

# INSTALLATION INSTRUCTIONS



SCAN HERE FOR  
INSTALLATION VIDEO

## SUSPENSION UPGRADE KIT

TO SUIT SUBARU FORESTER 2019+  
OUTBACK 2015-2019 AND XV CROSSTREK 2018+



**SAFETY WARNING:** Installing suspension often requires special tools and expert knowledge.

All fitment should be performed by a qualified and experience fitter. Always tighten bushed components after the vehicle is let down onto the ground at normal ride height, otherwise damage from torsional stresses can occur.

Ironman 4X4 recommends a wheel alignment after fitment of the new suspension.

This guide is intended to be used in conjunction with Subaru workshop manual for basic removal and installation procedures. These instructions are multi-application, please note some images and references may not be applicable for your vehicle.

Always adhere to vehicle manufacturers torque specifications when tightening fasteners.

**NOTE: Occupational Health and Safety procedures  
must be observed at all times**

**IMPORTANT:** Installations should only be done by a qualified person  
and it is the responsibility of this person to ensure correct fitment

## Suspension Upgrade Kit Applications

APPLICATION	ASSEMBLY PART NUMBER	DESCRIPTION	LOCATION	QTY
Subaru Forester 2019+  SUB007BKG Max Tire Size: 245/65/R17 Est. Lift 2"	12830007GR LH	Front Strut Assembly	Front Left	1
	12830007GR RH	Front Strut Assembly	Front Right	1
	12832008GR	Rear Strut Assembly	Rear	2
	1215K	Rear Subframe Alignment Kit	Rear	1
	1216K	Sway Bar Relocation Kit	Rear	1
Subaru Outback 2015-2019  SUB009BKG Max Tire Size: 245/65/R17 Est. Lift 2"	12833009GR LH	Front Strut Assembly	Front Left	1
	12833009GR RH	Front Strut Assembly	Front Right	1
	12834010GR	Rear Strut Assembly	Rear	2
	1215K	Rear Subframe Alignment Kit	Rear	1
Subaru XV Crosstrek 2018+  SUB011BKG Max Tire Size: 225/65/R17 Est. Lift 2"	12835011GR LH	Front Strut Assembly	Front Left	1
	12835011GR RH	Front Strut Assembly	Front Right	1
	12836012GR	Rear Strut Assembly	Rear	2
	1215K	Rear Subframe Alignment Kit	Rear	1
	1216K	Sway Bar Relocation Kit	Rear	1
	IEXH4075	Exhaust Hanger Rubber	Rear	3





## IRONMAN 4X4 SUSPENSION TO SUIT SUBARU INSTALLATION FORM

Please copy and complete this form at the time of installation.  
Keep in a safe place for future reference.

Installing suspension often requires special tools and expert knowledge. All fitment should be performed by a qualified and experienced fitter. Always tighten bushed components after the vehicle is let down onto the ground at normal ride height, otherwise damage from torsional stresses can occur.

Ironman 4x4 recommends a wheel alignment after fitment of new suspension, consideration to natural spring settling should be taken into account before alignment is done. Always adhere to vehicle manufacturers torque specification when tightening fasteners.

**ADAS safety systems may need to be recalibrated by a qualified service technician.**

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NAME: **OWNER DETAILS**  
 ADDRESS: ..... PHONE: .....  
 .....

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**VEHICLE DETAILS**  
 MAKE: .....MODEL: .....REG NO: ..... ODOMETER:.....  
 ENGINE TYPE:..... BODY TYPE:.....  
 PRE EXISTING MODIFICATIONS OR WEIGHTED ACCESSORIES: .....  
 .....

