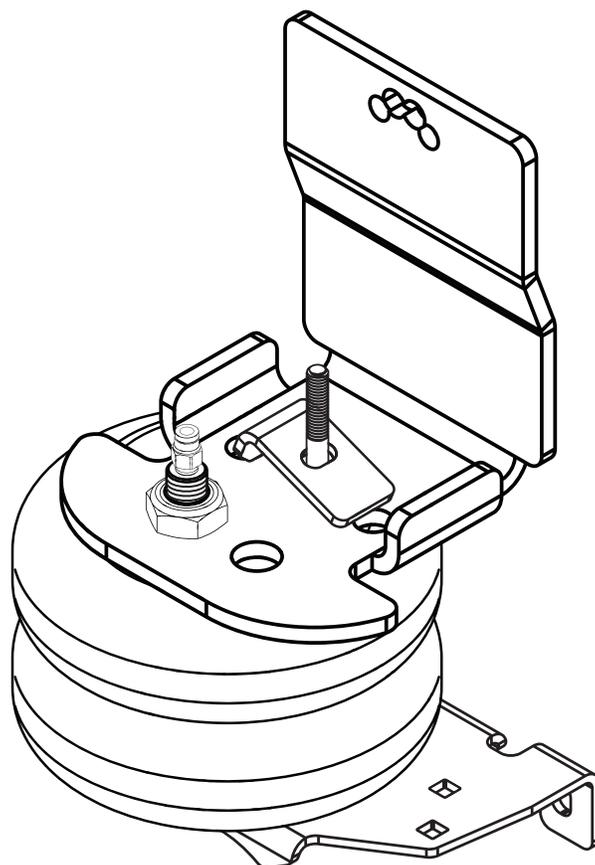




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# INSTALLATION INSTRUCTIONS



**Firestone**

Firestone Industrial Products

# ! IMPORTANT

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

**DO NOT INSTALL IF THE TRUCK HAS BEEN LIFTED AND THE STOCK JOUNCE BUMPER SPACERS ARE NOT ON THE VEHICLE.** 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.

## **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.

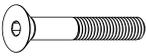
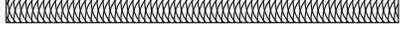
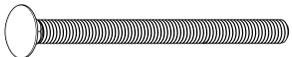
## MAIN KIT CONTENTS

PT # 6397	 x2 AIR SPRING	PT # 5923	 x2 UPPER BRACKET	PT # 1004	 x1 HEAT SHIELD
PT # 5564	 x2 LOWER BRACKET	PT # 5924	 x2 UPPER SECONDARY BRACKET	PT # 9414	 x1 AIR LINE TUBE (18 FEET)

## A24-760-7560 INFLATION VALVE BRACKET KIT

PART # 9483	 x1 NO-DRILL INFLATION VALVE BRACKET	PART # 9488	 x2 LARGE NYLON TIE
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## A21-760-2622 HARDWARE PACK

PT # 3345	 x2 3/8" - 16 x 2.5" FLAT HEAD BOLT	PT # 0055	 x2 5/16" - 24 x 1" HEX HEAD BOLT	PT # 9036	 x6 RED NYLON TIE
PT # 0681	 x2 3/8" - 16 x .75" HEX HEAD BOLT	PT # 3056	 x2 5/16" - 24 FLANGE LOCK NUT	PT # 0899	 x2 THERMAL SLEEVE
PT # 3033	 x6 5/16" FLAT WASHER	PT # 3373	 x2 3/8" - 16 BAIL CLAMP	PT # 3076	 x4 3/8" - 16 x 4" CARRIAGE BOLT
PT # 3332	 x2 5/8" - 18 NYLON JAM NUT	PT # 1163	 x2 AXLE BRACKET STRAP	PT # 3032	 x2 INFLATION VALVE AND VALVE CAP ASSEMBLY
PT # 3067	 x10 3/8" - 16 FLANGE LOCK NUT			PT # 3055	 x2 1/8 NPT MALE AIR FITTING

