

# Installation Manual



## 10475 KIT

Ford Stripped Chassis F53 (Class A Motorhome)\*

*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.



**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)*

### 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 air bag 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

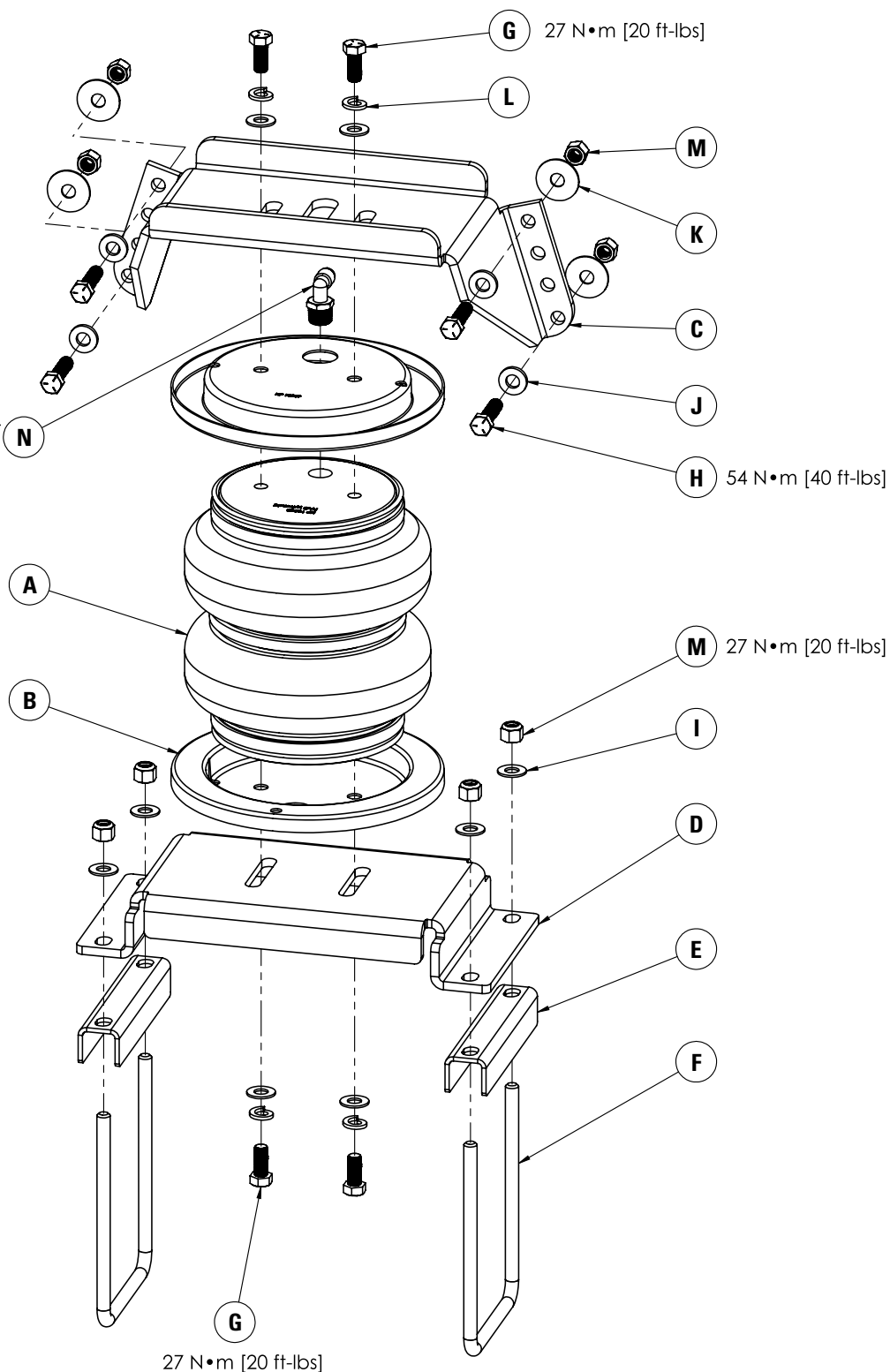
Reference the kit explosion diagram on the following page for part assembly.

