



# LEVELING KIT SUSPENSION

Assembly, Installation, Operation,  
and Maintenance Instructions

<b>PART NUMBER</b>	<b>T15LL1</b>
<b>INSTALL TIME</b>	<b>2 HOURS</b>

## 2022-2024 TOYOTA TUNDRA 2WD/4WD (EXCLUDES TRD PRO MODELS)

<b>DEALER / INSTALLER</b>	Provide a copy of these instructions to the end user of this product. These instructions provide important operating and safety information for proper usage of this product. Demonstrate the proper use of the product with the end user. Have the end user demonstrate that they understand the proper use of the product.
<b>END USER</b>	Read and follow all instructions included in this manual. Ask your Dealer / Installer for assistance if you do not understand the proper use of the product. Never remove any decals from the product. Failure to follow these instructions can result in injury or death.

TOOLS REQUIRED
BASIC HAND TOOLS
FLOOR JACK
JACK STANDS
ASSORTED METRIC & SAE SOCKETS
ALLEN WRENCHES

PACKAGE CONTENTS	QTY
SHOCK SPACERS	2
M10-1.25 HEX NUTS	8
3/8-16 C-LOCK NUTS	8
3/8" SAE WASHERS	8
COTTER PINS 1/8" X 2"	4
COTTER PINS 5/32" X 2"	2
THREAD LOCKING COMPOUND	1



# WARNINGS/SAFETY PRECAUTIONS



**For technical assistance call:** 1-866-638-4870 or email: [support@TrailFX.com](mailto:support@TrailFX.com)

## **READ THIS BEFORE YOU BEGIN INSTALLATION:**

- Check all parts to the parts list above before beginning installation. If any parts are missing contact TrailFX tech and warranty team at 1-866-638-4870 and a replacement part will be sent to you immediately.
- Read all instructions thoroughly from start to finish before beginning the installation. If these instructions are not properly followed, severe frame, driveline and/or suspension damage may occur.
- Check your local city and state laws prior to the installation of this system for legality. Do not install if not legal in your area.
- Prior to the installation of this suspension system, perform a front-end alignment. Do not install this system if the vehicle alignment is not within factory specifications. Check for frame and suspension damage prior to installation.
- Use the provided thread locking compound on all hardware.
- **WARNING:** Installation of this system will alter the center of gravity of the vehicle and may increase rollover as compared to stock.
- Vehicles that run oversized tires should check ball joints, tie rod ends, pitman arm and idler arm every 2500 - 5000 miles for wear and replace as needed.

## **FOOTNOTES:**

- This leveling kit will not work with factory air ride vehicles.
- Some models of trucks may not sit level after installation due to added accessories such as bumpers, toolboxes, cargo management, tow packages, etc.

Prior to installing this kit, with the vehicle on level ground, measure the height of your vehicle. This measurement can be recorded from the center of the wheel, straight up to the top of the inner fender lip. Record the measurements below.

**LF:** \_\_\_\_\_

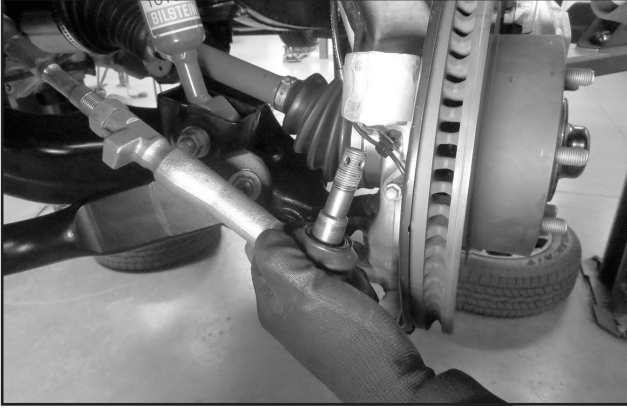
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**LR:** \_\_\_\_\_

