

Installation Manual

VERSION
FRANÇAISE



AIR SPRING KIT

*Chevrolet Silverado/GMC Sierra 1500 (2WD/4WD)**

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.*

L6453_REV6_02.22.2023 ECN 1-2724



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*

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.

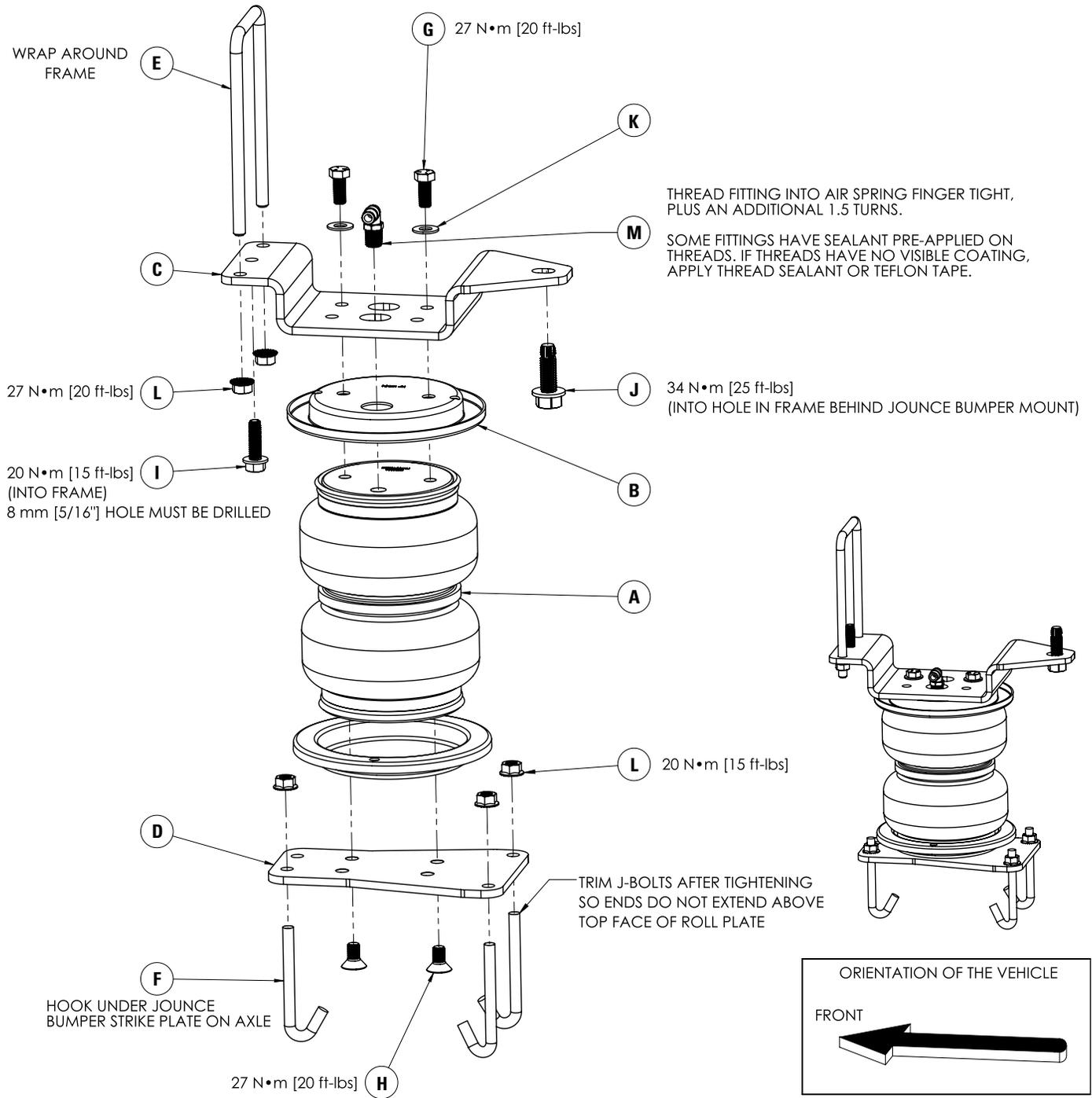
KIT CONTENTS

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

KIT CONTENTS			REQUIRED TOOLS		
	QTY	PART #			
A Air Bag	2	HP10000	•	Hoist or Floor Jack	
B Roll Plate	4	HP10054	•	Safety Stands	
C Bracket, Upper	2	HP1578	•	Safety Glasses	
D Bracket, Lower	2	HP1579	•	Torque Wrench	
E U-Bolt	2	HP1018	•	Standard Combination Wrenches	
F J-Bolt	6	HP1337	•	7/32" Hex Allen Wrench	
G Bolt, 3/8" - 24 x 7/8" Hex Head	4	HP1002	•	Ratchet	
H Bolt, 3/8" - 24 x 3/4" Countersunk	4	HP1008	•	Metric & Standard Sockets	
I Bolt, 3/8" - 16 x 1.25" Self Threading	2	HP1078	•	Hose Cutter (included) or Sharp Utility Knife	
J Bolt, 1/2" - 13 x 1.5" Self Threading	2	HP1580	•	Pipe Thread Sealant	
K Washer, 3/8" Flat	4	C653	•	Spray Bottle with Dish Soap/Water	
L Nut, 3/8" Serrated Flange	10	HP1338	•	Air Compressor/Compressed Air Source (to test/fill air springs)	
M 90° Swivel Fitting	2	HP1100			
N Heat Shield	1	HP0012			
O Worm Gear Ring Clamp	2	HP1001			

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:

