

# Installation Manual

VERSION  
FRANÇAISE



## AIR SPRING KIT

Mercedes Sprinter 3500XD/4500 (2WD/4WD) DRW\*+

*+Does not fit models with ride height sensors*

*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.*



**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 #
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<b>A*</b> Double Convoluted Air Bag, 2500 lb each	2	HP10000
<b>B**</b> Roll Plate, 4.5" Diameter	4	HP10054

XD (7500 lbs) KIT CONTENTS	QTY	PART #
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<b>A*</b> Double Convoluted Air Bag, 3750 lb each	2	HP10438
<b>B**</b> Roll Plate, 5.5" Diameter	4	HP10069
<b>X+</b> Fitting, 3/8" NPT - 1/4" NPT	2	HP1388

KIT CONTENTS	QTY	PART #
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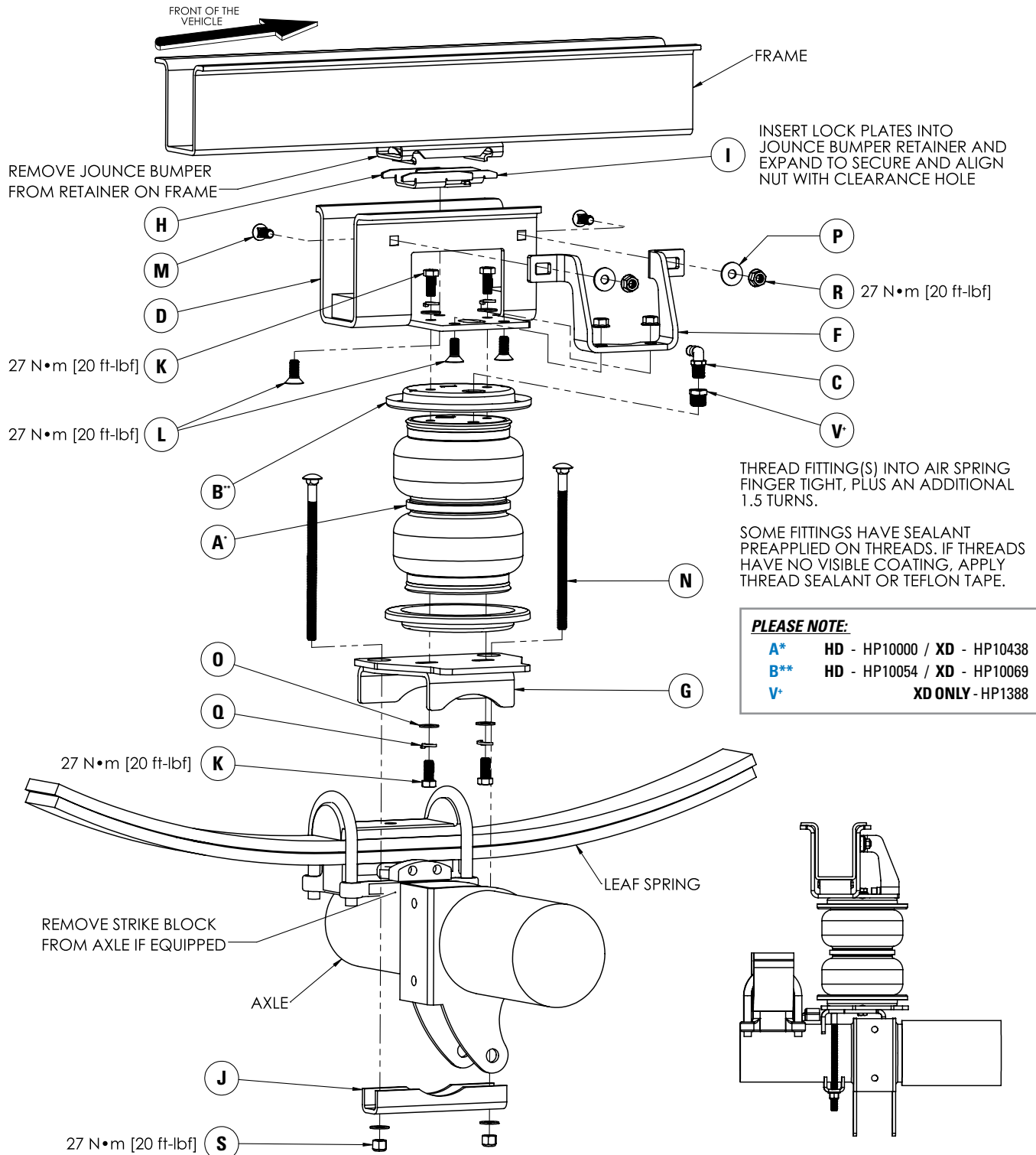
<b>C</b> 90° Swivel Fitting, 1/4" NPT	2	HP1099
