Installation Manual

AIR SUSPENSION KIT

Chevrolet Silverado/GMC Sierra 2500HD/3500HD (2WD/4WD)*

** **For all trucks**, including those with 5th wheel hitches*
** **Will not fit** models equipped with MagneRide*

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.*
+ Applications vary. Never exceed manufacturer's recommended Gross Vehicle Weight Rating

L6518_REV11_04.10.2026

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.

PLEASE NOTE: This manual is used across multiple kit variations. Installation step images may vary depending on your kit but the procedure remains the same across all part numbers (unless specifically noted in a step).

HEAVY DUTY KIT CONTENTS

Please confirm the items below are provided in your kit before starting the installation.

XD (XTREME DUTY) KIT CONTENTS LISTED ON FOLLOWING PAGE

HEAVY DUTY KITS		QTY	PART #
A[1]	**Double Convoluted Spring**	2	**HP10000**

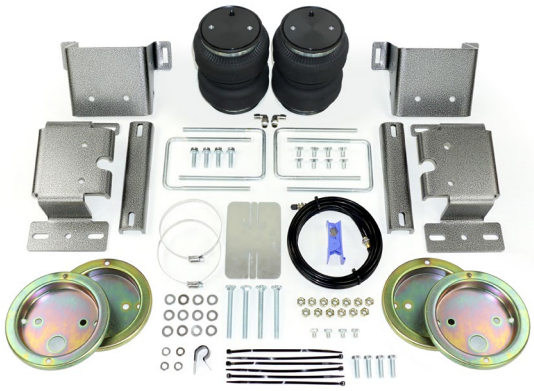
HEAVY DUTY JOUNCE BUMPER KITS		QTY	PART #
B[1]	**Double Convoluted Spring** w/ Jounce Bumper	2	**HP10000J**

SHARED HD KIT CONTENTS		QTY	PART #
C[1]	Roll Plate	4	HP10054
D[1]	90° Swivel Fitting, 1/4" Hose to 1/4" NPT	2	HP1100
E[1]	Bracket, Upper Left	1	HP0125
F[1]	Bracket, Upper Right	1	HP0126
G[1]	Bracket, Lower	2	HP0127
H	Bolt, 3/8" – 24 x 3/4" Countersunk	8	HP1008
I	Bolt, 3/8" – 16 x 1.25" Self Threading	4	HP1078
J	Bolt, 3/8" – 16 x 3.5" Carriage	4	HP1332
K	Bolt, 3/8" – 16 x 1.25" Hex Head	1	C10464
L	Bolt, M8 x 1.25 x 10mm Hex Head	4	HP1334
M	U-Bolt, 3/8" – 16 x 4.25" x 6.5"	4	HP1331
N	Washer, 3/8" Flat	12	C653
O	Washer, M8 Flat	4	C10473
P	Nut, 3/8" Nylock Lock	13	HP1000
Q	Strap, Axle	2	HP0128
R	5/8" Adel Clamp	1	HP1006
S	Heat Shield	1	HP0012
T	Worm Gear Ring Clamp	2	HP1001

HP10000

HP10000J

HEAVY DUTY (HD) KIT LAYOUT



REQUIRED TOOLS

- Hoist or Floor Jack
- Safety Glasses
- Pipe Thread Sealant
- Safety Stands
- Torque Wrench
- Ratchet
- Standard Combination Wrenches
- 7/32" Hex Allen Wrench
- Metric & Standard Sockets
- Hose Cutter (included) or Sharp Utility Knife
- Spray Bottle with Dish Soap/Water
- Air Compressor/Compressed Air Source (to test/fill air springs)
- Heavy Duty Drill
- 3/8 & 5/16 drill bits (very sharp)
- 3/8 Nut Driver

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*

PLEASE NOTE: This manual is used across multiple kit variations. Installation step images may vary depending on your kit but the procedure remains the same across all part numbers (unless specifically noted in a step).

XTREME DUTY KIT CONTENTS

Please confirm the items below are provided in your kit before starting the installation.

