

# Installation Manual



## AIR SPRING KIT

RAM 1500 Classic (2WD/4WD)\*

*Will not fit TRX models or models with Factory Air Suspension*

*Use this in-coil 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.*



**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](http://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.**

*Safety Warnings!*

- ❶ 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.
  - ❶ 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.
  - ❶ 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 LAYOUT



## KIT CONTENTS

Reference the kit layout above & explosion diagram on the following page for parts and assembly.

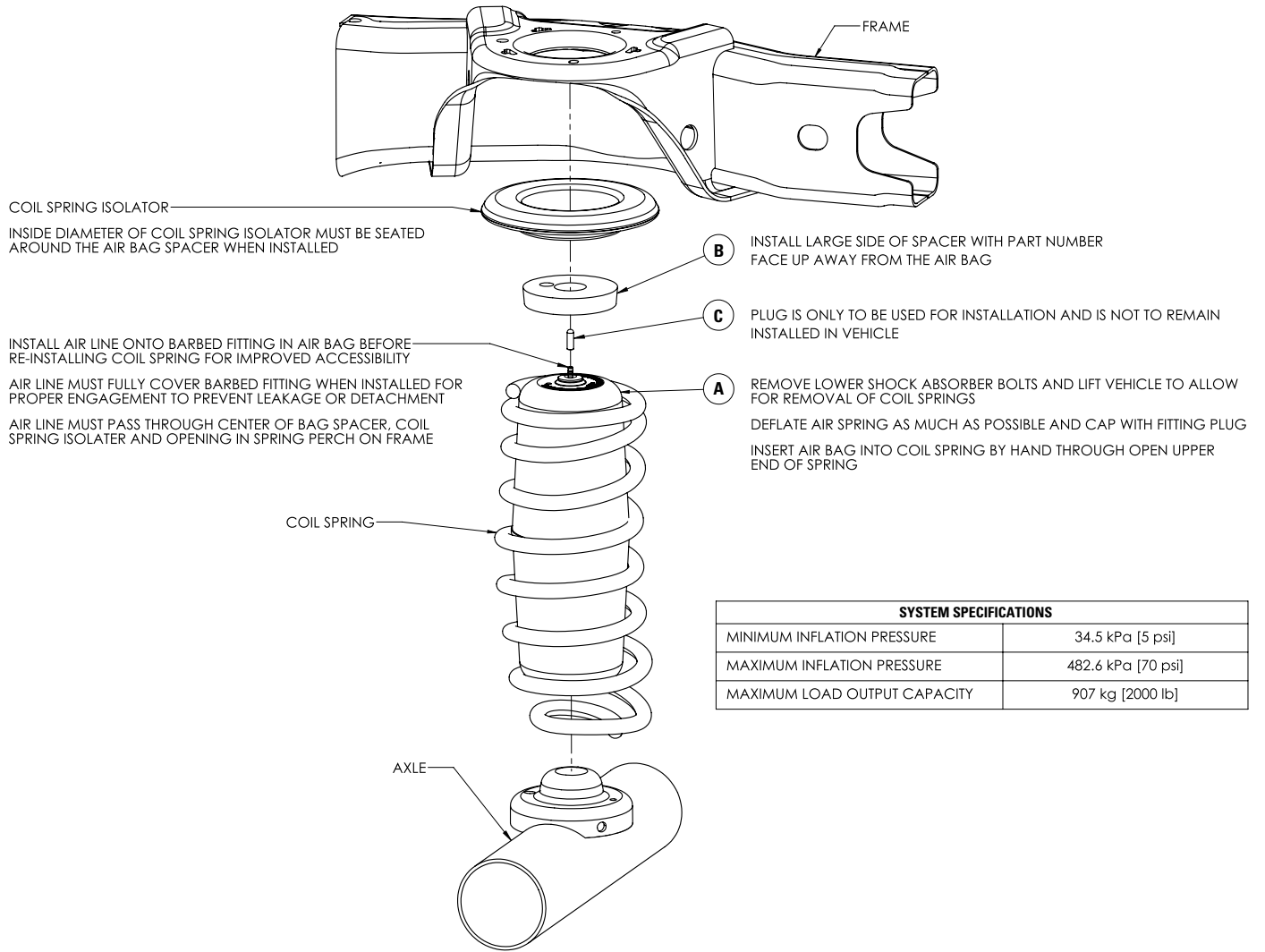
KIT CONTENTS	QTY	PART #
<b>A</b> In-Coil Air Bag	2	HP10560
<b>B</b> Air Bag Support Spacer	2	HP10565
<b>C</b> Red Fitting Cap	2	P34691
<b>D</b> Airline Assembly & Hose Cutter	1	HP1344
<b>E</b> Zip Ties	6	C11618

