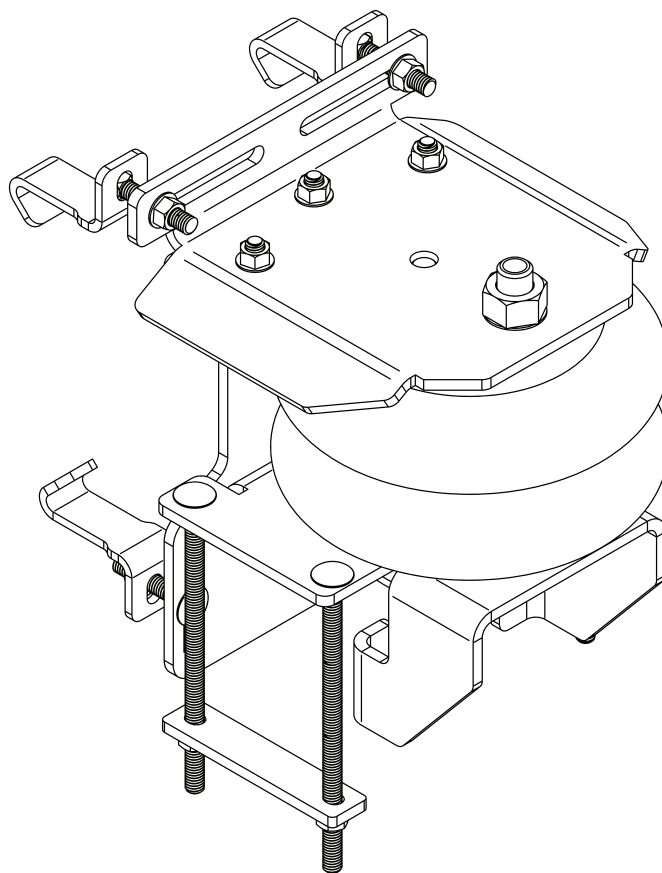




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# INSTALLATION INSTRUCTIONS



**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.**

## DRILLING PRECAUTIONS

Some installations may not allow for upper spring mount hooks. In this case, drilling may be required. **If drilling, use caution to avoid damaging any vehicle wiring or plumbing.** See step 5 for details.

## 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.

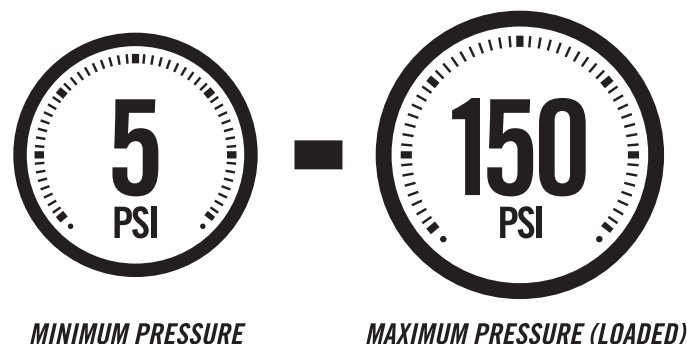
## APPROPRIATE AIR PRESSURE

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).

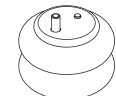


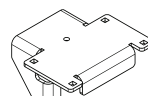
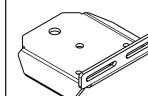

**ONCE INSTALLED SUCCESSFULLY, FOLLOW THESE PRESSURE REQUIREMENTS FOR THE AIR SPRINGS:**





# PARTS

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

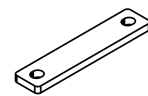

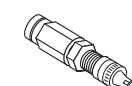






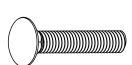




## MAIN KIT CONTENTS

PT # 8401	 x 2 AIR SPRING	PT # 5912	 x 2 CENTER BRACKET	PT # 5900	 x 8 SPRING MOUNT HOOK
PT # 5910	 x 2 LOWER BRACKET	PT # 5911	 x 2 TOP BRACKET	PT # 9453	 x 1 AIR LINE TUBE (30 FEET)

## A24-760-7560 INFLATION VALVE BRACKET KIT

PT # 9483	 x 1 NO-DRILL INFLATION VALVE BRACKET	PT # 9488	 x 2 LARGE NYLON TIE
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## A21-760-2711 HARDWARE PACK

PT # 5851	 x 4 SPREADER BAR	PT # 3022	 x 22 3/8" - 16 FLANGE LOCK NUT	PT # 3032	 x 2 INFLATION VALVE AND VALVE CAP ASSEMBLY
PT # 3033	 x 4 5/16" FLAT WASHER	PT # 3064	 x 2 3/4" INTERNAL TOOTH LOCK WASHER	PT # 3046	 x 2 1/4" PTC STRAIGHT FITTING
PT # 3089	 x 2 3/8" - 16 x 3/4" FLANGE BOLT	PT # 3295	 x 2 3/4" - 16 HEX NUT	PT # 3484	 x 4 3/8" - 16 x 7" CARRIAGE BOLT
PT # 3402	 x 8 3/8" - 16 x 2" CARRIAGE BOLT	PT # 3501	 x 4 3/8" - 16 x 5" CARRIAGE BOLT	PT # 9168	 x 6 BLACK NYLON TIE
PT # 3514	 x 6 3/8" - 16 x 1" FLAT HEAD SCREW			PT # 0899	 x 2 THERMAL SLEEVE

