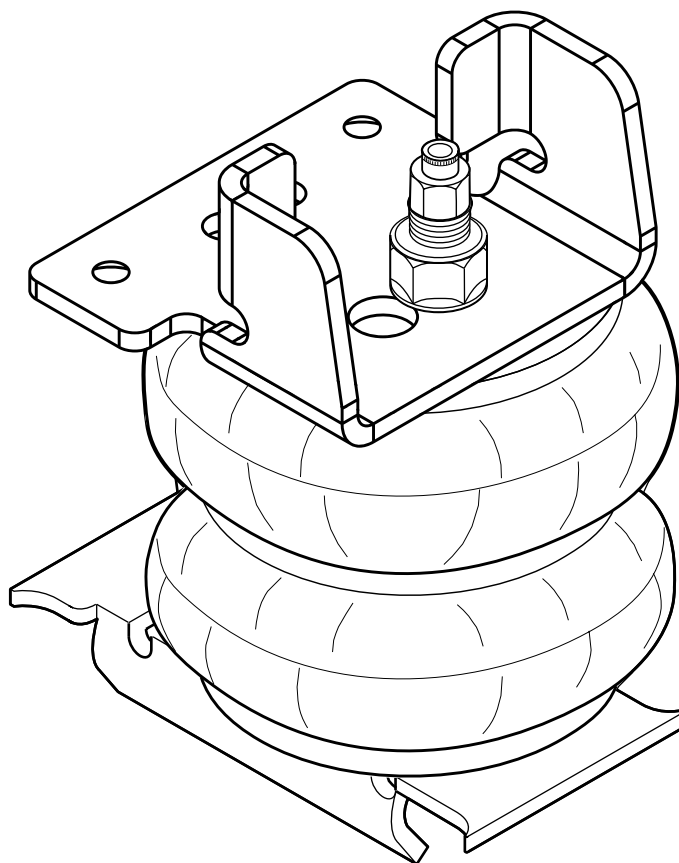




[riderite.com](http://riderite.com)

# 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.

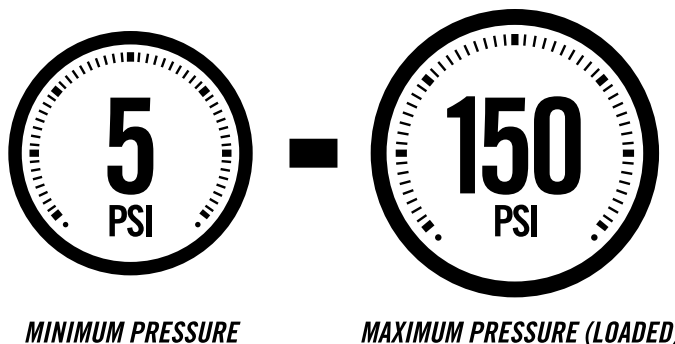
## **APPROPRIATE AIR PRESSURE**

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).


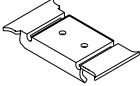
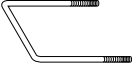
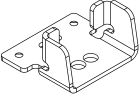
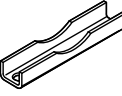


**ONCE INSTALLED SUCCESSFULLY, FOLLOW THESE PRESSURE REQUIREMENTS FOR THE AIR SPRINGS:**





# PARTS

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







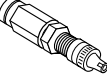




## MAIN KIT CONTENTS

PT # 8401	 x2 AIR SPRING	PT # 5841	 x2 LOWER BRACKET	PT # 3511	 x2 BAIL CLAMP
PT # 5906	 x2 UPPER BRACKET	PT # 5896	 x2 AXLE STRAP BRACKET	PT # 1004	 x1 HEAT SHIELD
				PT # 9153	 x1 AIR LINE TUBE (30 FEET)