# CONTENTS AND OVERVIEW

PAGE **4** REMOVE VEHICLE JOUNCE BUMPER & CREATE UPPER BRACKET ASSEMBLY

PAGE **5** INSTALL UPPER BRACKET ASSEMBLY TO VEHICLE

PAGE **6** CREATE AIR SPRING ASSEMBLY

PAGE **7** INSTALL AIR SPRING TO UPPER BRACKET

PAGE **8** INSTALL LOWER BRACKET

PAGE **9** INSTALL HEAT SHIELD

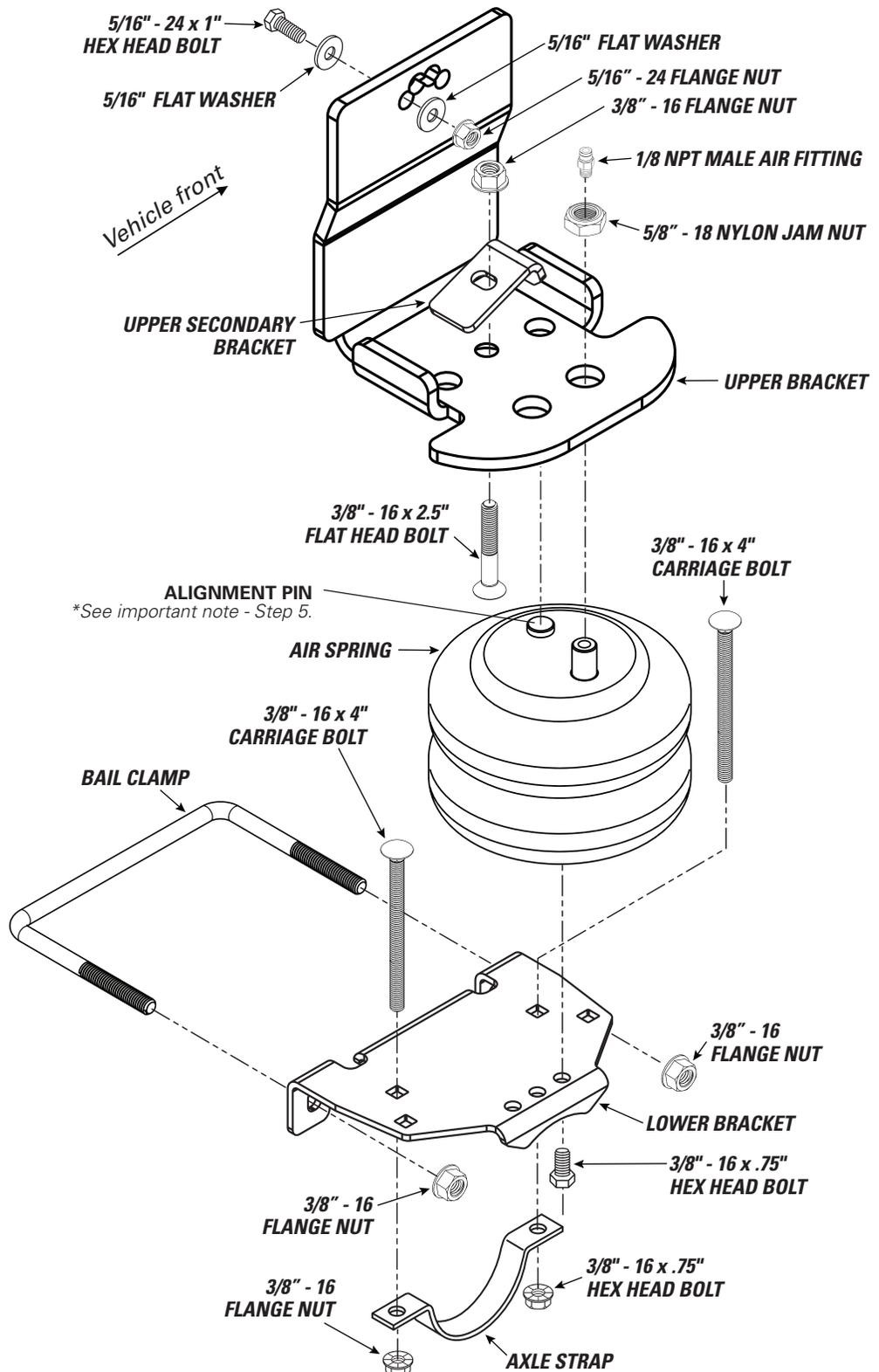
PAGE **10** AIR LINE TUBE & INFLATION VALVE INSTALLATION

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

PAGE **12** CHECKING THE SYSTEM

PAGE **13** FIXING AN AIR LEAK

PAGE **14** FINISHING THE INSTALLATION

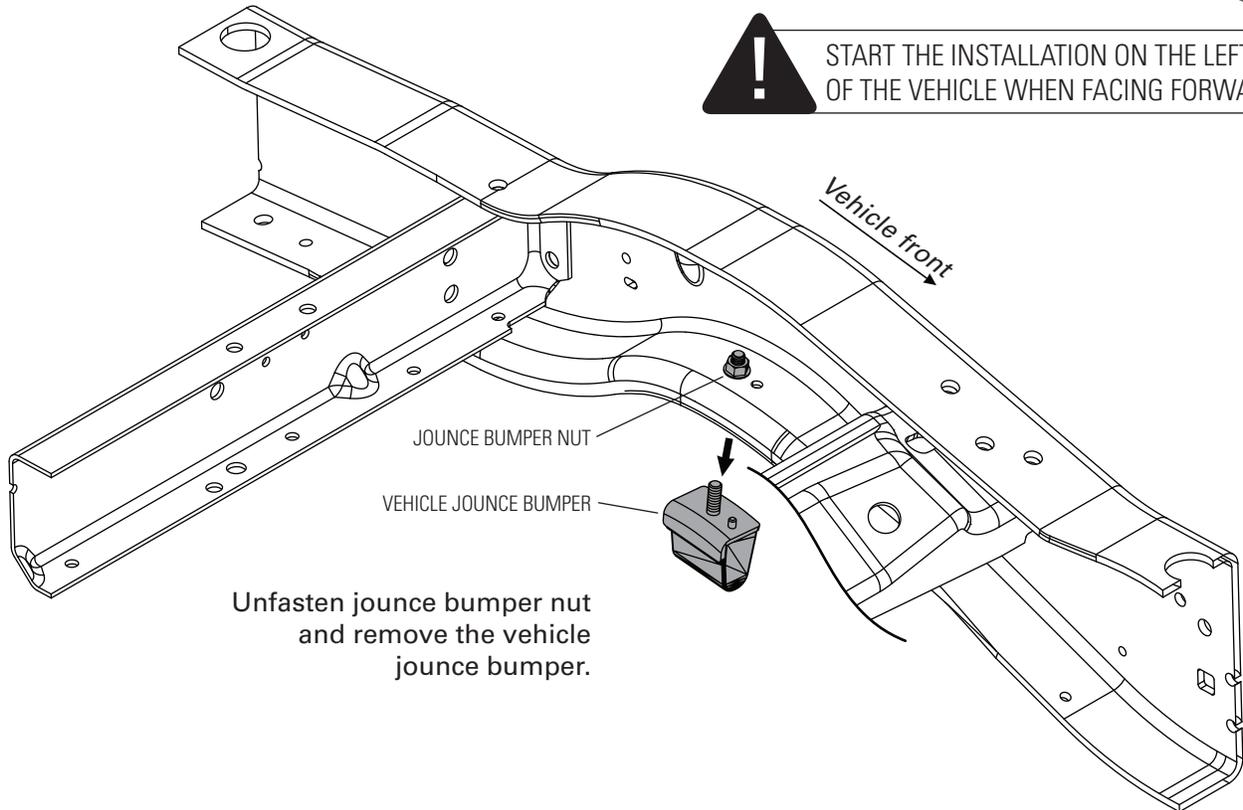


## REMOVE VEHICLE JOUNCE BUMPER

1



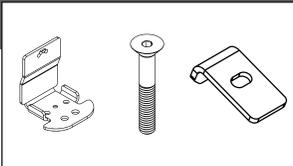
START THE INSTALLATION ON THE LEFT SIDE OF THE VEHICLE WHEN FACING FORWARD.



