

# K4RT30Y

## **2018+ Subaru 1.5" Lift Kit**

KB-150-LIFT-SK/GT

### **Intallation Manual**

2018+ Subaru 1.5" Lift Kit

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**24 pages**

**Inventory List**

**Tool List**

**Instructions**

**Company Contact**

**Print Ready**

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**Creating a superior  
product that is always  
original, never a  
knockoff, and 100%  
American made.**

k4rt3b0

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**Thank you for  
purchasing  
this K4RT30Y  
product.**

**Introduce**

# Introduction

## Welcome

All Wheel Engineering, LLC was founded in 1999 to serve the U.S. market's demand for upgraded components on Subaru Impreza 2.5RS vehicles. Due to the increasing popularity of the vehicle, All Wheel Engineering developed the kartboy.com web site to promote our K4RT30Y line of products and services. With the addition of the Subaru WRX to the 2002 model line, the product offerings were expanded, and we've never slowed down.

Starting with our first shift kits, to our newest products, our dedication to quality, and American-Made Shift is unparalleled. K4RT30Y designs 100% of it's own products, manufacturing most of the parts in-house - right here in San Diego, CA - and everything is made with US sourced materials.

Thank you for your purchasing your K4RT30Y Subaru 1.5" Lift Kit. We know there are other products on the market, and we strive to always be your first choice.

Our kit is unique in that it includes full replacement rear swaybar relocation brackets, rather than simple adapters. Our brackets include double-shear mounts for added strength - whether you're crawling the trails or the malls.

The kit also features replacement steel-braided front and rear brake lines at a corrected length appropriate for the additional height. The new lines prevent kinking at full droop and binding at full compression - plus you get improved pedal feel. The 'just right' of brake lines for the all-around win.

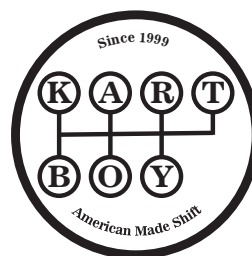
While these seem like minor details, they illustrate our commitment to making the best products for your Subaru.

Though we take all care to assure nothing is missing from your kit, we sometimes make mistakes. Please compare everything against the inventory page before you begin installation.

We hope you enjoy your lift kit for years to come. Please visit [kartboy.com](http://kartboy.com) for more great products.

Thank you!

Tom Deadrick  
Kartboy



# ction

## Parts Inventory

- 1** Front Strut Spacers - L & R
- 2** Front Sway Bar End Link Adapters x2
- 3** Rear Strut Spacers x2 - L & R are same
- 4** Rear Sway Bar Relocation Brackets - L & R
- 5** Rear Subframe Spacers x4 - DONUT EAT
- 6** Rear Subframe Reinforcement Spacers x2
- 7** Replacement Rear Subframe Bolts/Washers x4
- 8** Rear Parking Brake Adapters x2
- 9** Exhaust Hangers x3
- 10** Front & Rear Brake Line Kit
- 11** License Plate Delete
- 12** Fireball Candy (not pictured)



## Required Tools

- 1** Floor Jack & Stands - Lift Recommended
- 2** 3/8" Ratchet
- 3** 3/8" Breaker Bar
- 4** 3" Extension
- 5** Sockets - 12mm, 13mm, 14mm, 15mm, 16mm, 17mm, 18mm, 19mm, 22mm
- 6** Open-end Wrenches - 10mm, 12mm, 13mm, 14mm, 19mm
- 7** Allen Key - 5mm, 6mm, 1/8"
- 8** Flathead Screwdriver
- 9** Torque Wrench
- 10** Pry Bar
- 11** Flare Nut Wrench - 10mm

## Front Suspension Installation

### Step.1

Please thoroughly read all instructions before installing your lift kit.

**NOTE:** Always wear safety glasses when working on a vehicle. This is dangerous business, and you could be injured. Gloves are also recommended.

Place vehicle on lift.

If no lift is available you can use a floor jack and jack stands on flat, level ground. Use caution with either method to ensure vehicle is stable.

Remove wheels (19mm), using wheel lock key if needed.

Open hood.