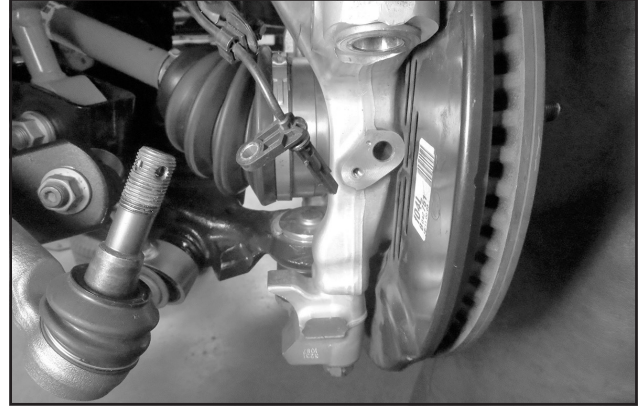
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# INSTALLATION PROCEDURE

1. Disconnect the negative terminal on the battery. Jack up the front end of the truck and support the frame rails with jack stands. **NEVER WORK UNDER AN UNSUPPORTED VEHICLE!** Remove the front tires.
2. Remove the cotter pin from the tie rod end ball joint. Loosen the nut and using a hammer strike the knuckle ball joint housing to dislodge the tie rod end. **Careful not to damage the tie rod end. (FIGURE 1).**
3. Disconnect the wheel speed sensor from the knuckle. Save hardware. **(FIGURE 2).**

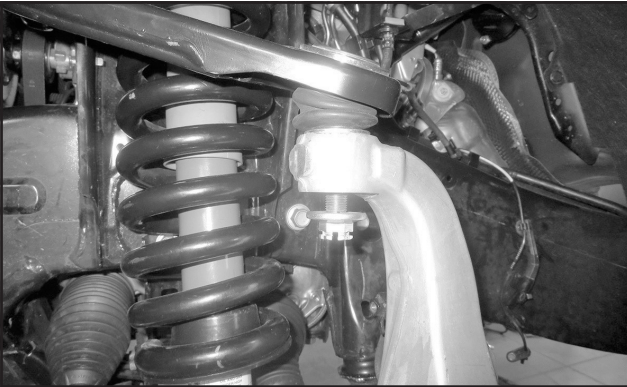


**FIGURE 1 - STEP 2**



**FIGURE 2 - STEP 3**

4. Remove the cotter pin from the tie rod end ball joint nut. Loosen the nut and using a hammer strike the knuckle ball joint housing to dislodge the upper control arm from the knuckle. Do not remove the nut. **(FIGURE 3).**
5. Remove the CV axle cotter pin and nut. Save nut. **(FIGURE 4).**

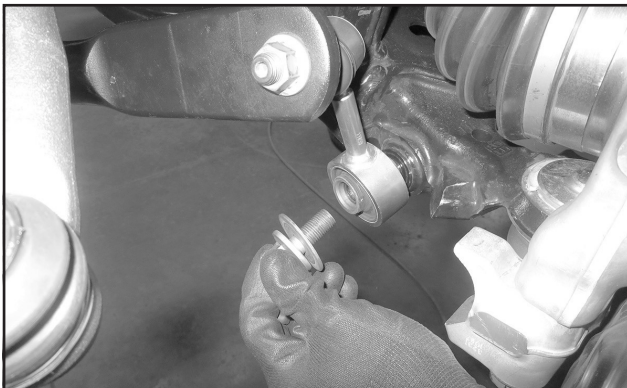


**FIGURE 3 - STEP 4**



**FIGURE 4 - STEP 5**

6. Remove the sway bar link bolt attaching the sway bar link to the lower control arm. Save hardware and disconnect the link from the arm. **(FIGURES 5-6).**



