



# 1.5" LEVELING KIT

Assembly, Installation, Operation,  
and Maintenance Instructions

<b>PART NUMBER</b>	<b>F15LL2</b>
<b>INSTALL TIME</b>	<b>2-3 HOURS</b>

## 2015-2020 FORD F150 4WD/2WD & 2021-2023 FORD F150 4WD

<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 & EQUIPMENT REQUIRED
FLOOR JACK
JACK STANDS
WHEEL CHOCKS
LARGE HAMMER
ASSORTED METRIC & S.A.E. WRENCH SET
3/8" DRIVE RATCHET (MIN.)
ASSORTED METRIC & S.A.E. SOCKETS
TORQUE WRENCH (CAPABLE OF 150 FT-LBS.)
SOCKET EXTENSIONS
TAPE MEASURE
CUT-OFF WHEEL
PRY BAR

PACKAGE CONTENTS	QTY
ALUMINUM STRUT SPACER	2
DRIVER WARNING LABEL	1
3/8-24 X 1 GRADE 8 HEX BOLT - ZINC PLATED	6
3/8" GRADE 8 FLAT WASHER - ZINC PLATED	6
3/8" GRADE 8 LOCK WASHER - ZINC PLATED	6
10MM-1.5 C-LOCK NUT - ZINC PLATED	6
THREAD LOCKING COMPOUND - 2 mL	1
INSTALL INSTRUCTIONS	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:** \_\_\_\_\_

**RF:** \_\_\_\_\_

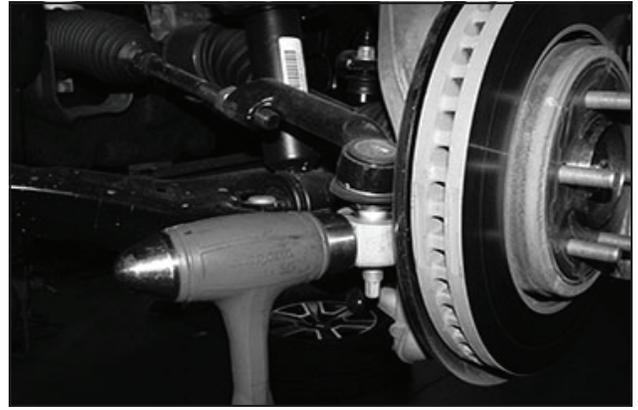
**LR:** \_\_\_\_\_

**RR:** \_\_\_\_\_

# INSTRUCTIONS - (2015-2020)

## FRONT SUSPENSION

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. Loosen the upper ball joint nut and carefully strike the knuckle with a hammer until it comes loose from the control arm. Save the hardware. **(IMAGE 1).**
3. Loosen the tie rod nut and carefully strike the knuckle with a hammer until it comes loose. Save hardware. **(IMAGE 2).**
4. Disconnect the factory sway bar endlink. Save the hardware. **(IMAGE 3).**
5. Remove the lower coilover nuts. Save hardware. **(IMAGE 4).**
6. Remove the three nuts attaching the coilover to the upper mount and remove the factory coilover. **(IMAGE 5).**



