



# PILOT

## 2016-2022 2.5 inch lift kit installation guide

*Professional installation is recommended*

### **IMPORTANT!**

Lifting and modifying the suspension on your vehicle may result in drive line vibrations, damaged bushings, erratic handling characteristics, and shortened suspension component life. HRG Offroad recommends the following:

- Checking and/or replacing worn drive axles with new parts, not remanufactured.
- Checking and/or replacing all worn factory rubber bushings with urethane bushings, such as Prothane.
- Checking and/or replacing worn shock absorbers and bump stops.
- Performing a 4 wheel alignment after working on suspension components.

**Lift kits may not be legal for use on public highways in your area. Please check local laws before installing!!**

### **WARNING!**

***Lifted vehicles are more prone to rolling over.***

Some HRG Offroad products are designed to improve off-road capabilities. Modifying the suspension of your vehicle may result in handling characteristics that are different from a factory equipped vehicle. Extreme care must be used to prevent a rollover or loss of control. Always operate your modified vehicle at a reduced speed to ensure your ability to maintain control under all driving conditions. Driving your vehicle in an unsafe manner may result in serious injury or death. HRG Offroad lift kits are designed and tested to work together. HRG Offroad does not recommend combining this lift kit with any other type of suspension or body lift. Always wear your seat belt.

Recommended tire size:

245/60/18 (stock)(29.6")

255/60/18 (30.0")

245/65/18 (30.5")

265/60/18 (31.1")

265/65/18 (31.5") **WILL REQUIRE FENDER MODIFICATION**

***Be sure to check fitment prior to installation! These sizes are only suggestions. HRG is not responsible***

***for improperly fitted wheels/tires!***

**Included in the kit:**

2 2.5" front lift spacers 5321  
2 1.5" or 2.0" rear lift spacers 5282 or 5281  
6 M10 nuts (front lift spacers)  
6 M10x25mm grade 10.9 bolts (rear lift spacers)  
6 M10 nuts (rear lift spacers)  
2 Replacement front sway bar links  
2 0.75x1 M8 spacers (driveshaft protector)  
2 M8x40 bolts (driveshaft protector)  
2 M10x90 bolts (engine mount)  
2 M10x50 bolts (driveshaft carrier bearing)  
3 M8x40 bolts (gas tank bar)  
4 M14x160 bolts (front subframe)  
8 M12x50 bolts (front subframe brackets)  
4 M14x160 bolts (rear subframe)  
4 M12x50 bolts (rear subframe brackets)  
3 0.75x1 M8 spacers (gas tank bar)  
2 1x1 M10 spacers (driveshaft carrier bearings)  
2 1x1 M10 spacers (engine mount)  
4 2.5x1 M14 spacers (front subframe)  
4 3.5x1 M14 spacers (rear subframe)  
16 1.25x1 M12 spacers (front and rear subframe brackets)  
2 M12x70 bolts (exhaust hangers)  
2 M12 nuts (exhaust hangers)  
3 extended exhaust hangers

**TOOLS REQUIRED:** Floor jack, lug wrench, metric socket set to 21mm, 36mm axle socket, metric wrench set to 19mm, impact wrench, pliers, heavy hammer, screwdriver, plastic cutting tool, torque wrench and paint pen.

**Note to installer:** Some bolts removed to install lift kit will be replaced with longer bolts. Some OEM hardware will be reused. **Installing this kit requires cutting of plastic splash shield and sheet metal surrounding steering coupler to allow clearance.**

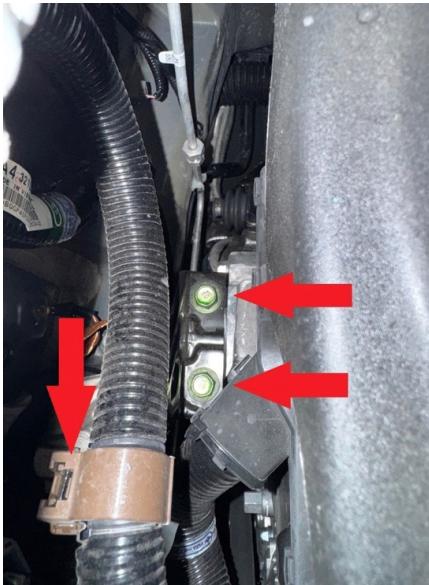
**Approximate installation time: 6 hours.**

