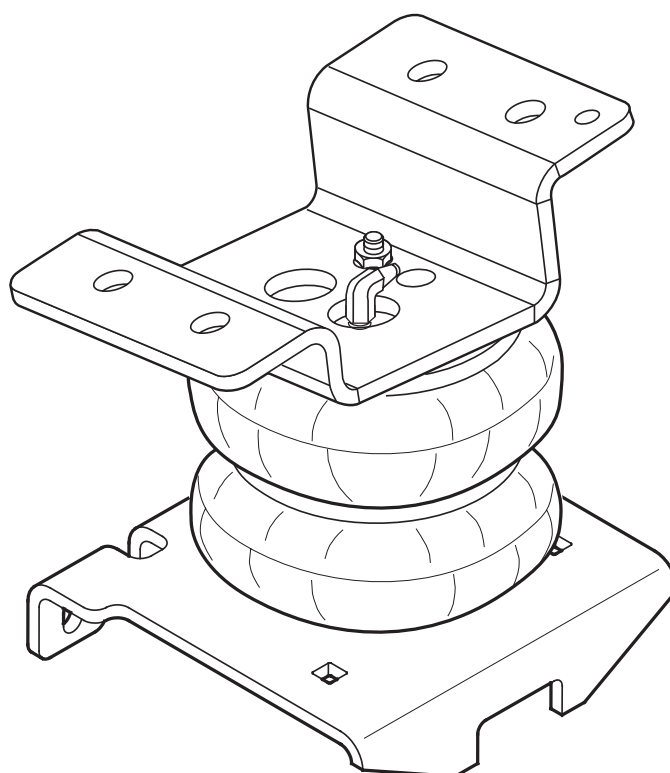




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# INSTALLATION INSTRUCTIONS



**Firestone**

*World's Number 1  
Air Spring.*



FIRESTONE INDUSTRIAL PRODUCTS COMPANY

# ! IMPORTANT

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

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.

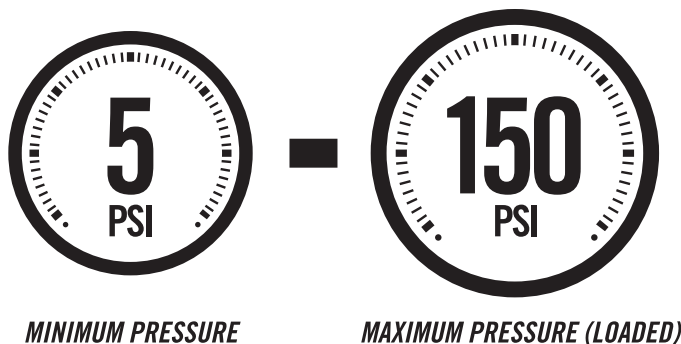
## **NYLOCK NUTS**

Using an impact gun is **NOT** recommended when fastening Nylock Nuts. Doing so may result in the nylon insert overheating, causing it to loosen over time.

## **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).



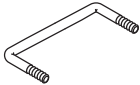
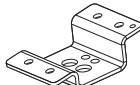


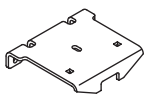
**ONCE INSTALLED SUCCESSFULLY, FOLLOW THESE PRESSURE REQUIREMENTS FOR THE AIR SPRINGS:**





# PARTS

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










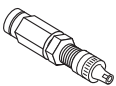

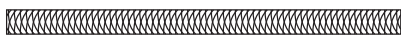

## MAIN KIT CONTENTS

PART # 8781	 x 2 AIR SPRING	PART # 0530	 x 2 AXLE STRAP BRACKET	PART # 3373	 x 2 BAIL CLAMP
PART # 5837	 x 2 UPPER BRACKET	PART # 9153	 x 1 AIR LINE TUBE (30 FEET)	PART # 1004	 x 1 HEAT SHIELD
PART # 5831	 x 2 LOWER BRACKET				

## A24-760-7560 INFLATION VALVE BRACKET KIT

PART # 9483	 x 1 NO-DRILL INFLATION VALVE BRACKET	PART # 9488	 x 2 LARGE NYLON TIE
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## A21-760-2700 HARDWARE PACK

PT # 3029	 x 4 3/8" - 16 x 1 1/2" HEX HEAD BOLT	PT # 3488	 x 16 3/8" - 16 NYLOCK NUT	PT # 3482	 x 1 3/8" - 16 x 3 1/2" CARRIAGE BOLT
PT # 3490	 x 2 3/8" - 16 x 3/4" FLANGE BOLT	PT # 0532	 x 4 3/8" LARGE FLAT WASHER	PT # 3483	 x 4 3/8" - 16 x 4" CARRIAGE BOLT
PT # 3142	 x 2 3/8" - 16 x 5/8" FLAT HEAD BOLT	PT # 3033	 x 4 5/16" FLAT WASHER	PT # 9168	 x 8 BLACK NYLON TIE
PT # 3032	 x 2 INFLATION VALVE AND VALVE CAP ASSEMBLY	PT # 3031	 x 2 ELBOW AIR FITTING	PT # 0899	 x 2 THERMAL SLEEVE
PT # 3493	 x 16 3/8" FLAT WASHER (Use as necessary with 3/8" Nylock Nuts)				

