

Installation Manual

VERSION
FRANÇAISE



10398 KIT

Ford Transit 350HD DRW (2WD/4WD)* & Class C 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.

L6541_REV5_12.07.2023



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*

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.

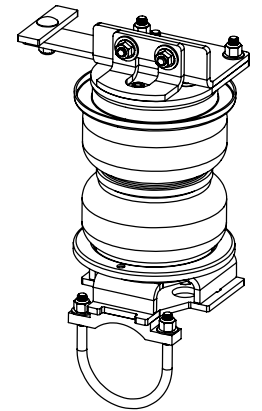
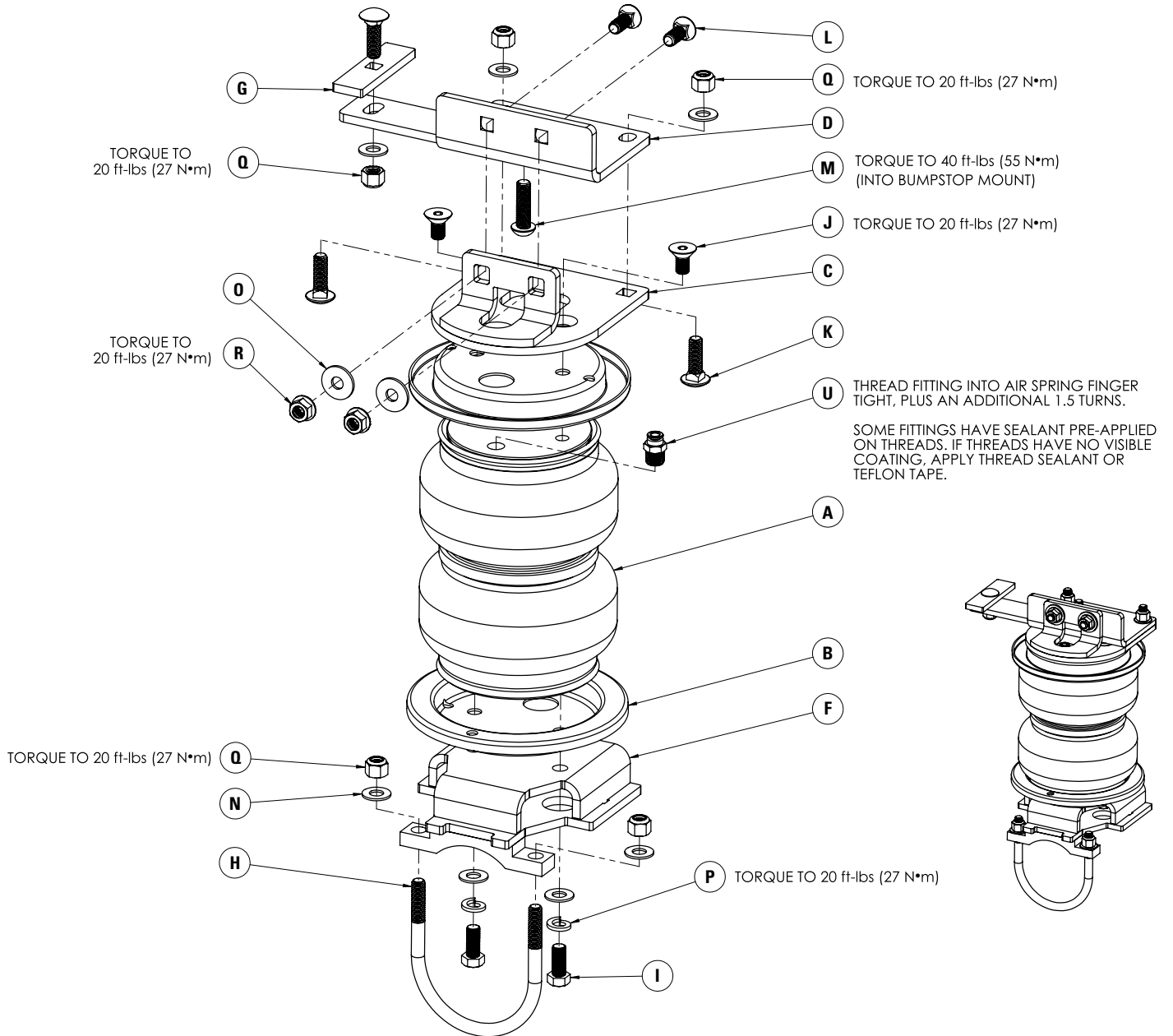
KIT CONTENTS		QTY	PART #
A	Air Spring	2	HP10000
B	Roll Plate	4	HP10054
C	Bracket, Upper Spring	2	HP1737
D	Bracket, Driver Frame	1	HP1735
E	Bracket, Passenger Frame	1	HP1736
F	Bracket, Lower	2	HP1740
G	Carriage Bolt Plate	2	HP0123
H	U-Bolt, 3.75" X 4" Round	2	HP1744
I	Bolt, 3/8" - 24 X 7/8" Hex Head	4	HP1002
J	Bolt, 3/8" - 24 X 7/8" Countersunk	4	HP1008
K	Bolt, 3/8" - 16 X 1.25" Carriage	6	HP1149
L	Bolt, 3/8" - 16 X 1" Square Neck Plow	4	HP1734
M	Bolt, M10-1.5 X 35mm Button Head	2	HP1414
N	Washer, 3/8" Flat	14	C653
O	Washer, 3/8" Wide Flat	4	C18006
P	Washer, 3/8" Split Lock	4	C18007
Q	Nut, 3/8" Nylon Lock	10	HP1000
R	Nut, 3/8" Serrated Flange	4	HP1338
S	Heat Shield	1	HP0012
T	Worm Gear Ring Clamp	2	HP1001
U	Fitting, 1/4" NPT Brass Straight	2	HP1099
V	Airline Hose Assembly	1	HP1344
W	Tie Strap	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)
- Bolt Leader Tool (included)

