



## INSTALLATION INSTRUCTIONS

**Read installation instructions in its entirety before installing your Coil-Rite Kit**

### STEP 1 - VEHICLE PREPARATION

Remove the negative battery cable. With the vehicle on a solid level surface chock the front wheels. Raise the rear wheels of the vehicle using a lift or platform jack. Lower the vehicle's frame on to jack stands rated for your vehicle's weight, making sure the suspension is fully extended. **DO NOT use wood or concrete blocks to support the weight of the vehicle.** Remove the rear wheels from the vehicle.

On 1999 to current Honda Odysseys and Hyundai Entourage, a 1/2" hole will have to be drilled in the lower control arm to where the coil spring is centered to allow the air line to pass through. Make sure that the hole is aligned with the location of the push-to-connect air fitting on the installed air spring *see Figure "A"*. Remove any burrs from the hole to prevent damage to the air spring. *Make sure that the air spring is not installed when the hole in the lower spring seat is drilled.*

### STEP 2 - COIL SPRINGS

It will be necessary to remove the coil springs from the vehicle in order to install the Coil-Rite kit. Remove the wheel sensor wire from the lower control arm by unbolting it *see Figure "B"*. *Do not disconnect the wheel sensor connector.* Position a floor jack underneath the point where the lower control arm connects with the knuckle. Raise the jack until it makes contact with the lower arm. Remove the flanged hex bolt and lock nut securing the lower control arm to the knuckle *see Figure "B"*. Carefully lower the floor jack, allowing the lower control arm to fall away from the knuckle. Remove the coil spring and upper and lower spring seats. Hint: Using a crayon or grease pencil, put a mark across the coil spring, lower spring seat, and lower control arm as a means to align the spring seat and coil spring with the lower control arm when reinstalled.

### PARTS LIST

| DESCRIPTION                        | QTY. |
|------------------------------------|------|
| AIR SPRING                         | 2    |
| 18' AIR LINE                       | 1    |
| NYLON TIE                          | 6    |
| PUSH-TO-CONNECT<br>INFLATION VALVE | 2    |
| 5/16" FLAT WASHER                  | 4    |
| SUPPORT                            | 2    |
| PLUG                               | 2    |

#### WARNING:

Do not inflate this assembly when it is unrestricted. The assembly must be restricted by a coil spring. Do not inflate beyond recommended operating pressures for your specific vehicle. Improper use or over inflation may cause property damage or severe personal injury.

**FOR BEST RIDE** use only enough air pressure in the air helper springs to level the vehicle when viewed from the side (front to rear). This amount will vary depending on the load, location of load, condition of existing suspension and personal preference.

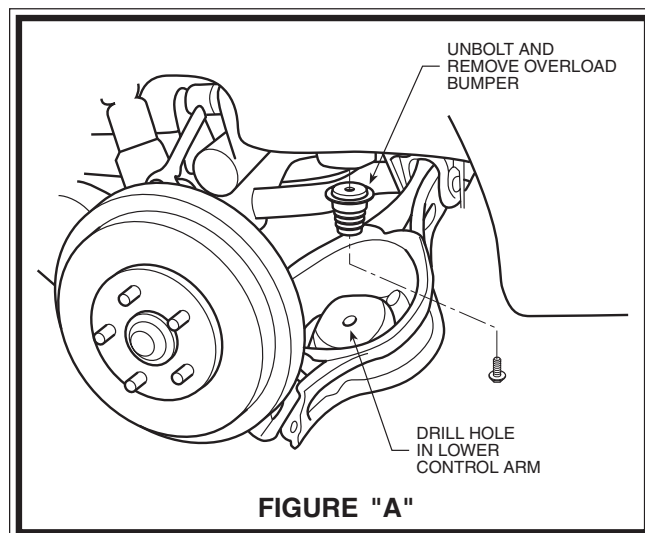


FIGURE "A"

#### RECOMMENDED OPERATING PRESSURES

|     |               |
|-----|---------------|
| Van | 5 - 35 p.s.i. |
|-----|---------------|

# COIL-RITE INSTALLATION PROCEDURE

## STEP 3 - OVERLOAD BUMPERS

The factory overload bumpers inside the coil springs must be removed to provide clearance for the installed air spring. Remove the overload bumper by removing the flanged hex bolt securing it to the vehicle's body *see Figure "A"*. Do not discard the overload bumper hex bolt. It will be used to install the support in *Step 4*.

## STEP 4 - INSTALL THE SUPPORTS

Install the provided support in place of the factory overload bumper. This will prevent the metal bumper mount from damaging the air spring. Install the support using the original overload bumper bolt so that the bolt head is recessed into the support *see Figure "C"*.

