

Installation Manual



AIR SUSPENSION KIT

Ford Transit 350HD (2WD/4WD/AWD)* & Class C Motorhome*

***Will not fit** Transit Passenger Vans or XL/XLT models

Use the most advanced air springs on the market to eliminate your vehicle's sag, sway and bottoming out. This heavy duty air suspension kit levels your truck's stance while providing added support for an overall smooth and safe ride.

* See application guide for proper fitment.

L6665_REV2_09.04.2026

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. If you are unsure whether you are qualified to install the Air Suspension kit, consult a qualified service professional before beginning the installation.

SAFETY WARNINGS!

You must read and abide by the instructions found in this manual, paying close attention to the helpful (+), cautionary (!) or dangerous (!) warning icons highlighting important safety recommendations and maintenance suggestions throughout this manual. **Failure to abide by all instructions in this manual will void the warranty.**



HELPFUL INSTALL TIP
Additional information that could potentially make the job a little easier.



PLEASE USE CAUTION
Unsafe practices could result in damage to you or your vehicle, or others.



DANGER WARNING
Hazards which could result in severe personal injury or death.

-  **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.
-  **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.
-  **An 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.**

-  For safe and proper operation of the vehicle, never operate the vehicle under the minimum or over the maximum listed PSI in the air spring(s), (see: *MIN/MAX PSI* chart on the final page of this manual). Staying within the pressure limits will ensure a reasonable duration of the air springs. **Failure in doing so may result in damage to your vehicle and will void the warranty.**

BEFORE STARTING THE INSTALLATION

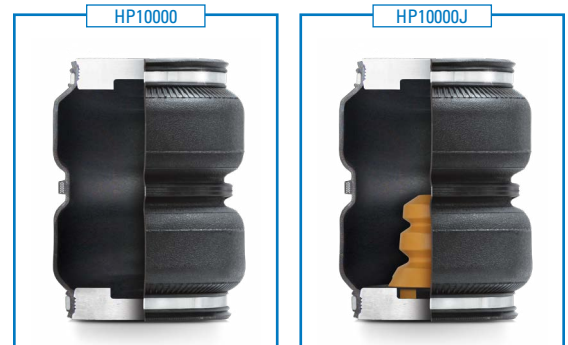
-  **Always read your vehicle owner's manual and follow all instructions and warnings therein prior to modifying your vehicle.**
-  Ensure the application information is correct for the make, model and year of the vehicle you are installing the kit on.
-  It is recommended to always jack the vehicle on the axle. If lifting the vehicle with a floor jack or hoist on the frame, never allow the air spring to limit the travel of the axle. Suspending the axle with the air spring limiting the axle travel **will damage the air spring and void the warranty.** (This warning does not apply to In-Coil Springs)
-  The air spring must have clearance between itself and the surrounding components to prevent any contact when the air spring is inflated or compressed. Trimming off excess bolt length may also be required to ensure no contact with the spring or other suspension components can be made once installed. **Failure to do so will void the warranty.**
-  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.
-  This kit contains push-to-connect fittings; using scissors or wire cutters to cut the nylon air line will distort the line and cause the connection to leak. The air line must be cut off squarely with the hose cutter provided in this kit, or a sharp utility knife. **Failure to do so will void the warranty.**
-  It is recommended to use additional thread sealant or Teflon tape on fittings during the installation for a proper seal.
-  Always ensure the bolts are not over-torqued; especially when a torque value is provided, failing to use the provided torque value(s) can lead to **premature failure and will void the warranty.**
-  It is recommended to use a good quality anti-seize on all fasteners to reduce the chance of corrosion and help facilitate removal, if required at a later date.

KIT CONTENTS

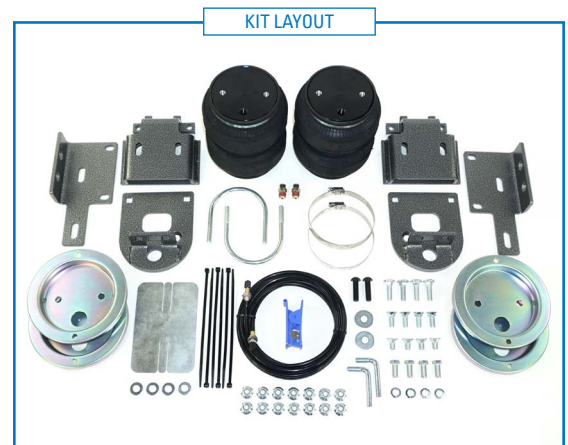
Please confirm the items below are provided in your kit before starting the installation. Reference the kit explosion diagram on the following page for part assembly.