Unfasten jounce bumper nut and remove the vehicle jounce bumper.

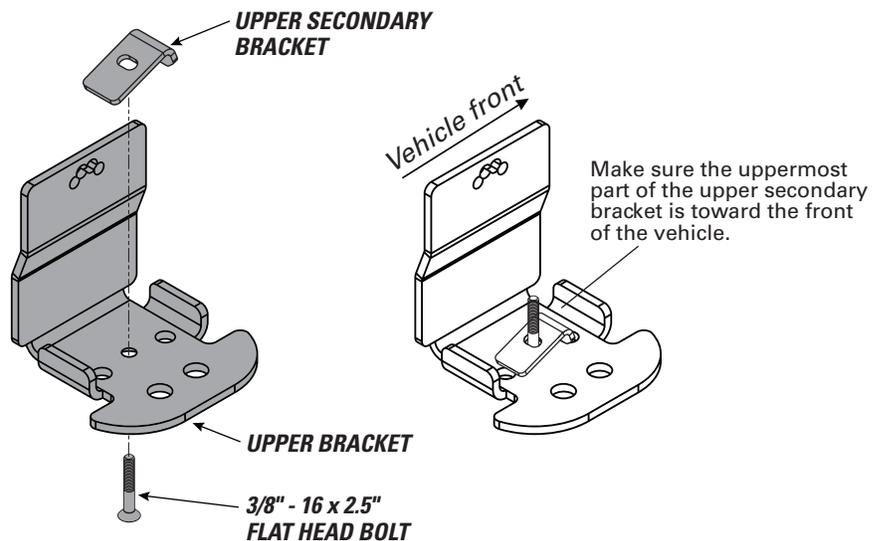
## CREATE UPPER BRACKET ASSEMBLY

2



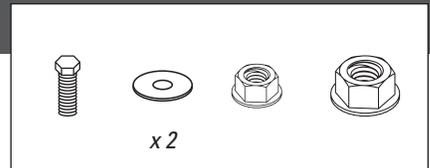
**1** Insert 3/8" - 16 x 2.5" flat head bolt through the upper bracket, as shown.

**2** Place upper secondary bracket over the 3/8" - 16 x 2.5" bolt and on top of main bracket. **Make sure the uppermost part of the secondary bracket is toward the front of the vehicle.**

