



Cognito Motorsports, Inc. 2000-2010 6-Lug GM SUV & Hummer H2 Rear End Drop Kit Installation

Introduction

- Installation requires a qualified mechanic.
- Read instructions carefully and study the pictures (if included) before attempting installation.
- Check the parts and hardware packages against the parts list to assure that your kit is complete. Separating parts according to the areas where they will be used and placing the hardware with brackets before you begin will save you installation time.
- Secure and properly block vehicle prior to beginning installation.
- Always wear safety glasses when using power tools.
- Foot-pound readings are listed on the Torque Specification Chart at the end of the instructions.
- Exhaust modification may be necessary.
- Drive line modification may be necessary.

Parts List

- ___ Passenger coil/air spring spacer
- ___ Driver coil/air spring spacer
- ___ Passenger side control arm bracket tie in
- ___ Driver side control arm bracket tie in
- ___ (2) Lower control arm bracket
- ___ (2) Upper control arm bracket
- ___ (2) Sway bar end links
- ___ Track bar bracket
- ___ Track bar support adjuster
- ___ Hardware Package #9042
- ___ Hardware Package #9043
- ___ Hardware Package #9044
- ___ Hardware Package #9051
- ___ Hardware Package #9098 (for factory AIR ride)
- ___ (2) Limiting Strap

Rear End Disassembly

- 1) Park vehicle on level ground. Mark the slip yoke on the drive shaft where it comes out of the tail housing. You will need this mark later to determine how long to lengthen your drive shaft.
- 2) If this vehicle has air springs in the rear instead of coil springs, disconnect the positive side of the battery terminal now. Make sure you have purchased HP9098.
- 3) **Never work on an unsupported vehicle.** Remove rear tires. Disconnect the driver side mount of the track bar and retain hardware for later use. Remove the sway bar end links, and factory rear shocks and discard.
- 4) If installing Cognito Motorsports 10" front system, a brake line kit was included in that front kit which consists of front and rear brake lines. If installing Cognito Motorsports 7" system, brake lines are not included, but may be purchased separately. If replacing the rear factory brake line, remove it now.
- 5) Remove hitch, if so equipped and interfering with installation.
- 6) With the rear end supported under the axle housing as well as under the pinion, remove the hardware fastening the front of both the upper and lower control arms to the frame. Separate the rear end assembly from the frame, being careful not to over extend the emergency brake cable.
- 7) **If non air ride:** remove the coil springs from the vehicle, and save the 4 rubber isolators for future installation. **If air ride:** disconnect the air fitting from the top of each of the air springs by pressing down the outer ring of the fitting, and then pulling the hose out of the fitting. Remove the air spring by twisting counter clockwise, then the air spring will drop out of the frame pocket.
- 8) Referring to Figure 1, mount the Cognito Motorsports upper and lower control arm brackets to the factory 4-link bar frame mounts with the factory hardware that was previously removed. Use the 1/2" x 1 1/2" bolts and hardware from Hardware package #9042 to fasten the nose of the upper control arm brackets to the bottom side of the frame. Use the 9/16" x 1 3/4" bolts and hardware from Hardware package #9042 to fasten the nose of the lower control arm brackets to the bottom side of the frame.
- 9) Using the rest of the 9/16" hardware from package #9042, assemble the control arms in the Cognito brackets and the tie in plates on the outside of the Cognito brackets as shown in Figure 1. Tighten all hardware in this step.
- 10) Bolt the track bar re-locate bracket to the factory location on the rear end housing using the stock hardware previously removed. Assemble the track bar support with the hardware in package #9043. Bolt one end of the adjuster support to the top hole of the upper control arm tower bracket that is welded on to the rear end housing, use the 5/8"x2" bolt, two flat washers, and a lock nut, see Figure 2. The other end bolts to the Cognito track bar relocate bracket. Use the 5/8"x2.5" bolt, two flat washers, lock nut, and cone washer. The cone

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washer's large end will mate with the track bar bracket, and the small end with the rod end of the adjuster. Bolt the track bar to the Cognito bracket with the supplied 9/16" hardware. Tighten all fasteners at this time.