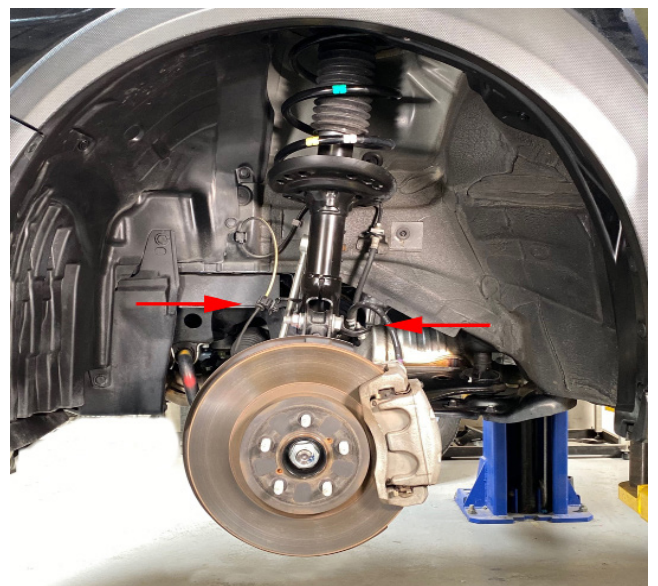


### Step.2

**NOTE:** The procedure for right and left is the same. Instructions are written using **LEFT** side of vehicle. Refer to vehicle manufacturer's service manual for correct torque settings. Be sure to check, check again, and re-re-check all bolts for correct torque.

Detach the ABS sensor mount from the strut using a flathead screwdriver.

Detach the brake line bracket from the strut with a 12mm socket. Retain bolt for re-use.





**Step.3**

Detach sway bar end link from strut using 17mm socket.

It may be necessary to use a wrench and allen key for this step.

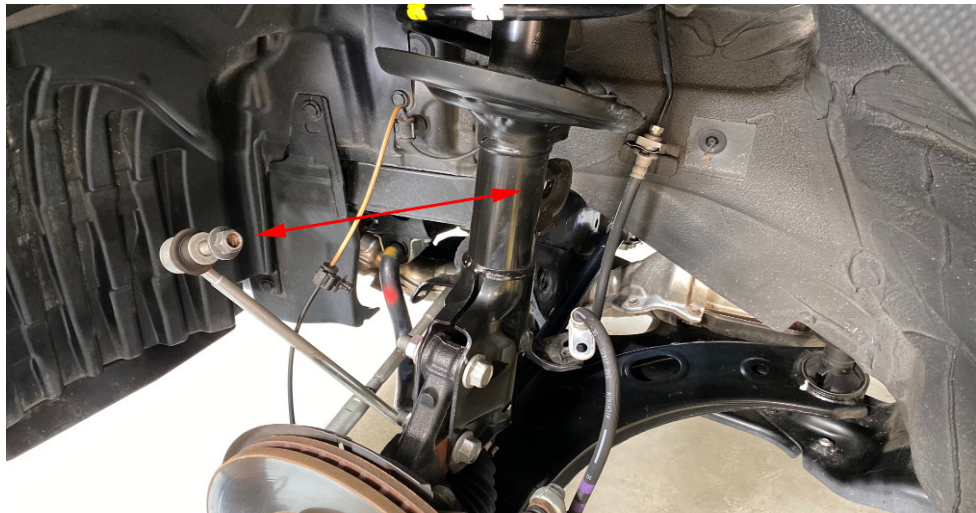
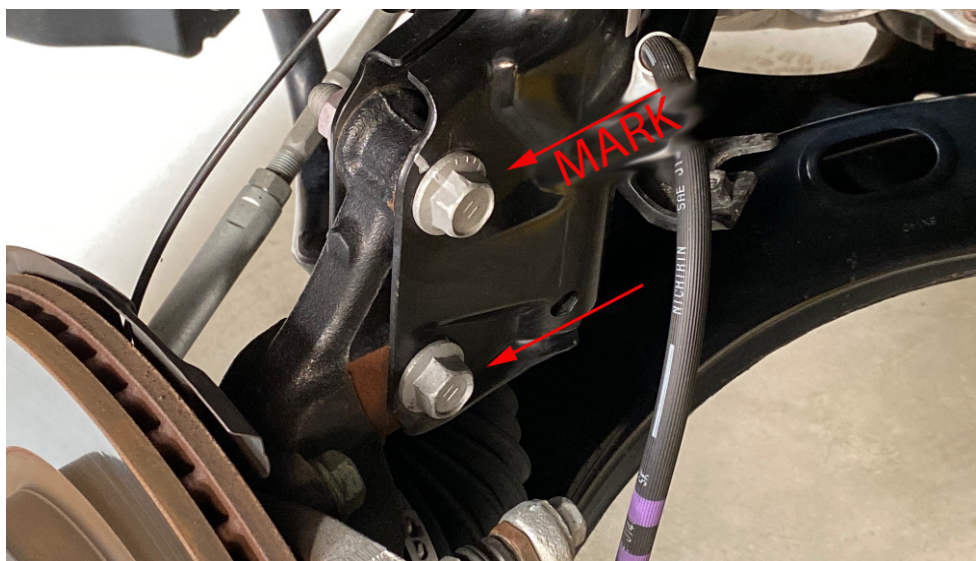
Remove the swaybar end link from the strut.

**Step.4**

Mark the position of the top bolt holding the strut to the hub with a paint pen, grease pen, or other device. This index mark will help align the eccentric bolt during re-assembly, somewhat preserving current alignment settings.