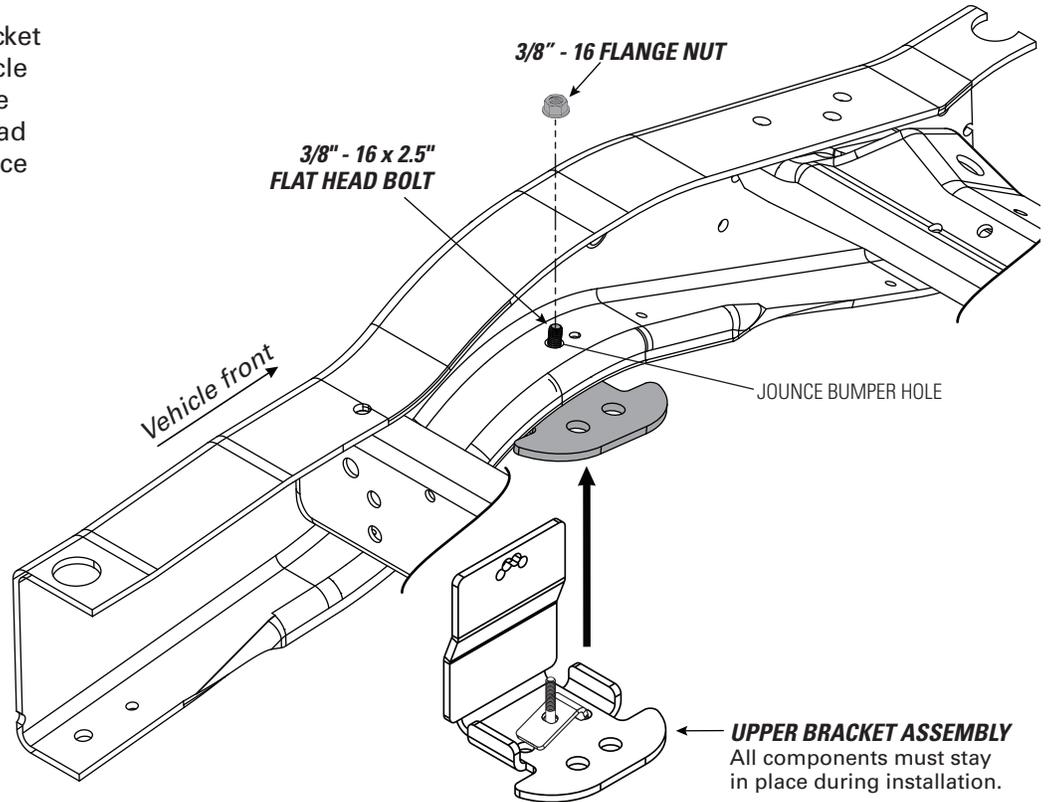


# 3

## INSTALL UPPER BRACKET ASSEMBLY TO VEHICLE

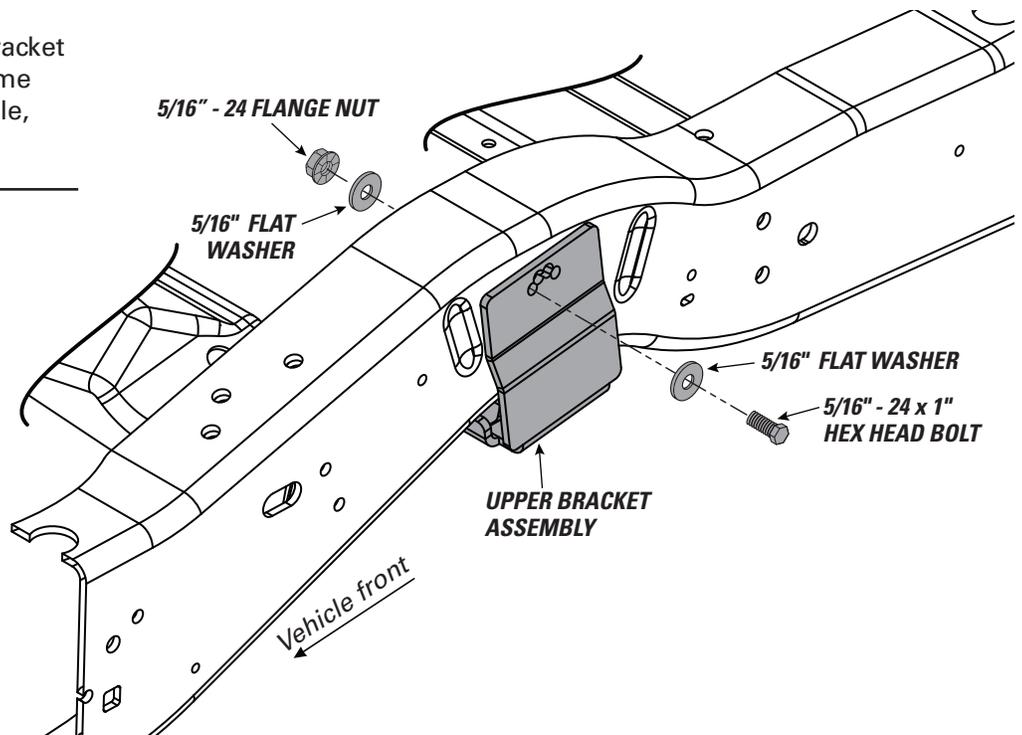


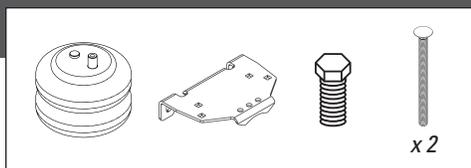
**1** Fasten the upper bracket assembly to the vehicle frame by inserting the 3/8" - 16 x 2.5" flat head bolt through the jounce bumper hole.



**2** Loosely attach upper bracket assembly to side of frame through appropriate hole, as shown.

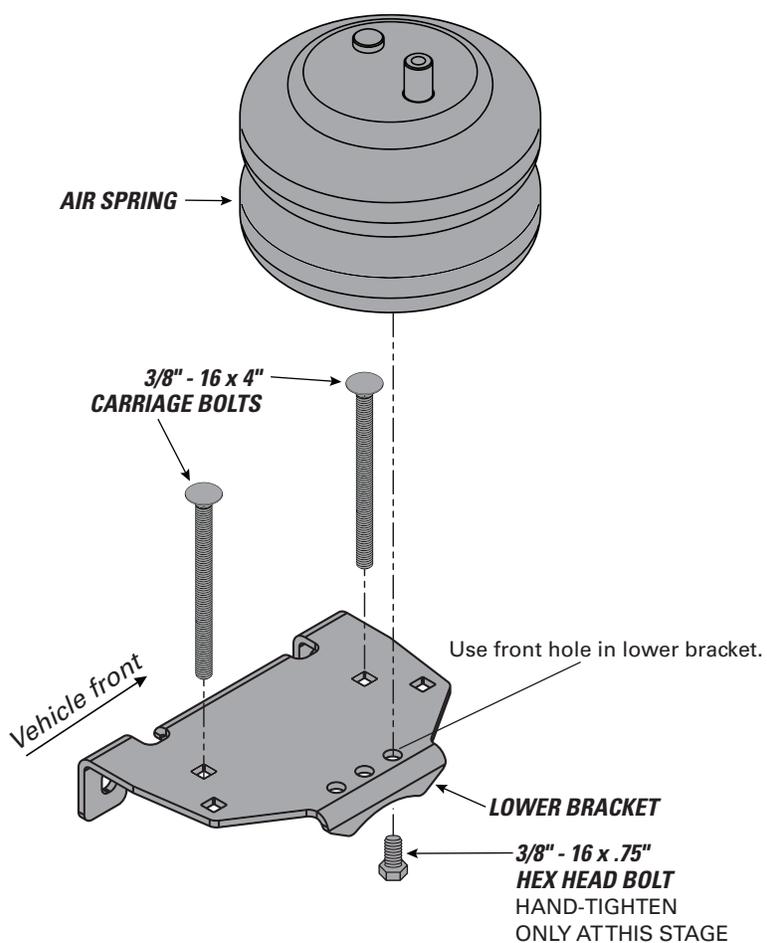
**3** Torque all fasteners to specification.





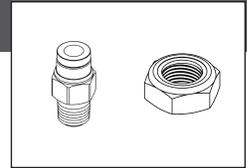
**1** Insert the two 3/8" - 16 x 4" carriage bolts through the square holes that are closest together in lower bracket.

**2** Loosely attach bottom of spring to top of lower bracket through the front hole with 3/8" - 16 x .75" hex head bolt.