HD (HEAVY DUTY) KIT CONTENTS LISTED ON PREVIOUS PAGE

XTREME DUTY KITS		QTY	PART #
A²	**Double Convoluted Spring**	2	**HP10438**

XTREME DUTY JOUNCE BUMPER KITS		QTY	PART #
B²	**Double Convoluted Spring** w/ Jounce Bumper	2	**HP10438J**

SHARED XD KIT CONTENTS		QTY	PART #
C²	Roll Plate	4	HP10069
D²	90° Swivel Fitting, 1/4" Hose to 3/8" NPT	2	HP1245
E²	Bracket, Upper Left	1	HP1655
F²	Bracket, Upper Right	1	HP1656
G²	Bracket, Lower	2	HP1657
H	Bolt, 3/8" – 24 x 3/4" Countersunk	8	HP1008
I	Bolt, 3/8" – 16 x 1.25" Self Threading	4	HP1078
J	Bolt, 3/8" – 16 x 3.5" Carriage	4	HP1332
K	Bolt, 3/8" – 16 x 1.25" Hex Head	1	C10464
L	Bolt, M8 x 1.25 x 10mm Hex Head	4	HP1334
M	U-Bolt, 3/8" – 16 x 4.25" x 6.5"	4	HP1331
N	Washer, 3/8" Flat	12	C653
O	Washer, M8 Flat	4	C10473
P	Nut, 3/8" Nylock Lock	13	HP1000
Q	Strap, Axle	2	HP0128
R	5/8" Adel Clamp	1	HP1006
S	Heat Shield	1	HP0012
T	Worm Gear Ring Clamp	2	HP1001

HP10438

HP10438J

XTREME DUTY (XD) KIT LAYOUT

REQUIRED TOOLS

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- Safety Glasses
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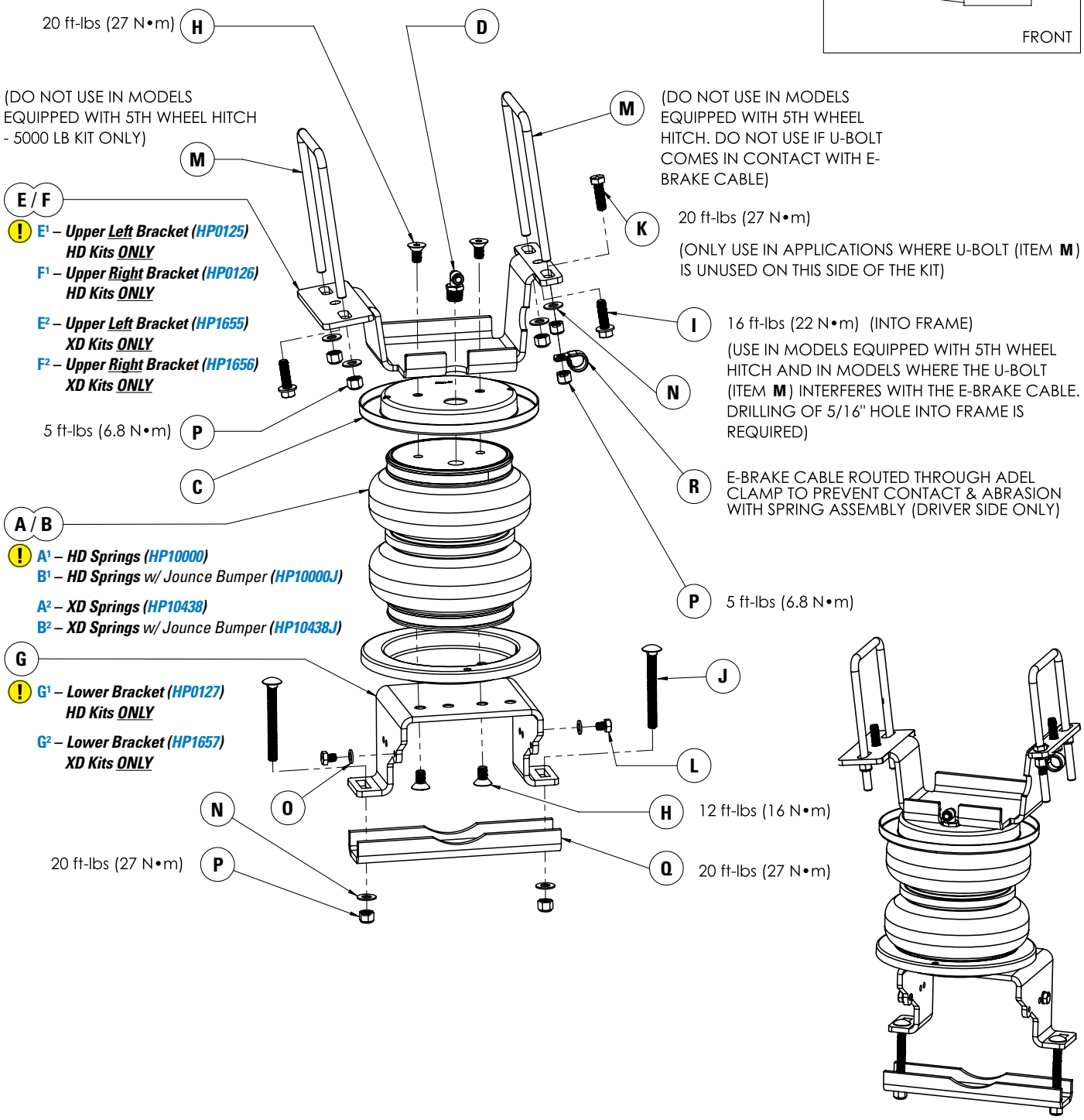
KIT EXPLOSION DIAGRAM

