



# 2005-2016 Toyota Tacoma Bilstein Stage 1 5100 Series Rear Kit | 1.0"-2.5" Lift by Low Range Off-Road (SKU# TAC-SK-BIL1-2G-R)

Revised 2-04-16

## Installation Instructions



**CAUTION:** Safety glasses should be worn at all times when working with vehicles and related tools and equipment.



**FOR ADDITIONAL COPIES OF THESE AND OTHER INSTRUCTIONS GO TO:**  
[www.lowrangeoffroad.com](http://www.lowrangeoffroad.com) and click on the "INSTRUCTIONS" tab.

### Suggested Tools:

- Twin Post Lift (or Floor Jack)
- Transmission Jack (or 2 Jack Stands)
- Large Standard Screwdriver
- Vice Grip Pliers
- Slip-Joint Pliers
- Allen Wrench: 5 mm
- Sockets: 10,14,17,19 & 21 mm
- Ratchet
- Combination Wrenches: 10,14,17,19 & 21 mm
- 2 - 4" C-Clamps
- 10 mm Tubing Wrench
- 1/2" Dr. Torque Wrench: up to 150 ft. lbs.

### Optional Tools

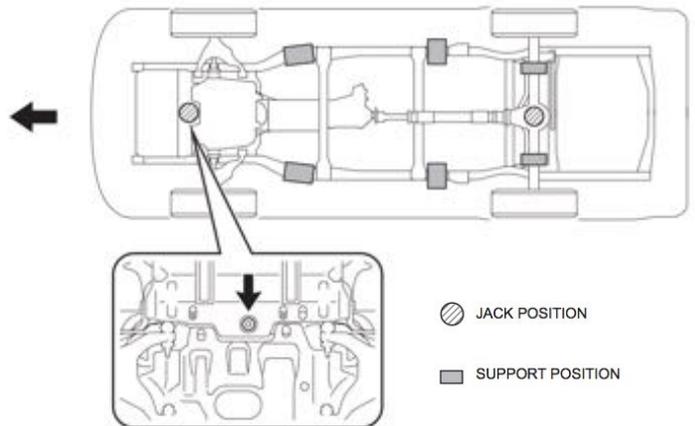
- Impact Wrench: 1/2" Drive
- Impact Sockets: 10,14,17,19 & 21 mm

## Caution:

This vehicle will require a professional wheel alignment after this lift kit has been installed. Failure to have this vehicle professionally aligned could result in poor vehicle stability, handling, and braking; as well as excessive tread wear. Further, certain aspects of this installation can be dangerous. Therefore, we recommend that this kit be installed by a trained professional technician.

## General Note

The photographs for these instructions were taken with the vehicle placed on a twin post lift. However, this job could be done with a floor jack and jack stands. We also used power tools but, manual tools could be substituted and work reasonably well.



