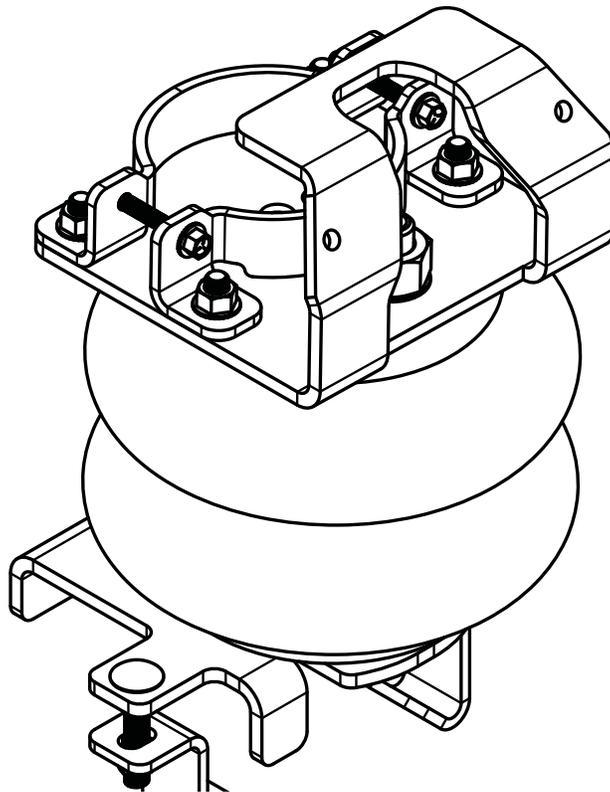




## **81213004 2011-2022 GM 2500/3500**

Congratulations - your new TowPro Helper Springs are quality products capable of improving the handling and comfort of your vehicle. As with all products, proper installation is the key to obtaining all of the benefits your kit is capable of delivering. Please take a few minutes to read through the instructions to identify the components and learn where and how they are used. It is a good idea to start by comparing the parts in your kit with the parts list below.

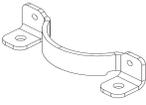
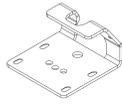
# **INSTALLATION INSTRUCTIONS**



# PARTS

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

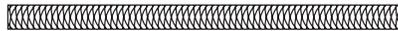
## MAIN KIT CONTENTS

PT # 6401	 x 2 AIR SPRING	PT # 5897	 x 4 CLAMP SPRING MOUNT	PT # 5898	 x 2 UPPER BRACKET
PT # 5899	 x 2 LOWER BRACKET	PT # 5900	 x 4 HOOK SPRING MOUNT	PT # 9414	 x 1 RED AIR LINE TUBE (18 FEET)
PT # 1004	 x 1 HEAT SHIELD				

## 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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## A21-760-2613 HARDWARE PACK

PT # 3046	 x 2 AIR FITTING	PT # 3064	 x 2 INTERNAL TOOTH LOCK WASHER	PT # 3513	 x 4 1/4" - 20 x 2" HEX SCREW
PT # 3295	 x 2 3/4" - 16 HEX NUT	PT # 3510	 x 4 1/4" - 20 FLANGE NUT	PT # 3402	 x 4 3/8" - 16 x 2" CARRIAGE BOLT
PT # 3033	 x 4 5/16" FLAT WASHER	PT # 3514	 x 8 3/8" - 16 x 1" FLAT HEAD SCREW	PT # 9036	 x 6 RED NYLON TIE
PT # 3022	 x 12 3/8" - 16 FLANGE LOCK NUT	PT # 3032	 x 2 INFLATION VALVE AND VALVE CAP ASSEMBLY	PT # 0899	 x 2 THERMAL SLEEVE
PT # 3142	 x 2 3/8" - 16 x .625" FLAT HEAD BOLT				