KIT CONTENTS			QTY	PART #	REQUIRED TOOLS
<b>A</b>	Air Bag		2	HP10068	• Hoist or Floor Jack
<b>B</b>	Roll Plate		4	HP10069	• Safety Stands
<b>C</b>	Bracket, Upper		2	HP0044	• Safety Glasses
<b>D</b>	Bracket, Lower		2	HP1834	• Torque Wrench
<b>E</b>	Bracket, Spacer		4	HP1835	• Standard Combination Wrenches
<b>F</b>	U-Bolt, 4 5/8" X 6 1/2" Square		4	HP1836	• 7/32" Hex Allen Wrench
<b>G</b>	Bolt, 3/8" – 24 x 7/8" Hex Head		8	HP1002	• 1-1/8" Wrench or Deep Socket
<b>H</b>	Bolt, 3/8" – 16 x 1.5" Hex Head		8	C18018	• Ratchet
<b>I</b>	Washer, 3/8" Flat		16	C653	• Metric & Standard Sockets
<b>J</b>	Washer, 3/8" Thick Flat		8	HP1135	• Hose Cutter (included) or Sharp Utility Knife
<b>K</b>	Washer, 3/8" Flat, 1.25" OD		8	HP1013	• Pipe Thread Sealant
<b>L</b>	Washer, 3/8" Split Lock		8	C18007	• Spray Bottle with Dish Soap/Water
<b>M</b>	Nut, 3/8" Nylon Lock		16	HP1000	• Air Compressor/Compressed Air Source (to test/fill air springs)
<b>N</b>	Fitting, 90° Push-to-Connect		2	HP1245	

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

### DRIVER SIDE ASSEMBLY SHOWN:

THREAD FITTING INTO AIR SPRING  
FINGER TIGHT, PLUS AN ADDITIONAL  
1.5 TURNS.  
SOME FITTINGS HAVE SEALANT PRE-  
APPLIED ON THREADS. IF THREADS  
HAVE NO VISIBLE COATING, APPLY  
THREAD SEALANT OR TEFLON TAPE.



**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.***

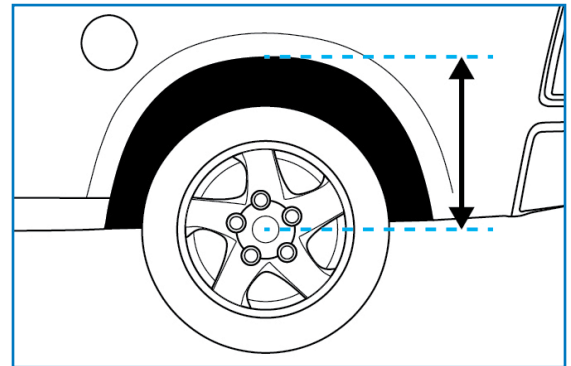
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**1 MEASURE STOCK RIDE HEIGHT**

Park the vehicle on a level surface. Remove any unnecessary weight from the vehicle to attain a Normal Ride Height. This is important for correct initial air spring set-up and adjustment.

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 ATTACH LOWER BRACKETS

Place a roll plate and lower bracket on the bottom of the air spring (as shown in Figure 3).

Align all holes and attach with two 3/8" – 16 x 7/8" bolts, two 3/8" lock washers and two 3/8" flat washers.

Tighten fasteners finger tight to allow for spring alignment in later step.

### 4 ATTACH UPPER BRACKETS

Install a swivel fitting in 1/8" NPT port on top of the air spring.

Thread fitting into air spring finger tight, plus an additional 1.5 turns.

**Note: Some fittings have thread sealant pre-applied on threads, If threads have no visible coating, apply thread sealant or Teflon tape.**

Place a roll plate and upper bracket on the top of the air spring (as shown in Figure 4).

Align all holes and attach with two 3/8" – 16 x 7/8" bolts, two 3/8" lock washers and two 3/8" flat washers.