## A24-760-7560 INFLATION VALVE BRACKET KIT

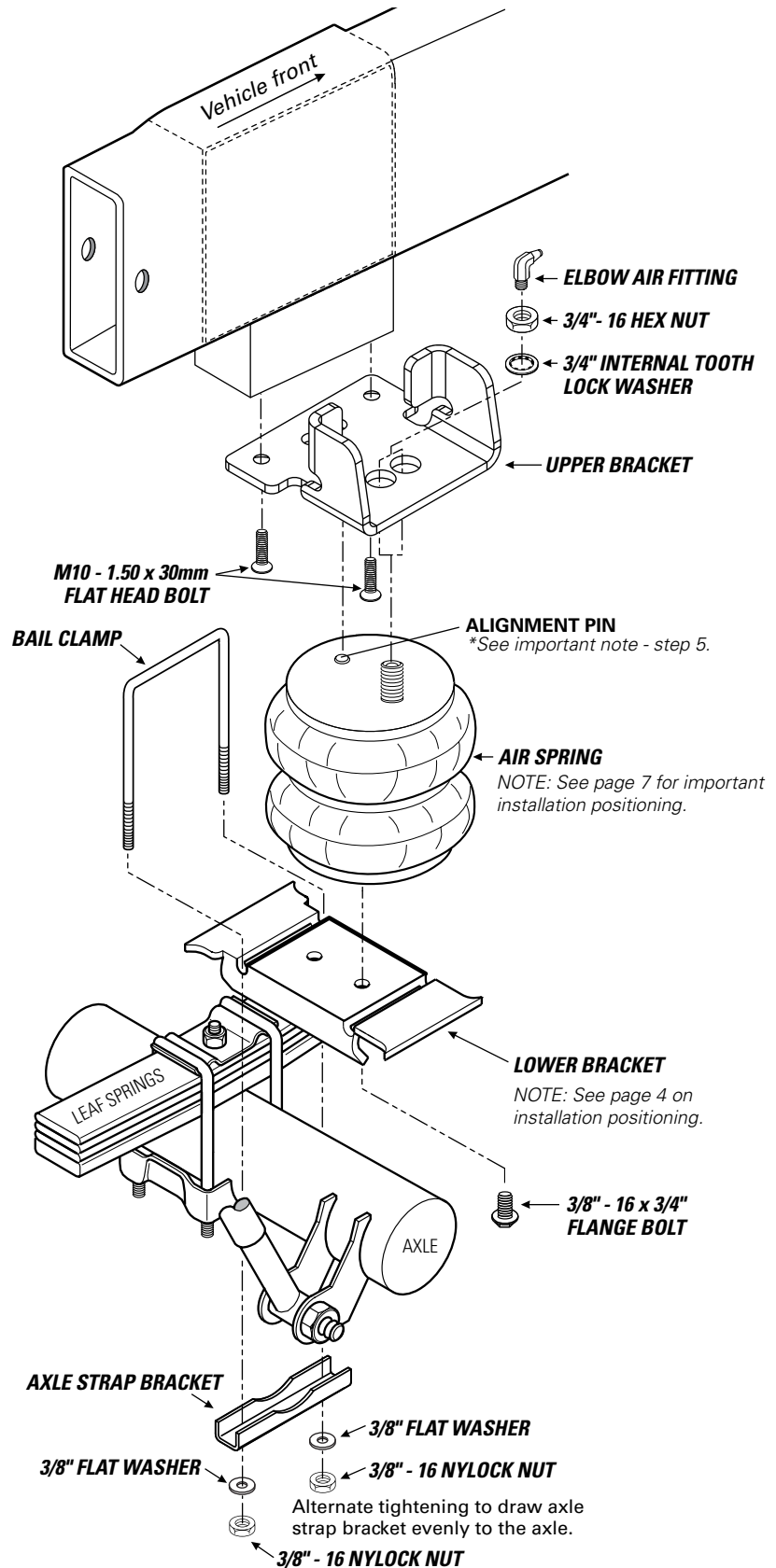
PT # 9483	 x1 NO-DRILL INFLATION VALVE BRACKET	PT # 9488	 x2 LARGE NYLON TIE
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## A21-760-2705 HARDWARE PACK

PT # 3490	 x2 3/8" - 16 x 3/4" FLANGE BOLT	PT # 3488	 x4 3/8" - 16 NYLOCK NUT	PT # 3293	 x4 M10 - 1.50 x 30mm FLAT HEAD BOLT
PT # 3064	 x2 3/4" INTERNAL TOOTH LOCK WASHER	PT # 3485	 x2 3/4" - 16 HEX NUT	PT # 3031	 x2 ELBOW AIR FITTING
PT # 3032	 x2 INFLATION VALVE AND VALVE CAP ASSEMBLY	PT # 3033	 x4 5/16" FLAT WASHER	PT # 9168	 x6 BLACK NYLON TIE
PT # 3493	 x4 3/8" FLAT WASHER			PT # 0899	 x2 THERMAL SLEEVE

# CONTENTS AND OVERVIEW

PAGE 4	REMOVE JOUNCE BUMPER & SELECT LOWER BRACKET ORIENTATION
PAGE 5	FASTEN AIR SPRING TO LOWER BRACKET
PAGE 6	INSTALL UPPER BRACKET
PAGE 7	AIR SPRING ASSEMBLY INSTALLATION
PAGE 8	AXLE STRAP BRACKET INSTALLATION
PAGE 9	HEAT SHIELD & PASSENGER SIDE
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

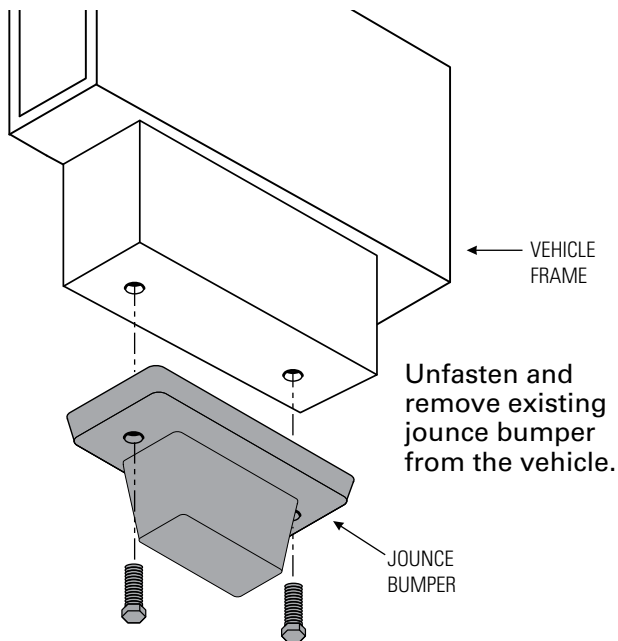


# REMOVE EXISTING JOUNCE BUMPER

1

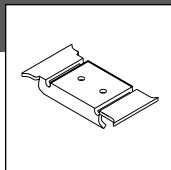


START THE INSTALLATION ON THE LEFT SIDE OF THE VEHICLE WHEN FACING FORWARD.