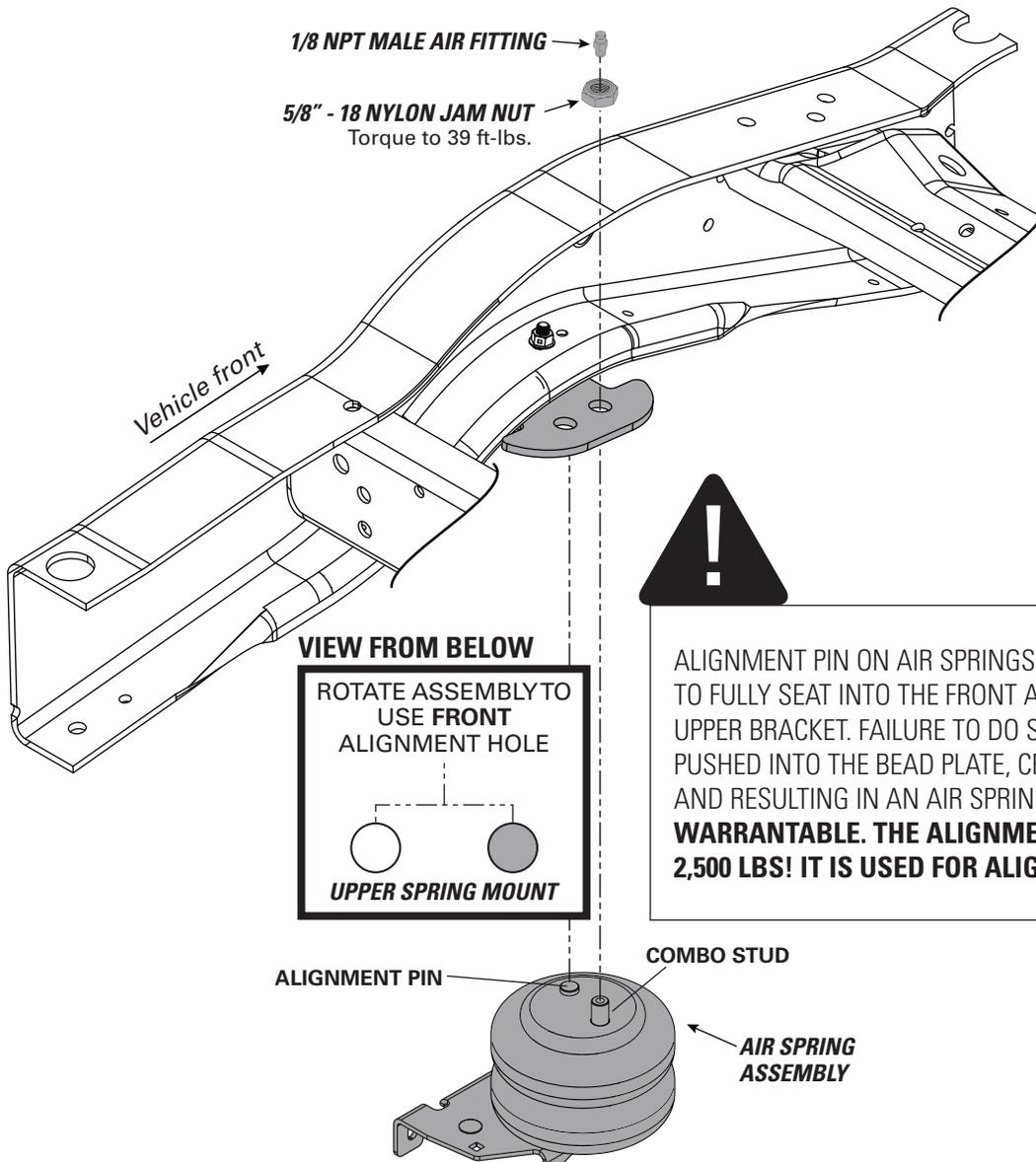
# 5

## INSTALL AIR SPRING TO UPPER BRACKET

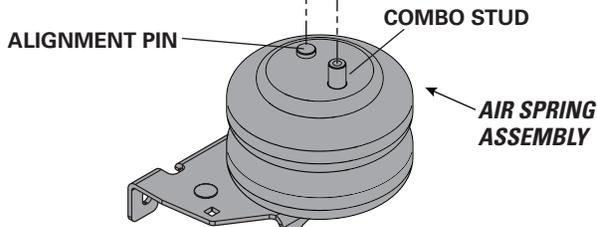
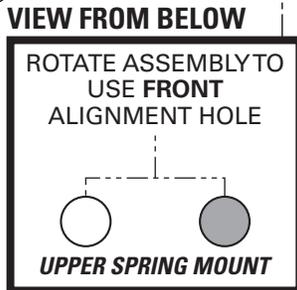


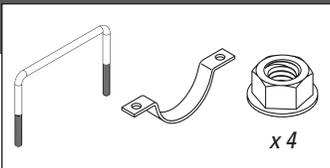
INSTALLING THE RIGHT SIDE? REMEMBER TO INSTALL THE HEAT SHIELD IN STEP 7 FIRST!

- 1 Compress spring by hand and slide air spring assembly between upper bracket and axle tube.
- 2 Insert air spring combo stud through the large hole furthest forward in upper bracket.
- 3 Verify index pin on top of spring is fully engaged into smaller hole in upper bracket, and install fasteners, as shown.