## SPECIAL NOTE

In some cases, you may need to drill into the vehicle frame to complete this installation. Please review the steps first to determine if this applies to your installation. **If drilling, you will need to supply your own Grade A, 3/8-16 fasteners for step 5.**

# CONTENTS AND OVERVIEW

PAGE **4** MARK BRACKETS & CREATE UPPER BRACKET ASSEMBLY

PAGE **5** INSTALL LOWER BRACKET

PAGE **6** INSTALL UPPER BRACKET ASSEMBLY (NO-DRILL)

PAGE **7** INSTALL UPPER BRACKET ASSEMBLY (IF DRILLING)

PAGE **8** SECURE LOWER BRACKET ASSEMBLY

PAGE **9** HEAT SHIELD & PASSENGER SIDE

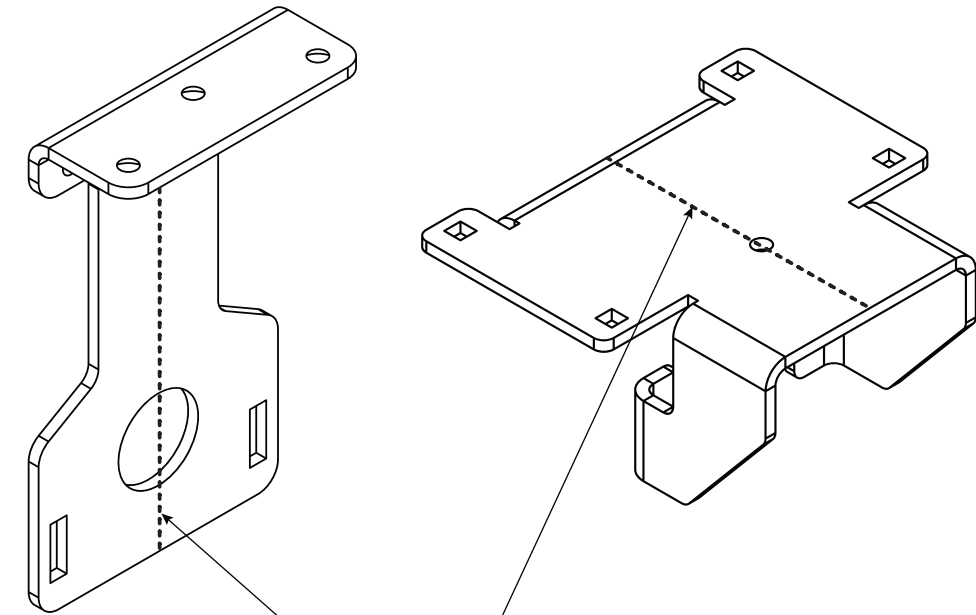
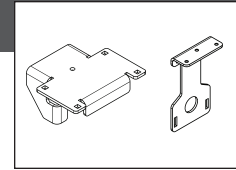
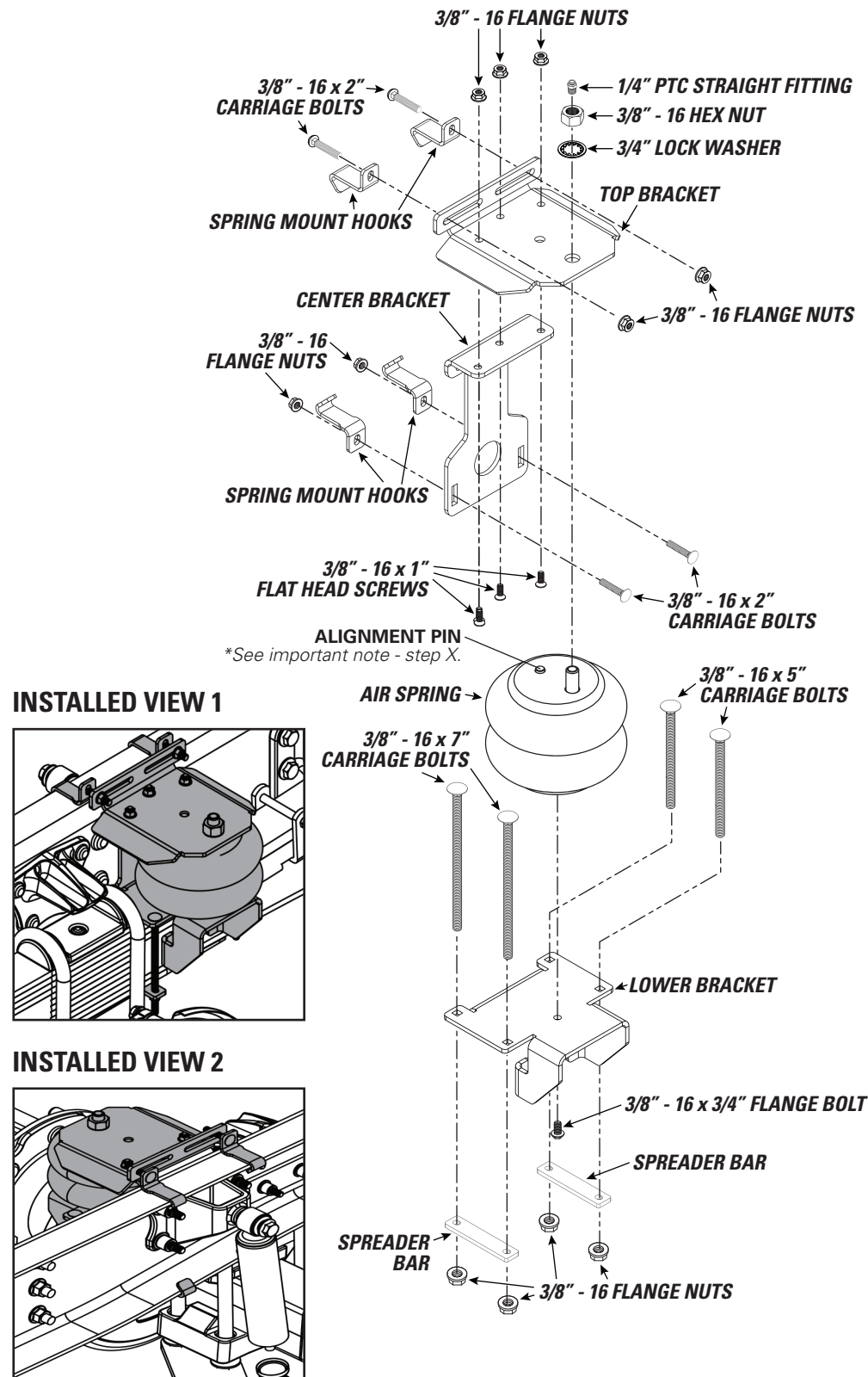
PAGE **10** AIR LINE TUBE & INFLATION VALVE INSTALLATION

