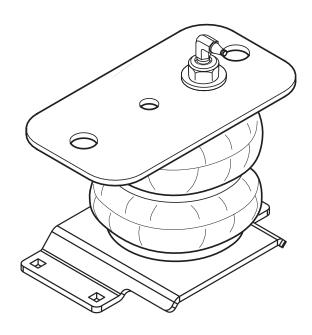
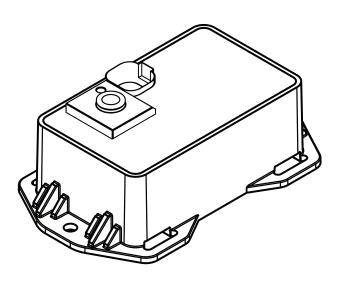


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## **INSTALLATION INSTRUCTIONS**





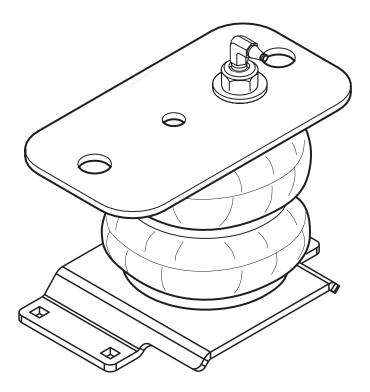
**SECTION 1 - AIR SPRING** 

**SECTION 2 - AIR ACCESSORY** 



riderite.com

## **INSTALLATION INSTRUCTIONS**





**Firestone Industrial Products** 

# **! IMPORTANT**

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

## This kit is to be used on a pickup truck only, and DOES NOT INCREASE YOUR VEHICLE'S MAXIMUM LOAD.

## 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.

## **KIT CLEARANCE**

There must be a minimum of 1/2" clearance around all installed components when the air springs are inflated and under a load. The air springs must flex and expand during operation, so the clearance keeps the kit from rubbing against parts of the vehicle.

### **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. Consult your local dealership for additional GVWR specifications.

### **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**

The air springs will support approximately 50 lbs. of load for each PSI of inflation pressure (per pair). For example, 50 PSI of inflation pressure will support a load of 2500 lbs. per pair of air springs.

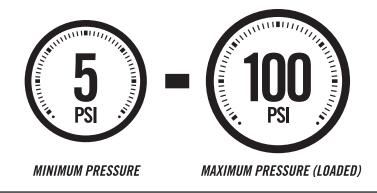
## **APPROPRIATE AIR PRESSURE**

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.

### **OPTIONAL T-FITTING**

This kit includes inflation valves and air line tube for each air spring, allowing you to compensate for unbalanced loads. If you prefer a single inflation valve system to provide equal pressure to both air springs, your dealer can supply the optional "T" fitting (Part # 3025 or WRI-760-3461 retail pack).

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



# PARTS

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

## **MAIN KIT CONTENTS**

PT # 6410		x 2	AIR SPRING	PT # 5928	°	x 2	LOWER BRACKET	PT # 5584	000	x 2	FUEL PUMP EXTENSION BRACKET
PT # 5542	0	x 2	UPPER BRACKET	PT # 5086		x 4	LEAF STACK STRAP BRACKET	PT # 9414		x 1	AIR LINE TUBE (18 FEET)

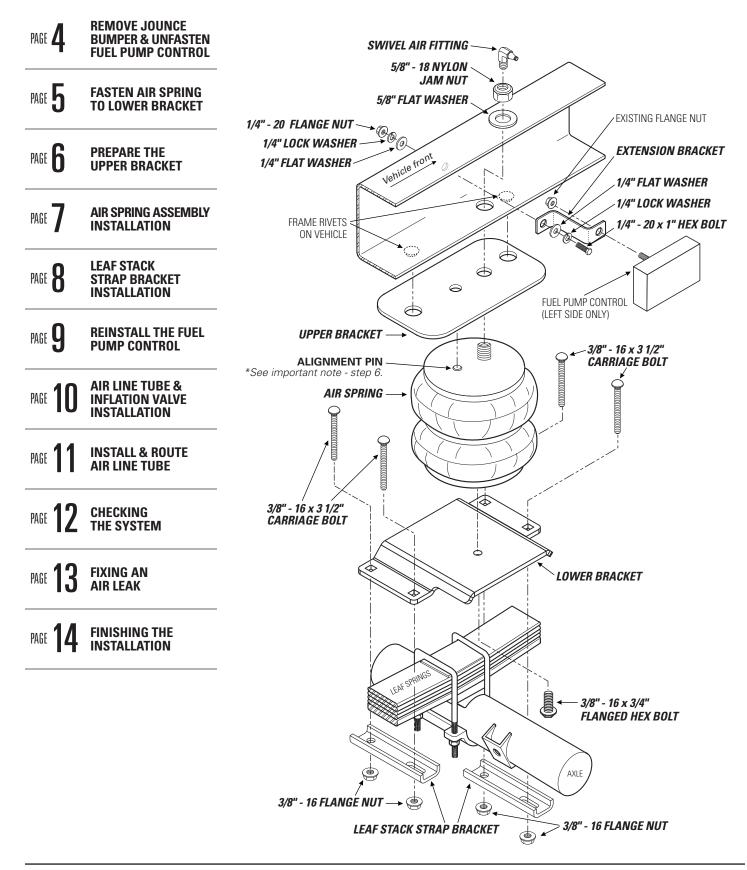
## A24-760-7560 INFLATION VALVE BRACKET KIT



