

DIRECT-REPLACEMENT
INSTALLATION GUIDE



F-150 RAPTOR (10+)

883-02-046 - 3.0 FACTORY SERIES Internal Bypass Coil-Over Kit

883-02-047 - 3.0 FACTORY SERIES Bypass Kit



F-150 RAPTOR

3.0 FACTORY SERIES Internal Bypass
Coil-Over Kit: 883-02-046

3.0 FACTORY SERIES Bypass Kit:
883-02-047

INSTALLATION GUIDE

Thank you for choosing FOX direct-replacement, [coil-over shocks](#) for your vehicle. FOX products are designed, tested, and manufactured by the finest professionals in the industry.

FOX recommends that you become completely familiar with the handling characteristics of your modified vehicle before operating it under rigorous conditions, helping to avoid potential rollover situations and other loss of control events. FOX further recommends that you use appropriate protective equipment at all times when operating your vehicle.

To achieve the best performance and product longevity, periodic service and maintenance is required. Please refer to the Service and Upgrades section for more information.

WARNINGS

- FOX direct-replacement, coil-over shocks should always be installed as a pair for maximum performance.
- Proper installation and service procedures are essential for the safe and reliable installation of chassis parts, requiring the experience and tools specially designed for this purpose. Installation and maintenance procedures for this product must be performed by a qualified service technician, to avoid potentially unsafe vehicle handling characteristics, which may result in **SERIOUS INJURY** or **DEATH**.
- Modifying your vehicle's suspension will change the handling characteristics of your vehicle. Under certain conditions, your modified vehicle may be more susceptible to loss of control or rollover, which can result in **SERIOUS INJURY** or **DEATH**. Thoroughly familiarize yourself with the modified vehicle handling characteristics before any rigorous vehicle operation. Wear body protective gear including head protection when appropriate.

Installation of vehicle roll bars or cage is highly recommended.

- FOX direct-replacement, coil-over remote reservoir shocks are gas-charged and are highly pressurized. Placing shocks in a vise or clamp, applying heat, or attempting to open or service the shock without the proper tools and training can result in **SERIOUS INJURY** or **DEATH**. Do not attempt to modify, puncture or incinerate a FOX direct-replacement coil-over shock absorber.
- Any attempt to misuse, misapply, modify, or tamper with any FOX product voids any warranty and may result in **SERIOUS INJURY** or **DEATH**.

GUIDELINES

- Always use a chassis lift for the installation of shocks, and make certain that the raised vehicle is securely attached to the lift to prevent the vehicle from slipping, falling, or moving during the installation process.
- **DO NOT** install any FOX product without the necessary special tools, expertise and chassis lift, or you will subject yourself to the risk of **SERIOUS**

INJURY or DEATH. If you elect to not use a chassis lift (which election may result in SERIOUS INJURY or DEATH), ensure that the vehicle is on level ground, that all tires on the ground during installation are blocked to prevent vehicle movement, that at least two tires are on the ground at all times, and that adequately secured jack stands are used to support the vehicle. NEVER get under the vehicle until you have checked to ensure that the vehicle will be stable during installation.

- FOX direct-replacement, coil-over shocks are designed to fit your vehicle's shock mounts with no modifications with the exception of reservoir placement on specific models and applications.
- To adjust the ride height, first lift the vehicle (refer to the INSTALLATION GUIDELINES for instructions on how to properly lift the vehicle). After properly lifted, loosen the pinch bolt securing the main spring retainer (Loosen bolt until it spins freely, DO NOT remove bolt!). Using a spanner wrench, adjust the main spring retainer as required. If shocks have locking rings, loosen

the top lock ring and adjust main spring retainer as needed. Once set, retighten the top lock ring against the main spring retainer. IT IS HIGHLY RECOMMENDED TO USE A SPRING COMPRESSOR WHEN MAKING ANY TYPE OF PRE LOAD ADJUSTMENT

INSTRUCTIONS - FRONT

Medium-strength thread-lock (blue Loctite®) is recommended on all bolts.

1. Please read the INSTALLATION GUIDELINES for instructions on how to properly lift and secure the vehicle.
2. Record the front vehicle ride height to ensure proper lift is attained after kit is installed. You will be able to make preload adjustments if needed once the shock assembly is installed. (Spanner wrench required) READ INSTALLATION GUIDELINES ON HOW TO PROPERLY ADJUST PRELOAD
3. Remove front wheel.
4. Remove the (3) top nuts that secure the stock shock assembly to the vehicle. DO NOT remove center nut; doing so will release the spring from the stock assembly and could result in SERIOUS INJURY or DEATH!
5. Remove the (1) bolt connecting the shock to the lower control arm. DO NOT discard bolt and nut as it will be used with your new FOX coil-over assembly.

6. Disconnect outer tie rod end at the knuckle for removal/installation clearance.
7. Disconnect upper ball joint at the knuckle for removal/installation clearance. CAUTION DO NOT stretch the brake line or the wires that run to the steering knuckle.
8. Swing the knuckle towards the rear of the vehicle (Fig.1) leaving removal/installation clearance.



Fig. 1: Driver side

9. Remove the stock shock assembly. Be careful not to damage any brake lines or electrical wires.
10. Install the new coil-over assembly making sure that the reservoir hose is

facing towards the front of the vehicle (Fig. 2). Connect the top shock hat to the vehicle using the bolts and washers provided. Tighten to 24 ft*lbs.