HEAVY DUTY KITS		QTY	PART #
A	Double Convolute Spring	2	HP10000

HEAVY DUTY JOUNCE BUMPER KITS		QTY	PART #
B	Double Convolute Spring w/ Jounce Bumper	2	HP10000J



KIT CONTENTS		QTY	PART #
C	Roll Plate	4	HP10054
D	Fitting, 1/4" NPT Brass Straight	2	HP1099
E	Bracket, Upper Spring	2	HP2267
F	Bracket, Driver Frame	1	HP2265
G	Bracket, Passenger Frame	1	HP2266
H	Bracket, Lower	2	HP2100
I	U-Bolt, 3.75" X 4" Round	2	HP1744
J	Bolt, 3/8" - 24 X 7/8" Hex Head	4	HP1002
K	Bolt, 3/8" - 24 X 7/8" Countersunk	4	HP1008
L	Bolt, 3/8" - 16 X 1.25" Carriage	4	HP1149
M	Bolt, 3/8" - 16 X 1" Square Neck Plow	4	HP1734
N	Bolt, M10-1.5 X 35mm Button Head	2	HP1414
O	L-Bolt, 3/8" - 16	2	HP2154
P	Washer, 3/8" Flat	4	C653
Q	Washer, 3/8" Split Lock	4	C18007
R	Washer, 3/8" x 1.25" OD Flat, Thick	2	HP2262
S	Nut, 3/8" - 16 Nylon Lock Flange	14	HP1975
T	Heat Shield	1	HP0012
U	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
- 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)



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

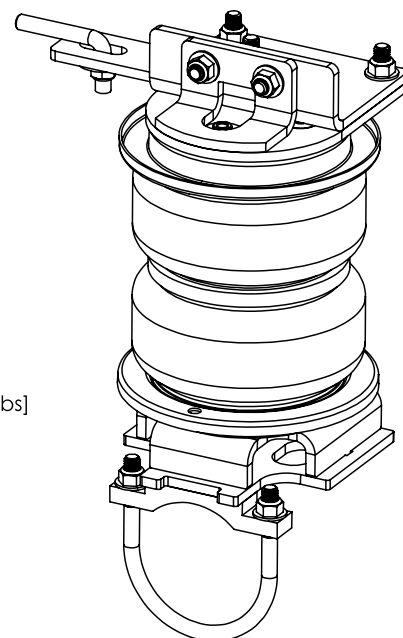
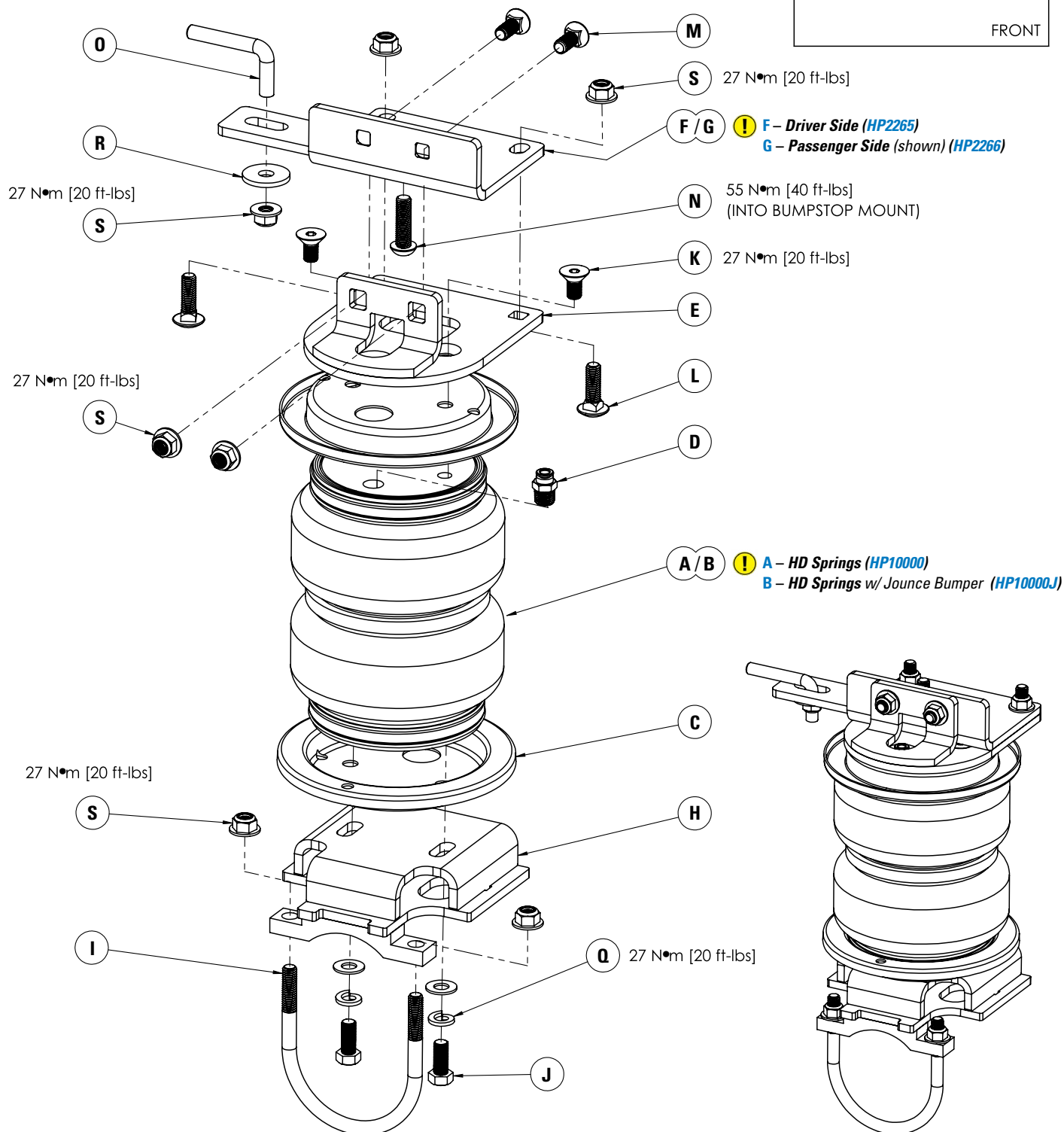
KIT EXPLOSION DIAGRAM