After marking, remove both bolts (19mm) holding the lower strut to the hub. Take care not to allow the hub to fall, dislocating the axle.

**NOTE:** Nut is at front of vehicle for re-installation.

**3****4**

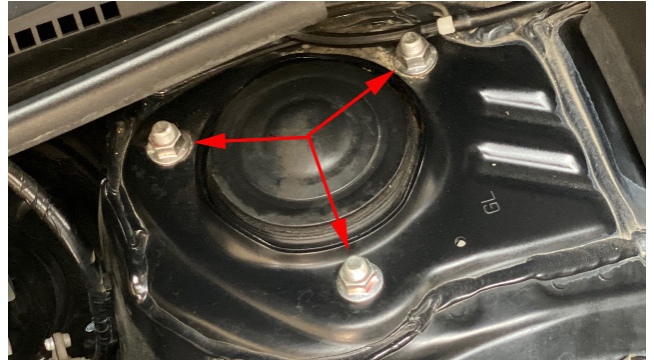
# Front Suspension Installation

## Step.5

Unbolt top of strut (14mm) at upper mounting point under hood. Take care not to allow strut to fall.

Allowing strut to fall could cause damage to the CV boots, strut, or any number of things - including you. Safety first. Get a friend if needed.

Remove strut from vehicle.



## Step.6

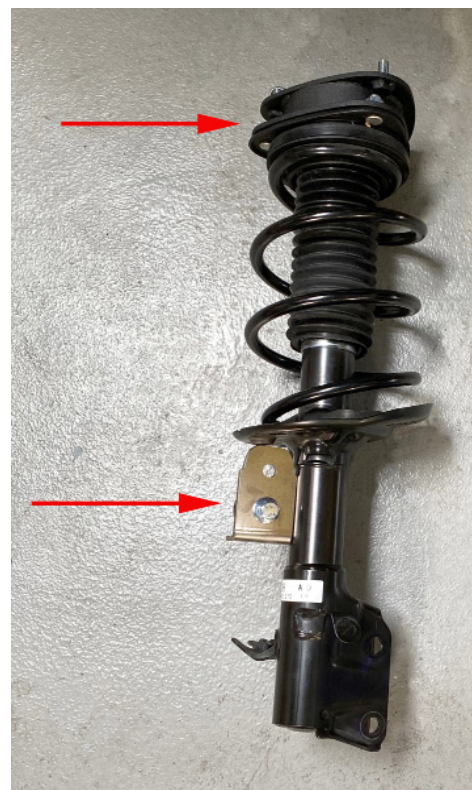
Install new sway bar end link bracket on strut as shown. Use supplied 16/18mm nut/bolt.

Install new strut spacer to top of strut as shown. Use stock top hat nuts.

**IMPORTANT:** Original top hats are symmetrical, and therefore have NO orientation. This is **NOT** true of the lift kit spacers.

Lift kit spacers are marked **LEFT** and **RIGHT**, and have a notch in the lower portion to indicate **FRONT OF VEHICLE** - see image.

**LEFT** is **DRIVER**.



**Step.7a**

Re-install front struts using supplied 15mm top nuts.

Lift kit spacers are marked **LEFT** and **RIGHT**, and have a notch in the lower portion to indicate **FRONT OF VEHICLE**.