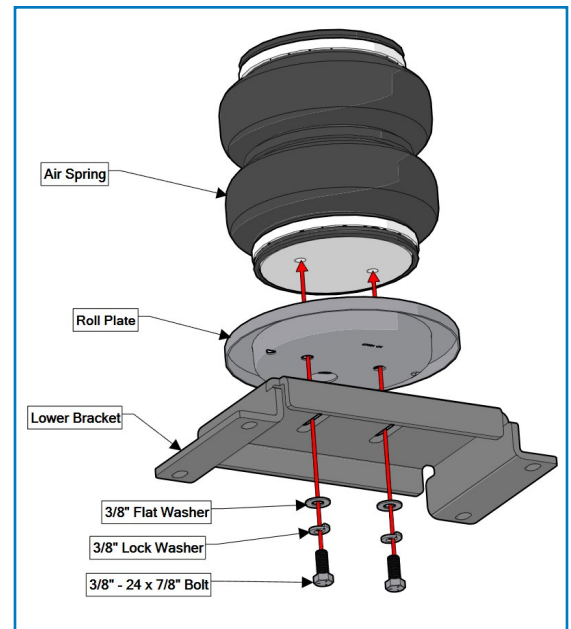
Tighten fasteners finger tight to allow for spring alignment in later step.

### 5 MARKING UPPER BRACKET MOUNTING HOLES

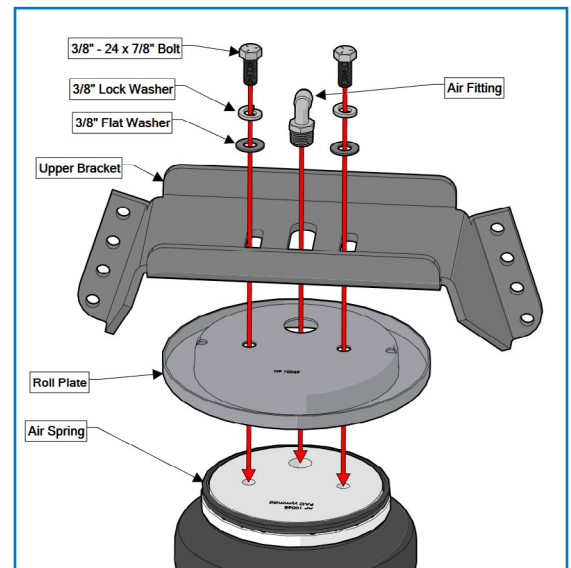
**PLEASE NOTE: These steps are important for correct kit setup.**

- Ensure there is no unnecessary weight in the vehicle to attain normal ride height.
- Also ensure the rear suspension is fully supporting the vehicle weight.

Refer to the diagram (Figure 5) on the following page for assembly installation requirements.