DRIVER SIDE ASSEMBLY SHOWN (Passenger side assembly is mirrored)

ORIENTATION OF THE VEHICLE



FRONT



INSTALLATION INSTRUCTIONS

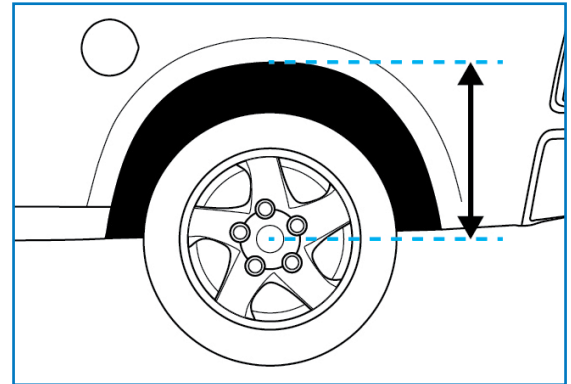
1 MEASURE STOCK RIDE HEIGHT & CLEARANCE

Park the vehicle on a level surface and remove any unnecessary weight from the vehicle to attain a "Normal Ride Height".

Using a measuring tape, measure the distance between the center of the wheel hub and the bottom of the fender well (see Figure 1 for reference) this will give you your stock Normal Ride Height.

Note the ride height for all four tires.

Check the clearance between the outside of the frame and the inside of the rear tires (as shown in red in Figure 1B), a minimum of 5" is required for adequate air spring clearance.



1A

2 REMOVE REAR WHEELS

⊕ PLEASE NOTE: This step is optional for this installation but will make the install easier to complete.

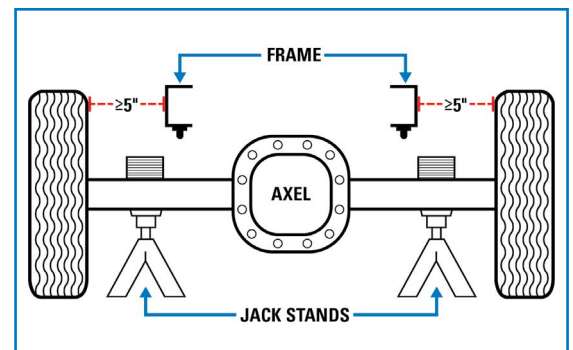
Place wheel chocks in front of and behind both front wheels.

