



21-24 Ford F-150 2WD/4WD 2" Leveling Kit SKU 2503-01

*If you're planning to install this product, be sure to factor in **alignment, headlamp adjustment, and potential ADAS recalibration costs**, as well as the **legal compliance in your state**.

Suspension Modification Safety Warning

- **Handling Changes:** The suspension modification will alter the vehicle's handling compared to its original factory settings. It could increase the risk of loss of control or rollover during sharp turns or abrupt maneuvers.
 - **Driver Responsibility:** Drivers must be **familiar with the new handling characteristics** and **confident in their ability to operate the modified vehicle safely**.
 - **Legal Compliance:** Some suspension modifications **may not be legal in all states**. Check local laws before proceeding.
 - **Liability Disclaimer:** By installing the product, you assume **full responsibility** for the vehicle's legality and safety.
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Installation Notes

1. **Vehicle Alignment:** A wheel alignment will be necessary after installation.
 2. **Headlamp Aim:** Due to the vehicle's changed ride height, the **headlights may need realignment** to avoid unsafe road illumination or glare for others.
 3. **ADAS Systems (Advanced Driver Assistance Systems):**
 - Features like **lane keeping, adaptive cruise, collision detection, etc.** may require **recalibration** after suspension changes.
 - Some systems may **only be adjustable by OEM dealers** using specialized tools
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DIY Installation

- You are urged to read the instructions **thoroughly before starting**.
 - **Installation by a Certified mechanic is recommended**.
 - **UPR Products is not liable** for any damage caused by improper installation.
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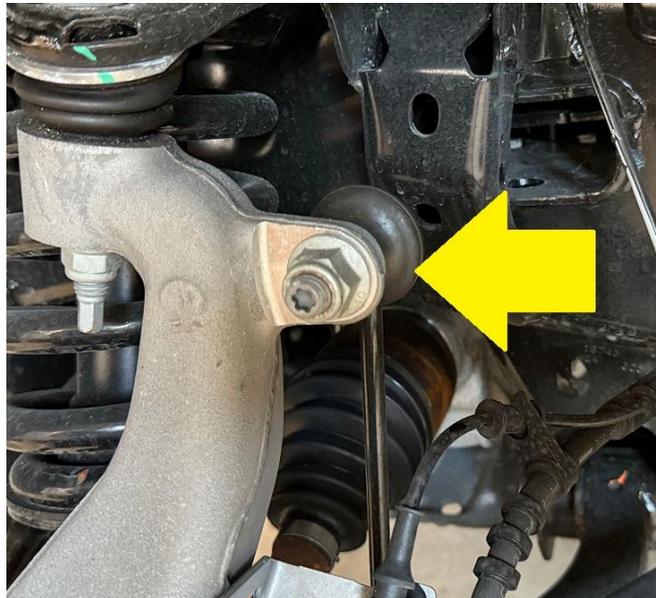
1. Always try to work on a flat, level surface. Measure the factory ride height before starting (We measure from the ground to the top of the fender opening). This is done to help identify any potential suspension issues. If you see a drastic difference in ride height from left to right sides of the vehicle, have a suspension inspection done before working on the truck.