## REQUIRED TOOLS

- Hoist or Floor Jack
- Safety Stands
- Safety Glasses
- Torque Wrench
- Ratchet
- Metric & Standard Combination Wrenches
- 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)

Please make sure all the items shown in the kit layout (on the previous page) are provided in your kit before starting the installation.

**DRIVER SIDE ASSEMBLY SHOWN:**



SYSTEM SPECIFICATIONS	
MINIMUM INFLATION PRESSURE	34.5 kPa [5 psi]
MAXIMUM INFLATION PRESSURE	482.6 kPa [70 psi]
MAXIMUM LOAD OUTPUT CAPACITY	907 kg [2000 lb]

## 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:**

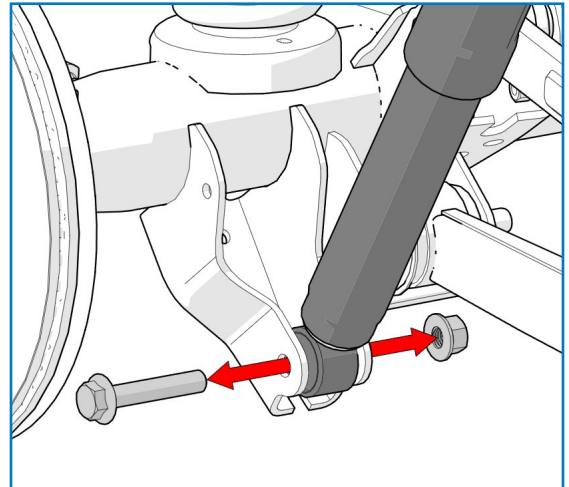
*This kit contains barbed fittings; using scissors or wire cutters to cut the nylon airline will distort the line and cause the connection to leak. The airline must be cut off squarely with the nylon hose cutter provided in this kit or a sharp utility knife.*

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## 1 UNBOLT SHOCKS

Remove the lower bolt securing the shock absorber to the axle on both sides of the vehicle (as shown in Figure 1).

Retain hardware for later reinstallation in Step 10.



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## 2 RAISE VEHICLE

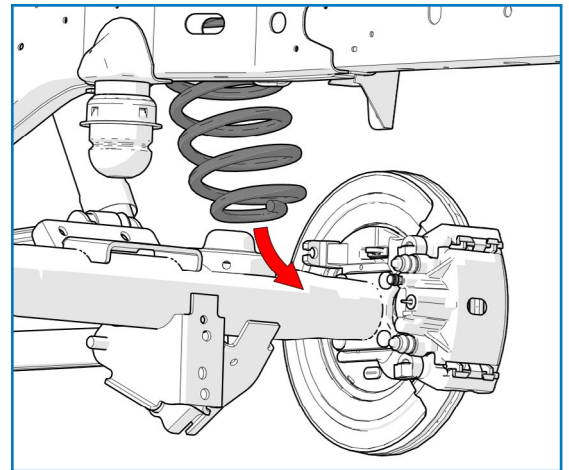
Place wheel chocks in front of and behind both front wheels.

Lift the rear of the vehicle by the frame until the coil springs are loose and can be removed from the vehicle.

Place two jack stands under the frame and lower the vehicle onto the stands.

