

DIRECT-REPLACEMENT  
**INSTALLATION GUIDE**



**FORD F-150 RAPTOR (2017+)**

883-06-140: 3.0 Internal Bypass Coil-Over Kit

883-09-141: 3.0 Bypass Kit



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Thank you for choosing FOX direct-replacement 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, 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, 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 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 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



Fig. 1 Right side shown

## INSTRUCTIONS - FRONT COIL-OVER

Medium-strength thread-lock (blue) 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 both front wheels.
4. Remove the three (3) top nuts that secure the stock shock assembly to the vehicle. CAUTION: 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 one (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. (Fig. 1)
7. Disconnect wires and brake line from the knuckle. Disconnect the sway-bar from the lower control arm.
8. 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.



Fig. 2: Right side shown

9. Swing the knuckle towards the rear of the vehicle (Fig.1) leaving removal/installation clearance.
10. Remove the stock shock assembly. Be careful not to damage any brake lines or electrical wires.
11. Install the new coil-over assembly making sure that the reservoir hoses are towards the front of the vehicle and angled away from the engine bay. (Fig. 2). Connect the top shock hat to the vehicle using the nuts and washers provided. Tighten to 24 ft\*lbs.



Fig. 3: Right side shown

12. Connect the shock to the lower control arm utilizing the stock bolt and nut. Torque to 406 ft\*lbs.
13. Reconnect the upper ball joint at the spindle. Torque to 46 ft\*lbs.
14. Reconnect the outer tie rod ends and torque to 85 ft\*lbs. Reconnect any lines or wires you may have loosened.
15. Reconnect wires and brake line to the knuckle. Reconnect the sway-bar to the lower control arm. Torque sway-bar end link nuts to 52 ft\*lbs.
16. Install the provided clip nuts at the front and rear facing holes on the



Fig. 4: Right side shown

sides of the body mount. Make sure the threaded portion of the nut points toward the body mount.

17. Install one of the reservoir mounting brackets onto the dovetail rail of the reservoir with the pinch bolt facing toward the ground. Slide the bracket down the reservoir until it is roughly 1/8" from the orange lockring. Tighten the 1/4-20 pinch bolt on the bracket to 18 ft\*lbs to lock in place. Install the second reservoir mounting bracket onto the reservoir dovetail rail and space 8 inches away from first bracket. Leave the pinch bolt loose for now.

18. Hold the reservoir in place and use the provided 5/16-18 x 5/8 bolt to attach the mounting bracket to the installed rear facing clip nut on the body mount. Slide the loose mounting bracket down the reservoir until it contacts the body mount, and using another 5/16-18 x 5/8 bolt, attach the mounting bracket to the front facing clip nut. Torque both bolts to 20 ft\*lbs. After both reservoir mounting brackets have been securely fastened to the body mount, tighten the pinch bolt on the front mount to 18 ft\*lbs to lock its



Fig. 5: Right side shown

position on the reservoir. Make sure to check that the hoses will not rub on any frame or suspension components.

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

## INSTRUCTIONS - REAR BYPASS

Medium-strength thread-lock (blue) 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 wheels from vehicle.
3. Remove the stock shocks.
4. Utilizing the stock bolts and nuts, install the new bypass shock with the reservoir facing away from the axle and the cooler hoses toward the axle (Fig. 6). Torque values differ left to right side.
  - Right Side: Torque to 66 ft\*lbs.
  - Left Side: Torque to 81 ft\*lbs



Fig. 6: Right side shown

- Take the provided drill template and fold along the noted fold line. Locating the template differs for driver and passenger sides.

### DRIVER SIDE (LEFT SIDE) (FIG. 7)

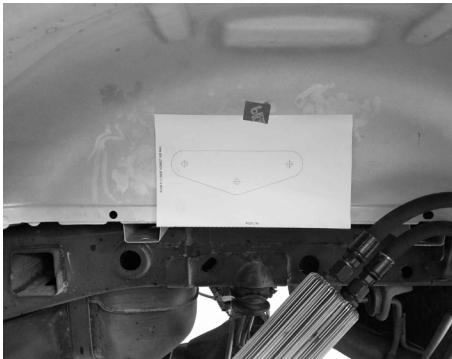


Fig. 7: Left side shown

Place the template against the truck bed wheel well until fold line is against bottom edge. Slide forward until it touches the forward bed rail. Use the template to mark the three hole locations.

### PASSENGER SIDE (RIGHT SIDE) (FIG. 8)

Place the template against the truck bed wheel well and slide backward until it touches the rear bed rail. Use the template to mark the three hole locations.

After the hole locations have been marked, use a 11/32 drill bit to drill through the truck bed and make the mounting holes for the cooler.

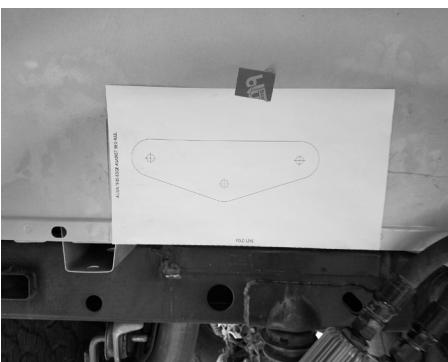


Fig. 8: Right side shown



Fig. 9: Right side shown



Fig. 10: Right side shown

6. Place the cooler mounting plate on the inside of the bed and secure to the bed with the provided 5/16-18 x 3/8 bolt installed into the center hole of the plate. Torque bolt to 16 ft\*lbs. (Fig. 9 & 10)
7. Attach the name plate and cooler to the cooler mounting bracket using the remaining two mounting holes, supplied 5/16-18 x 1-3/4 bolts and standoffs. Torque bolts to 16 ft\*lbs. (Fig. 11, 12, & 13)



Fig. 11: Right side shown

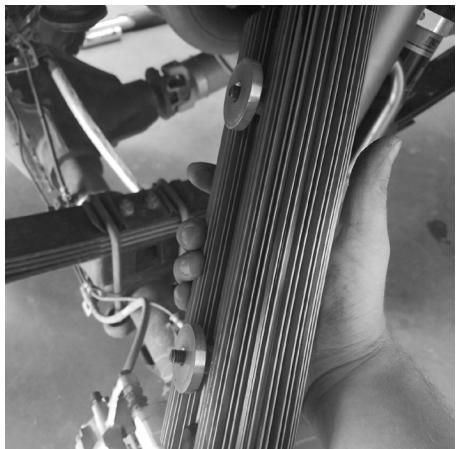


Fig. 12: Right side shown



Fig. 13: Right side shown

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



## **FOX LIMITED WARRANTY**

FOX Factory, Inc., a California corporation having offices at 915 Disc Drive, Scotts Valley, CA 95066 ("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 PUNITIVE 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**

The text "SHOX NEED" is in a large, white, sans-serif font. Below it, the word "TOO" is also in a large, white, sans-serif font, but the letter "T" has a solid black circle cutout in its center, and the letter "O" is entirely black.



## SERVICE & UPGRADES

Have your FOX serviced or upgraded by FOX technicians. Call our Off-road 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

## SERVICE MENUS & PRICING

Please visit [ridefox.com/orservice](http://ridefox.com/orservice)



RIDEFOX.COM 750 VERNON WAY SUITE 101. EL CAJON, CA 92020 USA  
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