

Cognito 2-Inch Economy Leveling Kit w/ Bilstein Shocks For 05-16 Ford F250/F350 4WD Trucks

INSTALL INSTRUCTIONS:

Cognito 2-Inch Economy Leveling Kit w/ Bilstein Shocks For 05-16
 Ford F250/F350 4WD Trucks
 SKU: 220-91065

PARTS LIST FOR SKU: 220-91065

QUANTITY	PART #	DESCRIPTION
2	5706	Leveling Kit Spacer
1	90599	1" Bump Stop Spacer Kit
2	HARDWARE-M14X2.0X100	14mm-2.0x100mm Hex Bolt
2	HARDWARE-33628	14mm Lock Washer
1	THREADLOCK-10743-0327	Thread Locker
2	220-90941	Bilstein Front Leveling Shock
2	220-90943	Bilstein Rear Leveling Shock

PARTS LIST FOR SKU: 90599

QUANTITY	PART #	DESCRIPTION
2	6289	FSD 1" Bump Stop Spacer
2	HARDWARE-M8X1.25X50	M8-1.25 X 50mm Gr 8.8 DIN 931 Hex Head Cap Screw
2	HARDWARE-33080	5/16" SAE Zinc Flat Washer
2	HARDWARE-33620	5/16" Zinc Split Washer


WARNING

Please read this entire instruction sheet before beginning installation. Proper installation of these components requires a qualified mechanic. Always wear safety glasses when using power tools, and take appropriate precautions when working under a vehicle. If these instructions are not properly followed you may jeopardize your, and your passenger's safety, and severe frame, suspension or tire damage may also result from improper installation.



INTRODUCTION

Thank you for purchasing a Cognito 2-Inch Economy Leveling Kit w/ Bilstein Shocks. This kit yields 2 inches of front lift, leveling the front of the vehicle with the rear. This kit maintains adequate droop travel for superior ride quality using Bilstein 5100 extended length front shocks, and stock replacement Bilstein rear shocks. All components made and assembled in the USA.

REQUIREMENTS

- Allows for up to a 35 x 12.5-Inch tire on a 9-Inch wide wheel with 4.5-Inch backspacing.
- Installation requires a qualified mechanic.
- Follow the OE specifications when replacing or re-installing OE fasteners, retainers, and hardware specified in the OEM manual.
- Always wear safety glasses when using power tools.
- When a lift is required to perform the installation of these products, always ensure the vehicle is properly supported before attempting installation or serious injury may occur.

TECH NOTES

- Read instructions carefully and study the pictures (if included) before attempting installation.
- If this product was purchased as part of a kit each kit, and options to kits, are packaged separately. Therefore installation procedures are covered in separate instructions. Familiarize yourself with each specific set of instructions before beginning.
- Check the parts and hardware packages against the parts list to assure that your kit is complete before starting.

INSTALLATION

1. Rack the vehicle and lift it off the ground, or if no hoist is available then jack front of truck off the ground and support properly with jack stands. Remove the front tires and set them as side.
 - **NEVER WORK ON AN UNSUPPORTED VEHICLE.**
2. Use a jack to support underneath the front axle on one side of the vehicle, (Figure 1).



3. Remove the brake line bracket form the axle.
4. Remove the lower shock bolt on the supported side of the axle.
5. Remove the lower sway bar end link from the axle on the supported side of the axle, leaving the sway bar link attached to the sway bar.
6. Carefully lower the axle housing so that the coil springs can be removed from the truck, (Figure 2).
 - **NOTE:**
DO NOT lower the axle any lower than necessary to remove springs. This could result in driveline, wiring, brake line, and suspension component damage.

