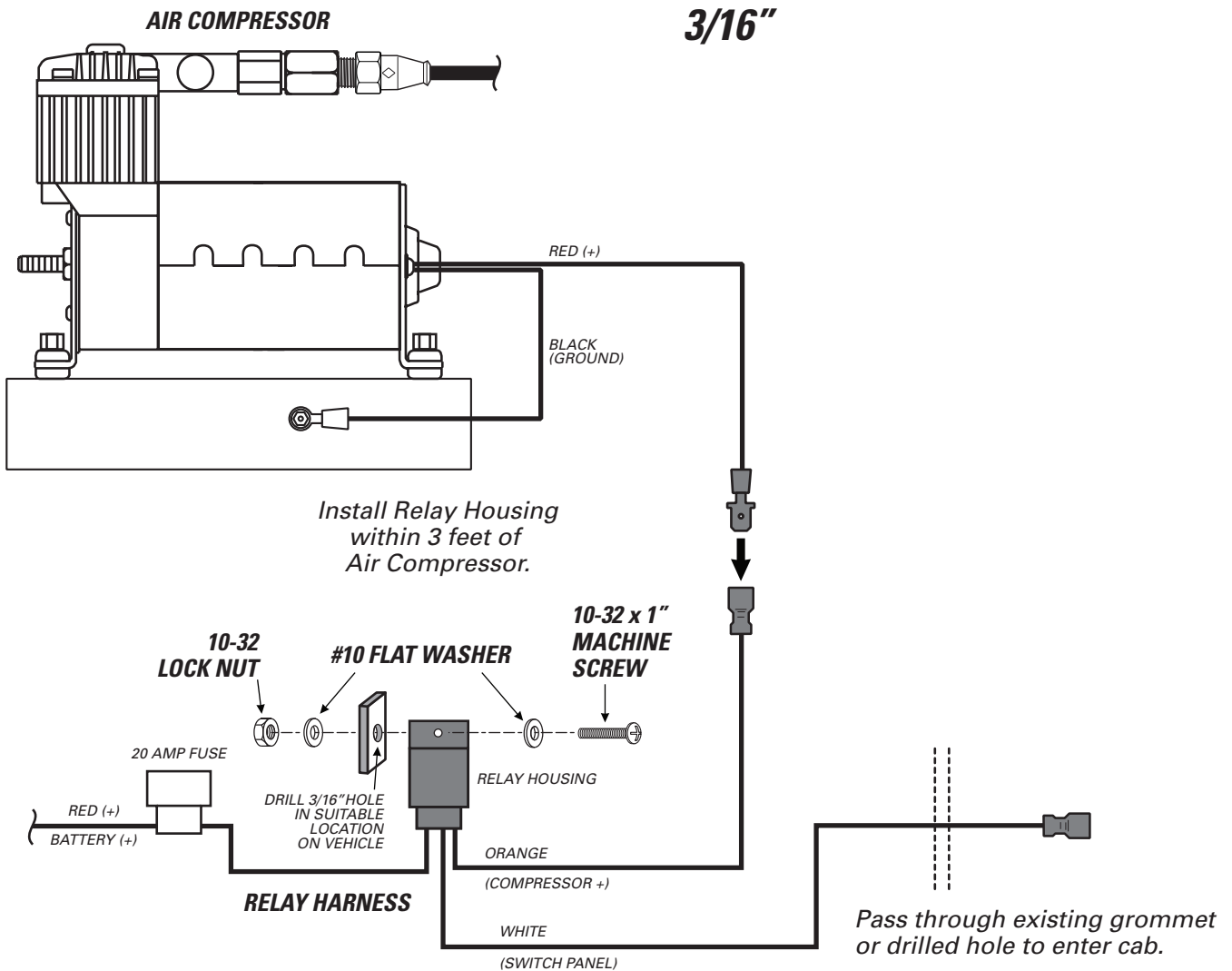




**1** Select a safe location within 3 feet of the Air Compressor.

**2** Mark and drill a 3/16" hole to mount the relay housing on the Relay Harness. Secure with fasteners shown.

**3** Route the white wire with the female spade connector labeled "switch panel" to the Control Panel.