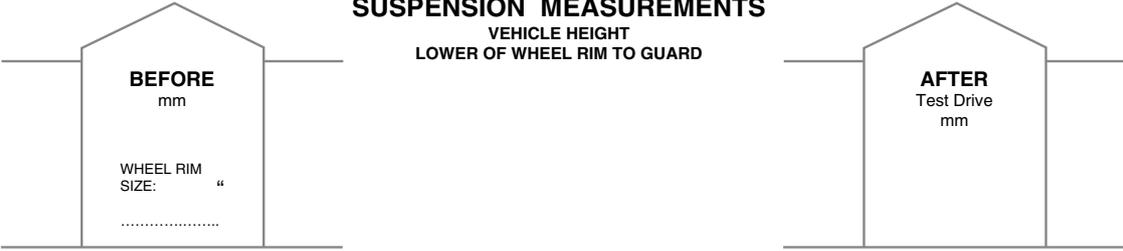
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**PART NUMBERS INSTALLED**

PART # .....	BATCH# .....	PART # .....	BATCH# .....
PART # .....	BATCH# .....	PART # .....	BATCH# .....
PART # .....	BATCH# .....	PART # .....	BATCH# .....
PART # .....	BATCH# .....	PART # .....	BATCH# .....
PART # .....	BATCH# .....	PART # .....	BATCH# .....

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**SUSPENSION MEASUREMENTS**  
 VEHICLE HEIGHT  
 LOWER OF WHEEL RIM TO GUARD

 <p><b>BEFORE</b> mm</p> <p>WHEEL RIM SIZE: “ .....</p>	<p><b>AFTER</b> Test Drive mm</p>
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**NOTES AND COMMENTS**  
 NOTES: .....  
 .....

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**POST INSTALLATION INSPECTION**

All fitting, fasteners and wheels have been tensioned to the correct manufacturers specifications and marked with a paint pen where appropriate.

TICK

INSTALLERS NAME: PRINT NAME  
 SIGNATURE: \_\_\_\_\_  
 DATE OF INSPECTION: \_\_\_\_\_

All measurements to be taken prior to installation, immediately after initial test drive and again at 300 mile check. All vehicle height measurements to be taken from lower of wheel rim to guard unless otherwise stated. Up to 1/2" height reduction in springs can be considered normal settling over time. Suspension product warranty period is 3 years or 40,000 miles.



USSF170920 Rev.1

1. Always ensure you have all the correct parts before beginning installation.

## Front Suspension

2. Open the hood and raise the vehicle on the lift and remove all four wheels.

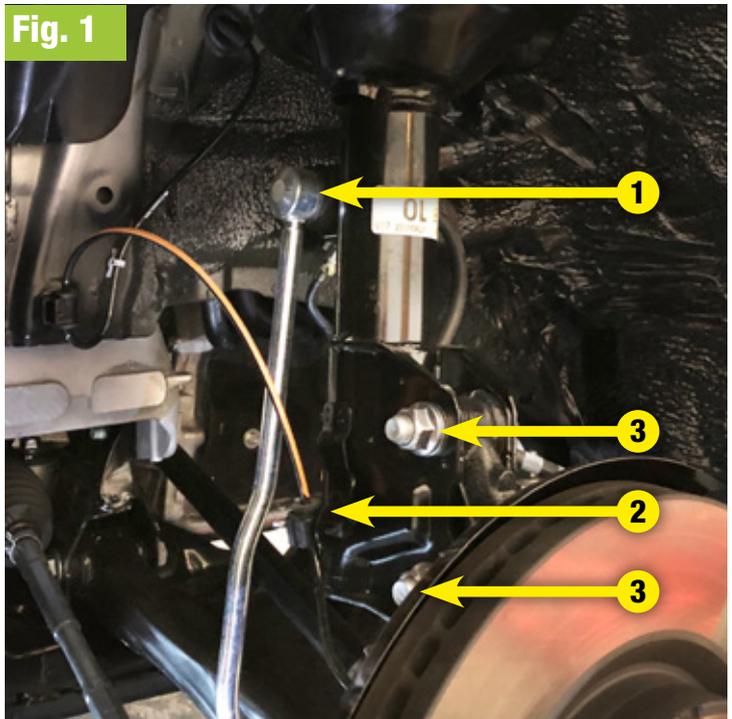
Working one side at a time.

Disconnect sway bar links **1** brake hoses and the ABS wire retainers **2** from the struts.

Remove the 2 x lower strut clevis nuts **3** leaving the bolts in place for now.

Remove 3 x nuts securing the top strut plate from under the hood.  
(Refer Fig. 2)  
(DO NOT remove the center nut)

Remove 2 x lower strut clevis bolts and remove strut from the vehicle.