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:

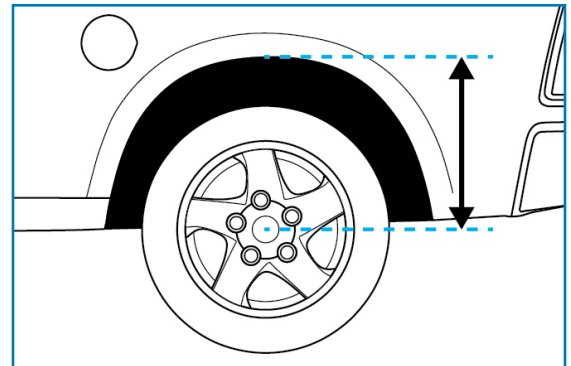
This kit contains push-to-connect fittings; using scissors or wire cutters to cut the nylon airline will distort the line and cause the connection to leak. THE AIRLINE MUST BE CUT OFF SQUARELY WITH THE NYLON HOSE CUTTER PROVIDED IN THIS KIT OR A SHARP UTILITY KNIFE.

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

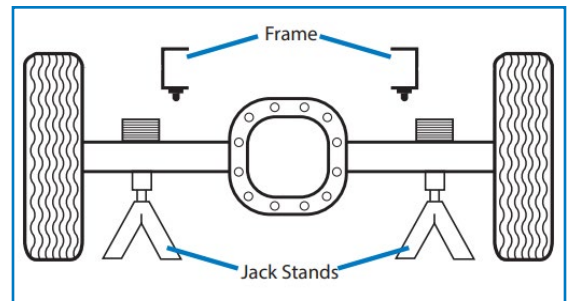
Place wheel chocks in front of and behind both front wheels.

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.

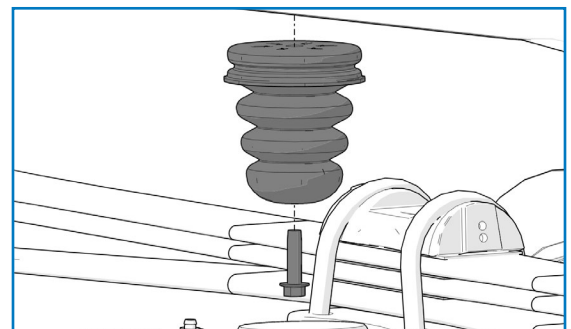


2

3 REMOVE JOUNCE BUMPER

Unbolt and remove both jounce bumpers (as shown in Figure 3). A socket extension may be required to reach the bolts.

You can safely dispose of jounce bumpers and hardware as they will not be reused in this installation.