DRIVER SIDE ASSEMBLY SHOWN (Passenger side assembly is mirrored)



INSTALLATION INSTRUCTIONS

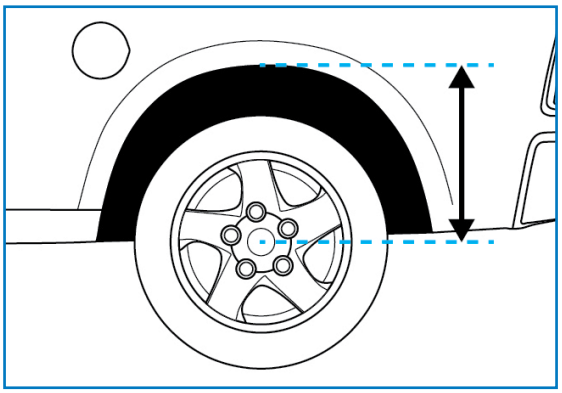
1 MEASURE STOCK RIDE HEIGHT & CLEARANCE

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

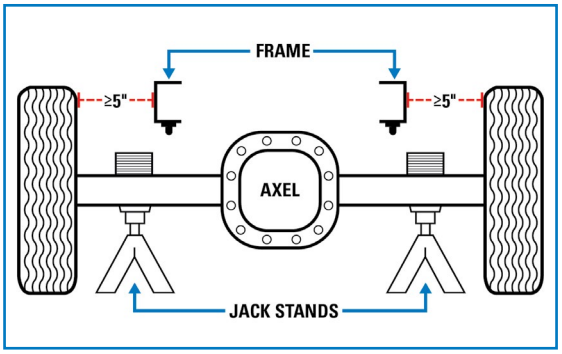
Using a measuring tape, measure the distance between the center of the wheel hub and the bottom of the fender well (see Figure 1 for reference) this will give you your stock Normal Ride Height.

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



1B

2 REMOVE REAR WHEELS

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).

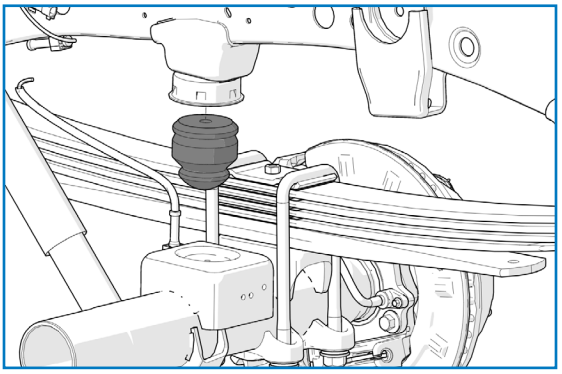
Lower the vehicle until the axle is supported by the jack stands.

Remove rear wheels.

3 REMOVE JOUNCE BUMPERS

Remove the jounce bumpers by prying them out of the retaining cup.

A pry bar or large flat screwdriver is typically required.



3

4 PRE-ASSEMBLE AIR SPRINGS

Install the 90º NPT threaded swivel fittings in the fill opening (largest of the three holes) of each air spring.

Tighten finger tight plus an additional 1.5 turns.