# CONTENTS AND OVERVIEW

PAGE **4** REMOVE JOUNCE BUMPER & BRAKE LINE CLIP

PAGE **5** FASTEN AIR SPRING TO UPPER & LOWER BRACKETS

PAGE **6** INSTALL AIR SPRING ASSEMBLY

PAGE **7** INSTALL BAIL CLAMP

PAGE **8** INSTALL AXLE STRAP BRACKET & REINSTALL BRAKE LINE CLIP

PAGE **9** HEAT SHIELD & PASSENGER SIDE

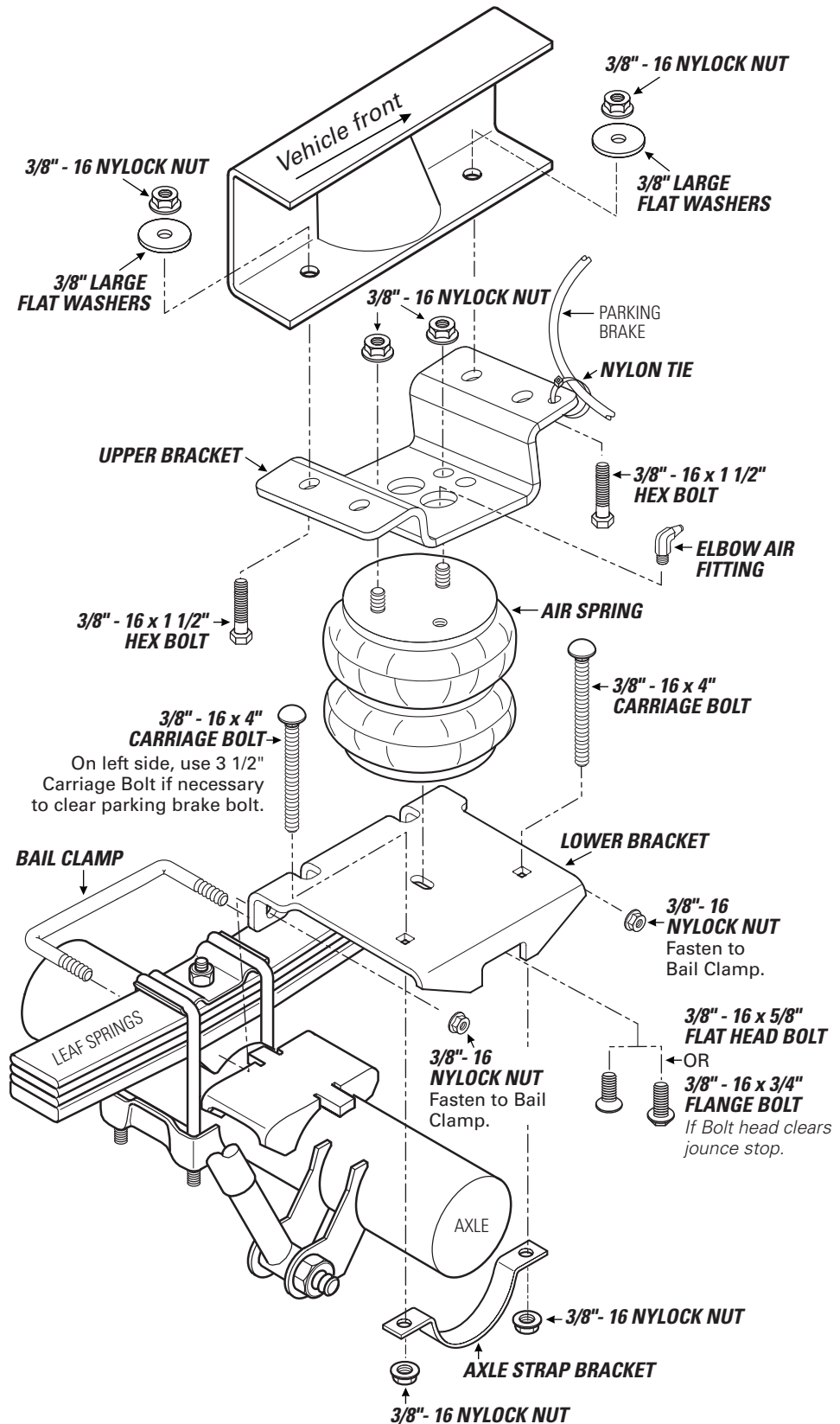
PAGE **10** AIR LINE TUBE & INFLATION VALVE INSTALLATION

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

PAGE **12** CHECKING THE SYSTEM

PAGE **13** FIXING AN AIR LEAK

PAGE **14** FINISHING THE INSTALLATION

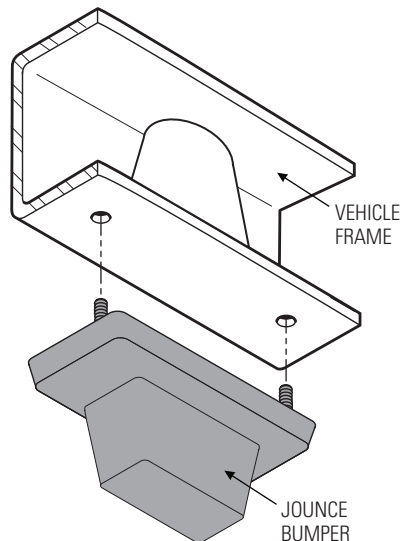


## REMOVE EXISTING JOUNCE BUMPER

1



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



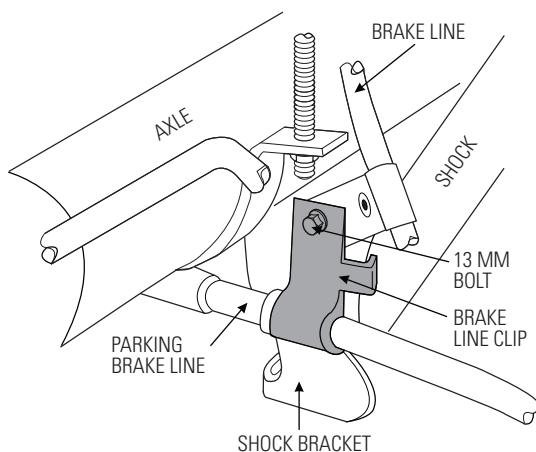
Unfasten and remove existing jounce bumper from the vehicle.