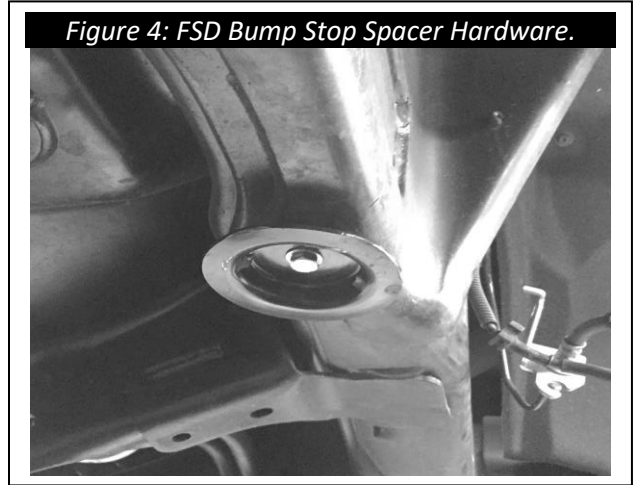


7. Remove the springs from the truck along with the upper coil spring isolator, retain for re-installation.
8. Locate the OE bump stop underneath the side frame rails. Remove the bump stop using a screwdriver to pry out of the bump stop mount (Figure 3). Once the bump stop is removed, loosen the bolt and remove OE bump stop mount from the frame rail (Figure 4).

Figure 3: OE Bump Stop Spacer.



Figure 4: FSD Bump Stop Spacer Hardware.

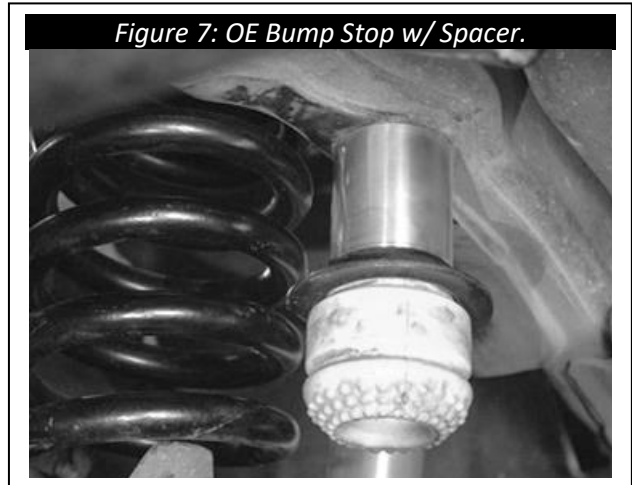
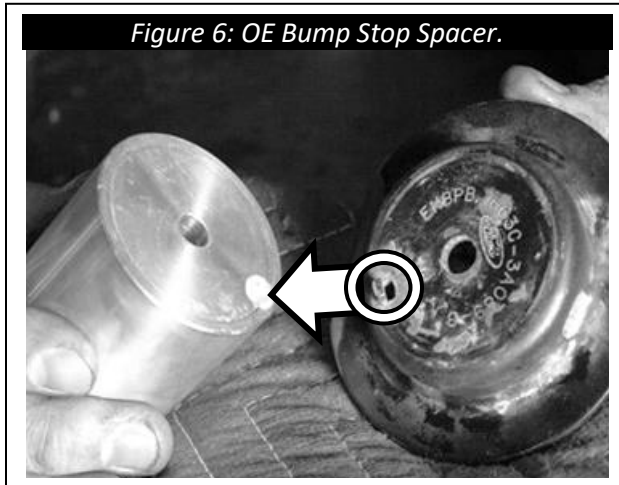


9. Now locate the 1" bump stop spacer kit, (Figure 5(different size spacer shown in picture)).

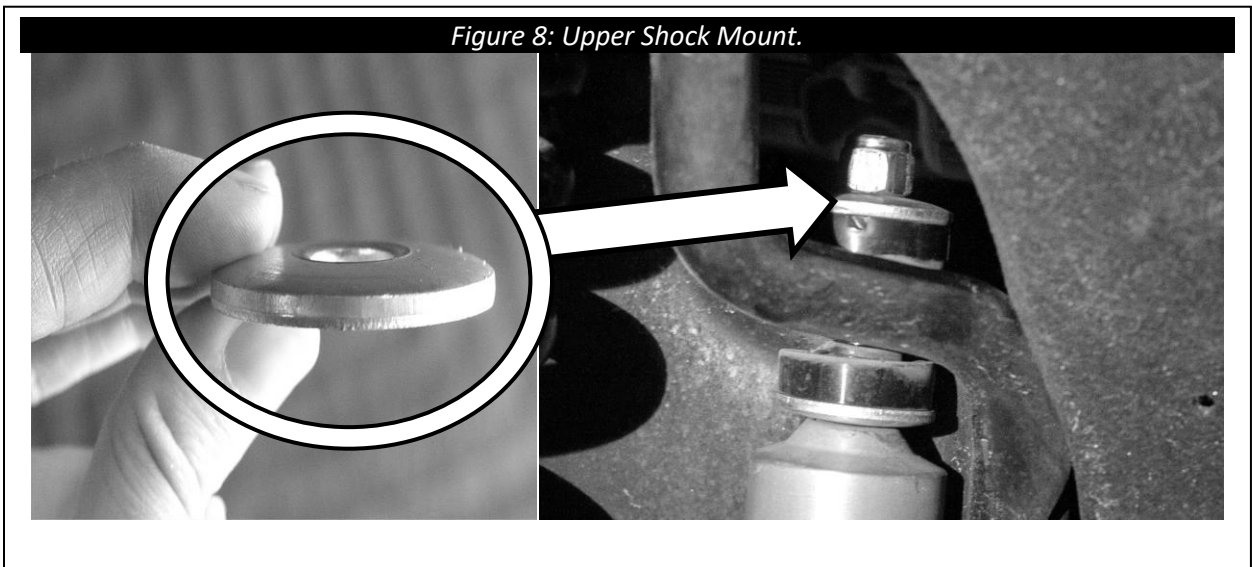
Figure 5: FSD Bump Stop Spacer & Hardware.



