

# Installation Manual



## AIR SPRING KIT

Chevy/GMC 2500/3500 (2WD/4WD)\*

*Use this heavy duty air suspension kit to level your truck's stance and eliminate your vehicle's sag, sway and bottoming out while providing added support for an overall smooth & safe ride.*

\* See application guide for proper fitment.

L6575\_REV1\_03.01.2023 ECN 1-2701



**WARNING:** This product can expose you to the chemical Hexavalent Chromate, which is known to the State of California to cause cancer and birth defects or other reproductive harm. *For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)*

***Thank you and congratulations on the purchase of an air suspension kit. Please read the entire manual prior to starting the installation to ensure you can complete it once started.***

#### **IMPORTANT**

This air suspension kit will not increase the GVWR (*Gross Vehicle Weight Rating*), as the GVWR is determined by the vehicle manufacturer. **Do not exceed the maximum capacity listed by the vehicle manufacturer.**

***PLEASE NOTE: The air bag must have clearance between itself and the surrounding components to prevent any contact when bag is inflated or compressed. Trimming off excess bolt length is also required to ensure no contact with the bag or other suspension components can be made once installed.***

#### *Safety Warnings!*

- ❗ Serious personal injury or death may result from an air spring failure or accident due to improper installation or air spring pressure operation or maintenance. Please read and abide the instructions, safety recommendations and maintenance suggestions throughout this manual.
  - ❗ Inflating an unsecured air spring is dangerous. If it bursts, it could be hurled into the air with explosive force resulting in serious personal injury or death. Never inflate an air spring unless it is secured to the vehicle.
  - ❗ Removing and replacing air springs can be dangerous. This is only a job for a qualified service professional. Never perform air spring service procedures without proper training, tools, and equipment.
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## KIT CONTENTS

Reference the kit explosion diagram on the following page for part assembly.

HD (5000 lbs) KIT CONTENTS	QTY	PART #
<b>A*</b> Double Convuluted Air Bag, 2500 lb each	2	HP10000
<b>B**</b> Roll Plate, 4.5" Diameter	4	HP10054
<b>C***</b> 90° Swivel Fitting, ¼" Hose to ¼" NPT	2	HP1100

XD (7500 lbs) KIT CONTENTS	QTY	PART #
<b>A*</b> Double Convuluted Air Bag, 3750 lb each	2	HP10438
<b>B**</b> Roll Plate, 5.5" Diameter	4	HP10069
<b>C***</b> 90° Swivel Fitting, 3/8" Hose to 3/8" NPT	2	HP1245

KIT CONTENTS	QTY	PART #
<b>D</b> Bracket, Upper Driver	1	HP1884
<b>E</b> Bracket, Upper Passenger	1	HP1885
<b>F</b> Bracket, Lower	2	HP1886
<b>G</b> Axle Strap	2	HP0128
<b>H</b> Round Strap	2	HP0016
<b>I</b> U-Bolt, 4.25" x 6.5" Square	2	HP1331
<b>J</b> Bolt, 3/8"-16 x ¾" Countersunk	8	HP1008
<b>K</b> Bolt, 3/8"-16 x 2.5" Carriage	4	HP1005
<b>L</b> Bolt, 3/8"-16 x 3.5" Carriage	4	HP1332
<b>M</b> Bolt, M8x1.25 x 25 mm Flange	2	HP1430
<b>N</b> Nut, 3/8"-16 Nylon Lock Flange	12	HP1975
<b>O</b> Heat Shield	1	HP0012
<b>P</b> Worm Gear Ring Clamp	2	HP1001

## REQUIRED TOOLS

- Hoist or Floor Jack
- Safety Stands
- Safety Glasses
- Torque Wrench
- Standard Combination Wrenches
- 7/32" Hex Allen Wrench
- 1-1/8" Wrench or Deep Socket
- Ratchet
- Metric & Standard Sockets
- Hose Cutter (included) or Sharp Utility Knife
- Pipe Thread Sealant
- Spray Bottle with Dish Soap/Water
- Air Compressor/Compressed Air Source (to test/fill air springs)
- Pry bar or large screwdriver (optional)