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

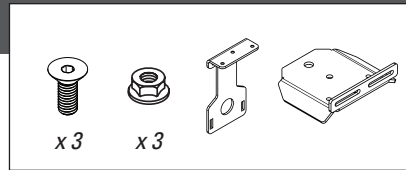
PAGE **12** CHECKING THE SYSTEM

PAGE **13** FIXING AN AIR LEAK

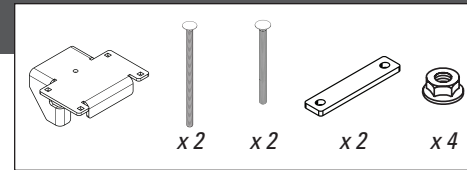
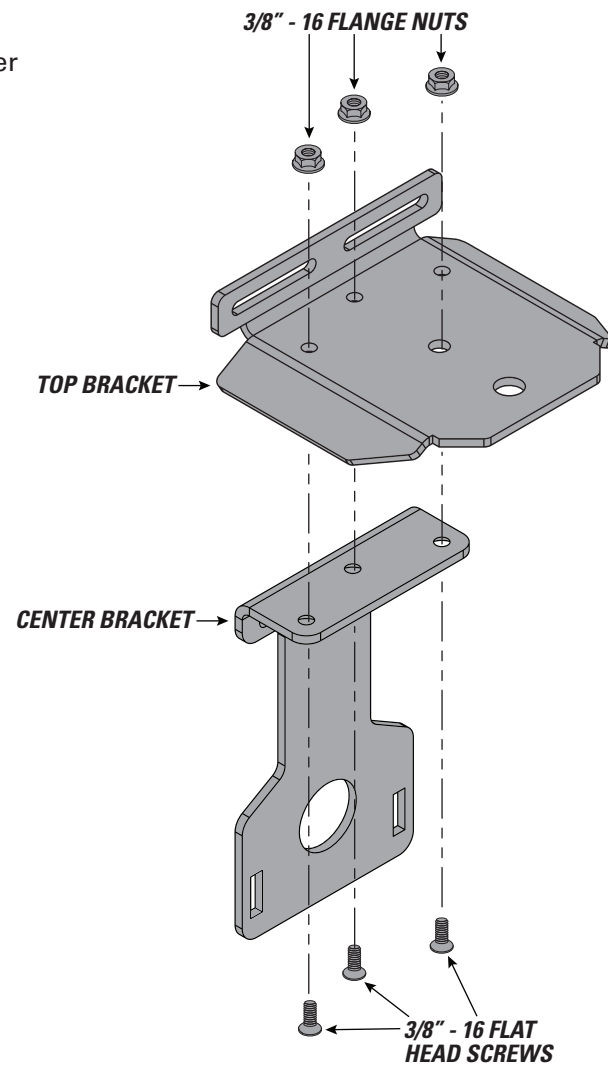
PAGE **14** FINISHING THE INSTALLATION



Using a square, make a mark down the center of the center brackets and lower brackets, as shown. Use a marking tool that is easily visible, as you will align these marks during installation.