## REMOVE EXISTING BRAKE LINE CLIP AND FASTENER

2



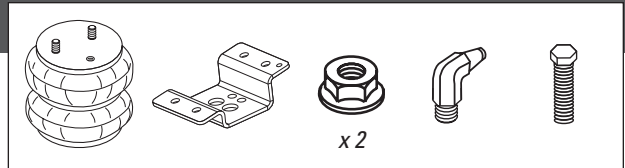
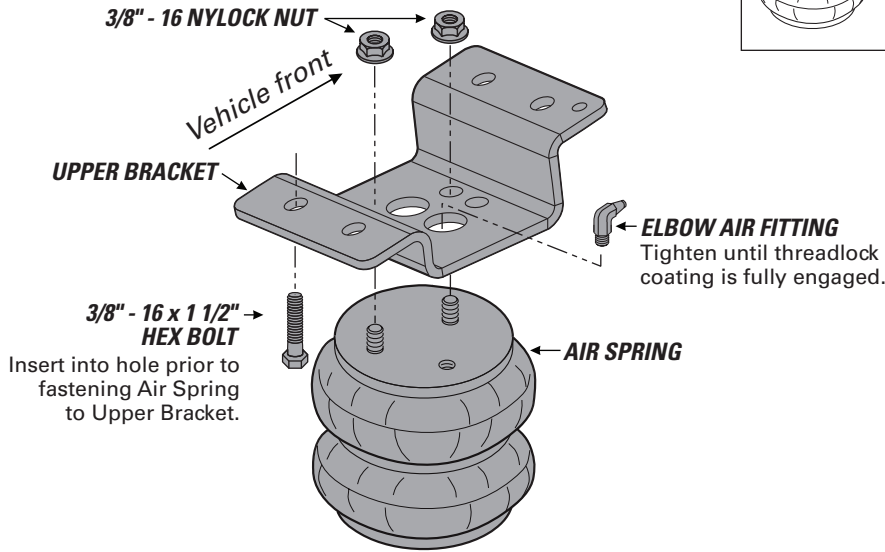
KEEP THE BOLT AND CLIP. YOU WILL NEED TO REINSTALL THESE PARTS LATER. THIS STEP IS ONLY NEEDED ON THE LEFT SIDE.



Unfasten bolt and brake line clip. Keep them for later reinstallation.

# 3

## FASTEN AIR SPRING TO UPPER BRACKET



**1** Use Upper Bracket holes marked "L" for left side. Use "R" for right side.

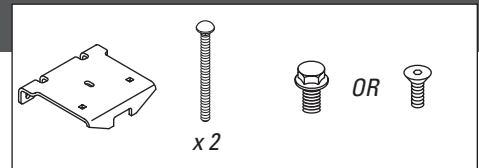
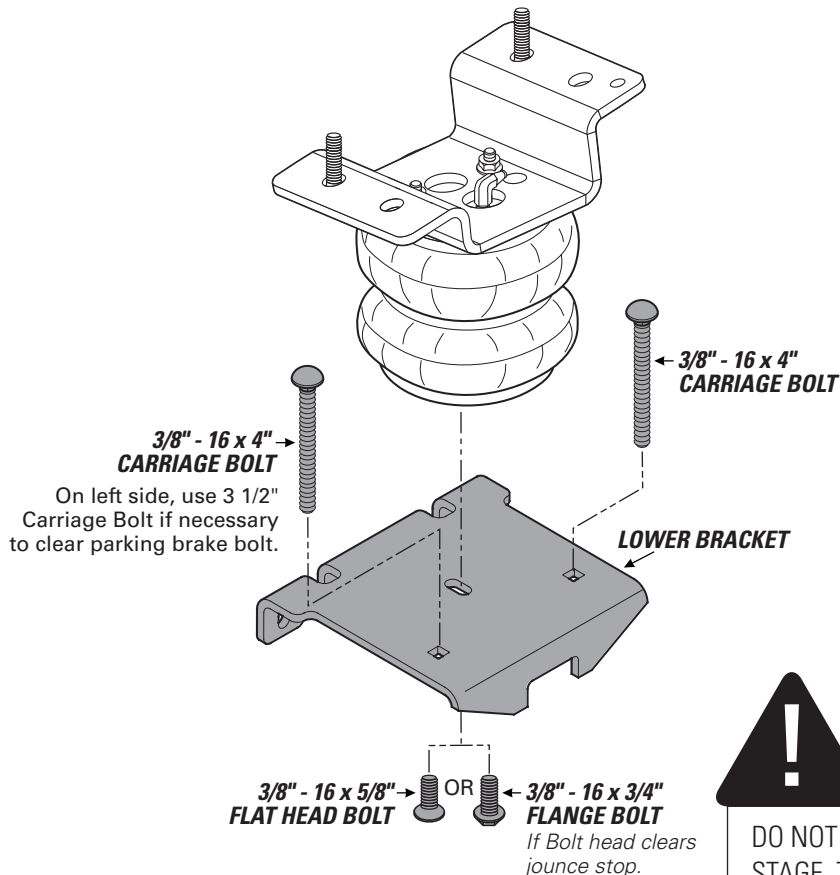
**2** Make sure to install the 3/8"-16 x 1 1/2" Hex Bolt into Upper Bracket hole first.