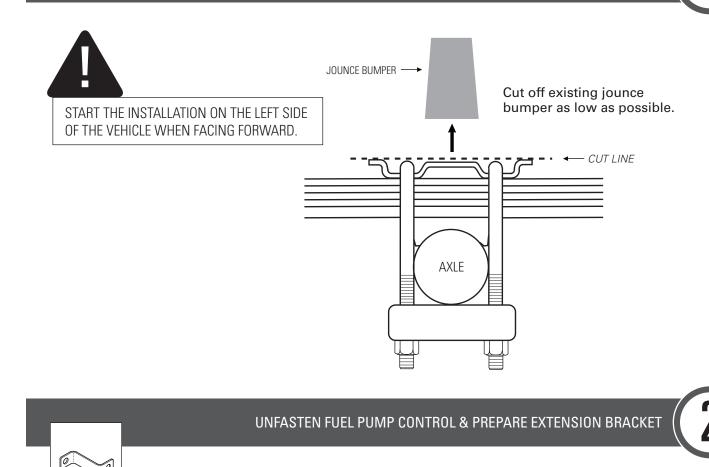
## A21-760-2445 HARDWARE PACK

PT # 1057		x 2 1/4" - 20 x 1" HEX BOLT	PT # 3067	9	x 8	3/8" - 16 FLANGE LOCK NUT	PT # 3371	x 2 5/8" - 18 HEX LOCK NUT
PT # 3069		x 2 3/8" - 16 x 3/4" FLANGE BOLT	PT # 0060	Ø	x 2	1/4" LOCK WASHER	PT # 3014	x 8 3/8" - 16 x 3 1/2" CARRIAGE BOLT
PT # 0075	0	x 2 5/8" FLAT WASHER	PT # 3033	$\odot$	x 4	5/16" FLAT WASHER	PT # 9036	x 6 RED NYLON TIE
PT # 3032		INFLATION VALVE x 2 AND VALVE CAP ASSEMBLY	PT # 0864	$\overline{\mathbf{O}}$	x 4	1/4" FLAT WASHER	PT # 0899	x 2 THERMAL SLEEVE
PT # 3128	<u>j</u>	x 2 SWIVEL AIR FITTING	PT # 0057	9	x2	1/4" HEX NUT		

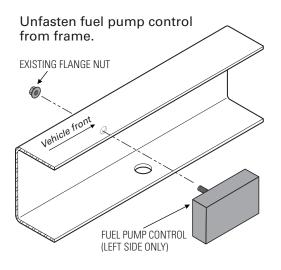
# **CONTENTS AND OVERVIEW**



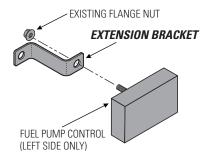
#### **REMOVE EXISTING JOUNCE BUMPER**

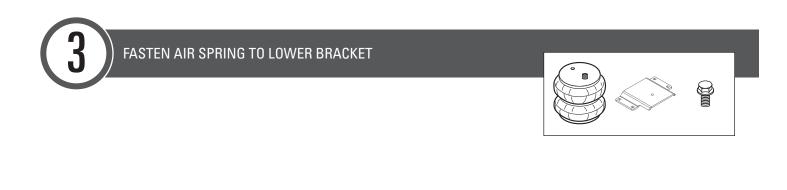


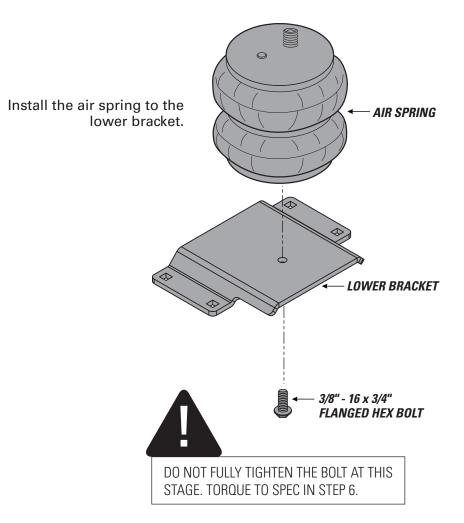


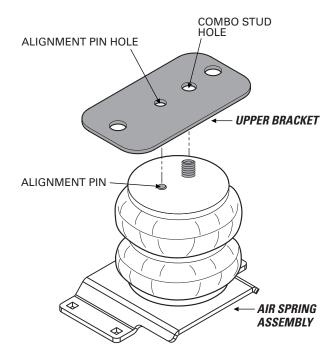


Use existing flange nut to fasten the fuel pump control to the extension bracket. Do not yet fasten the extension bracket to the vehicle frame.



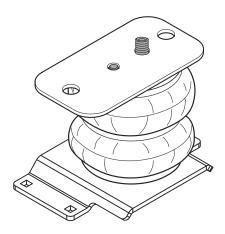






Place the upper bracket on top of the air spring, as shown.

Make sure the alignment pin is fully seated in the alignment pin hole in the upper bracket.



INSTALL AIR SPRING ASSEMBLY Follow guidelines below to dry fit assembly. Make alignment marks as shown. THE EMERGENCY BRAKE BRACKET MAY NEED TO BE Remove assembly and SLIGHTLY BENT TO ALLOW PROPER CLEARANCE. match alignment marks vou made. SWIVEL AIR FITTING Thread onto inside of air combo stud. Fully tighten the 3/8"-16 x 3/4" Tighten until threadlock coating is fully engaged flanged hex head bolt on the DO NOT OVERTIGHTEN. bottom of the lower bracket. 5/8" - 18 NYLON JAM NUT Thread onto outside of air combo stud. Insert the combo stud on 5/8" FLAT WASHER top of the air spring into the hole in the vehicle frame.

Vehicle front

Make sure two holes in the upper bracket align with the frame rivets on the vehicle.

Securely fasten the top of the air spring and install the swivel air fitting, as shown.

> NOTE: Alignment pin must be correctly seated into alignment pin hole on the upper bracket.

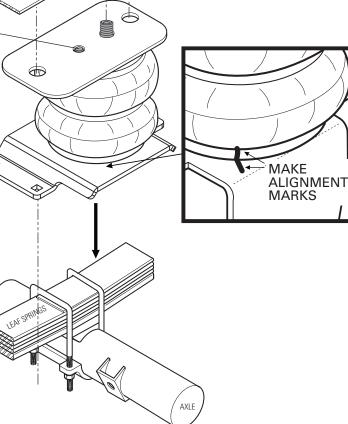
ALIGNMENT PIN ON AIR SPRING MUST BE INSTALLED TO FULLY SEAT INTO THE ALIGNMENT HOLE IN THE UPPER BRACKET. FAILURE TO DO SO WILL CAUSE IT TO BE PUSHED INTO THE BEAD PLATE, CREATING AN AIR LEAK, AND RESULTING IN AN AIR SPRING FAILURE THAT IS NOT WARRANT-ABLE. THE ALIGNMENT PIN CANNOT HOLD 2,500 LBS! IT IS USED FOR ALIGNMENT ONLY!

