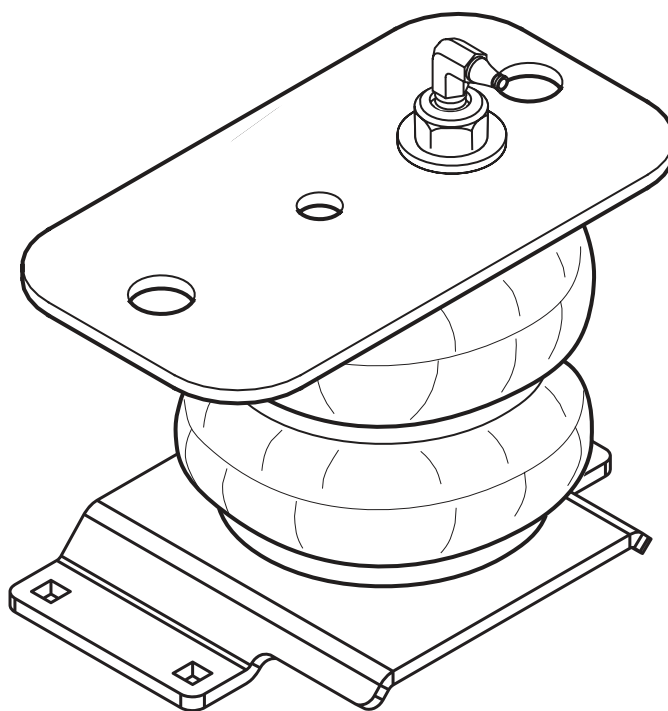




[riderite.com](http://riderite.com)

# INSTALLATION INSTRUCTIONS



**Firestone**

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.

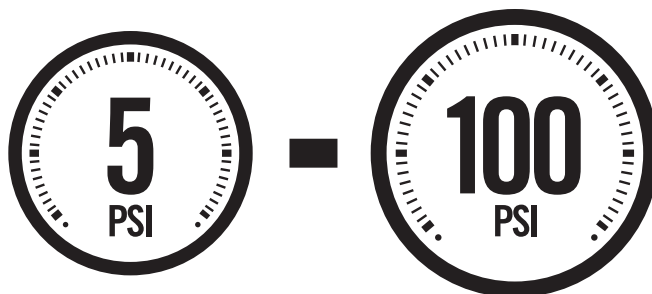
## **APPROPRIATE AIR PRESSURE**

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:**




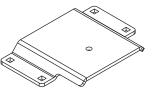

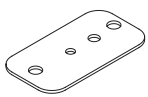
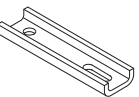

**MINIMUM PRESSURE**

**MAXIMUM PRESSURE (LOADED)**



# PARTS

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










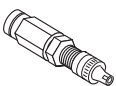

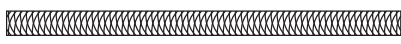


## MAIN KIT CONTENTS

PT # 6410	 x2 AIR SPRING	PT # 5928	 x2 LOWER BRACKET	PT # 5584	 x2 FUEL PUMP EXTENSION BRACKET
PT # 5542	 x2 UPPER BRACKET	PT # 5086	 x4 LEAF STACK STRAP BRACKET	PT # 9414	 x1 AIR LINE TUBE (18 FEET)

## A24-760-7560 INFLATION VALVE BRACKET KIT

PT # 9483	 x1 NO-DRILL INFLATION VALVE BRACKET	PT # 9488	 x2 LARGE NYLON TIE
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## A21-760-2445 HARDWARE PACK

PT # 1057	 x2 1/4\" - 20 x 1\" HEX BOLT	PT # 3067	 x8 3/8\" - 16 FLANGE LOCK NUT	PT # 3371	 x2 5/8\" - 18 HEX LOCK NUT
PT # 3069	 x2 3/8\" - 16 x 3/4\" FLANGE BOLT	PT # 0060	 x2 1/4\" LOCK WASHER	PT # 3014	 x8 3/8\" - 16 x 3 1/2\" CARRIAGE BOLT
PT # 0075	 x2 5/8\" FLAT WASHER	PT # 3033	 x4 5/16\" FLAT WASHER	PT # 9036	 x6 RED NYLON TIE
PT # 3032	 x2 INFLATION VALVE AND VALVE CAP ASSEMBLY	PT # 0864	 x4 1/4\" FLAT WASHER	PT # 0899	 x2 THERMAL SLEEVE
PT # 3128	 x2 SWIVEL AIR FITTING	PT # 0057	 x2 1/4\" HEX NUT		