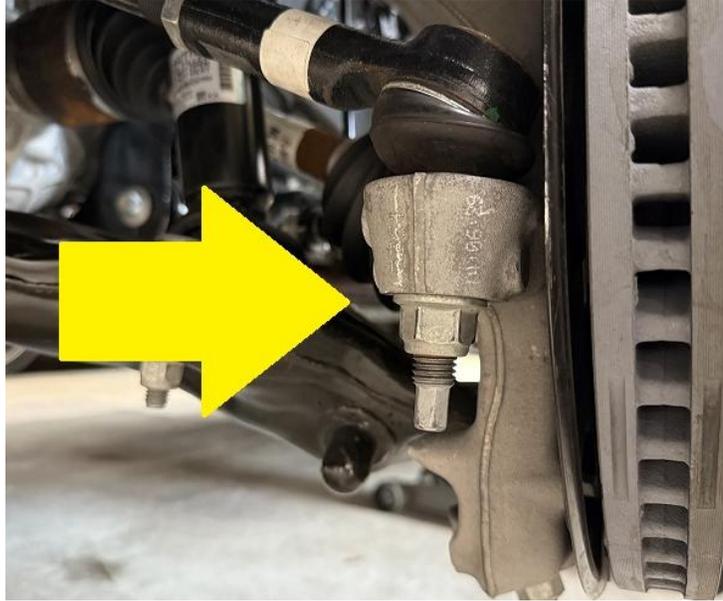
2. Lift the front of the truck and support it properly with appropriate heavy duty jack stands under the driver and passenger side frame rails. Remove both front wheels.



3. Starting on one side of the truck, support the knuckle / lower control arm with a reliable heavy-duty jack.



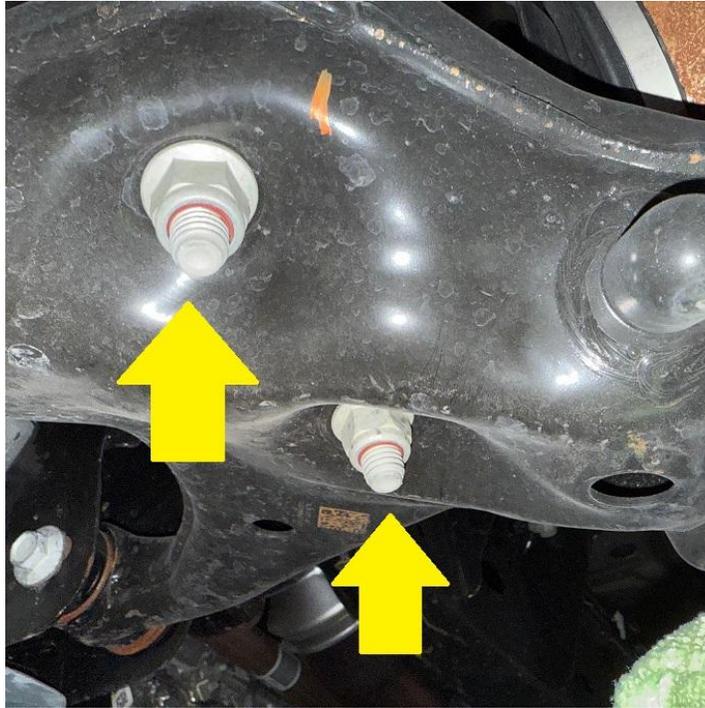
4. Remove the sway bar end link from the knuckle. Our 25 F150 had a 21mm nut and the stud had a T45 Torx.



5. Remove the tie rod end link from the knuckle. Our 25 F150 had a 21mm nut on the tie rod end.



6. There are three 18mm nuts holding the upper strut assembly into the frame pocket. Loosen the nuts, but do not remove them entirely.



7. There are 2 nuts holding the lower strut assembly to the lower control arm. Remove the nuts with an 18mm socket and set them aside.



8. The lower control arm is attached to the frame with 2 pivot bolts. Mark the location of the bolts on the frame as a reference. Loosen and remove the bolts. Set the bolts aside to be used later. You will not re use the nuts as replacements are provided in the kit.

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9. To remove the strut, allow the lower control arm to pivot downward to release the lower strut studs. You may need to lower the jack supporting the knuckle to get the strut out. You may need to carefully use a pry bar or dead blow hammer to dislodge the A arm from the frame pockets and / or to release the shock studs from the A arm. While holding the strut assembly, remove the 3 upper strut mount nuts and remove the strut assembly from the truck.



10. Mark the outside (side facing the tire) of the spring and upper spring cup on the strut. (a silver sharpie works great). This will help with aligning the strut spacer later on.
11. Repeat the procedure on the other side of the truck to remove the other strut.