# 8

## FINISH WIRING AND INSTALLATION



x 2



x 3



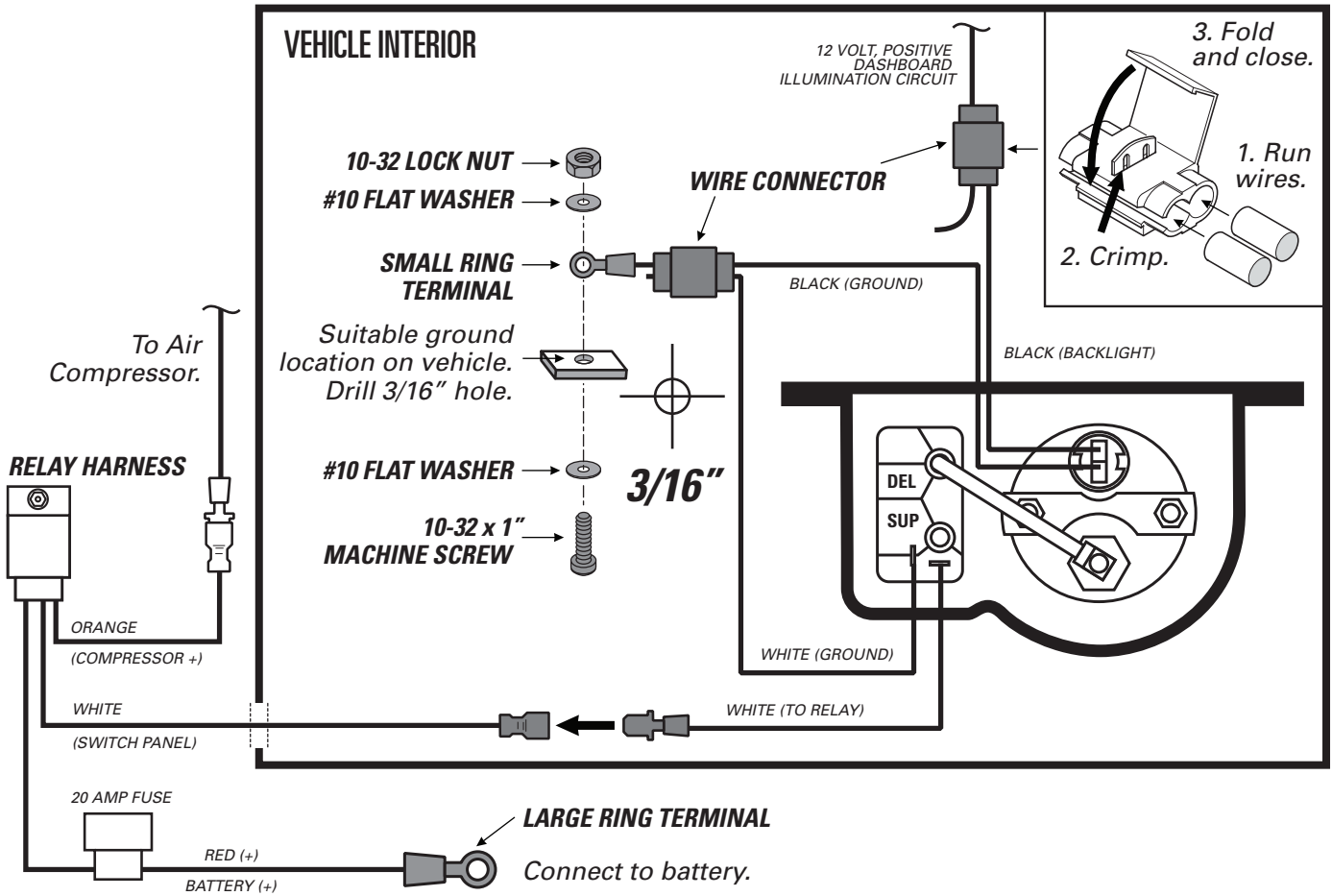
x 6



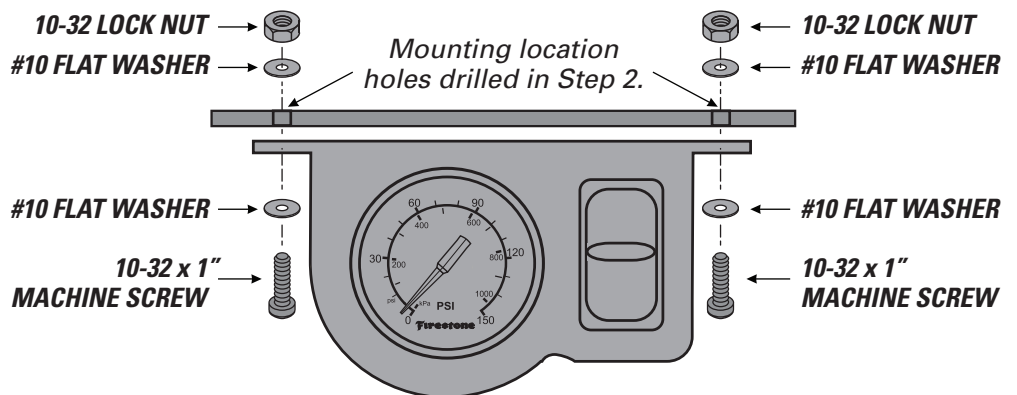
x 3

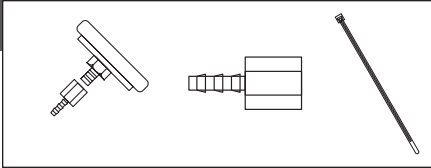
**1** Connect wires, install Ring Terminals and Wire Connectors as shown below.