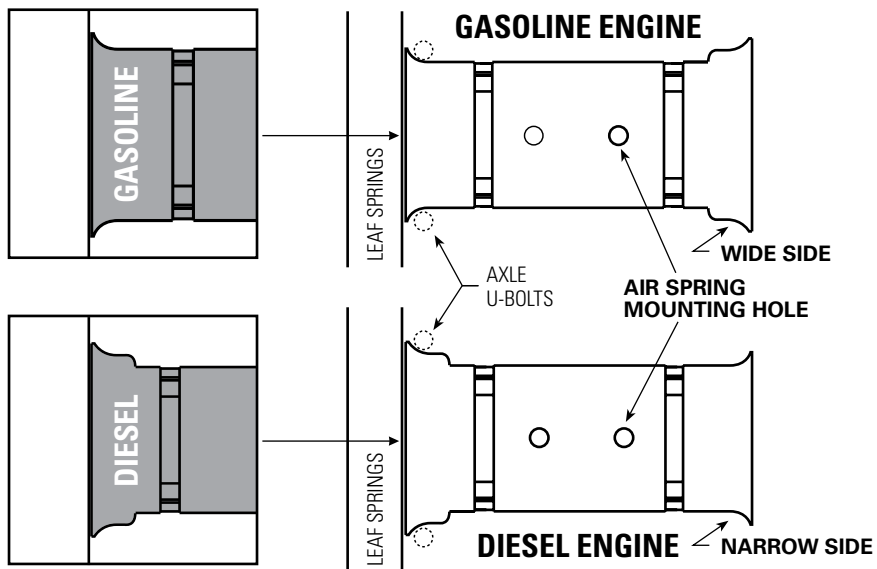
# DETERMINE LOWER BRACKET ORIENTATION

2



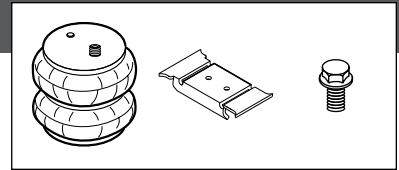
THE ORIENTATION OF THE BRACKET IS IMPORTANT. NOTE THE DIFFERENCE AND USE THE CORRECT SIDE FOR YOUR VEHICLE.