# CONTENTS AND OVERVIEW

PAGE **4** REMOVE JOUNCE BUMPER & UNFASTEN FUEL PUMP CONTROL

PAGE **5** FASTEN AIR SPRING TO LOWER BRACKET

PAGE **6** PREPARE THE UPPER BRACKET

PAGE **7** AIR SPRING ASSEMBLY INSTALLATION

PAGE **8** LEAF STACK STRAP BRACKET INSTALLATION

PAGE **9** REINSTALL THE FUEL PUMP CONTROL

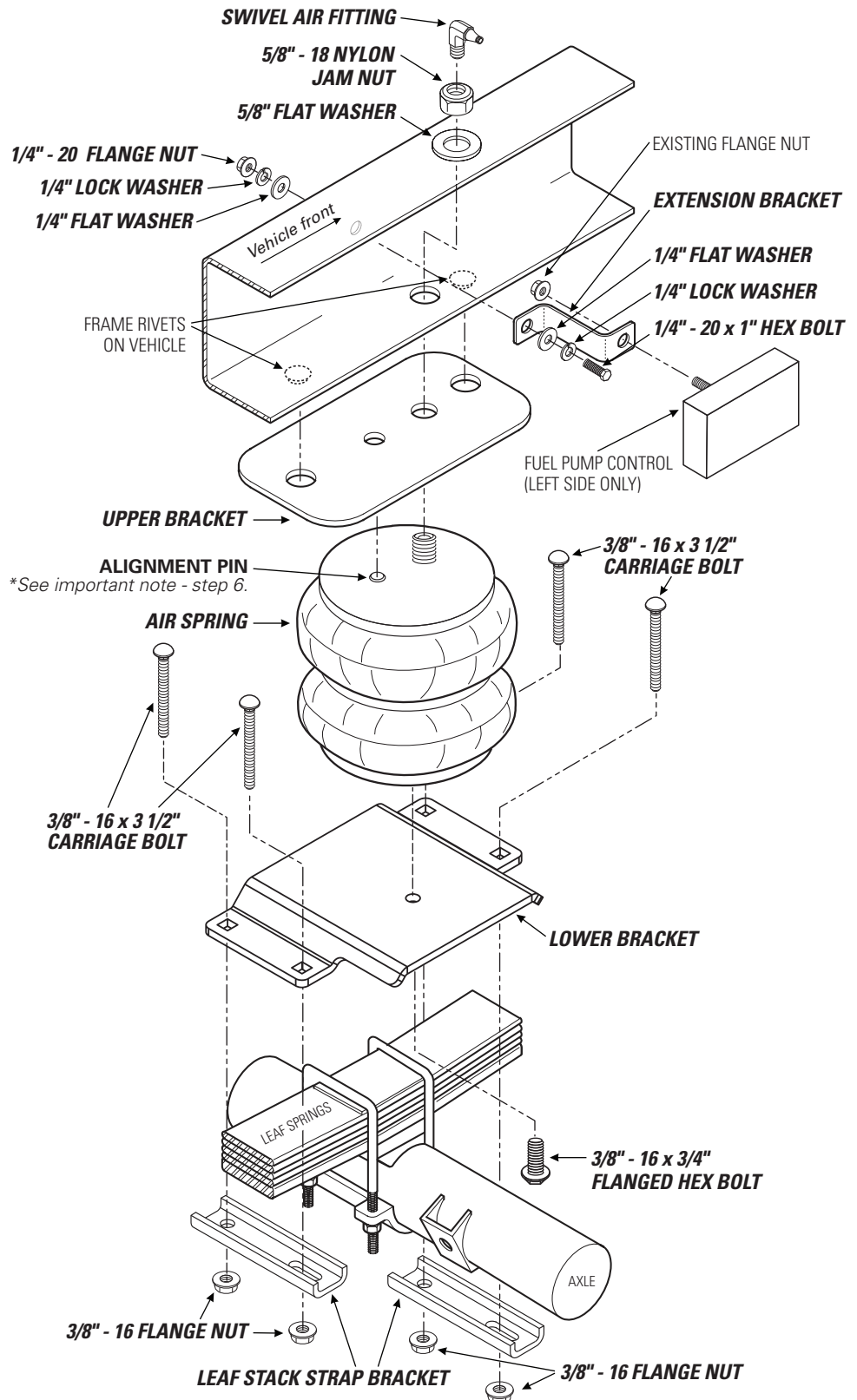
PAGE **10** AIR LINE TUBE & INFLATION VALVE INSTALLATION

PAGE **11** INSTALL & ROUTE AIR LINE TUBE

PAGE **12** CHECKING THE SYSTEM

PAGE **13** FIXING AN AIR LEAK

PAGE **14** FINISHING THE INSTALLATION

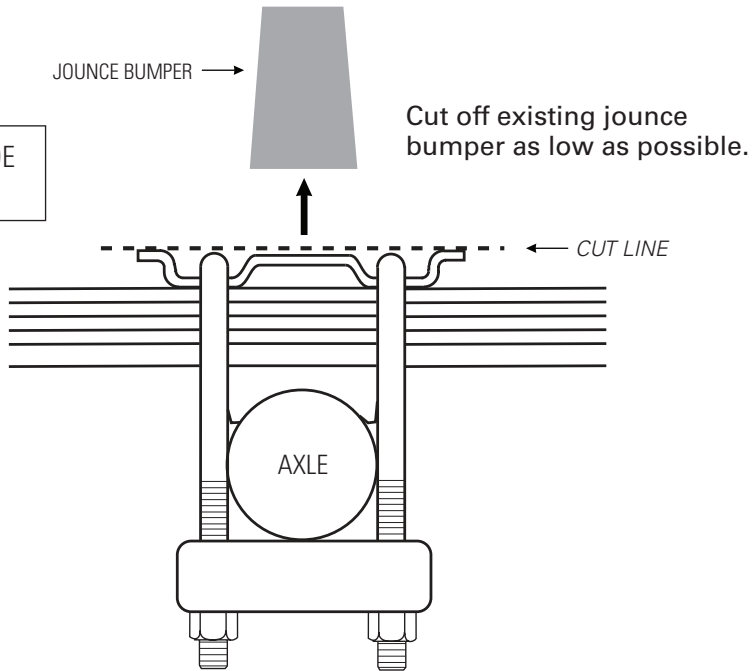


# REMOVE EXISTING JOUNCE BUMPER

1

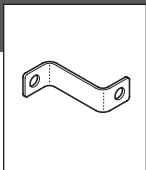