## STEP 5 - PREPARE THE AIR SPRINGS

Cut a section of air line tubing 3 inches in length and insert into the push-to-connect air inlet on the air spring (a "saw" cut with a sharp knife is preferred). Exhaust the air from the air spring by rolling it up toward the air inlet. After the air is exhausted, install the plug into the tubing in the air spring *see Figure "D"*.

## STEP 6 - INSTALL THE AIR SPRINGS

With the push-to-connect air fitting towards the bottom, slide the air spring into the coil spring and center it vertically in the coil spring. Remove the plug and tubing installed in the push-to-connect air fitting. Push the collar on the fitting towards the air spring and pull out the tube. Allow the air spring to return to its normal shape.

Cut the remaining air line tubing into two equal lengths (a "saw" cut with a sharp knife is preferred). Insert the tubing into the push-to-connect fitting on the air spring as far as possible. Install the lower spring seat on the coil spring so that the air line runs through the center of the spring seat *see Figure "E"*. Place the coil spring and lower spring seat on the lower control arm. Carefully pull the air line through the hole drilled in the lower control arm, being careful not to kink the tubing. Next, install the upper spring seat on top of the coil spring. Ensure that the upper and lower spring seats are seated properly on the coil spring.

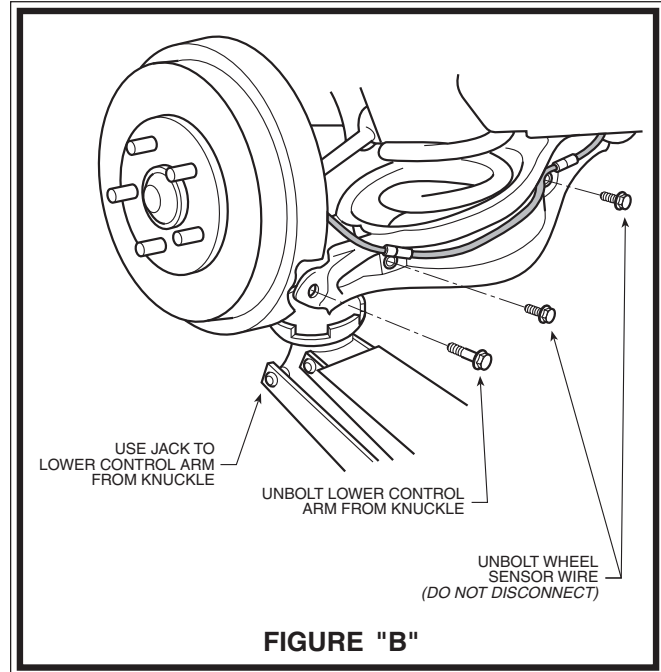


FIGURE "B"

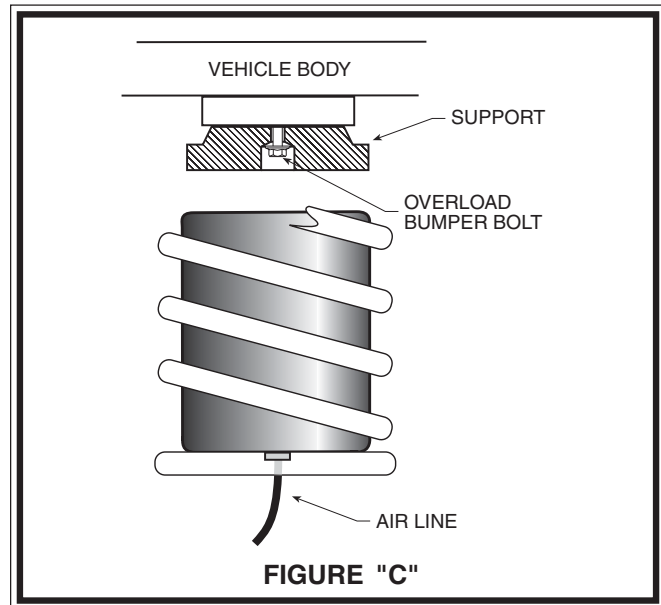


FIGURE "C"