**Difficulty: Difficult**

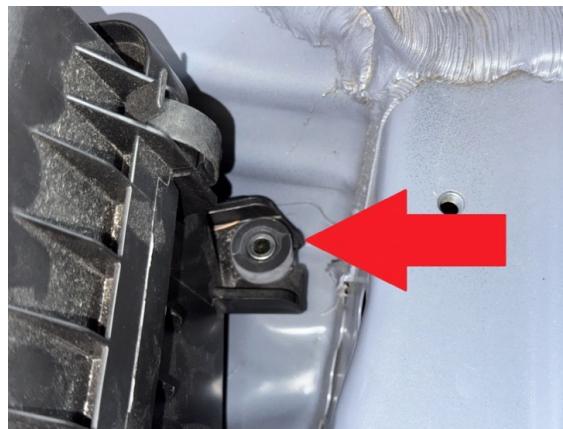
**Front installation:**

Step 1. Disconnect negative battery terminal.

Step 2. Remove 2 M10 bolts holding passenger side engine dampener to engine, and unclip wiring harness from bracket. Remove black bracket. Bracket will not be reused.



Step 3. Remove air box bolt as shown:

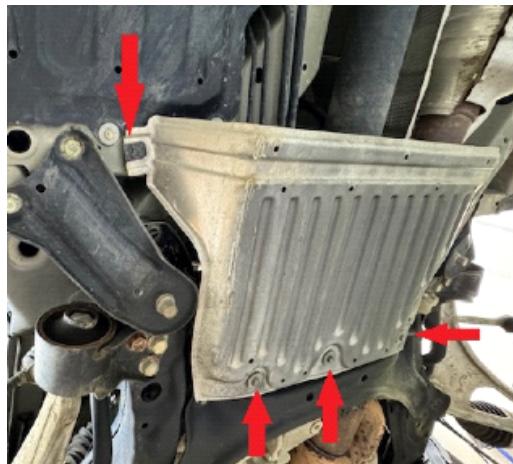


Step 4. Lift vehicle, remove wheels and support with jack stands.

Step 5. Remove clips and screws holding front part of plastic fender liners and lower plastic splash guard under front valence to gain access to front main subframe bolts. Save hardware to reattach lower bumper cover to fender liners. Plastic splash guard will not be reinstalled.

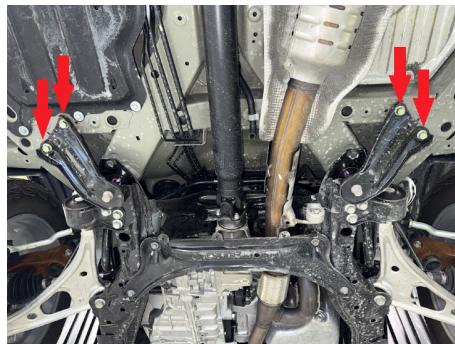


Step 6. Remove plastic clips and 10mm bolts holding aluminum heat shield behind subframe. (IF APPLICABLE) Save hardware.