<b>D</b> Bracket, Upper Driver	1	HP1715
<b>E</b> Bracket, Upper Passenger	1	HP1716
<b>F</b> Bracket, Upper Brace	2	HP1699
<b>G</b> Bracket, Lower	2	HP1700
<b>H</b> Plate, Jounce Outer Lock	2	HP1693
<b>I</b> Plate, Jounce Inner Lock	2	HP1694
<b>J</b> Axle Strap	2	HP1383
<b>K</b> Bolt, 3/8" - 16 x 1" Countersunk	6	HP1704
<b>L</b> Bolt, 3/8" - 16 x 1" Square Neck Plow	4	HP1734
<b>M</b> Bolt, 3/8" - 24 x 7/8" Hex Head	8	HP1002
<b>N</b> Bolt, 3/8" - 16 x 7" Carriage	4	HP1409
<b>O</b> Washer, 3/8" Flat	12	C653
<b>P</b> Washer, 3/8" Wide Flat	4	C18006
<b>Q</b> Washer, 3/8" Split Lock	8	C18007
<b>R</b> Nut, 3/8" Serrated Flange	8	HP1338
<b>S</b> Nut, 3/8" Nylon Lock	4	HP1000
<b>T</b> Heat Shield	2	HP0012
<b>U</b> Worm Gear Ring Clamp	4	HP1001
<b>V</b> Airline Hose Assembly	1	HP1344
<b>W</b> Tie Straps	6	C11618