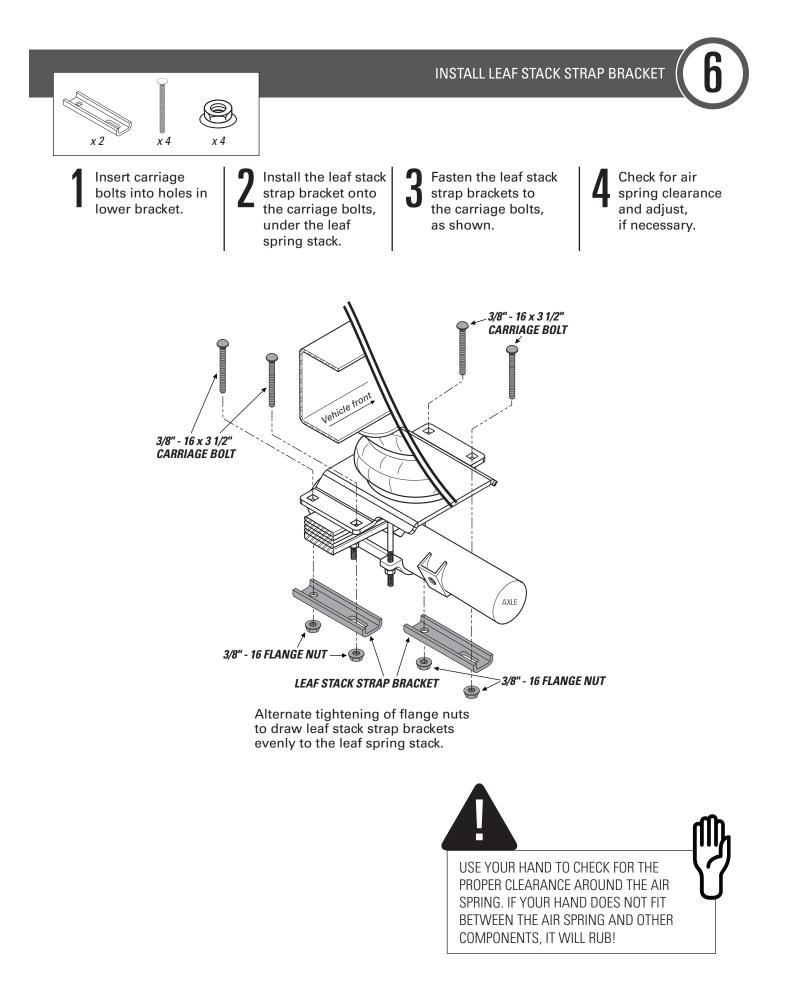
> Carriage bolt holes in lower bracket fall on either side of the leaf spring stack.

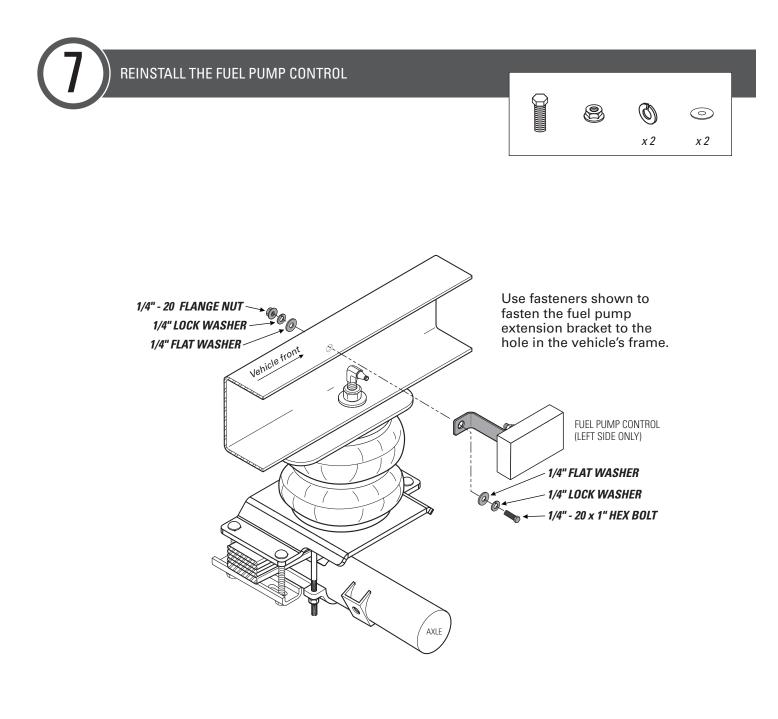


FRAME RIVETS <

ON VEHICLE





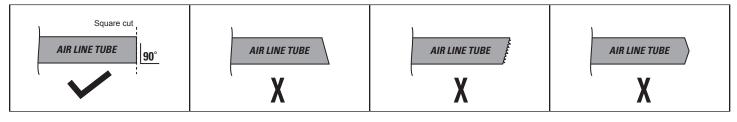




**AWESOME!** You're done with the left side. The right side installation is the same, with the exception of the fuel pump bracket. Go complete steps 1-7 for the right side, then continue to step 8.

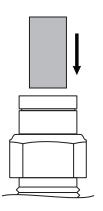
**INSTALL INFLATION VALVES** х2 x 4 x 2 х2 IF USING THE OPTIONAL NO-DRILL INFLATION VALVE BRACKET, CHOOSE OPTION 1. IF DRILLING, CHOOSE OPTION 2. INFLATION VALVES MUST BE ACCESSIBLE BY AN AIR CHUCK. Secure the Air Inflation Install Inflation Valve Select a protected location to Valve Bracket to a proinstall the Inflation Valves, assembly as shown. tected, secure location. such as the bumper or the PROCEEDTO STEP 3. body of the vehicle. Drill two 5/16" holes for **AIR LINE TUBE** LARGE Inflation Valve install 5/16" - 16 FLAT WASHER NYLON TIESlocations. 5/16' **INFLATION VALVE** 0 **INFLATION EXAMPLE VALVE NUT** INFLATION Vehicle body, (A) VALVES 5 bumper or VÁLVE CAP Inflation valve inflation valve BUMPER install locations: bracket. CUT THE AIR LINE TUBE INTO TWO EQUAL LENGTHS Match air line tube ends. Find center of air line tube, make a square cut with tube **AIR LINE TUBE** cutter or sharp utility knife. DON'1 Fold or kink the air line tube. Make sure the cut is as square as possible. Cut the air line tube at an angle. Use a tube cutter or sharp utility knife. Use pliers, scissors, snips, saws, or side cutters.