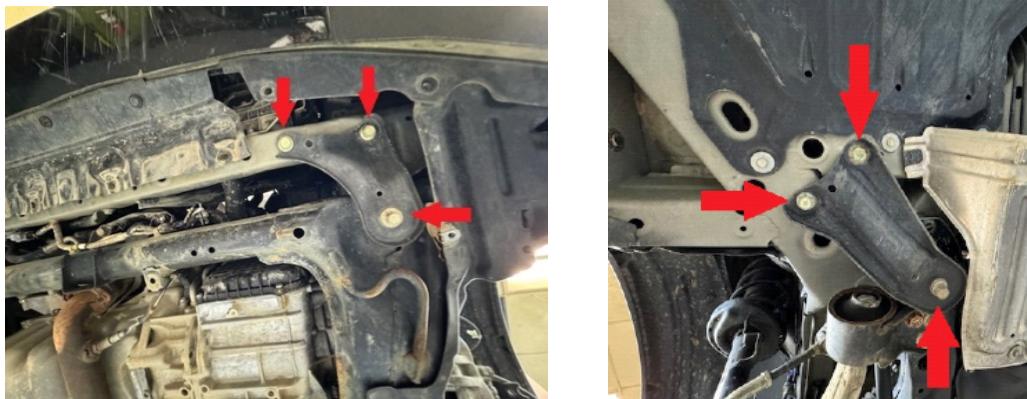


Step 7. Support subframe using a screw jack or floor jack.

Step 8. Remove 8 M12 bolts holding main subframe stiffener brackets to body. (see photo below)



Step 9. Remove ONLY 2 of the 4 main subframe bolts, and temporarily replace with the longer M14x180 bolts included in the kit.



Step 10. Remove the 2 remaining OEM subframe bolts one at a time, lower subframe carefully about 1 inch with floor jack or screw jacks, and slip 2.75x1 M14 spacers between subframe and body, installing M14x160 bolts as you go. (This keeps the subframe aligned during installation.)



Step 11. Install 8 1.25x1 M12 steel spacers between main subframe bolt retainer brackets and body using supplied M12x50 bolts. (see photo)



Step 12. Trim plastic splash shield as necessary to fit with lowered subframe, reinstall using original hardware.



Step 13. Drill new mounting holes in aluminum heat shield (if applicable)



Step 14. Re-install aluminum heat shield, bend as necessary to fit with lowered subframe. Re-attach using OEM hardware.



Step 15. Using a body saw or suitable metal cutting tool, cut a notch in the hole where the steering column passes through (see photo) to allow clearance for steering shaft.



*ALTERNATE METHOD: Using a screwdriver or round bar, bend sheet metal back about 1/4 inch around the coupler. Turn steering wheel to verify the coupler has proper clearance.*

Step 16. Install foam weather seal between steering rack and firewall.



Step 17. Under driver side dash, remove plastic dust cover on steering column to gain access to steering coupler.

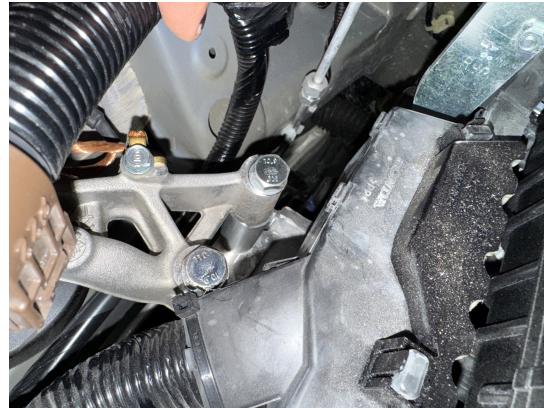


Step 18. Re-install dust cover on steering column below interior dashboard. Double check full rotation of steering wheel to check for any noises or rubbing. Trim as necessary.

**TIP: If necessary, loosen the bolts in the steering column "u-joint"**

## coupler and re-tighten them to eliminate binding.

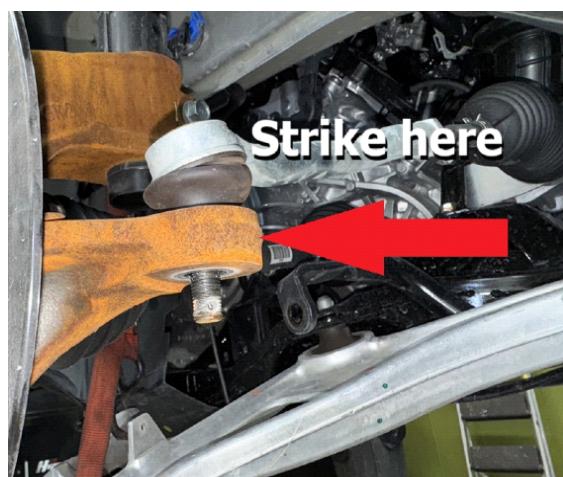
Step 19. Lower vehicle back down and Install 2 1x1 M10 steel spacers between engine mount and engine bracket, using supplied M10x110mm bolts.



