

# START HERE

Cognito 2-Inch Economy Leveling Kit for 2020+ GM 2500HD/3500HD 2WD/4WD

## INSTALL SUMMARY SHEET:

Cognito 2-Inch Economy Leveling Kit for 2020+ GM  
2500HD/3500HD 2WD/4WD  
SKU: 110-90800

## PARTS LIST FOR SKU: 110-90800

QTY.	PART #	DESCRIPTION
2	1581	2011+ GM 8-Lug Front Shock Spacer
1	110-91031	1" Block and 16" U-bolt Kit (machined/straight)
1	110-90771	2020+ GM 8-Lug Torsion Bar Keys
4	HARDWARE-M12-FLATWASHER	M12 DIN125 Zinc Flat Washer
4	HARDWARE-M12X1.75-LOCKNUT	M12 X 1.75 Class 8 Zinc Nylock Nut



## 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 the Cognito 2-Inch Economy Leveling Kit. This kit offers a cost-effective solution to improve vehicle appearance. The included front shock spacers allow for increased front lift while retaining the OE front shocks. The included torsion keys allow for increased front lift while retaining torsion key adjustability. 1 inch Rear Lift Block slightly increases rear ride height.

## TECHNICAL INFORMATION

- Cutting of the OEM frame and suspension components is required.
- Torsion bar loading tool is required for this installation.
- Front-end alignment will be required after completion.
- This lift kit may only be installed on a truck that has not already been lifted or leveled. You cannot stack leveling kits or shock spacers.
- **Proper shocks and shock lengths must be used, or damage to control arms, ball joints, and vehicle will occur.**
- Follow the OE specifications when replacing or re-installing OE fasteners, retainers, and hardware specified in the OEM manual.
- Trimming of front bumper trim may be necessary based off tire size.
- Proper vehicle lifting equipment is required. Always make sure the vehicle is properly supported and **never work under an unsupported vehicle.**
- Check the parts and hardware packages against the parts list in each instruction set to assure that your kit is complete.
- Be sure to read though all install instructs include with this kit prior to attempting installation and heed all warnings, failure to comply with all warnings and requirements can lead to an accident and serious injury.

This Kit Install Summary will guide you through the **necessary order of steps** to install each of the individual components that comprise this kit in the required sequence to safely complete full and proper installation.

The proper installation of this combination of products is dictated by the necessary sequence in which each component must be installed to avoid access, interference or clearance issues that will result in unnecessary disassembly and reassembly and potential safety hazards.

This document will guide you through the sequence of operations, which includes preparatory work and the prescribed order for installing components – by referring you to the individual instructions packaged with each Cognito component for detail on how each kit component is properly installed.

**YOU MUST FOLLOW THESE STEPS IN SEQUENTIAL ORDER FOR PROPER INSTALLATION OF THIS KIT.**

**REVIEW TECHNICAL NOTES AND REQUIREMENTS OF THE INDIVIDUAL INSTALLATION INSTRUCTION SHEETS INCLUDED WITH THIS KIT BEFORE BEGINNING.**

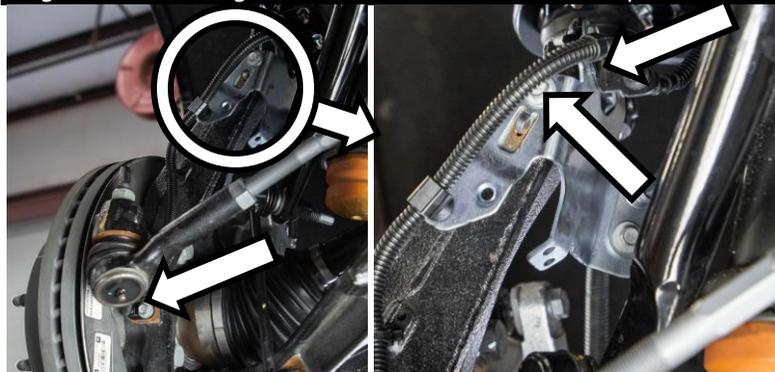
## INSTALLATION

1. Begin by locating the 2 instruction sheets **7024**, and **7037** included with this kit. You will need them **all** to do this install. If instructions are missing or damaged, contact Cognito Motorsports for where to find replacements.
2. Start with instruction set **7024**. Check to make sure you have all parts on the parts list. Work through the instructions until all steps are completed.
3. Refer to instruction set **7037** to install the Cognito Torsion Key Kit. Check to make sure you have all parts on the parts list. Work through the instructions until the OEM Torsion keys have been unloaded but not remove the OEM torsion keys yet at this time.
4. After the torsion keys are unloaded, support the lower control arms with a floor jack or stand.
5. Due to the added droop travel when using this Cognito leveling kit, the service perch under the upper control arm must be partially cut off. Start by removing the screw for the brake line bracket attached to the service perch.
6. Remove the wheel speed sensor and brake line bracket that are attached to the spindle.