3. Install new strut assembly into the vehicle, reverse of the removal.

Repeat steps for the other side of the vehicle.

Re-attach all previously removed hardware.

Tighten top stud nuts to 29 ft/lb.

Adjust eccentric cam bolts to maximum negative camber position and tension to 143 ft/lb.  
(Refer Fig. 3)

Tension sway bar link nuts to 48 ft/lb and brake hose retainers to 24 ft/lb.

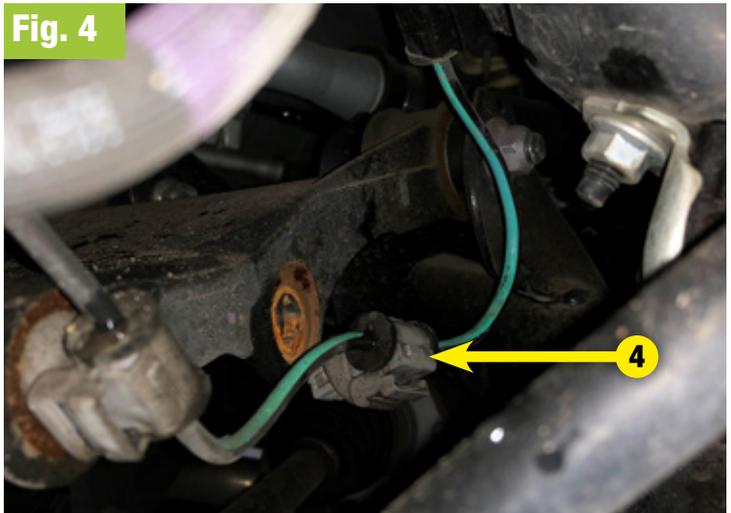


## Rear Suspension

4. With the vehicle on the lift, remove the wheels.

Undo the brake hose retaining bolt from the axle housing (Refer Fig. 12)

Unclip the ABS wire from the upper control arm **4** This is to avoid over stretching the ABS wire.

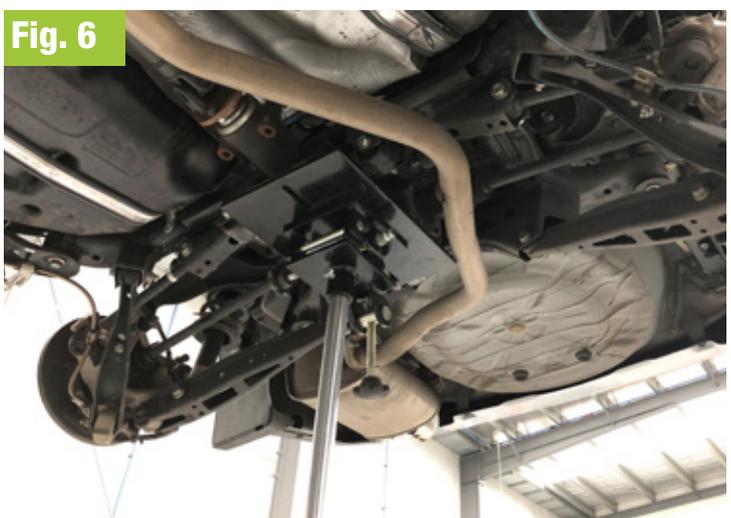


5. Remove the left and right gas tank protection shields and the handbrake cable retaining clips from the sub-frame front plates.

Remove the 2 x M10 bolts from each sub-frame plate as well as the M8 bolts retaining the mudflap to the plate.



6. Support the rear sub-frame assembly with a Transmission jack or similar. (ensure you have clearance from the exhaust system).



7. Loosen off the 4 x M14 bolts that retain the sub-frame, (Refer Fig. 7) undo the bolts so they are held on by a few threads. (do not remove bolts at this stage).

Lower the sub-frame approximately 2", (if the vehicle is fitted with a headlamp leveling system care must be taken not to over stretch the linkage).