# CONTENTS AND OVERVIEW

PAGE **4** BUILD UPPER MOUNT ASSEMBLY & REMOVE EXISTING JOUNCE BUMPER

PAGE **5** INSTALL UPPER SPRING MOUNT ASSEMBLY

PAGE **6** DRY FIT AIR SPRING AND LOWER BRACKET

PAGE **7** SECURE LOWER BRACKET TO AIR SPRING

PAGE **8** INSTALL HOOK SPRING MOUNTS & SECURE AIR SPRING

PAGE **9** INSTALL THE HEAT SHIELD

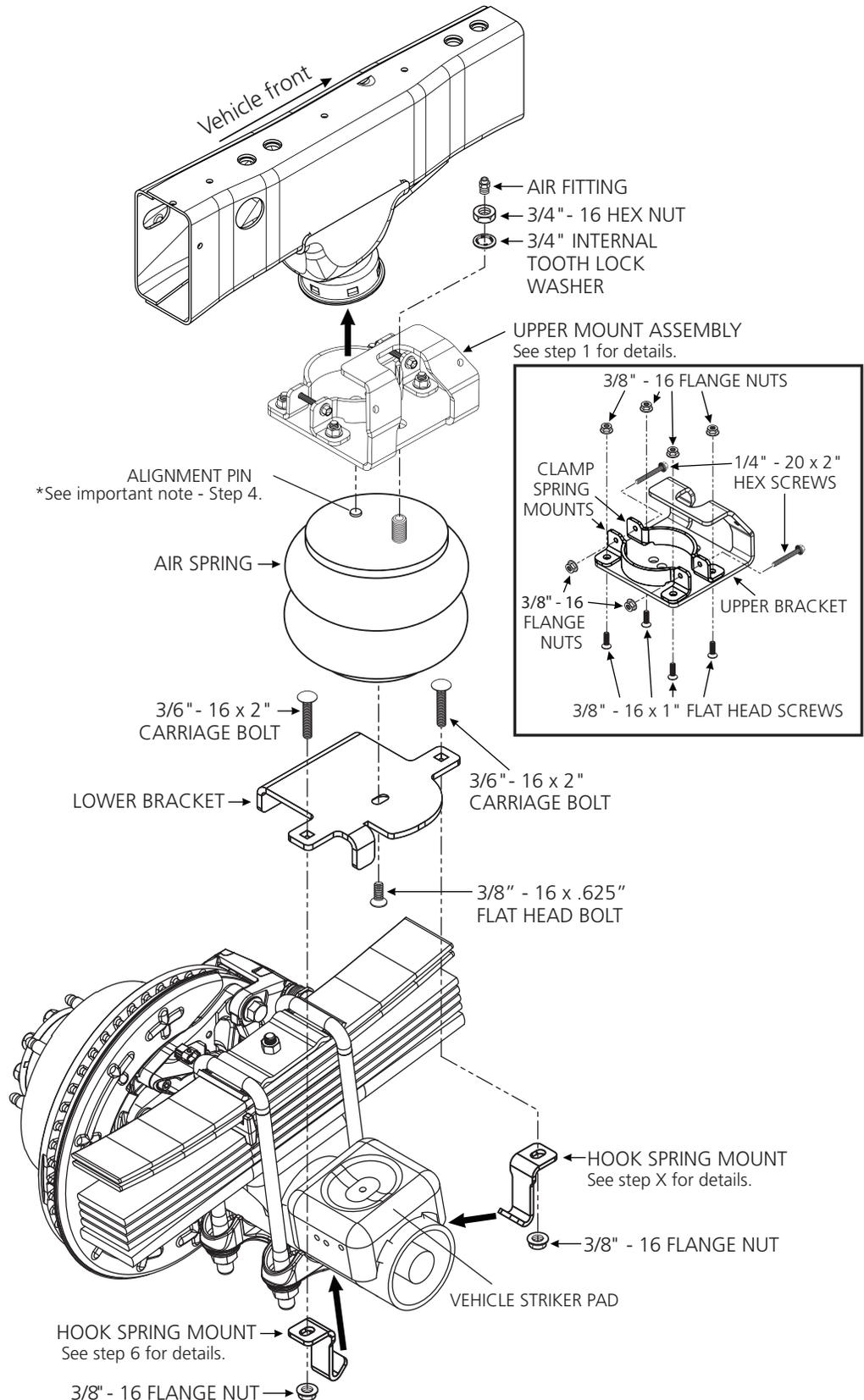
PAGE **10** AIR LINE TUBE & INFLATION VALVE INSTALLATION

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

PAGE **12** CHECKING THE SYSTEM

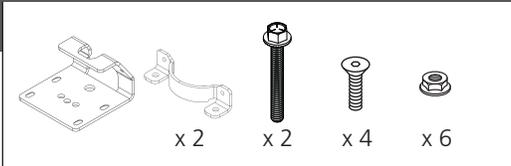
PAGE **13** FIXING AN AIR LEAK

PAGE **14** FINISHING THE INSTALLATION



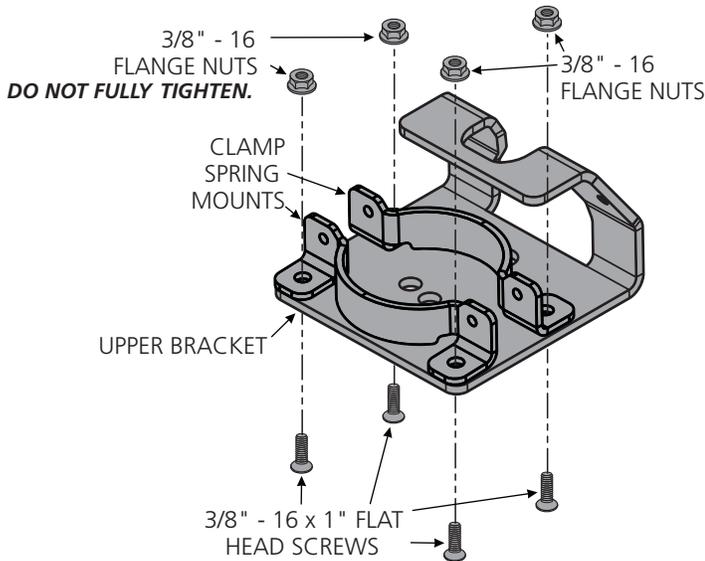
**BUILD UPPER MOUNT ASSEMBLY**

**1**

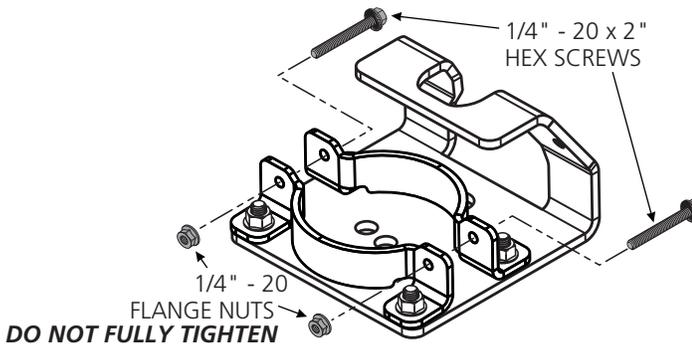


**START THE INSTALLATION ON THE LEFT SIDE OF THE VEHICLE WHEN FACING FORWARD.**

**1** Using the flat head screws and flange nuts, loosely bolt clamp spring mounts to the upper bracket, as shown. **DO NOT TIGHTEN AT THIS POINT.**



