



**Installation manual**  
**2" Front leveling kit**  
**2004 -- 2008 Ford F150**  
**Part # 22905**

sj06242011rev.02

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**2" Front leveling kit**

<b><u>Part #</u></b>	<b><u>Description</u></b>	<b><u>Qty.</u></b>
22905-01	Front spacer	2
22905INST	Instruction sheet	1
MIRRORHANGER	Rear view mirror hanger	1
WARNINGDECAL	Warning decal	1

Due to the inconsistencies of the stock strut, height after installation of the spacer may vary. Any questions please feel free to contact Tuff Country or your local Tuff Country dealer.

Congratulations on your selection to purchase a Tuff Country EZ-Ride Suspension System. We at Tuff Country are proud to offer a high quality product at the industries most competitive pricing. Thank you for your confidence in us, and our product.

Before installation begins, it is the customers/installers responsibility to make sure that all parts are on hand. If any parts are missing, please feel free to call one of our customer service representative @ (800) 288-2190.

Tuff Country EZ-Ride Suspension packages (1) set of instruction sheets with this box kit. This instruction sheet is for the installer. We also package some post installation procedure literature and it is the installers responsibility to make sure that the customer receives a copy of the literature.

The Tuff Country EZ-Ride Suspension product safety label that is included in your kit box must be installed inside the cab in plain view of all occupants.

**Important customer information:**

Tuff Country EZ-Ride Suspension highly recommends that a qualified and/or certified mechanic performs this installation.

If you desire to return your vehicle to stock, it is the customers responsibility to save all stock hardware.

This vehicles reaction and handling characteristics may differ from standard cars and/or trucks. Modifications to improve and/or enhance off road performance may raise the intended center of gravity. Extreme caution must be utilized when encountering driving conditions which may cause vehicle imbalance or loss of control. **DRIVE SAFELY!** Avoid abrupt maneuvers, such as sudden sharp turns which could cause a roll over, resulting in serious injury or death.

It is the customers responsibility to make sure that a re-torque is performed on all hardware associated with this suspension system after the first 100 miles of installation. It is also the customers responsibility to do a complete re-torque after every 3000 miles or after every off road use.

After the original installation, Tuff Country EZ-Ride Suspension also recommends having the alignment checked every 6 months to ensure proper tracking, proper wear on tires and front end components. Tuff Country EZ-Ride Suspension takes no responsibility for abuse, improper installation or improper suspension maintenance

It is the customers/installers responsibility to read and understand all steps before installation begins. OEM manual should be used as a reference guide.

Make sure to use loctite on all new and stock hardware associated with this installation.

### Limited lifetime warranty

Notice to all Tuff Country EZ-Ride Suspension customers: It is your responsibility to keep your original sales receipt! If failure should occur on any Tuff Country EZ-Ride Suspension component, your original sales receipt must accompany the warranted unit to receive warranty. Warranty will be void if the customer can not provide the original sales receipt. Do not install a body lift in conjunction with a suspension system. If a body lift is used in conjunction with any Tuff Country EZ-Ride Suspension product, your Tuff Country EZ-Ride Suspension WARRANTY WILL BE VOID. Tuff Country Inc. ("Tuff Country" ) suspension products are warranted to be free from defects in material and workmanship for life if purchased, installed and maintained on a non-commercial vehicle; otherwise, for a period of twelve (12) months, from the date of purchase and installation on a commercial vehicle, or twelve thousand (12,000) miles (which ever occurs first). Tuff Country does not warrant or make any representations concerning Tuff Country Products when not installed and used strictly in accordance with the manufacturer's instructions for such installation and operation and accordance with good installation and maintenance practices of the automotive industry. This warranty does not apply to the cosmetic finish of Tuff Country products nor to Tuff Country products which have been altered, improperly installed, maintained, used or repaired, or damaged by accident, negligence, misuse or racing. ("Racing is used in its broadest sense, and, for example, without regards to formalities in relation to prizes, competition, etc.) This warranty is void if the product is removed from the original vehicle and re-installed on that or any other vehicle. This warranty is exclusive and is in lieu of any implied warranty of merchantability, fitness for a particular purpose or other warranty of quality, whether express or implied, except the warranty of title. All implied warranties are limited to the duration of this warranty. The remedies set forth in this warranty are exclusive. This warranty excludes all labor charges or other incidental of consequential damages. Any part or product returned for warranty claim must be returned through the dealer of the distributor from whom it was purchased. Tuff Country reserves the right to examine all parts returned to it for warranty claim to determine whether or not any such part has failed because of defect in material or workmanship. The obligation of Tuff Country under this warranty shall be limited to repairing, replacing or crediting, at its option, any part or product found to be so defective. Regardless of whether any part is repaired, replaced or credited under this warranty, shipping and/or transportation charges on the return of such product must be prepaid by the customer under this warranty.

Important information that needs to be read before installation begins:

Tuff Country recommends a 32x11.50 or a 295/75 tire package once part # 22905 has been installed. If larger than a 32x11.50 or a 295/75 tire is installed on your in conjunction with part # 22905; Tuff Country assumes no liability and the warranty will be VOID.