**3** Fasten Upper Bracket to top of Air Spring.

**4** Fasten Elbow Air Fitting to top of Air Spring.

# 4

## FASTEN AIR SPRING TO LOWER BRACKET

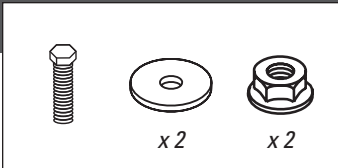


**1** Fasten the Air Spring to the Lower Bracket after selecting the desired fastener. **HAND-TIGHTEN ONLY AT THIS STEP.**

**2** Choose the desired rear Carriage Bolt. Insert the Carriage Bolts into the Lower Bracket as shown.



**DO NOT FULLY TIGHTEN THE BOLT AT THIS STAGE. TORQUE TO SPEC IN STEP 5.**

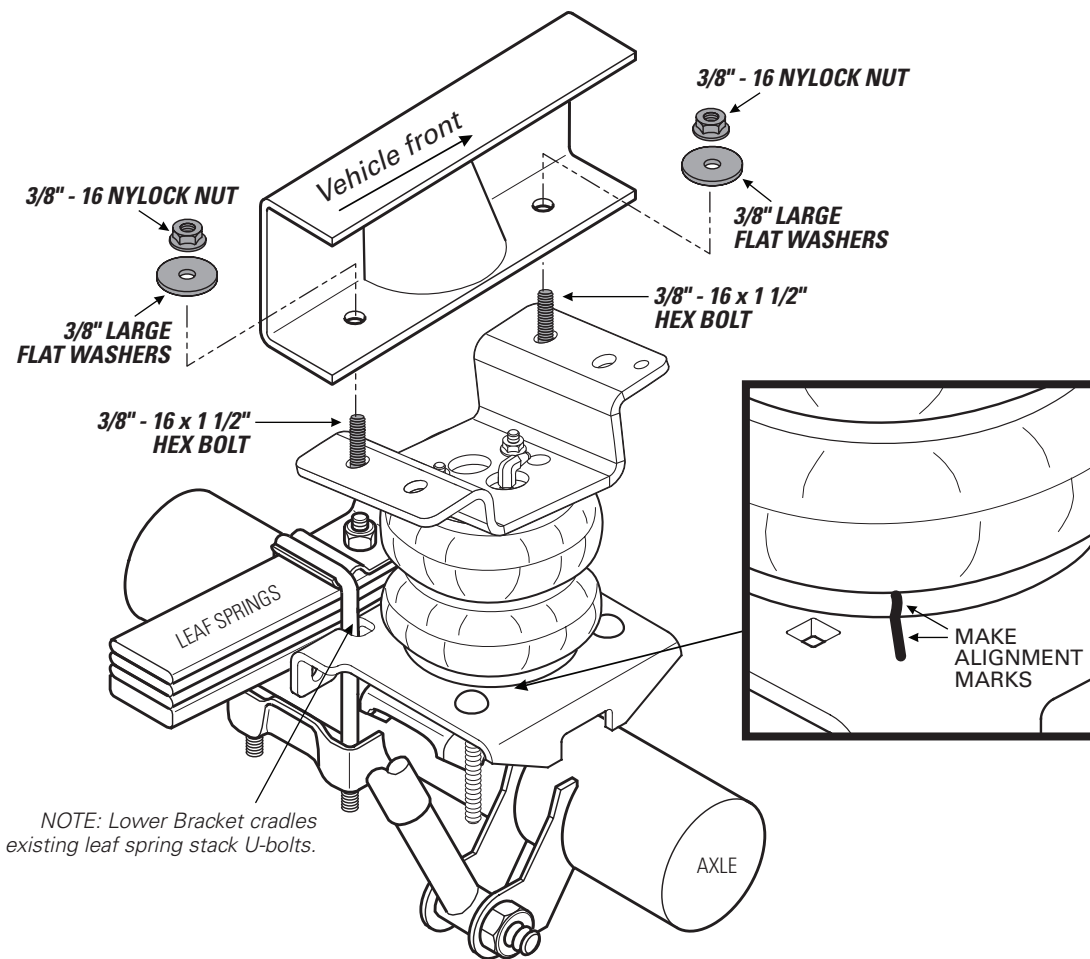


**1** Follow guidelines below to dry fit assembly. Make alignment marks as shown.

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

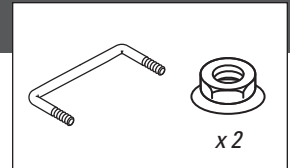
**3** Fully tighten the fastener into the Air Spring.