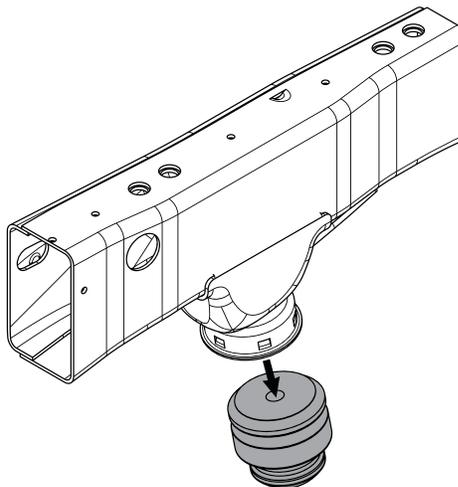
**2** Install the hex screws and flange nuts, as shown. **DO NOT TIGHTEN AT THIS POINT.**



**REMOVE THE EXISTING JOUNCE BUMPER**

**2**

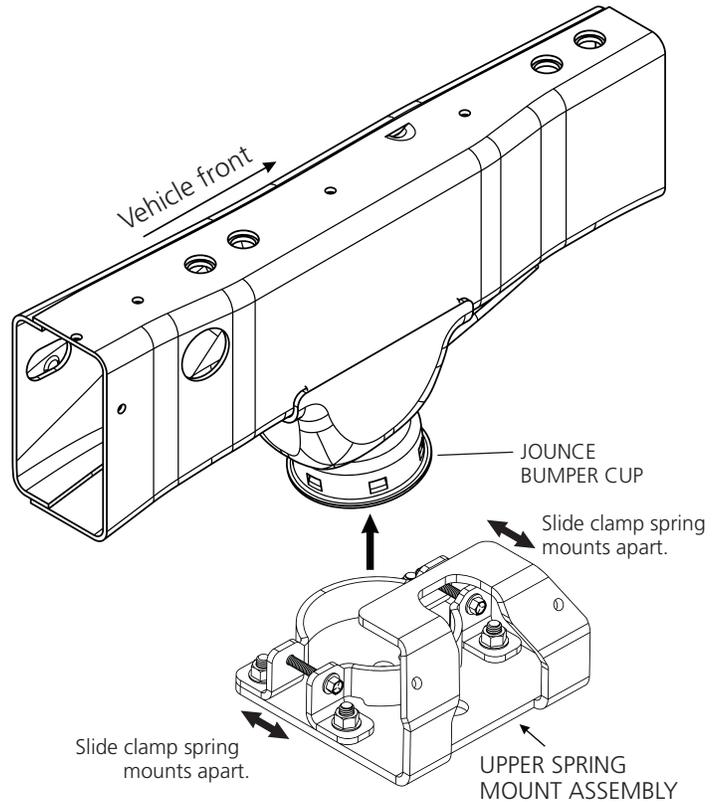
**1** Use a pry bar or flat head screwdriver to pry out the existing jounce bumper.



# 3

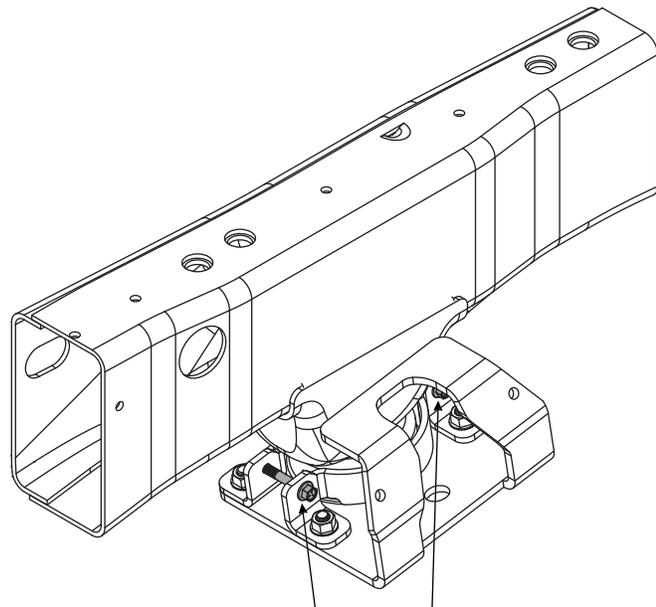
## INSTALL UPPER SPRING MOUNT ASSEMBLY TO JOUNCE BUMPER CUP

- 1 Using the upper mount assembly from step 1, slide clamps so that they are farthest apart and place over the jounce bumper cup.



- 2 Press the upper mount assembly tight against the bottom of the jounce bumper cup, assuring there is no gap.

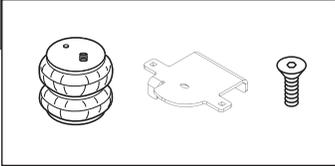
- 3 Slowly and evenly tighten hex screws and flange nuts on each side of clamp until the upper mount assembly is securely attached to jounce bumper cup.



- 1 Alternate tightening the flange nuts onto the hex screws on each side.