## LOWER BRACKET ORIENTATION



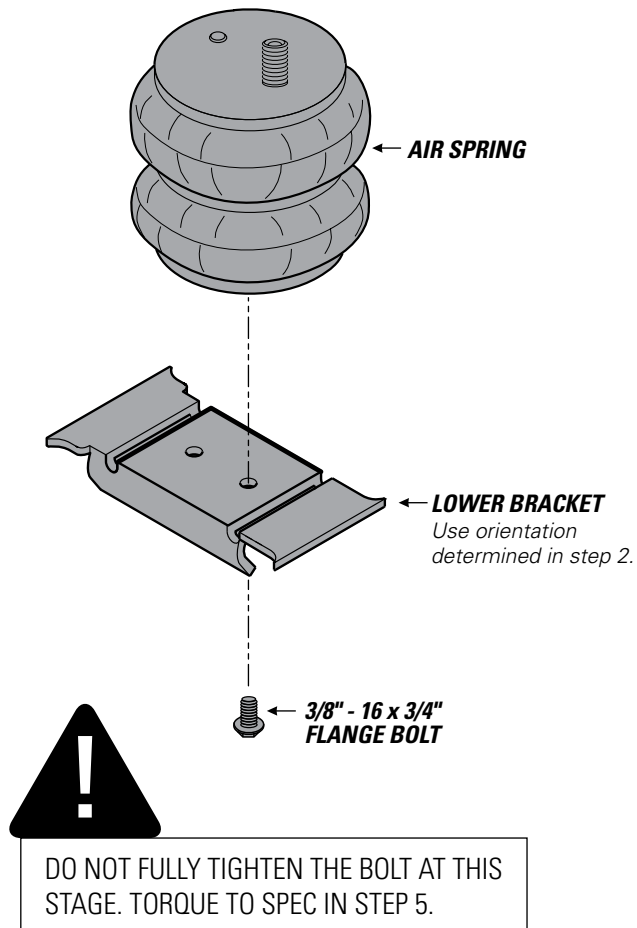
# 3

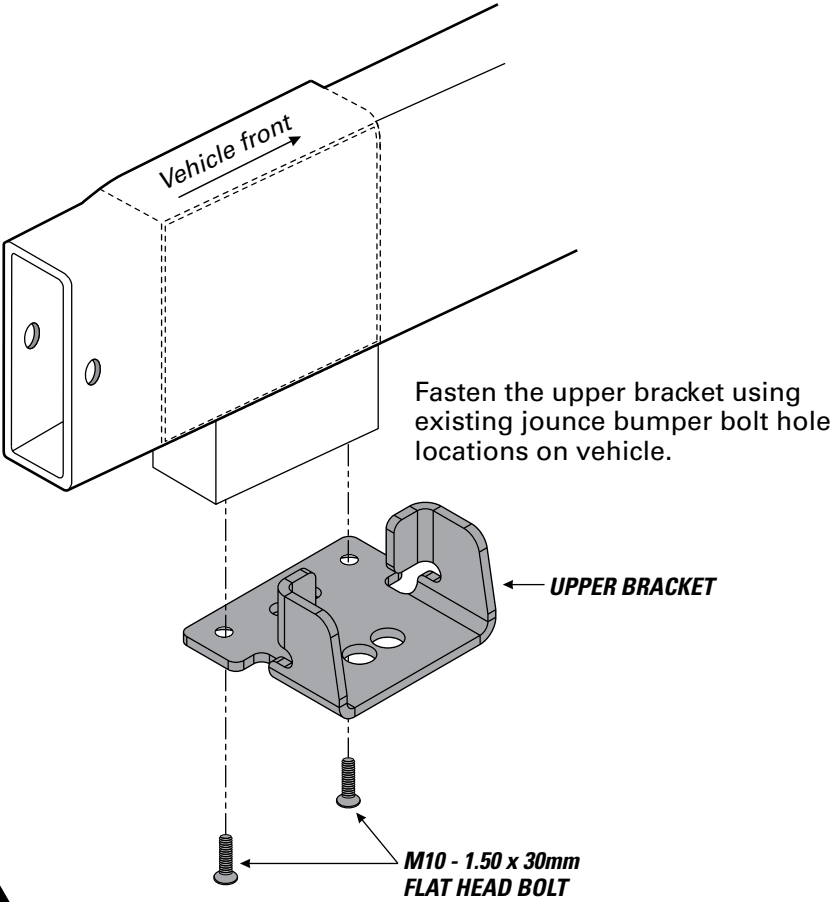
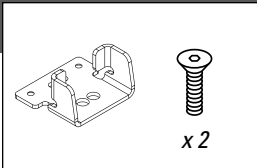
## FASTEN AIR SPRING TO LOWER BRACKET



**1** Install the air spring to the lower bracket, as shown.

**2** Do not fully tighten the fastener at this stage.





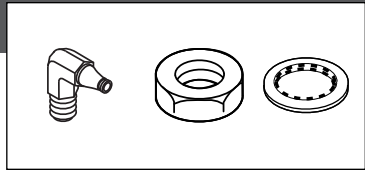
MAKE SURE THE UPPER BRACKET ASSEMBLY IS FASTENED TIGHTLY TO THE VEHICLE FRAME.

# 5

## INSTALL AIR SPRING ASSEMBLY



INSTALLING THE RIGHT SIDE? REMEMBER STEP 7 FIRST!

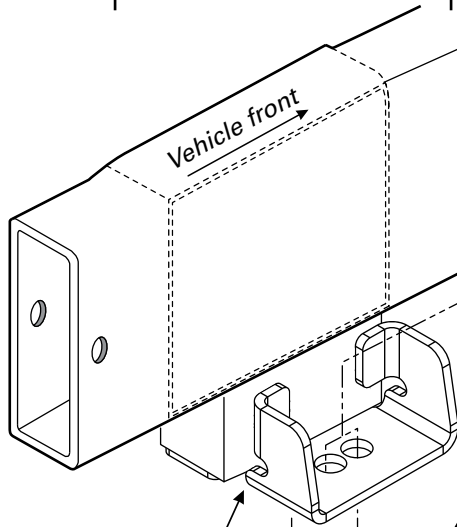


**1** Follow guidelines below to dry fit assembly. Make alignment marks as shown.

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

**3** Fully tighten flange bolt to fasten the air spring to the lower bracket.

**4** Install assembly and follow the guidelines.



**ELBOW AIR FITTING**

Tighten until threadlock coating is fully engaged.



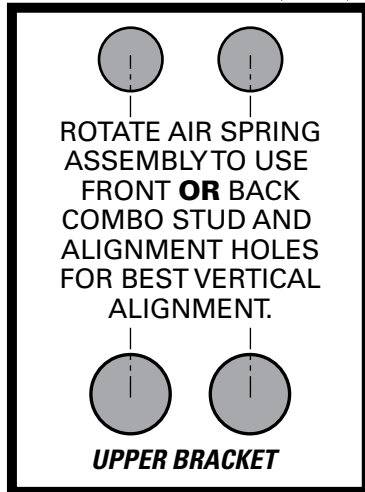
**3/4" - 16 HEX NUT**

Thread onto outside of air combo stud.



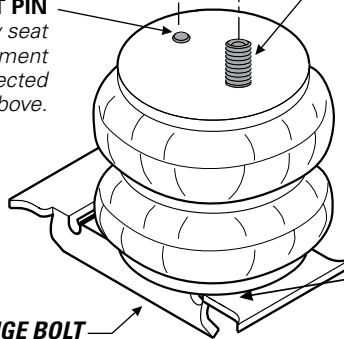
**3/4" INTERNAL TOOTH LOCK WASHER**

**VIEW FROM BELOW**



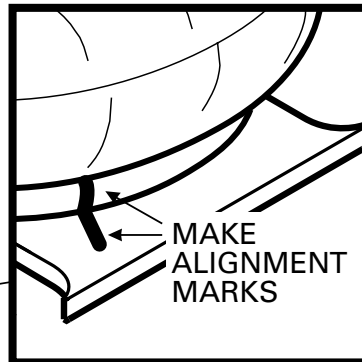
ALIGNMENT PIN ON AIR SPRINGS MUST BE FULLY SEAT INTO ONE OF THE ALIGNMENT HOLES IN THE UPPER BRACKET. FAILURE TO DO SO WILL CAUSE IT TO BE PUSHED INTO THE BEAD PLATE, CREATING AN AIR LEAK, AND RESULTING IN AN AIR SPRING FAILURE THAT IS **NOT WARRANTABLE. THE ALIGNMENT PIN CANNOT HOLD 2,500 LBS! IT IS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