## PROPER AND IMPROPER CUTS IN THE AIR LINE TUBE

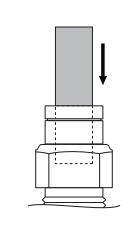




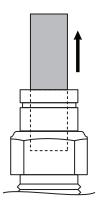
Insert end of air line tube into air fitting.



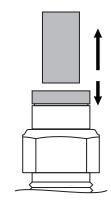
Push air line tube into air fitting as far as possible.



Gently pull on the air line tube to check for a secure fit.



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.



## ROUTE AND SECURE AIR LINE TUBES

Air line tube routes will vary, depending on your truck, and requires you to choose the best path from the air springs to the inflation valves. Use the instructions below to help you choose.

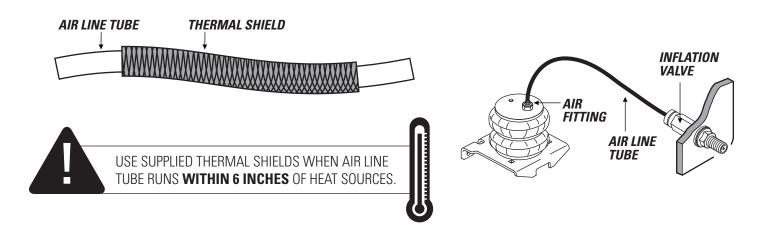
х б	
x 2	

DO

Select routes protected from heat, debris, and sharp edges. Use thermal shields near heat sources. Use nylon ties to secure the air line tube.



Bend or sharply curve air line tubes. Leave air line tube exposed to sharp edges. Use unnecessary lengths of air line tube. Route air line tube near moving parts. Let air line tube hang unsecured from vehicle. Scar air line tube while routing.



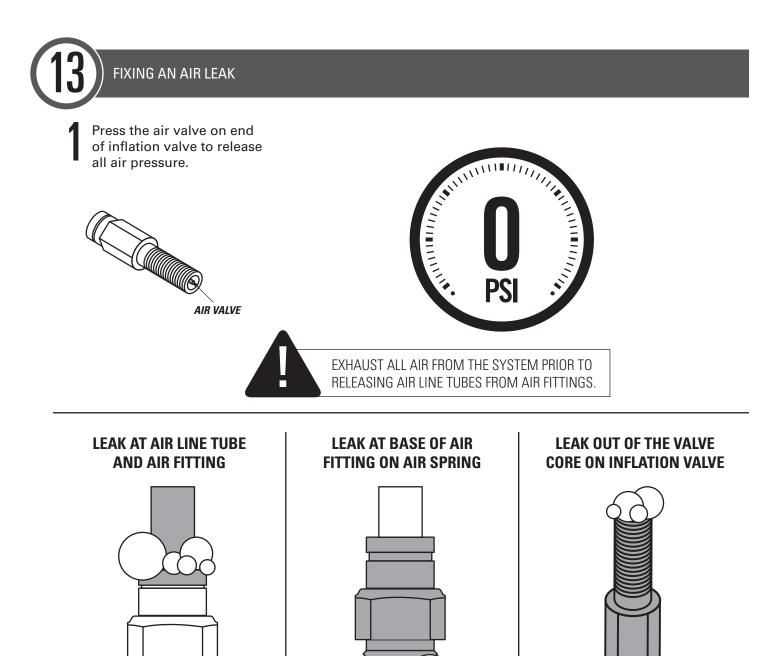
CHECKING THE AIR SYSTEM Place an air chuck onto the Spray fittings with inflation valve and fill the soap and water system to 70 PSI. mixture. -----WATER SOAP AIR SPRINGS INFLATE QUICKLY. CHECK AIR PRESSURE WHILE INFLATING. Observe bubbles. Source **SOAP BUBBLES SMALL SOAP BUBBLES THAT EXPAND** THAT DO NOT EXPAND X

## **NO LEAKS?**

Congratulations! Continue to step 14 to finish installation. Review the Operating Instructions.

LEAK?

Bummer. Continue to step 13 to fix the leak.



Release air line tube (see page 11). Review proper cuts and procedures in step 9. Repeat steps 10 and 12.

Tighten air fitting one turn or until leak stops.

#### Tighten valve core with valve core wrench on inflation valve cap.

## **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, visit riderite.com.



## SAFELY RETURN VEHICLE TO OPERATIVE STATE

If you removed any wheels during installation, install the wheels and torque the lug nuts to the manufacturer's specifications.

Safely remove any jack stands and wheel chocks used during installation.

Re-attach the negative battery cable.

### **DOUBLE-CHECK AIR SPRING CLEARANCE**

Check the air springs once again for the proper 1/2" minimum clearance. Perform clearance check again when vehicle is under load.

### **VEHICLE GVWR**

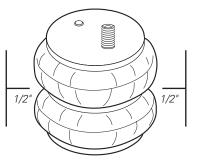
NEVER exceed the maximum load recommended by the vehicle manufacturer (GVWR). The GVWR can be found in your vehicle's owner's manual or on the data plate on the driver's side door. Consult your local dealership for additional GVWR specifications.

## READ AND UNDERSTAND THE OPERATING INSTRUCTIONS

The Ride-Rite system can improve handling and comfort. Take the time to learn how to properly use and maintain your investement by reading the Operating Instructions.



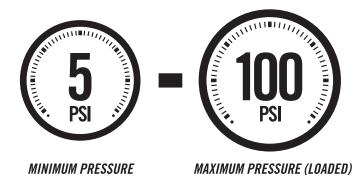
USE YOUR HAND TO CHECK FOR THE PROPER CLEARANCE AROUND THE AIR SPRING. IF YOUR HAND DOES NOT FIT BETWEEN THE AIR SPRING AND OTHER COMPONENTS, IT WILL RUB!