## Step 1

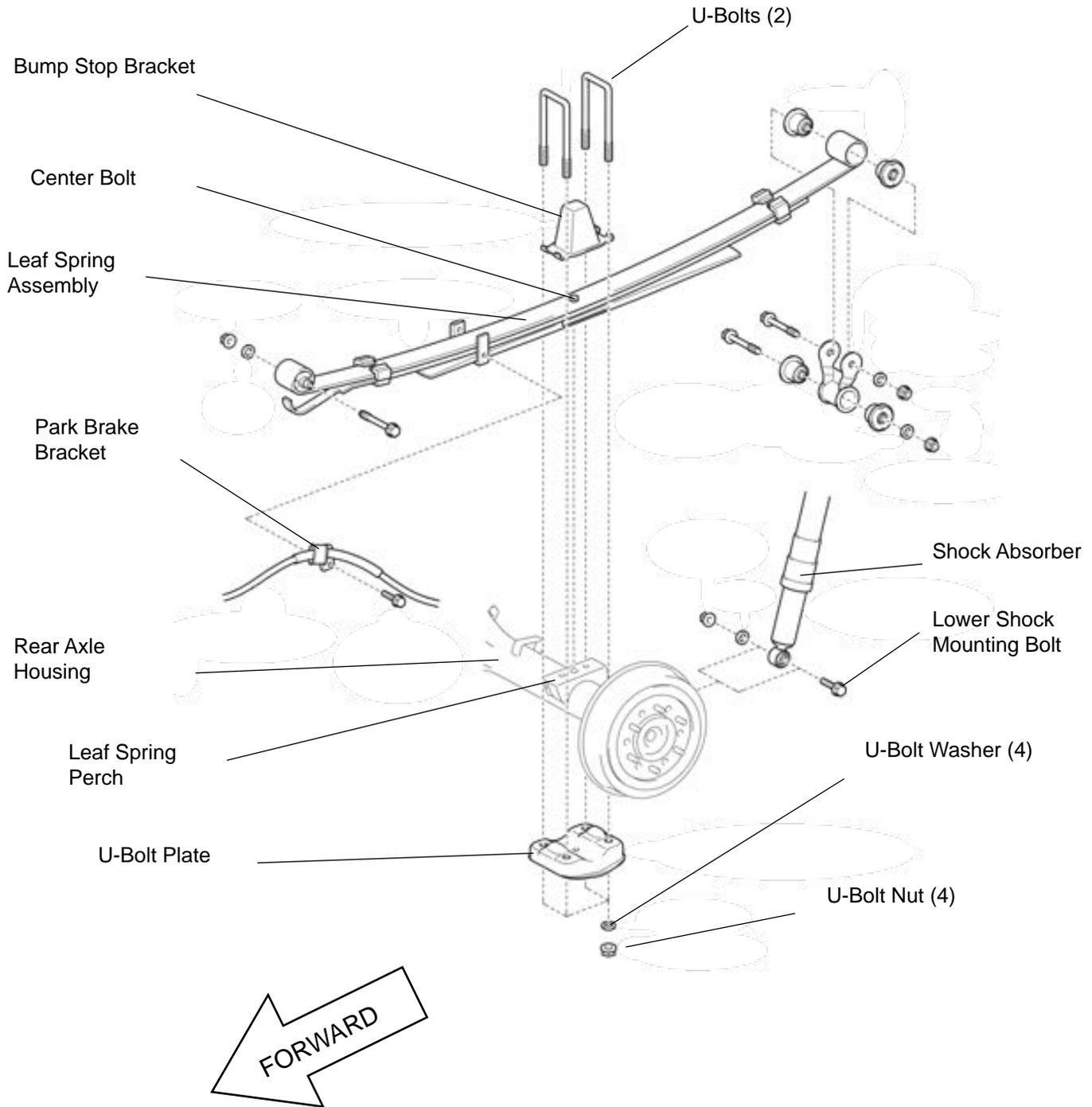
Lift the vehicle on a twin post lift.

or

Lift the rear of the vehicle with a floor jack and support it with (2) jack stands. Refer to **Figure A** for proper floor jack and jack stand positioning.

**Figure A**

## Rear Suspension System Components



## Beginning with the Driver Side



### Step 2

Remove the wheel assembly by removing the (6) lug nuts using a 21 mm socket.



### Step 3

Disconnect the ABS wiring harness bracket using a 12 mm box end wrench.

Note: It is not necessary to unplug the wires.



### Step 4

Disconnect the brake line bracket using a 12 mm box end wrench.

Note: This is done so the brake lines will not hinder the lowering of the rear axle assembly.



### Step 5

Disconnect the forward park brake cable bracket from the frame using a 12 mm box end wrench.



### Step 6

Disconnect the rear park brake cable bracket from the leaf spring using a 12 mm box end wrench.



### Step 7

Place a transmission jack (or under hoist jack stand) under the axle housing between the leaf spring and the differential. If you are working on jack stands you could use the floor jack for this purpose.



### Step 8

Disconnect and remove the lower shock mount bolt using 17 mm socket and 17 mm box end wrench.



### Step 9

Disconnect the top of the shock absorber by holding the top of the shock rod with vice grip pliers and loosen the nut using a 14 mm open end wrench.



## Step 10

Remove the shock absorber and set it aside.

Note: This shock absorber will NOT be reused in this install. It is too short.



## Step 11

Clamp the leaf springs together using a 4" C-Clamp about 2 inches behind the rear U-Bolt.

Note: It is very important to clamp the springs tight. They must be kept tightly together.



## Step 12

Using a 2nd C-clamp, clamp the leaf springs together about 2 inches ahead of the front U-Bolt.



## Step 13

Remove the (4) U-bolt nuts and washers using a 19 mm socket.



### Step 14

Remove the U-Bolt Plate and set it aside.