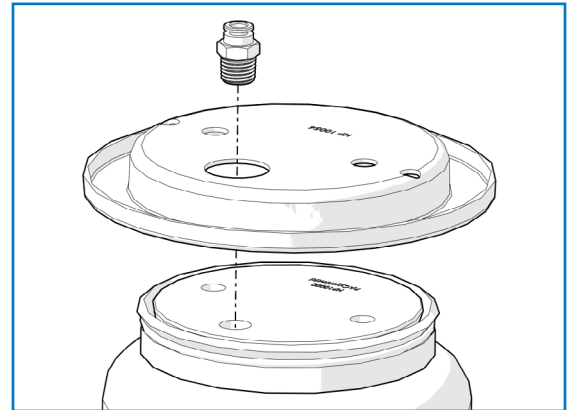
3

4 ASSEMBLING AIR SPRINGS

Set a roll plate on top of each air spring, ensuring that all holes line up.

Install the brass fittings into the port on the top of each air spring (as shown in Figure 4).

Tighten the fittings finger-tight plus an additional 1 1/2 turns. The use of thread sealant or Teflon tape is recommended.



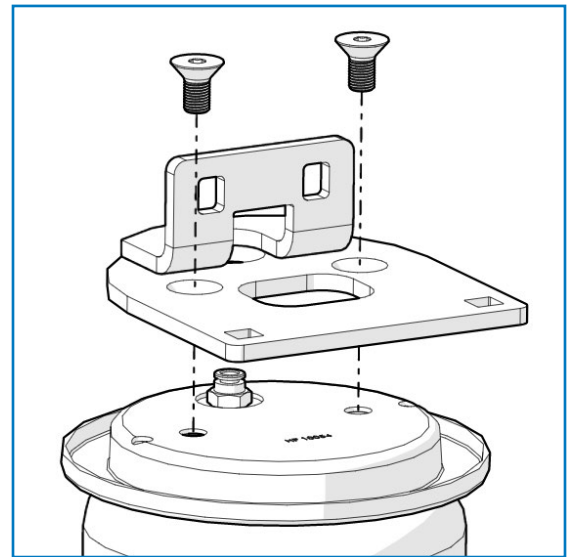
4

5 UPPER SPRING BRACKETS

Place the upper spring brackets on top of each air spring assembly (as shown in Figure 5).

Attach brackets with two 3/8" – 24 x 3/4" countersunk bolts.

Torque bolts to 20 ft-lbs (27 N•m).



5

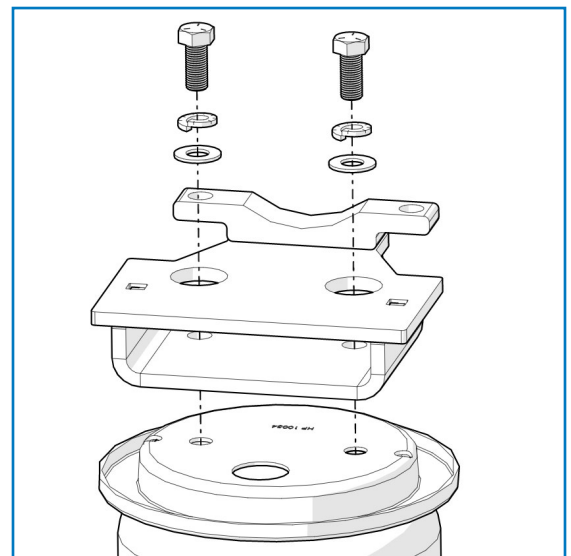
6 LOWER BRACKETS

Flip over the assemblies and set the roll plates into position on the bottom of the air springs.

Set the lower bracket on the air spring with the arched block on the same side as the air fitting.

Attach the lower bracket with two 3/8" – 24 x 7/8" hex bolts, two 3/8" lock washers and two 3/8" flat washers (shown in Figure 6).

Torque bolts to 20 ft-lbs (27 N•m).



6

7 INSTALL FRAME BRACKET

Insert a 3/8" - 16 X 1.25" carriage bolt through the carriage bolt plate. Insert the assembly through the circled hole on the side of the frame and use the included bolt leader tool to pull the carriage bolt through to the indicated slot adjacent to the jounce bumper hole (as shown in Figure 7A).