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 (as shown in Figure 1B).

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

Remove rear wheels.



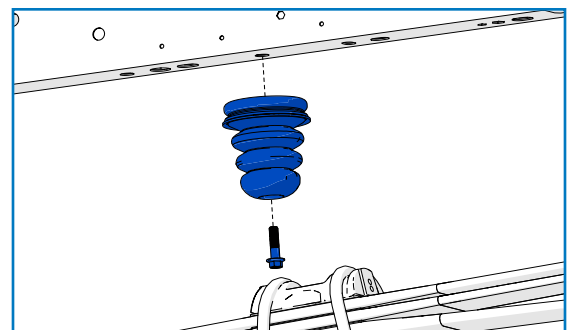
1B

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

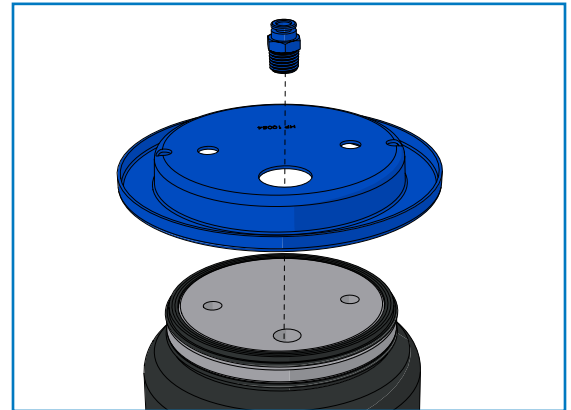
4 INSTALL AIR FITTING

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

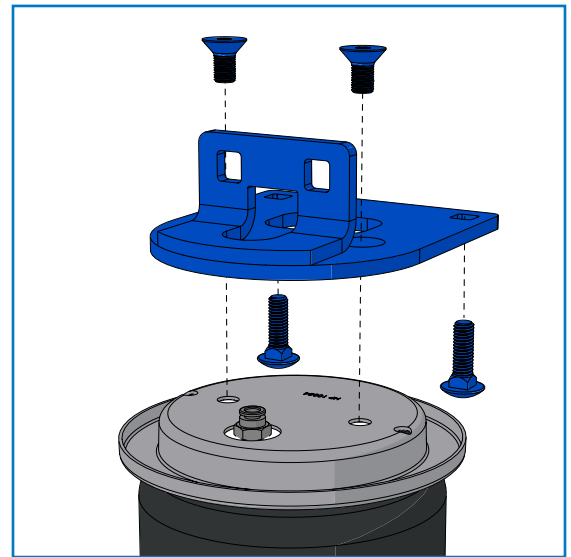
5 PRE-ASSEMBLY OF UPPER AIR SPRINGS

Insert two 3/8" – 16 x 1.25" carriage bolts through the upper spring bracket.

Then 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 **27 N•m (20 ft-lbs)**.



5

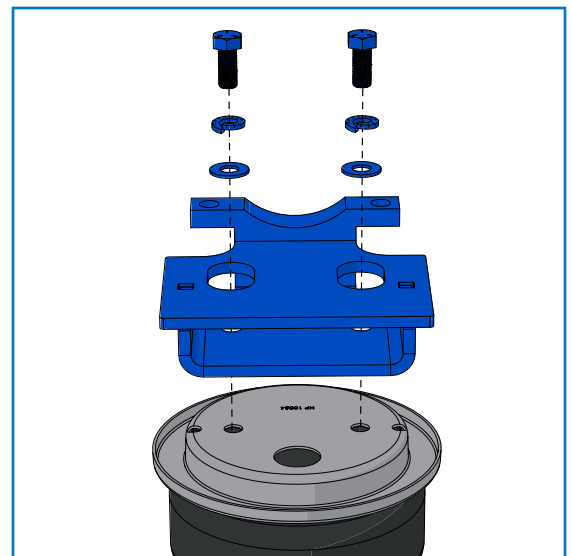
6 LOWER BRACKETS

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.

Loosely 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).