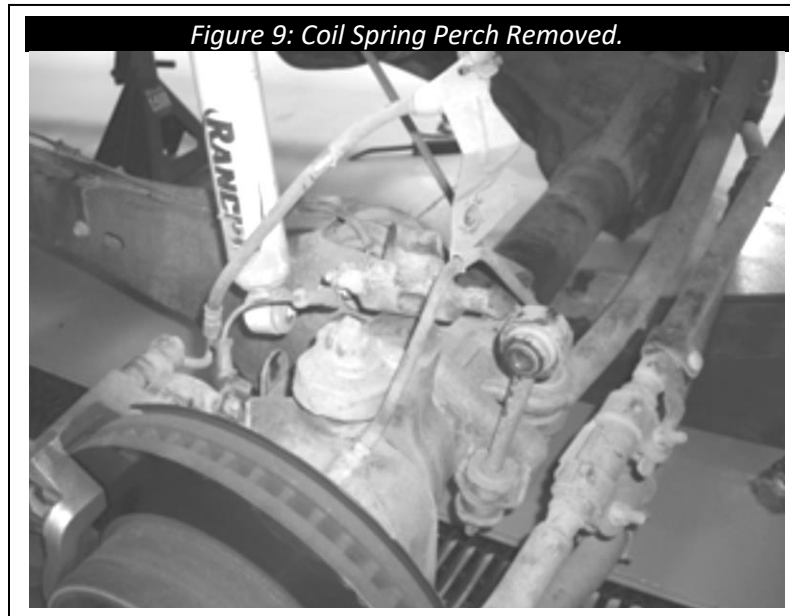
10. Insert the locking tab on the OE bump stop mount into the alignment hole on **6289**, the bump stop spacer, (Figure 6(different size spacer shown in picture)).
 Using (1) M8-1.25 X 50mm cap screw, assemble with (1) split washer between the bolt head and (1) flat washer. Orientate the spacer so that the flat side of the OEM bump stop mount is facing the spring, (Figure 7(different size spacer shown in picture)).
 Torque to **25 ft.-lbs.**



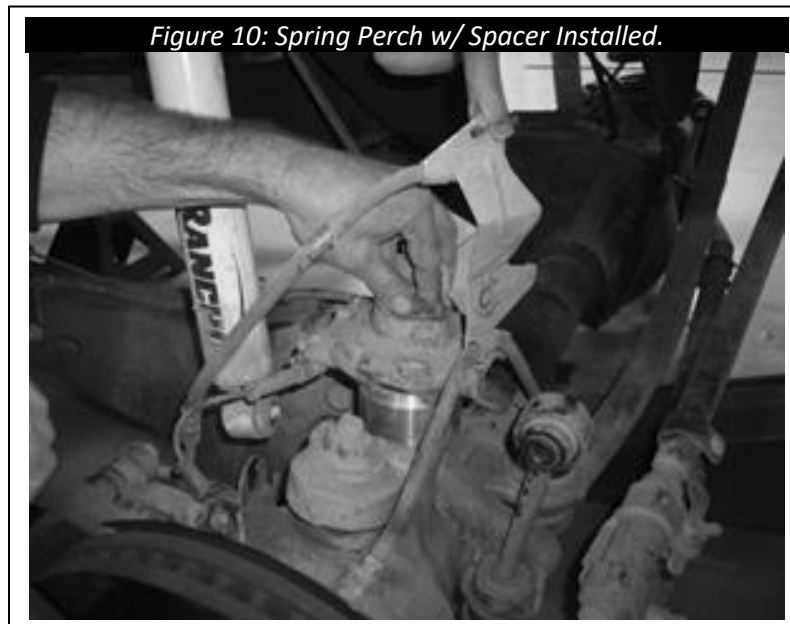
11. Insert the OEM foam bump stop back into the mount once torqued.
12. Unbolt the upper end of the front shocks and remove from the vehicle
13. Locate one (1) **220-90941**, install the upper end of the new shock.
- **NOTE:**
 Make sure the polyurethane pancake bushings are in place on both sides of frame. Install the top mounting washer with the concave side against bushing, (Figure 8).