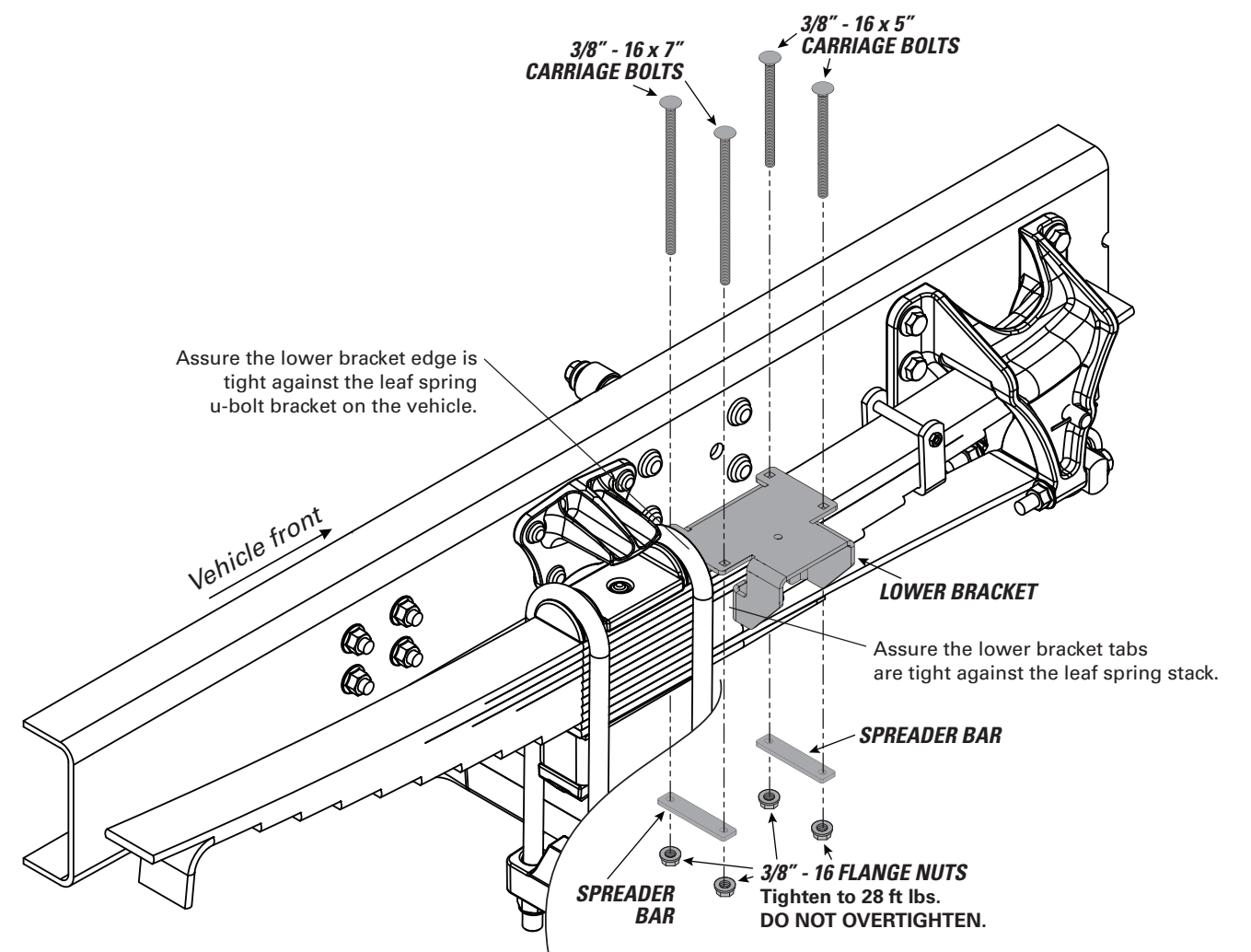
1 Create the upper bracket assembly by assembling the top bracket to the center bracket, as shown.

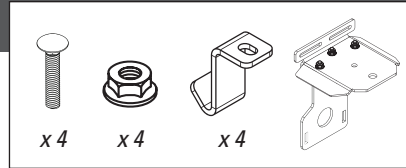


START THE INSTALLATION ON THE RIGHT SIDE OF THE VEHICLE WHEN FACING FORWARD.

1 Place lower bracket on top of leaf spring stack with flanges facing outward, as shown. Assure that the lower bracket flanges are tight against the leaf spring stack.

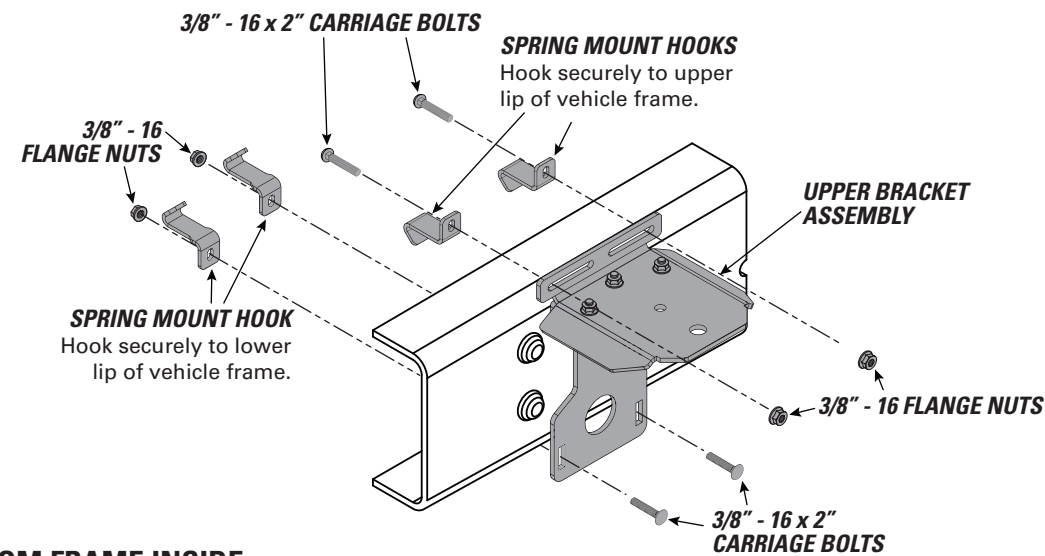
2 To secure the lower bracket to the leaf spring stack, install the fasteners and spreader bars, as shown.