*Figure 1: Remove Brake Line Bracket*



*Figure 2: Removing Brake Line Bracket and Wheel Speed Sensor*

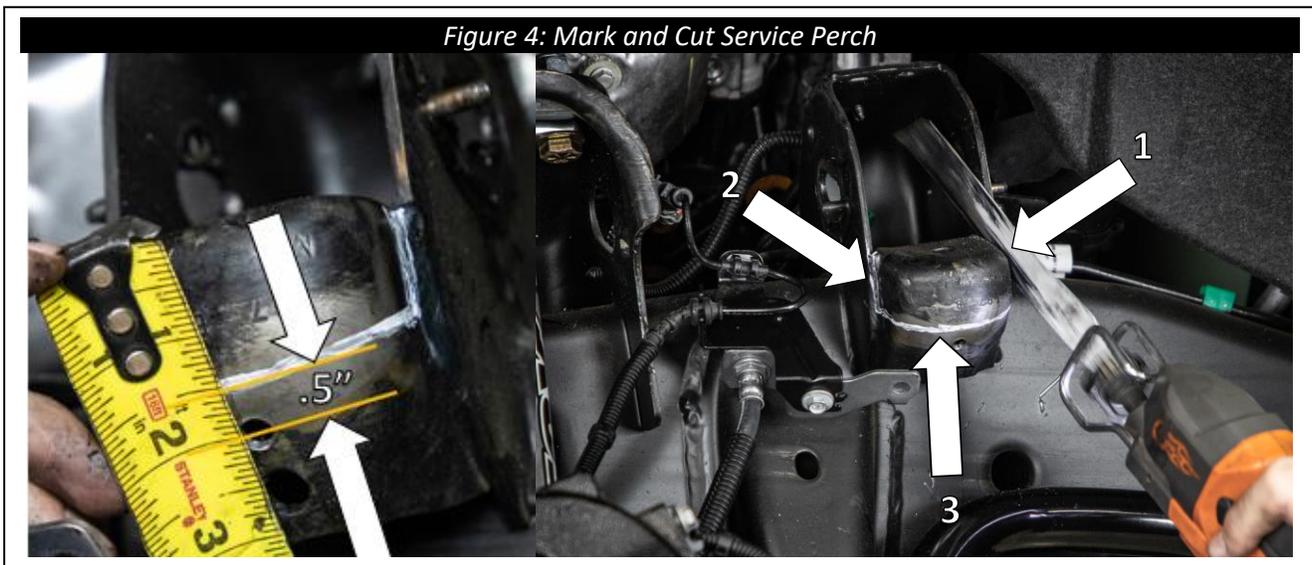


**INSTALLATION – CON'T**

7. Remove the factory upper control arms. Loosen the ball joint nut of the upper control arm enough until the nut can be spun by hand, but do not remove totally. Use a pickle fork to separate the ball joint from the spindle or tap on the side of the spindle next to the ball joint stud. When the tapered seat of the ball joint breaks loose remove the ball joint nut, and separate the factory upper control arm from the spindle



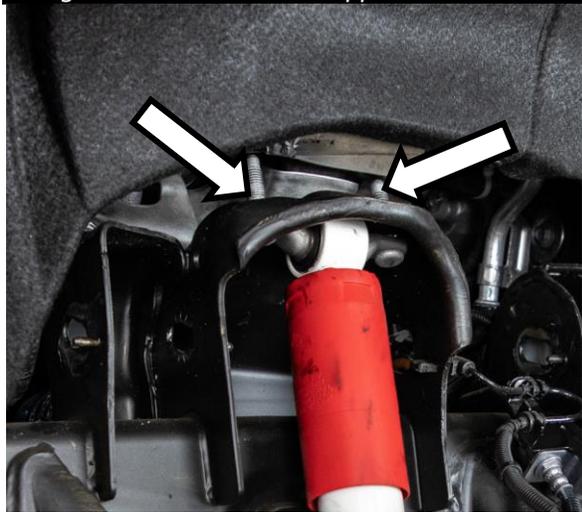
8. Remove the factory bolts and eccentric washers that connect the control arm to the frame and retain them for future use. Place them aside and note the order in which the components were removed, that way they may be re-installed in the same manner they came off. Remove the OEM Upper Control Arm (UCA) from the vehicle.
9. Mark the service perch in the 3 locations shown below with the lower horizontal line 1/2 inch above the brake line bracket mounting hole. Tie the lines and wires up so they are clear of the cutting area.
  - **NOTE:**  
Wear safety glasses.  
Take great care to keep the lines and wires safe during the cut and make sure to shield them from sparks if any kind of grinder is used. Smooth the cut edges to get rid of sharp edges and burrs.  
Exposed raw metal should be coated or painted to prevent corrosion.



## INSTALLATION – CON'T

10. Reinstall the removed brake line bracket to the service perch. Torque the bolt to **22 ft-lbs**.
11. Remove the front shock upper flange nuts and discard them. Pull down on the shock body or lower the support under the lower control arm until the studs on top of the shock clear the frame mount and the shock can be removed from the upper mount.
  - **NOTE:**  
Ensure the lower control arm and spindle are supported prior to removing the shock. Damage to other components can occur if this is not done correctly.
12. Locate 1X **1581**, Place the spacer over top of the studs on the top of the shock. Reinstall the shock in the reverse of its removal using the provided M12 washers and nylock nuts in place of the OEM hardware. Torque to **65ft-lb**.

*Figure 5: Remove Shock Upper Mount Nuts*



*Figure 6: Install Shock Spacer*



13. Install the OEM upper control arms back onto the frame using the factory hardware previously removed. Torque Hardware to **90 ft-lbs**.
  - **NOTE:**  
Set the bolts in the middle of the adjustment swing, or in the OEM plastic inserts. This will be close enough to drive to an alignment shop to get an alignment.
14. Mount the ball joint to the spindle with the OEM hardware and tighten to OEM torque spec.
15. Reinstall the wheel speed sensor and brake line bracket onto the spindle. Torque to OEM specs.
16. Repeat the steps above on the opposite side of the vehicle.
17. After the shocks and shock spacers are installed, refer back to instruction set **7037**. Continue where you left off, and work through the rest of them to completion.

***This completes the installation steps, enjoy your new Cognito 2-Inch Economy Leveling Kit!***



## 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.