14. Unbolt the factory lower coil spring perch from the axle, (Figure 9), discard the hardware but retain the perch.



15. Locate one (1) **5706** and re-install the factory spring perch with the coil spacer, spacing the perch above the axle from the stock location, (Figure 10).
 Fasten the spacer and perch with (1) M14-2.00 X 100mm cap screw, assemble with (1) split washer and place a small amount of thread locker on the end of the treads.
 Torque to **111 ft.-lbs.**



16. Install the coil spring and isolator back into place, align the OE rubber isolator, removed in prior steps, with the top spring pig-tail (Figure 11). Install the spring with isolator onto the lower spring perch and rotate until the bottom spring pig-tail makes contact with OE spring perch tab (Figure 12). Raise the floor jack until the spring is in the proper position, and compressed slightly so that the shock can be re fastened in the lower shock mount. Torque to **111ft.-lbs.**

Figure 11: Coil Spring and Isolator Orientation.

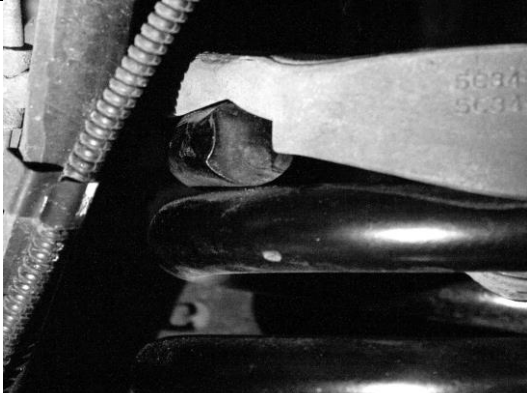


Figure 12: Bottom Spring Pig-tail Orientation.

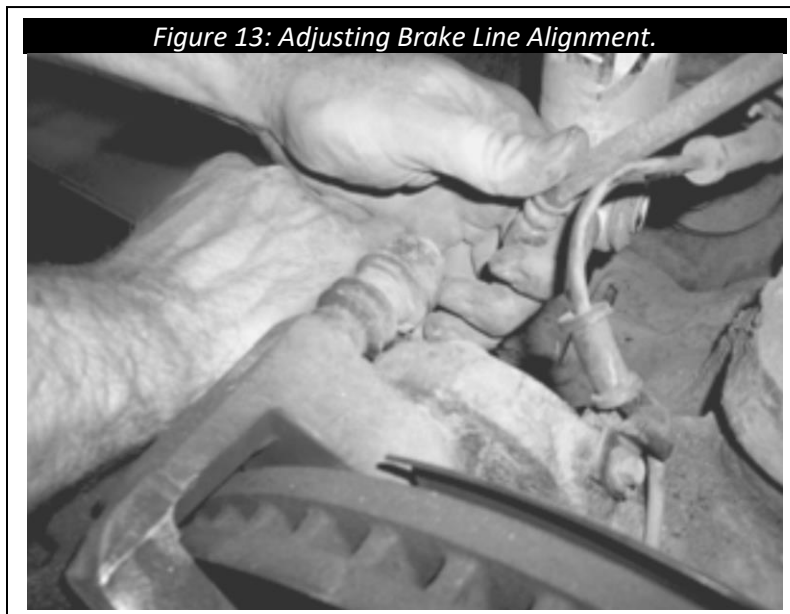


17. Torque the shock top mount to **46 ft.-lbs.**
18. Re-install the sway bar end link, torque to **59ft.-lbs.**
19. Re-install the brake line bracket, torque to **6 ft.-lbs.**

- **NOTE:**

The metal brake line must be bent slightly toward the front of the truck, (Figure 13).