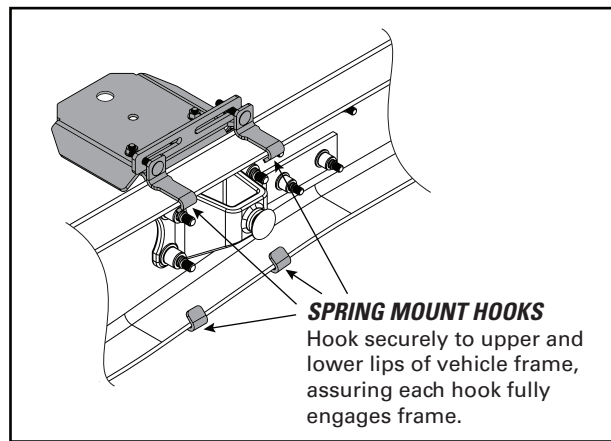


SOME INSTALLATIONS MAY NOT ALLOW FOR UPPER SPRING MOUNT HOOKS. IN THIS CASE, DRILLING MAY BE REQUIRED. SEE STEP 5 FOR DETAILS.

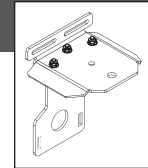
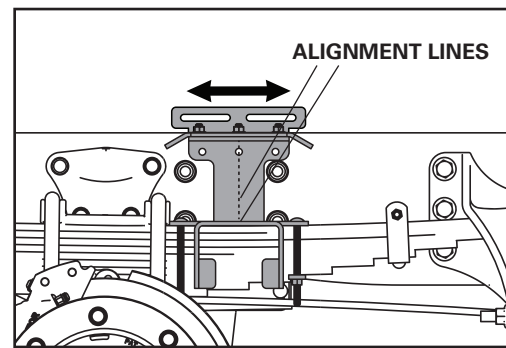
- 1 Install the upper bracket assembly to the frame, as shown. Use the lines you created in step 1 to align the upper bracket assembly to the lower bracket.
- 2 Assure the fasteners for the upper spring mount hooks are as far apart as possible.
- 3 Assuring all spring mount hook tabs fully engage the vehicle frame, fully tighten the fasteners, as shown.



VIEW FROM FRAME INSIDE

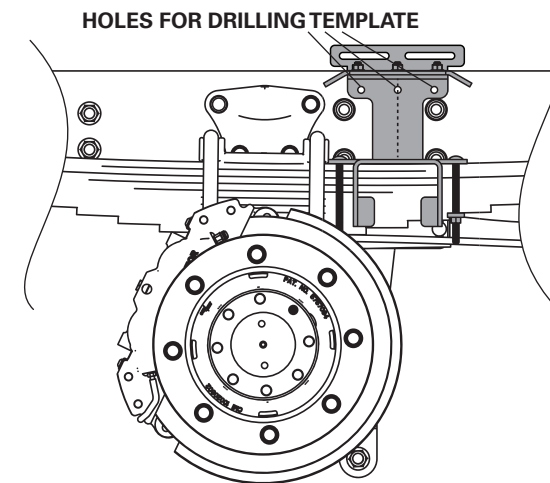
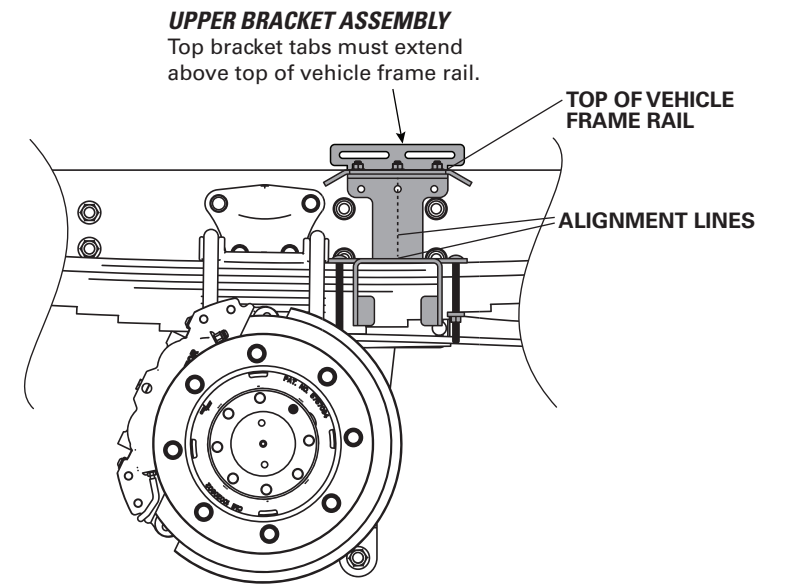