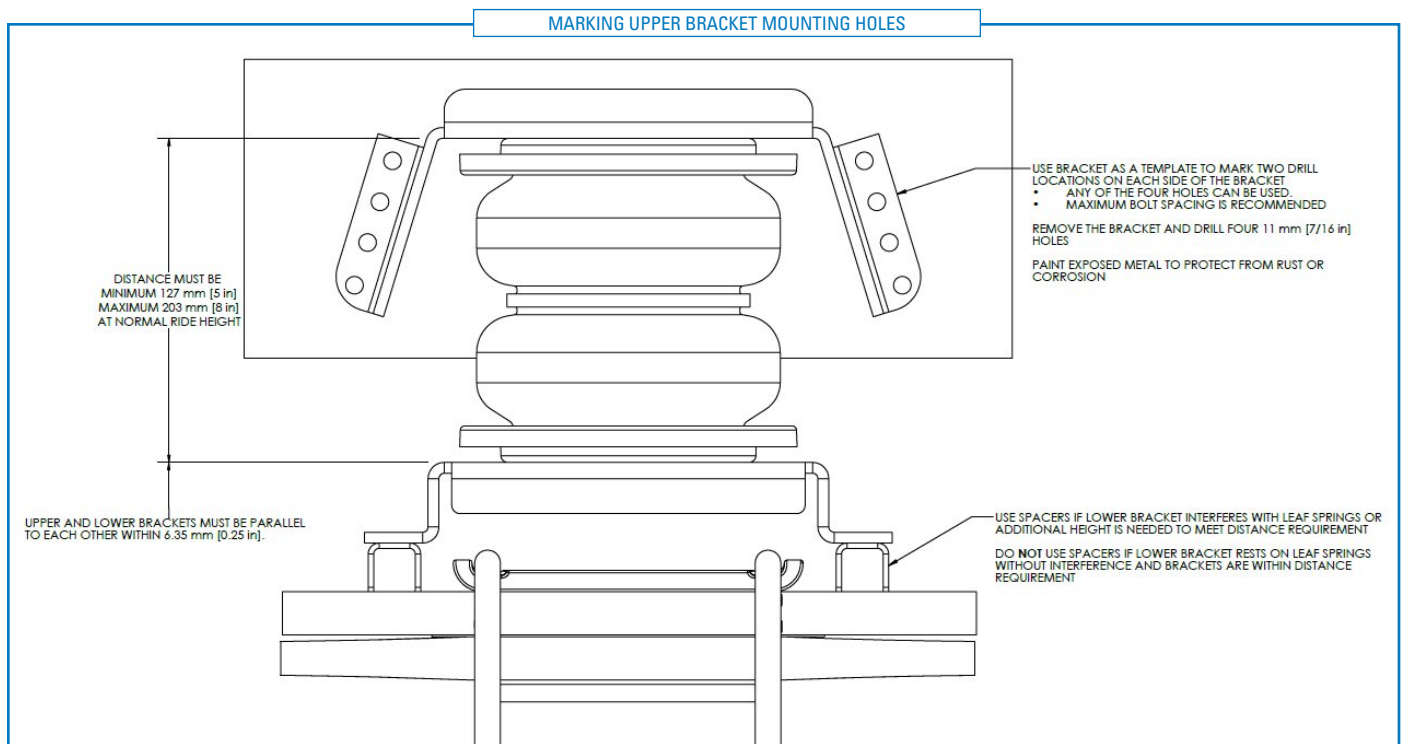


3



4

...Step continues on the following page



5

Place the air spring assembly on top of the leaf spring with the lower bracket centered above the axle tube. Install the spacer brackets if needed.

Position the upper bracket such that the mounting height requirement is achieved and it is parallel to the lower bracket.

**Note:** *Using clamps to clamp the upper bracket to the frame can help hold it in place for finer adjustment and positioning.*

When the correct position is attained, choose the best two mounting holes on each side of the bracket and mark the centers. Maximum hole spacing is recommended.

## 6 DRILL UPPER BRACKET MOUNTING HOLES

Remove the air spring assembly from the vehicle and drill four 11mm [7/16" holes] through the frame in the marked locations

Use caution when drilling to not damage any wiring, fuel lines or other vehicle components behind the drill location.

After drilling, paint the exposed metal to protect from rust or corrosion

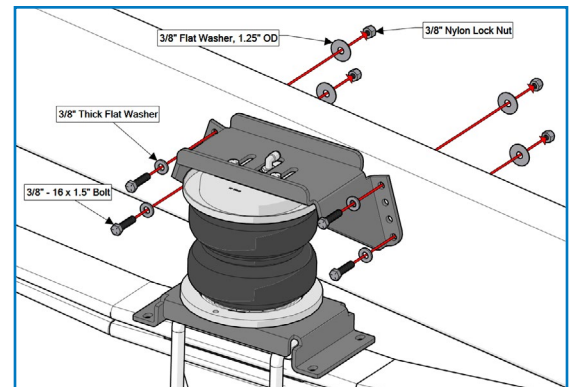


## 7 SECURE UPPER BRACKET

Place the air spring assembly back in the vehicle.

Secure the upper bracket to the frame using four 3/8" – 16 x 1.5" bolts, 3/8" thick flat washers, large OD washers and nylon lock nuts as shown in Figure 7.

Torque all bolts to 40 ft-lbs [54 N•m]



7

## 8 SECURE LOWER BRACKET

Attach the lower bracket (and spacer brackets if used) to the leaf spring with two U-bolts, four 3/8" flat washers and four 3/8" nylon lock nuts (as shown in Figure 8A).

Leave the fasteners loose at this time.

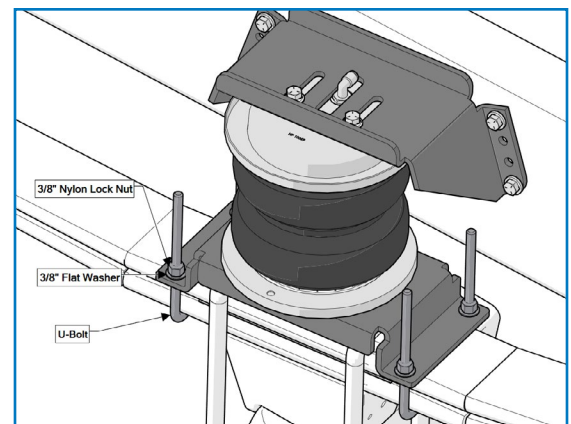
Position the air spring to achieve the best vertical alignment (as per Figure 8B).

