Installation Manual

AIR SUSPENSION KIT

Chevrolet Colorado / GMC Canyon (2WD/4WD)*

***PLEASE NOTE:** GM Canyon/Colorado vehicles may come equipped with a variety of factory lifts. Factory lifts may not be compatible with this air suspension kit. **This kit will only fit** on vehicle's where the distance from the bottom of the jounce bumper to the bottom of the frame is between 6.75" and 8.0". [See Page 3 for details]*

Use the most advanced air springs on the market to eliminate your vehicle's sag, sway and bottoming out. This 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.*

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.
  - ***PLEASE BE AWARE:***
    GM Canyon/Colorado vehicles may come equipped with a variety of factory lifts. Factory lifts may not be compatible with this air suspension kit. ***This kit will only fit*** *on vehicle's where the distance from the bottom of the jounce bumper to the bottom of the frame is between 6.75" and 8.0". [See Page 3 for details]*
- 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.

REQUIREMENTS FOR GM COLORADO/CANYONS

PLEASE NOTE: *GM Colorado/Canyon vehicles may come equipped with a variety of factory rear suspension lifts. Confirm your vehicle, regardless of trim level, is compatible with the air suspension kit before starting the installation.*

The air spring present in the air suspension kits is compatible with the vehicle when the distance from the bottom of the jounce bumper to the bottom of the frame (A) is between 6.75” and 8.0”.