⊕ *Do not fully tighten hardware at this time to allow for assembly adjustments on the vehicle. (Hardware is secured in Step 11)*

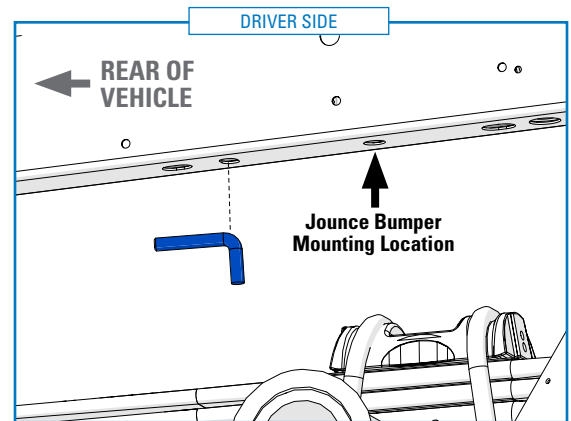


6

7 INSTALL L-BOLT

Insert the unthreaded (long) end of the L-bolt into the slot under the vehicle frame, behind the jounce bumper mount (see Figure 7 for details).

⚠ CAUTION! *The inserted length of the L-bolt must be directed toward the rear of the vehicle (as indicated in Figure 7).*



7

8 INSTALL FRAME BRACKET

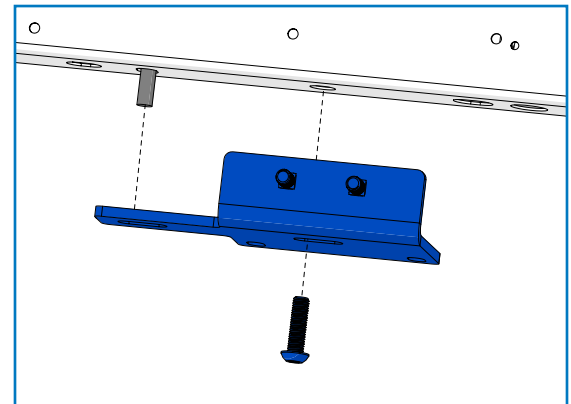
Insert two 3/8" – 16 x 1" square neck plow bolts through the upper frame bracket.

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 inside of the frame, (see Figure 8).

Loosely attach the bracket to the frame with an M10 – 1.5 x 35 mm bolt in the former jounce bumper bolt hole.

⊕ *Do not fully tighten hardware at this time to allow for assembly adjustments on the vehicle. (Hardware is secured in Step 11)*



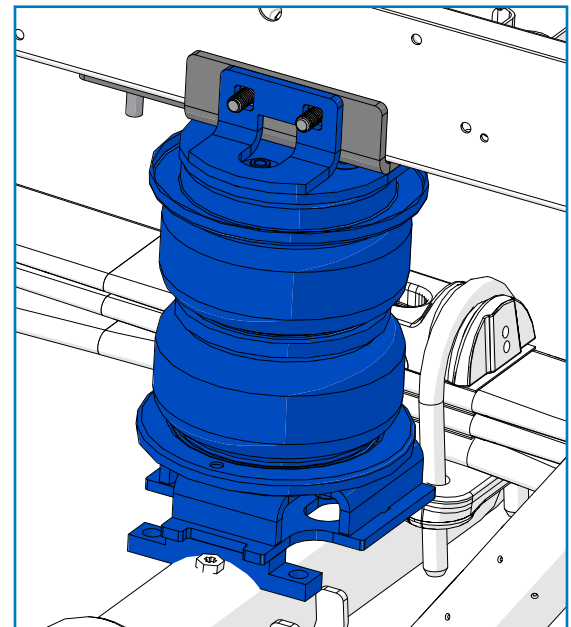
8

9 POSITION AIR SPRING ASSEMBLIES

Set the lower bracket and air spring assemblies into position on the axle of the vehicle.

Align square holes on upper bracket with previously installed square neck plow bolts. (See Figure 9 for reference).

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



9

10 ADJUST UPPER BRACKETRY

Adjust the upper frame bracket (previously installed in Step 8), and the lower bracket assembly to ensure proper air spring alignment, (as illustrated in Figure 10A).

! PLEASE NOTE:

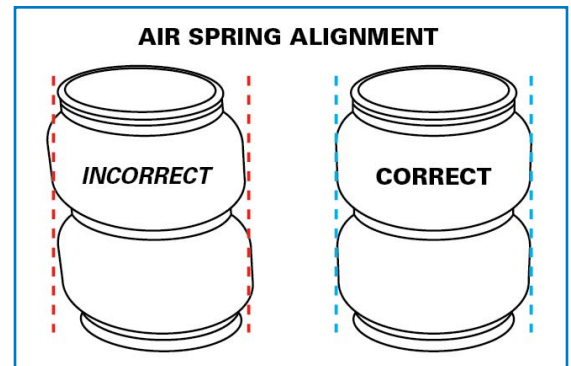
2013-2025 MODEL YEAR VEHICLES, the upper bracket should be pushed toward the front of the vehicle (as shown in Figure 10B).