**ALIGNMENT PIN**  
Must fully seat into alignment hole selected above.

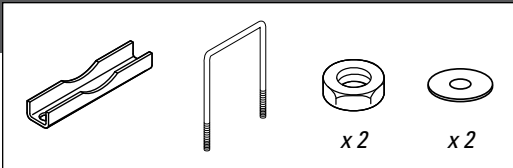


AIR COMBO STUD

**3/8" - 16 x 3/4" FLANGE BOLT**  
Match alignment marks



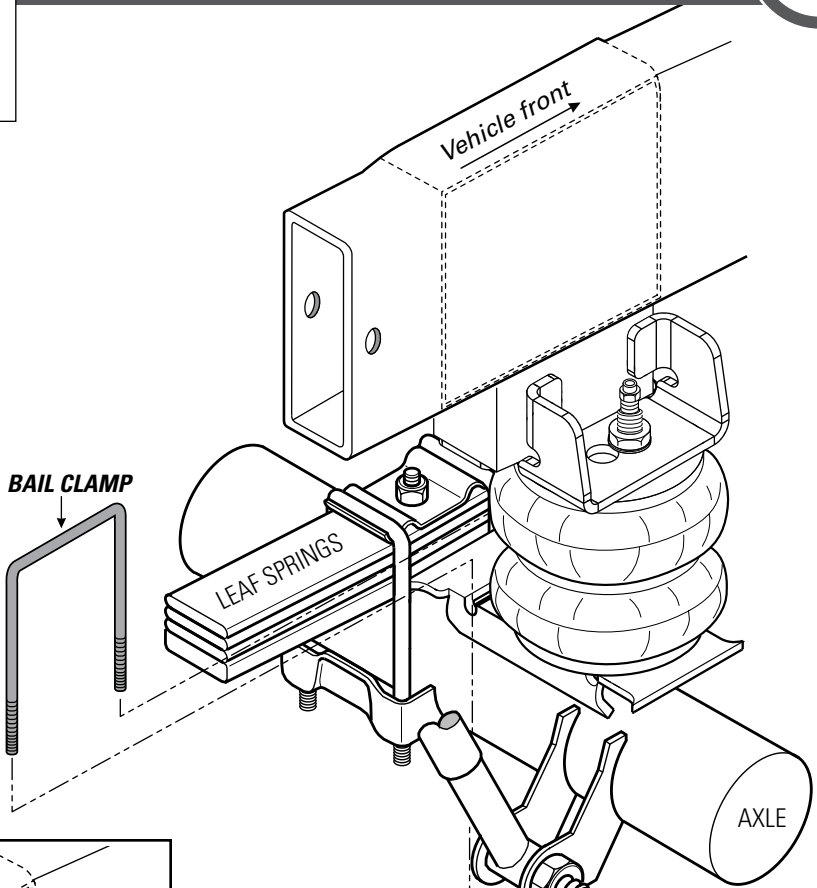




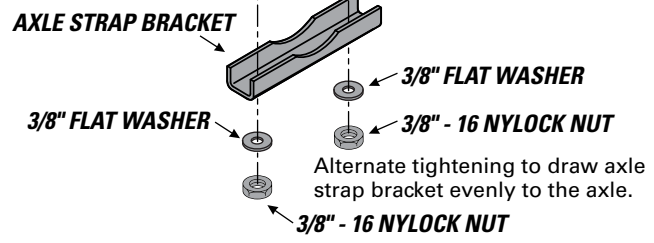
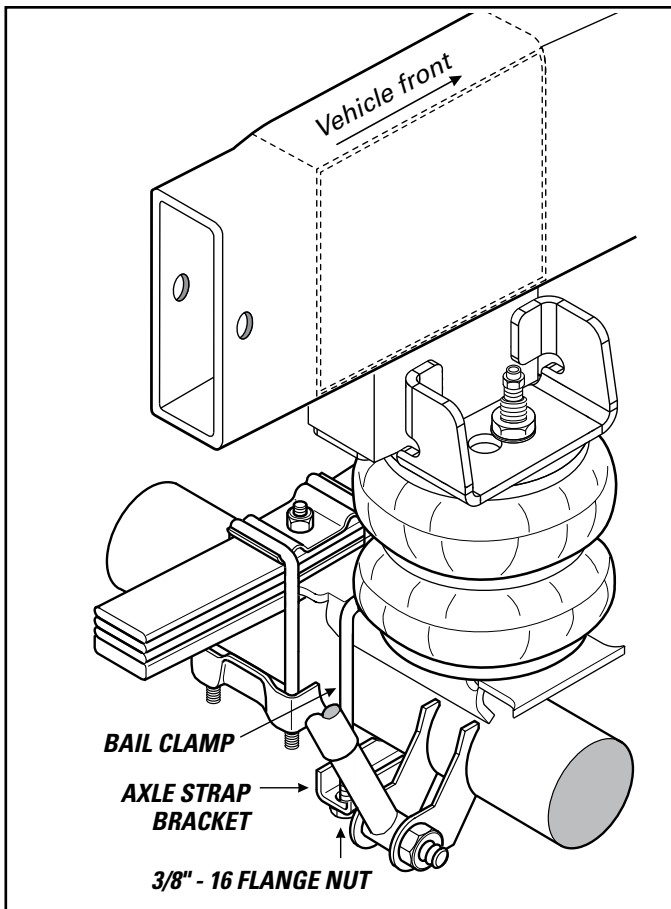
**1** Assure that the lower bracket is tight against the leaf spring stack on the vehicle.