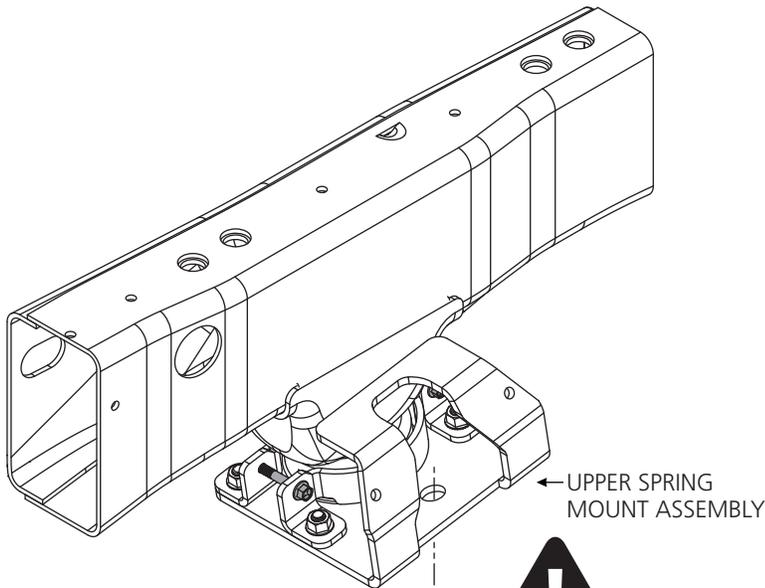
ASSURE THERE IS NO GAP BETWEEN THE TOP OF THE UPPER BRACKET AND THE BOTTOM OF THE JOUNCE BUMPER CUP.



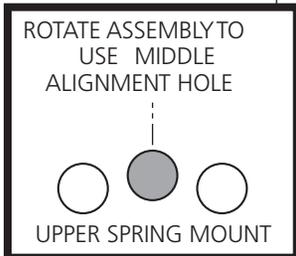
INSTALLING THE RIGHT SIDE? REMEMBER TO INSTALL THE HEAT SHIELD IN STEP 7 FIRST!

**1** Fasten the lower bracket to the air spring using the flat head bolt, as shown. DO NOT FULLY TIGHTEN IN THIS STEP.

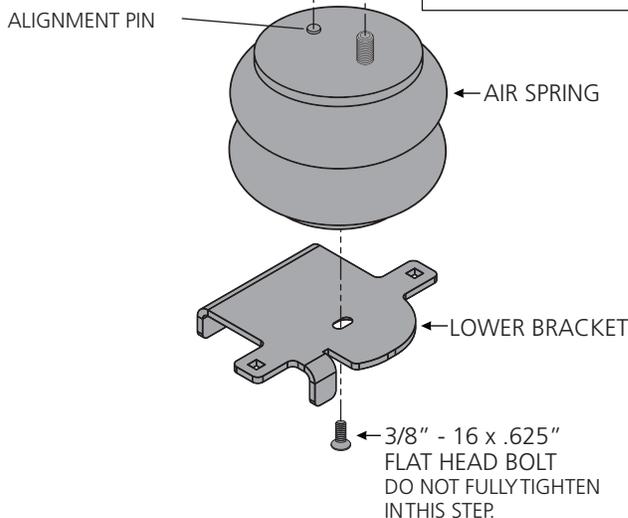
**2** Dry fit into place, assuring the alignment pin is fully seated into the middle hole on the upper spring mount assembly.



VIEW FROM BELOW



ALIGNMENT PIN ON AIR SPRINGS MUST BE INSTALLED TO FULLY SEAT INTO THE MIDDLE 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!



# 5

## SECURE LOWER BRACKET TO AIR SPRING

**1** Position the lower bracket so that it sits squarely on the jounce bumper striker pad.

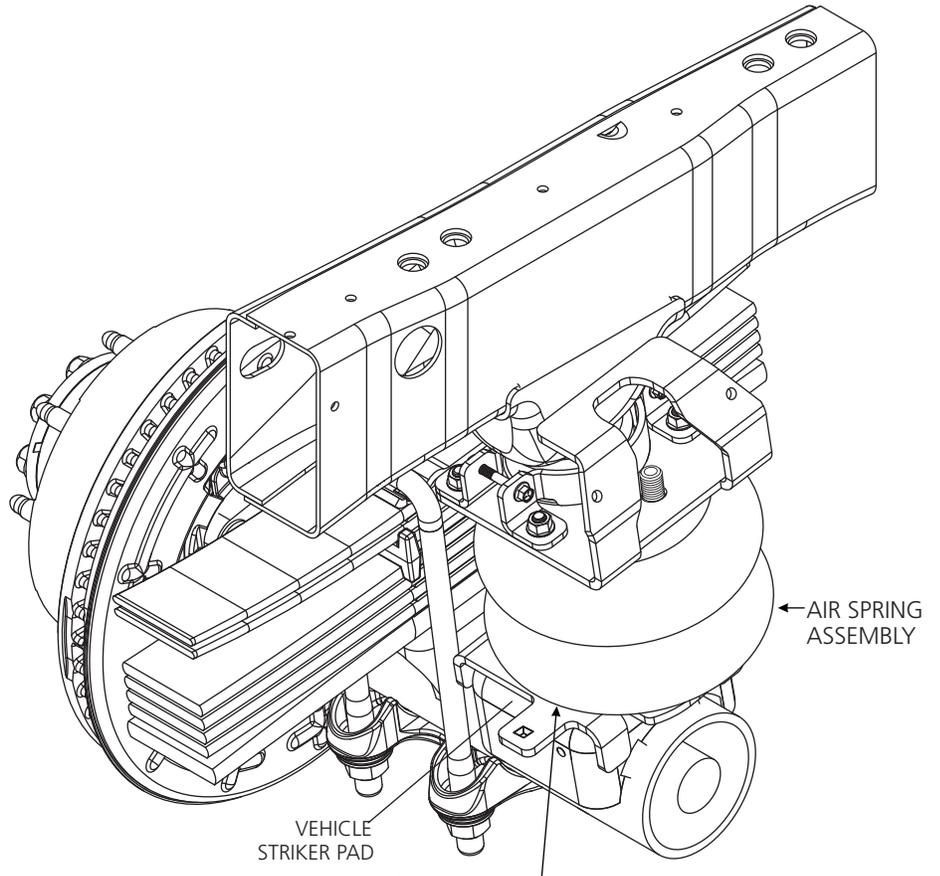
**2** Assure that the alignment pin is fully seated in the middle hole, as noted in step 4.