When spring is aligned, torque the upper and lower air spring bolts to 20 ft-lbs [27 N•m].

Secure the lower bracket by tightening the nuts on the U-bolts to 20 ft-lbs [27 N•m].

When fasteners are tight trim the excess U-bolt length such that it does not extend above the lower edge of the roll plate.

**⚠ WARNING:** Failure to trim U-bolts can result in air bag puncture during operation and may void your warranty.



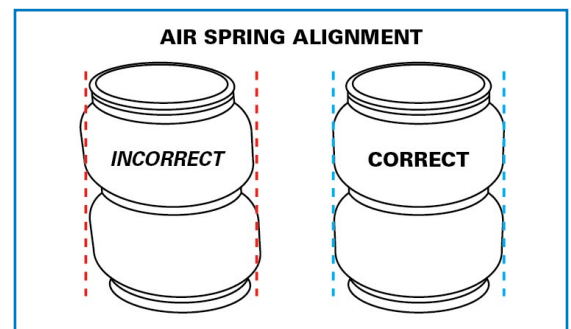
8A

## 9 INSTALL HEAT SHIELD

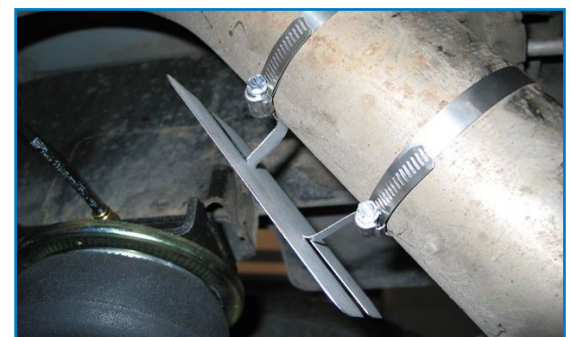
Bend tabs on the heat shield so the required 1/2" of dead space exists between the heat shield and exhaust when attached.

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.



8B



9

## 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.

**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.

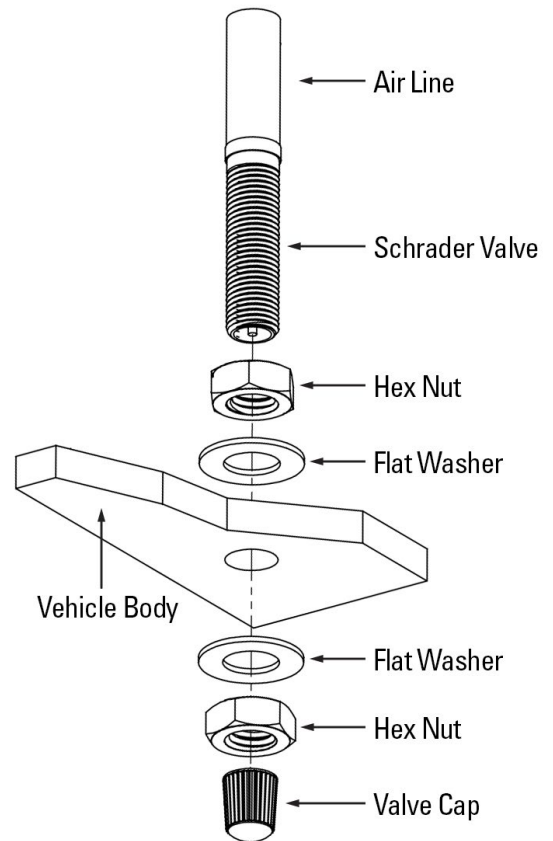
Large, expanding bubbles indicate a leak (as shown in Figure 11).

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.



10



11



## 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.**

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**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

To be eligible for warranty, the owner must submit their warranty card or register online within 30 days of the purchase date.

**NOTE: The owner's warranty will be void if air springs are run with less than the minimum of 10 psi.**

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