**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)

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

### DRIVER SIDE ASSEMBLY SHOWN:



**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.***

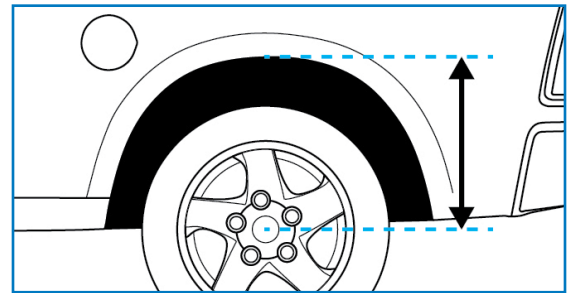
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**1 MEASURE STOCK RIDE HEIGHT**

Park the vehicle on a level surface.

Using a measuring tape, measure the distance between the center of the wheel hub and the bottom of the fender well (as shown in Figure 1) this will give you your ride height.

Note the ride height for all four corners.

**1****2 REMOVE REAR WHEELS**

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

Raise the rear of the truck high enough to remove both wheels and attain a comfortable working height.

Place two jack stands under rear axle (shown in Figure 2).

Lower the vehicle until the axle is supported by the jack stands.

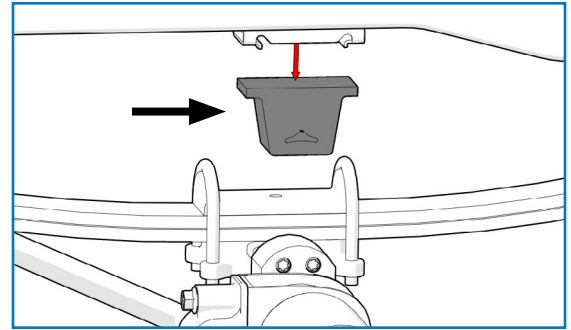
Remove rear wheels.

**2**

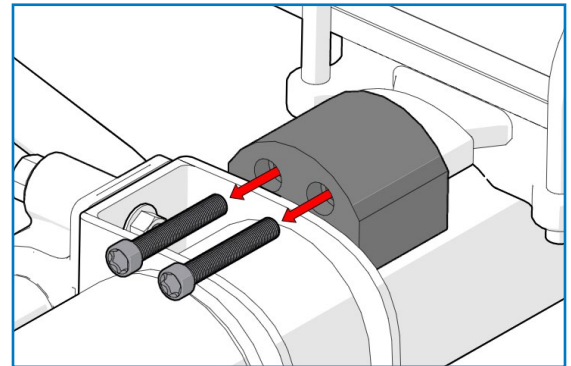
### 3 REMOVE JOUNCE BUMPER

Using a long flat head screwdriver or pry bar, remove the frame mounted rubber jounce bumper (shown in Figure 3A).

Use a Torx drive socket (T50 or T55 based on model year) to remove the two bolts attaching the strike block to the axle. (See Figure 3B for reference)



3A

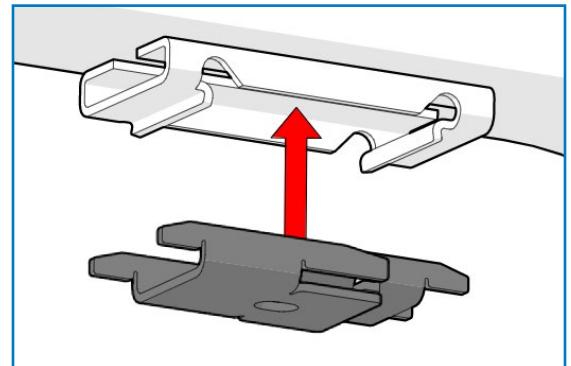


3B

### 4 INSERT JOUNCE BUMPER CLAMPS

Slide inner and outer jounce bumper clamps together and insert jounce bumper clamps into the jounce bumper retainer on the frame (as shown in Figure 4).

Expand the clamps and ensure their edges rest on the jounce bumper retainer.



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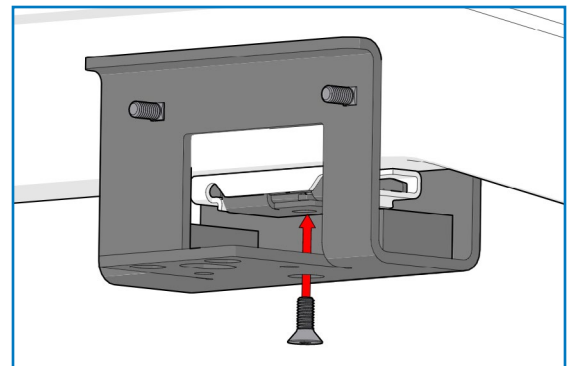
### 5 INSTALL UPPER BRACKET TO FRAME

Insert two 3/8" - 16 x 1" square neck plow bolts through the square holes in the upper frame bracket (as shown in Figure 5).

Place the upper frame bracket on the frame and secure with a 3/8" - 16 x 1" countersink bolt as shown.

**NOTE: A wiring harness may need to be unclipped from the frame on the driver's side to allow for installation.**

Torque bolt to 20 N•m (20 ft-lbs).