### 3 REMOVE COIL SPRINGS

Remove both coil springs and upper spring isolators from the vehicle.



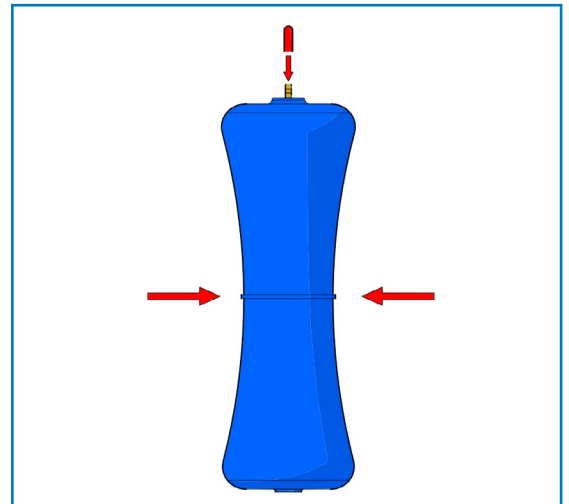
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### 4 COMPRESS AIR BAG

Remove the red cap from the barbed fitting on the air bag.

Compress the bag by hand to deflate and exhaust as much air as possible from the bag.

With the bag compressed, replace the red cap on the barbed fitting to prevent air from re-entering the bag.



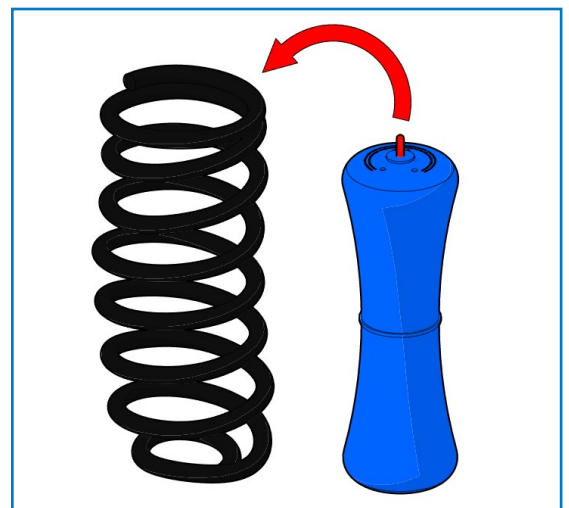
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### 5 INSERT AIR BAG IN SPRING

Insert the compressed air bag into the coil spring through the large open end of the spring.

Ensure barbed fitting in air bag is pointing upwards towards large open end of spring.

After fully inserting air bag, remove the red cap from the barbed fitting so the bag can expand.



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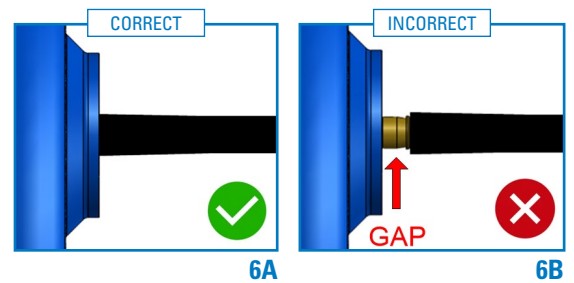
## 6 CONNECT AIR LINE TO BAG

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

**PLEASE NOTE:** Using scissors or wire cutters to cut the nylon airline will distort the line and may cause the connection to leak.

Connect each air line half to the air bags (one air line for each bag) by firmly pressing the air line onto the barbed fitting.

It is important to ensure the air line fully covers the barbed fitting (as shown in Figure 6A). A gap left between the bag and air line (as shown in Figure 6B) will result in a leak.