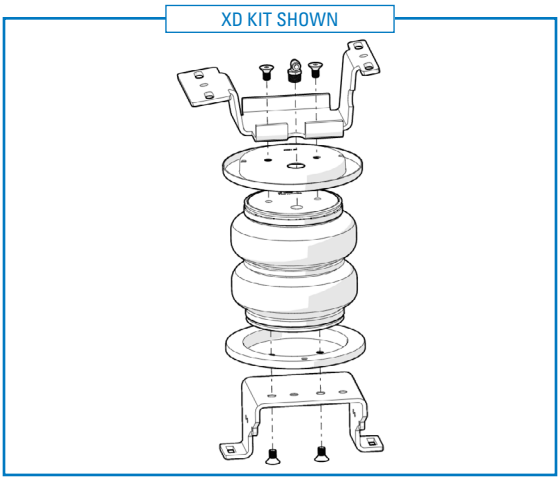
The use of thread sealant or Teflon tape is recommended.

Place a roll plate and the upper bracket on the top surface of the air spring (see Figure 4 for assembly reference).

Align the holes in the air spring, roll plate and bracket and secure with two 3/8" – 24 x 3/4" countersunk screws.

The use of anti-seize on all fasteners is recommended.

Torque screws to 27 N•m (20 ft-lbs)



4

5 LOWER MOUNTING BRACKET

FOR HD KITS: Place a roll plate and lower bracket on the bottom surface of the air spring.

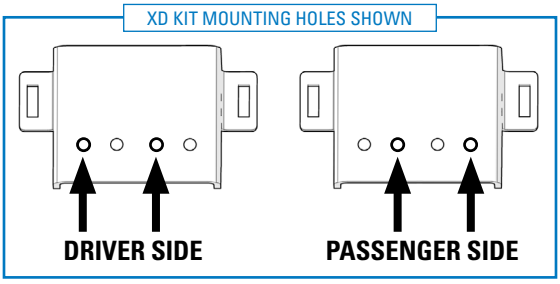
Align the lower bracket holes for each assembly. Secure with two 3/8"– 24 x 3/4" countersunk screws and torque to 16 N•m (12 ft-lbs).

FOR XD KITS: Place a roll plate and lower bracket on the bottom surface of the air spring.

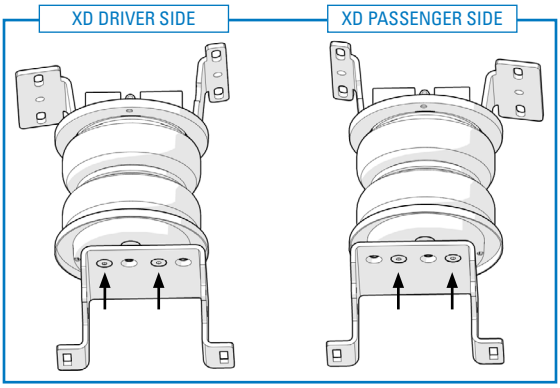
The Drive side and Passenger side assemblies use different mounting holes in the lower bracket (as shown in Figures 5A & 5B). *Make sure to select the appropriate mounting holes when assembling to ensure a correct installation:*

After aligning the correct side lower bracket holes for each vehicle side assembly, secure with two 3/8" – 24 x 3/4" countersunk screws and torque to 16 N•m (12 ft-lbs).

The finished assemblies should appear as shown in Figure 5B.



5A



5B

6 REMOVE DRIVER SIDE E-BRAKE BRACKET

Remove the M8 hex cap screw retaining the emergency brake cable bracket to the frame on the driver side (shown with a white arrow in Figure 6).

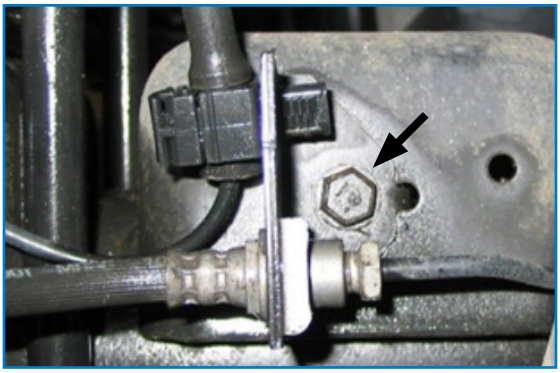
Discard the bracket and screw as they will not be reused in this installation.