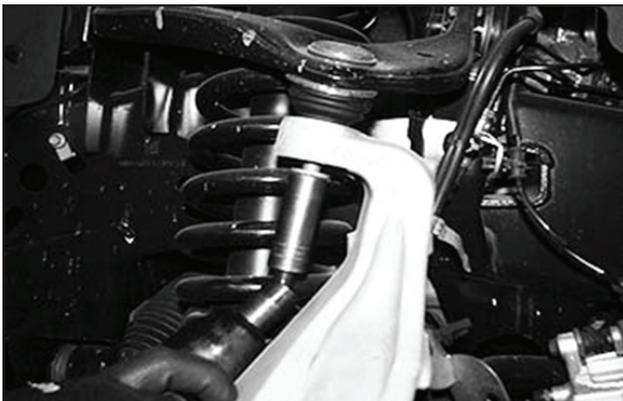
**IMAGE 2 - STEP 3**



**IMAGE 3 - STEP 4**



**IMAGE 4 - STEP 5**



**IMAGE 1 - STEP 2**



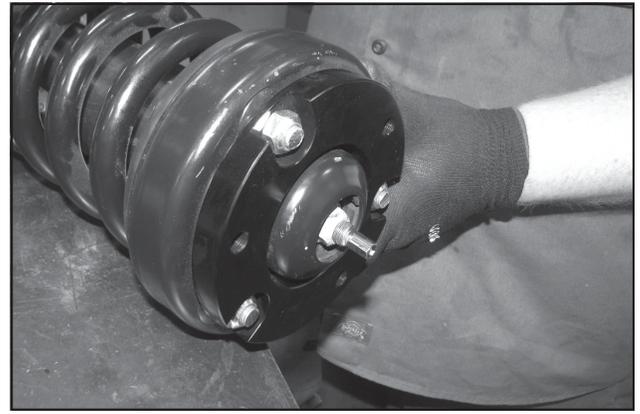
**IMAGE 5 - STEP 6**

## INSTRUCTIONS (CONTINUED)

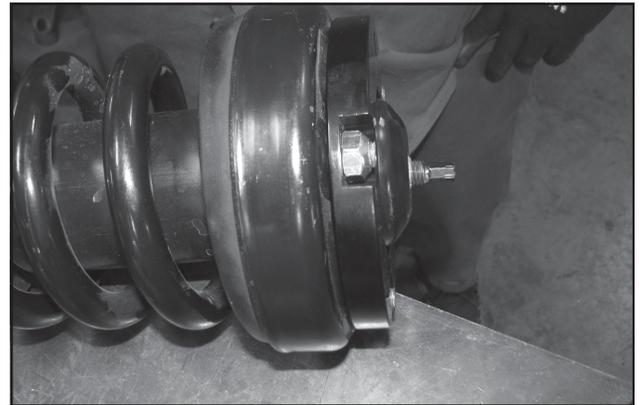
7. On the factory coilover that was just removed, measure and mark  $5/8$ " from the base of the factory studs. Using a cut-off wheel, cut the excess end of the studs off. **(IMAGE 6-7).**

8. Locate the aluminum strut spacer and 10mm c-lock nuts. Apply thread locking compound and install the aluminum strut spacer on the factory coilover. Torque to 58 ft-lbs. **(IMAGE 8-9).**

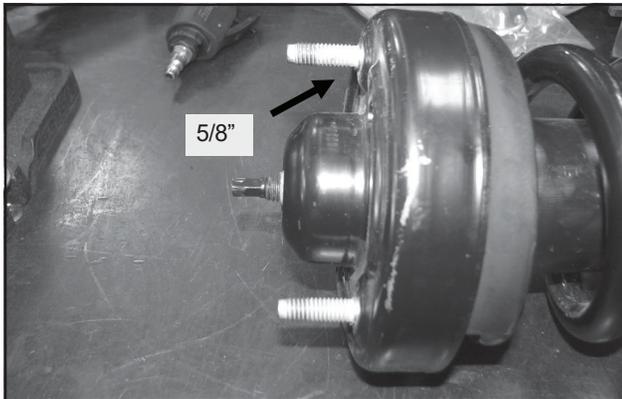
9. Install the factory coilover into the vehicle using supplied  $38$ "- $24 \times 1$ " bolts and washers, securing the upper spacer to the vehicle. Torque to 52ft-lbs. **(IMAGE 10-11).**