Figure 13: Adjusting Brake Line Alignment.



20. Repeat the steps above for the opposite side of the vehicle.
21. Re-install wheels and torque lug nuts to factory specs.
22. Remove the stock rear shocks and set them to the side.
23. Locate both (2) **220-90943** install new rear shocks.
Torque the ***upper mount*** to **52 ft.-lbs.**
Torque the ***lower mount*** to **66 ft.-lbs.**
24. Ensure that all bolts are properly torqued. Ensure there are no rubbing or loose cables anywhere after the installation. Use cable ties to restrain any cables from interfering with any other part. Check that all lines are free of stress or interference while the vehicle is in full droop and full bump.
25. Adjust the headlights per owner's manual.
26. Have the front end professionally aligned to factory specifications.
 - **NOTE:**
The vehicle will handle differently due to increase ride height, take time to familiarize yourself with the handling characteristics of the modified vehicle.



WARRANTY / RETURN POLICY / SAFETY

Cognito Limited Lifetime Warranty

Cognito Motorsports, Inc. hereinafter “Cognito,” warrants to the original retail purchaser, that its suspension products are free from workmanship and material defects for as long as the purchaser owns the vehicle on which the product(s) were originally installed. This warranty will be void if any modifications are made to the components, including alterations to the surface finish, i.e.; painting, powder coating, plating, and/or welding, or if they are improperly installed. Cognito truck suspension products are not designed nor intended to be installed on “competition” vehicles used in race applications, stunt or for exhibition purposes that are outside of the intended operating conditions specified by the manufacturer. Racing and competition are defined as any contests between two or more vehicles; or vehicles competing individually on off road circuits in timed events (whether or not such contests are for an award or prize).

This warranty does not include coverage for police, taxi, government or commercial vehicles, and the warranty does not cover Cognito products sold outside of the USA. Cognito’s obligations under this warranty are specified and applied at its sole discretion, and warranty coverage is limited to repair or replacement of the defective product(s). Any and all costs of removal, installation or reinstallation; freight charges, incidental or consequential damages associated with the covered products are expressly excluded from this warranty.

The following items are exempt from Cognito limited warranty coverage: bushings, bump stops, tie-rod ends (Heim joints) and limiting straps. These parts are “consumables” and designed to wear as a normal part of their duty cycle, therefore they are not considered defective when worn. The aforementioned products are warranted separately against defects in workmanship, for 60 days from the date of purchase. As a condition of warranty validation, respective Cognito suspension components must be installed as a complete system (not combined with non-Cognito hardware or ancillary parts). Any substitutions or omission of required components will void the warranty. Some minor cosmetic wear and imperfections may occur to parts during shipping, which is not covered under this warranty. This limited warranty does not apply to any components that have been subjected to collision damage, negligence, alteration, abuse, or misuse, and coverage does not extend to products manufactured by third-party companies. Cognito reserves the right to supersede, discontinue, or change the design, finish, part number and/or application of its parts when deemed necessary, without notice.

Return Policy

Product returns will not be accepted without prior written approval from an authorized Cognito representative. All products being returned must be shipped via trackable, prepaid freight. Returned products are subject to a 25% percent restocking fee. The eligible return period for products purchased directly from Cognito is 30 days from the verified date when the product(s) were originally received by the purchaser.

Product Safety Advisory

The installation of Cognito steering and suspension components will modify your vehicle’s original factory equipment and geometry, which may cause it to handle differently than a stock (unaltered) vehicle. Installation of these components is not intended to strengthen nor reinforce the vehicle’s frame, nor are they designed to increase rollover protection. It is necessary to periodically inspect all suspension and drive train components for proper attachment, torque specifications, operation, and for any potential unusual wear or damage. Installation of these parts will modify the height of the vehicle and may raise the center of gravity. Modifying vehicle height combined with off road operation may increase your vehicle’s susceptibility to rollover conditions, which may cause serious injury or death. Many states regulate allowable vehicle height modifications, and it is your responsibility to know and comply with the legal requirements specified by the laws where you reside. Modifications to your vehicle’s ride height may also affect the ride quality, driver input response, trackability and handling, and wear to your vehicle’s suspension components and tires.