Step 20. Remove brake line and unclip ABS wiring from strut, remove wheel sensor.



Step 21. Remove nut holding tie rod end to hub, strike knuckle with heavy hammer to dislodge tie rod end.



Step 22. Remove caliper (never loosen the brake line hoses) and secure it out of the way.



Step 23. Remove brake rotor and axle nut.



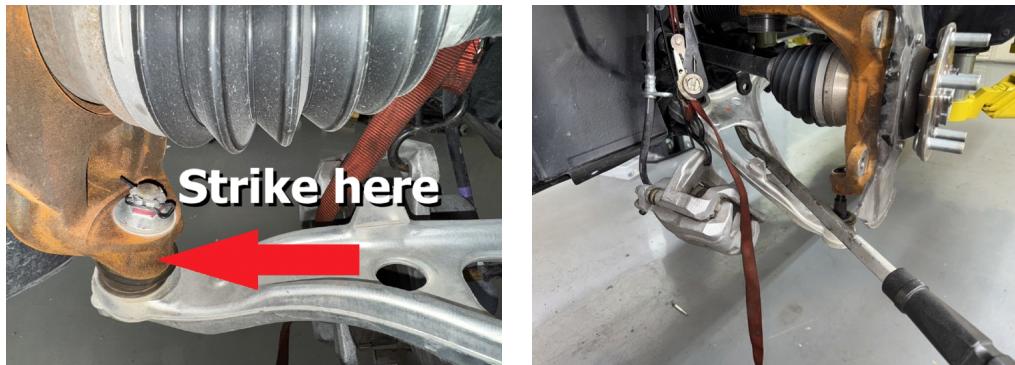
Step 24. Remove and discard OEM sway bar links.



Step 25. Remove lower ball joint nut and cotter pin.

Step 26. Have a helper pry downward on the lower control arm while striking the hub with a large hammer, to separate the ball joint from the hub. This can take dozens of hits. Be careful not to hit the

ball joint boot.

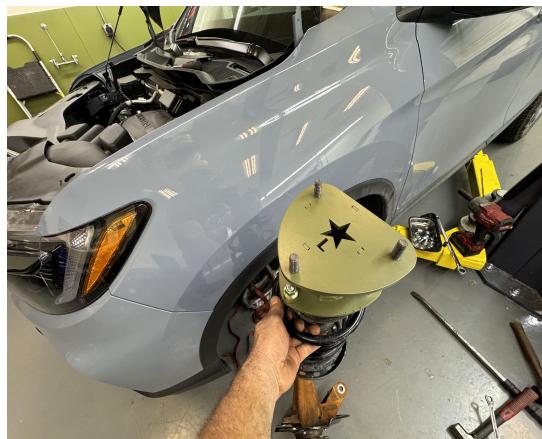


Step 27. Remove plastic access panels under hood to reach driver side front upper strut mount.



Step 28. Remove 14mm nuts holding struts to body, remove strut and hub assembly as one piece. Do not separate strut from hub.

Step 29. Install strut spacers onto top of struts using OEM hardware.



Step 30. Mount spacer, strut, and hub assembly back into shock tower using M10 nuts provided in the kit. Torque nuts to 33 ft-lb.

Step 31. Using a very large pry bar or 4 foot pipe, pry down on the lower control arm while moving hub

back into position. Slide the axle back into the hub and angle the lower ball joint outward so that it feeds into the hole in the bottom of the hub. Once the ball joint is oriented properly, release pressure on the pry bar. The ball joint should pop into place. Have a helper push in and turn the hub while doing this. This step may take several attempts!

Step 32. Reinstall axle nut, torque to 242 ft-lb.