START THE INSTALLATION ON THE LEFT SIDE OF THE VEHICLE WHEN FACING FORWARD.



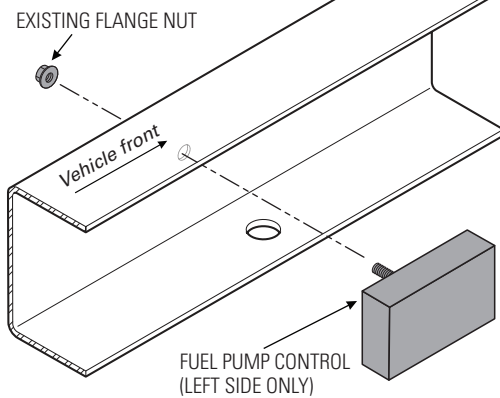
# UNFASTEN FUEL PUMP CONTROL & PREPARE EXTENSION BRACKET

2

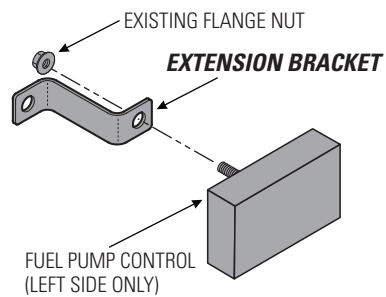


## LEFT SIDE ONLY

Unfasten fuel pump control from frame.

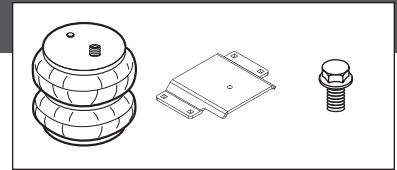


Use existing flange nut to fasten the fuel pump control to the extension bracket. Do not yet fasten the extension bracket to the vehicle frame.

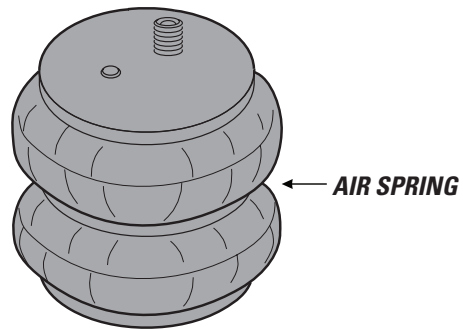


# 3

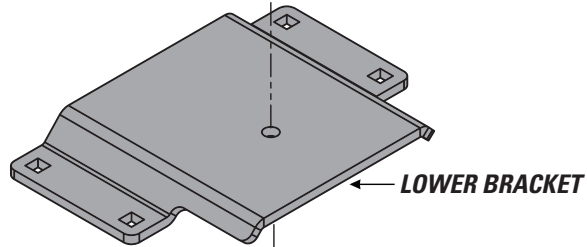
## FASTEN AIR SPRING TO LOWER BRACKET



Install the air spring to the lower bracket.