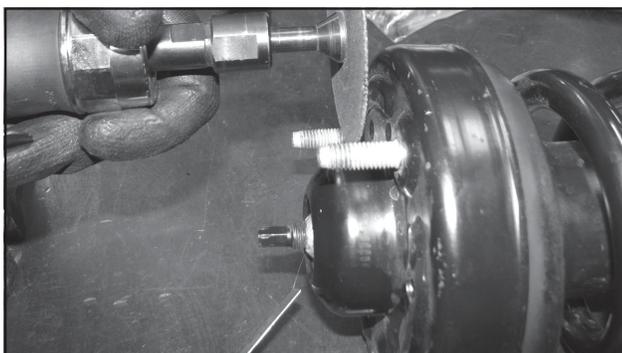
**IMAGE 8 - STEP 8**



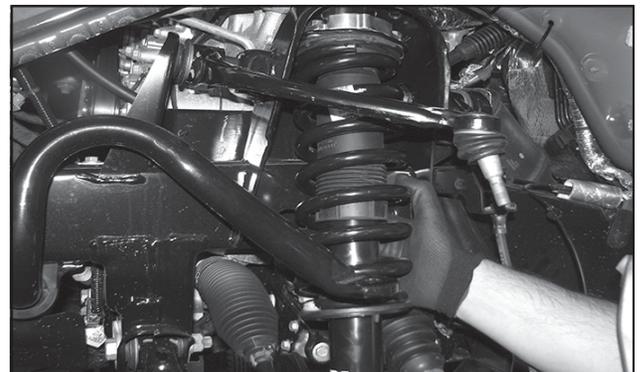
**IMAGE 9 - STEP 8**



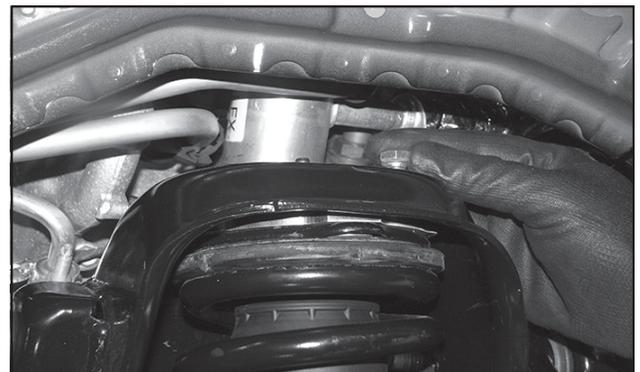
**IMAGE 6 - STEP 7**



**IMAGE 7 - STEP 7**



**IMAGE 10 - STEP 9**



**IMAGE 11 - STEP 9**

## INSTRUCTIONS (CONTINUED)

10. Reinstall the lower coilover studs into the control arm and torque the nuts to 58 ft-lbs. **NOTE: Turning the coilover may be necessary to realign the lower studs with the control arm holes.** Reinstall the upper ball joint to the knuckle. Torque to 60 ft-lbs. Reattach the tie rod end to the knuckle. Torque to 50 ft-lbs.

11. Repeat steps 2-9 on the other side.

12. When both sides are complete, reattach the sway bar.

13. 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.**

14. Check front end alignment and set to factory specifications.

15. Readjust headlights.

16. Recheck all bolts for proper torque.

17. Recheck brake hoses, ABS wires and suspension parts for proper tire clearance while turning tires fully left to right.

18. Check the fluid in the front and rear differential and fill if needed with factory specified 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 differentials.**

19. Install Driver Warning Decal.

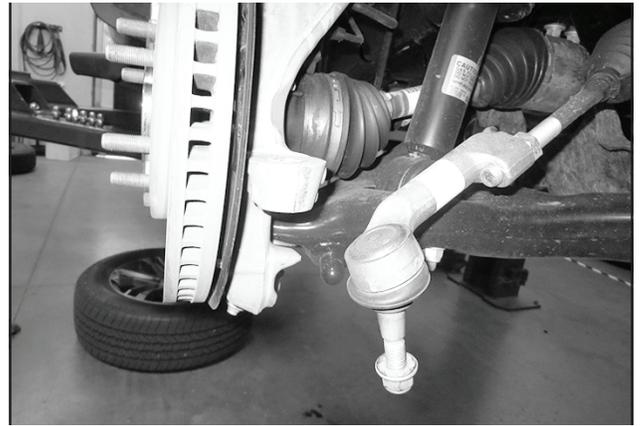
**Vehicles that will receive oversized tires should check ball joints, tie rod ends and all steering components every 2500-5000 miles for wear and replace as required.**