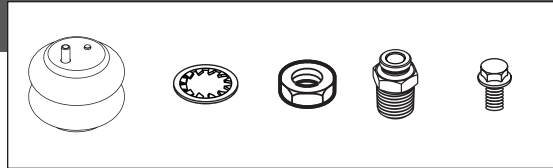
ALIGNMENT VIEW



THIS STEP IS ONLY REQUIRED IF IT IS NOT POSSIBLE TO USE THE UPPER SPRING MOUNT HOOKS IN STEP 4. AFTER COMPLETING THIS STEP, RETURN TO STEP 4 TO SECURE LOWER SPRING MOUNT HOOKS.

- 1 Position upper bracket assembly against the vehicle frame, as shown and align the marks you made in step 1.
- 2 Using the three center bracket holes as a template, mark the frame rail to drill three holes.
- 3 Drill holes through the frame. **USE CAUTION TO AVOID DAMAGING ANY VEHICLE WIRING OR PLUMBING.**
- 4 Fasten the upper bracket assembly to frame, using the holes you drilled. Supply Grade A, 3/8-16 fasteners that are appropriate for your installation (**not included in kit**). Use threadlock on the hardware for the three upper holes.

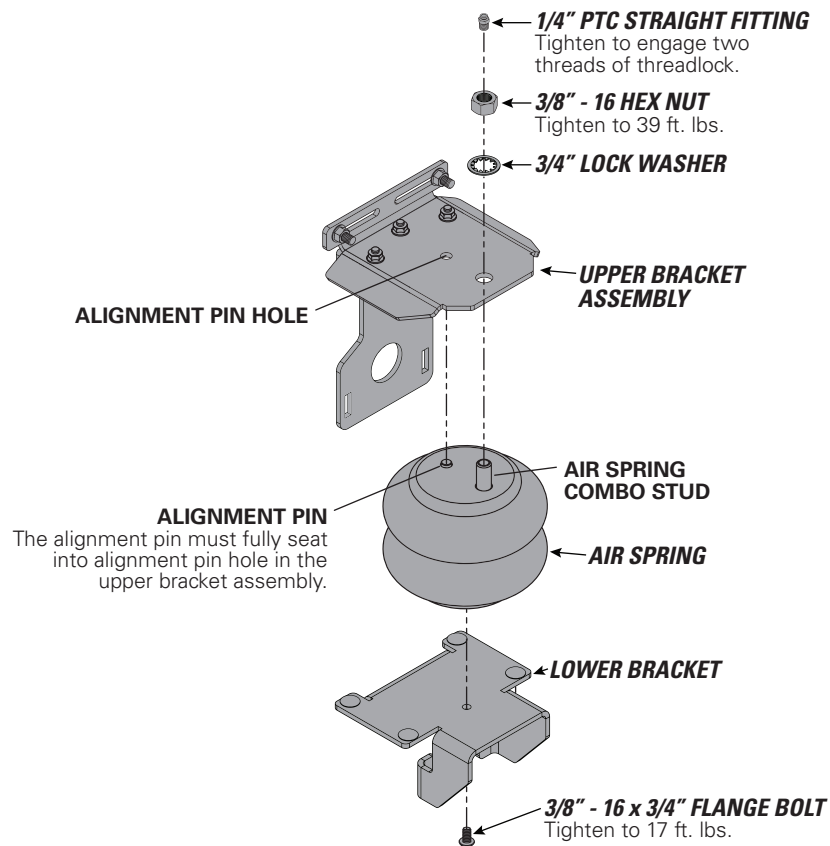




**1** Compress the air spring by hand and slide it between the lower bracket and the upper bracket assembly.

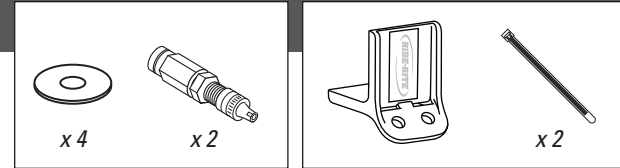
**2** Insert the air spring combo stud through the mounting hole in the upper bracket assembly. **Rotate the air spring to assure the alignment pin is fully seated in the alignment pin hole.**