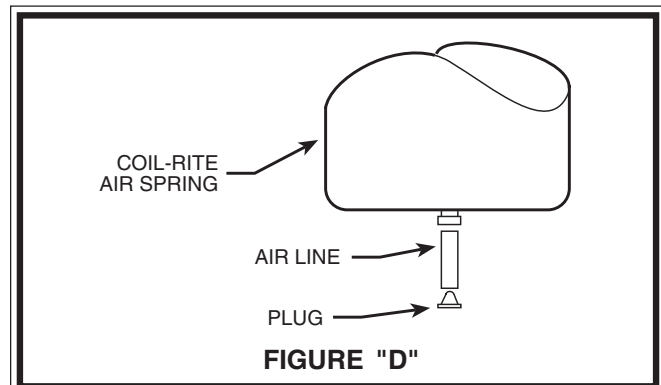
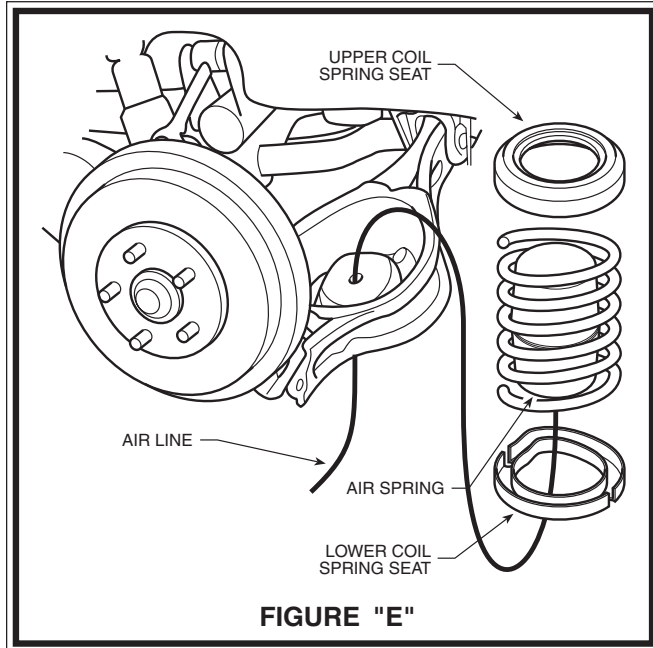


FIGURE "D"

**PLEASE TAKE ALL NECESSARY SAFETY PRECAUTIONS WHEN INSTALLING YOUR COIL-RITE KIT.**

# COIL-RITE INSTALLATION PROCEDURE



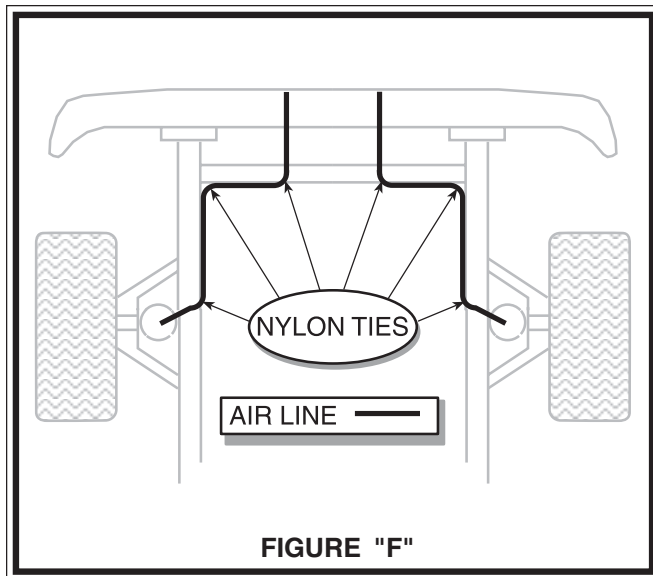
## STEP 7 - REATTACHMENT

Swing the lower control arm upward to force the upper spring seat to contact the vehicle's body. Ensure that the spring seats are nested properly against the vehicle's body and lower control arm. Align the pencil marks on the coil spring and lower spring seat with the marks on the control arm to assure that the spring seats are seated properly on the coil spring. Position a floor jack under the lower control arm where it connects to the knuckle. Raise the lower control arm until the bolt holes in the arm are aligned with the bolt holes in the knuckle. Install the flanged bolt and lock nut to attach the lower control arm to the knuckle and torque to manufacturer's specifications. Reinstall the wheel sensor wire *see Figure "B"*.

## STEP 8 - INSTALL THE AIR LINE AND INFLATION VALVES

Select a location on the vehicle for the air inflation valves. The location can be on the bumper or the body of the vehicle, as long as it is in a protected location so the valve will not be damaged, but maintain accessibility for the air chuck. Drill a 5/16" hole and install the air inflation valve using two 5/16" flat washers as supports *see Figure "G"*. Run the tubing from the air helper spring to the inflation valve, routing it to avoid direct heat from the engine, exhaust pipe, and away from sharp edges *see Figure "F"*. Use the supplied nylon ties to secure the tubing to the vehicle.

Cut the excess air line tubing so that it will fit easily into the inflation valve, making sure the end is cut squarely (a "saw" cut with a sharp knife is preferred). Push the end of the tubing into the inflation valve as far as possible *see Figure "G"*.