Step 33. Reinstall brake rotor and caliper. Tighten brake caliper bolts to 80 ft-lb

Step 34. Reinstall tie rod end. Do not forget cotter pin!

Step 35. Install BLBL on brake line mount, to relocate brake line. (see photo)



Step 36. Repeat installation process for passenger side.

Step 37. Install new sway bar end links using supplied hardware. Torque sway bar nuts to 56 ft-lb.



Step 38. Double check all bolts. Especially sway bar links!

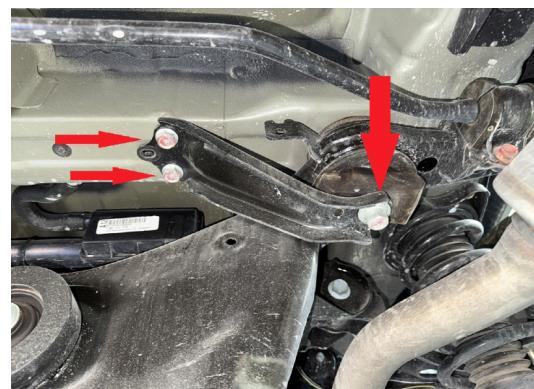
Step 39. Check brake dust shields for contact with rotors, bend back as necessary to prevent noise.

## Rear installation:

Step 1. Lift vehicle and support with jack stands.

Step 2. Support rear subframe with floor jack or screw jack.

Step 3. Remove 8 bolts holding rear subframe stiffener brackets to body. DO NOT REMOVE ALL 4 MAIN SUBFRAME BOLTS AT ONCE!





Step 4. Loosen 4 main M14 bolts holding subframe to body, removing only the front 2. This allows the subframe to drop enough to install 2 of the 4 3.5x1" M14 spacers between subframe and body. Install M14x160 bolts. Be sure to pass bolts through support brackets! (see photo)



Step 5. Remove rear 2 subframe bolts one by one, installing remaining 3.5x1 spacers and installing M14x160 bolts.

Step 6. Install 8 1.25x1 M12 spacers between stiffener brackets and body, install 8 M12x50 bolts.



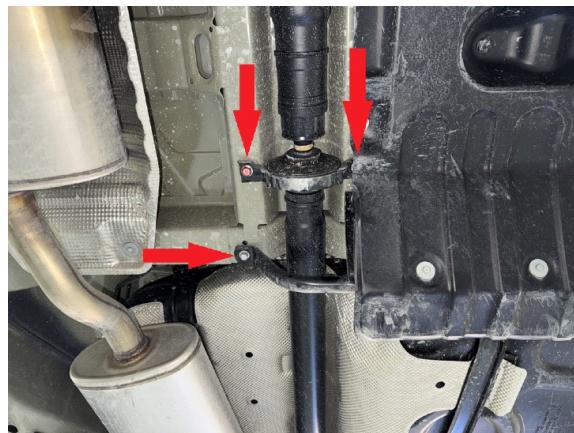
Step 7. Remove driveshaft protector loop.



Step 8. Cut notch in plastic and install 0.75x1 M8 spacers and M8x40 bolts as shown.



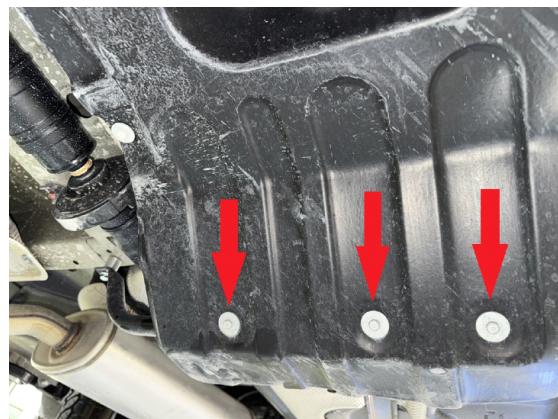
Step 9. Remove 2 14mm bolts holding driveshaft carrier bearing, and 12mm bolt holding gas tank bar.