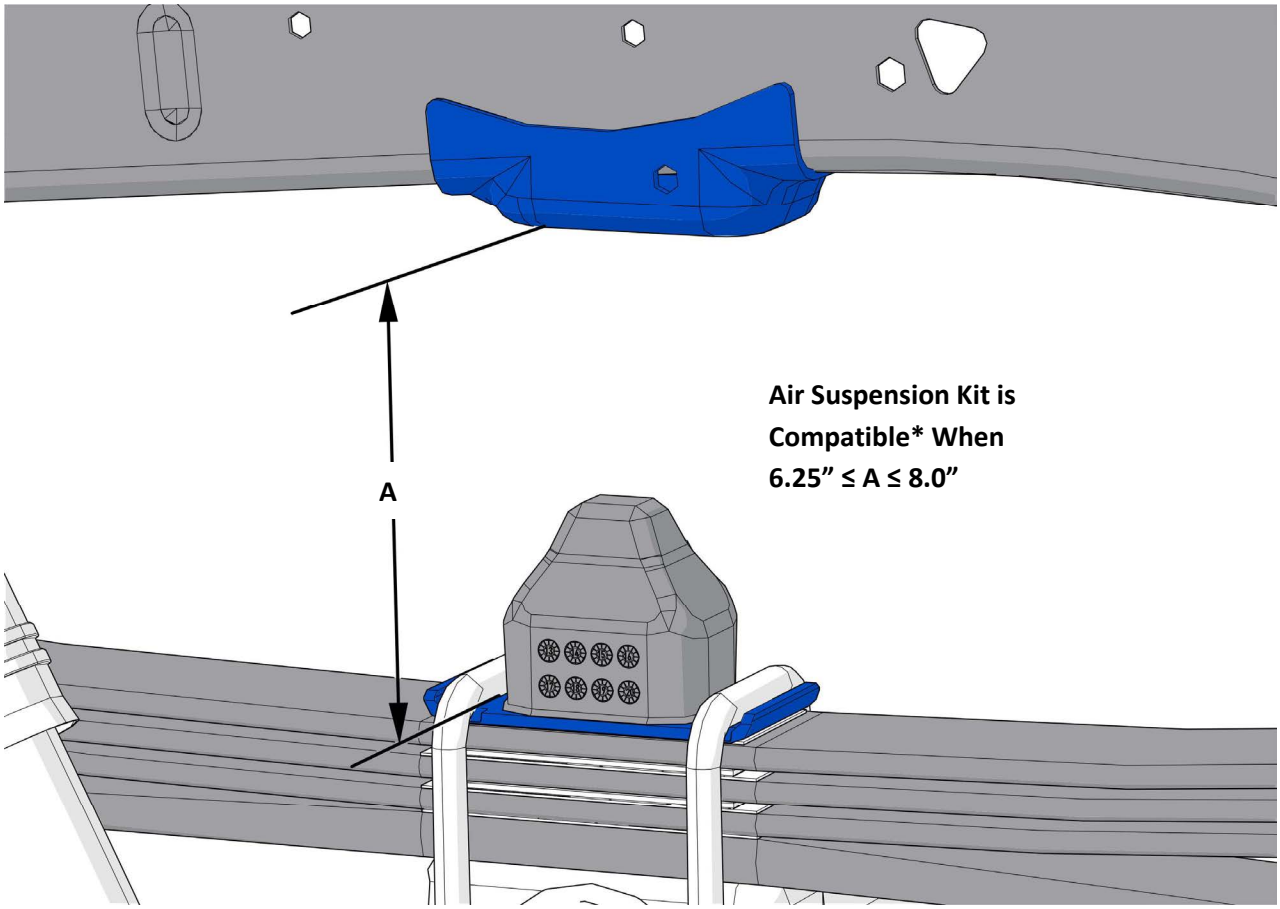


Figure 1. Diagram of GM Colorado/Canyon Rear Suspension

*A vehicle with a distance A in the required range may not be compatible with an air suspension kit due to other factors. Review the complete list of air suspension kit fitment restrictions, if applicable, for the specific GM Canyon/Colorado air suspension kit.

AIR SPRING (HP10199) HEIGHTS – IN GM COLORADO/CANYON AIR SUSPENSION KITS

Data on HP10199 Air Spring	
Minimum Operating Bag Height	2.95” [75 mm]
Maximum Operating Bag Height	9.65” [245 mm]

All information contained in this document is for reference only, subject to change without notice.

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.

KIT CONTENTS		QTY	PART #
A	Air Spring 5"Sleeve Style	2	HP10199
B	90° Swivel Fitting 1/4" Hose to 1/8" NPT	2	HP1019
C	Upper Bracket (Driver Side)	1	HP1566
D	Upper Bracket (Passenger Side)	1	HP1567
E	Lower Bracket	2	HP2034
F	Clamp Bracket	2	HP1623
G	U-Bolt, 3/8" - 16 x 4.25 x 3.5	2	HP2029
H	J-Bolt	2	HP1337
I	Bolt, 3/8" - 16 x 3/4" Self Threading Flange	4	HP1569
J	Bolt, 1/2" - 13 x 3/4" Flat Head	2	HP1342
K	Washer, 1/2" x 2" OD Thin Flat	4	HP1010
L	Nut, 3/8" - 16 Nylon Lock Flange	6	HP1975
M	Nut, 3/4" Jam	2	HP1076
N	Heat Shield	1	HP0012
O	Worm Gear Ring Clamp	2	HP1001