**3** Make alignment marks, as shown.

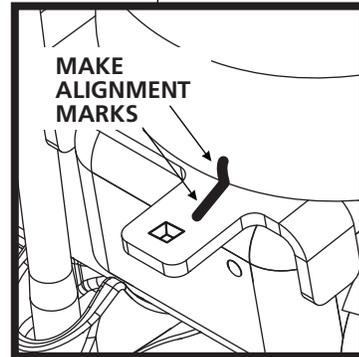
**4** Remove air spring assembly.

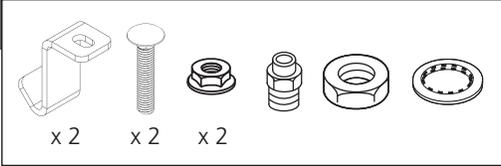
**5** Assuring your marks are aligned, fully tighten the flat head bolt to secure the lower bracket to the air spring.

**6** Fit the air spring assembly back into position.



ALIGNMENT PIN ON AIR SPRINGS MUST BE INSTALLED TO FULLY SEAT INTO THE MIDDLE 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!



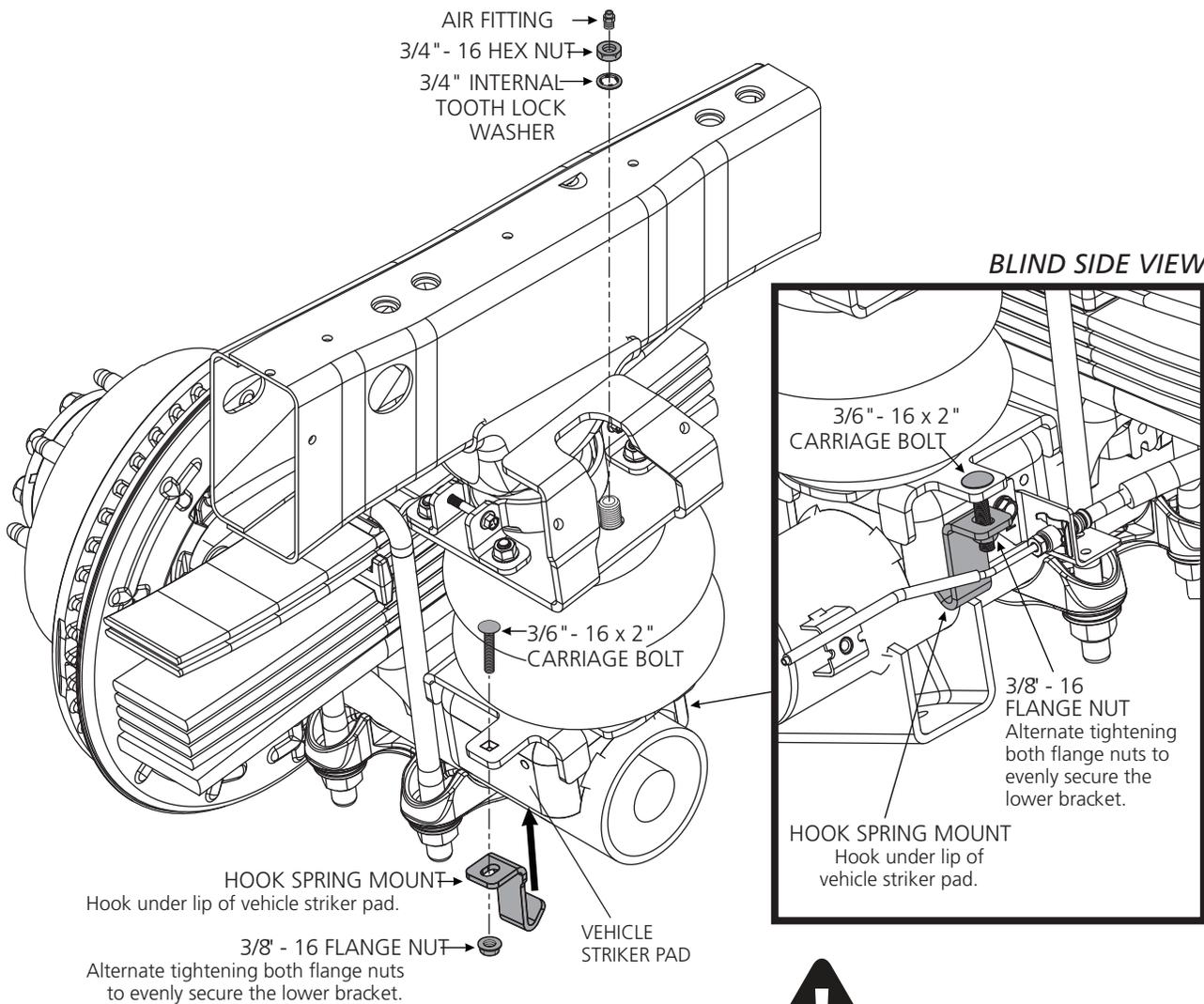