Note: This U-Bolt Plate **WILL** be used later on.



### Step 15

Remove both U-Bolts and set them aside. They will **NOT** be reused in this install.

Note: It is not recommended that U-Bolts be reused. They can become stretched and weak if installed again.



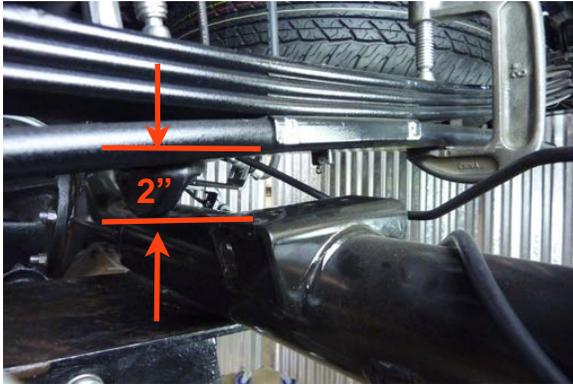
### Step 16

Remove the bump stop bracket.



### Step 17

Carefully lower the transmission jack (or floor jack) until . . . .



## Step 18

. . . . you have about a two inch gap between the bottom leaf and the rear axle perch as shown here.



## Step 19

Hold the spring center bolt with vice grip pliers on the bottom and remove the nut using a 14 mm socket.

**Caution:** Be sure the C-Clamps remain secure and in place as this is being done.



## Step 20

Remove the center bolt.

Note: The rear axle assembly may need to be lowered a little more to get the bolt out.



## Step 21

Carefully remove the rear C-Clamp.



## Step 22

Remove the front C-Clamp.



## Step 23

Remove the bottom leaf.



## Step 24

Ready the supplied leaf spring by applying some silicone suspension lube to the rubbing pads.



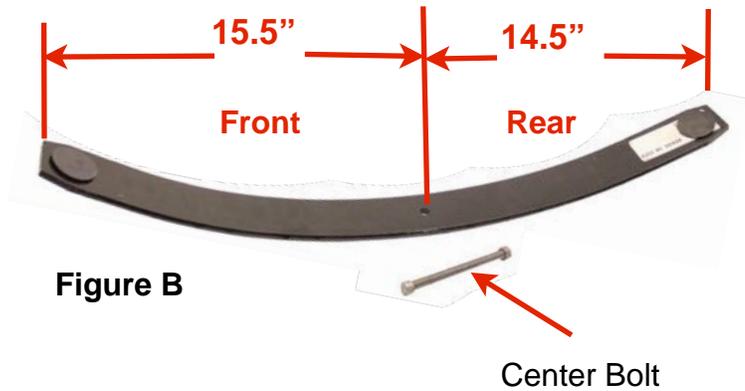
We recommend using Energy Suspension Formula 5 Pre-lube.



## Tech Tip

The supplied leaf spring is to be installed with the long end forward (See Figure B). To determine the long end, measure from the center pin to the end of the spring in both directions. The end that should be oriented to the front is 15.5" and the end that goes to the rear is 14.5".





### Step 25

Install the supplied leaf on top of the bottom leaf, (the leaf you just removed) and insert the supplied center bolt.



### Step 26

Position the two leaf springs a little out of alignment with the OEM (Original Equipment Manufacturer) leaf springs as shown. Slide the center bolt through the holes and install the supplied nut just 2 or 3 turns.

Note: It may be necessary to lower the transmission jack (or floor jack) to allow room for the longer center bolt.



### Step 27

Twist the two bottom springs into alignment with the top spring.

Note: This may require a little force.



## Step 28

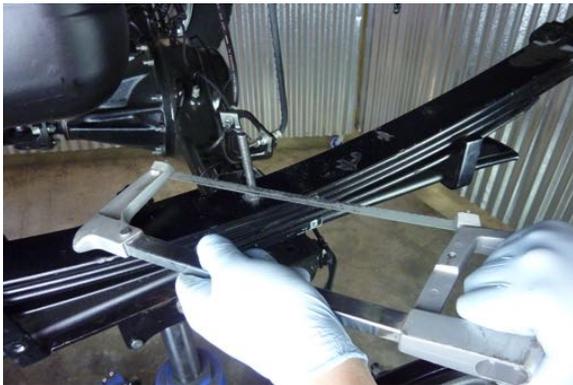
While holding the bottom of the center bolt with vice grip pliers, tighten the nut using a 14 mm box end wrench.