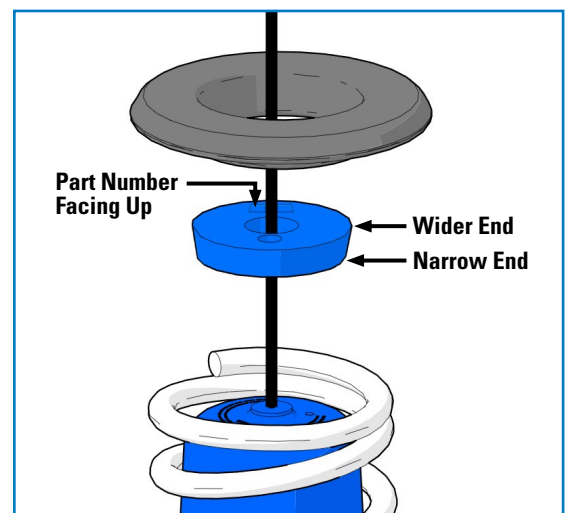
## 7 PLACE SPACER & SPRING ISOLATOR

Place the air bag support spacer on top of the air bag with the wider-ended face containing the part number FACE UP away from the air bag (as shown in Figure 7).

Place the coil spring isolator on top of the coil spring.

Ensure the inside diameter of the coil spring isolator is seated around the outer diameter of the air bag spacer.

**PLEASE NOTE:** The air line must pass through the center of the air spring spacer and coil spring isolator.

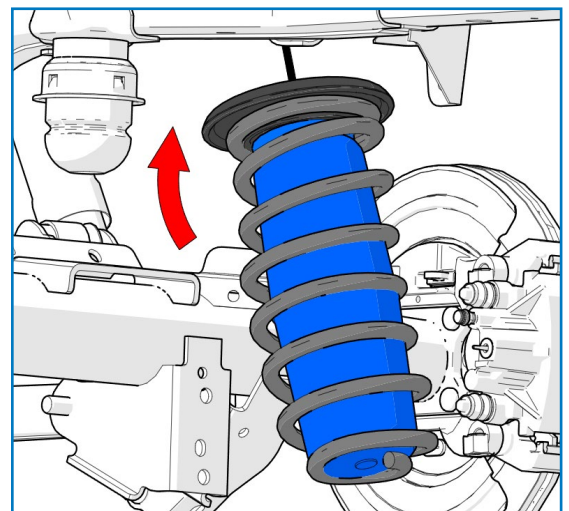


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## 8 INSTALL COIL SPRING WITH BAG

Insert the spring with isolator and air bag into the vehicle and seat the coil on the lower spring retainer on the axle.

Feed the air line through the center opening of the upper spring perch in the frame of the vehicle and pull all slack through and away from the coil spring.



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## 9 INSTALL AIR LINE

**PLEASE NOTE:** Using scissors or wire cutters to cut the nylon airline will distort the line and may cause the connection to leak.

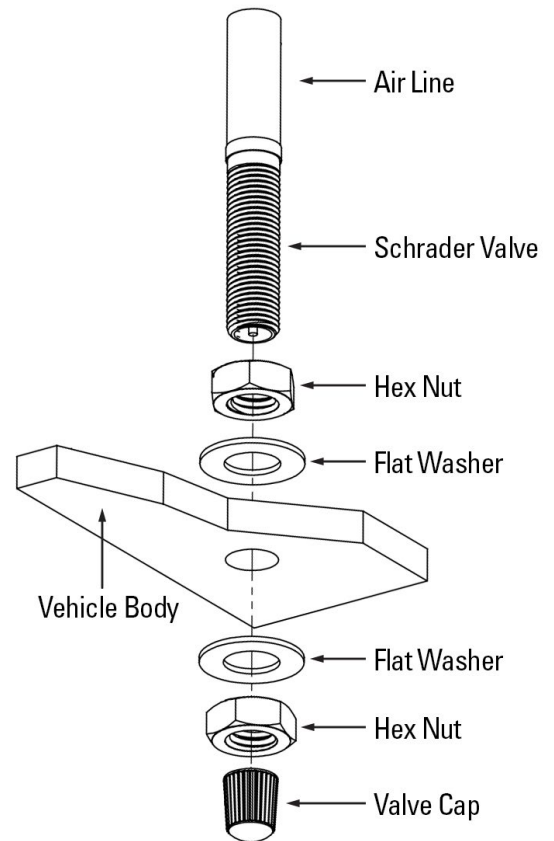
Provided in air spring kit are two fill valves. The most common place to install is in place of license plate fasteners.