**1** Assure that the alignment pin is fully seated in the middle hole, as noted in step 4.

**2** Fasten the air spring to the upper spring mount as - assembly, as shown.

**3** Install the hook spring mounts, as shown. Assure that the mount hooks under the edge of the striker pad.

**4** Slowly and evenly tighten the nut on each carriage bolt until lower bracket is secure.



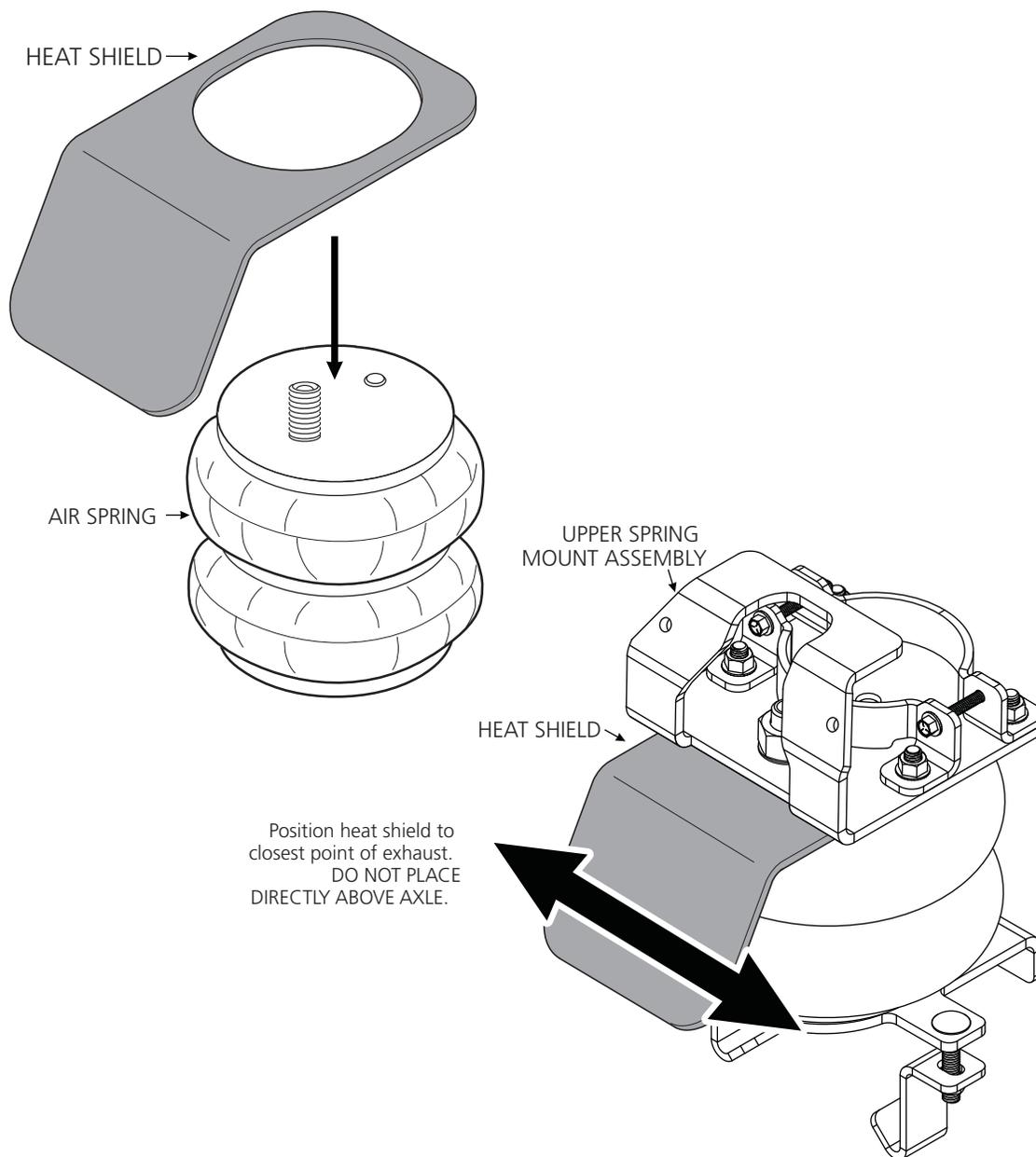
USE YOUR HAND TO CHECK FOR THE PROPER CLEARANCE AROUND THE AIR SPRING. IF YOUR HAND DOES NOT FIT BETWEEN THE AIR SPRING AND OTHER COMPONENTS, IT WILL RUB!