Fig. 2: Driver side

11. Connect the shock to the lower control arm utilizing the stock bolt and nut. Torque to 406 ft*lbs.
12. Reconnect the upper ball joint at the spindle. Torque to 85 ft*lbs.
13. Reconnect the outer tie rod ends and torque to 85 ft*lbs. Reconnect any lines or wires you may have loosened.
14. Install the reservoir bracket with the supplied washers and nuts to the underside of the frame rails in front of

the suspension. Drop the bolt bracket into the frame rail and use a pick or similar tool to help drop the bolts through the holes in the frame rail. (Some earlier Raptors do not have these holes in the frame rails. If so, proceed to step 16.)

15. Using two supplied clamps, mount the reservoir to the brackets making sure to check that the hose will not rub on any frame or suspension components (Fig. 3). Utilize the slots in the bracket to locate the clamps. Do not feed the clamps through the slots in the brackets (Fig. 4).
16. For Raptors that are missing the reservoir bracket mounting holes in the frame rails, mount the reservoir to the bracket using the two supplied clamps.
17. Holding the bracket and reservoir in the proper position making sure to check that the hose will not rub on any frame or suspension components (Fig. 3). Mark and drill the holes for the mounting bolts (Center punch, 3/8" bit, and power drill required). Now complete step 14.



Fig. 3: Driver side



Fig. 4

18. Check that the suspension has proper clearance by steering completely in both directions.

19. Reinstall the front wheel and torque the lug nuts to 150 ft*lbs.
20. Set vehicle back on the ground and drive it back and forth several feet to allow the suspension to settle. Now measure ride height and make adjustments if necessary. READ INSTALLATION GUIDELINES ON HOW TO PROPERLY ADJUST PRELOAD
21. It is highly recommended that you have your wheel alignment checked.

INSTRUCTIONS - REAR

Medium-strength thread-lock (blue Loctite®) is recommended on all bolts.

1. Please read the INSTALLATION GUIDELINES for instructions on how to properly lift and secure the vehicle.
2. Remove rear wheel.
3. Remove the stock shocks.
4. Utilizing the stock bolts and nuts, install the new bypass shock with the reservoir facing towards the axle, and the bypass tubes facing towards the tires (Fig. 5). Torque to 66 ft*lbs.



Fig. 5: Driver side

5. Reinstall rear wheel and torque the lug nuts to 150 ft*lbs.

FOX LIMITED WARRANTY

FOX Factory, Inc., a California corporation having offices at 130 Hangar Way, Watsonville, CA 95076 ("FOX"), makes the following LIMITED WARRANTY with respect to its suspension products:

LIMITED ONE (1) YEAR WARRANTY ON SUSPENSION PRODUCTS

Subject to the limitations, terms and conditions hereof, FOX warrants, to the original retail owner of each new FOX suspension product, that the FOX suspension product, when new, is free from defects in materials and workmanship. Unless otherwise required by law, this warranty expires one (1) year from the date of the original FOX suspension product retail purchase from an authorized FOX dealer or from a FOX authorized Original Equipment Manufacturer where FOX suspension is included as original equipment on a purchased vehicle. If law requires a warranty duration of greater than one (1) year, then, subject to the other provisions hereof, this warranty will expire at the end of the minimum warranty period required by such law.

TERMS OF WARRANTY

This warranty is conditioned on the FOX suspension product being operated under normal conditions and properly maintained as specified by FOX. This warranty is only applicable to FOX suspensions purchased new from an authorized FOX source and is made only to the original retail owner of the new FOX suspension product and is not transferable to subsequent owners. This warranty is void if the FOX suspension product is subjected to abuse, neglect, improper or unauthorized repair, improper or unauthorized service or maintenance, alteration, modification, accident or other abnormal, excessive, or improper use.

Should it be determined by FOX in its sole and final discretion, that a FOX suspension product is covered by this warranty, it will be repaired or replaced, by a comparable model, at FOX's sole option, which will be conclusive and binding. THIS IS THE EXCLUSIVE REMEDY UNDER THIS WARRANTY. ANY AND ALL OTHER REMEDIES AND DAMAGES THAT MAY OTHERWISE BE APPLICABLE ARE EXCLUDED, INCLUDING, BUT NOT LIMITED TO,

INCIDENTAL OR CONSEQUENTIAL DAMAGES OR PUNATIVE DAMAGES.

This limited warranty does not apply to normal wear and tear, malfunctions or failures that result from abuse, improper assembly, neglect, alteration, improper maintenance, crash, misuse or collision. This limited warranty gives the consumer specific legal rights. The consumer may also have other legal rights which vary from state to state or country to country. Some states and countries do not allow the exclusion or limitation of incidental or consequential damages or warranties, and if dictated by law the above limitations or exclusions may not apply to you. If it is determined by a court of competent jurisdiction that a certain provision of this limited warranty does not apply, such determination shall not affect any other provision of this limited warranty and all other provisions shall remain in full effect.

THIS IS THE ONLY WARRANTY MADE BY FOX ON ITS SUSPENSION PRODUCTS AND COMPONENTS, AND THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION HEREIN. ANY WARRANTIES THAT MAY OTHERWISE BE IMPLIED BY

LAW INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ARE EXCLUDED.

SHOX NEED ♥ TOO

SERVICE & UPGRADES

Have your FOX serviced or upgraded by FOX technicians. Call our Offroad and Truck Service Center at 619.768.1800 to go over the service and upgrade options available for your shocks. Once you've setup your service or upgrades you will receive a return authorization number and shipping instructions.

SERVICE INTERVALS

- 100% street use: every 50,000 miles
- 50% street / 50% offroad use: every 10,000 miles