**3** Install hardware, as shown. Use your hand to check that you have proper clearance around the air spring.



**!** 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!**

**!** 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!

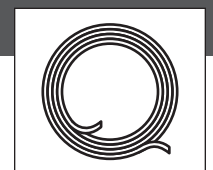
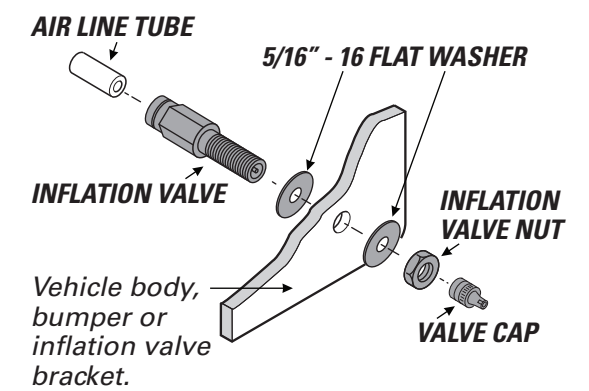
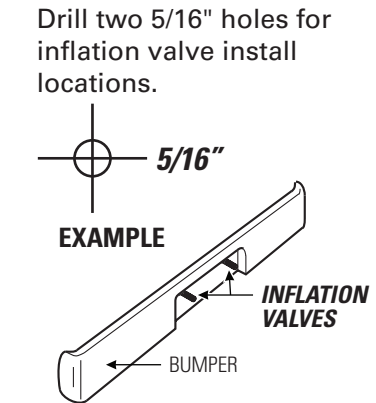
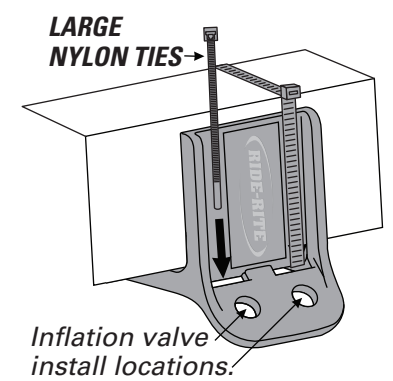


**!** IF USING THE OPTIONAL NO-DRILL INFLATION VALVE BRACKET, CHOOSE OPTION 1. IF DRILLING, CHOOSE OPTION 2. **INFLATION VALVES MUST BE ACCESSIBLE BY AN AIR CHUCK.**

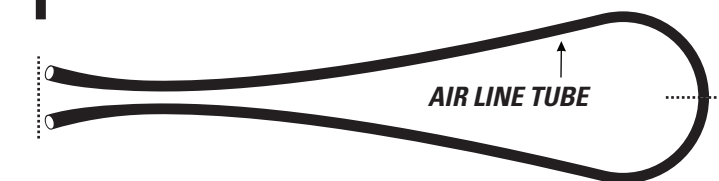
**1** Secure the air inflation valve bracket to a protected, secure location. **PROCEED TO STEP 3.**

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

**3** Install inflation valve assembly as shown.



**1** Match air line tube ends.

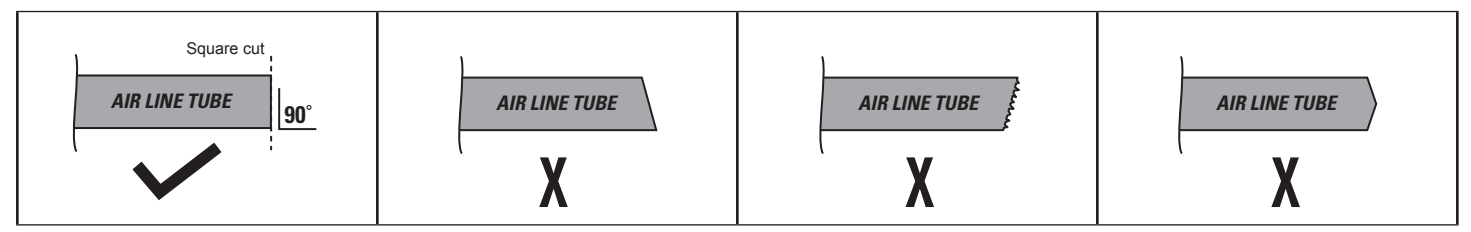


**2** Find center of air line tube, make a square cut with tube cutter or sharp utility knife.

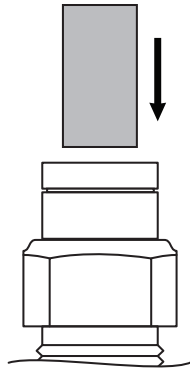
**DO** Make sure the cut is as square as possible. Use a tube cutter or sharp utility knife.

**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.

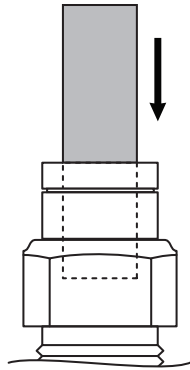
**PROPER AND IMPROPER CUTS IN THE AIR LINE TUBE**



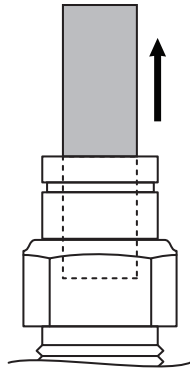
1 Insert end of air line tube into air fitting.



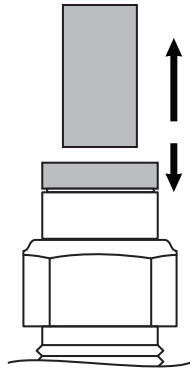
2 Push air line tube into air fitting as far as possible.



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

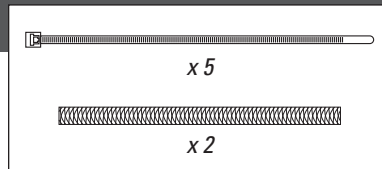


4 To remove, push down collar and gently pull air line tube away.



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

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.