PLEASE BE AWARE: If this kit is being installed on a **Trail Boss / AT4 model vehicle**, you will need to purchase a 2" Air Suspension Spacer kit (Part # 10152).

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.**

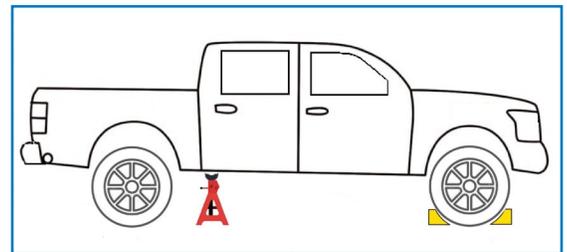
1 REMOVE REAR WHEELS

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.

Support vehicle frame on both sides and allow rear suspension to extend.

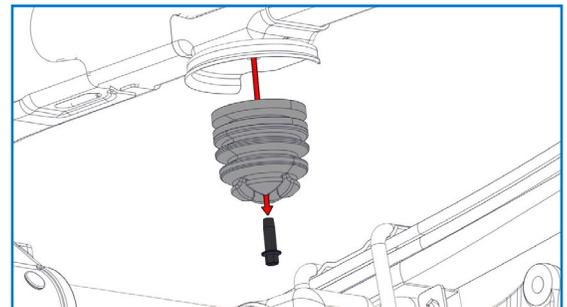
PLEASE NOTE: Removing rear wheels is not needed to complete installation, but allows for additional point of accessibility.



1

2 REMOVE JOUNCE BUMPERS

Remove rear jounce bumpers located on the frame rail on both sides of vehicle using a 10mm socket (see Figure 2).



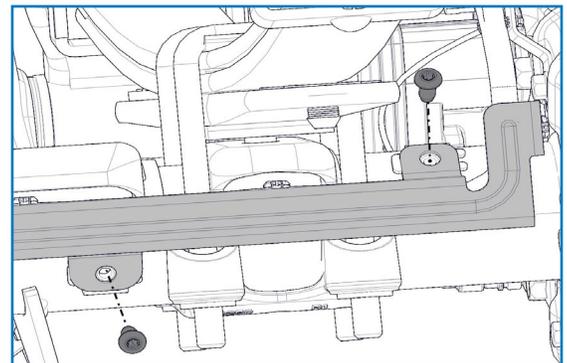
2

3 LOOSEN WIRING HARNESS GUARDS

Locate the wiring harness guard on the front side of the axle below the leaf spring on driver side of the vehicle.

Remove two T40 Torx bolts (as shown in Figure 3) and allow to sit loosely.

Repeat on the opposite side of the vehicle.



3

4 ASSEMBLE AIR SPRINGS: UPPER BRACKETS

Put roll plate on top of air spring, ensure that all holes line up.

If 90° air fitting threads do not come with thread sealant pre-applied, apply some now.

Thread fitting into air spring finger tight, then tighten an additional one and half turns. Ensure fitting protrudes less than 1 1/8" from roll plate (as shown in Figure 4A). If not, tighten an additional half turn.