**AIR SPRING**

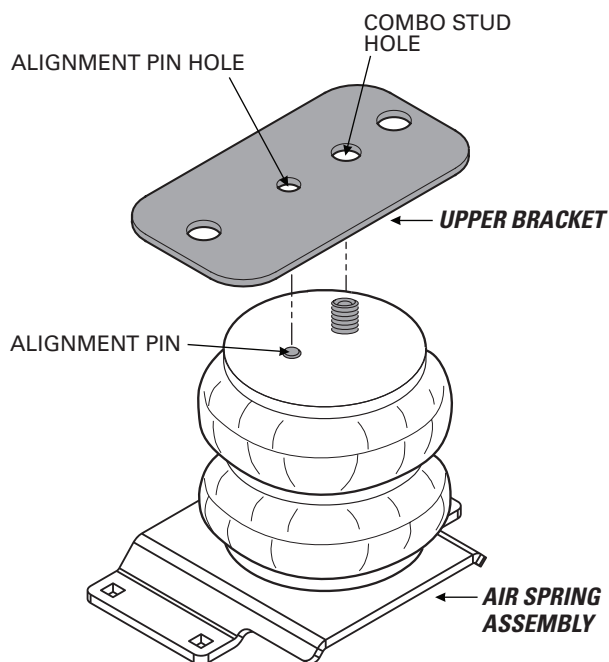
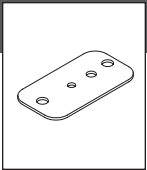


**LOWER BRACKET**

**3/8" - 16 x 3/4"  
FLANGED HEX BOLT**

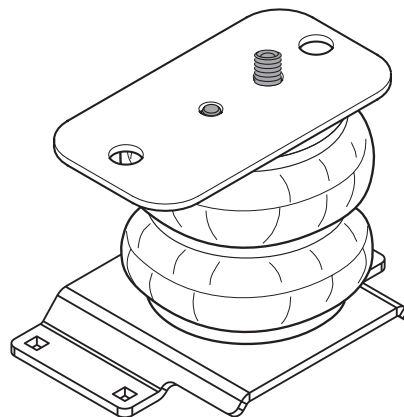


DO NOT FULLY TIGHTEN THE BOLT AT THIS STAGE. TORQUE TO SPEC IN STEP 6.



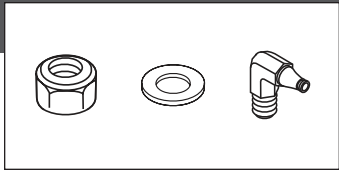
Place the upper bracket on top of the air spring, as shown.

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



# 5

## INSTALL AIR SPRING ASSEMBLY



**1** Follow guidelines below to dry fit assembly. Make alignment marks as shown.

**2** Remove assembly and match alignment marks you made.

**3** Fully tighten the 3/8"-16 x 3/4" flanged hex head bolt on the bottom of the lower bracket.

**4** Insert the combo stud on top of the air spring into the hole in the vehicle frame.

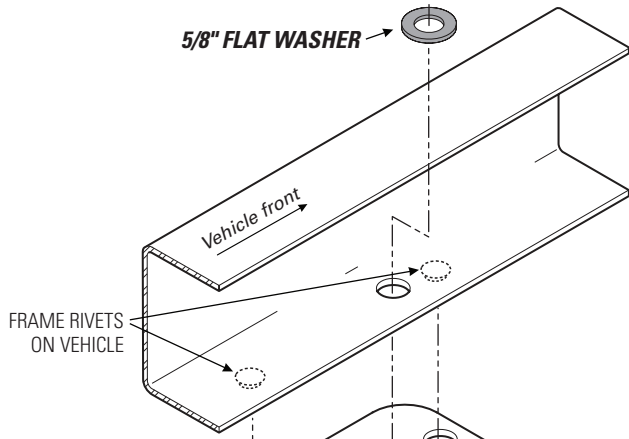
**5** Make sure two holes in the upper bracket align with the frame rivets on the vehicle.

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



THE EMERGENCY BRAKE BRACKET MAY NEED TO BE SLIGHTLY BENT TO ALLOW PROPER CLEARANCE.

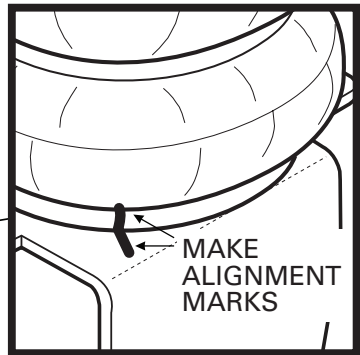
- SWIVEL AIR FITTING**  
Thread onto inside of air combo stud.  
*Tighten until threadlock coating is fully engaged*  
**DO NOT OVERTIGHTEN.**
- 5/8" - 18 NYLON JAM NUT**  
Thread onto outside of air combo stud.
- 5/8" FLAT WASHER**



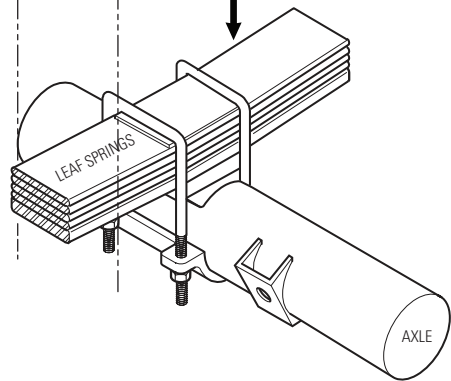
NOTE: Alignment pin must be correctly seated into alignment pin hole on the upper bracket.