## **! IMPORTANT**

### A MINIMUM OF 5 PSI MUST BE MAINTAINED IN THE AIR SPRINGS AT ALL TIMES

Too much air pressure in the air springs will result in a firmer ride, while too little air pressure will allow the air springs to bottom out over rough conditions, and will not provide the improvement in handling that is possible.



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## BEFORE YOU DRIVE, CONFIRM THE FOLLOWING:

AIR HELPER SPRINGS

Do you have a minimum of 5PSI in your air springs?

Are your air springs standing 5 1/2 - 6 1/2" tall?

- Are your air springs properly aligned, left-to-right and front-to-back?
- Are your nuts and bolts tight?
- □ Put your paper work back into the sleeve and keep it in your glove compartment for future reference.

You've been bagged...and now your suspension is Airide equipped! Show it off with the supplied decal!

## **NEED INSTALLATION HELP?**

Email us at **rrtech@fsip.com**. Please include photos to help us better diagnose and understand any problems you may be experiencing.

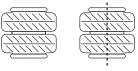


**Firestone Industrial Products** 

FirestonelP



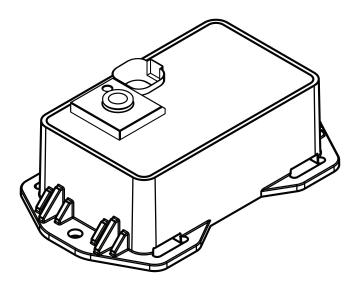
5 1/2" - 6 1/2"





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## **INSTALLATION INSTRUCTIONS**





**Firestone Industrial Products** 

## AIMPORTANT

## PLEASE DON'T HURT YOURSELF, THE 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**

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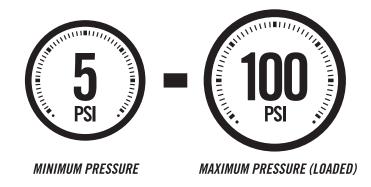
### **PRESSURE TO LOAD**

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.

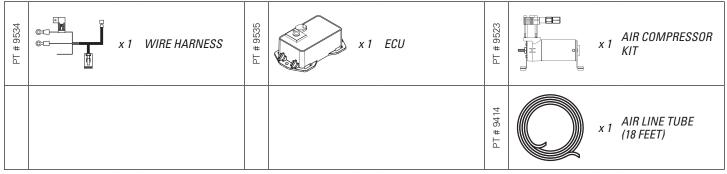
ONCE INSTALLED SUCCESSFULLY, FOLLOW THESE PRESSURE REQUIREMENTS FOR THE AIR SPRINGS:



# PARTS

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

## **MAIN KIT CONTENTS**



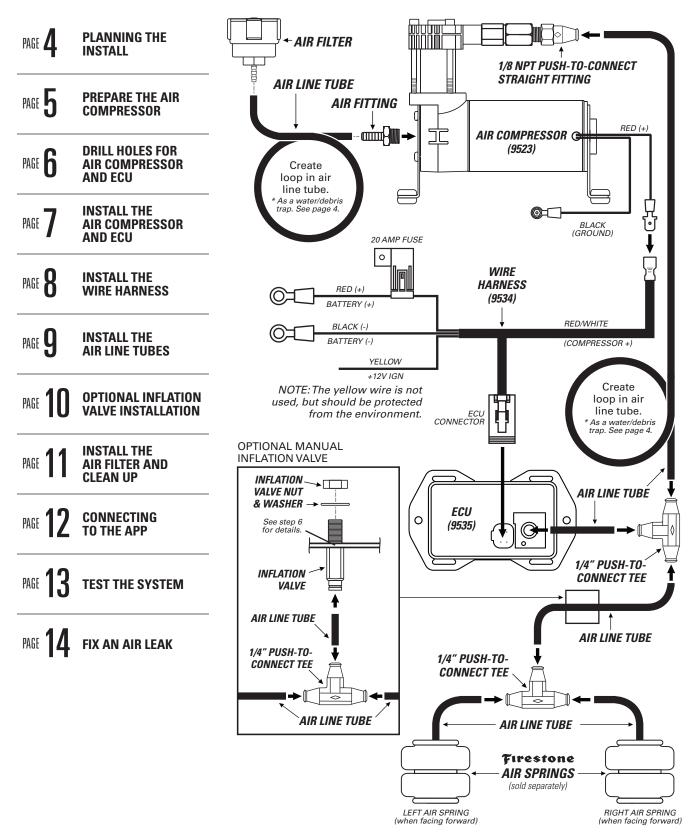
## A24-760-7560 INFLATION VALVE BRACKET KIT



## A21-760-2610 HARDWARE PACK

PT # 3087	P)	x 4 10-32 x 1" MACHINE SCREW	PT # 3093	F)	x 2	10-32 x 3/4" MACHINE SCREW	PT # 3086	$\odot$	x 10	3/16" FLAT WASHER
PT # 3088	9	x 6 10-32 NYLOCK NUT	PT # 3055		x 1	1/8 NPT PUSH- TO-CONNECT STRAIGHT FITTING	PT # 3032		x 1	INFLATION VALVE AND VALVE CAP ASSEMBLY
PT # 3025		x 3 1/4" PUSH-TO- CONNECT TEE	PT # 3421	Ð	x 1	10-16 x 3/4" SELF-TAPPING SCREW	PT # 9036			x 8 RED NYLON TIE
# 9488										
ЪТЧ		x 2 LARGE NYLON TIE	H Tq		X	2 THERMAL SLEEVE				

# **CONTENTS AND OVERVIEW**



# **PLANNING THE INSTALL**

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

## DETERMINE THE MOUNTING LOCATION FOR THE AIR COMPRESSOR

- Provides ample air flow and is protected from airborne debris and moisture.
- Mount close enough to the ECU to allow wire harness connections to reach.
- If using the optional Firestone air accessory mounting kit, consider the guidelines above, and follow the kit's instructions.
- DETERMINE THE MOUNTING LOCATION FOR THE ECU
  - Mount close enough to the air compressor to allow wire harness connections to reach.
  - Allow room for air line tube to connect to the air fittings on the ECU.
  - Allow room for the 4-pin ECU connector to connect to the ECU.
  - Allow room for the air line tube to run without sharp curves or bends.
  - Using supplied fasteners shown in step 3 is recommended. If no other mounting option is available, see the sidebar on step 2 for using the large Nylon ties.
  - Select a location that is solid and secure on the body or frame of the vehicle, away from any moving parts, electrical or any other lines.