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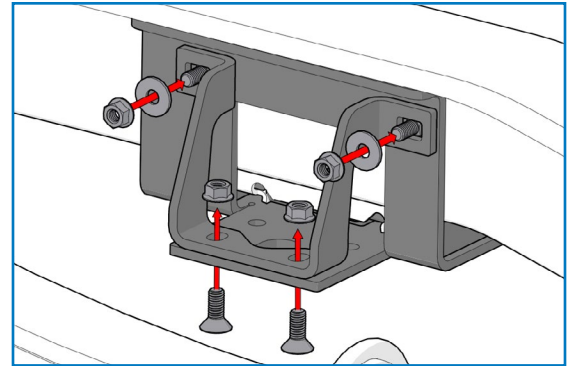
## 6 INSTALL UPPER BRACE BRACKET

Place the upper brace bracket on the upper frame bracket (as shown in Figure 6).

Secure the lower portion of the bracket using two 3/8"-16 x 1" countersunk bolts and two 3/8" serrated nuts.

Secure the upper portion of the bracket using the previously installed plow bolts with two 3/8" wide flat washers and two 3/8" serrated nuts.

Torque all hardware to 20 N•m (20 ft-lbs).



6

## 7 ASSEMBLE AIR SPRINGS AND LOWER BRACKETS

Place a roll plate on the upper surface of the air bag (as shown in Figure 7A).

**7500lb kits:** Install swivel air fitting into bushing and then thread assembly into air springs\* finger tight plus an additional 1.5 turns.

**5000lb kits:** Thread air fitting directly into air springs\* finger tight plus an additional 1.5 turns.

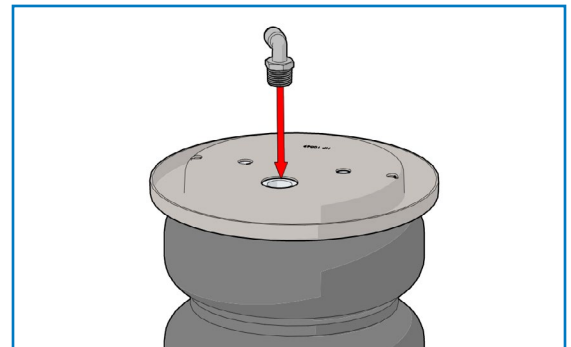
*\*The use of thread sealant or Teflon tape is recommended.*

Insert two 3/8"-16 x 7" carriage bolts through the lower brackets (as shown in Figure 7B).

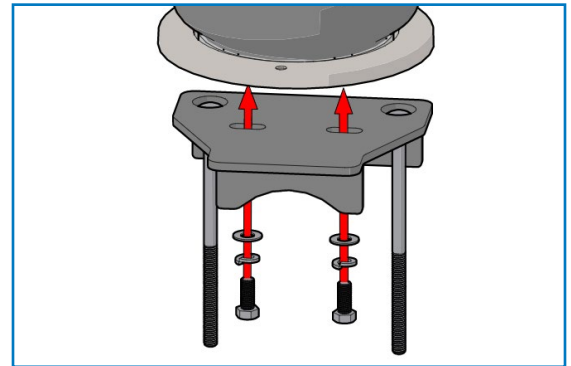
**NOTE:** Carriage bolts must be inserted before attaching the air bag as the roll plate will block the holes.

Place a roll plate on the lower surface of the air bag and secure the lower bracket to the bag using two 3/8"-16 x 7/8" hex bolts, two 3/8" lock washers and two 3/8" flat washers.

Torque bolts to 20 N•m (20 ft-lbs).



7A



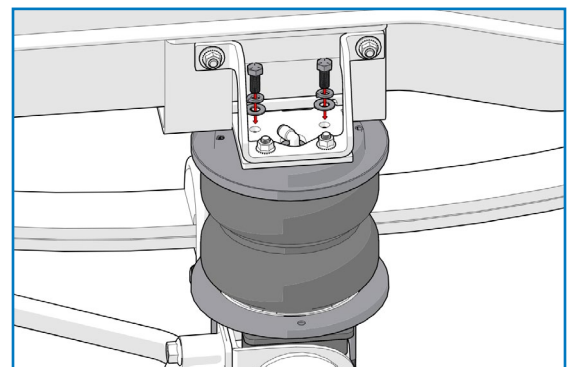
7B

## 8 INSTALL SPRING ASSEMBLY

Place the air spring assembly in the vehicle (as shown in Figure 8).