## BEFORE STARTING THE INSTALLATION:

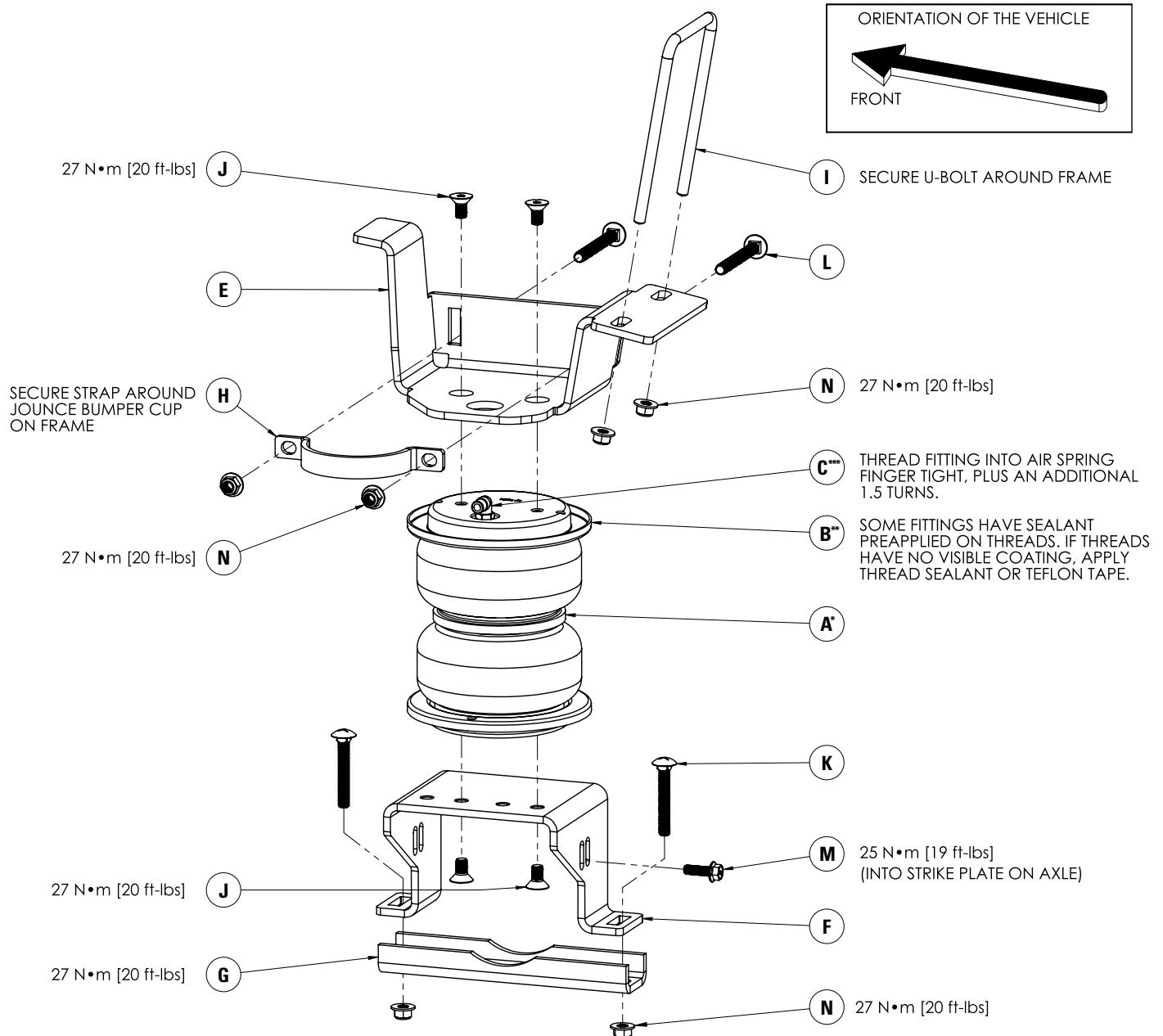
1. Ensure the application information is correct for the make, model and year of the vehicle you are installing the kit on.
2. Some vehicles are equipped with a rear wheel brake proportioning valve. Check with the manufacturer before installing the air spring kit, as it may affect braking performance.
3. It is recommended to use a good quality anti-seize on all fasteners. This will reduce the chance of corrosion on the fasteners and will help facilitate removal, if required at a later date.