Cut air line assembly into two equal lengths with supplied hose cutter. Connect one section of hose to the fitting on each bag for preliminary leak testing.

- Inflate both air springs to 30 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).
- If leaks at the fitting threads are found, thread in the fitting another half turn.
- If leaks are found around tubing connection, ensure the tubing is clean and pushed completely into port. Gently tug on the tubing outward after inserting fully into the fitting.
- If leaks around the tubing connection or threads continue after these procedures replace the fitting.

After leak testing the fittings, deflate the bags and remove the air lines before proceeding with installation.

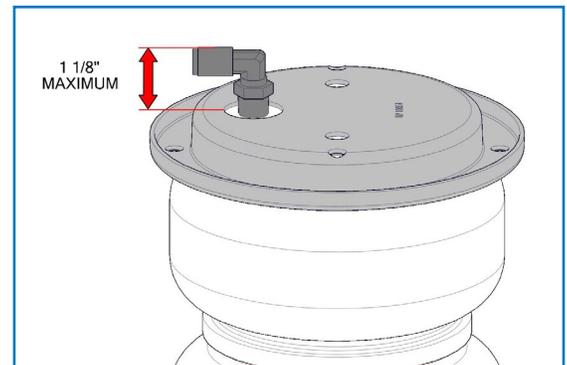
Arrange the air springs side-by-side with air fittings facing outwards (as shown in Figure 4B).

Note the fitting orientation compared to upper bracket for each air spring.

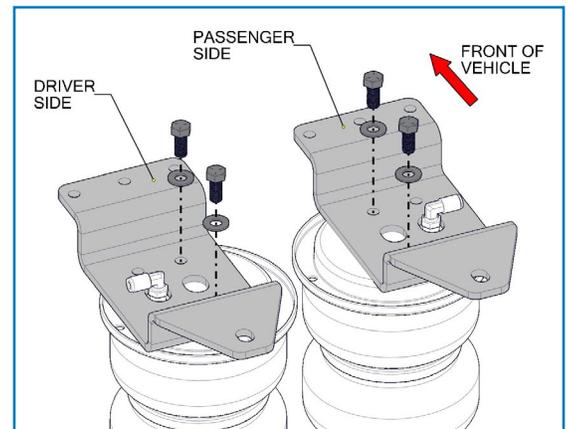
Attach upper brackets using two 3/8" -24 x 7/8" hex head cap screws and flat washers.

Torque to 27 N•m [20 ft-lbs].

Flip both air springs so that the end without bracket faces up.



4A



4B

If installing on a Trail Boss / AT4 model vehicle, you will need to install the 2" Air Suspension Spacer kit (Part # 10152) now, as per the manual included in that kit.

5 ASSEMBLE AIR SPRINGS: LOWER BRACKETS

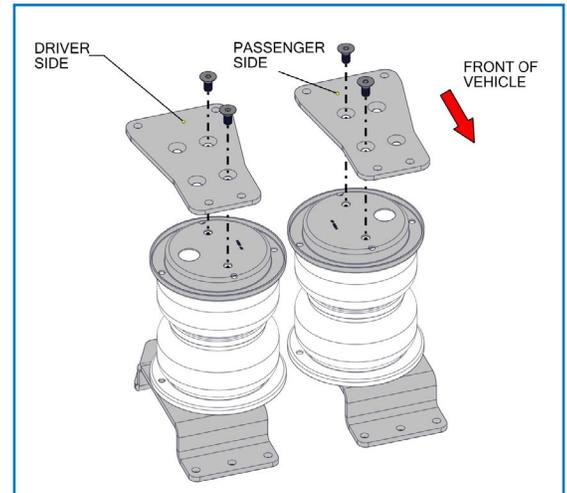
Set remaining two roll plates on air springs*, making sure that all holes line up (larger middle hole for fitting is unused).

***PLEASE NOTE: It is not necessary to install the lower roll plate of the air spring kit with the 2" spacer kit mentioned above.**

Set lower brackets on air springs, ensuring offset of the bracket is in same direction as upper bracket (Figure 5).

Secure using two 3/8"-24 x 3/4" flat countersunk cap screws.

Torque to 27 N•m [20 ft-lbs].