VEHICLE'S MANUFACTURED AFTER 2025, the upper bracket should be pushed toward the rear of the vehicle (see Figure 10C).

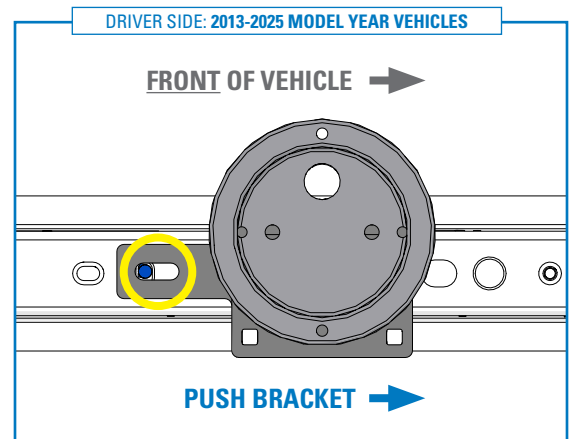
When alignment of the spring looks optimal, install a 3/8" fender washer and a 3/8" nylon lock flange nut to the L-bolt protruding through the upper frame bracket.

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

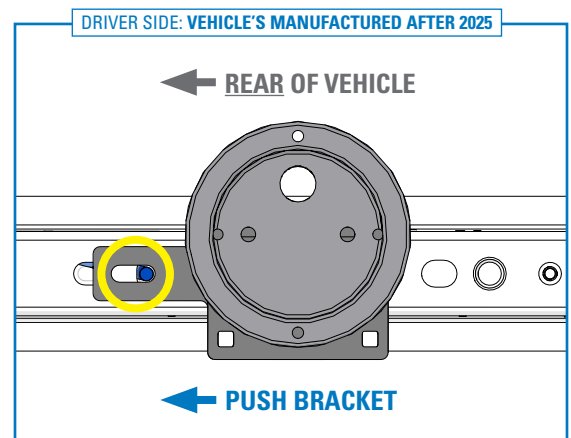
Take note of the position of the air spring relative to the lower bracket (use a marker or paint pen), then remove the air springs and lower bracketry (previously installed in Step 9) from the vehicle.



10A



10B



10C

11 TORQUE UPPER BRACKET AND BAG BOLTS

With the air spring alignment confirmed, secure the following bolts:

First, torque the M10 – 1.5 x 35 mm bolt, (previously installed in the former jounce bumper bolt hole in Step 8), to **55 N•m (40 ft-lbs)**.

Then torque the 3/8" – 24 x 7/8" hex bolts securing the air spring to the lower brackets, (previously installed in Step 6), to **27 N•m (20 ft-lbs)**.

12 INSTALL AIR SPRING ASSEMBLY

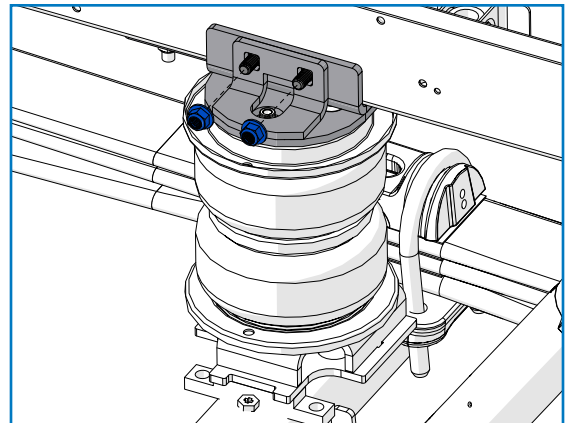
Set the lower bracket and air spring assemblies into position on the axle. Align square holes on upper bracket with previously installed square neck plow bolts. (See Figure 9 for reference).

! PLEASE 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" nylon lock flange nuts onto square neck plow bolts (as shown in Figure 12).

Ensure upper spring bracket rests against upper frame bracket.

Torque bolts to **27 N•m (20 ft-lbs)**.