**2** Fasten Control Panel ground wires to vehicle as shown.



**3** Install the Control Panel using the supplied fasteners.



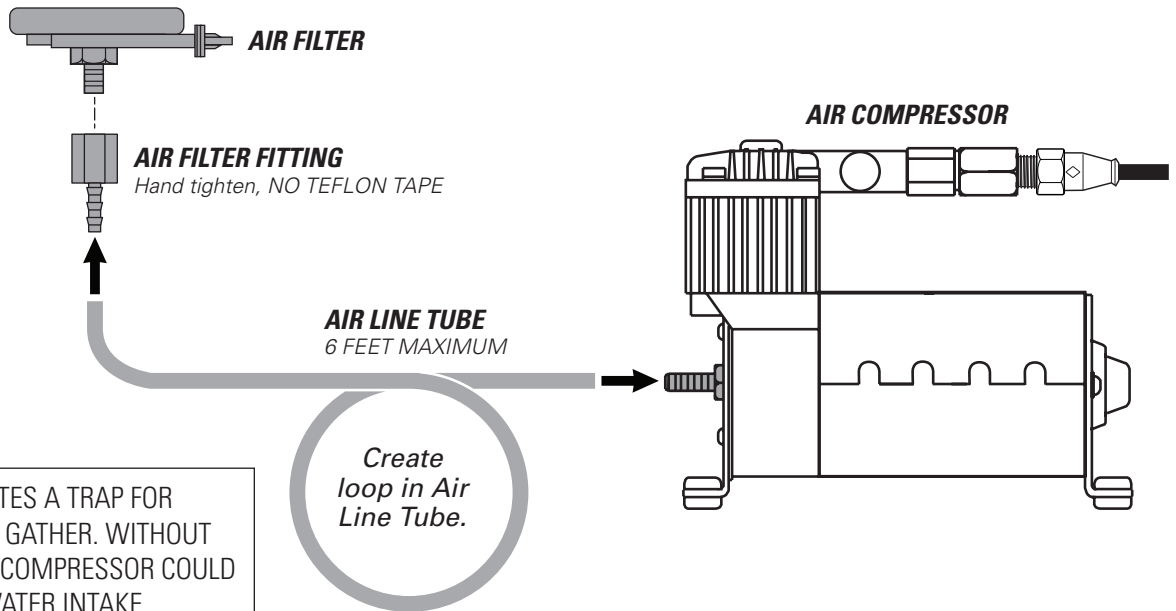


FOR PROPER INSTALLATION, SOAK AIR LINE TUBE ENDS IN HOT WATER BEFORE INSTALLING ONTO BARBED FITTINGS.