6

7 UNSCREW BRAKE LINE BRACKETS

Remove the M8 hex cap screws retaining the brake line to the jounce bumper stops (shown with a black arrow in Figure 7).

Discard the screws as they will not be reused in this installation.



7

8 UNSCREW PASSENGER SIDE E-BRAKE BRACKET

Remove the hex cap screw retaining the emergency brake cable to the jounce bumper stop on the passenger side of the vehicle (shown with a white arrow in Figure 8).

Discard the screw as it will not be reused in this installation.

8

9 INSTALL AIR SPRING ASSEMBLIES

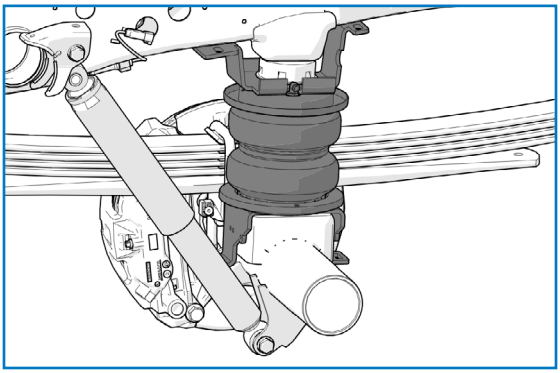
It may be necessary to raise the frame of the truck a few inches to allow more clearance to install the spring assemblies

Position the air spring assembly such that the lower bracket rests on the jounce bumper stop and the upper bracket nests around the jounce bumper retaining cup with the air fitting pointing inwards (see Figure 9A for reference).

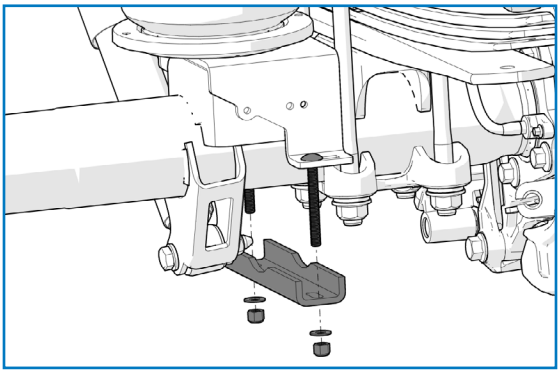
Insert two 3/8" – 16 x 3.5" carriage bolts through the rectangular holes in the lower bracket.

Install the axle strap (as shown in Figure 9B) with two 3/8" flat washers and two 3/8" nylon lock nuts.

Do not fully tighten yet.



9A



9B

10 INSTALLATION FOR TRUCKS WITHOUT A 5TH WHEEL HITCH

Secure the upper bracket to the frame (as shown in Figure 10) using two U-bolts with four 3/8" flat washers and four 3/8" nylon lock nuts, ensuring no wires or brake lines are pinched between the frame and U-bolt during installation.

PLEASE NOTE: *If the emergency brake cable (Driver side) cannot be relocated with an adel clip due to interference with the U-bolt, remove the U-bolts and follow the instructions in Step 11 for both sides of the vehicle.*

Align the air spring by adjusting the brackets on the frame and axle to achieve the best vertical alignment (reference Figure 10B for correct air spring alignment).

On the Driver's Side, secure the emergency brake cable [previously removed in Step 6] to the upper bracket with an adel clamp.

Attach the adel clamp to the forward U-bolt with a second nylon lock nut and torque to 6.8 N•m (5 ft-lbs).

Evenly torque the nylon lock nuts on the upper bracket to 6.8 N•m (5 ft-lbs).

Evenly torque the nylon lock nuts on the axle strap to 27 N•m (20 ft-lbs).

11 INSTALLATION FOR TRUCKS WITH A 5TH WHEEL HITCH

Secure the upper bracket to the frame by inserting the air spring assembly on to the frame and axle, adjusting the brackets to achieve the best vertical alignment (see Figure 10B for reference).

