

# Installation Manual



## 10311 KIT

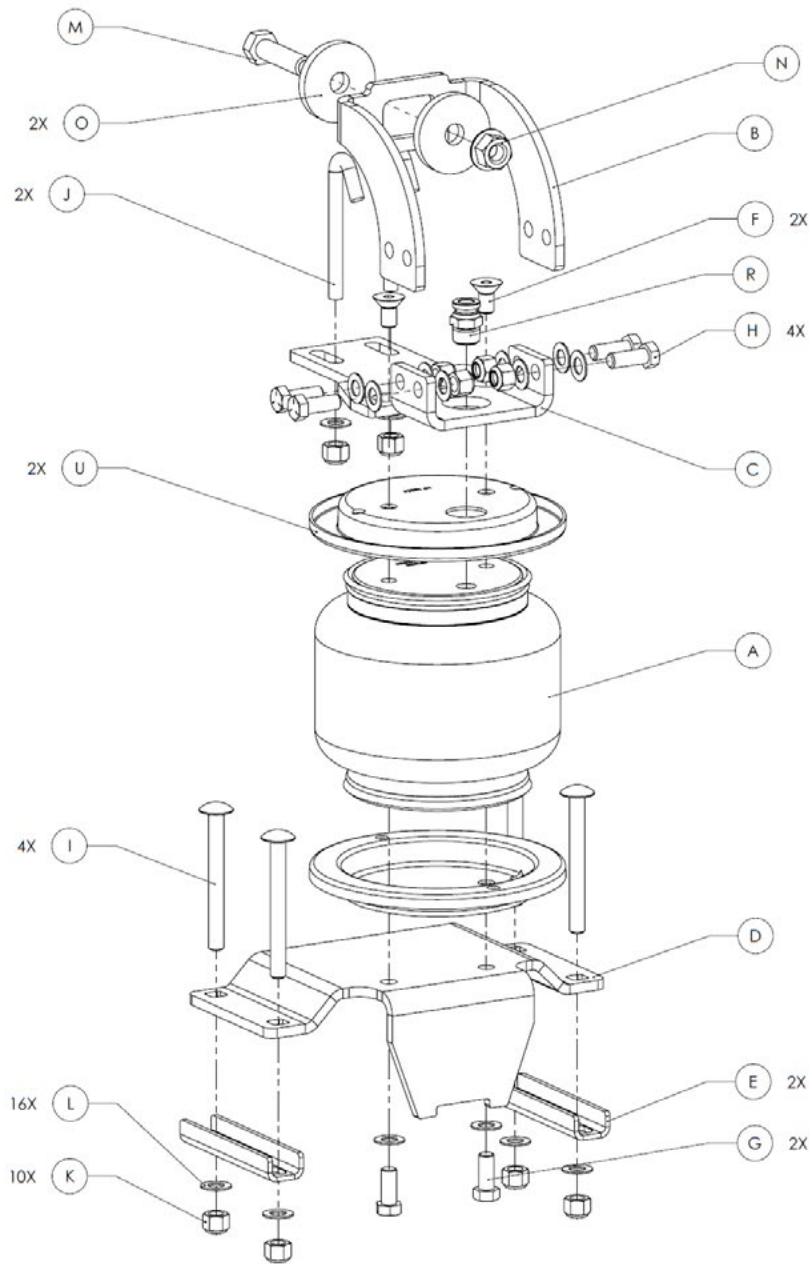
Toyota Tacoma (4WD)\*  
Toyota Tacoma PreRunner (2WD)\*

*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.

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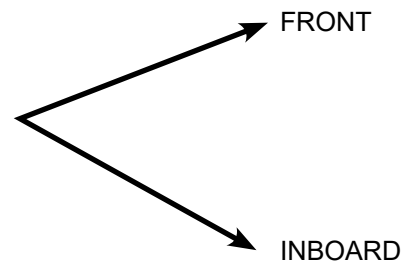
**KIT CONTENT**



**REQUIRED TOOLS**

- Hoist or Floor Jacks
- Safety Stands
- Safety Glasses
- Torque Wrench
- Standard Open-End Combo Wrenches
- Ratchet
- Metric and Standard Sockets
- Hacksaw
- Air Compressor or Compressed Air Source
- Spray Bottle with Dish Soap & Water

**Make sure all the items listed below are provided in your kit before starting the installation.**



**NOTE:** The diagram depicts orientation and quantities for the driver's side. Reverse all orientations when installing the passenger side air spring.

