

Cognito Instructions for bypassing Adaptive Ride Control (ARC) on GM 1500 Trucks

INSTALL INSTRUCTIONS:

Cognito Instructions for bypassing Adaptive Ride Control (ARC) on GM 1500 Trucks
SKU: HP9324

PARTS LIST FOR SKU: HP9324

QTY.	PART #	DESCRIPTION
8	HARDWARE-63124	6" Black UV Resistant Nylon Cable Tie
4	HARDWARE-63437	12" Black UV Resistant Nylon Cable Tie

INTRODUCTION

In 2019, GM moved to a new type of active suspension that is only present in the Denali, High Country and Custom trims. This new system is called Adaptive Ride Control or ARC for short. This system is problematic when lifting or leveling the vehicle due to the OEM shocks typically being replaced. When the OEM shocks are removed and replaced with another non-OEM shock the vehicle's computer system is able to tell and the vehicle will then start throwing error codes due to the ARC system no longer functioning properly.

Cognito has you covered, the method covered in this document will bypass the ARC system, will not throw error codes and is fully reversible. This document will go over the process in detail and walk you through how to perform this modification yourself.

ARC Solenoid



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.

REQUIREMENTS

- 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 and always ensure the vehicle is properly supported before attempting installation or serious injury may occur.

TECH NOTES

- ARC Vehicles can be identified by their shocks. In the photo above ARC shocks are shown, they can be identified by the large solenoid valve off the side of the shock.
 - If the shock bodies are smooth all the way around with nothing stick off the side, then the vehicle did not come equipped with the ARC system and this procedure is not needed.
- 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.

INSTALL NOTE

Instructions in this document assumes that the OEM shocks have already been removed from the vehicle and instructions for how to remove them will not be given. If removal instructions are needed, reference the install instructions that came with the leveling or lift kit purchased or the OEM service manual.

INSTALLATION

1. Start with a single shock and remove the plastic solenoid cover.
Cut or knock out the melted plastic edge of the solenoid cover holding the small metal cap in place.
Pry the small metal cap off. There is a small rubber sealing washer under the metal cap, it will typically come off with the metal cap. Once the metal cap and seal are removed, pull on the cover to remove it from the shock. Set the cover aside, it will be reused in a later step.

- **NOTE:**

If desired, this install is fully reversible, but the small metal cap and seal must be retained for this to be reversible.

Figure 1: Cut or knock out the melted plastic retaining the cap.



Figure 2: Remove small metal cap.



Figure 3: Pull to remove plastic cap.

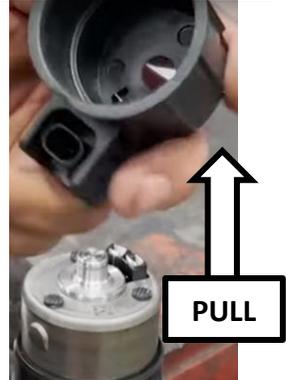


Figure 4: Save if future reversal of install is desired.



2. Drill two small holes in the plastic cover.
Measure from the bottom of the cover and make a mark at 5/8" (.625"/~16mm) up from the bottom. Using a drill and 3/16" drill bit, drill through both side of the cover, creating two holes on opposite sides of the cover.

- **NOTE:**

Make sure when drilling through the cover not to drill into the wiring harness connector.



Figure 5: Make a mark 5/8" up from the bottom.



Figure 6: Drill though the cover w/ 3/16" drill bit.

3. Remove the solenoid coil.
Using a set of locking pliers, clamp onto the outside of the silver solenoid coil housing cylinder. Twist the coil housing while pulling up to remove the solenoid coil from the solenoid valve.

- **NOTE:**

Use caution with the locking pliers, gripping too tightly could potentially damage the coil.

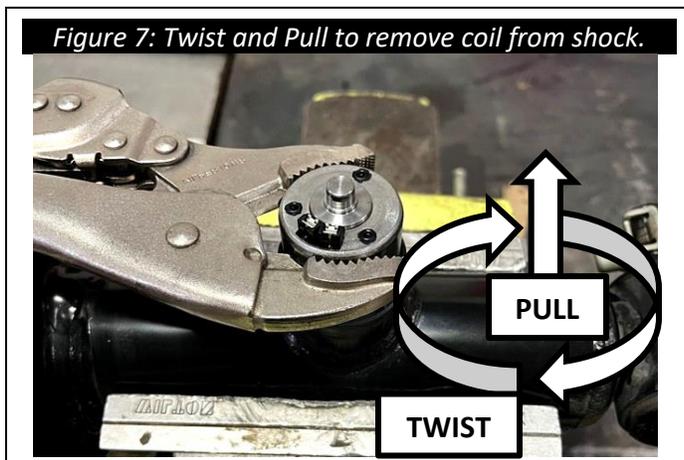


Figure 7: Twist and Pull to remove coil from shock.