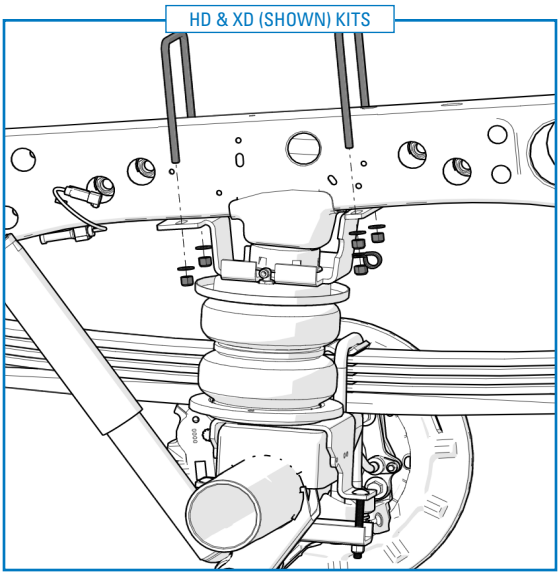
Using the center holes in the upper bracket flanges as a reference, drill two 5/16" holes into the bottom of the frame.

FOR HD KITS: Secure the upper bracket to the frame using one U-Bolt & one 3/8" – 16 x 1.25" self threading bolts and torque to 6.8 N•m (5 ft-lbs).

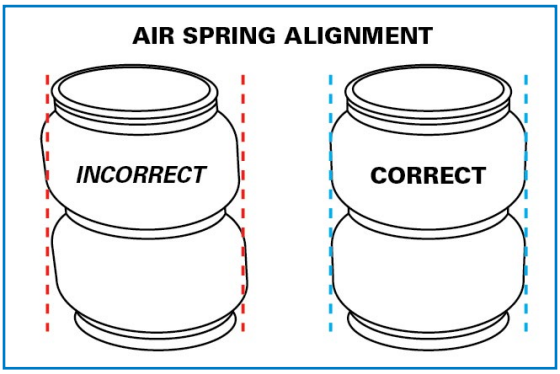
FOR XD KITS: Secure the upper bracket to the frame using two 3/8" – 16 x 1.25" self threading bolts and torque to 6.8 N•m (5 ft-lbs) (as shown in the Figure 11).

On the Driver's Side, secure the emergency brake cable removed in Step 5 to the upper bracket with an adel clamp. Attach the adel clamp to the forward upper bracket slot with a 3/8" – 16 x 1.25" bolt and 3/8" nylon lock nut.

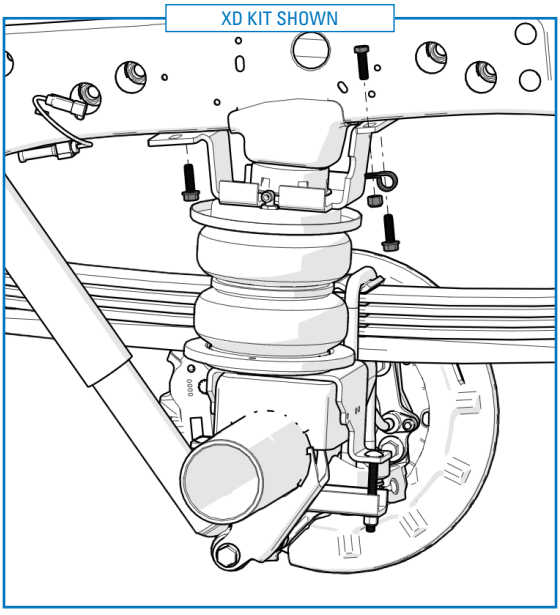
Torque bolt to 6.8 N•m (5 ft-lbs)



10A



10B



11

12 REATTACH BRAKE LINES

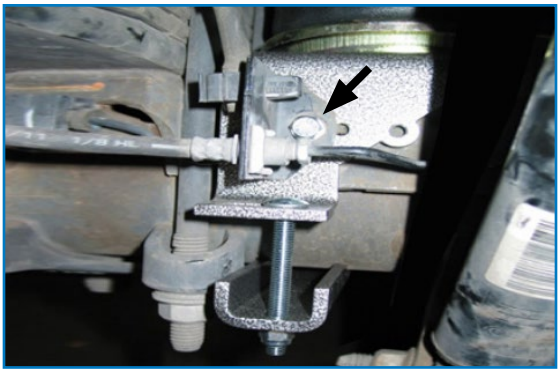
Using the M8 x 1.25 x 10mm Hex bolts, attach the brake line brackets removed in Step 6 to the rear face of the lower brackets as shown in Figures 12A & 12B.