**LEFT** is **DRIVER**.

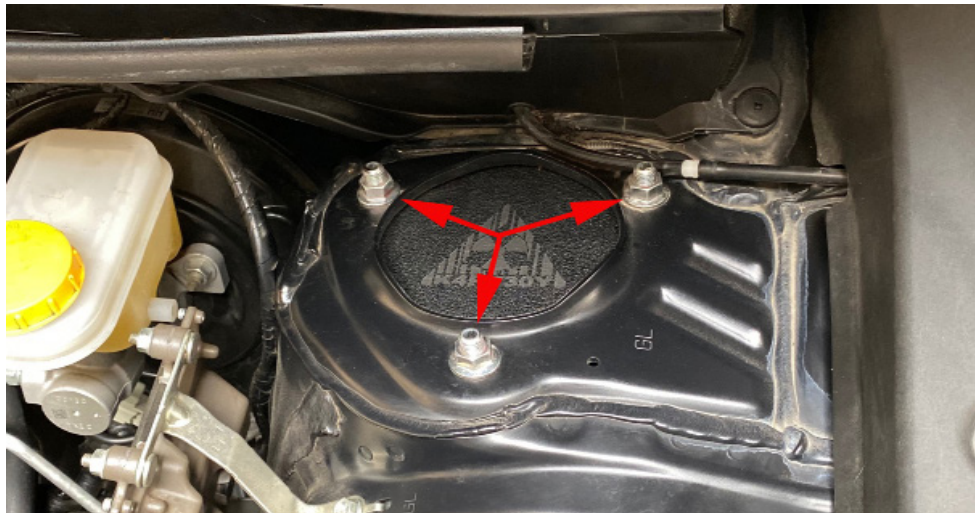
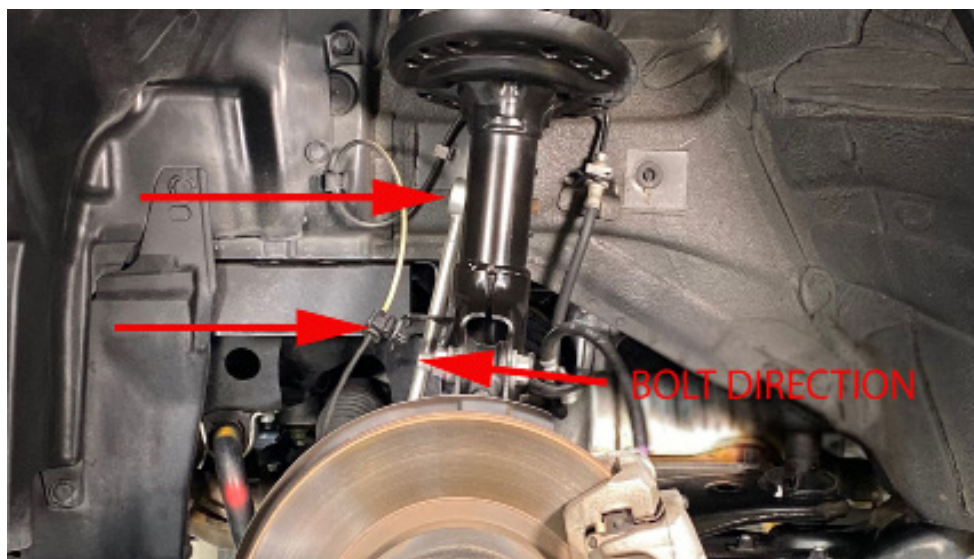
**Step.7b**

When installing the lower strut bolts, the eccentric bolt goes in the top hole, and should be installed as close as possible to the mark made in Step 4.

Bolts install from the **REAR** of the vehicle with the nuts at the front.

Re-attach sway bar end link.

Re-attach ABS sensor wire.

**7a****7b**

## Rear Suspension Installation

### Step.1

NOTE: The procedure for right and left is the same. Instructions are written using **LEFT** side of vehicle.

If your vehicle is on a lift, lower the vehicle and open the rear hatch. You will need access to the interior of the vehicle.

You will need to remove the two plastic caps that are indicated in the photo. You must first remove the carpet covering the spare tire.

Next, use care to remove the left and right foam pieces surrounding the spare tire. Each is held in with two clips. Be cautious not to break the foam pieces or clips.

Finally, remove the left and right plastic covers using a firm tug. This will allow access to the tops of the rear struts.



### Step.2

You can remove the nuts (14mm) holding the top of the strut in place as indicated by the photo at this step, or wait until after unbolting the bottom of the strut in a later step.

No matter which you choose, you must take care not to drop the strut upon removal.



**Step.3a**

Unbolt both the hub and strut (17mm) from the lower suspension lateral arm.

Note the direction bolts are installed. Also note that the longer bolt is for the strut, and the shorter bolt is for the hub.

**Step.3b**

**NOTE:** Your vehicle may be equipped with a sensor on the LEFT side of the vehicle. We recommend unbolting the sensor (10mm) from the lateral arm to provide clearance and prevent breaking the sensor arm.

**3a****3b**

## Rear Suspension Installation

### Step.4

Remove rear strut. If you did not previously undo the upper strut bolts (14mm), you will need to do so now.

Install the rear strut spacer as shown by using the supplied 15mm nuts.

You may remove the rear sway bar end link from the sway bar, if necessary, to allow removal of rear strut. You will need to do this to allow clearance when lowering the subframe later if you do not do so now.

**NOTE:** Rear spacers are same for LEFT and RIGHT. No specific orientation is required.

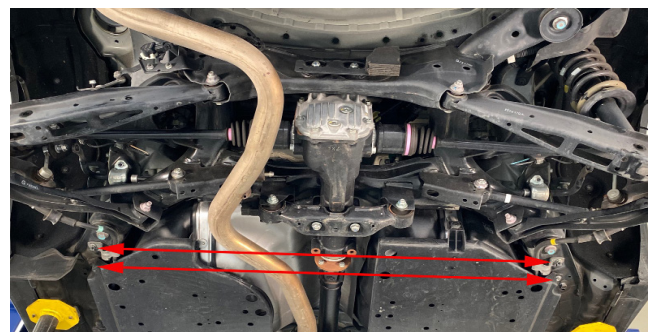


### Step.5

**CAUTION:** When working underneath your vehicle use special care to avoid getting debris in your eyes. Safety glasses should be worn at all times.