### PLEASE NOTE:

***This kit contains push-to-connect fittings; using scissors or wire cutters to cut the nylon airline will distort the line and cause the connection to leak. THE AIRLINE MUST BE CUT OFF SQUARELY WITH THE NYLON HOSE CUTTER PROVIDED IN THIS KIT OR A SHARP UTILITY KNIFE.***

**Please make sure all the items shown in this explosion diagram are provided in your kit before starting the installation.**

**HD (5000 lb) KIT PASSENGER SIDE ASSEMBLY SHOWN:**



**PLEASE NOTE:**

<b>A*</b>	HD - HP10000 / XD - HP10438
<b>B**</b>	HD - HP10054 / XD - HP10069
<b>C***</b>	HD - HP1100 / XD - HP1245

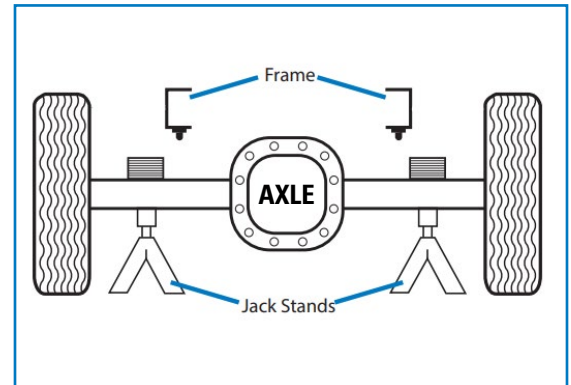
## 1 LIFT VEHICLE

Place wheel chocks in front of and behind both front wheels.

Raise the rear of the truck high enough to attain a comfortable working height.

Place two jack stands under the axle.

Lower the vehicle until the frame is supported by the jack stands (as shown in Figure 1).

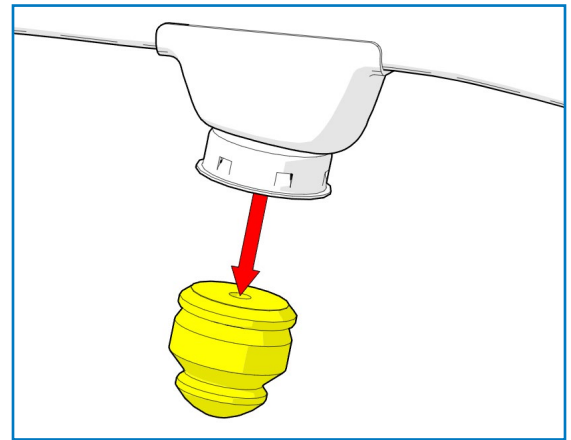


1

## 2 REMOVE JOUNCE BUMPER

Remove the jounce bumper from the retaining cup on the frame (as shown in Figure 2).

⚠ A pry bar or large screwdriver may be needed to pry out the jounce bumper.