Note: This step will go easier if you apply some lubricating oil to threads of the center bolt.



## Step 28 Continued

Continue tightening the center bolt until all of the leafs are compressed together.



## Step 29

Using a hack saw, cut the bolt off 2 or 3 threads above the nut.



## Tech Tip

If you have an angle grinder with a cut-off wheel, it will go much faster.



### Step 30

Raise the rear axle assembly . . . . .



### Step 31

. . . . and guide the bottom of the center bolt into the hole in the leaf spring perch.



### Step 32

Install the bump stop bracket.



### Step 33

Install the supplied U-bolts.





### Step 34

Install the U-bolt plate, washers and nuts.



### Step 35

Snug the nuts using a 19 mm socket. Then progressively tighten the nuts using a criss-cross pattern until 37 ft. lbs. is reached.

Note: Toyota spec is 37 ft. lbs. We recommend going to at least 50 ft. lbs.



### Step 36

Install the bottom of the supplied shock in the shock mount bracket.



### Step 37

Install the OEM bolt, washer and nut. Torque the nut to 43 ft. lbs.

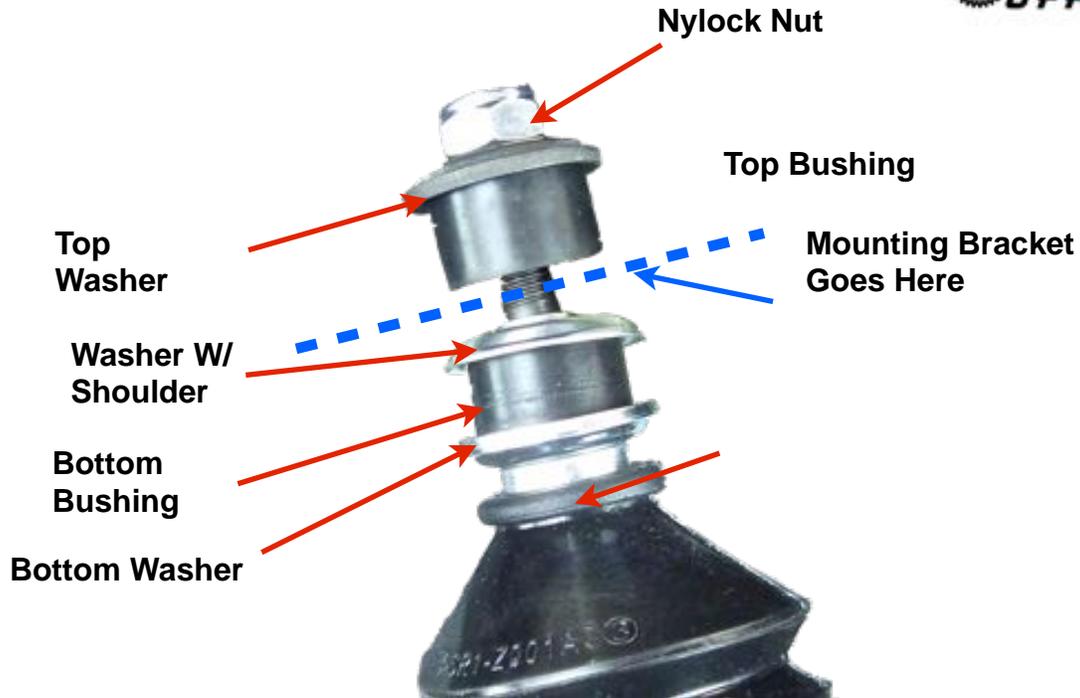


Figure C



### Step 38

Install the bottom washer, bushing and washer with a shoulder on the top of the shock and insert it in the shock mount bracket (See **Figure C**).



### Step 39

Install the top bushing, washer and nylock nut.

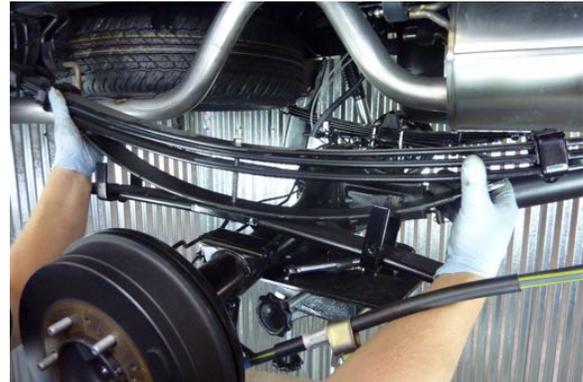




### Step 40

Hold the shock absorber shaft with a 5 mm allen wrench and tighten the nylock nut until the bushings bulge and the nut is tight.