**KIT CONTENTS**

<b>A</b>	Air Spring	(2)	HP10083	<b>L</b>	3/8" Washer	(32)	C18006
<b>B</b>	Frame Bracket	(2)	HP1508	<b>M</b>	1/2"-13x2.0" Hex Head Screw	(2)	HP1459
<b>C</b>	Upper Bracket	(2)	HP1507	<b>N</b>	1/2"-13 Flanged Nut	(2)	HP1370
<b>D</b>	Lower Bracket	(2)	HP1506	<b>O</b>	1/2" Washer	(4)	HP1369
<b>E</b>	Leaf Spring Clamp Bar	(4)	HP0113	<b>P</b>	Gear Clamp (Not Shown)	(2)	HP1001
<b>F</b>	3/8"-24 x 7/8" Flat Head Socket Cap Screw	(4)	HP1008	<b>Q</b>	Airline Hose Assembly (Not Shown)	(2)	HP1344
<b>G</b>	3/8"-24 x 7/8" Hex Head Screw	(4)	HP1002	<b>R</b>	Straight Air Fitting	(2)	HP1099
<b>H</b>	3/8"-16 x 1.5" Hex Head Screw	(8)	C18018	<b>S</b>	Heat Shield (Not Shown)	(1)	HP0012
<b>I</b>	3/8"-16 x 3.5" Carriage Bolt	(8)	HP1332	<b>T</b>	Tie Straps (Not Shown)	(8)	C11618
<b>J</b>	3/8"-16 x 3.75" J-Bolt	(4)	HP1337	<b>U</b>	Roll Plate	(4)	HP10054
<b>K</b>	3/8"-16 Nyloc Nut	(20)	HP1000	<b>V</b>	Tube Cutter (Not Shown)	(1)	HP10208



**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)*

## BEFORE STARTING THE INSTALLATION:

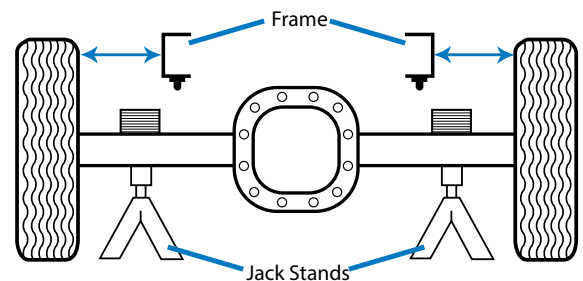
1. Ensure the application information is correct for the make, model and year of the vehicle you are installing the kit on.
2. Some vehicles are equipped with a rear wheel brake proportioning valve. Check with the manufacturer before installing the air spring kit, as it may affect braking performance.
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 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 RAISE THE REAR AXLE:

- Remove any unnecessary weight from the vehicle to attain normal ride height. This is important for correct initial air spring setup and adjustment.
- Park the vehicle on a level surface.
- Record the vehicle's normal ride height, which is the distance between the center of the axle and the horizontal wheel well flange. Ensure both sides are the same before raising the vehicle.
- Raise the rear axle high enough to remove both rear wheels and attain a comfortable working height.
- Place two jack stands under the axle (FIGURES 1 A & 1 B).
- Lower the floor jack until the vehicle axle is supported by the jack stands.
- Ensure the normal ride height measurement recorded earlier is the same. Adjust if necessary before proceeding.
- Once the rear axle is raised correctly, remove the rear wheels.