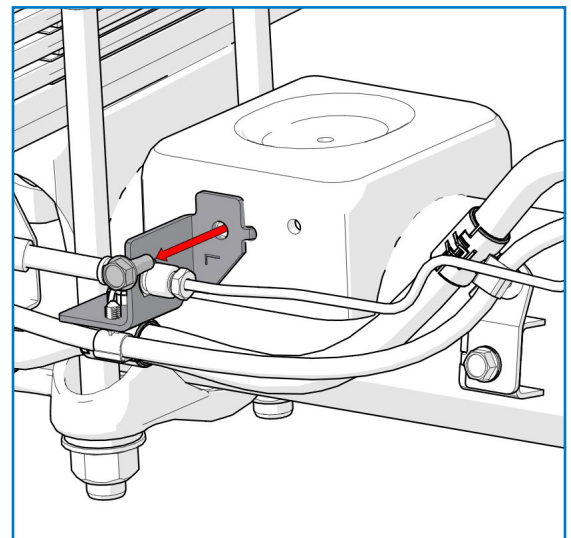


2

## 3 UNBOLT BRAKE LINE BRACKETS

Remove the bolt securing the brake line bracket to the strike plate on the axle on both sides of the vehicle (see Figure 3 for reference).

Gently pull the bracket with brake lines away from the strike plate.



3

#### 4 ASSEMBLE AIR SPRINGS

Assemble air springs as shown in Figure 4A (HD kit driver side shown as reference).

Set the roll plate and lower bracket over the bottom of the air spring.

Align the holes in the lower bracket (as per Figure 4B) which details the correct bolt holes to use for each side of the vehicle.

Secure using two 3/8"-24 countersunk bolts.

Torque bolts to 27 N•m [20 ft-lbf]

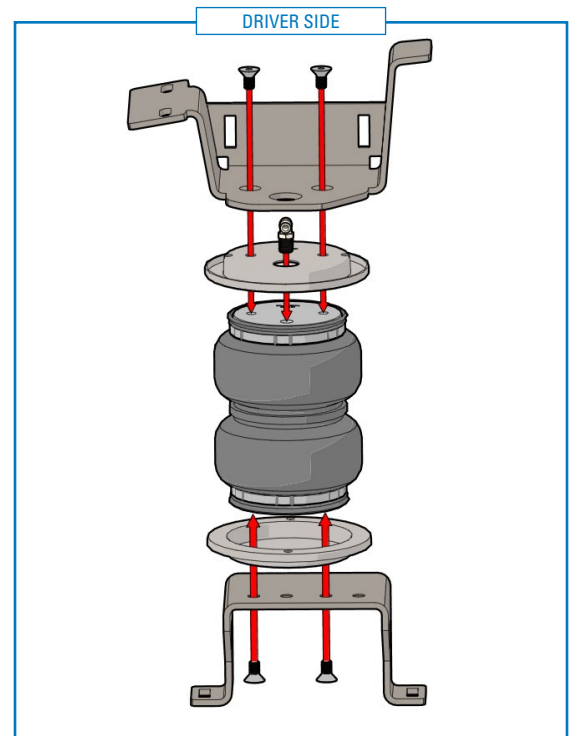
Install the swivel air fitting into the largest hole in the top of the air bag, hand tight plus 1.5 turns.

**!** Some air fittings have sealant pre-applied on threads. If no visible coating is present, apply a thread sealant or Teflon tape before assembling to help prevent leaks.

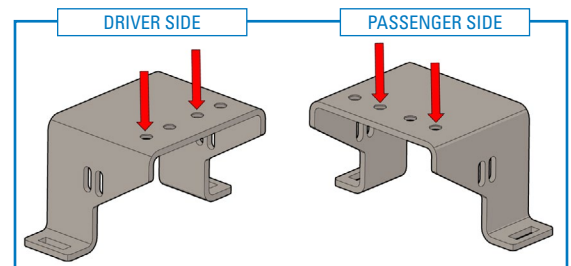
Set the roll plate and respective driver or passenger side upper bracket on the air spring.

Secure using two 3/8"-24 countersunk bolts.