5

6 PREPARE FRAME RAIL

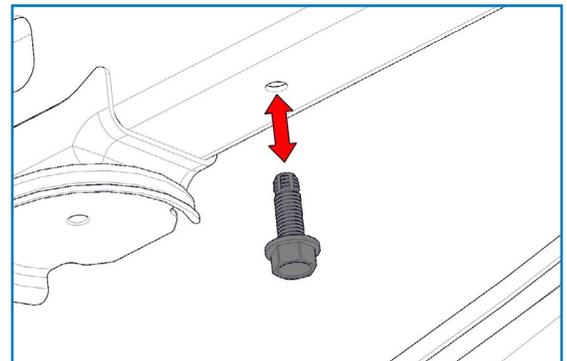
Carefully tap existing 11mm hole behind jounce bumper mounting cup with thread-forming bolt.

⚠ Ensure bolt does not tilt while tightening, threads need to be as straight as possible.

Stop tightening just before all threads of the bolt are in frame rail and remove bolt.

Coat newly formed threads with anti-seize compound.

Repeat for opposite side.



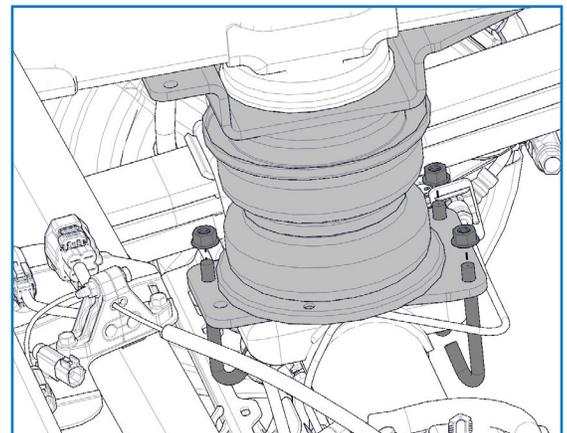
6

7 INSTALL AIR SPRING ASSEMBLIES

Set each assembly on jounce bumper strike plate, with air fitting facing the wheel. Ensure wedge-shaped end of upper bracket faces rear of vehicle.

On driver side, hook 3 of J-bolts under jounce bumper strike plate and insert threaded end through corresponding holes of lower bracket (as shown in Figure 7A).

Place flange nut onto each J-bolt so that lower bracket is held loosely to jounce bumper strike plate.



7A

Step continues on the following page...

FOR TRUCKS WITHOUT 5TH WHEEL BRACKET

Slip U-bolt over frame rail on both sides, allowing to hang, forward of jounce bumper mounting cup (as shown in Figure 7B).

! *Ensure U-bolt does not pinch brake lines/wiring harness.*

Insert legs of U-bolt into holes of upper bracket and thread on two flange nuts hand tight.

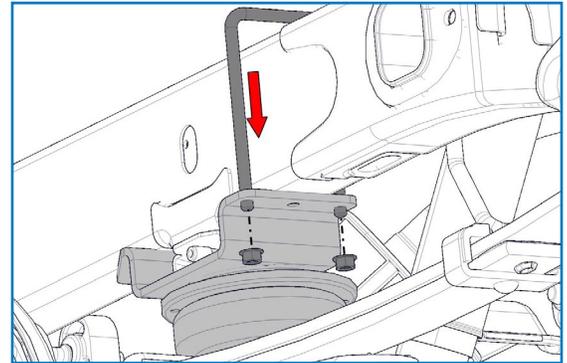
Coat thread-forming bolt with anti-seize and insert into previously tapped hole (see Figure 7C), tighten hand tight.

Torque flange nuts on the lower bracket J-bolts to 20 N•m [15 ft-lbs].

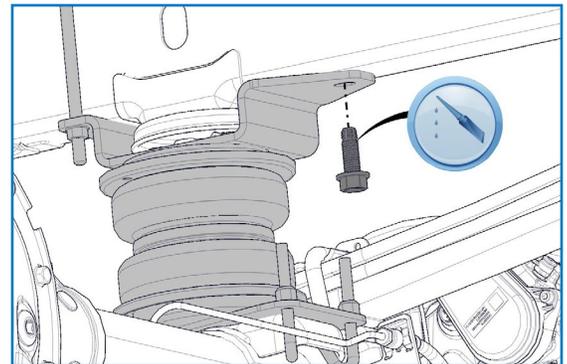
Adjust the upper bracket back and fourth to align the air spring. Some minor misalignment is acceptable.