Torque bolts to 16 N•m (12 ft-lbs)

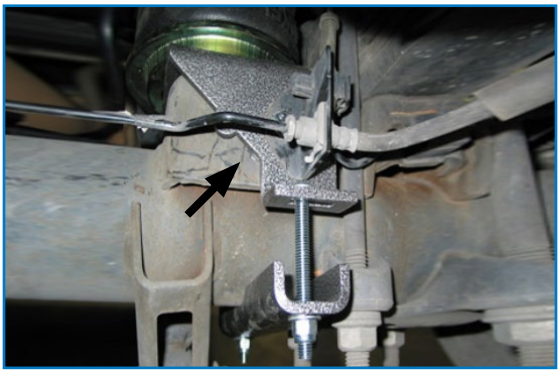
On the Passenger Side, attach the emergency brake cable bracket to the front face of the lower bracket with a M8 x 1.25 x 10 mm Hex bolt. (See Figure 12C).

Bending or removing the finger on the emergency brake cable bracket may be required.

Torque bolt to 16 N•m (12 ft-lbs)



12A



12B

12C

13 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 12).

Each hose clamp holds a tab against exhaust pipe.

13

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.

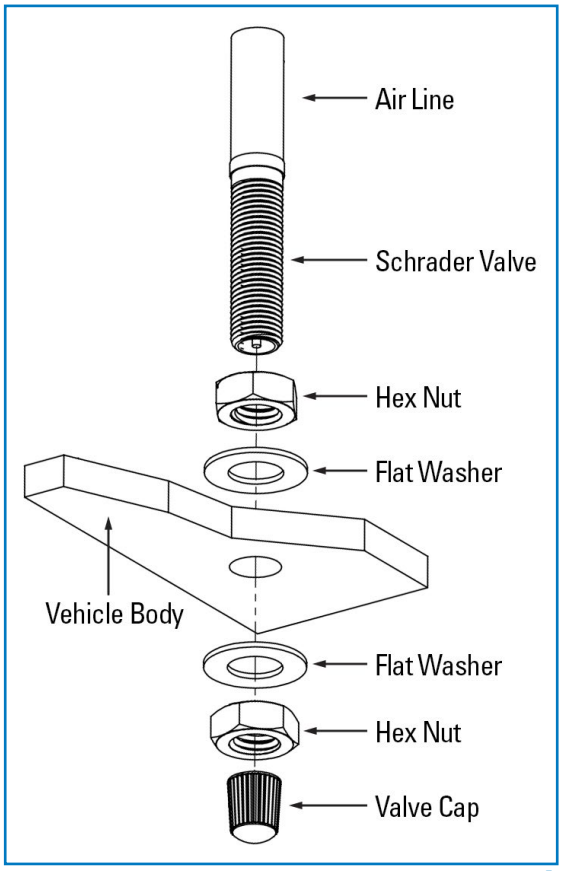
***PLEASE NOTE: This kit contains push-to-connect fittings**; using scissors or wire cutters to cut the nylon air line will distort the line and cause the connection to leak. The air line must be cut off squarely with a hose cutter or a sharp utility knife.*

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.



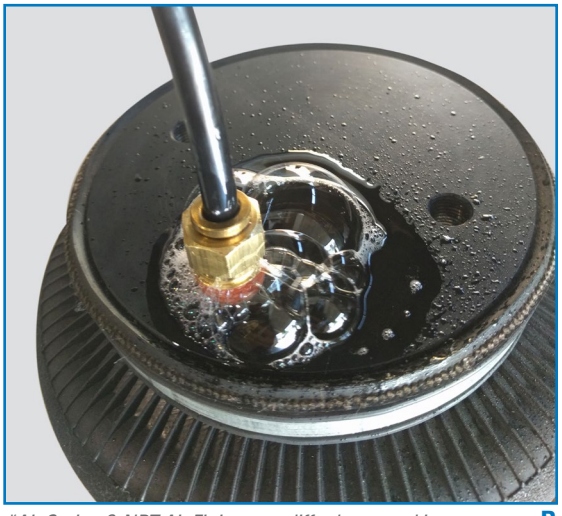
A

CHECK SYSTEM FOR LEAKS

Using the *MIN/MAX PSI* chart on the following page; inflate both air springs to 10 psi less than the maximum recommended pressure for the air spring part number included in this kit; 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.

Recheck the pressure on the following day. If one or both of air springs have lost pressure, an air leak is present and must be repaired.



**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.