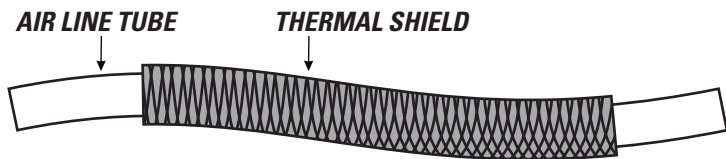


**DO**

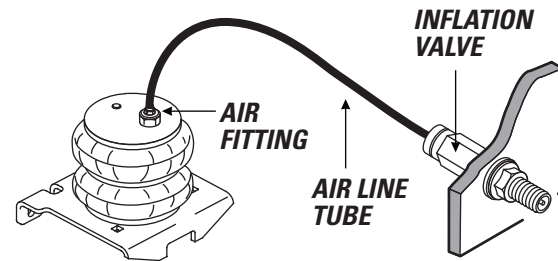
Select routes protected from heat, debris, and sharp edges. Use thermal shields near heat sources. Use nylon ties to secure the air line tube.

**DON'T**

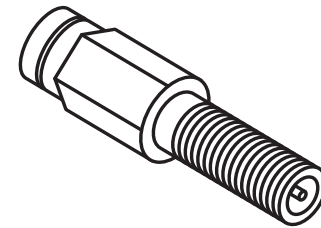
Bend or sharply curve air line tubes. Leave air line tube exposed to sharp edges. Use unnecessary lengths of air line tube. Route air line tube near moving parts. Let air line tube hang unsecured from vehicle. Scar air line tube while routing.



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**.

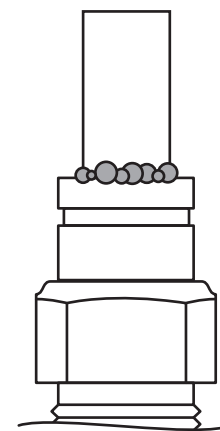


AIR SPRINGS INFLATE QUICKLY. CHECK AIR PRESSURE WHILE INFLATING.

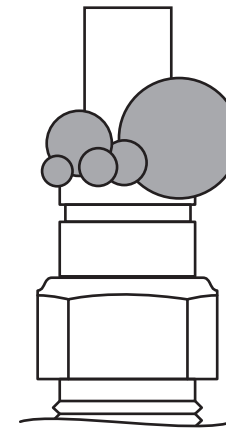
2 Spray fittings with soap and water mixture or glass cleaner.



3 Observe bubbles.



SMALL SOAP BUBBLES THAT DO NOT EXPAND



SOAP BUBBLES THAT EXPAND



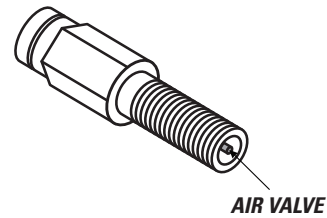
**NO LEAKS?**

Congratulations! Continue to step 13 to finish installation. Review the Operating Instructions.

**LEAK?**

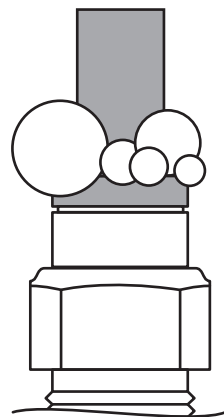
Bummer. Continue to step 12 to fix the leak.

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



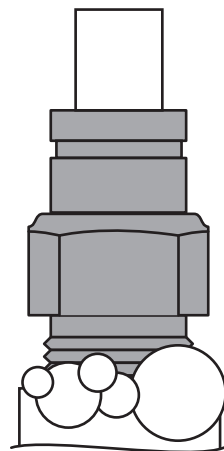
EXHAUST ALL AIR FROM THE SYSTEM PRIOR TO RELEASING AIR LINE TUBES FROM AIR FITTINGS.

**LEAK AT AIR LINE TUBE AND AIR FITTING**



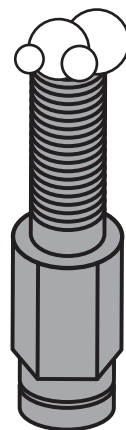
Release air line tube (see page 11). Review proper cuts and procedures in step 8. Repeat steps 9 and 11.

**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**

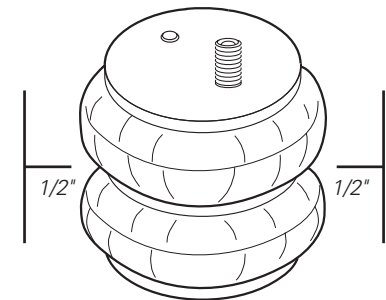
NEVER exceed the maximum load recommended by the vehicle manufacturer (GVWR). The GVWR can be found in your vehicle's owner's manual or on the data plate on the driver's side door. Consult your local dealership for additional GVWR specifications.

**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)



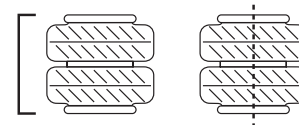


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## BEFORE YOU DRIVE, CONFIRM THE FOLLOWING:

- 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.

# Firestone

Firestone Industrial Products

CONNECT WITH US



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Firestone Ride-Rite