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12. **Assemble the Spacers:** Before installing the provided studs into the strut spacer, apply a small dab of blue loctite® to the threads. Thread them into the spacer by hand until they bottom out in the threaded hole. Do not tighten the studs.



13. The UPR leveling spacer will be marked with an arrow. The arrow will face out towards the tire.

14. In order to properly align the strut bolt pattern with the spacer bolt pattern and offset, there are two methods that can be used. **Please read the next two steps before proceeding.**
- If your F150 is equipped with any electronic sensors connected *directly* to the struts, and they are driver or passenger side specific, you would need to remove the upper spring cup and rotate it 180 degrees from the mark on the spring, which would require a **heavy-duty** spring compressor to release tension on the upper spring cup. Bringing the strut to a qualified shop with a **heavy-duty** spring compressor is recommended should you choose to rotate the cup. It is not recommended to use DIY spring compressors on a truck spring. If you choose to do so, it is at your own risk.
 - **OR** if your struts do not have any sensors connected directly to them, you can simply swap the struts side to side – installing the passenger side strut on to the driver, and driver side on the passenger side. The marks you made on the struts would now face in towards the frame, and the arrow on the strut spacer would face out towards the tire.



15. Install the leveling spacer onto the strut so that the arrow stamped on the spacer will face out towards the tire. Use the provided nuts to install the leveling spacer onto the strut. Torque the nuts to 30 lb-ft.



16. Reinstall the strut into the frame. Install the upper part of the strut into the strut pocket using the provided 10mm nuts. Be sure the arrow on the spacer is facing out towards the tire. Do not torque the nuts at this time.
17. Pivot the lower control arm to align the lower strut studs into the control arm holes. Install the factory nuts. Do not torque the nuts at this time.
18. Using a jack and a sturdy block of wood, carefully lift the lower control arm until the bushings align into the frame pockets and slide the factory pivot bolts through the bushings.

*The factory control arms do not have a good flat surface to use a jack on, so be cautious and patient when reinstalling the control arms.



19. Install the cam plate onto the pivot bolt so that the pin faces the frame. The pin on the back of the plate will fit into the existing hole in the frame.



20. Install the cam nut onto the pivot bolt. Using a 27mm wrench or socket to hold the cam nut in place, tighten the pivot bolt until the cam nut is seated. You can set the pivot bolt position close to your marks as a base setting until you get to an alignment shop. Tighten, but do not torque the bolts at this time.



21. Torque the upper strut mount nuts to 35 lb-ft.
22. Torque the lower strut mount nuts to 45 lb-ft.
23. Reinstall the tie rod end into the knuckle and torque to 60 lb-ft.
24. Reinstall the sway bar end link into the knuckle and torque to 45 lb-ft.
25. Repeat the procedure on the other side of the truck.
26. Double check all of your work to make sure no bolts or nuts are left loose, and there are no issues with ABS wires, brake lines, sensor wires etc.
27. Reinstall the wheels and torque the lug nuts to manufacturer's specifications.
28. Carefully lower the truck back to the ground.
29. With the weight of the truck back on the wheels, torque the control arm pivot bolts to 200 lb-ft. Move the truck forward then back and turn the wheels Lock to lock right then left to make sure there are no unusual noises or binding.

A professional alignment will be required.

The UPR leveling kit will provide approximately 2 inches of front ride height increase. Some trucks may be slightly lower or higher depending on the weight of the vehicle and how the truck is equipped.

Product Liability Statement: The purchase of the product, manufactured by UPR Products Inc. completes an agreement between UPR Products Inc. and the customer. UPR Products Inc. assumes no liability for damages or injury incurred by the buyer of this product. The purchaser or user of this product is responsible for the proper disposal of any hazardous materials (oil catch can contents). The buyer has complete responsibility for the installation, use and upkeep of this product.

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