Note: Be sure the shock is NOT fully extended when tightening the nut.



### Step 41

Repeat **Steps 2 through 40** on the passenger side of the vehicle.



## Installing the Flexible Brake Lines



### Step 42

If needed for the next step, raise the rear axle assembly using the transmission jack (or floor jack).



### Step 43

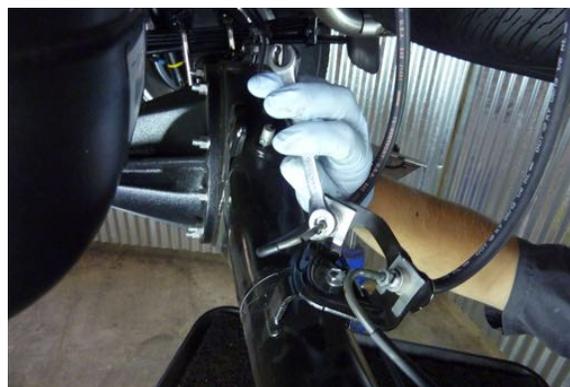
Reattach the brake line bracket on the rear axle housing.

Note: This will make loosening and tightening the brake lines easier.



### Step 44

Place a drain pan under the brake lines to catch any brake fluid that escapes.



### Step 45

Disconnect the passenger side brake line using a 10 mm tubing wrench.





### Step 46

Disconnect the driver side brake line in the same way.



### Step 47

Remove the passenger side brake line clip using slip-joint pliers.



### Step 48

Remove the driver side clip the same way.



### Step 49

Disconnect the passenger side brake line using a 10 mm tubing wrench.



### Step 50

Disconnect the clip using a large standard screwdriver.



### Step 51

Remove the passenger side brake hose.



### Step 52

Disconnect the driver side brake line using a 10 mm tubing wrench.



### Step 53

Remove the driver side clip.



### Step 54

Remove the driver side brake hose.



### Step 55

Install the supplied brake hoses in reverse order of removal. Be sure to install the new retainer clips.



### Step 56

Double check to see that all (4) brake hose connections are tight and secure.



### Step 57

Reconnect the four (2 driver side and 2 passenger side) parking brake cable brackets.

Note: These brackets may need to be bent slightly to avoid kinking the park brake cables.





## Step 58

Reconnect the ABS wire bracket.



## Step 59

Check to see that all the Park Brake Cables, ABS Wires, and Flexible Brake lines are routed properly and are secure. Also, check to see that there is enough slack in these hoses, wires and cables to allow for a full range of suspension movement.



## Bleeding the Rear Brakes



### Caution:

Brake fluid is extremely damaging to paint. If fluid should accidentally touch painted surfaces, immediately wipe fluid from the paint and clean the painted surface with clean water.

### Tech Tip:

Brake bleeding typically requires 2 people. However, with “Speed Bleeders” installed, it can be done much faster and with only 1 person. Click [HERE](#) for more information about our “Speed Bleeders”.

## Basic Theory and General Overview of Brake System Bleeding.

**Caution:** Before proceeding with the brake bleeding process, we strongly recommend inspecting all flexible brake hoses for road hazard damage, for cracks and chafing of outer cover, and for leaks and blisters. If any of these conditions exist replace the hose. Also, check all solid brake lines for damage, cracks, dents and corrosion. If any defect is found, replace the brake line.

**Bleeding:** If there is the smallest bubble of air in the hydraulic brake system, you will experience excessive pedal free-play or what is sometimes called a “spongy brake pedal”. Therefore, any air in the hydraulic brake system must be removed. To completely remove air from the brake system you will need to bleed (or flush-out) the air from the system.



## Step 60

Fill the master cylinder reservoir with DOT 3 brake fluid to the “MAX” line.



Low Range Off-Road  
Bleeder Bottle



## Tech Tip

The bleeding procedure can be done without a vinyl tube and container. It is just a little harder to see the air bubbles. A clear stream indicates no air in the fluid and a intermittent or “spitting” of the stream usually indicates air.