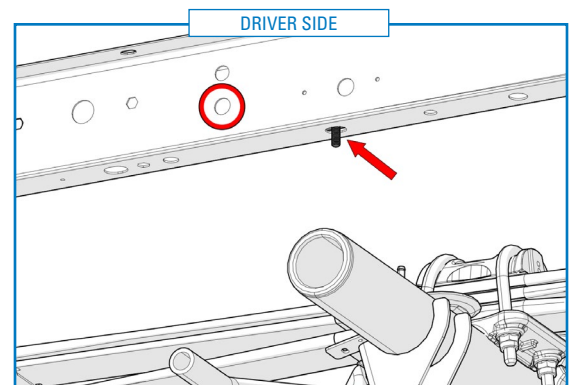
Insert two 3/8" - 16 X 1" square neck plow bolts through the upper frame bracket. Place the bracket on the frame, ensuring the heads of the plow bolts remain flush with the inner surface of the bracket's vertical flange.

Position the bracket so the vertical flange is flat against the frame. Secure by threading a M10-1.5 X 35 mm bolt through the bracket into the hole previously occupied by the jounce bumper bolt.

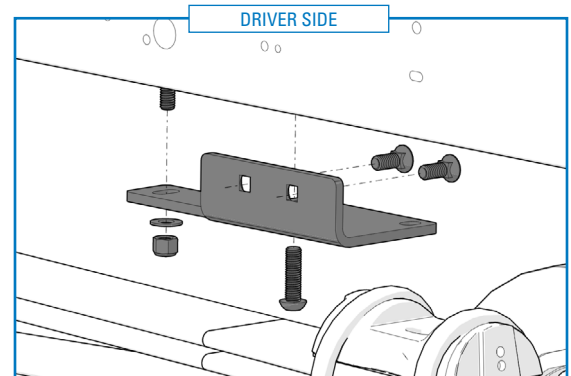
Install a 3/8" nylon lock nut and 3/8" washer onto the end of the previously inserted carriage bolt, which should now extend through the slot on the frame bracket. (See Figure 7B for reference).

Torque the M10 bolt to 40 ft-lbs (55 N•m).

Torque the 3/8" nylon lock nut to 20 ft-lbs (27 N•m).



7A



7B

8 INSTALLING AIR SPRING ASSEMBLIES

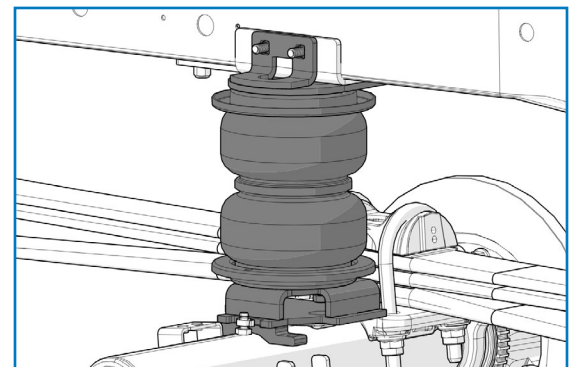
Set the Driver and Passenger assemblies into position on the axle. Align square holes on upper bracket with previously installed square neck plow bolts. (See Figure 8A for reference).

Note: When setting the Driver side assembly into position, be careful not to set the assembly onto the axle vent tubing and hose

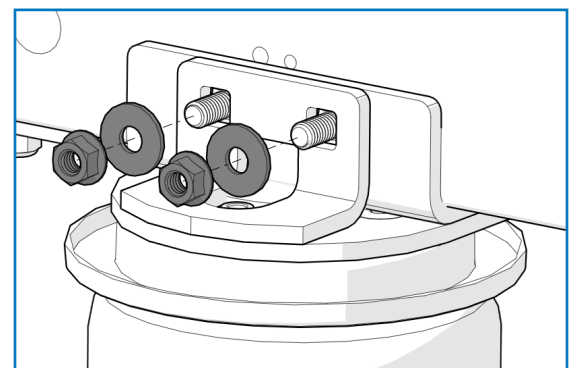
Insert two 3/8" Serrated flange nuts and 3/8" wide flat washers onto square neck plow bolts (as shown in Figure 8B).

Ensure upper spring bracket rests against upper frame bracket.

Torque bolts to 20 ft-lbs (27 N•m).