1A

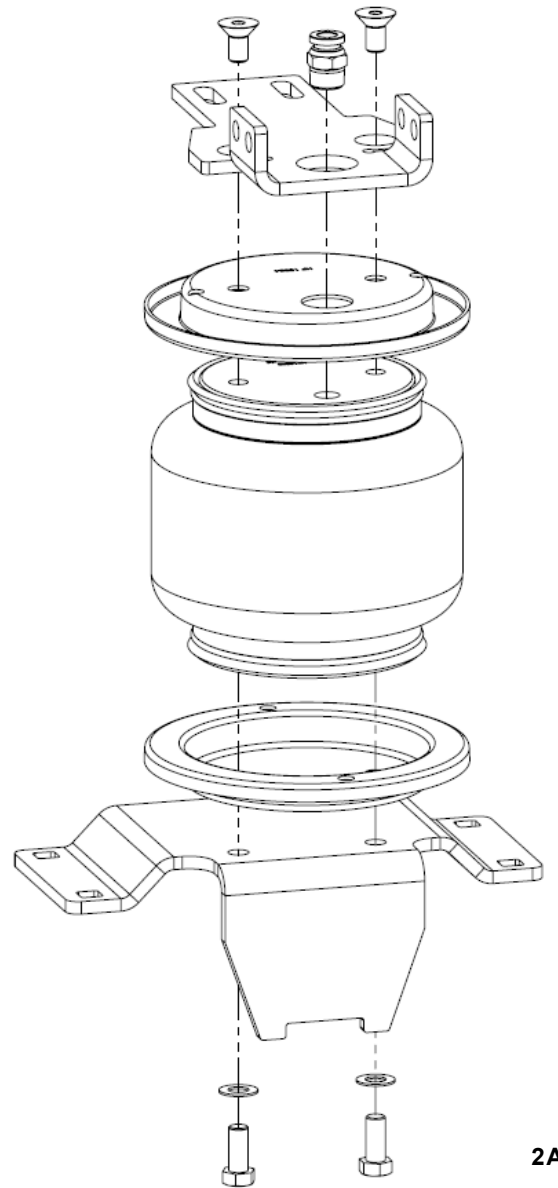


1B

## 2 ASSEMBLING THE AIR SPRING:

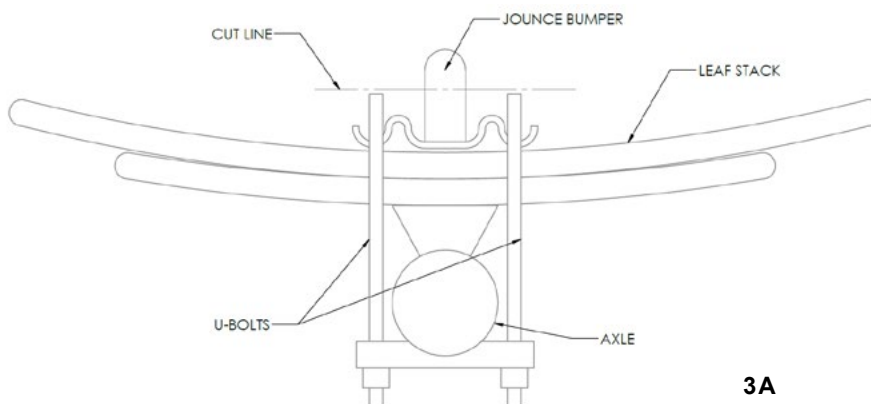
**CAUTION:** Never back off an installed NPT air fitting. Loosening the fitting will corrupt the seal and contribute to leakage and failure. Apply thread sealant to the fitting threads to prevent leaks and allow for deeper seating of the threads.

- Set a Roll Plate (U) on top of the Air Spring (A) (FIGURE 2 A). The radiused, or rounded, edge of the Roll Plate should be toward the Air Spring so that it is seated inside the Roll Plate.
- Install the Straight Air Fitting (R) into the port on top of the Air Spring, finger tight plus 1 ½ - 3 turns.
- Set the Upper Bracket (C) on top of the Air Spring, and install two ⅜"-24 X ⅞" Flat Head Socket Cap Screws (F) through the Upper Bracket, Roll Plate and into the aluminum end cap on top of the Air Spring. Torque to 20 ft-lbs (27 N•m).
- Flip the assembly upside down and set a Roll Plate on the bottom of the Air Spring.
- Set the Lower Bracket (D) on top of the assembly and install two ⅜"-24 X ⅞" Hex Head Cap Screws (G) with two ⅜" Washers (L) through the Lower Bracket, Roll Plate, and into the aluminum end cap of the Air Spring. Torque to 20 ft-lbs (27 N•m).
- Repeat this procedure for the second Air Spring Assembly.



## 3 REMOVE JOUNCE BUMPER

- Using a Hacksaw, cut off the rubber jounce bumper parallel with the top of the leaf spring U-Bolts (FIGURE 3 A).