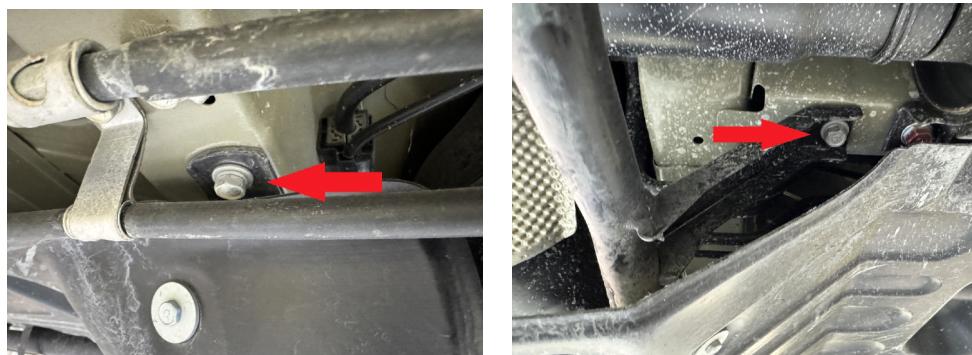
Step 10. Install 2 1x1 M10 spacers between carrier bearing and body, install 2 M10x50 bolts.



Step 11. Loosen 10mm bolts holding plastic under tray to gas tank bar.



Step 12. Remove remaining bolts holding gas tank bar to body.



Step 13. Install 3 0.75x1 M8 spacers between gas tank bar and body.



Step 14. Tighten 10mm bolts on plastic under tray.

Step 15. Remove OEM rubber hangers from both rear tailpipes. (Unless equipped with single rear tailpipe)

Step 16. Attach extended exhaust hanger to OEM hanger with M12x70 bolt and M12 nut. (see photo)



Step 17. Remove rubber hanger from exhaust mid-section under vehicle.

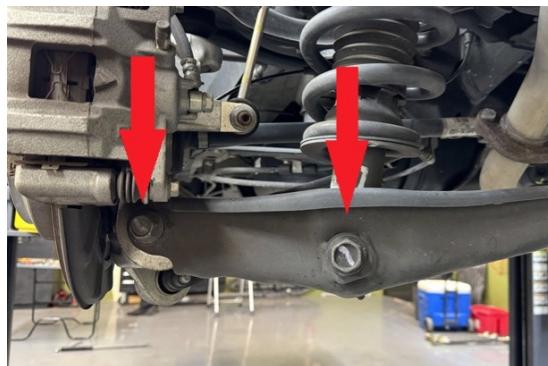
Step 18. Install new extended hanger as shown:



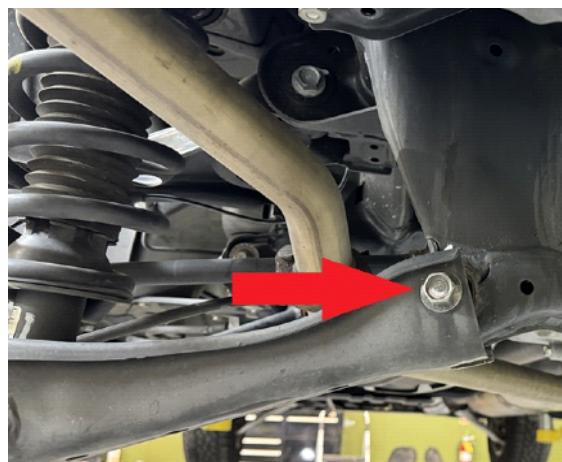
***NOTE: It is not necessary to modify the exhaust hanger that is attached to the rear subframe.***

Step 19. Remove bolt holding driver side rear strut to lower control arm.