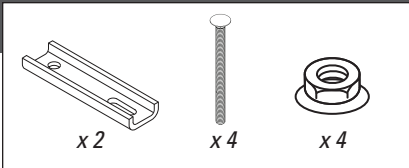
ALIGNMENT PIN ON AIR SPRING MUST BE INSTALLED TO FULLY SEAT INTO THE ALIGNMENT HOLE IN THE UPPER BRACKET. FAILURE TO DO SO WILL CAUSE IT TO BE PUSHED INTO THE BEAD PLATE, CREATING AN AIR LEAK, AND RESULTING IN AN AIR SPRING FAILURE THAT IS **NOT WARRANTABLE. THE ALIGNMENT PIN CANNOT HOLD 2,500 LBS! IT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



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





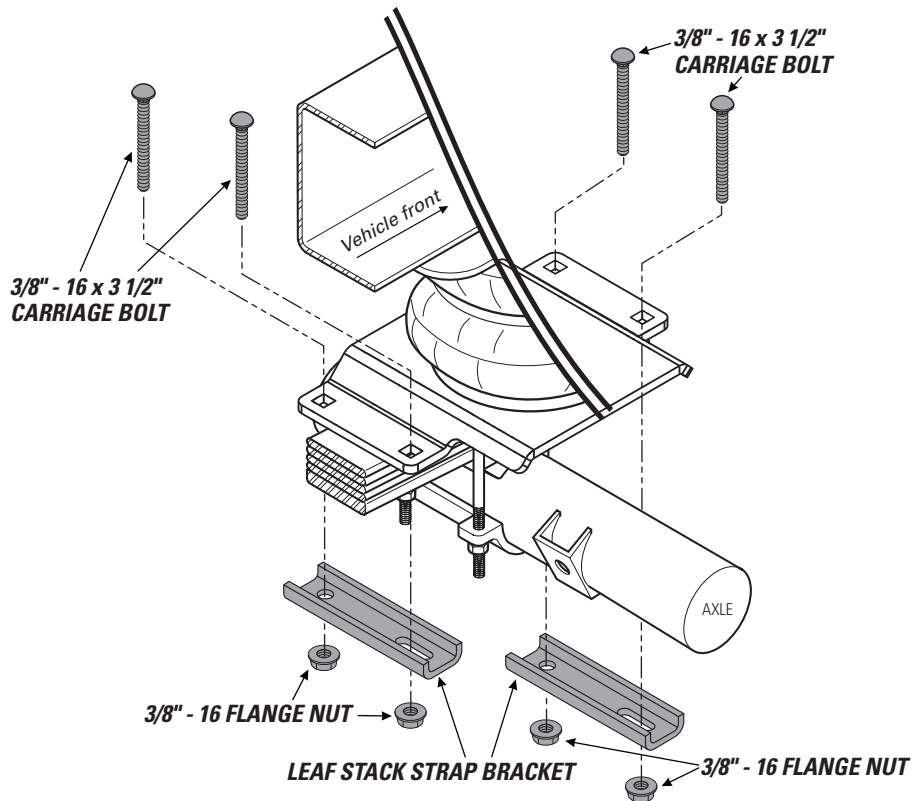


**1** Insert carriage bolts into holes in lower bracket.

**2** Install the leaf stack strap bracket onto the carriage bolts, under the leaf spring stack.

**3** Fasten the leaf stack strap brackets to the carriage bolts, as shown.

**4** Check for air spring clearance and adjust, if necessary.



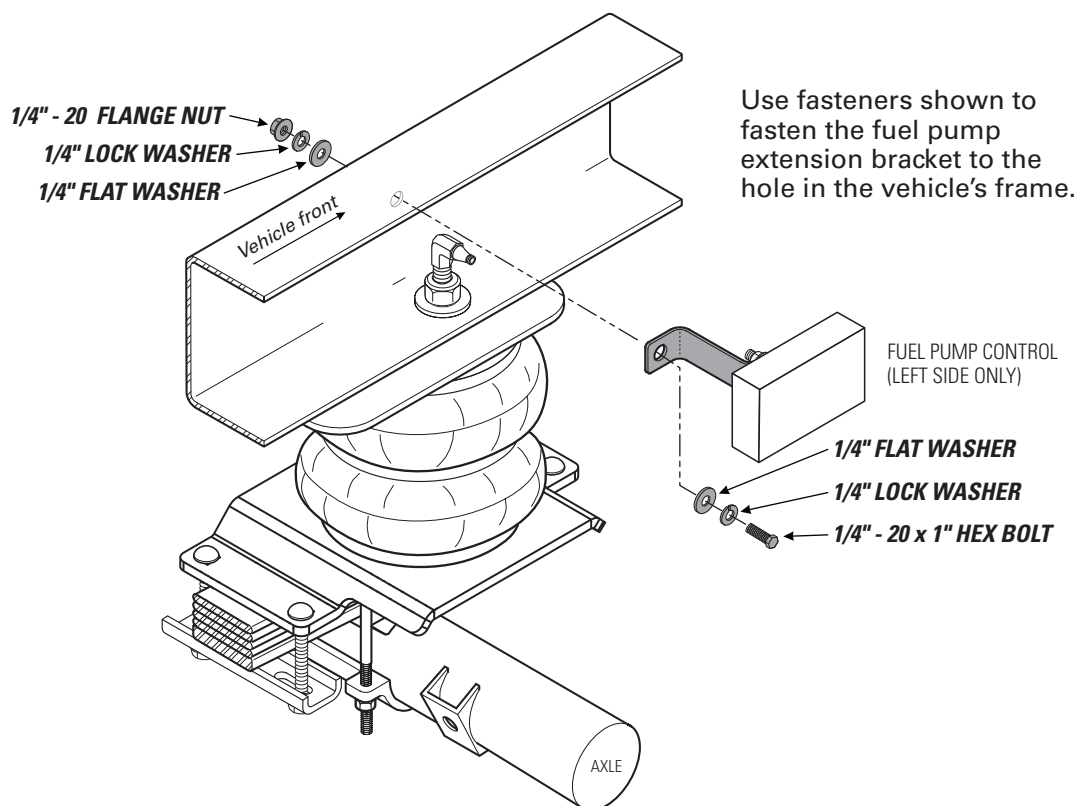
Alternate tightening of flange nuts to draw leaf stack strap brackets evenly to the leaf spring stack.



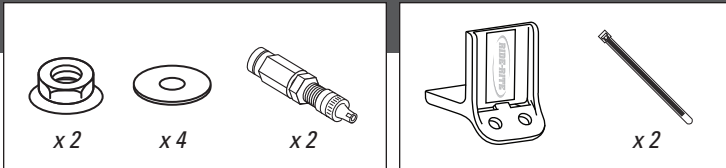