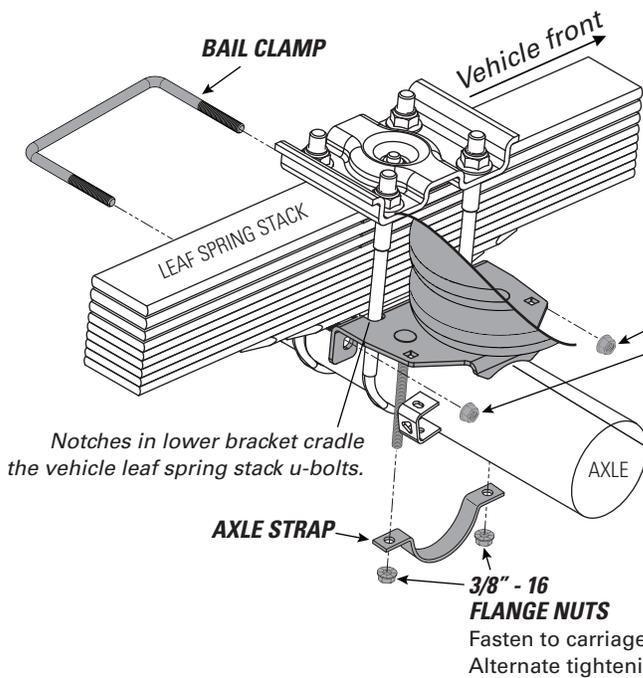
ALIGNMENT PIN ON AIR SPRINGS MUST BE INSTALLED TO FULLY SEAT INTO THE FRONT ALIGNMENT HOLE IN THE UPPER BRACKET. FAILURE TO DO SO WILL CAUSE IT TO BE PUSHED INTO THE BEAD PLATE, CREATING AN AIR LEAK, AND RESULTING IN AN AIR SPRING FAILURE THAT IS **NOT WARRANTABLE. THE ALIGNMENT PIN CANNOT HOLD 2,500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





**1** Dry fit the assembly. Assure the lower bracket is positioned as shown, then tighten the 3/8" - 16 x .75 bolt to the bottom of the air spring.

**2** Fasten the lower bracket to the vehicle using the bail clamp and axle strap, as shown.



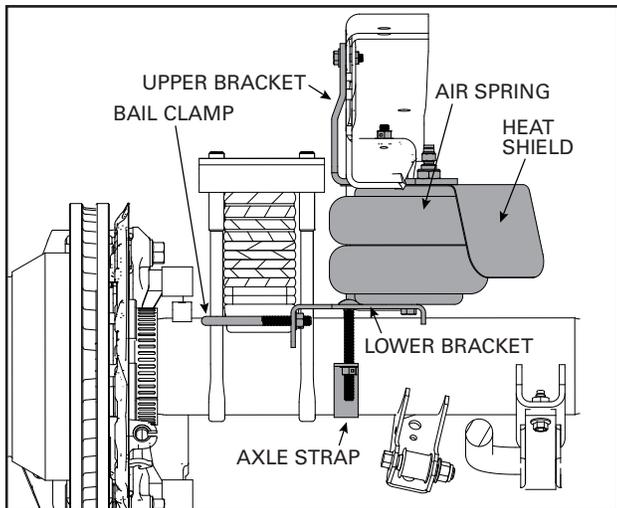
**!** REMEMBER TO FULLY TIGHTEN THE 3/8" - 16 x .75" FASTENER TO THE BOTTOM OF THE AIR SPRING.

**3/8" - 16 FLANGE NUTS**  
Fasten to bail clamp threads. Alternate tightening to evenly draw lower bracket to leaf spring stack.

Lower bracket tab must sit tightly against vehicle axle tube.

**3/8" - 16 FLANGE NUTS**  
Fasten to carriage bolt threads. Alternate tightening to evenly draw axle strap tightly to axle tube.

**RIGHT SIDE VIEW FROM FRONT**

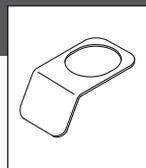


**!** USE YOUR HAND TO CHECK FOR THE PROPER CLEARANCE AROUND THE AIR SPRING. IF YOUR HAND DOES NOT FIT BETWEEN THE AIR SPRING AND OTHER COMPONENTS, IT WILL RUB!

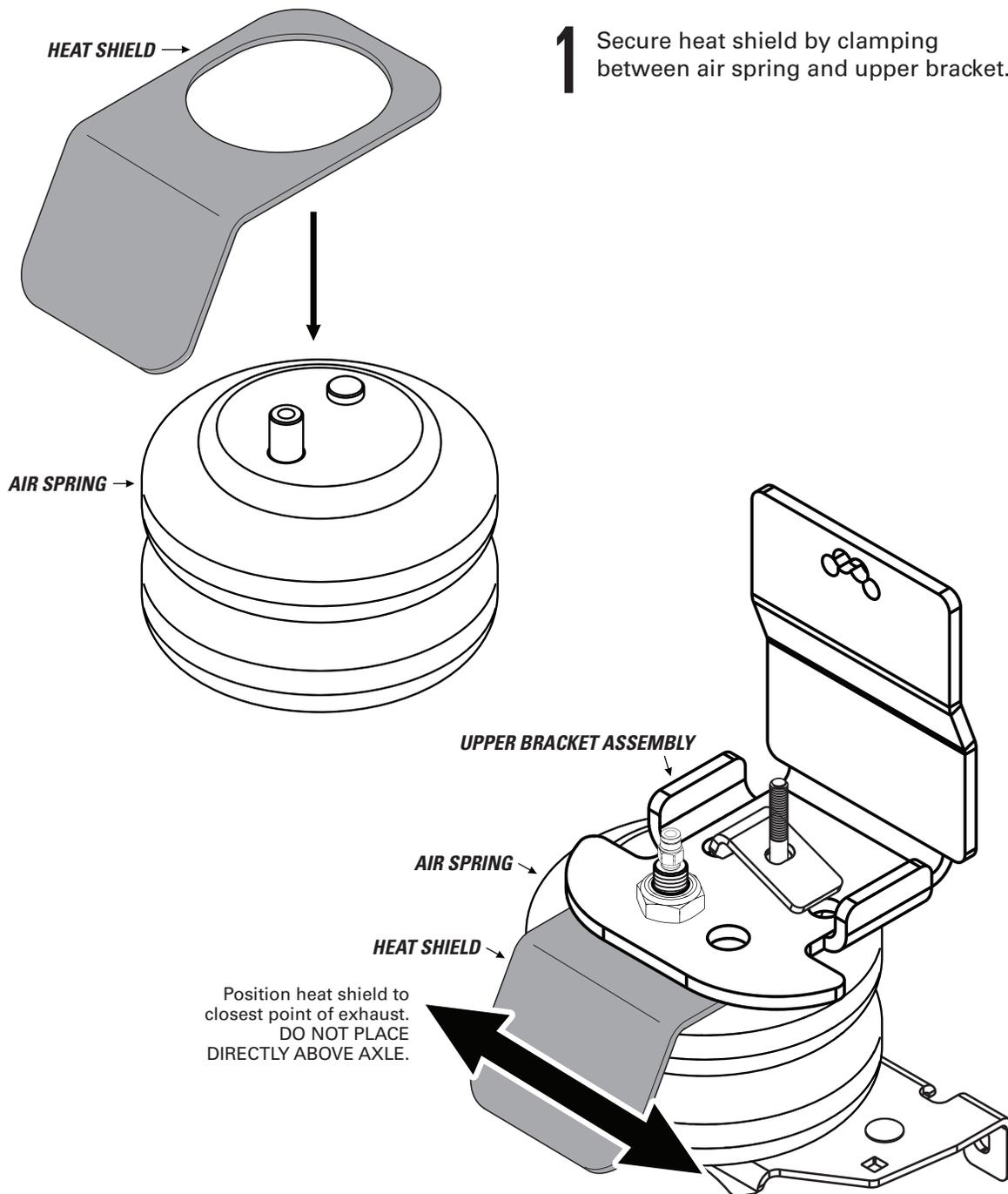
**👍 AWESOME!** You're done with the left side. Go back to step 1 and repeat the steps for the right side installation, including step 7 for the heat shield.