**4** Install the assembly as shown.



# 6

## INSTALL BAIL CLAMP

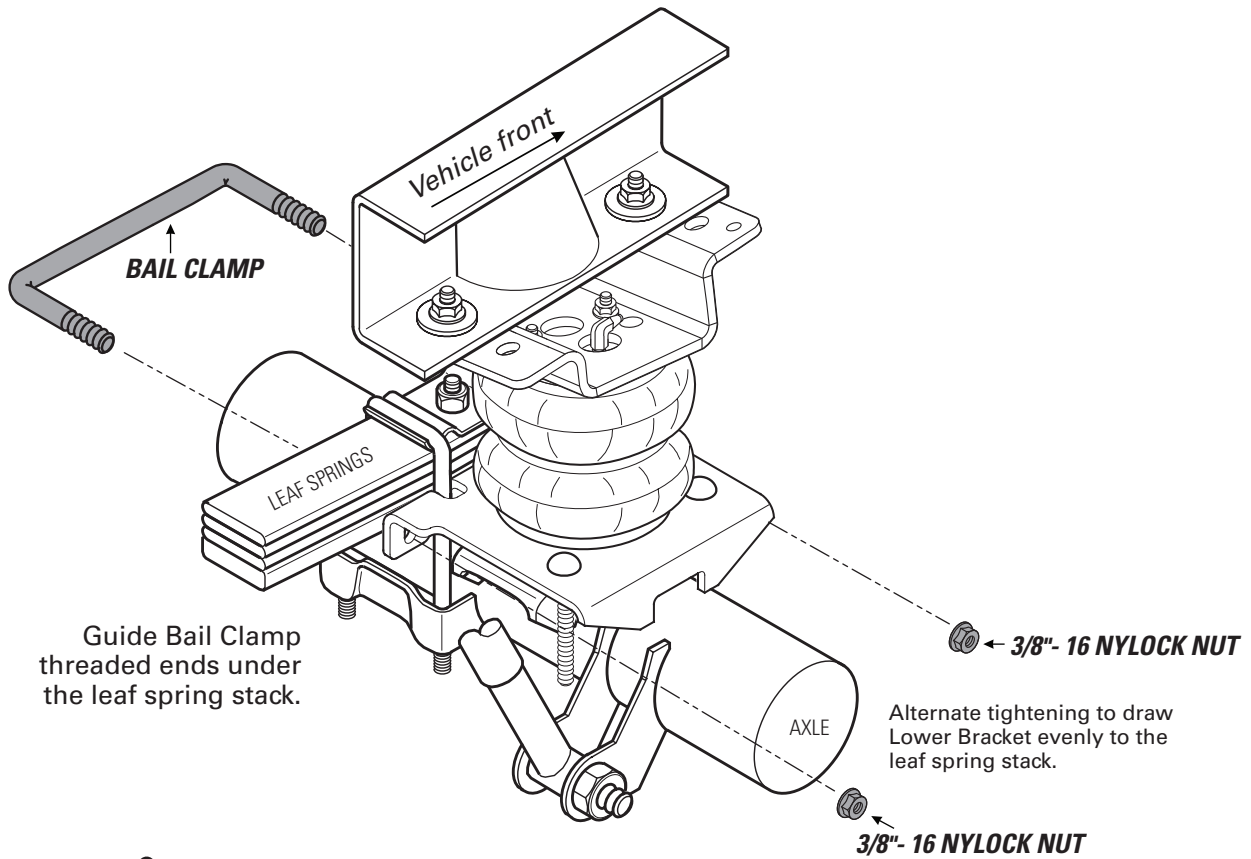


**1** Guide Bail Clamp threaded ends under the leaf spring stack.

**2** Insert Bail Clamp threaded ends through mounting holes in Lower Bracket.

**3** Use 3/8"-16 Nylock Nuts to secure the Bail Clamp to the Lower Bracket.

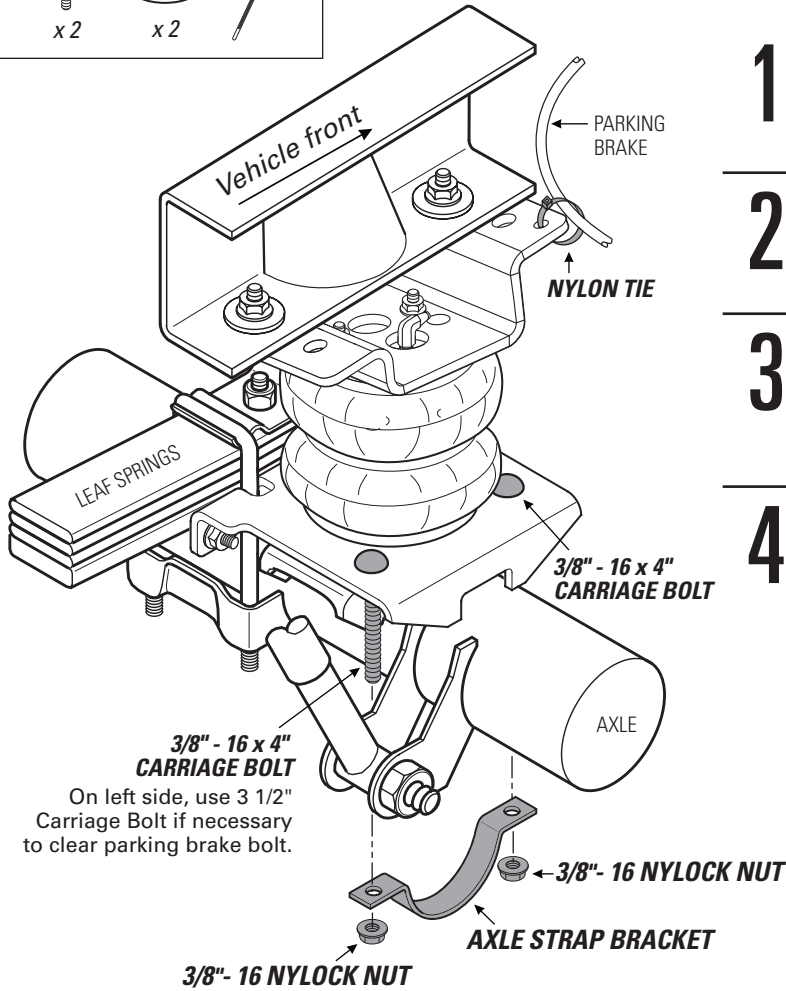
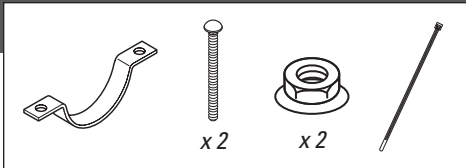
**4** Alternate tightening of the 3/8"-16 Nylock Nuts to draw Lower Bracket evenly to the leaf spring stack.