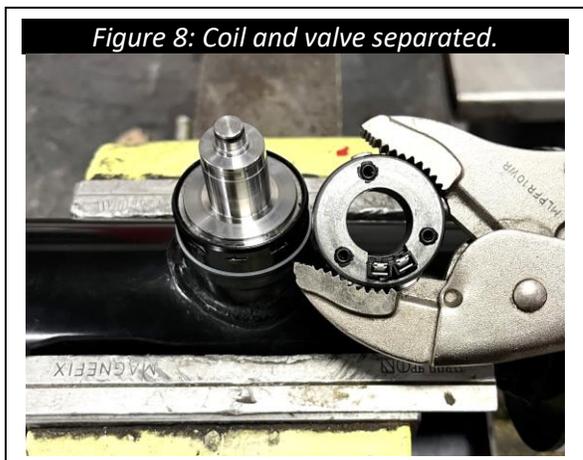


Figure 8: Coil and valve separated.

4. Reassemble cover and coil housing.

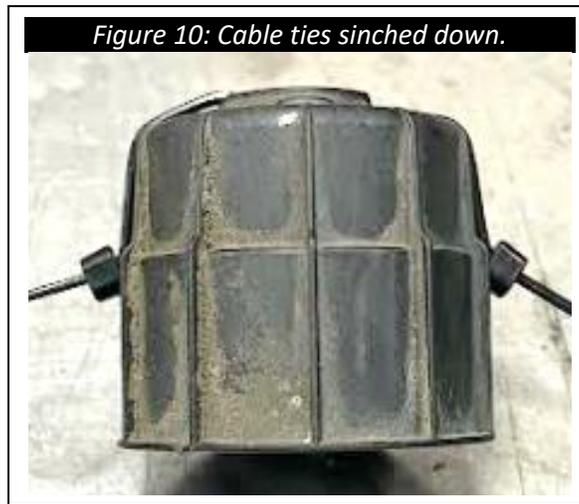
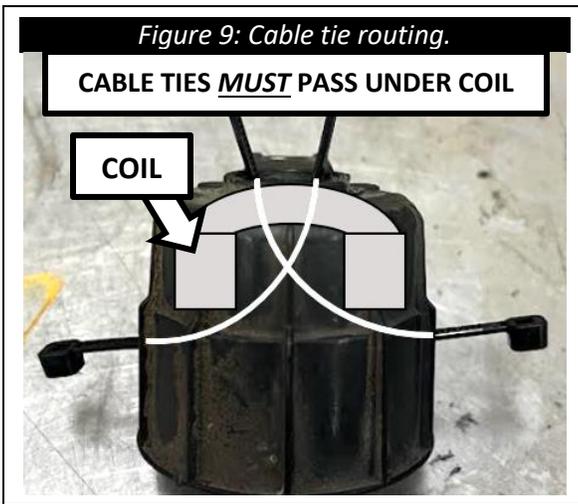
After the coil housing is removed from the shock, reinstall the coil housing into the plastic cover. Install two of the 6" cable ties provided, place one cable tie in each hole drilled. Feed the tails of the ties up and out the center of the cover.

Double check that the coil is fully seated down in the cove and that the cable ties are passing under the coil and then up and out the center of the cover.

With everything in place insert the tail of the cable tie into the head. Pull the tail through until the cable tie is sinched down tight and trim the tails.

- **NOTE:**

If the coil housing is not seated fully down in the plastic cover, then the holes to install the cable will most likely be blocked.



5. Reinstall assembly into vehicle.

Plug the coil and cover assembly back into the wiring harness and restrain with one of the provide 12" cable ties up and out of the way of any moving components.

6. Repeat the steps above for the other three shocks.

This completes the bypass installation steps, enjoy your newly lifted or leveled 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 warrantied 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.