Torque flange nuts on U-bolts to 27 N•m [20 ft-lbs].

Torque thread-forming bolt to 34 N•m [25 ft-lbs].



7B



7C

FOR TRUCKS WITH 5TH WHEEL BRACKET

Coat thread-forming bolt with anti-seize and insert into previously tapped hole (see Figure 7D), tighten to hand tight.

Center upper bracket on frame rail and torque thread-forming bolt to 34 N•m [25 ft-lbs].

Drill 5/16" hole using center hole as guide. (Reference 1, Figure 7E)

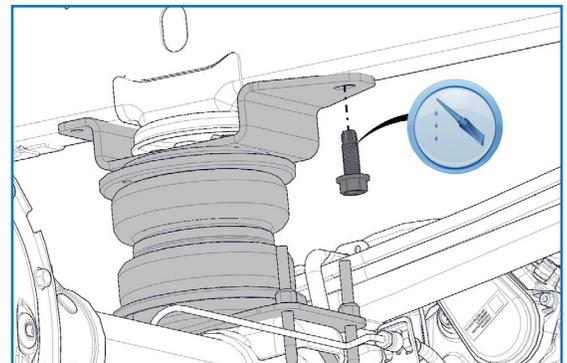
Coat 3/8" self-tapping screw with anti-seize and install in 5/16" hole.

Torque to 20 N•m [15ft-lbs]. (Reference 2, Figure 7E)

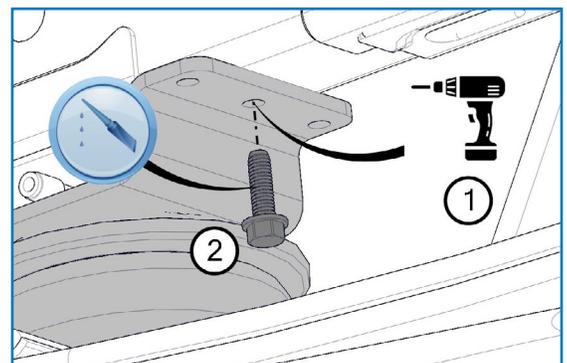
Repeat for other side.

Adjust the upper bracket back and fourth to align the air spring. Some minor misalignment is acceptable.

Torque flange nuts on lower bracket J-bolts to 27 N•m [20 ft-lbs].



7D

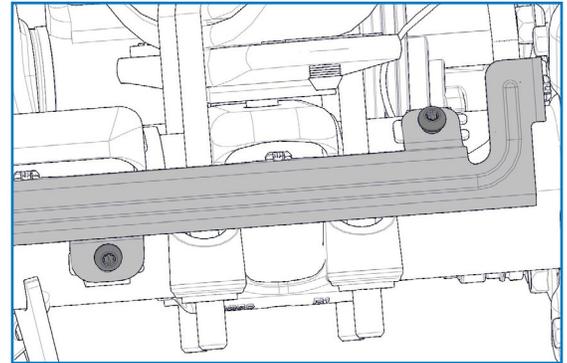


7E

8 REINSTALL WIRING HARNESS GUARDS

Reinstall four T40 Torx bolts securing wiring harness guards to front of axle (as shown in Figure 8).

Torque to 20 N•m [15 ft-lbs].

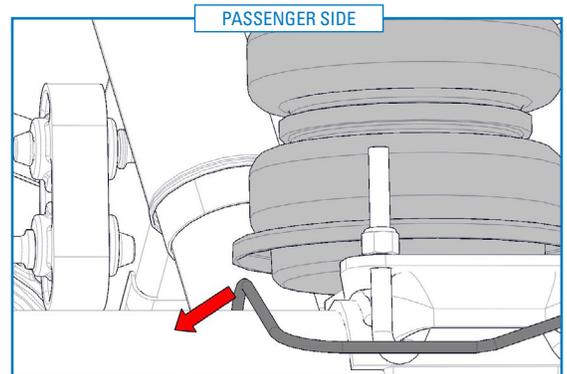


8

9 ADJUST BRAKE HARD LINE CLEARANCE

Ensure there is sufficient clearance between the lower bracket & bottom roll plate and the brake hard lines running along the axle on both sides.