Remove the two bolts (12mm) at the rear of the plastic underbody panels as indicated in the photo - one on each side.

Unbolt the left and right parking brake brackets (12mm) as indicated in the photo.



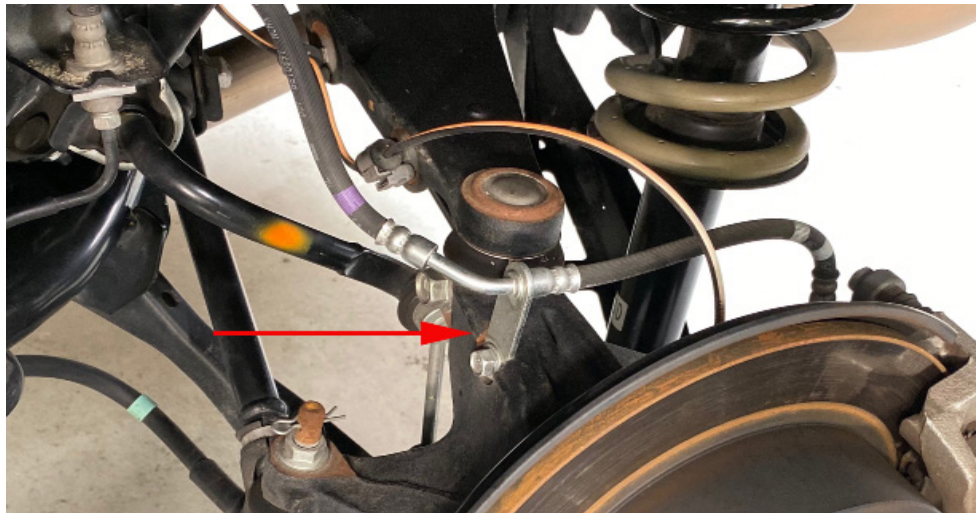
**Step.6**

Unbolt the rear brake line (12mm) from the hub.  
Retain bolt.

**Step.7**

**CAUTION:** You must support the rear differential with a jack during the installation of the subframe spacers or serious injury could occur. A lifted Subaru is not worth injury or death - support that diff.

6



7

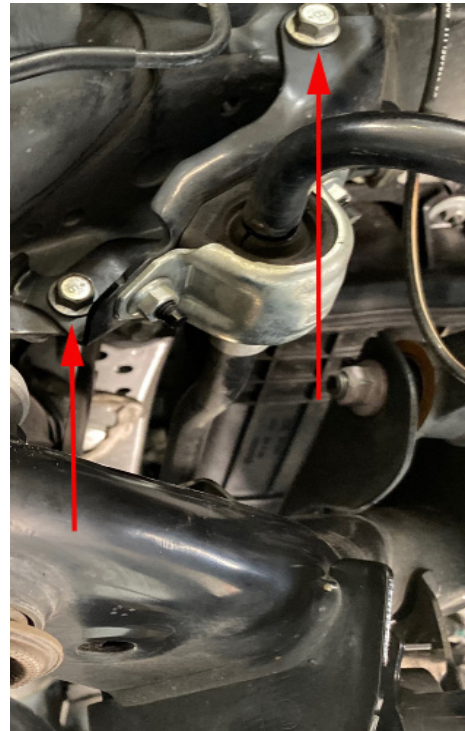


## Rear Suspension Installation

### Step.8

Unbolt and remove rear sway bar bracket (12mm). You do not need to remove the rear sway bar.

Discard old sway bar brackets. Retain bushings and bushing holders - they will be re-used.



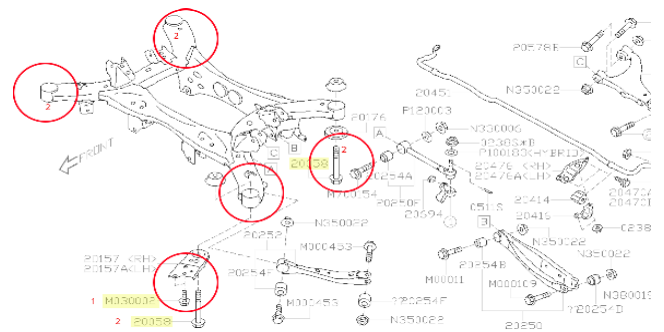
### Step.9

**REMINDER:** You must support the rear differential with a jack during the installation of the subframe spacers or serious injury could occur. A lifted Subaru is not worth injury or death - support that diff.

First, remove the 4 bolts at the front of the subframe reinforcements (14mm) - 2 per side, labeled M030002 in the diagram (see red '1'). Do not drop the reinforcements (20157 & 20157A in the diagram).

Next, with the rear differential completely supported by a jack, remove the four rear subframe bolts (19mm) - 1 at each corner, labeled 20058 in the diagram (see red '2'). Use care not to drop the differential and subframe. This step is critical to your safety.