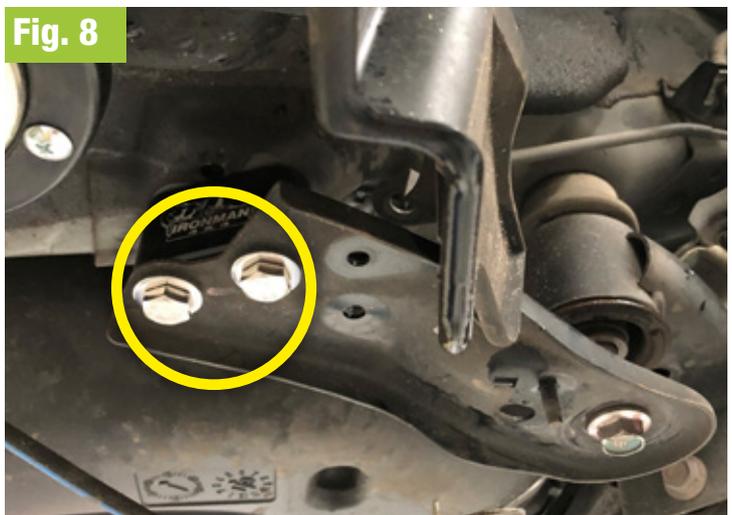
It is recommended to remove one bolt at a time so the sub-frame stays aligned.

Install 4x large round spacers between sub-frame and body as shown (Refer Fig. 7 and 9).

Install the double bolted spacers and M10 bolts and washers to the sub-frame front plates. (Refer Fig. 8)

Remove the M14 sub-frame bolts and install spacers with new M14 bolts and washers supplied.

Leave the bolts finger tight at this stage.



**NOTE:** For Forester and XV Crosstrek only

8. Disconnect sway bar D brackets and install sway bar spacers.

(Thread locking compound must be used on the countersunk bolts and tightened firmly). Ensure the sway bar spacers are installed in the correct orientation, arrow facing down as indicated.

Be sure to match the original nuts to the original vehicle studs, and newly supplied nuts to the new bolts.

Re-install sway bar in new bracket position as shown.



**NOTE:** For Outback only

- 9.** 4 x Tube spacers and M10 bolts are required for the rear brace support.

Some models may not utilise all tube spacers. Remaining tube spacers can be used to re-attach rear wheel flap (Refer Step 13), in other models tube spacers can be disregarded.

**Fig. 10**

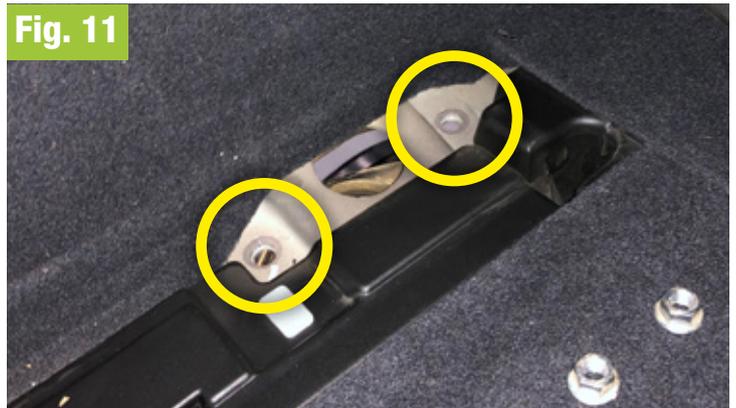


**NOTE:** All Models

- 10.** Tension the 4 x M14 sub-frame bolts and 4 x M10 bolts using OEM tightening procedures and torque specifications.

From inside of the vehicle remove the necessary trims to access the removal of the 2 x upper strut nuts. (DO NOT remove the center nut)

**Fig. 11**



- 11.** Remove the lower shock bolt.

Remove strut from the vehicle.

Install new strut assembly into the vehicle, reverse of the removal. Repeat steps for the other side of the vehicle.