USE YOUR HAND TO CHECK FOR THE PROPER CLEARANCE AROUND THE AIR SPRING. IF YOUR HAND DOES NOT FIT BETWEEN THE AIR SPRING AND OTHER COMPONENTS, IT WILL RUB!

# 7

## REINSTALL THE FUEL PUMP CONTROL

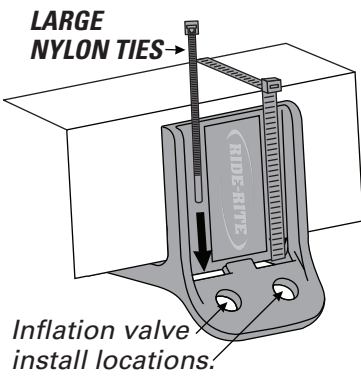


**AWESOME!** You're done with the left side. The right side installation is the same, with the exception of the fuel pump bracket. Go complete steps 1-7 for the right side, then continue to step 8.



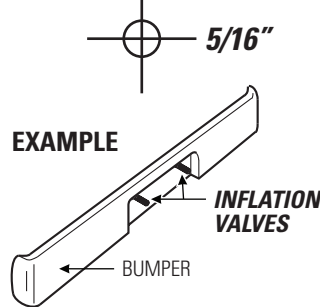
IF USING THE OPTIONAL NO-DRILL INFLATION VALVE BRACKET, CHOOSE OPTION 1. IF DRILLING, CHOOSE OPTION 2. **INFLATION VALVES MUST BE ACCESSIBLE BY AN AIR CHUCK.**

**1** Secure the Air Inflation Valve Bracket to a protected, secure location. **PROCEED TO STEP 3.**

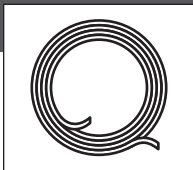
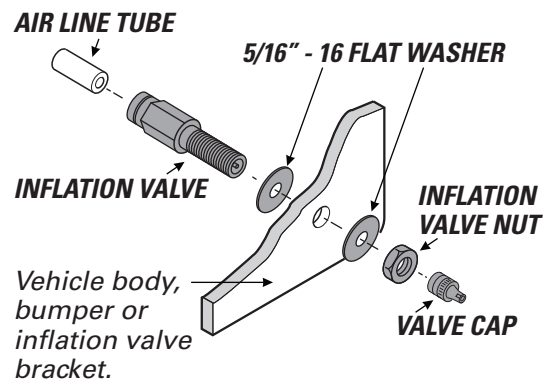


**2** Select a protected location to install the Inflation Valves, such as the bumper or the body of the vehicle.

Drill two 5/16" holes for Inflation Valve install locations.



