



GENERAL INSTRUCTION GUIDELINES **READ THIS FIRST:**

- Read these instructions fully prior to beginning work. Verify all parts listed below are in the kit packaging, and all tools, equipment, skills and methods are on hand to safely complete the installation.
- Read the attached GENERAL INSTALLATION NOTES prior to beginning any work.
- Installation of these components should be performed by experienced and qualified mechanics, using safe and correct tools and equipment. Northwoods recommends this installation be performed by a qualified, certified automotive shop.
- Use safe methods in all work operations. Support the vehicle safely as required on a lift or hoist, or certified jack stands.

GENERAL INSTALLATION NOTES

- Installation shall be performed by qualified, experienced mechanics capable of performing this type of work. Northwoods recommends the work be performed in qualified ASE certified shops.
- Use only quality, certified tools and equipment appropriate for the job.
- Vehicle should only be supported by certified hoists, lifts, or jackstands of adequate capacity.
- Use only certified, dedicated spring compressors to compress and assemble springs. Northwoods recommends springs only be assembled and installed by qualified auto repair shops, using dedicated spring compression tools.
- Actual lift heights will vary by vehicle due to vehicle accessories, weights, loading, wear, initial ride height, and other factors.
- Upon completion of installation of springs or other suspensions and steering components, vehicles should be immediately aligned at a qualified shop.
- Modification to vehicle ride height requires re-alignment of headlights.
- Full inspection of all components installed should be checked after 300 miles of driving, including torque of all fasteners.
- Modified vehicles will handle and perform differently from stock vehicles, and the modified vehicle characteristics should be considered for driving safety. Modified vehicles may have affects to vehicle steering and response, and increased braking distances due to increased vehicle weight or larger tires.
- Modified vehicles may exhibit increased wear to suspension and other components, as well as an increase in vibration due to changes in component alignment and operating angles.
- Northwoods Performance Warranty, Return, and Replacement policies can be found on-line at northwoodsperformance.com, RESOURCES tab.



1.5" LIFT KIT INSTALLATION INSTRUCTIONS

Toyota Highlander 2008-2013

Lexus RX350 2010 - 2015

Installation time: 3-4 hours

FRONT LIFT KIT MATERIAL LIST

- Hex nut, 10mm 12
- Washers, 10mm thick 6
- Washers, 10mm thin 6
- Front Lift Spacers 2
- Sway bar links, front 2

REAR LIFT KIT MATERIAL LIST

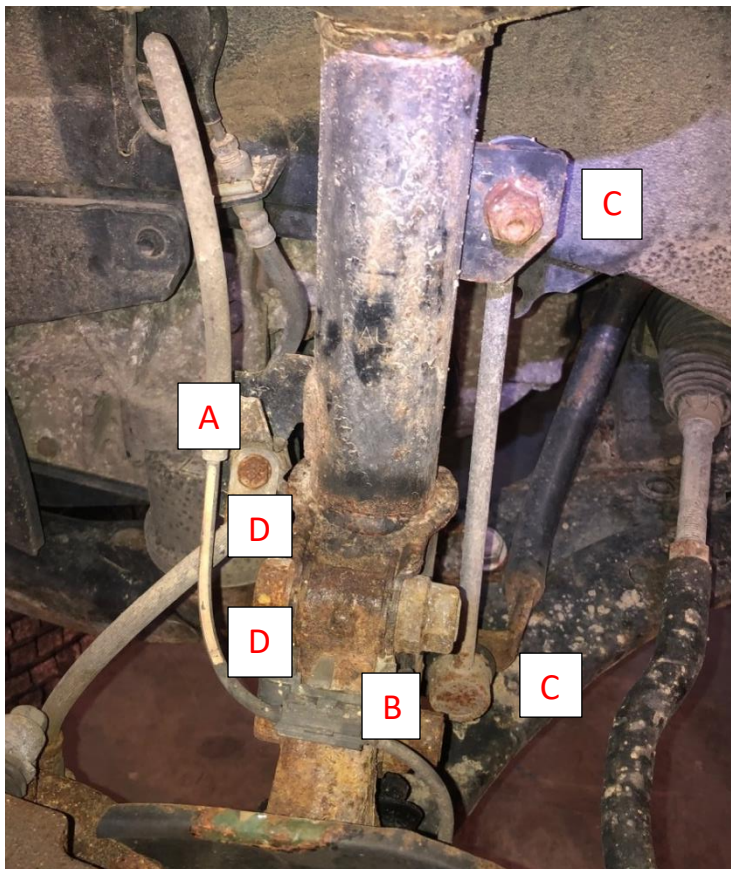
- Hex nut, 10mm 12
- Washers, 10mm thick 6
- Washers, 10mm thin 6
- Rear Lift Spacers 2
- Sway bar links, rear 2