**Note:** DO NOT tighten lower shock bolt at this stage. Leave only finger tight.

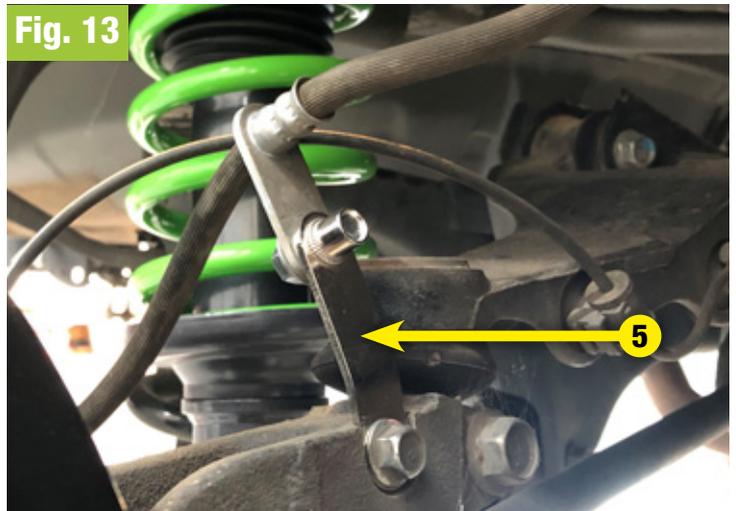
Re-attach all previously removed hardware, install brake hose extension brackets **5** and tension to 24 ft/lb, re-attach ABS wire clips to the upper control arm.

After installation of wheels and tires, the brake hose extension **MUST** be double checked for wheel clearance.

**Fig. 12**



**Fig. 13**



- 12.** Check exhaust system for clearance, if required install extended exhaust hanger rubbers (IEXH4070)

3 x extended exhaust hanger rubbers are required for XV Crosstrek.

Ironman 4x4 exhaust hanger rubbers are multi position capable, to provide necessary clearance to surrounding components.

Fig. 14



- 13.** Reinstall gas tank protection shields and handbrake retaining clips.

Applicable models; Using M8 x 55mm bolts and lock nut, refit forward mudflaps, together with small spacer tube.

Fig. 15



- 14.** Refit all wheels. Tension wheel nuts to 66 ft/lb.

Lower the vehicle to the ground, bounce and roll the vehicle back and forth to settle the suspension.

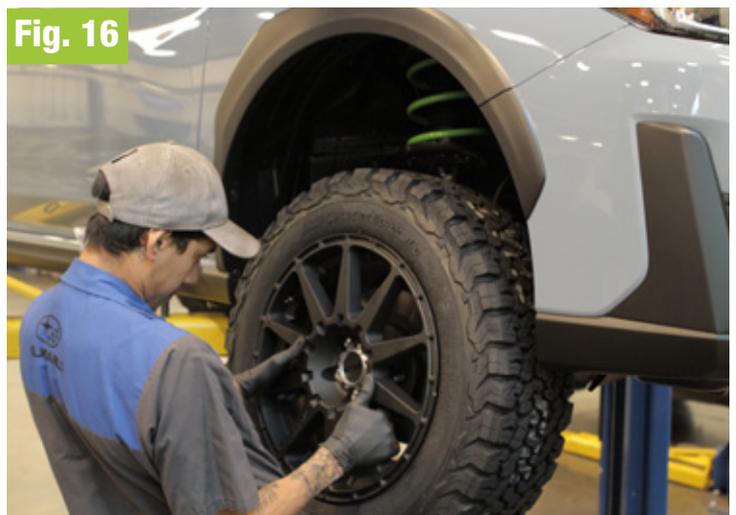
Re-tension wheel nuts to 80 ft/lb.

Tension lower shock bolts to 80 ft/lb.

Re-check all fasteners at ride height (front and rear) for correct tension.

Conduct short test drive to settle suspension fully.

Fig. 16



15. Carry out 4 wheel alignment, beginning with rear toe and thrust angle before completing front alignment.

The Ironman 4x4 suspension kit including sub-frame alignment kit should return camber and caster to near original positions, minor toe adjustments will be required.

If major camber and caster adjustments are needed, additional methods of adjustment may be required.

Check headlight beam alignment.

Ironman 4x4 recommends re-calibration of the Advanced Driver Assistance System (ADAS). Please consult your Subaru Dealer.

Re-check tension of all fasteners after 2 weeks or 300 miles.