KIT LAYOUT

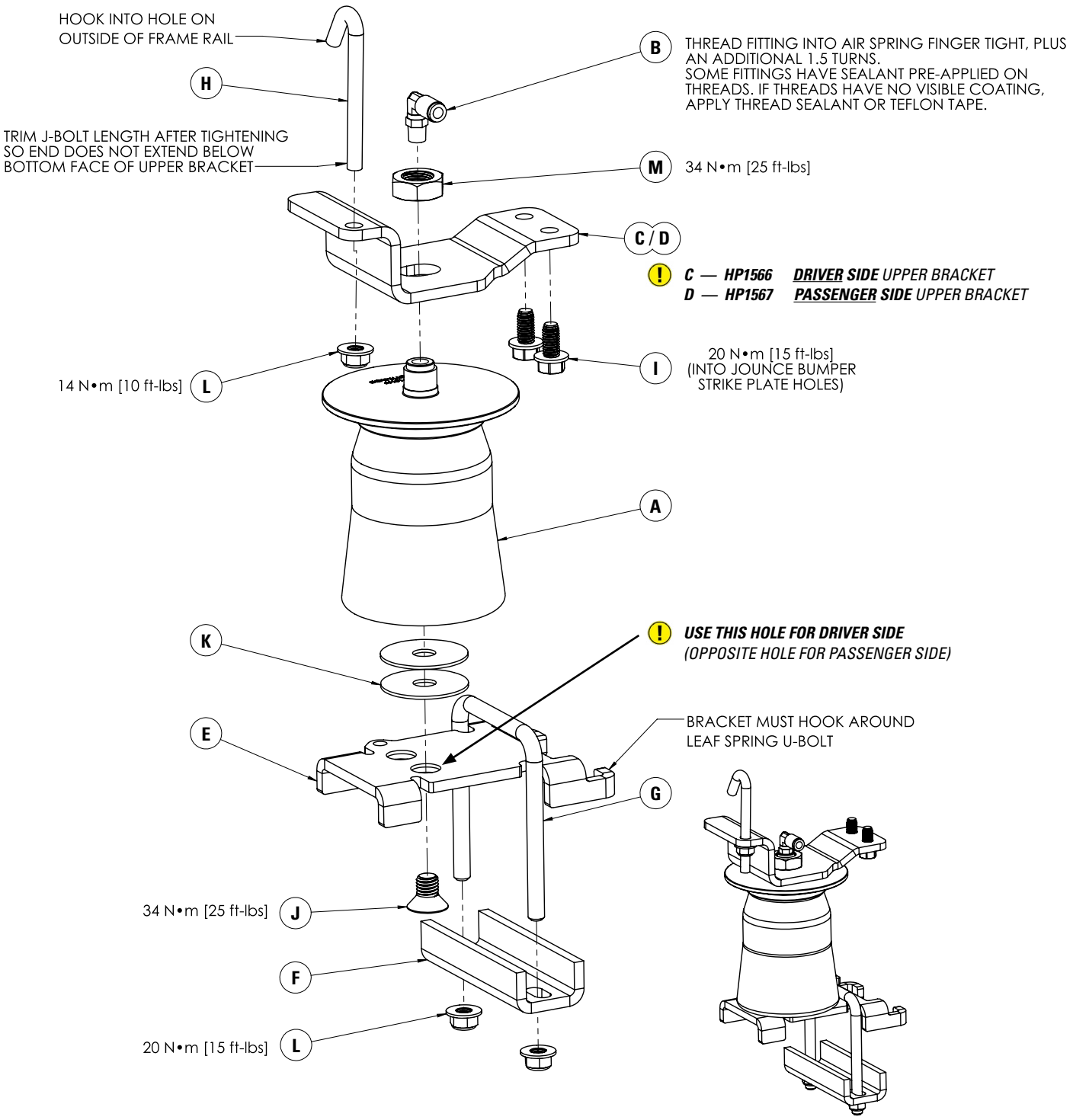
REQUIRED TOOLS

- 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)



INSTALLATION INSTRUCTIONS

1 MEASURE STOCK RIDE HEIGHT

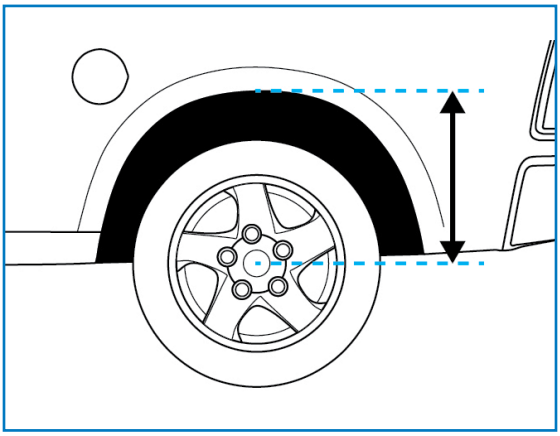
Park the vehicle on a level surface.

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

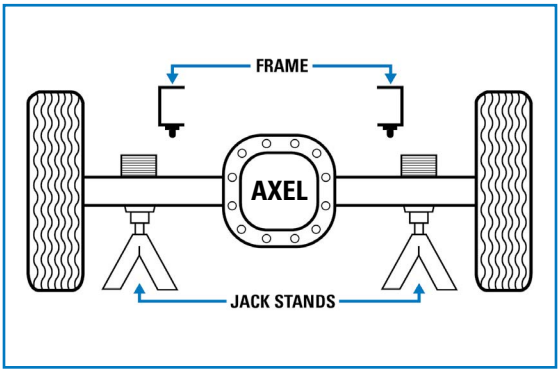
Place wheel chocks in front of and behind both front wheels.