- 11) Assemble the sway bar end links with the hardware in package #9051. Use the hardware provided to bolt the Cognito end links to the factory sway bar, and the other end in the factory location. One end of the limit strap will bolt in to the top sway bar end link hole, see Figure 2. Tighten all hardware at this time.
- 12) Bolt appropriate spring spacers to passenger side and driver with hardware package #9044 to the upper factory spring pocket. If there are no holes in the pocket because the vehicle has coil springs, holes will have to be marked and drilled by holding the appropriate spacer in place and aligning the support ear with the frame. The support ears on each spacer will require drilling one 3/8" mounting hole for each. Drill all holes and mount with provided hardware now and tighten to 40 ft-lbs now.
- 13) **If non air ride:** Re-install coil springs with isolators now. **If air ride:** re-route air lines so they will reach down through the spacer, then connect to the air spring by pressing into the fitting on top of the spring. Mate air spring to bottom of the spacer in slots appropriately and then twist clockwise to lock into position.
- 14) If the vehicle is a H2 with air springs, the air ride sensor arms must be modified. Cut the factory sensor arm in the middle to prepare for extending. From HP9098, locate the sensor arm extenders and set screws. The previously cut factory sensor arm will fit into each end of the extension, creating a longer sensor arm. Apply thread locker to each set screw and thread into the extender, locking against the sensor arm. Measure the length of the sensor arm, and be sure the length is the same on driver and passenger sides.
- 15) Reinstall hitch, if previously removed.
- 16) Install extended brake line. Bleed brakes so there is no air left in the system. Check system for leaks.
- 17) Install new rear shocks. The other end of the limit strap will bolt in along with the lower shock mount bolt, see Figure 2.
- 18) Put on rear tires.
- 19) Install rear drive shaft. Measure the distance the drive shaft needs to be lengthened by checking the distance between the mark you made previously and the amount it is in the tail housing now. Have drive shaft extended that amount. Some shorter wheel base vehicles may need a CV joint added to their drive shaft.
- 20) Recheck torque on all bolts at this time.

Torque Specification Chart

1/2" Bolts	70Ft.-Lbs
9/16" Bolts	95Ft.-Lbs
5/8" Bolts	100Ft.-Lbs

Torque all factory bolts to factory torque.