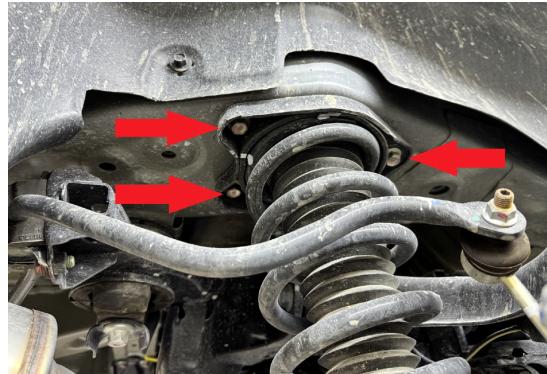
Step 20. Remove bolt holding lower control arm to wheel hub. (outermost bolt on lower control arm)



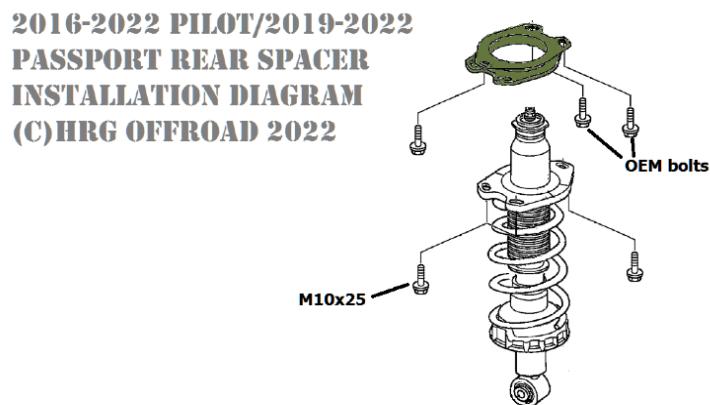
Step 21. Loosen but do not remove bolt holding lower control arm to subframe. (innermost bolt) to allow arm to move freely.



Step 22. Remove 3 bolts holding strut to body and remove strut.

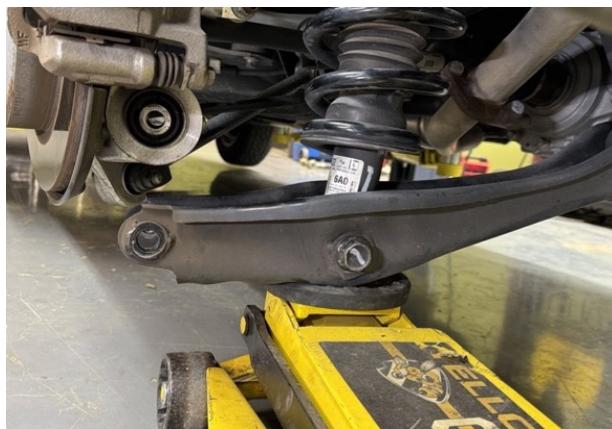


Step 23. Place spacer on top of strut and attach using M10x25 bolts and M10 nuts. Torque bolts to 35 ft-lb.



Step 24. Install strut/spacer assembly using OEM hardware. Be careful not to cross thread these bolts! Torque OEM bolts to 44 ft-lb.

Step 25. Reinstall bolt holding strut to lower control arm.



Step 26. Using a floor jack, lift lower control arm until bolt holes line up.



Step 27. Reinstall bolt holding lower control arm to hub. Torque bolts to 135 ft-lb.

**TIP: do not fully tighten control arm bolts until vehicle is resting on the ground (this will help prolong bushing life)**

Step 28. Install BLB2 on rear brake line mount. Torque bolts to 25 ft-lb (see photo)



Step 29. Repeat installation process for passenger side.

Step 30. Reinstall wheels and lower vehicle.

Step 31. Double check all bolts.

Step 32. Get a professional alignment.

Step 33. Find some trails!

**Note: Installing a lift kit will change the suspension geometry and will require a 4 wheel alignment.**

**Warning: Failure to follow the procedures in these installation instructions may result in unsafe handling characteristics, damage to**

**vehicle, or loss of control.**

**For tech support, please call 1-844- HRG LIFT (474-5438) from 8-4:30 PM EST Mon-Thu 8-3:30 PM Fri or email us 24/7 at [support@hrgoffroad.com](mailto:support@hrgoffroad.com).**

*This product is intended for off-road use only!!*

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