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 ASSEMBLE THE AIR SPRING

Place the Driver Side upper bracket (HP1566) on top of the air spring and secure with jam nut.

Torque jam nut to 34 N•m (25 ft-lbs)

Install the 90° swivel air fitting into the air spring, finger tight, then tighten an additional 1 to 1.5 turns.

Turn over the air spring assembly.

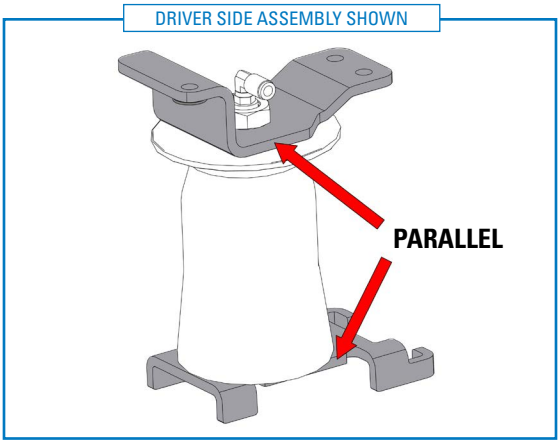
Place two 1/2" flat washers over the hole in the bottom of the air spring.

Then (using Figure 3B as reference), line up the "Driver Side" hole in the lower bracket (shown with a black arrow) and secure it with a flat socket head bolt.

Torque bolt to 34 N•m (25 ft-lbs)

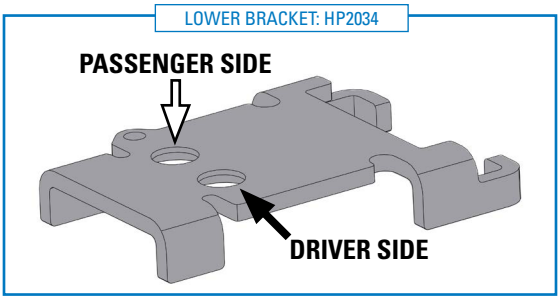
Ensure the edges of the upper and lower brackets are parallel and oriented as shown in Figure 3A.

DRIVER SIDE ASSEMBLY SHOWN



3A

LOWER BRACKET: HP2034



3B

REPEAT FOR SECOND AIR SPRING with Passenger Side upper bracket (HP1567)

PLEASE NOTE: Passenger Side lower bracket uses the opposite hole from the one used on the Driver Side. (Passenger side shown with a white arrow in Figure 3B).

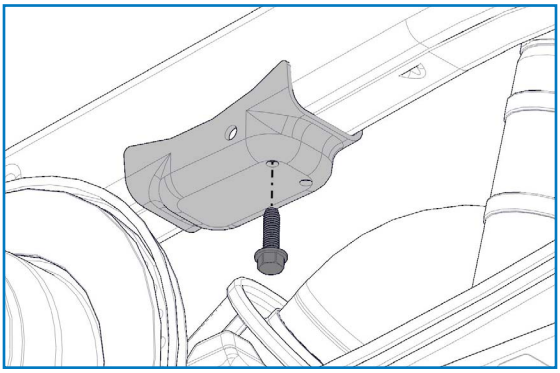
4 PREPARE JOUNCE BUMPER STRIKE PLATE

Locate 8mm holes in each jounce bumper strike plates on each side, on underside of frame rail.

Thread self-tapping bolt into 8mm hole until bolt head is approximately 1/4" from strike plate.

Once complete, remove bolt.