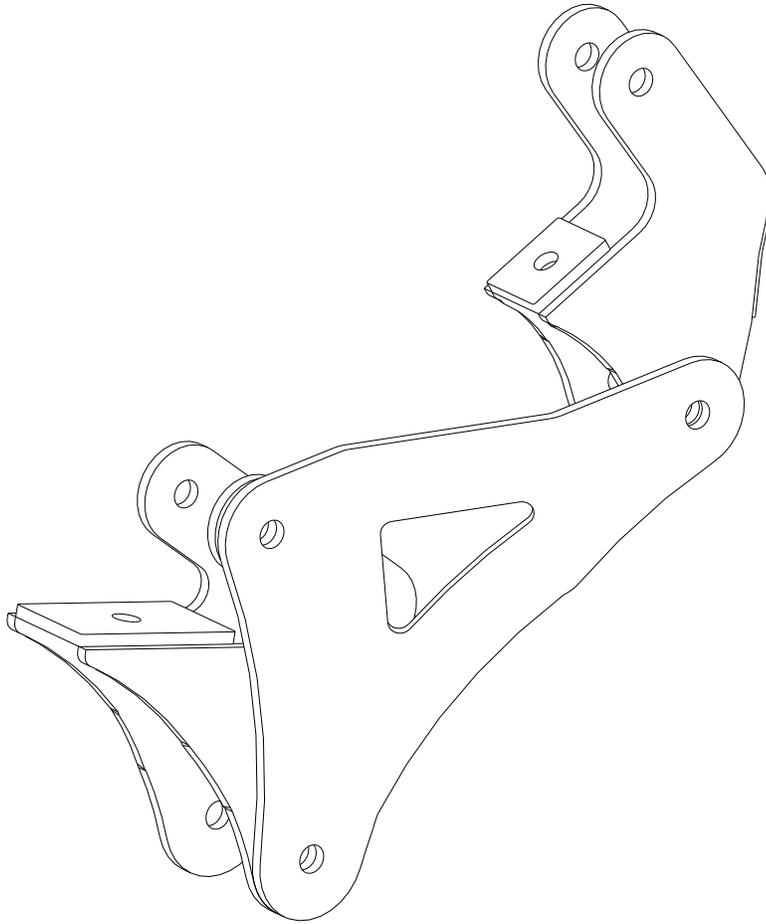


Figure 1: Driver side control arm re-location brackets. ← Front of vehicle

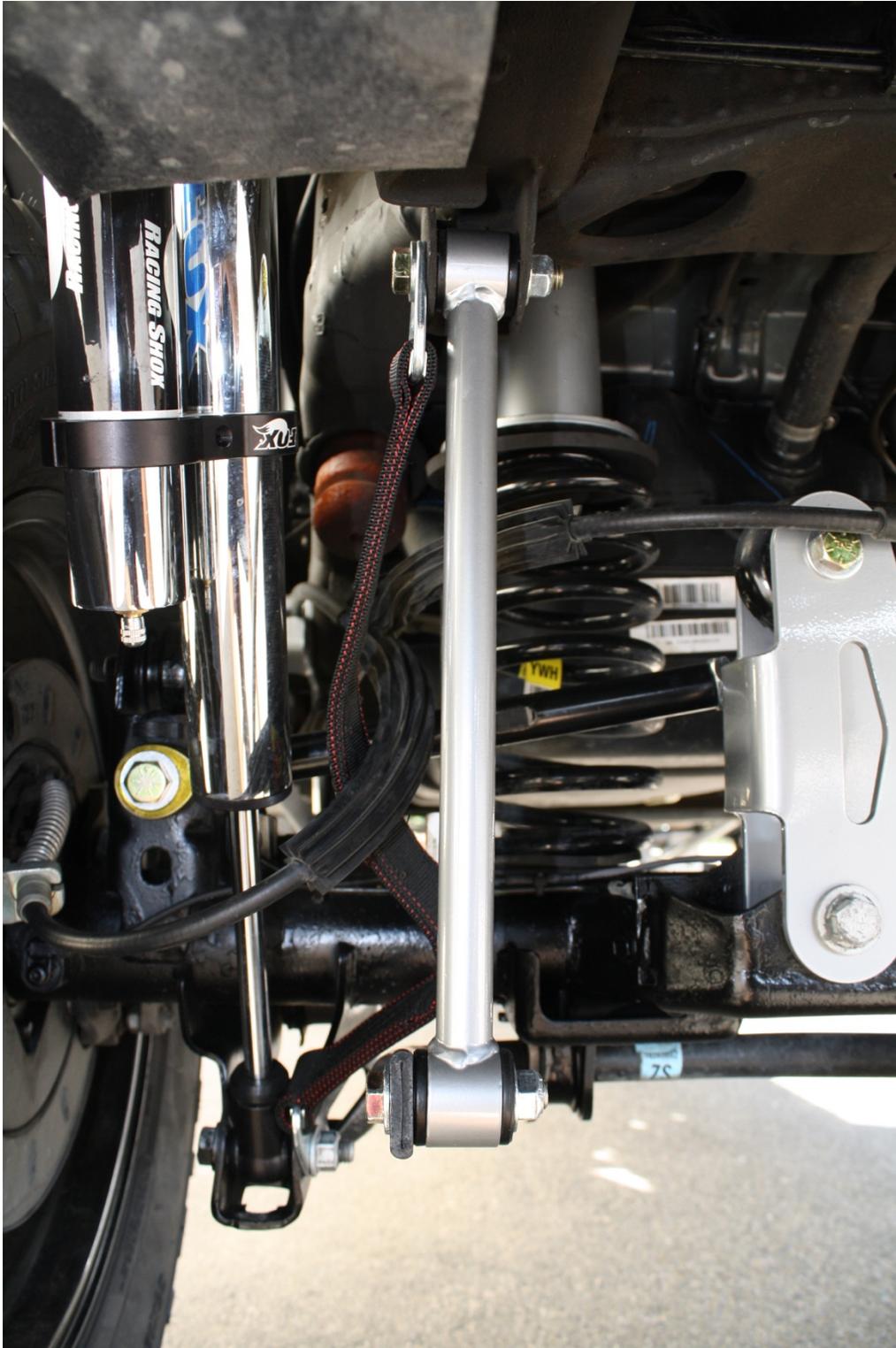


Figure 2: Limit strap mounting, and track bar support

Cognito Motorsports

Limited Lifetime Warranty

Cognito Motorsports warrants, to the original retail purchaser, that its suspension products are free from defects in workmanship and material for as long as the purchaser owns the vehicle on which the product was originally installed. Cognito Motorsports does not warrant the product for finish, alterations, modifications, and/or original installation contrary to specifications of Cognito Motorsports. Cognito Motorsports suspension products are not designed nor intended to be installed on vehicles used in race applications or for racing purposes or for similar activities involving abnormal abuse other than the vehicle was originally designed to handle or endure. (A "RACE" is defined as any contest between two or more vehicles, and/or contest of one or more vehicle against the clock, whether or not such contest is for a prize.)

This warranty is for a one-time replacement of each Cognito Motorsports product and does not cover any part that Cognito Motorsports has previously replaced under this warranty. This warranty does not include coverage for police or taxi vehicles, race vehicles, or vehicles used for government or commercial purposes. Also excluded from this warrant are sales outside of the United States of America. Alterations to the finish of the parts including but not limited to painting, powder coating, plating, and/or welding will void all warranties. Cognito Motorsports obligation under this warranty is limited to the repair or replacement, at Cognito Motorsports option of the defective product. Any and all costs of removal, installation or re-installation, freight charges, incidental or consequential damages are expressly excluded from this warranty.

This warranty excludes the following items: bushings, bumpstops, tie-rod ends, limiting straps, and heim joints. These parts are subject to wear and are not considered defective when worn. They are warranted for 60 days of purchase for defects in workmanship. Cognito Motorsports suspension components must be installed as a complete system. Any substitutions or exemptions of required components will immediately void the warranty. Some finish damage may happen to parts during shipping and is not covered under warranty. This warranty shall not apply to any product that had been subject to accident, negligence, alteration, abuse, or misuse. Cognito Motorsports does not warrant products not manufactured by Cognito Motorsports. Cognito Motorsports reserves the right to supersede, discontinue, or change the design, finish, part number and/or application of parts when deemed necessary by Cognito Motorsports without written notice, and in the sole and absolute discretion of Cognito Motorsports.