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Before installation begins, Tuff Country EZ-Ride Suspension highly recommends that the installer performs a test drive on the vehicle. During the test drive, check to see if there are any uncommon sounds or vibrations. If uncommon sounds or vibrations occur on the test drive, uncommon sounds or vibrations will be enhanced once the suspension system has been installed. Tuff Country EZ-Ride Suspension highly recommends notifying the customer prior to installation to inform the customer of these issues if they exist.

Torque settings:

5/16"	15—18 ft lbs.
3/8"	28—32 ft lbs.
7/16"	30—35 ft lbs.
1/2"	65—85 ft lbs.
9/16"	85—120 ft lbs.
5/8"	95—130 ft lbs.
3/4"	100—140 ft lbs.

Special note: Before installation begins, it is the customers/installers responsibility to make sure that all parts are on hand. If any parts are missing, please feel free to call one of our customer service representatives @ (801) 280-2777.

Recommended tools selection:

Torque wrench  
Standard socket set  
Standard wrench set  
Metric socket set  
Metric wrench set  
Tape measure  
Hydraulic floor jacks

**Tuff Country EZ-Ride Suspension highly recommends using a wall mounted strut compressor when installing the strut spacer into the stock strut. If you do not have access to a wall mounted strut compressor, please take it to your local Ford dealer to have the strut spacer installed into the stock strut.**

**Before installation begins, measure from the center of the hub, to the bottom of the fender well, and record measurements below.**

**Pre-installation measurements:**

**Driver side front:** \_\_\_\_\_

**Passenger side front:** \_\_\_\_\_

**At the end of the installation take the same measurements and compare to the pre-installation measurements.**

**Post installation measurements:**

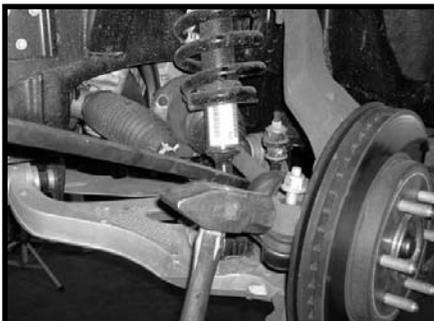
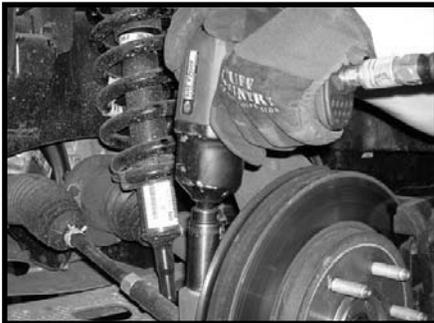
**Driver side front:** \_\_\_\_\_

**Passenger side front:** \_\_\_\_\_

**Front end installation:**

1. To begin installation, block the rear tires of the vehicle so that the vehicle is stable and can't roll backwards. Safely lift the front of the vehicle and support the frame with a pair of jack stands. Place a jack stand on both the driver and passenger side. Next, remove the wheels and tires from both sides.

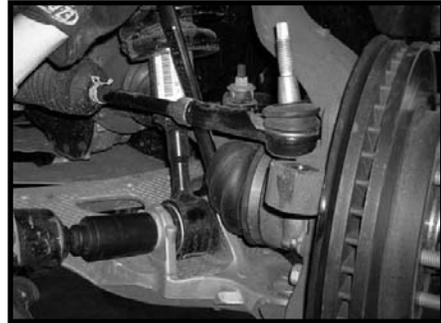
2. Working on the driver side, remove the stock outer tie rod hardware from the stock knuckle. Save the stock nut. Using a hammer, carefully brake the stock taper on the stock outer tie rod. **Special note: Take special care not to damage the stock outer tie rod dust boot.**



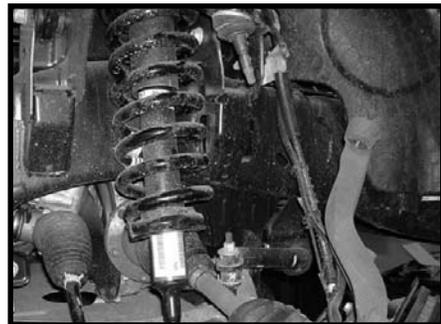
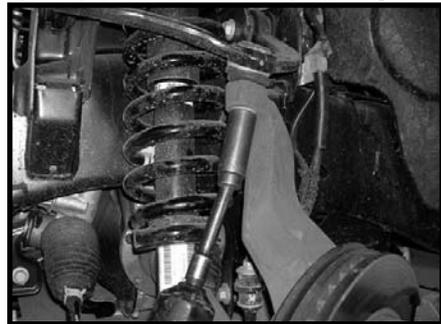
3. Working on the driver side, remove the (3) upper stock nuts that connect the stock strut into the stock location. Save the stock nuts for later re-installation.