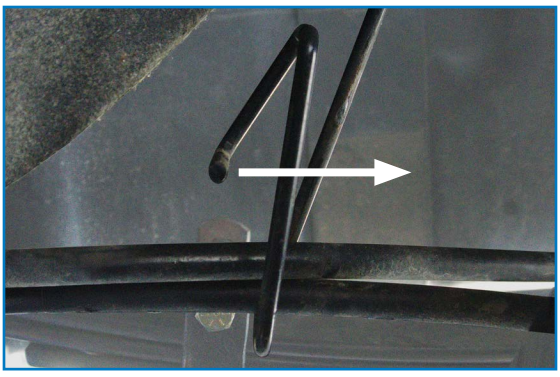
Repeat for the remaining 8mm holes.



4

5 RELOCATE E-BRAKE CABLE

Relocate passenger e-brake cable from upper loop to lower loop of bracket.



5

6 INSTALL AIR SPRING ASSEMBLY

Compress the air spring assembly by hand as needed to fit between the top of leaf spring and frame.

The air spring should sit forward of the axle, with the lower bracket hooked around the the leaf spring U-bolt (as shown in Figure 6A).

Place the square U-bolt over the lower bracket and leaf springs.

Install the clamp and secure with nylock flange nuts.

Torque to 20 N•m (15 ft-lbs)

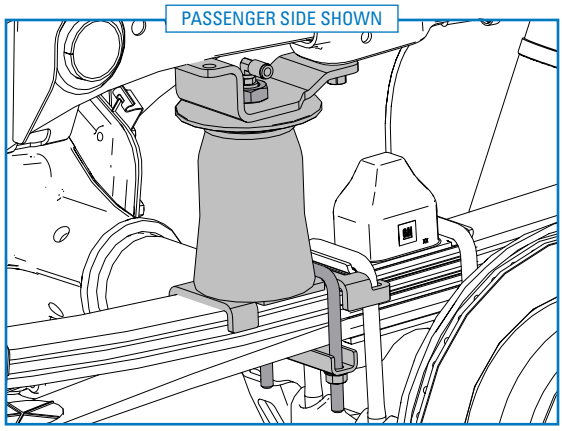
Trim the ends of the U-bolt that extend past nut.

Hook the J-bolt into the opening on outside of the frame rail and thread on a nylock flange nut, but do not tighten.

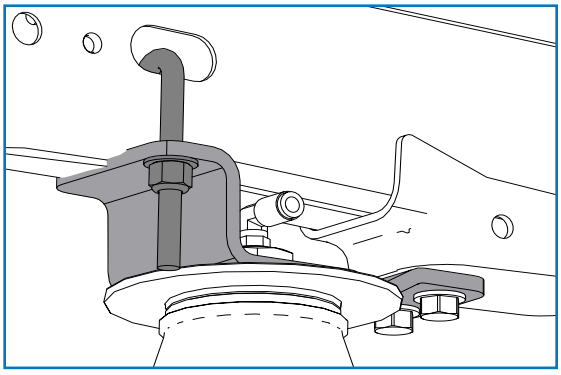
Lightly coat the self-tapping bolts with anti-seize compound and insert through the upper bracket to secure it to strike plate/frame (as shown in Figure 6B).

Torque self-tapping bolts to 20 N•m (15 ft-lbs) – ***Do not overtighten***

Torque Nyloc nut on J-bolt to 14 N•m (10 ft-lbs) – ***Do not overtighten***



6A

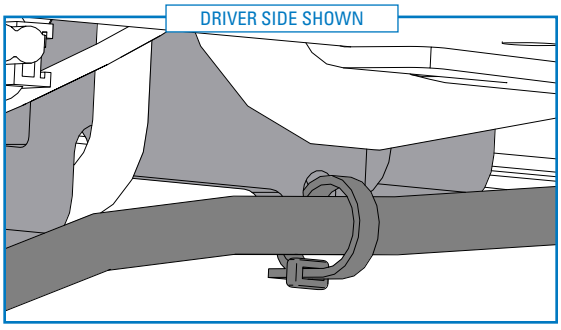


6B

REPEAT for the opposite side

7 SECURE E-BRAKE CABLE

Loosely secure the passenger e-brake cable to the lower bracket on driver side using tie strap (as shown in Figure 7).



7

8 INSTALL HEAT SHIELD

Bend the tabs on heat shield so that there will be the necessary 1/2" dead space between the heat shield and the exhaust when the heat shield is attached.