We recommend you loosen the bolts, creating slack, but do not remove all 4 bolts completely at the same time. The bolts are long enough for you to work on 1 corner of the subframe at a time. This will help prevent injury.





**Step.10**

Install rear subframe spacers on top of existing bushings - **DO NOT REMOVE STOCK BUSHINGS - DONUT EAT.**

Use new rear subframe bolts (22mm) and washers - **DO NOT RE-USE BOLTS OR WASHERS.**

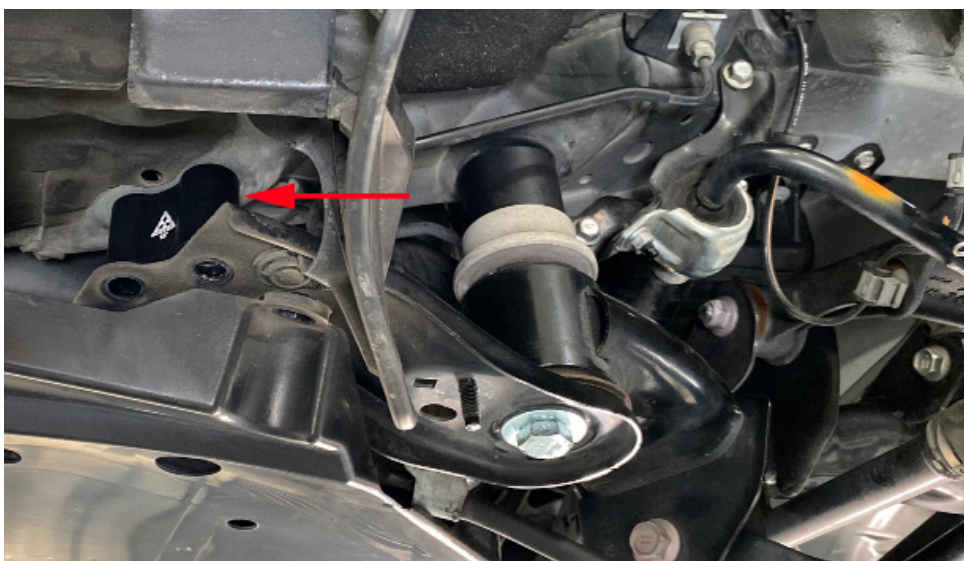
The two bolts at the front of the subframe also hold the reinforcements - do not forget to install.

**Step.11**

Install the subframe reinforcement spacers (14mm) using the supplied hardware. These are symmetrical and can be installed on either right or left sides.

In the photo you can also see the subframe spacer correctly installed with the subframe reinforcement.

**CAUTION:** Torque all bolts - refer to vehicle manufacturer's service manual for correct torque settings.

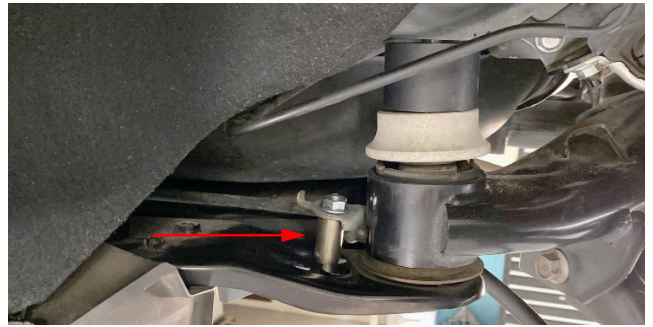
**10****11**

## Rear Suspension Installation

### Step.12

Install the parking brake cable adapter (12mm). The parking brake cable must be rotated to the top of the subframe reinforcement for proper fit and function.

**NOTE:** Photo shows subframe spacer before being torqued to proper specifications.



### Step.13

Install the rear swaybar relocation brackets (13mm) using new hardware provided.

The brackets are **RIGHT** and **LEFT** dependent and can only be installed one way.

Re-use the swaybar bushings and bushing holders using the supplied hardware.



**Step.14**

Replace the 3 stock exhaust hangers securing the muffler with the included extended exhaust hangers.