**2** Install the bail clamp over the lower bracket, assuring that the bail clamp is positioned into the lower bracket notches, as shown.

**3** Alternate tightening of the 3/8"-16 nylock nuts to draw axle strap bracket evenly around the axle.



**BAIL CLAMP INSTALLED**



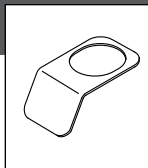
**!**

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

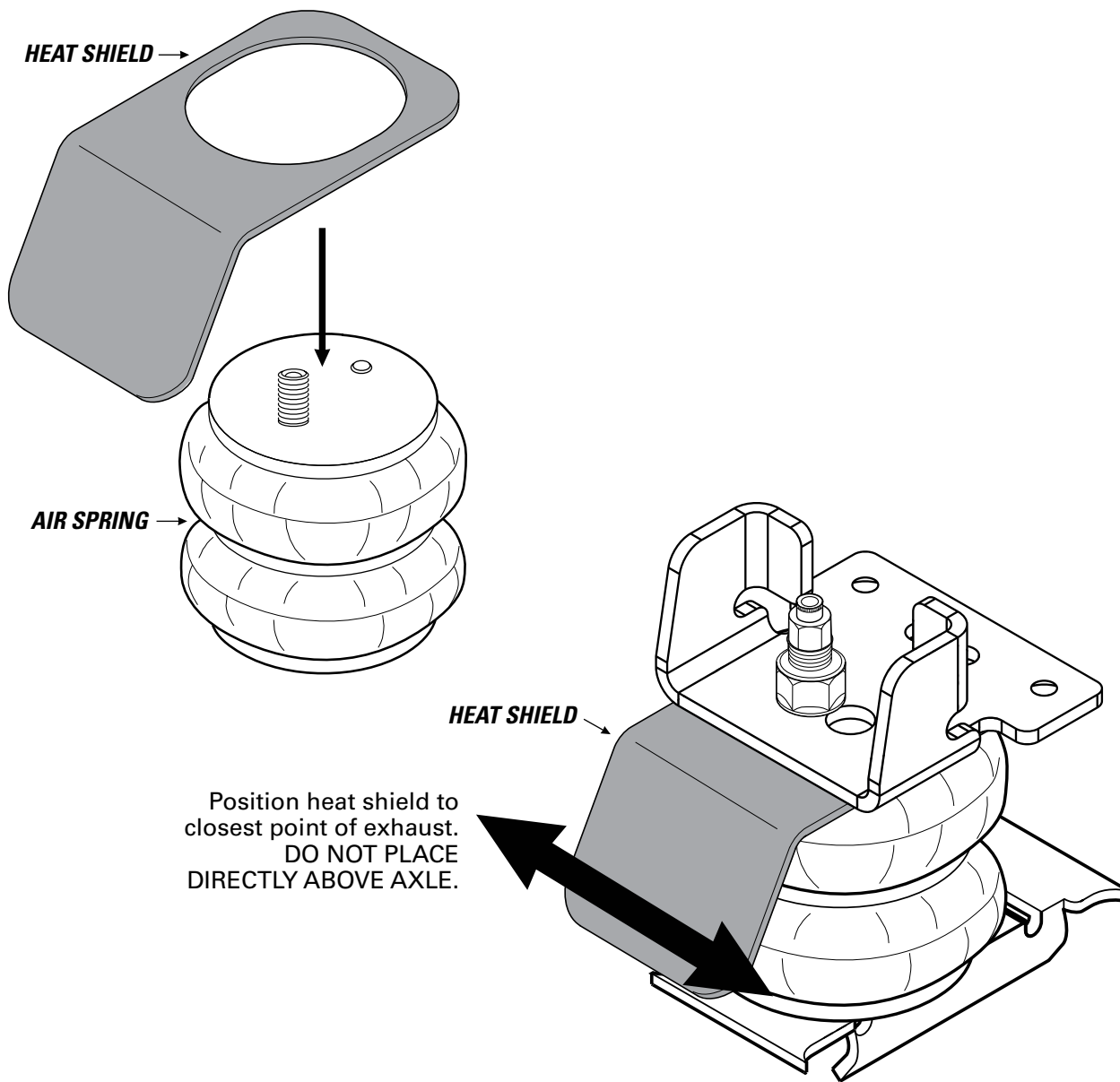
## INSTALL RIGHT SIDE WITH HEAT SHIELD

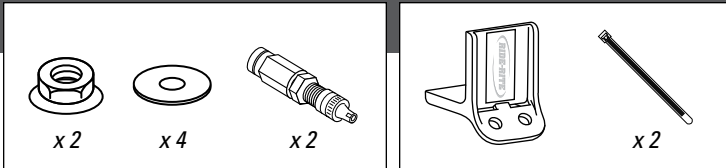


**AWESOME!** You're done with the left side. The right side installation is the same, with the addition of this step. Go complete steps 1-4 for the right side, then complete this step before continuing to step 5.