Attach the heat shield to exhaust pipe using the supplied worm gear clamps.

Each hose clamp holds a bent tab against the exhaust pipe.

Ensure heat shield faces toward the air spring (as shown in Figure 8).

Diesel model exhaust shown as the example.
Gas model's will mount the heat shield in similar location.

8

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.

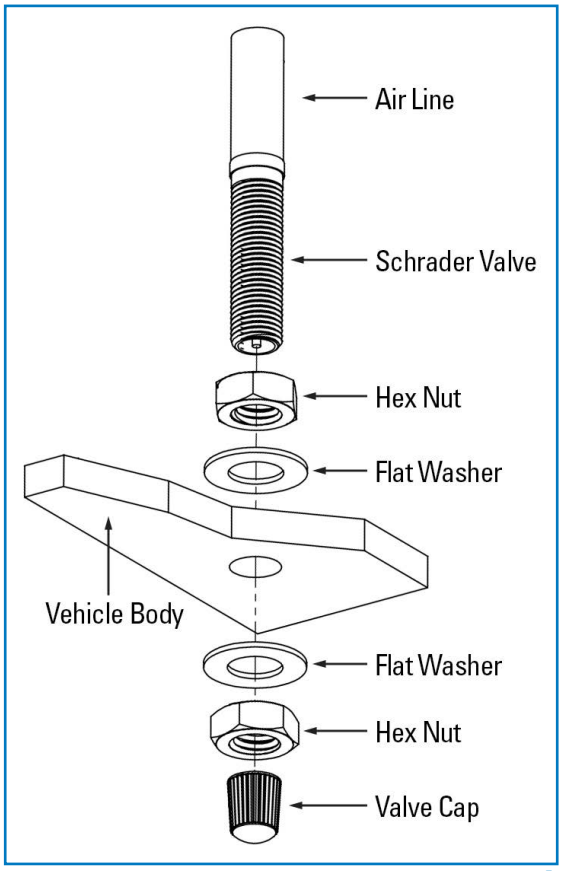
***PLEASE NOTE: This kit contains push-to-connect fittings**; using scissors or wire cutters to cut the nylon air line will distort the line and cause the connection to leak. The air line must be cut off squarely with a hose cutter or a sharp utility knife.*

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 ½" – 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.



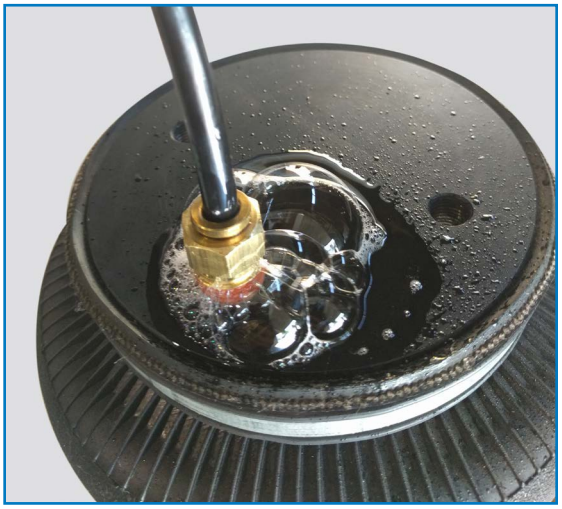
A

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.



**Air Spring & NPT Air Fitting may differ between kits*

B

CONGRATULATIONS! You have completed the install

After Installation continues on the following page.

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 Convoluted**	**HEAVY DUTY**	**5 PSI**	**100 PSI**
HP10083J		**HEAVY DUTY** with JOUNCE BUMPER	**0 PSI*** / **5 PSI**	**100 PSI**
HP10000	**Double Convoluted**	**HEAVY DUTY**	**5 PSI**	**100 PSI**
HP10000J		**HEAVY DUTY** with JOUNCE BUMPER	**0 PSI*** / **5 PSI**	**100 PSI**
HP10068	**Large Double Convoluted**	**HEAVY DUTY**	**5 PSI**	**100 PSI**
HP10438	**Double Convoluted**	**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.