FRONT STRUT REMOVAL

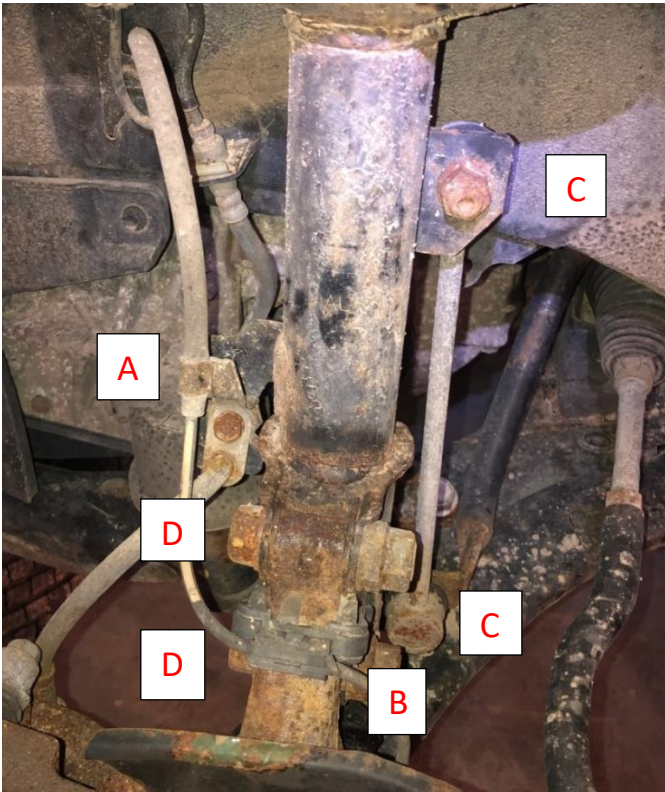
1. From inside the engine bay, remove the wiper arms, and the cowling cover to access the upper strut mounts.



2. Remove two of the three strut top retaining nuts (14mm). Loosen the third.
3. Remove brake and ABS line bracket (A, 12mm), the ABS line clip (B), the upper and lower sway bar link bolts (C, 6mm hex and 17mm box end wrench), the upper and lower knuckle bolts (D, 22mm). Support the knuckle assemble to keep the axleshaft from overextending.



4. Remove brake and ABS line bracket (A, 12mm), the ABS line clip (B), the upper and lower sway bar link bolts (C, 6mm hex and 17mm box end wrench), the upper and lower spindle bolts (D, 22mm).



5. Remove the last upper strut body nut and remove the strut.

SPACER INSTALLATION

1. Install the spacer on the top of the strut. Verify there is clearance between the top of the strut studs and the upper spacer plate studs. If necessary, cut the top of the three top strut studs to allow clearance. Hint; install a nut on the stud prior to cutting to smooth the threads on nut removal. See pics below.
2. On spacers with camber offset, install the spacer with the yellow tipped stud facing the inboard side of the strut.
3. Install spacer to strut with thin washers and nuts. Recommend light dab of blue loc-tite on the nuts. Tighten securely.

GENERAL NOTE ON INSTALLATION

This kit is designed to be fit on OEM strut systems. There are many manufacturers of struts, with slight design variations. Some struts are taller on the shaft and upper mounts, or have larger stud bases than stock. If required, some modifications may be required. Through the center hole in the top plate of the spacer, inspect to verify there is clearance between the strut and the top spacer plate. It is critical that the lower spacer plate mount flat and fully to the strut body.



STRUT INSTALLATION

Strut installation is in the reverse order of removal.