Torque bolts to 27 N•m [20 ft-lbf]



4A



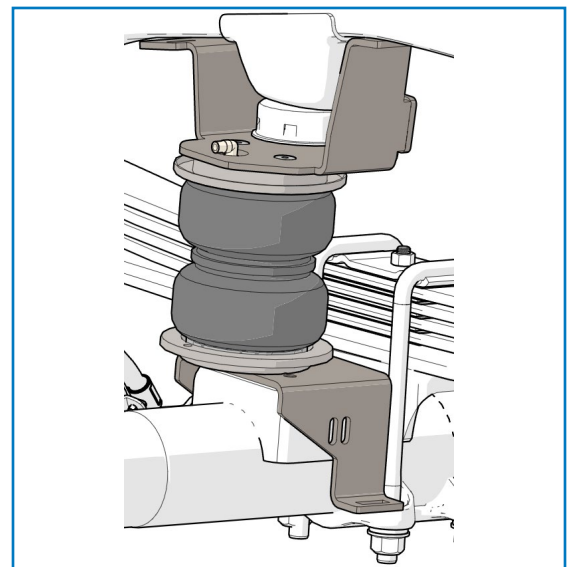
4B

#### 5 INSTALL SPRING ASSEMBLIES

**PLEASE NOTE:** It may be necessary to raise the frame of the truck a few inches to allow more clearance to install the air spring assemblies.

Position the air spring assembly such that the lower bracket rests on the jounce bumper strike plate and the upper bracket nests around the jounce bumper retainer. (See Figure 5 for reference)

The air fitting will be positioned on the inboard side of the frame.

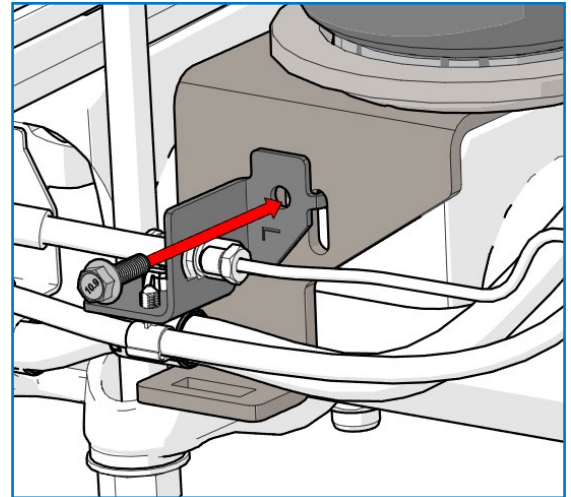


5

## 6 ATTACH BRAKE LINE BRACKET

Attach the brake line bracket (previously removed in Step 3) to the lower bracket of the air spring kit using the original mounting hole and the longer M8 bolt provided in this kit.

Torque bolt to 25 N•m [19 ft-lbf]



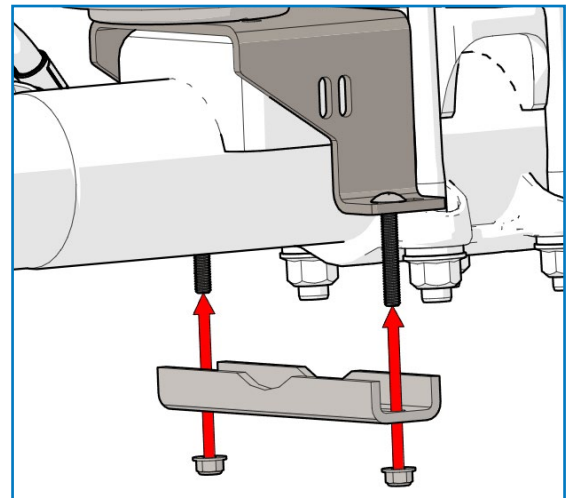
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## 7 INSTALL AXLE STRAP

Insert a 3/8"-16 x 2.5" carriage bolt through each slot in the lower bracket.

Place the axle strap on the axle and secure using the carriage bolts and two 3/8"-16 flanged nylon lock nuts.