8A



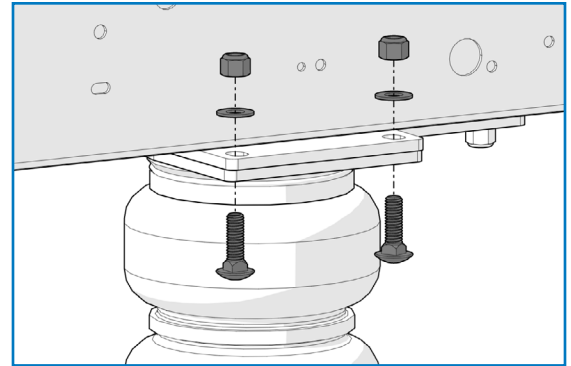
8B

9 FASTENING FRAME BRACKET TO UPPER SPRING BRACKET

Insert two 3/8" – 16 X 1.25" carriage bolts in through the bottom of the upper spring bracket, as shown in Figure 9.

Install two 3/8" flat washers and two 3/8" lock nuts onto the bolts.

Torque bolts to 20 ft-lbs (27 N•m).



9

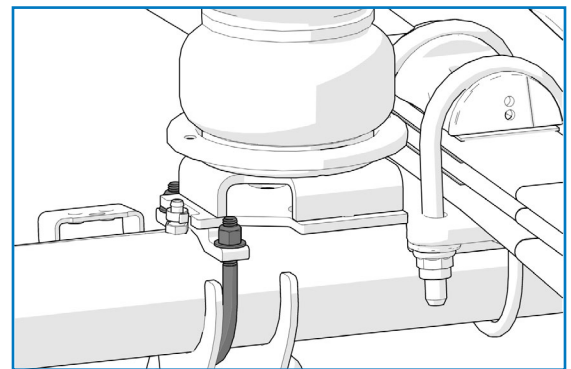
10 INSTALLING U-BOLT

On both sides, install the round U-bolt around the axle and through the lower bracket flanges. (See Figure 10A)

Install two 3/8" nylon lock nuts and two 3/8" flat washers onto the U-bolt.

Align the air springs as vertically as possible (see Figure 10B for proper air spring alignment).

Torque nuts on U-bolt to 20 ft-lbs (27 N•m).



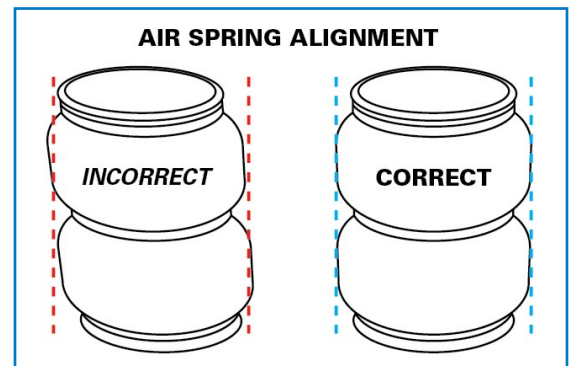
10A

11 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 11).

Each hose clamp holds a tab against exhaust pipe.



10B



11

12 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

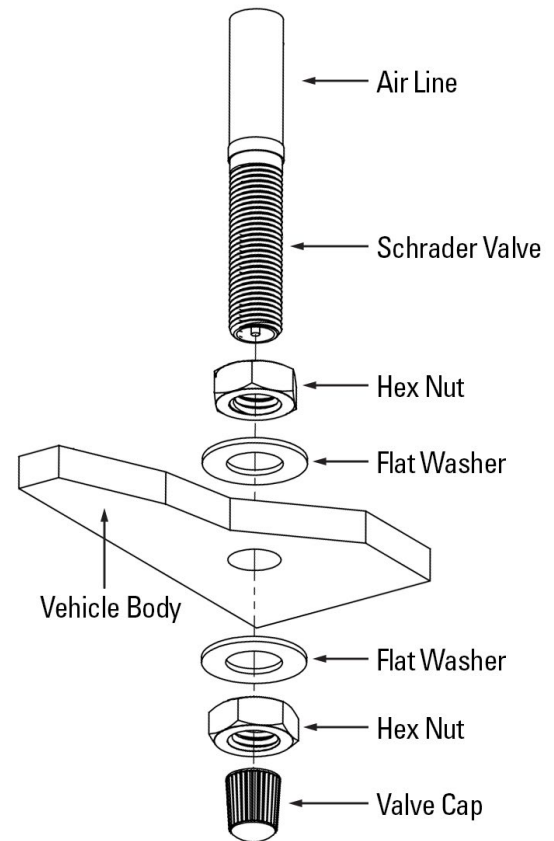
Provided in air spring kit are two fill valves. The most common place to install is in place of license plate fasteners. Alternatively, two 5/16" holes can be drilled in a convenient location.

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



12

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

13 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 13). 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.



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 (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.