PLEASE NOTE: If the brake hard line is touching or close to touching air spring components, gently bend the brake hard line away from the air spring components. (see Figure 9)

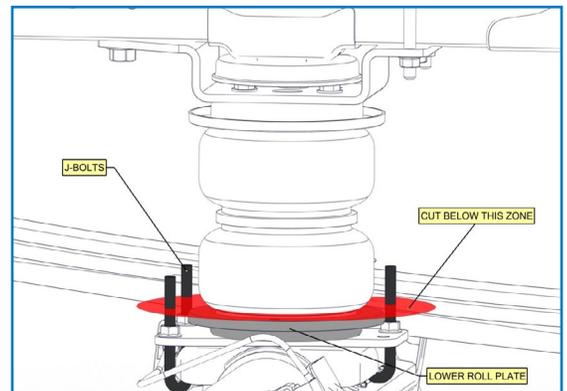


9

10 Trim J-bolts

Carefully cut all six J-bolts below the top surface of the lower roll plate as shown in Figure 10.

⚠ WARNING: If J-bolts are left uncut they can touch and abrade the air bag, causing it to fail unexpectedly.



10

11 INSTALL HEAT SHIELD

Bend tabs on the heat shield so the required ½" 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.



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.

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.

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

13 CHECK SYSTEM FOR LEAKS

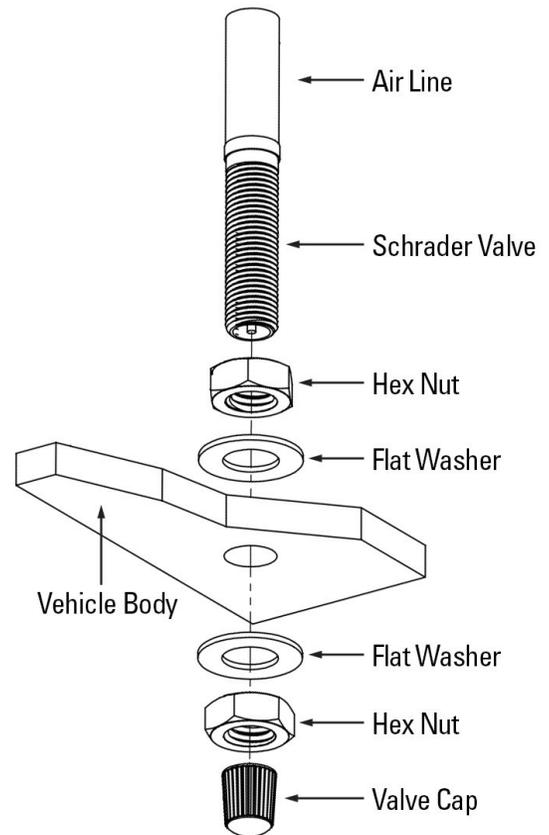
Inflate both air springs to 90 psi and then use a mixture of dish soap and water on all air line connections to detect any air leaks. Large, expanding bubbles indicate a leak (as shown in Figure 13).

Repair as necessary and retest.

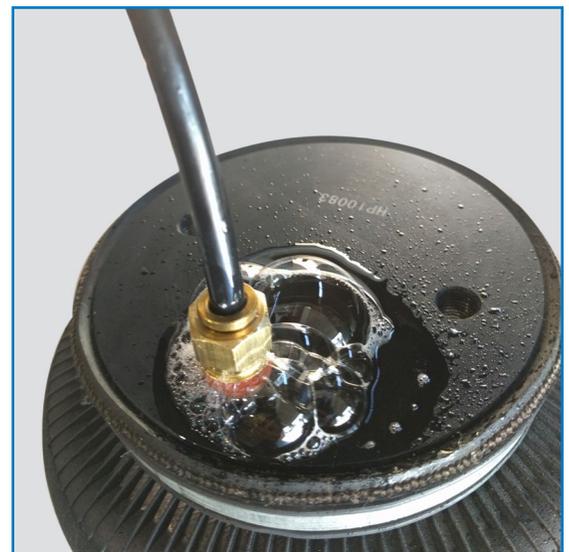
Inflate air springs to a predetermined value and on following day recheck pressure.

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.



12



13

14 AFTER COMPLETING THE INSTALLATION

PLEASE REMEMBER:

If the rear wheels were removed, torque fasteners to manufacturer's specifications upon re-installation.

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

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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