Alternatively, two 5/16" holes can be drilled in a convenient location of your choosing.

Route the air lines from each air bag to the mounting location for the fill valves.

Secure air line away from moving parts and heat sources using the supplied tie-straps.

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



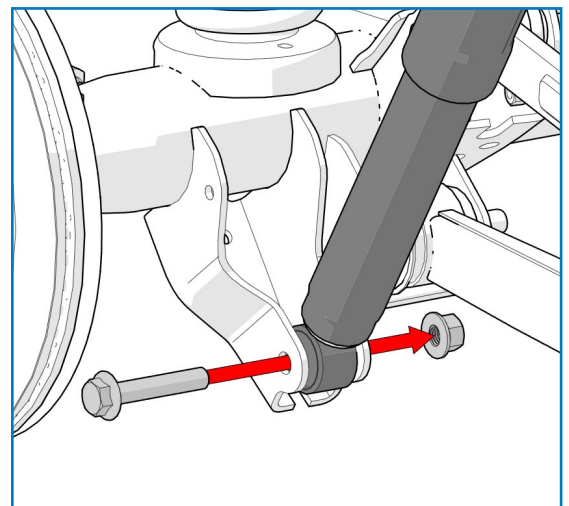
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## 10 RECONNECT SHOCKS

Lower the frame until the lower ends of the shock absorbers align with the attachment points on the axle.

Attach each shock to the axle using the original hardware previously removed in Step 1 (see Figure 10 for reference).

Torque lower shock bolts per OEM specifications.



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



## 11 CHECK SYSTEM FOR LEAKS

Inflate system to 50 psi.

Use a mixture of soap and water on all air line connections to detect leaks.

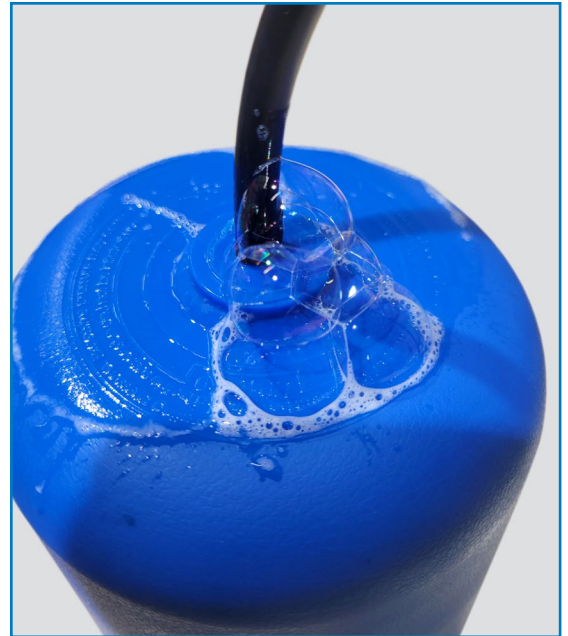
Large, expanding bubbles indicate a leak (as seen in Figure 11).

Repair as necessary and retest.

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

***PLEASE NOTE: A pressure loss up to 5 psi is normal in the first 24 hours as the bag settles into the shape of the coil spring. Re-inflate and check again the following day.***

If one or both of air springs have lost pressure, an air leak is present. The leak must be repaired, and then retested until no leaks exist.



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## 12 AFTER COMPLETING THE INSTALLATION

For safe and proper operation, never operate the vehicle under minimum of 5 psi or over maximum of 70 psi in air springs.

Staying within pressure limit will ensure maximum air spring life.

Failure in doing so may result in a void warranty.

***⚠ 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 5 psi in each air spring and never inflate air springs over 70 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.

***NOTE: Ensure pressure in air bag is less than 5 psi. Fully extending the suspension with a pressurized bag increases the risk of bag rupture.***

**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.***