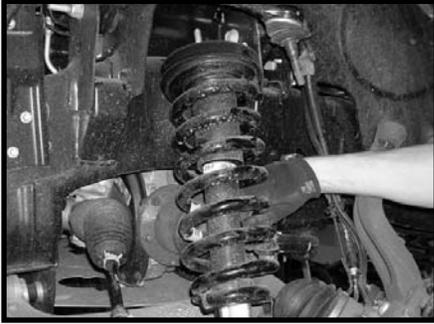
4. Working on the driver side, remove the stock lower bolt that connects the lower stock mounting point to the stock lower strut. Set the stock lower bolt aside for later re-installation. Repeat procedure on the passenger side.



5. Working on the driver side, remove the stock nut that connects the upper control arm to the stock knuckle. **Save the stock nut for later re-installation.** Using a hammer, carefully break the stock taper on the upper control arm and knuckle. Remove the upper control arm from the stock knuckle. Repeat procedure on the passenger side.



6. Working on the driver side, remove the stock strut from the vehicle and set aside. Repeat procedure on the passenger side.



7. Working on the driver side strut, scribe a line down the entire strut from the top of the strut to the bottom. **Special note: If this step is not performed properly re-installing the strut back into the vehicle will be difficult.** Repeat procedure on the passenger side strut.



Tuff Country EZ-Ride Suspension highly recommends using a wall mounted strut compressor when installing the strut spacer into the stock strut. If you do not have access to a wall mounted strut compressor, please take it to your local Ford dealer to have the strut spacer installed into the stock strut.

8. Using a wall mounted strut compressor, carefully compress the driver side stock strut until the upper stock strut bearing plate can be removed. Remove the stock nut and hardware from the top of the stock strut assembly and save the stock hardware for later re-installation. Remove the stock from the coil spring.

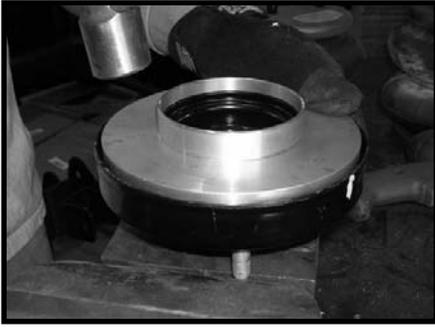


9. Working on the driver side upper bearing plate, remove the stock dust boot and discard. Place the isolator aside.



10. Locate (1) new front spacer. Install the new spacer into the upper bearing plate. **Special note: slight tapping of the spacer with a hammer will make installation easier.**

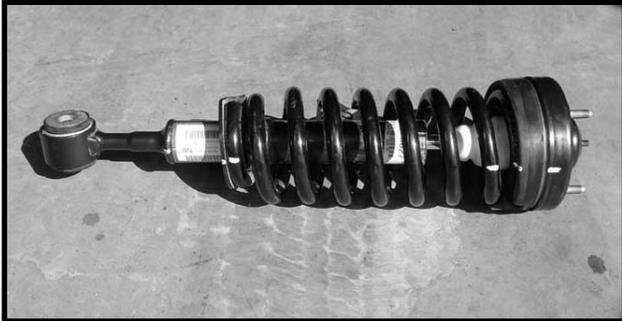




11. Locate the stock isolator and install it on the newly installed spacer.



12. Compress the stock strut enough so that the new front spacer can be installed. Install the new front spacer and secure the stock strut assembly with the stock upper hardware. Refer to the reference marks and make sure that they line up. **Special note: Make sure to use thread locker or loctite and torque to 45 ft lbs.**



13. Locate the (3) stock upper nuts. Install the modified strut with the new spacer into the stock upper location and secure using the stock hardware. **Special note: Make sure to use thread locker or loctite and torque to 35 ft lbs.**



14. Locate the stock lower strut hardware. Secure the lower portion of the stock strut into the stock location using the stock hardware. **Special note: Make sure to use thread locker or loctite and torque to 65 ft lbs.**

15. Locate the stock upper control arm ball joint hardware. Secure the upper control arm to the stock knuckle using the stock hardware. **Special note: Make sure to use thread locker or loctite and torque to 50 ft lbs.**

16. Locate the stock outer tie rod hardware. Install and secure the stock outer tie rod to the stock knuckle using the stock hardware. **Special note: Make sure to use thread locker or loctite and torque to 38 ft lbs.**

**Repeat steps 8 - 16 on the passenger side.**

17. Re-install the tires and wheels and safely lower the vehicle to the ground.

**Special note: After the completion of the installation, Tuff Country EZ-Ride Suspension recommends taking the vehicle to an alignment shop and having a proper front end alignment performed.**

Tuff Country EZ-Ride Suspension recommends that a complete re-torque is done on all bolts associated with this suspension system. It is the customers responsibility to make sure that a re-torque is performed on all hardware associated with this suspension system after the first 100 miles of installation. It is also the customers responsibility to do a complete re-torque after every 3000 miles or after every off road use. Neglect of following these steps could cause brackets to come loose and cause serious damage to the suspension system and to the vehicle.

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If you have any questions or concerns, please feel free to contact Tuff Country or your local Tuff Country dealer.