**1** Install the 1/4 NPT x 1/4" Tube Fitting onto the Air Filter Inlet as shown, hand tighten.

**2** Use supplied Nylon Ties to secure the Air Filter to a dry, protected location no more than 6 feet from the Air Compressor.

**3** Cut a length of Air Line Tube to run from the Air Compressor to the Air Filter. Attach the Air Line Tube to the barbed fittings as shown below.



**1** Clean up the installation using supplied Nylon Ties, and return all factory parts and materials to operative state.



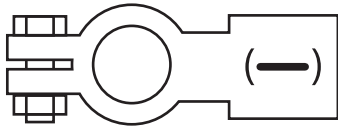
USING SUPPLIED NYLON TIES, SECURE ALL WIRING AND AIR LINE TUBE IN A MANNER THAT DOES NOT OBSTRUCT YOUR VIEW OR ABILITY TO SAFELY OPERATE THE VEHICLE.

# 10

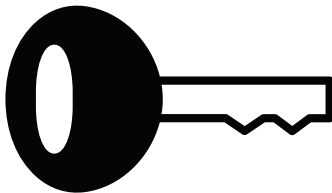
## TEST THE SYSTEM

With the Air Command Kit and your Air Springs installed, you are ready to test the system.

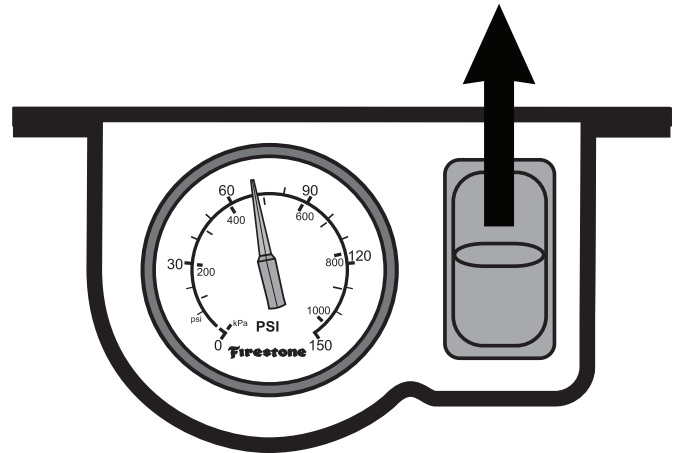
- 1** Re-attach the negative battery cable.



- 2** Turn on your vehicle's ignition.



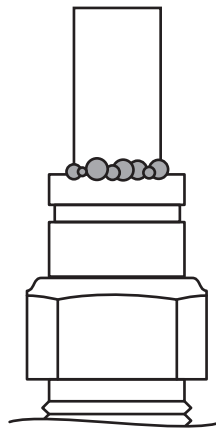
- 3** Push paddle switch up to inflate the Air Springs to 70 PSI.



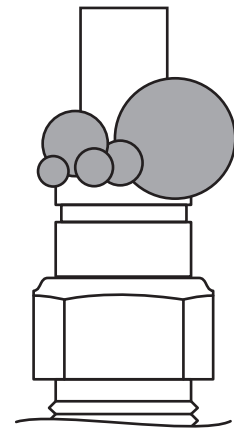
- 4** Spray fittings with soap and water mixture.



- 5** Observe bubbles.



**SMALL SOAP BUBBLES  
THAT DO NOT EXPAND**



**SOAP BUBBLES  
THAT EXPAND**



# NO LEAKS?

Congratulations! You're riding right with the flip of a switch! Remember to Review the Operating Instructions.

# LEAK?

Bummer. Continue to Step 11 to fix the leak.