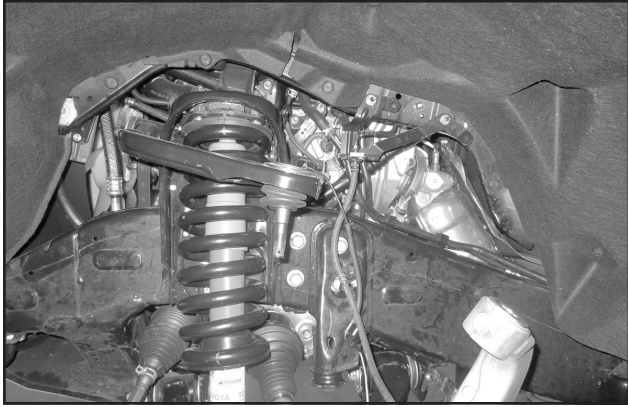
**FIGURE 5 - STEP 6**



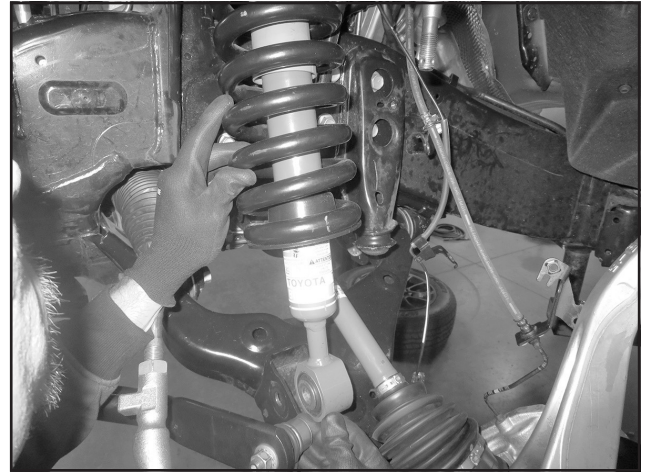
**FIGURE 6 - STEP 6**

## INSTALLATION PROCEDURE (CONTINUED)

7. Disconnect the upper control arm from the knuckle. Save hardware. **(FIGURE 7)**.
8. Remove the lower strut bolt and upper strut nuts, then remove the factory strut from the truck. **(FIGURE 8)**.

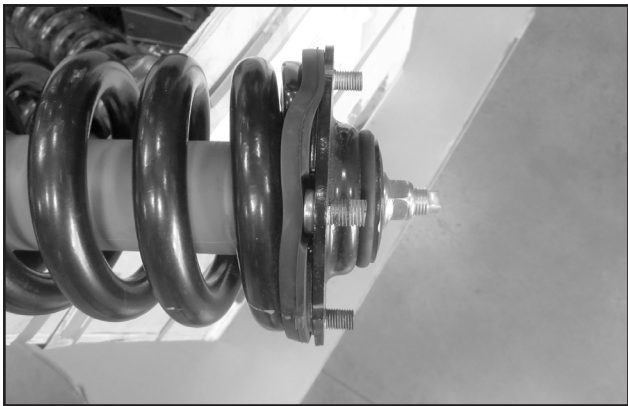


**FIGURE 7 - STEP 7**

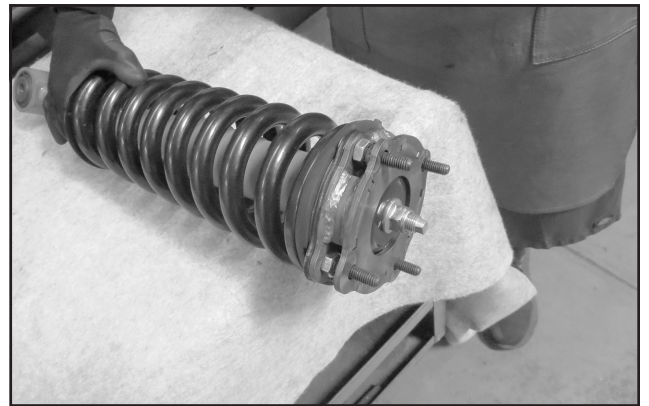


**FIGURE 8 - STEP 8**

9. Locate the four factory studs on the strut top cap. Measure 1/2" from the base of the stud and mark. The rest of the stud will need to be removed. **(FIGURE 9)**.
10. Install strut spacer onto the strut using the provided M10 nuts and thread locking compound. **(FIGURE 10)**.



**FIGURE 9 - STEP 9**



**FIGURE 10 - STEP 10**

11. Install the strut into the vehicle using the factory lower hardware and the supplied 3/8" nuts and washers. Torque the lower hardware to 148 ft-lbs. and the upper to 40 ft-lbs. **(FIGURE 11)**.