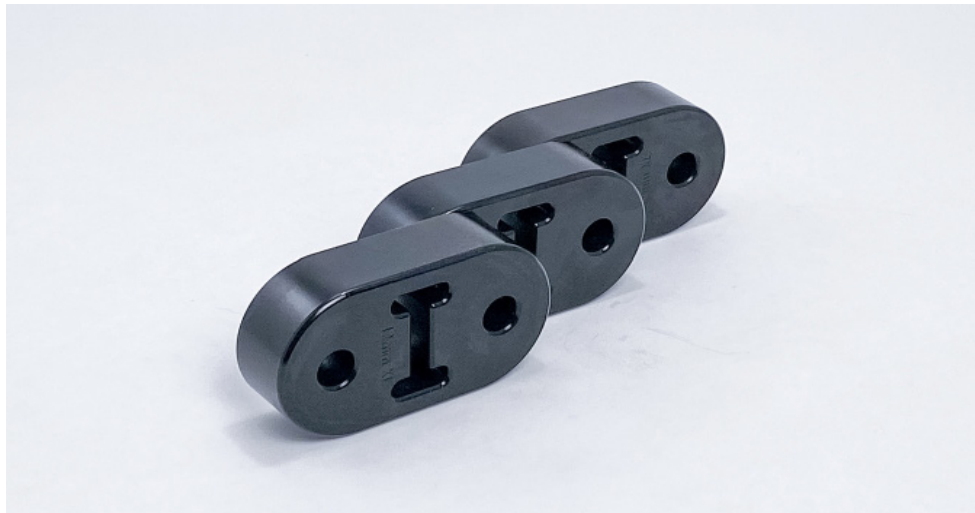
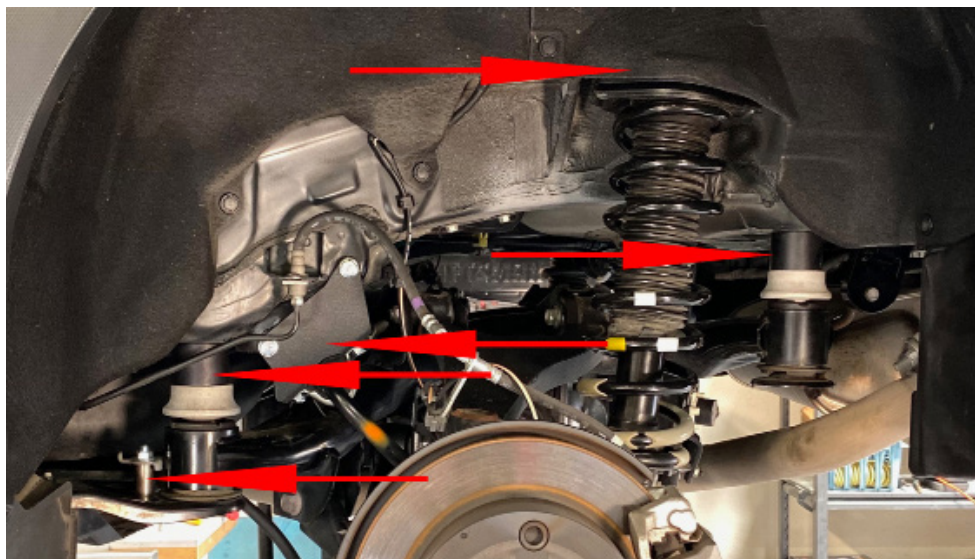
Use soapy water, and a pry bar to help facilitate removal as well as installation. Do not use petroleum based products (such as WD-40) as they will destroy your new exhaust hangers.

**Step.15**

Re-install rear struts. Process is reverse of removal.

**NOTE:** Bolts are installed from front of vehicle with nuts on rear of lateral link. Also note that the longer bolt is for the strut, and the shorter bolt is for the hub.

Photo below shows elements installed: rear subframe spacers, rear strut spacers, rear sway bar relocation brackets, and rear parking brake adapters.

**14****15**

## Brake Line Installation

### Step.1

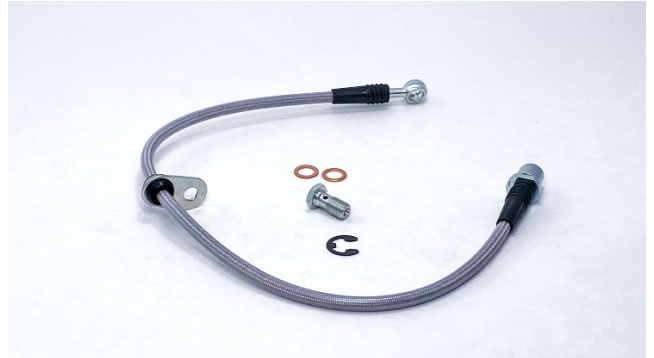
**CAUTION:** Brake fluid should not be allowed to get on brake rotors, brake pads, or painted surfaces. Immediately clean brake fluid off of surfaces that come in contact. Do not throw on floor. Do not lick. No feed to animals.

**CAUTION:** During installation procedure do not allow brake reservoir to drop below minimum line. Air in the ABS system could lead to brake failure, or costly repairs.

Our replacement brake lines come with all parts necessary, excluding brake fluid. We recommend Motul RBF 660 Dot-4 brake fluid for best results.

Make note of stock brake line routing. New lines need to follow same path.

Process is identical for all 4 corners of vehicle.



### Step.2

Using a flare nut wrench (10mm), disconnect the stock brake line from the hard line.