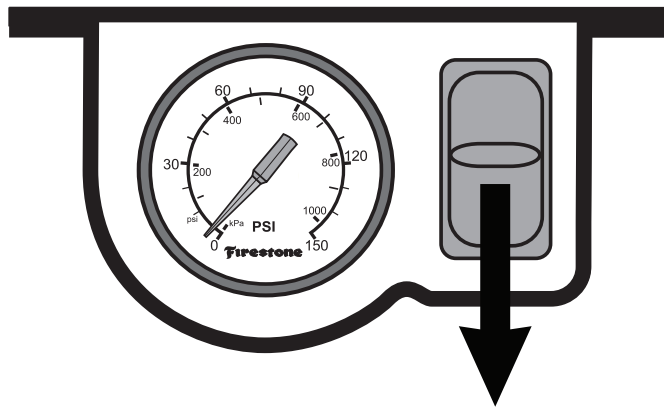


EXHAUST ALL AIR FROM THE SYSTEM PRIOR TO RELEASING AIR TUBES FROM AIR FITTINGS.

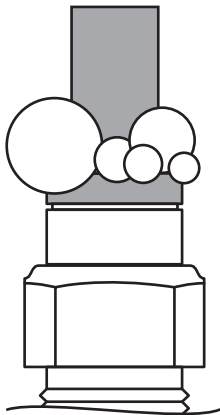


**1** Push paddle switch down to release all air pressure from the Air Springs.

NOTE: While doing this, if you get a quick burst of air prior to the gauge dropping to 0 PSI, your lines are incorrectly swapped.

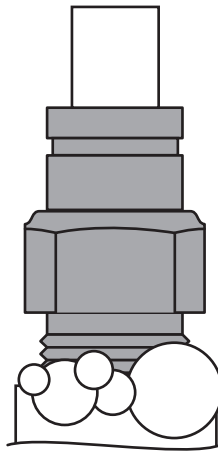


#### LEAK AT AIR LINE TUBE AND AIR FITTING



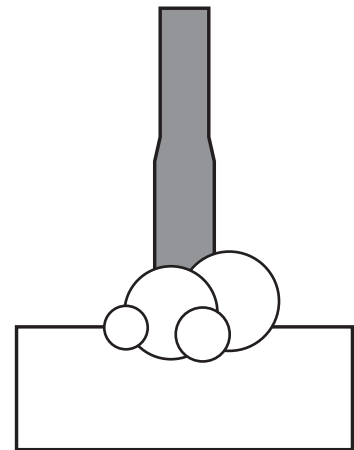
Release Air Line Tube (see page 4). Review proper cuts and procedures in Step 5. Repeat Step 6.

#### LEAK AT BASE OF AIR FITTING ON AIR SPRING



Tighten Air Fitting one turn or until leak stops.

#### LEAK AT A BARBED FITTING



Being careful not to scar the metal barbs, cut away, check for debris. Trim Air Tube Line, **soak for 5 minutes in hot water**. Reinstall.

## STILL HAVE A LEAK?

Refer to the Troubleshooting section of the Instruction Manual. If the leak persists, or if there is an issue with a leaking part, call 1-800-888-0650; Option 1; Option 1 for Tech Support.



[ride-rite.com](http://ride-rite.com)

## BEFORE YOU DRIVE, CONFIRM THE FOLLOWING:

- Secure all Air Line Tubes and wiring inside the cab and on the outside of the truck.
- Make sure no wiring, Air Line Tubes, or hardware obstruct your vision or ability to safely operate the vehicle.
- The system passes the leak test and holds air.
- The Air Compressor ground Ring Terminal is contacting bare metal, and coated with silicone if possible.
- The air gauge backlight turns off when the ignition is off, or when dashboard lights do not illuminate.
- Put a minimum of 5PSI in the Air Springs, unloaded.

## NEED INSTALLATION HELP? 1-800-888-0650

Select Option 1 for Ride-Rite; Select Option 1 for Technical Support.

Or, email us at [rrtech@fsip.com](mailto:rrtech@fsip.com). If emailing, please include photos to help us better diagnose and understand any problems you may be experiencing.

# Firestone

*World's Number 1  
Air Spring.*



FIRESTONE INDUSTRIAL PRODUCTS COMPANY