2A

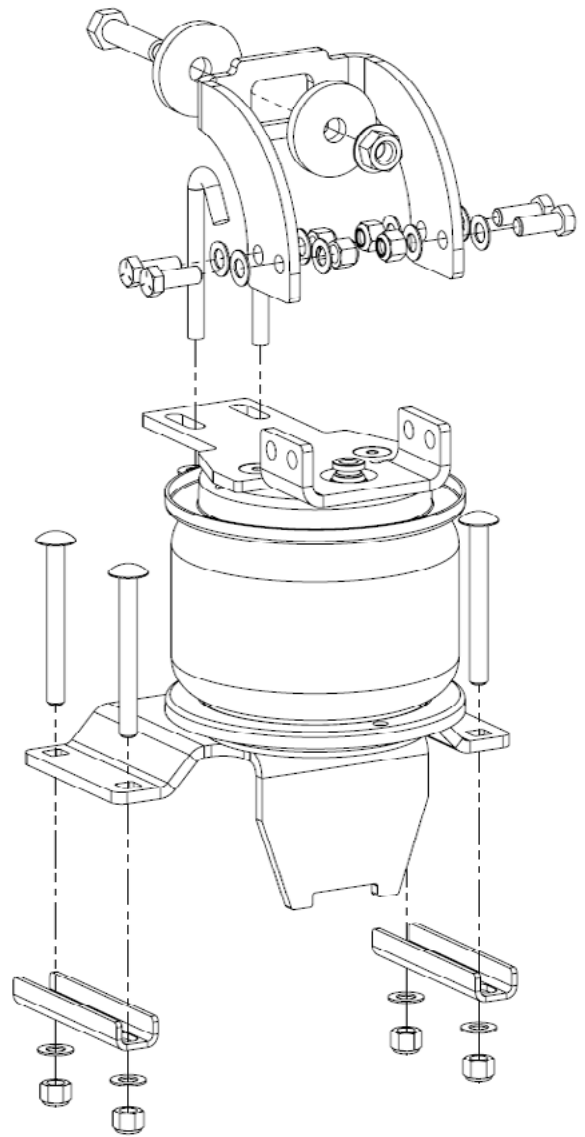
3A

## 4 INSTALLING THE AIR SPRING ASSEMBLIES:

- With the vehicle being supported by jack stands, drop the axle or raise the body so that the Air Spring Assemblies can be put into position in between the axle and the frame.
- Set both left and right side Air Spring Assemblies into position centered over the axle.
- Position the Frame Bracket so the large hole is aligned with the large hole in the frame. Install the ½"-13x2.0" Hex Head Screws (M), ½" Washers (O), and ½"-13 Flanged Nut (N) into the large hole. Torque to 80 ft-lbs (108 N•m).
- Fasten the Frame Bracket to the Upper Bracket using the ⅜"-16x1.5" Hex Head Screws (H), ⅜" Washers (L), and ⅜"-16 Nyloc Nuts (K). Torque to 30 ft-lbs (40 N•m).
- Next insert the ⅜"-16x3.75" J-Bolts (J) so that they hook over the jounce bumper brace (FIGURE 4 B) and insert into the Upper Bracket slots. Install the ⅜" Washers and ⅜"-16 Nyloc Nuts. Torque to 20 ft-lbs (27 N•m).
- Once the Upper Bracket is fixed in position, insert the ⅜"-16x3.5" Carriage Bolts (I) through the square holes in the Lower Bracket. Place the Leaf Spring Clamp Bars (E) over the Carriage Bolts under the leaf springs, secure using the ⅜" Washers and ⅜"-16 Nyloc Nuts. Torque to 12 ft-lbs (16 N•m).