**RETORQUE ALL NUTS, BOLTS AND LUGS AFTER 50 MILES AND PERIODICALLY THEREAFTER.**

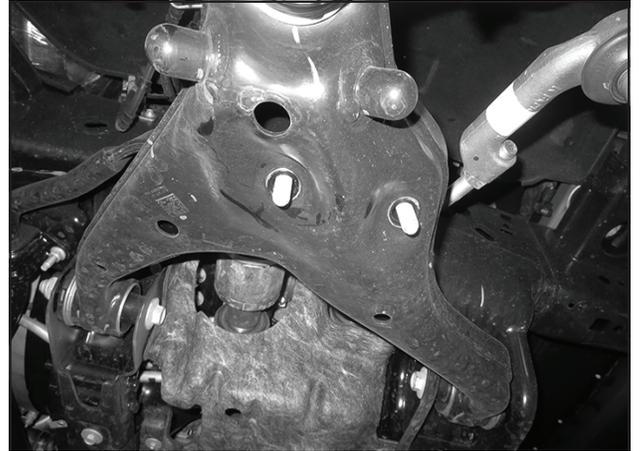
# INSTRUCTIONS - (2021-2022)

## FRONT SUSPENSION

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. Disconnect the sway bar link from the knuckle. Save hardware. **(IMAGE 1)**.
3. Loosen the tie rod nut and carefully strike the knuckle with a hammer until it comes loose from the knuckle. Save hardware. **(IMAGE 2)**.
4. Remove the two lower strut nuts from the bottom side of the lower control arm. Save hardware. **(IMAGE 3)**.
5. Loosen the three top strut nuts. Do not remove at this time. **(IMAGE 4)**.
6. Mark the location of the control arm pivot bolts on the lower control arm. Remove the two lower control arm pivot bolts. Save all hardware. **(IMAGE 5)**.



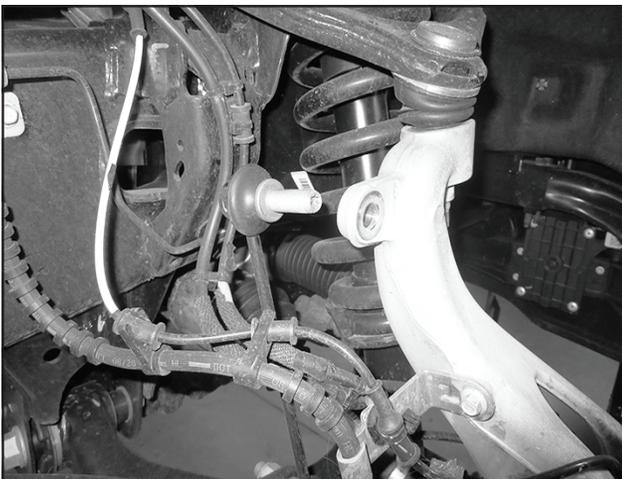
**IMAGE 2 - STEP 3**



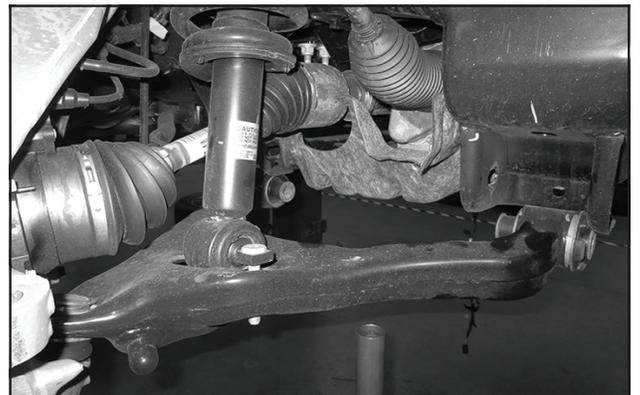
**IMAGE 3 - STEP 4**



**IMAGE 4 - STEP 5**



**IMAGE 1 - STEP 2**



**IMAGE 5 - STEP 6**

## INSTRUCTIONS (CONTINUED)

7. Pull down on the lower control arm to remove the lower strut studs. **(IMAGE 6)**. Remove the top strut nuts then remove the strut from the vehicle. **NOTE: Mark the orientation of the strut by marking the outside (toward the wheel).**

8. On the coilover measure and mark 5/8" from the base of the factory studs. Using a cut-off wheel, cut the excess end of the studs off. **(IMAGE 7-8)**.

9. Install the aluminum strut spacer on the factory coilover using the supplied M10 nuts. Torque to 58 ft-lbs. **(IMAGE 9)**.