**3** Install Inflation Valve assembly as shown.



**1** Match air line tube ends.



**2** Find center of air line tube, make a square cut with tube cutter or sharp utility knife.

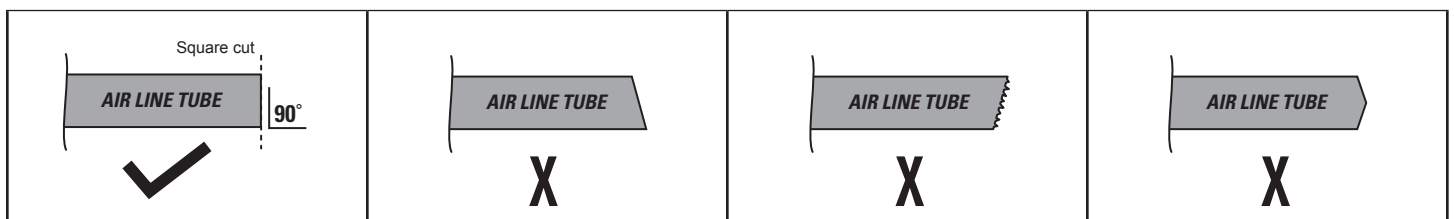
**DO**

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.

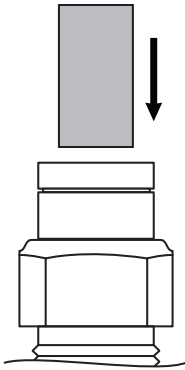
**PROPER AND IMPROPER CUTS IN THE AIR LINE TUBE**



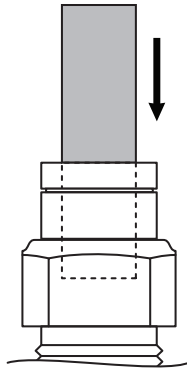
# 10

## INSTALLING AIR LINE TUBE INTO AIR FITTINGS AND INFLATION VALVE

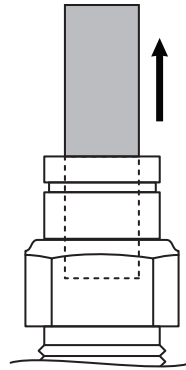
**1** Insert end of air line tube into air fitting.



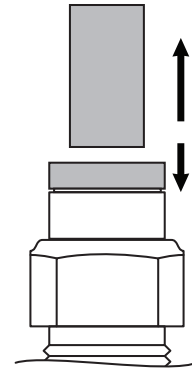
**2** Push air line tube into air fitting as far as possible.



**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.

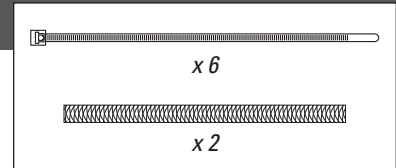


**Removal Tip:** Use a 1/4", 5/16", or 6mm open-ended wrench to push the collar down.

# 11

## 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.

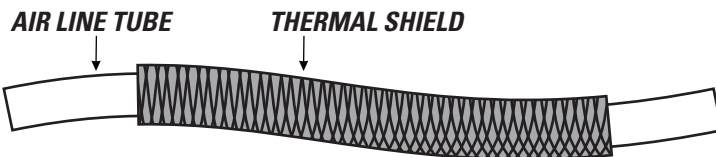


# DO

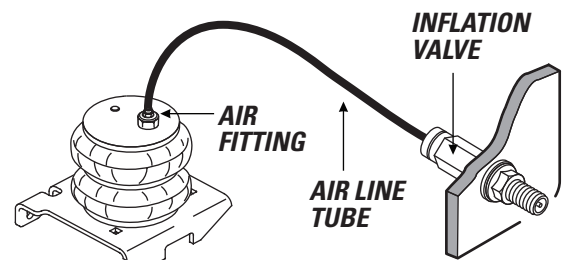
Select routes protected from heat, debris, and sharp edges. Use thermal shields near heat sources. Use nylon ties to secure the air line tube.