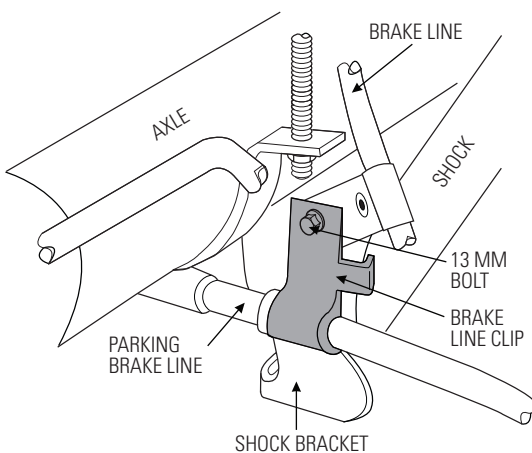
USE YOUR HAND TO CHECK FOR THE PROPER CLEARANCE AROUND THE AIR SPRING. IF YOUR HAND DOES NOT FIT BETWEEN THE AIR SPRING AND OTHER COMPONENTS, IT WILL RUB!







- 1** Insert Carriage Bolts into mounting holes of the Axle Strap Bracket.
- 2** Use 3/8"-16 Nylock Nuts to secure the Axle Strap Bracket to the Lower Bracket.
- 3** Alternate tightening of the 3/8"-16 Nylock Nuts to draw Axle Strap Bracket evenly around the axle.
- 4** Use supplied Nylon Tie to secure parking brake line to Upper Bracket as shown.



THIS STEP ONLY APPLIES TO THE LEFT SIDE.

Reinstall bolt and brake line clip.