## Step 61

Beginning with the passenger side rear, connect a vinyl tube to the bleeder plug. Submerge the other end of the vinyl tube into a clear container, half full of brake fluid.

Note 1: Click [HERE](#) to see a Bleeder Bottle offered by Low Range Off-Road.

Note: This procedure can be done without a tube and clear container. See the next **Tech Tip**.



## Step 62

Have an assistant depress the brake pedal several times and hold moderate pressure.

Note: The pedal will gradually sink to the floor when the next step is performed.



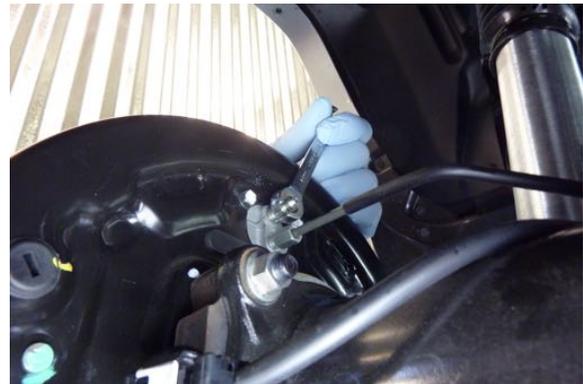
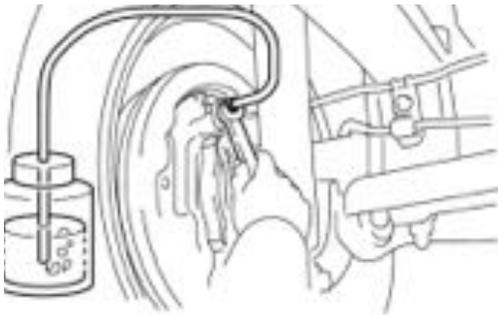
### Step 63

Open the bleeder screw using a 10 mm box end wrench. At the point where fluid stops coming out, close the bleeder plug.



### Step 64

Then let the pedal up.



### Step 65

Repeat **Steps 60 through 64** until there are no more air bubbles observed coming from bleeder plug.

**Caution:** Check the master cylinder reservoir frequently during the bleeding process. Keep fluid level at the "MAX" Line. Letting the master cylinder go dry will introduce air into the system at the master cylinder. Removing this air from the master cylinder will require a more involved and time consuming procedure. **DO NOT LET THE MASTER CYLINDER RUN OUT OF FLUID.**

### Step 66

Repeat **Steps 60 through 65** on the passenger side.





### Step 67

Check the brake pedal for proper feel. If the brakes feel spongy. Repeat the bleeding process until correct pedal feel is obtained. **DO NOT DRIVE THIS VEHICLE UNLESS YOU ARE SURE THE BRAKES ARE WORKING PROPERLY.**



### Step 68

Install both rear wheel assemblies and torque the lug nuts to 83 ft. lbs.



### Step 69

Lower the vehicle to the floor.



### Congratulation!!!

You have finished the Add-A-Leaf lift Kit. It is wise to double check all the fasteners associated with this job to insure you have not overlooked any of them. We hope these instructions have been helpful. Please feel free to contact us with any questions or concerns you may have.



As always, If you experience any difficulty during the installation of this product please contact Low Range Off-Road Technical Support at 801-805-6644 M-F 8am-5pm MST. Thank you for purchasing from Low Range Off-Road.



These instructions are designed as a general installation guide. Installation of many Low Range Off-Road products require specialized skills such as metal fabrication, welding and mechanical trouble shooting. If you have any questions or are unsure about how to proceed, please contact our shop at 801-805-6644 or seek help from a competent fabricator. Using fabrication tools such as welders, torches and grinders can cause serious bodily harm and death. Please operate equipment carefully and observe proper safety procedures.

Rock crawling and off-road driving are inherently dangerous activities. Some modifications will adversely affect the on-road handling characteristics of your vehicle. All products sold by Low Range Off-Road are sold for off road use only. Any other use or application is the responsibility of the purchaser and/or user. Some modifications and installation of certain aftermarket parts may under certain circumstances void your original dealer warranty. Modification of your vehicle may create dangerous conditions, which could cause roll-overs resulting in serious bodily injury or death. Buyers and users of these products hereby expressly assume all risks associated with any such modifications and use.

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