10. Reinstall the coilover using the supplied 3/8" hardware. **NOTE: When installing rotate 180 degrees to line up the holes in the upper mount and strut spacer.** Raise the lower control arm while inserting the lower strut studs into the holes in the arm. Install the factory lower strut nuts. **(IMAGE 10-11)**.

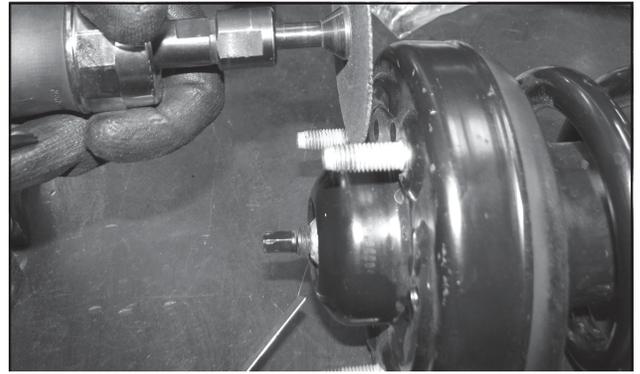


IMAGE 8 - STEP 8

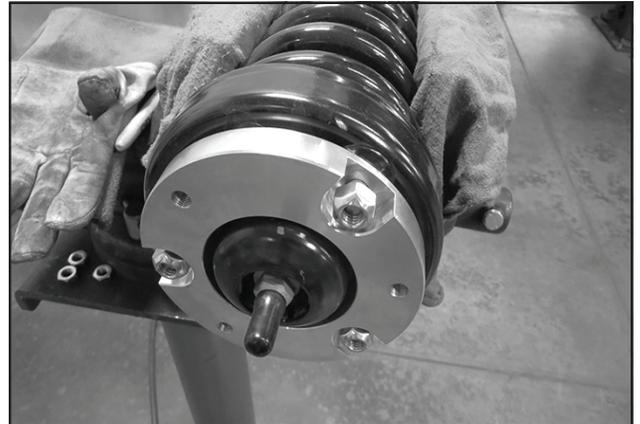


IMAGE 9 - STEP 9

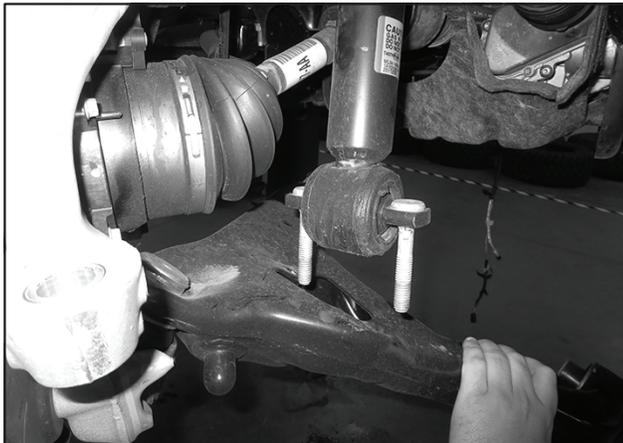


IMAGE 6 - STEP 7

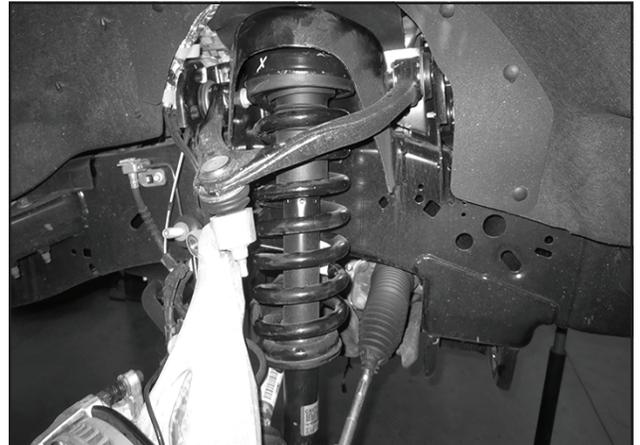


IMAGE 10 - STEP 10

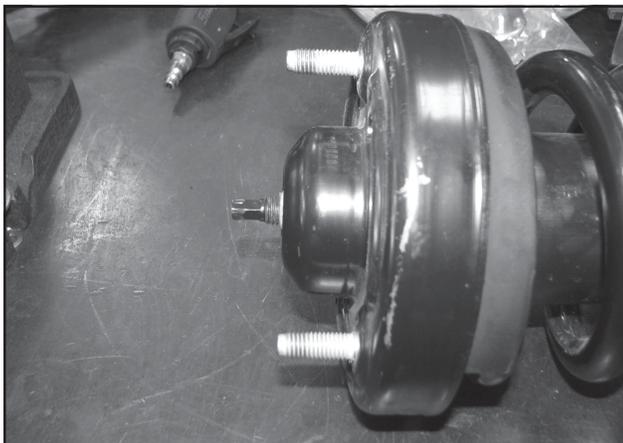


IMAGE 7 - STEP 8

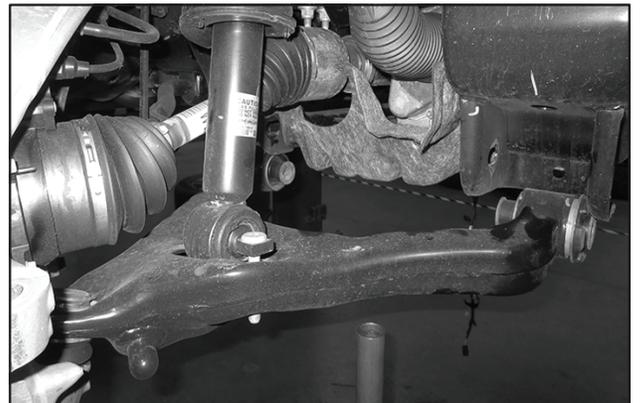


IMAGE 11 - STEP 10

## INSTRUCTIONS (CONTINUED)

**11.** Using a jack install the lower control arm into the pockets one pocket at a time using the factory hardware. Set to the mark previously marked and Torque to 200 ft-lbs. **(IMAGE 12).**

**12.** Torque the upper strut bolts to 40 ft-lbs and the lower strut nuts to 45 ft-lbs.

**13.** Install the tie rod end into the knuckle using the factory nut. Torque to 60 ft-lbs. Install the sway bar end link to the knuckle using the factory nut. Torque to 45 ft-lbs.

**14.** Repeat steps on the opposite side.

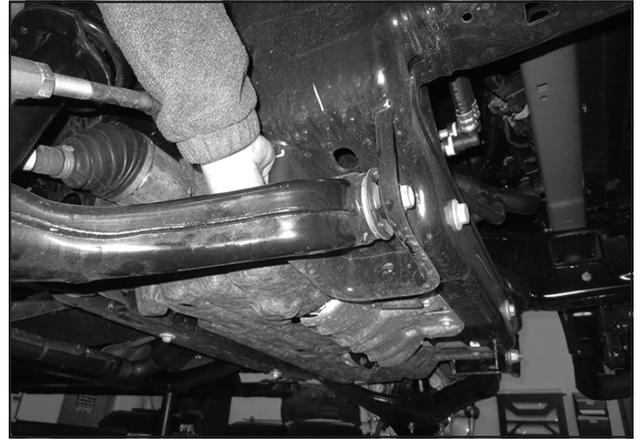
**15.** Install tires and wheels and torque lug nuts to wheel manufacturer's specifications. Turn front tires left to right and check for appropriate tire clearance. **Note: Some oversized tires may require trimming of the front bumper & valance.**

**16.** Recheck brake hoses, ABS wires and suspension parts for proper tire clearance while turning tires fully left to right.

**17.** Check front end alignment and set to factory specifications.

**18.** Readjust headlights.

**20.** Install Driver Warning Decal.



**IMAGE 12 - STEP 11**

**Vehicles with oversized tires should check ball joints, tie rod ends and all steering components every 2500-5000 miles for wear and replace as required.**

**RETORQUE ALL NUTS, BOLTS AND LUGS AFTER 50 MILES AND PERIODICALLY THEREAFTER.**

## **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.

## CONTACT US

**WEBSITE:** TrailFX.com

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

**EMAIL:** support@trailfx.com

## PRODUCT WARRANTY

### 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 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.