Warranty Claims

All warranty claims must be submitted through the original company of purchase. All claims must be shipped back to the original company of purchase with an approved RMA number listed as a reference on the shipping label and clearly printed on two opposing sides of the package(s); product in question must be inspected by Cognito Motorsports before replacement parts are shipped out.

Return Policy

Cognito Motorsports has a no refund return policy. Under special circumstances, returns might be accepted with prior written approval. All returned product will be shipped freight prepaid. Product returned is subject to a 25% restocking fee. No returns will be accepted after 30 days upon receipt of product.

Product Consumer Safety and Warning

The installation of this kit will modify the suspension of your vehicle and may cause it to handle significantly different than a factory equipped vehicle. Installing larger tires with modified suspension and increased ground clearance will significantly alter the handling characteristics of the vehicle, and may result in increased braking distances as well as changes in vehicle maneuverability and handling compared to the factory equipped vehicle. As with any vehicle, extreme caution and care must be used to prevent loss of control or roll-over during sharp turns or abrupt maneuvers. Always wear seat belts and drive safely, recognizing the reduced speeds and specialized driving techniques is required.

This suspension system will not strengthen nor reinforce the stock frame of the vehicle, nor will it increase rollover protection. It is necessary to periodically inspect all suspension and drive train components for tightness of fit or any damage. Installation of these parts will modify the height of the vehicle and will raise the center of gravity. Altered height modifications and off-road operation may increase your vehicle's susceptibility to roll over conditions and may cause serious injury or death. Many states regulate the height modification to each vehicle. Check the laws in your state for exact specifications. Height modifications may affect the reaction, ride, handling, and wear factor of your vehicle's components.

Failure to drive this vehicle safely may result in injury or death! Do not drive this vehicle unless you are familiar with its unique handling characteristics and are confident of your ability to maintain control under all driving conditions. Some modifications and combinations of modifications are not recommended, unsafe, and may not be permitted in your state. Consult your vehicle owner's manual, the instructions accompanying this product, and your state laws before undertaking these modifications. The owner of the modified vehicle and the qualified mechanic required to install this product are responsible for the legality and safety of the vehicle being modified.