4B



4A

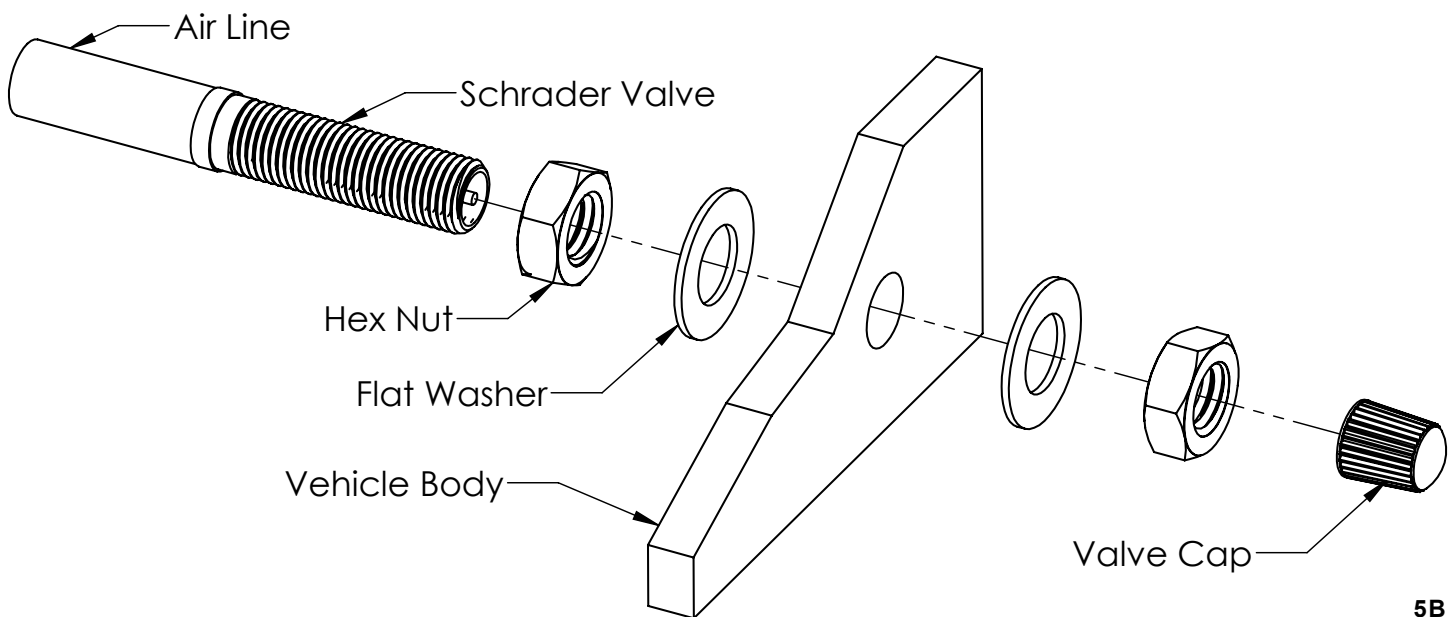
## 5 INSTALLING THE AIRLINE:

- Provided in the basic air spring kit are two fill valves. The most common place to install them is to replace the license plate fasteners with the fill valves (FIGURE 5 A). Alternatively, two 5/16" holes can be drilled in a convenient location.
- Install one airline according to FIGURE 5 B. Route the nylon hose to an air spring fitting, cut the hose and connect to the air spring fitting. Repeat with the other fill valve.
- Secure the airlines away from moving items and heat sources with the tie straps provided in the kit.
- If an in-cab inflation kit is being installed, follow the instructions provided with it.



5A

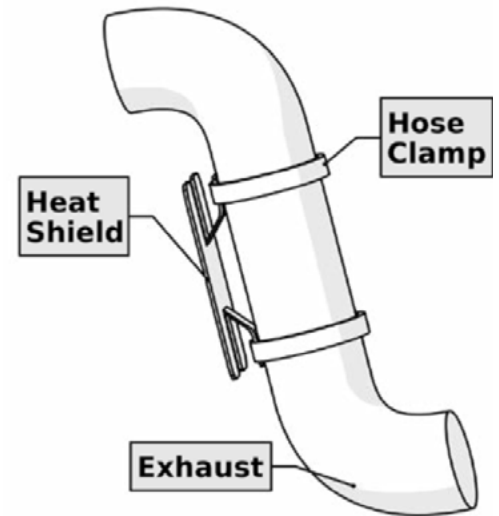
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5B

## 6 INSTALL THE HEAT SHIELD:

- Bend the tabs on the Heat Shield (S) so there will be the necessary ½" dead space between the Heat Shield and the exhaust pipe when attached.
- Attach the Heat Shield to the exhaust pipe using two Hose Clamps (P). Each Hose Clamp holds a tab against the exhaust pipe. Make sure the Heat Shield is facing toward the Air Spring.



6A

## 7 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. Repair as necessary and re-test.
- Inflate the air springs to a predetermined value, and on the following day re-check the pressure. If one or both the air springs have lost pressure, an air leak is present. The leak must be repaired, and then retested until no leaks exist.

## 8 AFTER THE INSTALLATION IS COMPLETED, PLEASE REMEMBER:

- Install the wheels, and torque the fasteners to the manufacturer's specifications.
- Re-torque all the fasteners after the first 500 miles of driving.
- For safe and proper operation, never operate the vehicle under the minimum of 10 PSI or over the maximum of 100 PSI. Staying within the pressure limit will ensure maximum air spring life. Failure in doing so may result in a void warranty (Refer to the warranty section on the following page).



7A

***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**

To be eligible for warranty, the owner must submit their warranty card or register online within 30 days of the purchase date.

***NOTE: The owner's warranty will be void if air springs are run with less than the minimum of 10 psi.***