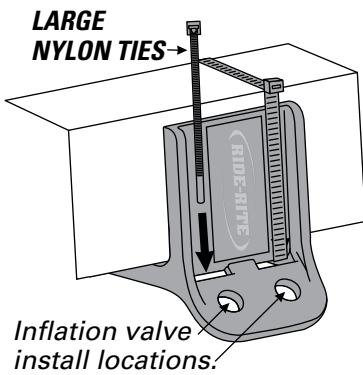
**RIGHT SIDE INSTALLATION MUST INCLUDE HEAT SHIELD!**





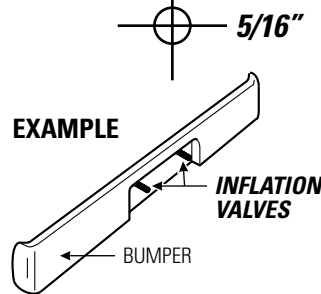
IF USING THE OPTIONAL NO-DRILL INFLATION VALVE BRACKET, CHOOSE OPTION 1. IF DRILLING, CHOOSE OPTION 2. **INFLATION VALVES MUST BE ACCESSIBLE BY AN AIR CHUCK.**

**1** Secure the air inflation valve bracket to a protected, secure location. **PROCEED TO STEP 3.**

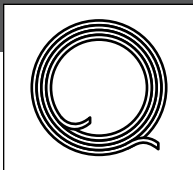
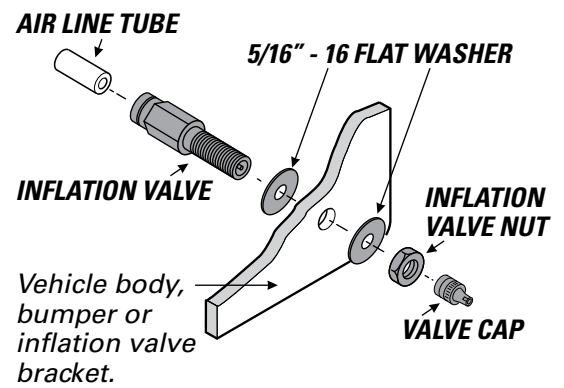


**2** Select a protected location to install the inflation valves, such as the bumper or the body of the vehicle.

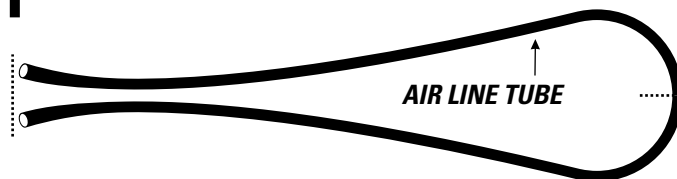
Drill two 5/16" holes for Inflation Valve install locations.



**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.

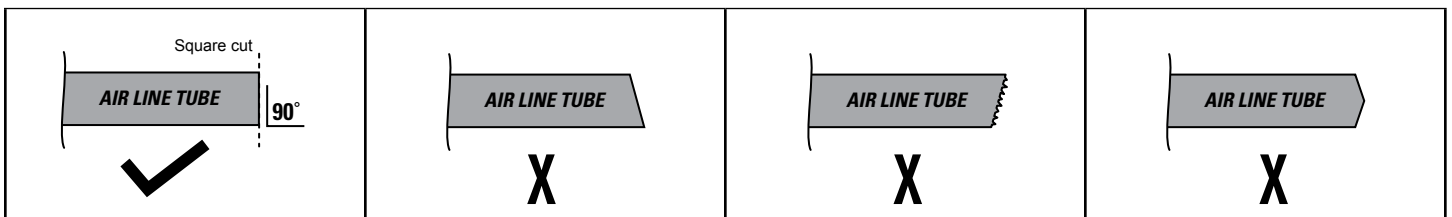
**DO**

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.

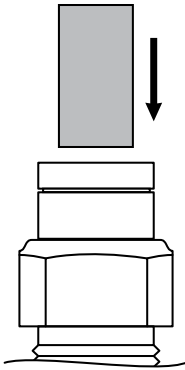
**PROPER AND IMPROPER CUTS IN THE AIR LINE TUBE**



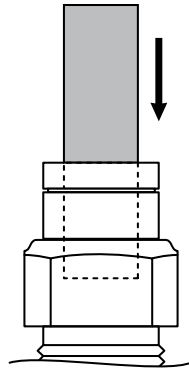
# 10

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

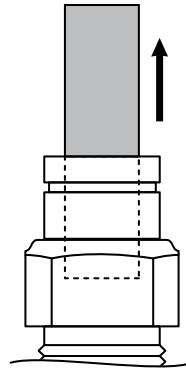
**1** Insert end of air line tube into air fitting.



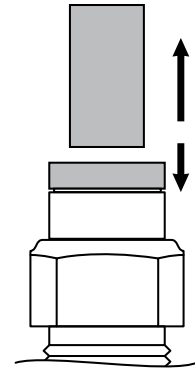
**2** Push air line tube into air fitting as far as possible.