## PLAN INSTALLATION ROUTES FOR WIRING AND AIR LINES

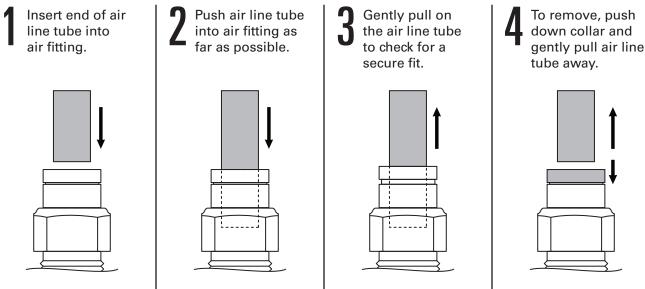
- Make sure the wire harness and air line tubes are not exposed to sharp metal edges that can damage them.
- Use supplied thermal sleeves on air line tubes when routing near heat sources.
- Use supplied Nylon ties to secure air line tubes and wire harness to the vehicle.
- Make a loop in the air line tube where shown. This creates a water/debris trap that protects the air compressor.
- Measure twice, cut once!

## 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 tubes.

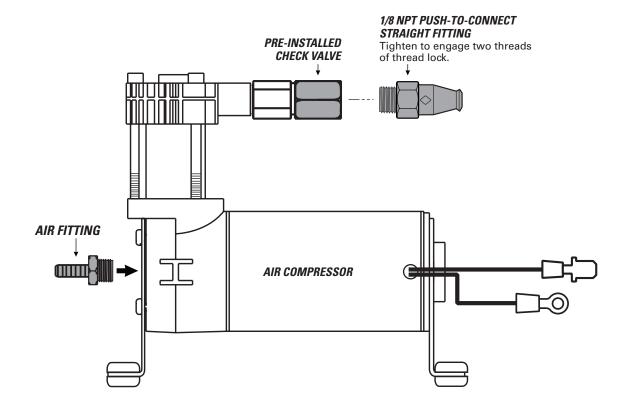


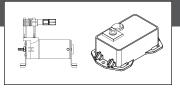
**Removal Tip:** Use a 1/4", 5/16", or 6mm open-ended wrench to push the collar down.





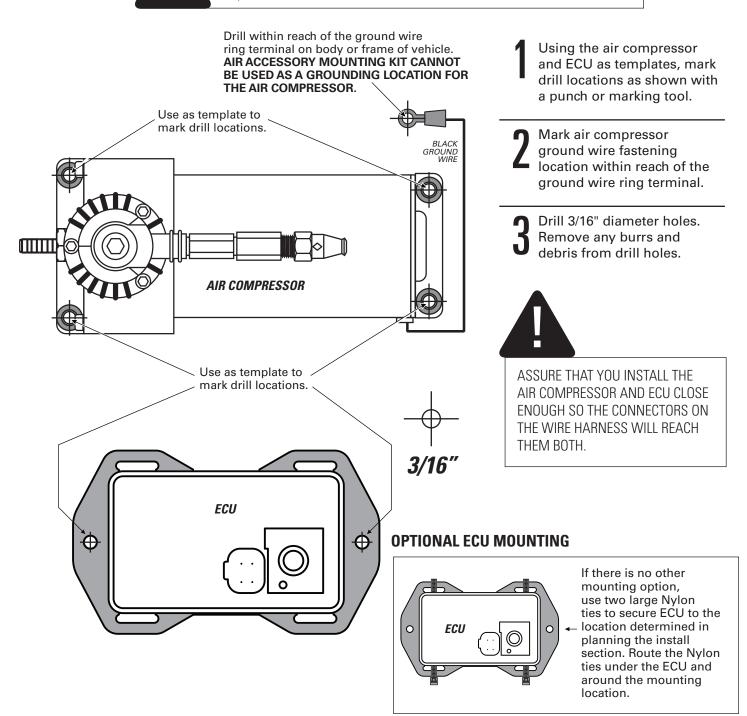
Install 1/8 NPT push-to-connect straight fitting on the check valve.



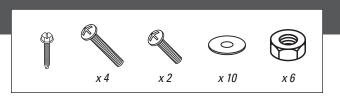


CHECK SURROUNDING AREA AND BACK SIDE OF MOUNTING LOCATION TO AVOID DRILLING INTO EXISTING LINES OR WIRING.

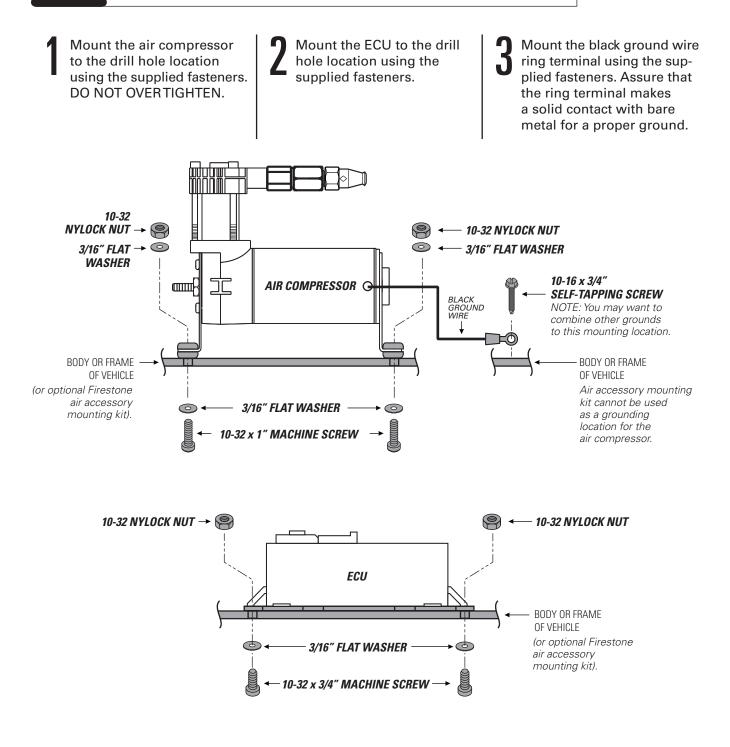
IF YOU ARE USING THE OPTIONAL FIRESTONE AIR ACCESSORY MOUNTING KIT, SKIP THIS STEP AND REFER TO THE MOUNTING KIT'S INSTRUCTIONS.