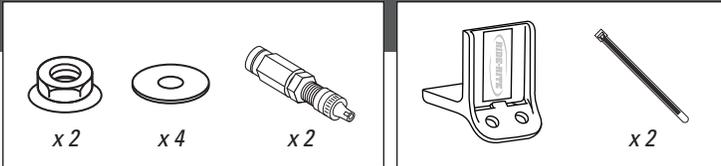
# 7

## INSTALL HEAT SHIELD



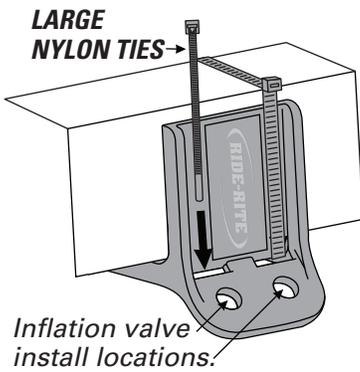
RIGHT SIDE INSTALLATION MUST INCLUDE HEAT SHIELD!





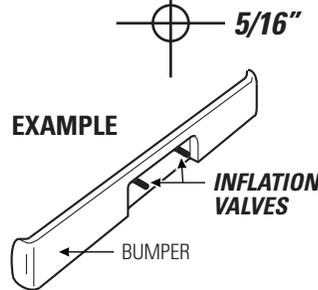
IF USING THE OPTIONAL NO-DRILL INFLATION VALVE BRACKET, CHOOSE OPTION 1. IF DRILLING, CHOOSE OPTION 2. **INFLATION VALVES MUST BE ACCESSIBLE BY AN AIR CHUCK.**

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

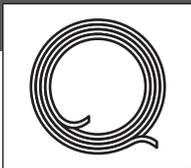
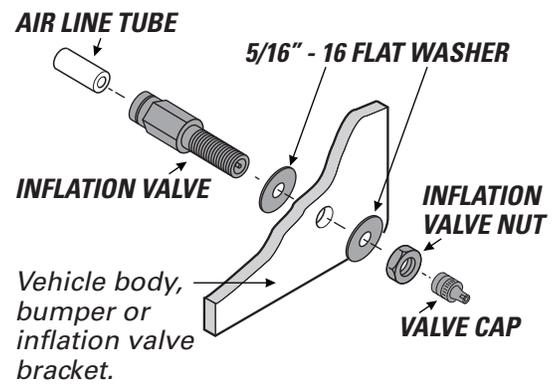


**2** Select a protected location to install the inflation valves, such as the bumper or the body of the vehicle.

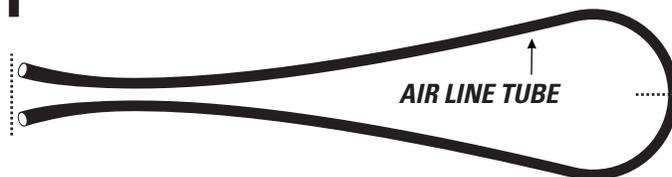
Drill two 5/16" holes for Inflation Valve install locations.



**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.

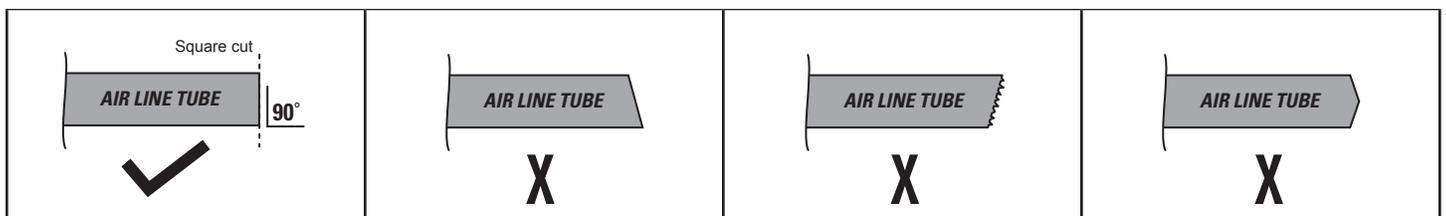
**DO**

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.