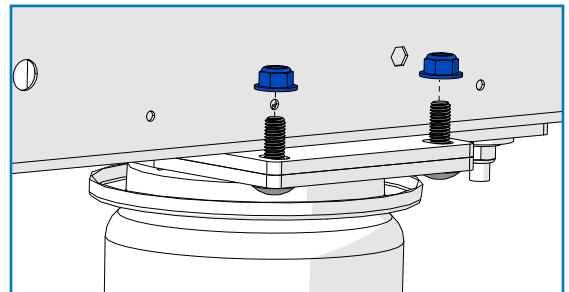
12

13 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 13).

Install two 3/8" flanged lock nuts onto the bolts.

Torque bolts to **27 N•m (20 ft-lbs)**.



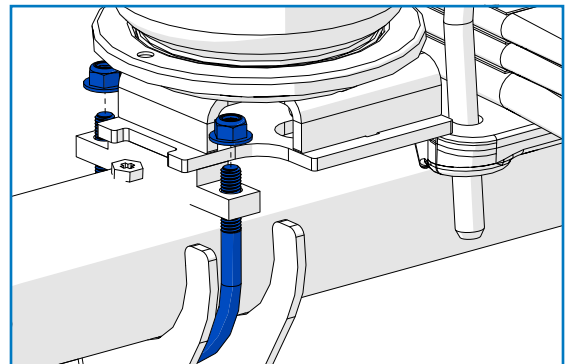
13

14 INSTALLING U-BOLT

Install the round U-bolt around the axle and through the lower bracket flanges, (as shown in Figure 14)

Install two 3/8" flanged nylon lock nuts onto the U-bolt.

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



14

15 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.

Attached the heat shield to the exhaust pipe on passenger side using two ring clamps (shown in Figure 15, as an example of install).

Each hose clamp holds a tab against exhaust pipe.



15

INSTALL AIR LINE

Two fill valves are provided in this kit. The most common place to install them is in place of the license plate fasteners. Alternatively, two 5/16" holes can be drilled in a location of your choosing.

Cut the air line assembly into two equal lengths with the hose cutter provided in this kit or a sharp utility knife.

⚠ PLEASE NOTE: *This kit contains push-to-connect fittings; using scissors or wire cutters to cut the nylon air line will distort the line and cause the connection to leak. The air line must be cut off squarely with a hose cutter or a sharp utility knife.*

Install one air line at a time starting at the fill valve location. 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 A for assembly). There should be enough valve exposed after installation – approximately 1/2" – to easily apply a pressure gauge or an air chuck.

Route the air line back to the NPT fitting on the air spring, then cut the hose to length. 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.

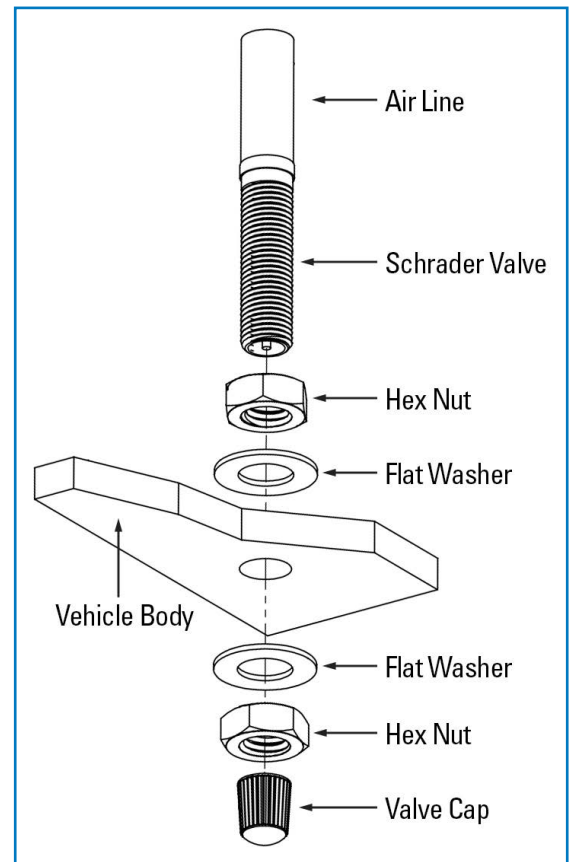
Secure the air lines using the provided tie-straps, away from any moving items and heat sources.