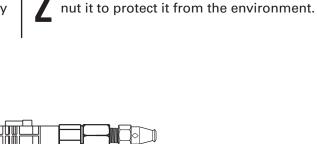


INSTALL THE AIR COMPRESSOR AND ECU



DO NOT OVER TIGHTEN MOUNTING BOLTS AND NUTS ON THE AIR COMPRESSOR. TOO MUCH TORQUE CAN CRUSH THE BRASS INSERTS AND RUBBER ISOLATORS.

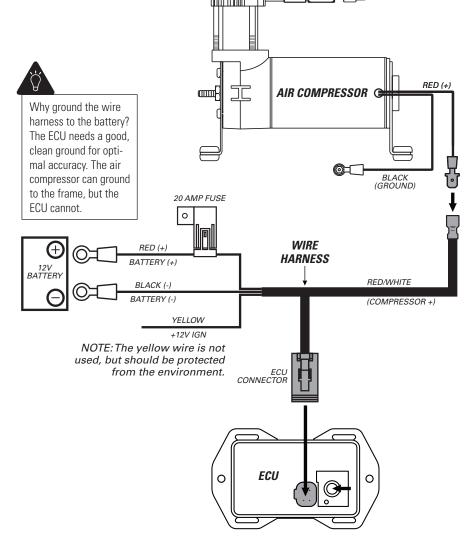




The yellow wire is not used. Wrap or wire

Route the wire harness in the most protected manner possible, and securely make all connections as shown.

e-**1** 



Firestone

**INSTALL AIR LINE TUBES** 

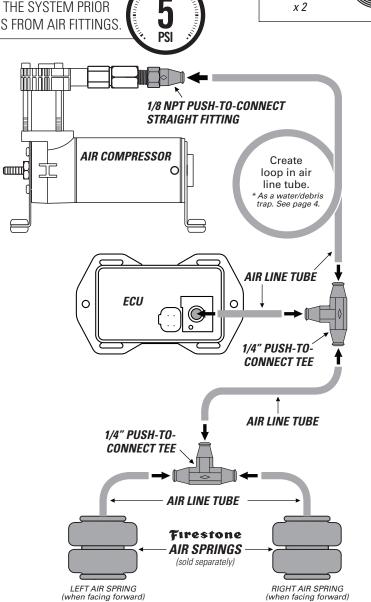
EXHAUST ALL AIR FROM THE SYSTEM PRIOR TO RELEASING AIR TUBES FROM AIR FITTINGS.

Route the air line tube from 1/8 NPT push-to-connect straight fitting on the top of the air compressor to the first 1/4" push-to-connect tee.

From the 1/4" push-toconnect tee, route air line tube to the ECU, as shown.

Route air line tube from each air spring and connect to a 1/4" push-to-connect tee, as shown.

Route air line tube to connect the two 1/4" pushto-connect tees, as shown.



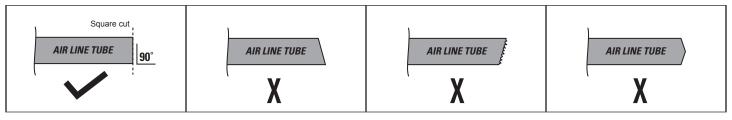
(when facing forward)

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**

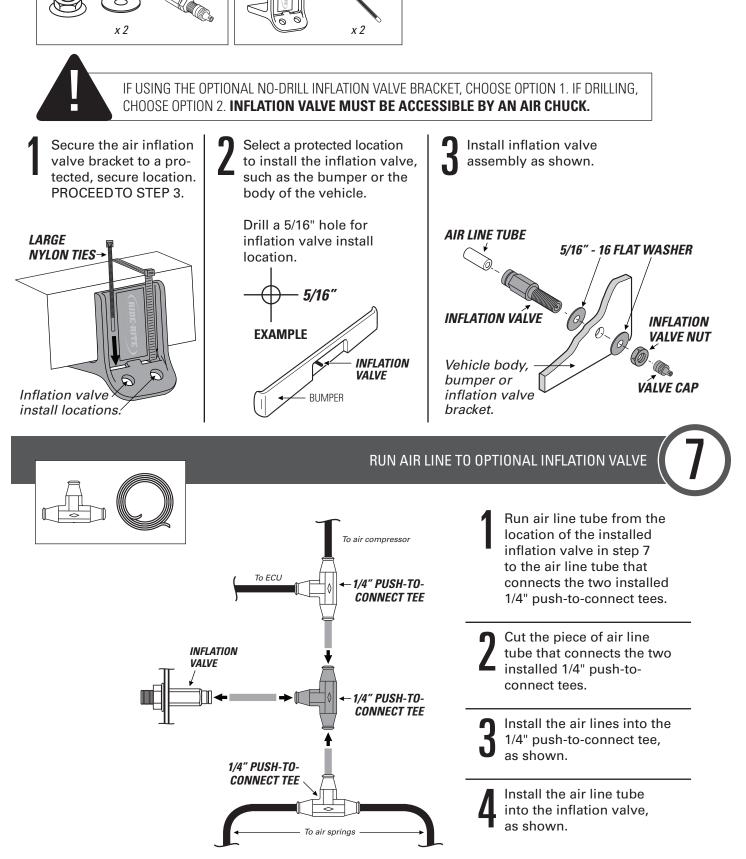
Make sure the cut is as square as possible.

Use a tube cutter or very sharp utility knife.



**OPTIONAL INFLATION VALVE INSTALL** 





## INSTALLING THE AIR FILTER

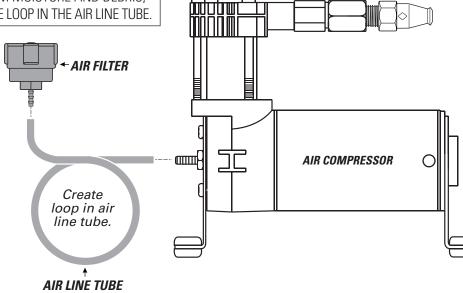


FILTER LIFE WILL VARY BASED ON ENVIRONMENTAL CONDITIONS. PROTECT THE AIR COMPRESSOR BY CHANGING THE AIR FILTER MORE FREQUENTLY IN DUSTY CONDITIONS.