Torque flange nuts to 27 N•m [20 ft-lbf]



7

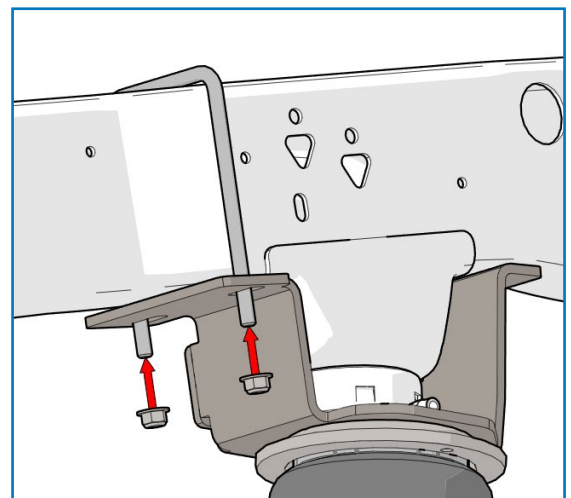
## 8 SECURE UPPER BRACKET

Install the square U-bolt around the frame of the vehicle and through the mounting holes in the upper bracket (as shown in Figure 8A).

**⚠ Ensure no brake lines or wires are pinched between the U-bolt and the frame.**

Install a 3/8"-16 flanged nylon locking nut on each end of the U bolt.

Do not fully tighten yet.



8A

*Step continues on the following page...*

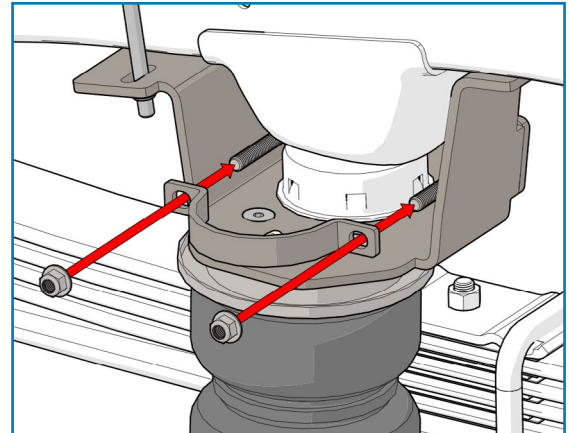


Insert two 3/8"-16 x 3.5" carriage bolts into the large slots on the upper bracket.

Place the round strap around the jounce bumper retainer and onto the carriage bolts (as shown in Figure 8B).

Secure the strap using two 3/8"-16 flanged nylon locking nuts.

Torque all flange nuts to 27 N•m [20 ft-lbf]



8B

## 9 INSTALL HEAT SHIELD

Bend tabs on the heat shield so the required 1/2" of dead space exists between the heat shield and exhaust when attached.

Attach the heat shield to the exhaust pipe on passenger side using two ring clamps (shown in Figure 9). Each hose clamp holds a tab against exhaust pipe.



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## 10 INSTALL AIR LINE

**PLEASE NOTE: This kit contains push-to-connect fittings; using scissors or wire cutters to cut the nylon airline will distort the line and cause the connection to leak. THE AIRLINE MUST BE CUT OFF SQUARELY WITH THE NYLON HOSE CUTTER PROVIDED IN THIS KIT OR A SHARP UTILITY KNIFE**

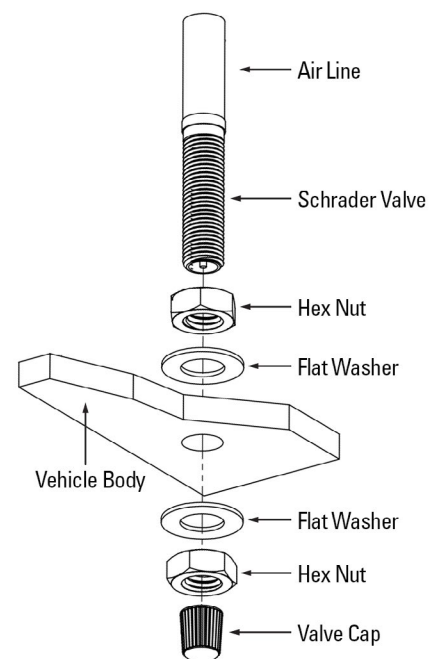
Provided in air spring kit are two fill valves. The most common place to install is in place of license plate fasteners. Alternatively, two 5/16" holes can be drilled in a convenient location.