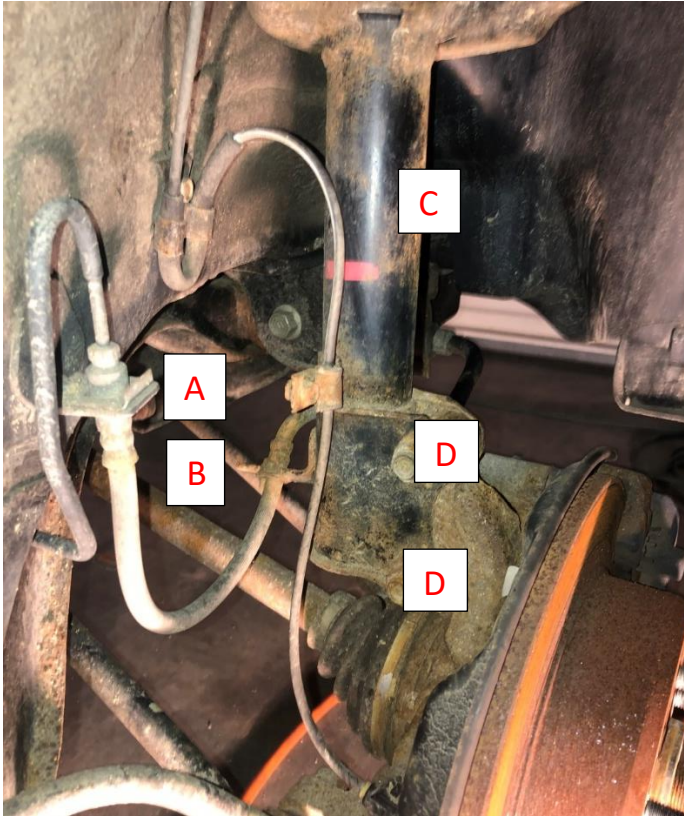
1. Place the strut in place, and secure loosely in place with nuts from the strut spacer through the car body. Install with provided 10mm nuts and thick washers.
2. Align the upper and lower knuckle bolts and install. Tighten securely.
3. Install the brake and ABS line bracket with the bolt.
4. Complete strut installation on both sides of the car.
5. Grease the new sway bar links, and install. The links are custom designed and made to work correctly with a spacer lift—they do have stud orientation on the same side of the links by design. Install with both link studs facing outboard of the car, and the grease zerks facing rearward. Tighten securely.
6. Lower the car onto the ground, and tighten the strut mount nuts through the body securely.

REAR STRUT REMOVAL

1. From inside the rear cargo bay, remove the plastic cover over the top strut mount, and remove the 3 nuts.



2. Remove brake and ABS line bracket (A), the brake line clip (B), the upper sway bar link bolt (C, 5mm hex and 14mm box end wrench), and the upper and lower spindle bolts (D, 19mm).



3. Remove the strut.

SPACER INSTALLATION

1. Install the spacer on the top of the strut. Verify there is clearance between the top of the strut studs and the upper spacer plate studs. If necessary, cut the top of the three top strut studs to allow clearance. Hint; install a nut on the stud prior to cutting to smooth the threads on nut removal. See pics below.
2. Install spacer to strut with thin washers and nuts. Recommend light dab of blue loc-tite on the nuts. Tighten securely.

GENERAL NOTE ON INSTALLATION

This kit is designed to be fit on OEM strut systems. There are many manufacturers of struts, with slight design variations. Some struts are taller on the shaft and upper mounts, or have larger stud bases than stock. If required, some modifications may be required. Through the center hole in the top plate of the spacer, inspect to verify there is clearance between the strut and the top spacer plate. It is critical that the lower spacer plate mount flat and fully to the strut body.

STRUT INSTALLATION

Strut installation is in the reverse order of removal.

1. Place the strut in place, and secure loosely in place with nuts from the strut spacer through the car body. Install with provided 10mm nuts and thick washers.
2. Align the upper and lower knuckle bolts and install. Tighten securely.
3. Install the brake and ABS line bracket with the bolt.
4. Complete strut installation on both sides of the car.
5. Grease the new sway bar links, and install. The links are custom designed and made to work correctly with a spacer lift—they do have stud orientation on the same side of the links by design. Install with both link studs facing outboard of the car, and the grease zerks facing rearward. Tighten securely.
6. Lower the car onto the ground, and tighten the strut mount nuts through the body securely.