CHECK SYSTEM FOR LEAKS

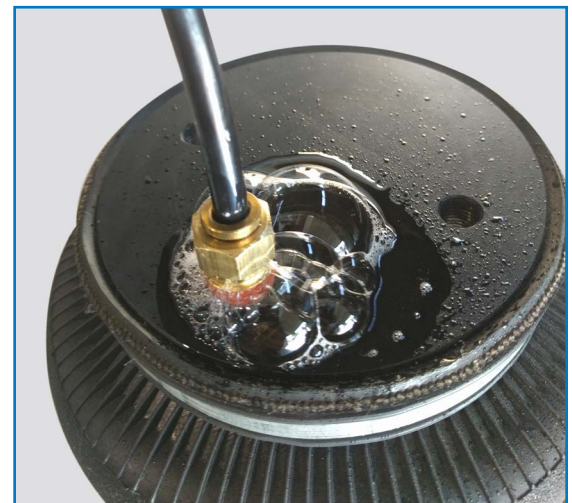
With the vehicle on the ground, inflate both air springs to 10 psi less than the maximum recommended pressure for the air spring part number included with your kit (see MIN/MAX PSI chart on the following page for reference). Then use a mixture of dish soap and water on all air line connections to detect any air leaks. Large, expanding bubbles indicate a leak (as shown in Figure B).

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

Inflate air springs to a predetermined value and on following day recheck the pressure. If one or both of air springs have lost pressure, an air leak is present.



A



*Air Spring & NPT Air Fitting may differ between kits

B

CONGRATULATIONS! You have completed the install

After Installation continues on the following page.

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Thank you again, and congratulations on the installation of your Air Suspension kit.

AFTER COMPLETING THE INSTALLATION

- ❗ The air spring must have clearance between itself and the surrounding components to prevent any contact when the air spring is inflated or compressed. Trimming off excess bolt length may also be required to ensure no contact with the spring or other suspension components can be made once installed. **Failure to do so will void the warranty.**
- ❗ If the vehicle's tires were removed during the installation; re-install and torque all wheel fasteners (lug nuts) to the manufacturer's specifications. Re-torque all wheel fasteners after the first 500 miles of driving.
- ❗ **Review your vehicle owner's manual and adhere to all instructions and post-installation requirements related to vehicle modifications.**

OPERATING YOUR VEHICLE WITH AIR SUSPENSION

Air springs have minimum and maximum recommended pressure requirements:

MIN / MAX PSI: REQUIREMENTS FOR YOUR AIR SPRING(S)				
PART #	SPRING STYLE	SPRING TYPE	MIN PSI	MAX PSI
HP10687	In-Coil	STANDARD DUTY	5 PSI	50 PSI
HP10560		STANDARD DUTY	5 PSI	70 PSI
HP10001	Sleeve Style	STANDARD DUTY	10 PSI	100 PSI
HP10173		STANDARD DUTY		
HP10199		STANDARD DUTY		
HP10083	Single Convolute	HEAVY DUTY	5 PSI	100 PSI
HP10083J		HEAVY DUTY with JOUNCE BUMPER	0 PSI* / 5 PSI	100 PSI
HP10000	Double Convolute	HEAVY DUTY	5 PSI	100 PSI
HP10000J		HEAVY DUTY with JOUNCE BUMPER	0 PSI* / 5 PSI	100 PSI
HP10068	Large Double Convolute	HEAVY DUTY	5 PSI	100 PSI
HP10438	Double Convolute	EXTREME DUTY	5 PSI	100 PSI
HP10438J		EXTREME DUTY with JOUNCE BUMPER	0 PSI* / 5 PSI	100 PSI

**Springs with a jounce bumper can be run at zero PSI when vehicle is unloaded only*

Never operate the vehicle under the minimum or over the maximum listed PSI in the air spring(s). Staying within the pressure limits will ensure maximum air spring life. **Failure in doing so may result in damage to your vehicle and void the warranty.**

- ❗ **It is recommended to check the air pressure in your air springs daily, for the first 5 days, to ensure a leak has not developed.**

Air springs are designed to maintain the vehicle's 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

It is recommended to always jack the vehicle on the axle. If lifting the vehicle with a floor jack or hoist on the frame, never allow the air spring to limit the travel of the axle. Suspending the axle with the air spring limiting the axle travel **will damage the air spring and void the warranty.** (This warning does not apply to In-Coil Springs)

WARRANTY

See accompanying limited warranty included with this kit for details.