**FIGURE 11 - STEP 11**

## INSTALLATION PROCEDURE (CONTINUED)

12. Reconnect the upper control arm to the knuckle using the factory nut and supplied cotter pin. Torque to 35 ft-lbs. **NOTE: Make sure the CV axle is inserted into the hub.**
13. Install the CV axle nut and new cotter pin. Torque to 180 ft-lbs.
14. Install the wheel speed sensor and factory sway bar endlink to the lower control arm. Torque to 78 ft-lbs.
15. Install the tie rod end to the knuckle using the factory hardware and supplied cotter pin. Torque to 35 ft-lbs.
16. Repeat steps on the passenger side.
17. Install tires and wheels and torque lug nuts to wheel manufacturer's specifications. Turn front tires left to right and check for appropriate tire clearance. **Note:** Some oversized tires may require trimming of the front bumper & valance.
18. Check front end alignment and set to factory specifications. Readjust headlights.
19. Recheck all bolts for proper torque. **RE-TORQUE ALL NUTS, BOLTS AND LUGS AFTER 50 MILES AND PERIODICALLY THEREAFTER UNTIL TORQUE VALUES ARE RETAINED.**
20. Recheck brake hoses, ABS wires and suspension parts for proper tire clearance while turning tires fully left to right.
21. Check the fluid in the front and rear differential and fill if needed with factory specification differential oil. **Note: Some differentials may expel fluid after filling and driving. This can be normal in resetting the fluid level with the new position of the differential/s.**
22. Check ball joints, uniballs bearings, bushings and all steering components every 2500-5000 miles for wear and replace as required.

## **PRODUCT CARE/MAINTENANCE**

- 1.** Make sure to regularly check the vehicle suspension and steering components for any signs of wear or damage. It is important to regularly check components for any signs of wear or damage like ball joints, tie rods, links, and bushings. Replace any worn or damaged components you find on these inspections.
- 2.** Inspect tires. Lifting your truck can put additional stress on your tires, so it is important to regularly check the tire pressure, tread depth and replace the tires when necessary.
- 3.** Make sure to have your vehicle aligned post install and regularly check as making changes to the suspension will affect the alignment, which can lead to uneven tire wear and handling issues.

# WARRANTY INFORMATION

## Limited-Lifetime Warranty:

TrailFX and Keystone Automotive Operations Inc. make no guarantees or warranties for products not manufactured by Keystone Automotive Operations Inc. Such products are covered solely under any applicable warranty of the manufacturer. It is always recommended that the operating instructions and warranty instructions provided by the manufacturer are followed.

The Limited-Lifetime Warranty excludes the following TrailFX items: bushings, bump stops, ball joints, tie rod ends, limiting straps, cross shafts, heim joints and driveshafts. These parts are subject to wear and are not considered defective when worn. They are warranted for 60 days from the date of purchase for defects in workmanship.

Keystone Automotive Operations Inc. warrants its products to be free from manufacturing and material defects to the original purchaser for the length of warranty stated above from the date of retail purchase. If any products are found to have a manufacturing or material defect, the product will be replaced or repaired at the option of TrailFX and Keystone Automotive Operations Inc. with proof of purchase by the original purchaser. The original purchaser shall pay all transportation and shipping costs associated with the return of the defective product and the defective product shall become the property of Keystone Automotive Operations Inc.

This Warranty applies to Keystone Automotive Operations Inc. products used for individual and recreational purposes. Commercial usage of the Keystone Automotive Operations Inc. products limits the warranty to 90 days from the date of purchase.

This Warranty applies only to Keystone Automotive Operations Inc. products which are found to be defective in manufacturing or material. This warranty does not apply to normal wear and tear of the finish placed on Keystone Automotive Operations Inc. products.

TrailFX and Keystone Automotive Operations Inc. are not responsible for any labor costs incurred for removal or replacement of the defective product.

TrailFX and Keystone Automotive Operations Inc. are not responsible for repair or replacement of any product under the limited warranty where the product was improperly installed, misapplied, altered, abused, neglected, overloaded, misused, or damaged as a result of an accident, including any use of the product not in accordance with all products operating and safety instructions.

Without limiting the generality of the foregoing, TrailFX and Keystone Automotive Operations Inc. shall under no circumstances be liable for any incidental or consequential loss or damage whatsoever arising out of, or in any way relating to any such breach of warranty or claimed defect in, or non-performance of the products. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above exclusion or limitation may not apply to you.

This limited warranty gives you specific legal rights, and you may also have other rights that vary from state to state.

## CONTACT US

**WEBSITE:** [TrailFX.com](http://TrailFX.com)

**PHONE:** 1-866-638-4870

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