**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.

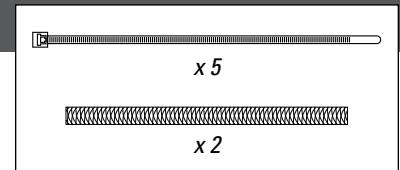


**Removal Tip:** Use a 1/4", 5/16", or 6mm open-ended wrench to push the collar down.

# 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.

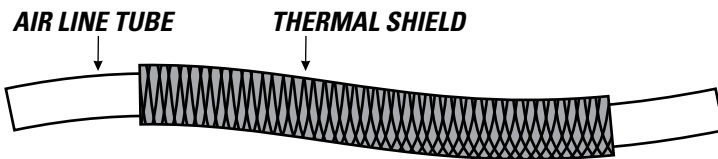


# DO

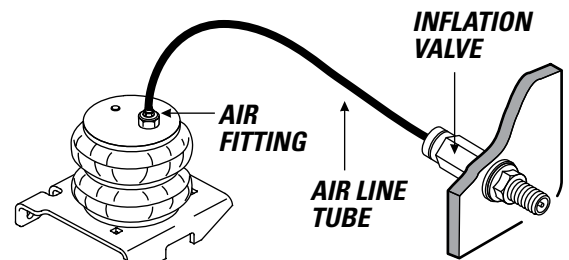
Select routes protected from heat, debris, and sharp edges. Use thermal shields near heat sources. Use Nylon ties to secure the air line tube.

# DON'T

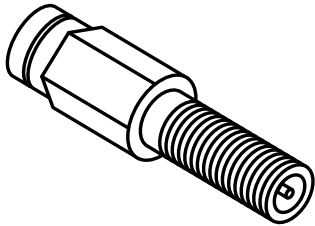
Bend or sharply curve air line tubes. Leave air line tube exposed to sharp edges. Use unnecessary lengths of air line tube. Route air line tube near moving parts. Let air line tube hang unsecured from vehicle. Scar air line tube while routing.



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**.

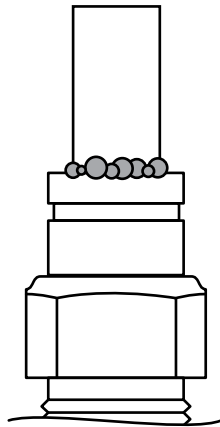


AIR SPRINGS INFLATE QUICKLY. CHECK AIR PRESSURE WHILE INFLATING.

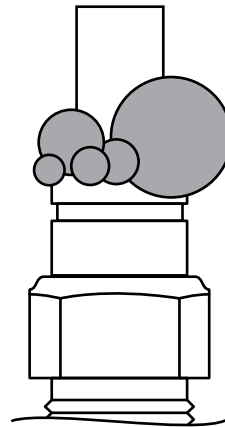
- 2** Spray fittings with soap and water mixture.



- 3** Observe bubbles.



**SMALL SOAP BUBBLES  
THAT DO NOT EXPAND**



**SOAP BUBBLES  
THAT EXPAND**



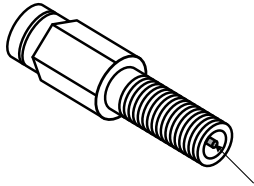
# NO LEAKS?

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.

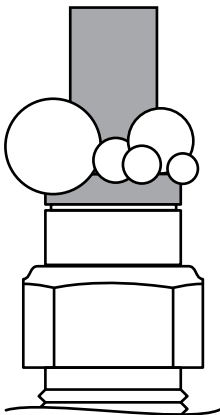


AIR VALVE



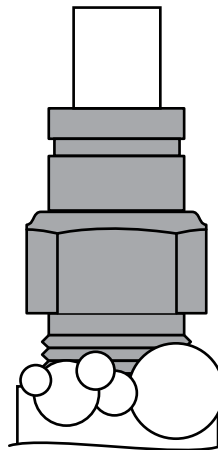
EXHAUST ALL AIR FROM THE SYSTEM PRIOR TO RELEASING AIR LINE TUBES FROM AIR FITTINGS.

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



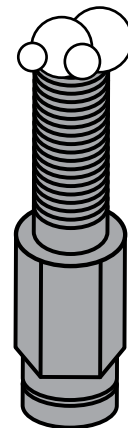
Release air line tube (see page 11). Review proper cuts and procedures in step 9. Repeat steps 10 and 12.

#### 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.

**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**

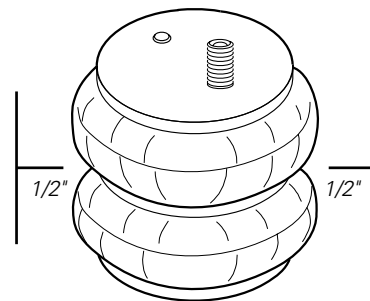
NEVER exceed the maximum load recommended by the vehicle manufacturer (GVWR). The GVWR can be found in your vehicle's owner's manual or on the data plate on the driver's side door. Consult your local dealership for additional GVWR specifications.

**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



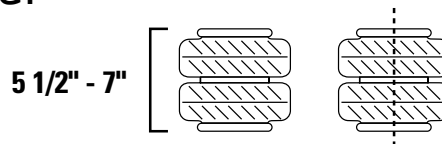
MAXIMUM PRESSURE (LOADED)



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

# Firestone

Firestone Industrial Products

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Firestone Ride-Rite