Secure the air bag to the upper frame bracket using two 3/8"-16 x 7/8" hex bolts, two 3/8" lock washers and two 3/8" flat washers.

Torque bolts to 20 N•m (20 ft-lbs).



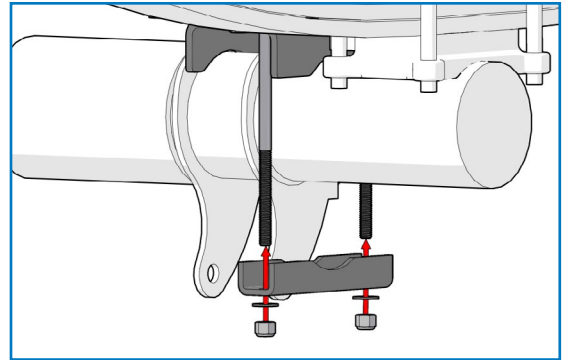
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## 9 SECURE SPRING ASSEMBLY TO AXLE

Position the lower bracket on the axle to achieve the best vertical spring alignment (as shown in Figure 9).

Secure the spring assembly to the axle using ax axle strap, two 3/8" flat washers and two 3/8" nylon lock nuts.



9

## 10 INSTALL HEAT SHIELD

Two heat shields have been provided to provide increased protection due to the geometry and close proximity of the exhaust pipe.

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

Attached the heat shield to the exhaust pipe on passenger side using two ring clamps (shown in Figure 10 on the following page). Each hose clamp holds a tab against exhaust pipe.



10

## 11 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**

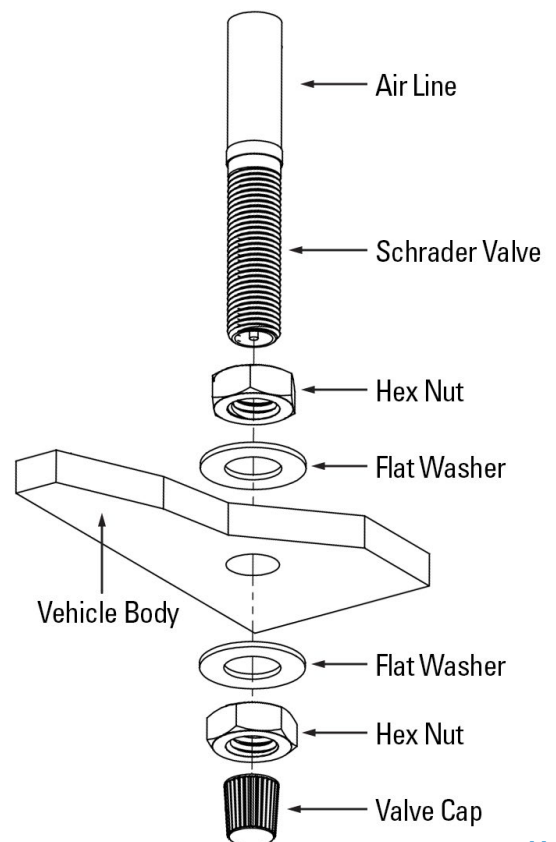
Provided in air spring kit are two fill valves. The most common place to install is in place of license plate fasteners. Alternatively, two 5/16" holes can be drilled in a convenient location.

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 11 for assembly). There should be enough valve exposed after installation—approximately 1/2"—to easily apply a pressure gauge or an air chuck.



11



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

## 12 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 12).

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.



12

## 13 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.

***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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