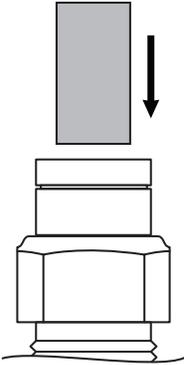
**PROPER AND IMPROPER CUTS IN THE AIR LINE TUBE**



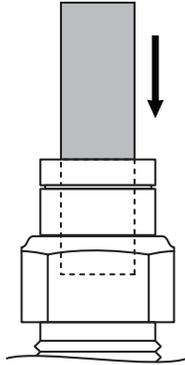
# 10

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

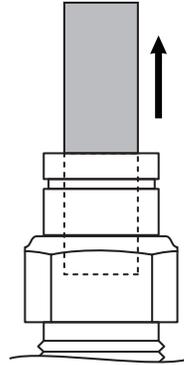
**1** Insert end of air line tube into air fitting.



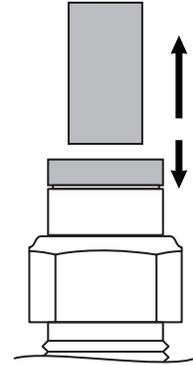
**2** Push air line tube into air fitting as far as possible.



**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.

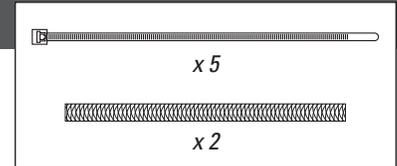


**Removal Tip:** Use a 1/4", 5/16", or 6mm open-ended wrench to push the collar down.

# 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.

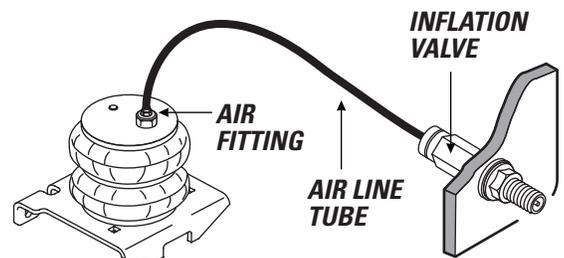
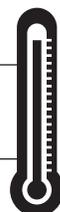
# DON'T

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.

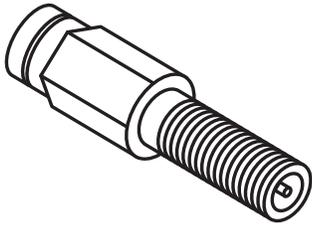
**AIR LINE TUBE**      **THERMAL SHIELD**



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**.

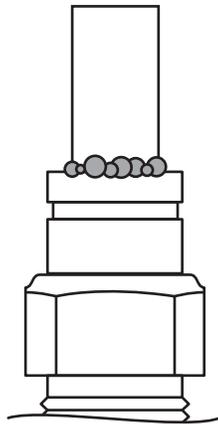


AIR SPRINGS INFLATE QUICKLY. CHECK AIR PRESSURE WHILE INFLATING.

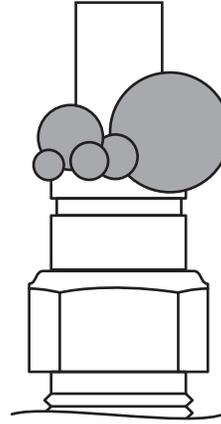
- 2** Spray fittings with soap and water mixture.



- 3** Observe bubbles.



**SMALL SOAP BUBBLES  
THAT DO NOT EXPAND**



**SOAP BUBBLES  
THAT EXPAND**



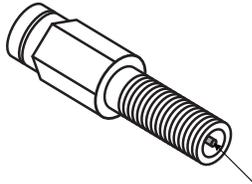
# NO LEAKS?

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.

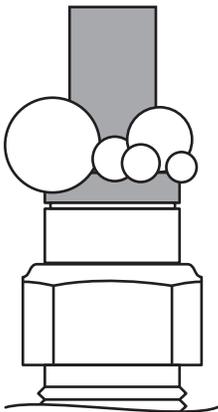


AIR VALVE



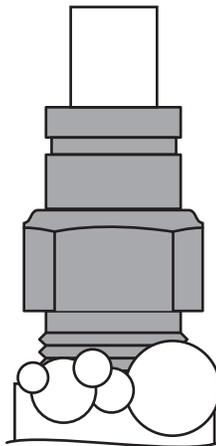
EXHAUST ALL AIR FROM THE SYSTEM PRIOR TO RELEASING AIR LINE TUBES FROM AIR FITTINGS.

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



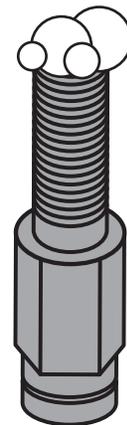
Release air line tube (see page 11). Review proper cuts and procedures in step 9. Repeat steps 10 and 12.

#### 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**

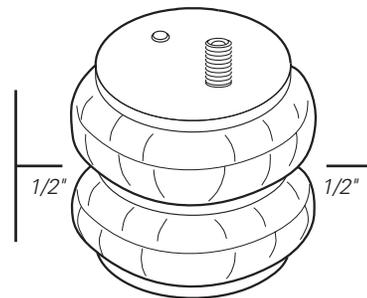
NEVER exceed the maximum load recommended by the vehicle manufacturer (GVWR). The GVWR can be found in your vehicle's owner's manual or on the data plate on the driver's side door. Consult your local dealership for additional GVWR specifications.

**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)

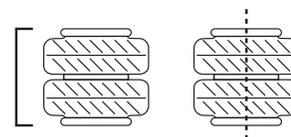


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## BEFORE YOU DRIVE, CONFIRM THE FOLLOWING:

- 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.

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Firestone Industrial Products

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Firestone Ride-Rite