# 7

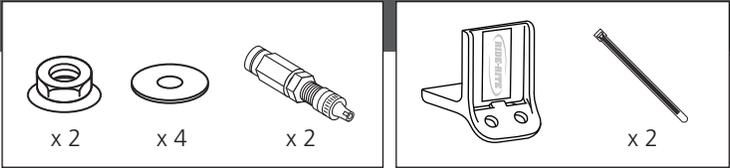
## INSTALL THE HEAT SHIELD



1 Secure the heat shield by clamping it between the air spring and upper spring mount assembly.

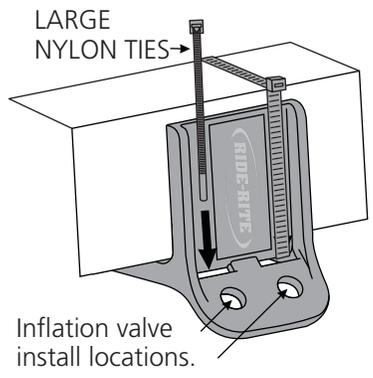


**AWESOME!** You're done with the left side. Go back to step 1 and repeat the steps for the right side installation.



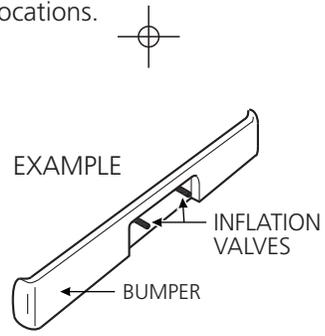
IF USING THE OPTIONAL NO-DRILL INFLATION VALVE BRACKET, CHOOSE OPTION 1. IF DRILLING, CHOOSE OPTION 2. INFLATION VALVES MUST BE ACCESSIBLE BY AN AIR CHUCK.

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

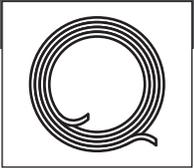
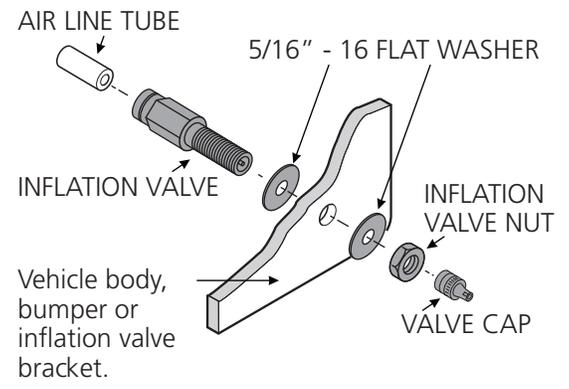


**2** Select a protected location to install the inflation valves, such as the bumper or the body of the vehicle.

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.

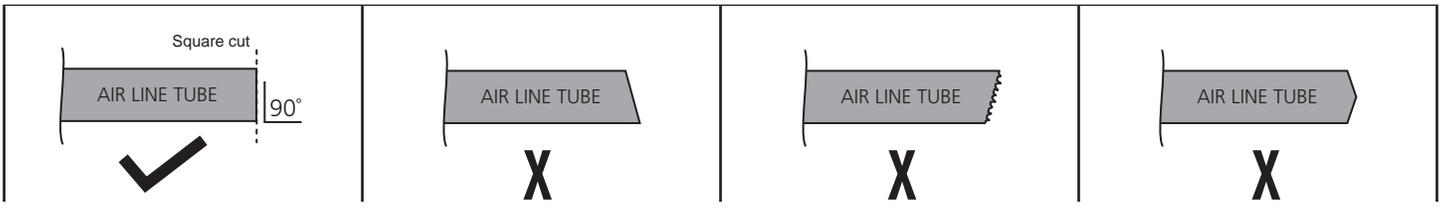
**DO**

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.

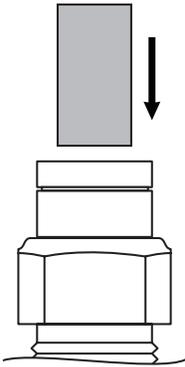
PROPER AND IMPROPER CUTS IN THE AIR LINE TUBE



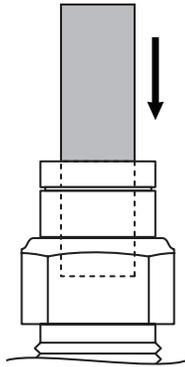
# 10

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

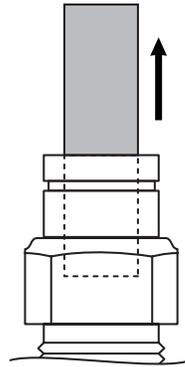
**1** Insert end of air line tube into air fitting.



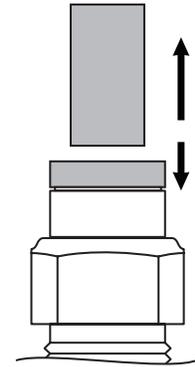
**2** Push air line tube into air fitting as far as possible.



**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.

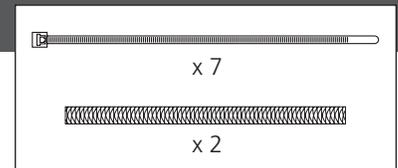


Removal Tip: Use a 1/4", 5/16", or 6mm open-ended wrench to push the collar down.