Fully secure the air filter barb into the air line tube from the air compressor kit.

Press air line tube onto the barb on the air compressor air fitting until fully seated. Assure you create a loop in the air line Tube, as shown, when securing it to the vehicle. Periodically check the air filter during operation.
When the air filter is dirty and needs to be replaced, contact an Authorized Firestone dealer to purchase a new one.

SECURE THE AIR FILTER IN A LOCATION THAT PROTECTS IT FROM MOISTURE AND DEBRIS, AND IS ABOVE THE LOOP IN THE AIR LINE TUBE.



FROM AIR COMPRESSOR KIT



## CLEAN UP INSTALLATION

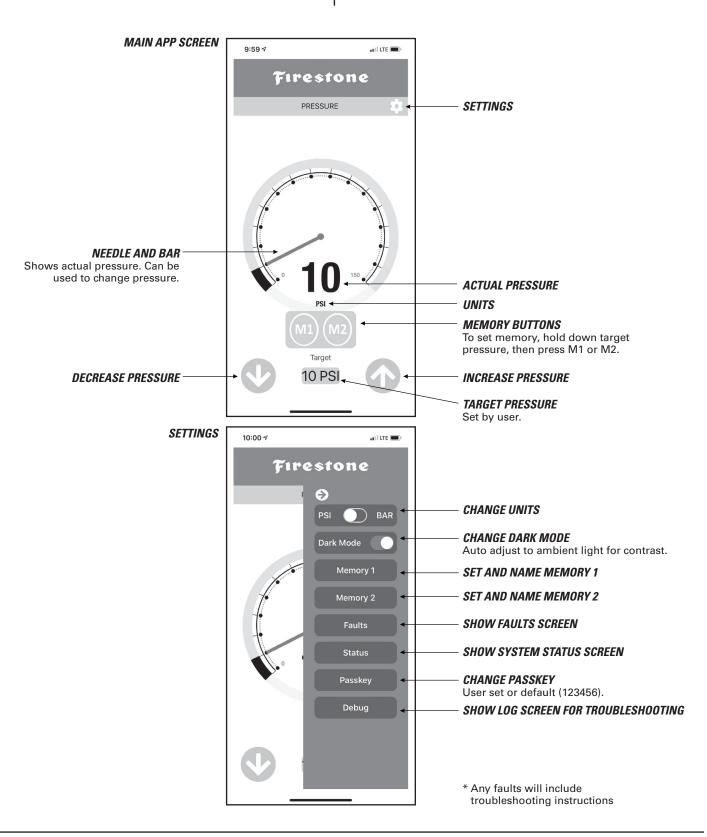
Clean up the installation using supplied Nylon ties, and return all factory parts and materials to operative state.



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

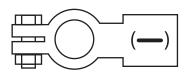


- Download and install the Firestone Air Command app on a compatible iPhone or Android device.
- 2 Open the app. Once the app has established a Bluetooth connection on startup, it will automatically link to the ECU.

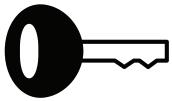


With the Air Command<sup>™</sup> F3 kit and your air springs installed, you are ready to test the system.

Reattach the negative battery cable.



2 Turn on your vehicle's ignition.



Spray fittings with soap and water mixture or glass cleaner.



Observe bubbles.

70 PS

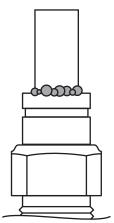
Use the app to inflate the air springs to 70 PSI. See step 10

all UTE 📼

for details.

Firestone

9:59 🗸



SOAP BUBBLES

SMALL SOAP BUBBLES THAT DO NOT EXPAND



X

THAT EXPAND

**NO LEAKS?** 

Congratulations! You're riding right with the push of a button! Remember to review the Operating Instructions.

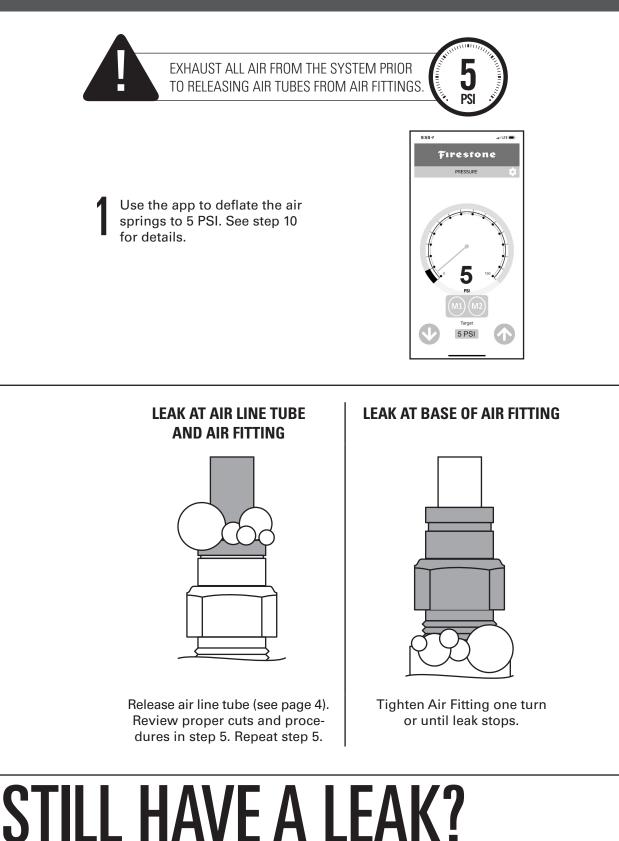
LEAN !

Bummer. Continue to step 12 to fix the 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.



## riderite.com

## BEFORE YOU DRIVE, CONFIRM THE FOLLOWING:

Secure all air line tubes and wiring.

 $\Box$ 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 wire harness is grounded to the negative (-) battery terminal. The ECU needs a good, clean, interference-free ground.
- There is a loop in the air line tubes as shown to prevent water or debris from getting into the air compressor head and damaging it.

## 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**. Please include photos to help us better diagnose and understand any problems you may be experiencing.



**Firestone Industrial Products**