# 9

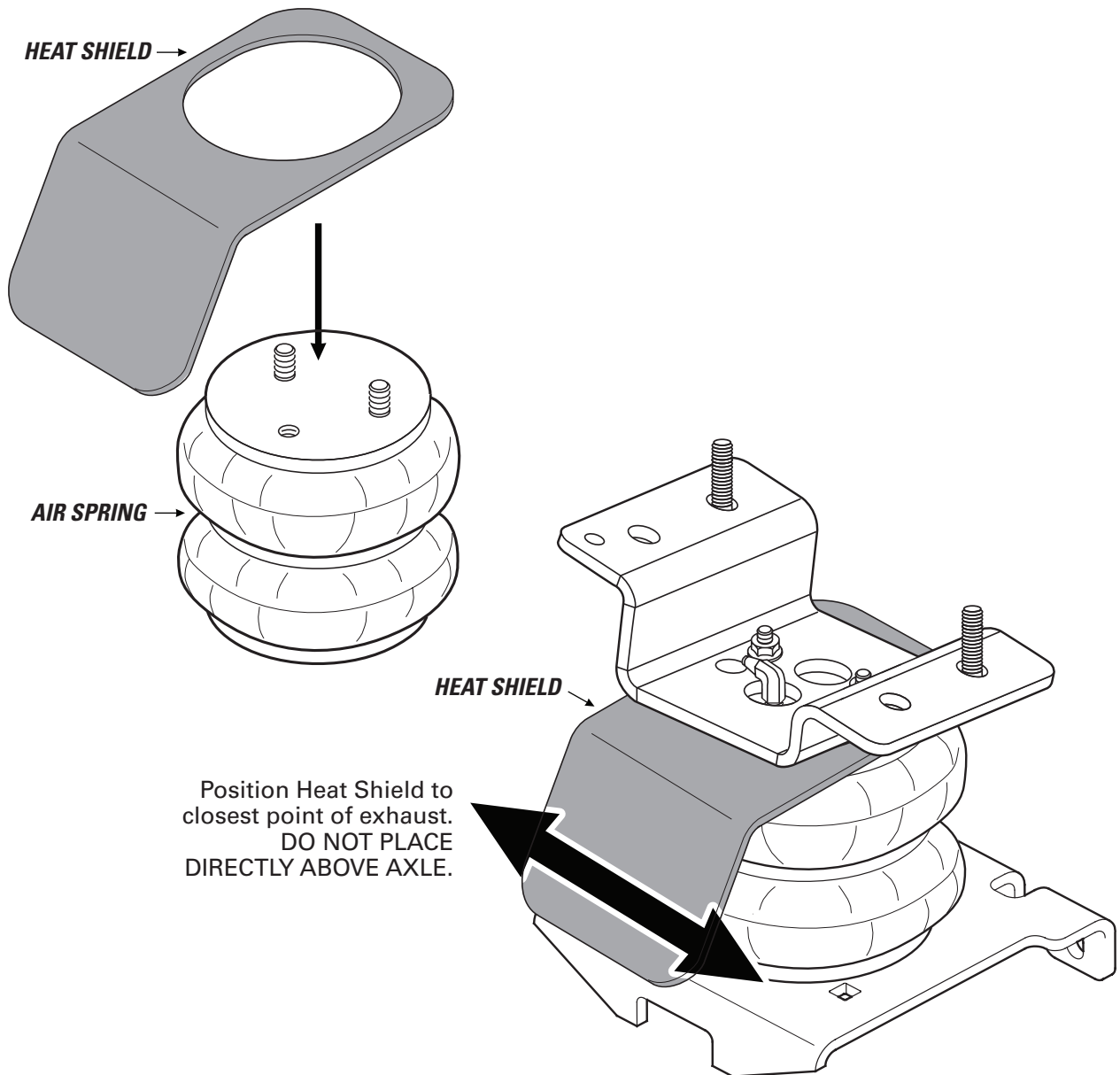
## INSTALL RIGHT SIDE WITH HEAT SHIELD

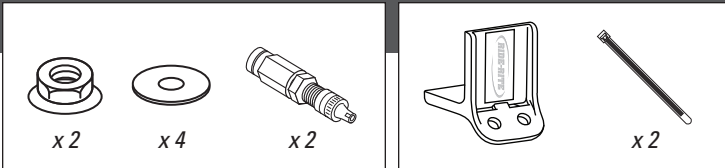


**AWESOME!** You're done with the left side. The right side installation is the same, with the addition of this step. Go complete Steps 1-2 for the right side, then complete this step before continuing to Step 3.



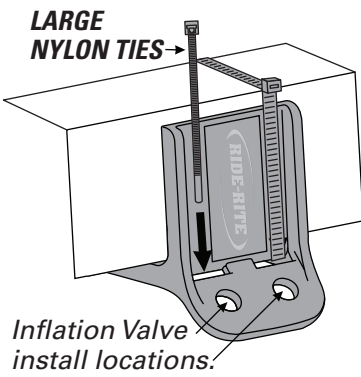
**RIGHT SIDE INSTALLATION MUST INCLUDE HEAT SHIELD!**





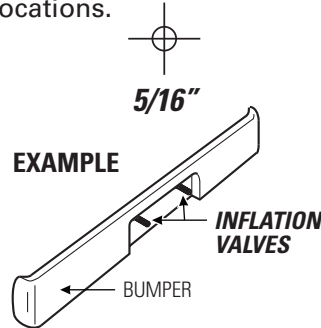
IF USING THE OPTIONAL NO-DRILL INFLATION VALVE BRACKET, CHOOSE OPTION 1. IF DRILLING, CHOOSE OPTION 2. **INFLATION VALVES MUST BE ACCESSIBLE BY AN AIR CHUCK.**

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

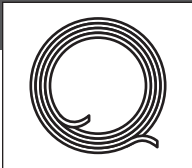
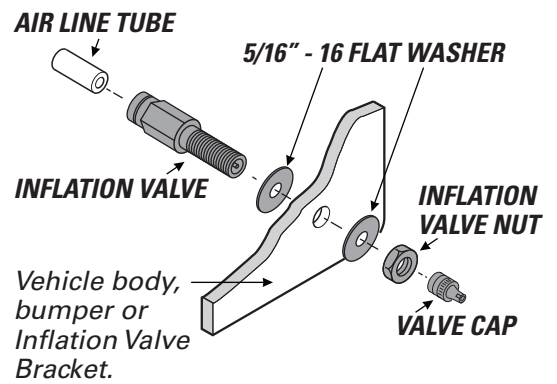


**2** Select a protected location to install the Inflation Valves, such as the bumper or the body of the vehicle.

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.

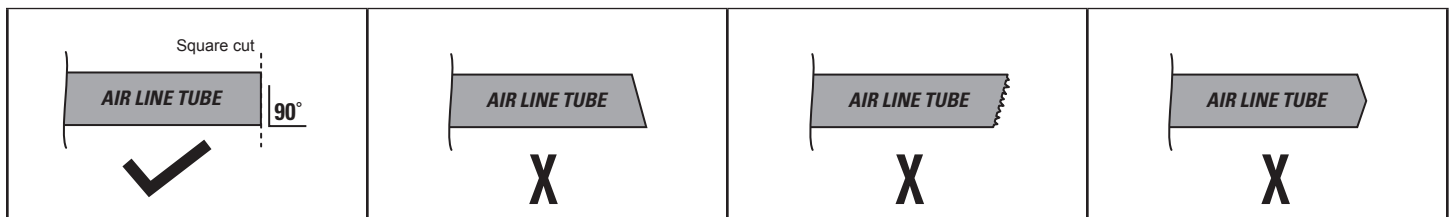
**DO**

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.

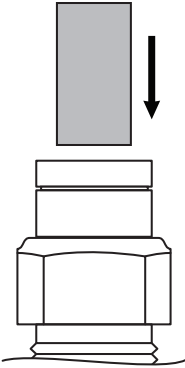
**PROPER AND IMPROPER CUTS IN THE AIR LINE TUBE**



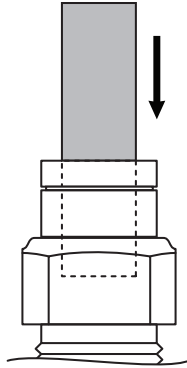
# 12

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

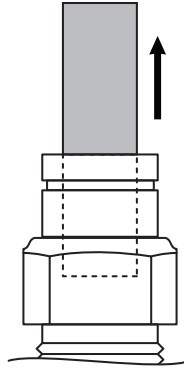
**1** Insert end of Air Line Tube into Air Fitting.



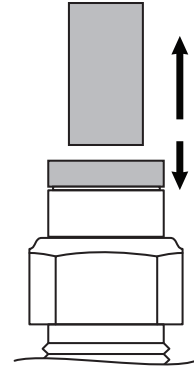
**2** Push Air Line Tube into Air Fitting as far as possible.