Cut air line assembly into two equal lengths with hose cutter.

Install one air line, route the nylon air line to an air spring fitting and cut the hose. Moisten the end of the air line prior to inserting it into the fitting and push it in until it stops. Repeat with the other fill valve.

Secure airlines using the tie-straps, away from moving items and heat sources.

Place a 5/16" nut on the air valve. Leave enough of the inflation valve in front of the nut to extend through the hole, install a flat washer, and 5/16" nut and cap (reference Figure 10 for assembly). There should be enough valve exposed after installation—approximately 1/2"—to easily apply a pressure gauge or an air chuck.



10



***If an in-cab inflation kit is being installed, follow the instructions provided with that kit now.***

## 11 CHECK SYSTEM FOR LEAKS

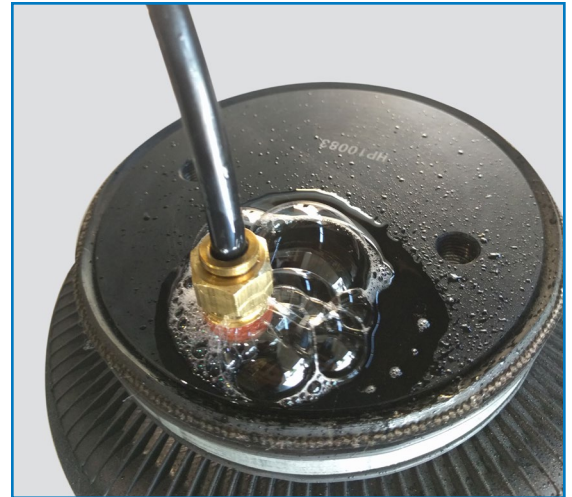
Inflate both air springs to 90 psi and then use a mixture of dish soap and water on all air line connections to detect any air leaks. Large, expanding bubbles indicate a leak (as shown in Figure 11).

Repair as necessary and retest.

Inflate air springs to a predetermined value and on following day recheck pressure.

If one or both of air springs have lost pressure, an air leak is present.

Leak must be repaired, and then retested until no leaks exist.



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## AFTER COMPLETING THE INSTALLATION

### PLEASE REMEMBER:

Install wheels and torque fasteners to manufacturer's specifications.

Re-torque all fasteners after first 500 miles of driving.

For safe and proper operation, never operate the vehicle under minimum of 10 psi or over maximum of 100 psi in air springs. Staying within pressure limit will ensure maximum air spring life. Failure in doing so may result in a void warranty (see **Note** below).

***NOTE: Do not exceed maximum vehicle payload. Failure to do so may result in failure of the air suspension kit and/or damage to your vehicle.***

***Thank you again, and congratulations on the installation of the air suspension kit.***

## OPTIONAL ACCESSORIES

Optional dual needle air gauges are available to monitor pressure in each spring from vehicle cab, as well as a full line of air compressors, air tanks, and solenoids built to work with and control your air spring system.

## OPERATING YOUR VEHICLE WITH AIR SUSPENSION

Air springs have minimum and maximum pressure requirements. Never operate your vehicle with less than 10 psi in air spring and never inflate air springs over 100 psi. Damage to air springs will result.

Check air pressure in air springs daily for first couple of days to ensure a leak has not developed. Air springs are designed to maintain the vehicles stock ride height with a load. Do not use the air springs as a means to lift vehicle with no load. This will result in a harsh ride.

## SERVICING YOUR VEHICLE WITH AIR SUSPENSION

When lifting the vehicle with a floor jack or hoist on the frame, never allow the air spring to limit the travel of the axle. Try to always jack the vehicle on the axle. Suspending the axle with the air spring limiting the axle travel will damage the air spring and void the air spring warranty.

## WARRANTY

***The owner's warranty will be void if air springs are run with less than the minimum of 10 psi. See additional warranty for details.***

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