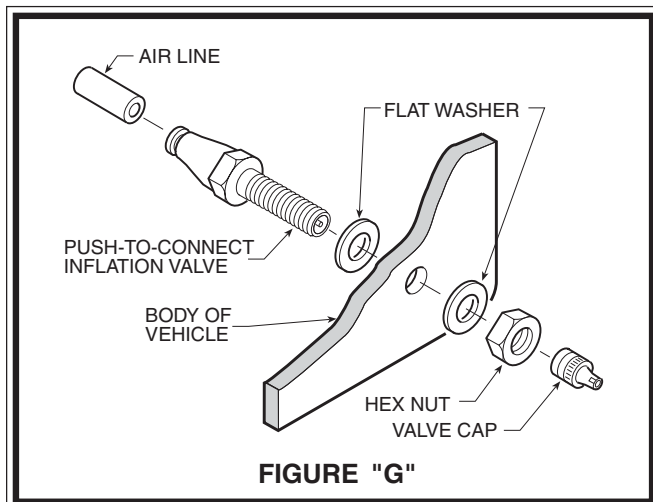


## STEP 9 - INFLATE AND TEST

Inflate the air springs to the maximum recommended operating pressure (see page 1 for operating pressures). Upon initial inflation, ensure that the air line tubing is not pinched or kinked. With an applied solution of soap and water, check for air leaks around the fittings and valve core. We recommend inflating and deflating in 5 p.s.i. increments to find the ideal riding condition for your vehicle.

## COMPLETION

This now completes the installation. Reinstall the wheels and torque the lugnuts to the manufacturer's specifications. Raise the vehicle and remove the jack stands and lower the vehicle to the ground. Reattach the negative battery cable. *It may be necessary to realign the rear suspension after installation.*



**NOTE: CHECK AIR PRESSURE ON A MONTHLY BASIS.**

*For your convenience, Firestone offers a complete line of air accessories. Shown below are some of the more popular kits. Contact your Ride-Rite dealer or visit [www.riderite.com](http://www.riderite.com) for more information.*



#### **STANDARD DUTY**

**2158 (shown)** - A single control panel will provide equal inflation and deflation of two air springs at the push of a button.

**2178** - The dual control panel consisting of two paddle switches and a single, dual-needle gauge, will inflate and deflate two individual air springs or two pairs of air springs.

#### **HEAVY DUTY**

**2097** - A single control panel and a heavy duty compressor will provide instant control of a pair of air springs from within the cab.

**2219 (shown)** - The dual control panel and heavy duty compressor will provide side-to-side leveling (two individual air springs) or front-to-rear leveling (two pairs of air springs).



#### **HEAVY DUTY WITH ON-BOARD AIR**

**2168** - Provides front-to-rear or side-to-side leveling through a dual control panel, heavy duty compressor, and 1/2 gallon tank. The included 25' extension hose provides a source of air for inflating tires. Controls two individual air springs or two pairs of air springs.

#### **REMOTE AIR COMMAND**

**2334** - The Remote Air Command provides instant control over a pair of air springs through the use of a standard duty compressor and a wireless key fob. There is no air line to route through the firewall and no gauges or switches to mount on the dash.





# Do Not Return This Product to the Dealer or Distributor

## If you are

- missing parts,
- experiencing installation problems, or
- have technical concerns regarding this product,

you may contact a Firestone Technical Service Representative at [rrtech@fsip.com](mailto:rrtech@fsip.com) or at 800-888-0650 (option 1, and then option 2). Representatives are available from 7:30 a.m. – 4:30 p.m. Eastern on Monday – Friday, excluding holidays. If you are located outside of the United States, you should first contact your distributor or dealer directly with any issues.

When contacting Technical Service, please have the kit or part # ready, along with the make, model, and year of the vehicle. You may also need to provide details, such as 2WD/4WD or if the vehicle has been lifted or lowered from stock height.

If you have a warranty concern, please include in your email a detailed description of the situation, a photo(s) of the issue, and your contact information, including ship-to address.

**WARRANTY COVERAGE\***— The Ride-Rite™ kits, components, and accessories are warranted against defects in workmanship and materials. This warranty does not cover service or labor charges, neglect...to the product.

### **PERIOD OF COVERAGE:**

- |   |  |
|---|--|
| • Ride-Rite air springs – Lifetime Limited  | • Work-Rite load assists – 2 Years Limited                                       |
| • Sport-Rite air springs – Lifetime Limited | • Air-Rite accessories – 2 Years Limited   |
| • Coil-Rite air springs – Lifetime Limited  | • Brackets, hardware, fittings, air line, and other components – 2 Years Limited |
| • Level-Rite air springs – Lifetime Limited |  |

**HOW TO MAKE A WARRANTY CLAIM** — If you purchased your air springs in the U.S. or Canada and believe you have a part with a warrantable defect, call Firestone directly at 1-800-888-0650.

International customers should contact their distributors or dealers directly with any problems.

(\*) Please refer to the “Firestone Limited Lifetime Air Spring Warranty” for details, terms, and conditions.

## **WARRANTY QUESTIONS**

Go to [www.riderite.com/installation-support](http://www.riderite.com/installation-support)  
Select “Warranty Info” tab