**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.

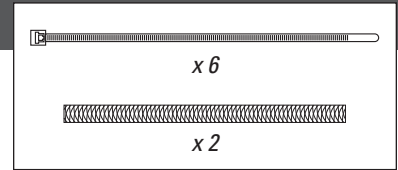


**Removal Tip:** Use a 1/4", 5/16", or 6mm open-ended wrench to push the collar down.

# 13

## 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.



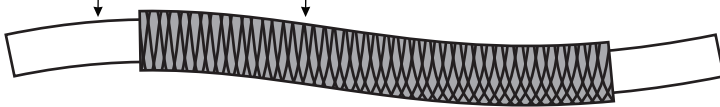
# DO

Select routes protected from heat, debris, and sharp edges.  
Use Thermal Shields near heat sources.  
Use Nylon Ties to secure the Air Line Tube.

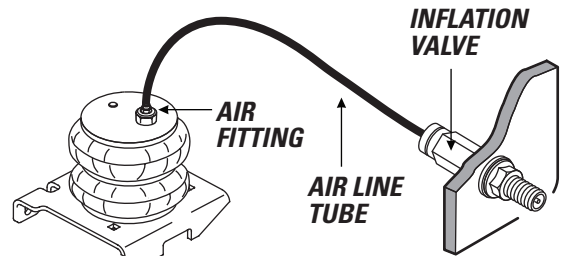
# DON'T

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.

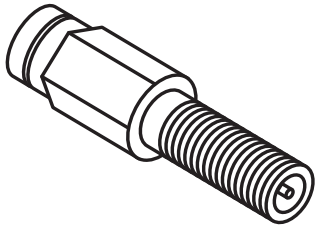
**AIR LINE TUBE**      **THERMAL SHIELD**



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**.

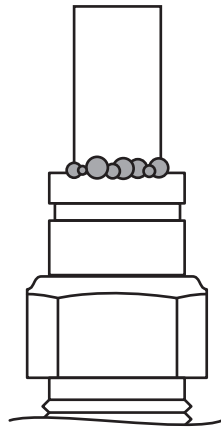


AIR SPRINGS INFLATE QUICKLY. CHECK AIR PRESSURE WHILE INFLATING.

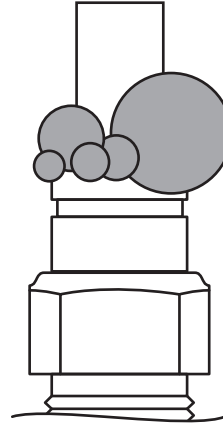
- 2** Spray fittings with soap and water mixture.



- 3** Observe bubbles.



**SMALL SOAP BUBBLES  
THAT DO NOT EXPAND**



**SOAP BUBBLES  
THAT EXPAND**



# NO LEAKS?

Congratulations! Continue to Step 16 to finish installation. Review the Operating Instructions.

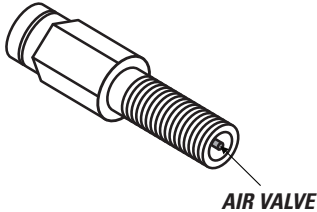
# LEAK?

Bummer. Continue to Step 15 to fix the leak.

# 15

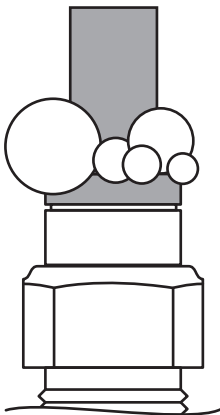
## FIXING AN AIR LEAK

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



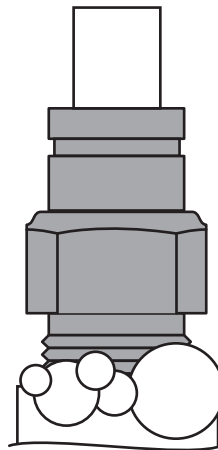
EXHAUST ALL AIR FROM THE SYSTEM PRIOR TO RELEASING AIR LINE TUBES FROM AIR FITTINGS.

### LEAK AT AIR LINE TUBE AND AIR FITTING



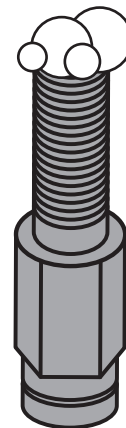
Release Air Line Tube (see page 11). Review proper cuts and procedures in Step 11. Repeat Steps 12 and 14.

### 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, call 1-800-888-0650; Option 1; Option 1 for Tech Support.

**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**

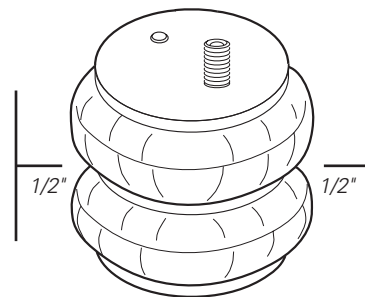
NEVER exceed the maximum load recommended by the vehicle manufacturer (GVWR). The GVWR can be found in your vehicle's owner's manual or on the data plate on the driver's side door. Consult your local dealership for additional GVWR specifications.

**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

-

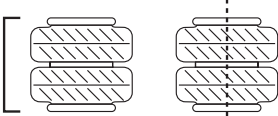


MAXIMUM PRESSURE (LOADED)



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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!

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

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

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



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Firestone RideRite



Firestone Ride-Rite