# 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.

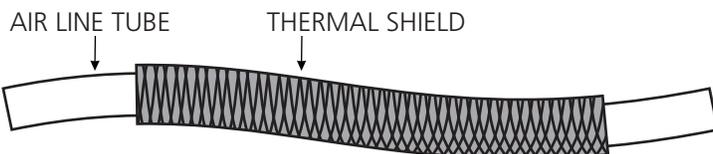


# DO

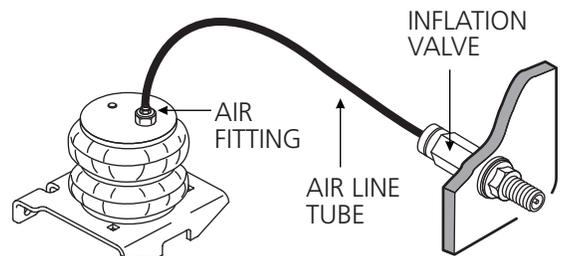
Select routes protected from heat, debris, and sharp edges.  
Use thermal shields near heat sources.  
Use Nylon ties to secure the air line tube.

# DON'T

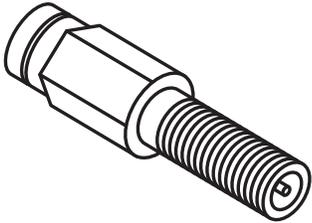
Bend or sharply curve air line tubes.  
Leave air line tube exposed to sharp edges.  
Use unnecessary lengths of air line tube.  
Route air line tube near moving parts.  
Let air line tube hang unsecured from vehicle.  
Scar air line tube while routing.



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 .

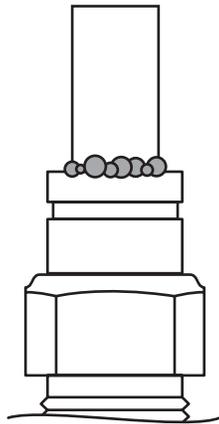


AIR SPRINGS INFLATE QUICKLY. CHECK AIR PRESSURE WHILE INFLATING.

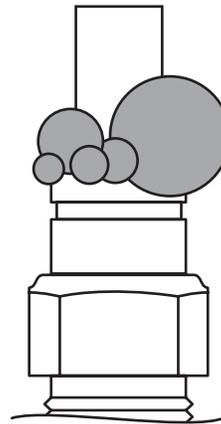
- 2** Spray fittings with soap and water mixture.



- 3** Observe bubbles.



SMALL SOAP BUBBLES  
THAT DO NOT EXPAND



SOAP BUBBLES  
THAT EXPAND



# NO LEAKS?

Congratulations! Continue to step 15 to finish installation. Review the Operating Instructions.

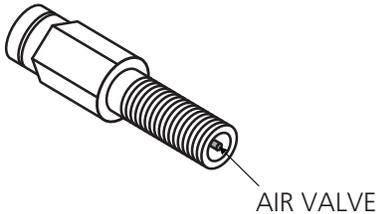
# LEAK?

Bummer. Continue to step 14 to fix the leak.

# 13

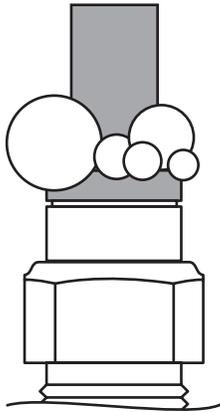
## FIXING AN AIR LEAK

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



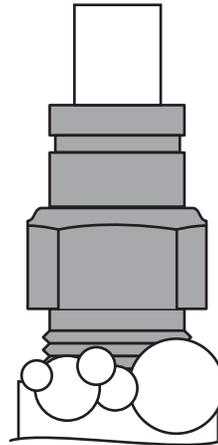
EXHAUST ALL AIR FROM THE SYSTEM PRIOR TO RELEASING AIR LINE TUBES FROM AIR FITTINGS.

### LEAK AT AIR LINE TUBE AND AIR FITTING



Release air line tube (see page 12). Review proper cuts and procedures in step 10. Repeat steps 11 and 13.

### 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 1-812-482-2932.

**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**

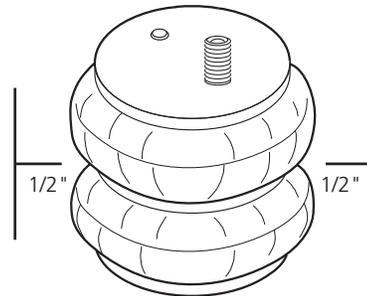
NEVER exceed the maximum load recommended by the vehicle manufacturer (GVWR). The GVWR can be found in your vehicle's owner's manual or on the data plate on the driver's side door. Consult your local dealership for additional GVWR specifications.

**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.



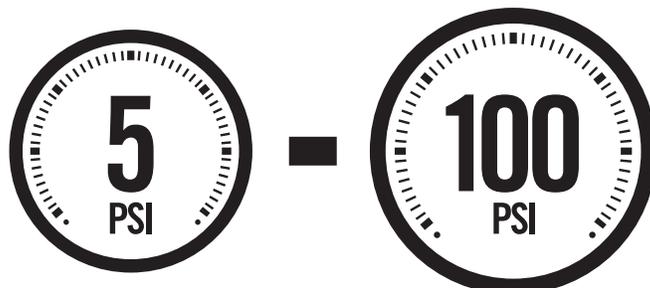
USE YOUR HAND TO CHECK FOR THE PROPER CLEARANCE AROUND THE AIR SPRING. IF YOUR HAND DOES NOT FIT BETWEEN THE AIR SPRING AND OTHER COMPONENTS, IT WILL RUB!



# ! 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.



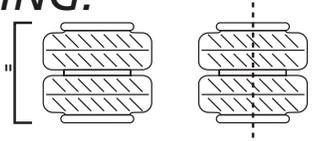
MINIMUM PRESSURE

MAXIMUM PRESSURE (LOADED)

**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? 1-812-482-2932**