# DON'T

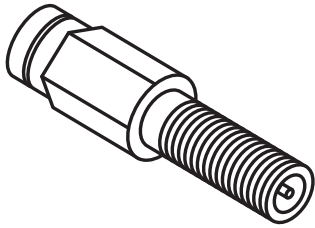
Bend or sharply curve air line tubes. Leave air line tube exposed to sharp edges. Use unnecessary lengths of air line tube. Route air line tube near moving parts. Let air line tube hang unsecured from vehicle. Scar air line tube while routing.



USE SUPPLIED THERMAL SHIELDS WHEN AIR LINE TUBE RUNS **WITHIN 6 INCHES** OF HEAT SOURCES.



- 1** Place an air chuck onto the inflation valve and fill the system to **70 PSI**.

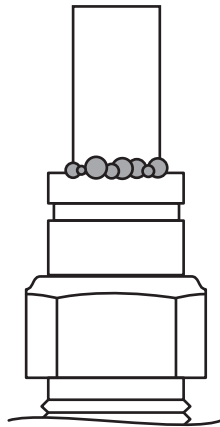


AIR SPRINGS INFLATE QUICKLY. CHECK AIR PRESSURE WHILE INFLATING.

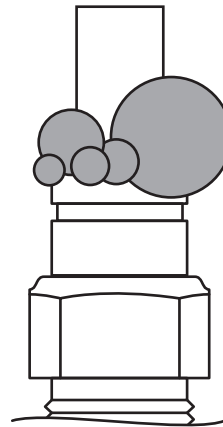
- 2** Spray fittings with soap and water mixture.



- 3** Observe bubbles.



**SMALL SOAP BUBBLES  
THAT DO NOT EXPAND**



**SOAP BUBBLES  
THAT EXPAND**



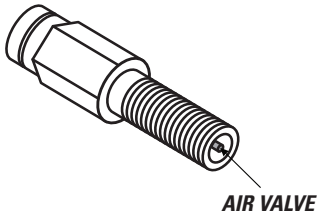
# NO LEAKS?

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

# LEAK?

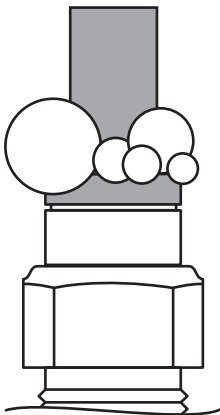
Bummer. Continue to step 13 to fix the leak.

- 1 Press the air valve on end of inflation valve to release all air pressure.



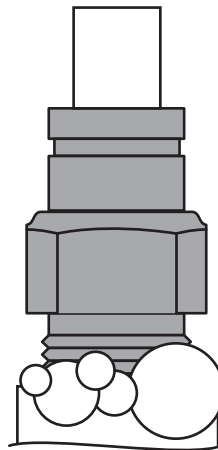
EXHAUST ALL AIR FROM THE SYSTEM PRIOR TO RELEASING AIR LINE TUBES FROM AIR FITTINGS.

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



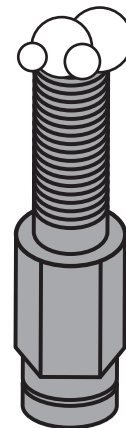
Release air line tube (see page 11). Review proper cuts and procedures in step 9. Repeat steps 10 and 12.

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



Tighten air fitting one turn or until leak stops.

#### LEAK OUT OF THE VALVE CORE ON INFLATION VALVE



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](http://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**

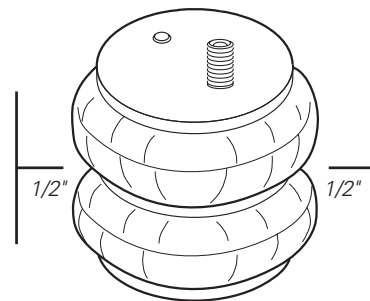
NEVER exceed the maximum load recommended by the vehicle manufacturer (GVWR). The GVWR can be found in your vehicle's owner's manual or on the data plate on the driver's side door. Consult your local dealership for additional GVWR specifications.

**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 investment 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.



MINIMUM PRESSURE



MAXIMUM PRESSURE (LOADED)

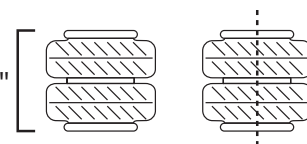


[riderite.com](http://riderite.com)

## BEFORE YOU DRIVE, CONFIRM THE FOLLOWING:

- 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!

5 1/2" - 6 1/2"



## NEED INSTALLATION HELP?

Email us at [rrtech@fsip.com](mailto:rrtech@fsip.com). Please include photos to help us better diagnose and understand any problems you may be experiencing.

**Firestone**  
Firestone Industrial Products

CONNECT WITH US



FirestoneIP



Firestone Ride-Rite