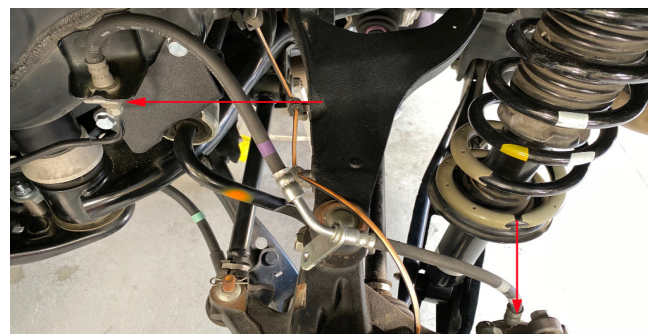
Remove and discard the stock retaining clip.

**ONLY** use a flare wrench. A standard wrench will strip the brake line.

If available, use a silicone cap on the hard line to prevent excessive brake fluid loss.

Unbolt the brake line from the brake caliper (12mm). Discard stock crush washers and banjo bolt.

Discard stock brake line.



# Brake Line Li

**Step.3a**

Install replacement brake line. Replacement brake line comes with new retaining clips, banjo bolts, and crush washers.

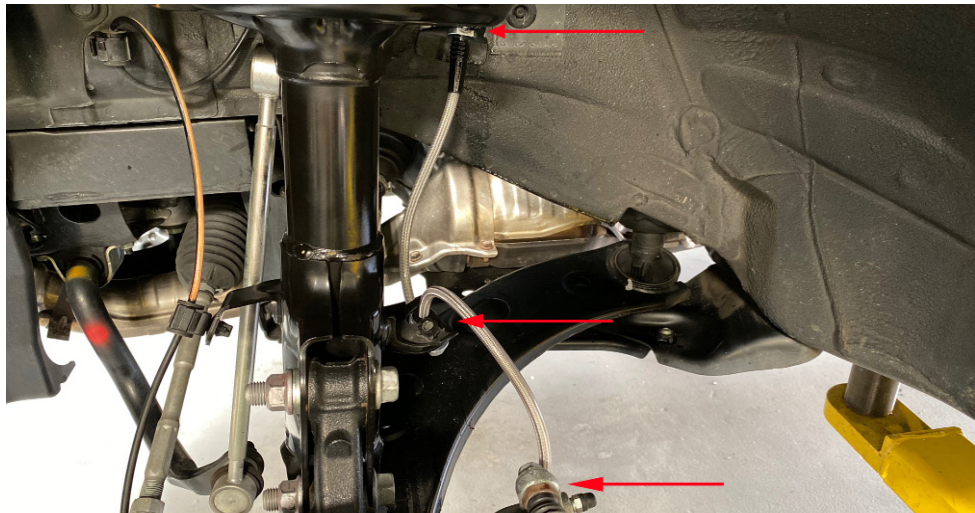
Crush washers must not be re-used. ONE crush washer must be placed on both sides of the brake line at the caliper. No crush washers are used at the connection to the hard line.

**Step.3b**

Repeat process for all 4 brake lines.

Bleed brake system according to procedure outlined in manufacturer's service manual. ABS brake systems may require special processes. If you are unsure, please visit your local professional.

Recheck all fittings after the first 100 miles.

**3a****3b**

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# Notes

**Notes**

Before driving your vehicle make sure you have re-torqued all bolts to the manufacturer's recommendations. Double, and triple-check EVERYTHING before driving.

Ensure nothing is loose or leaking. The brake pedal should be firm before test driving the vehicle.

Recheck EVERYTHING after 100 miles. Re-torque all bolts after 100 miles.

K4RT30Y recommends an alignment before the first 100 miles.

Congratulate yourself on a job well done and enjoy your Fireball.

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# Notes

## Contact & Warranty

# Contact & Warranty

### All Wheel Engineering, LLC

www.kartboy.com  
sales@kartboy.com

### Warranty Policy

ALL Kartboy products are produced in the USA with the highest quality materials and built to the strictest standards. That's not to say that parts can never fail. Our products carry a limited lifetime warranty. If, by chance, you have some issues with one of our parts please email us at sales@kartboy.com with a copy of your sales receipt and we'll do our best to work with you.

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### Disclaimer

**This kit is for off road use only.** All Wheel Engineering, LLC and kartboy.com and all associated affiliates or entities are hereby void of any and all litigation with the use of said suspension lift parts on any legal road way here in the USA and abroad. These lift parts are for off road purposes only, and or for show cars not to be driven on a legal roadway, or as a daily driver, etc. Any purchaser of any kartboy.com or All Wheel Engineering, LLC parts hereby agrees to these terms and conditions as a binding legal contract between anyone purchasing said products. In return, the customer or entity or business that decides to use said parts on any legal roadway bears all financial and non financial burdens that come with your decision to use the parts in said manner.



