

START HERE

Install Sheet #7256 | Cognito 4" Standard Lift Kit for 2014-2018 GM 1500 2WD/4WD Trucks with OE Stamped Steel/Aluminum Arms | SKU: 110-P0782



INSTALL SUMMARY SHEET:
Cognito 4" Standard Lift Kit for
2014-2018 GM 1500 2WD/4WD
Trucks with OE Stamped
Steel/Aluminum Arms
SKU: 110-P0782



PARTS LIST FOR SKU: 110-P0782

QTY.	PART #	DESCRIPTION
1	110-70010	4"/6" Sub-Frame Component Box for 2007*-2013 GM 1500 2WD/4WD trucks and SUVs.
1	110-70012	4"/6" 4WD Component Box for 2007*-2013 GM 1500 4WD trucks and SUVs.
1	110-70013	4"/6" Spindle Component Box 2007*-2018 GM 1500 2WD/4WD trucks and SUVs.
1	110-70060	OE Skid Plate Adapter for 2014-2018 GM 1500 2WD/4WD trucks and SUVs
1	110-90646	3" Block and 11" U-bolt Kit (fab/straight) for 1999-2018 GM 1500 2WD/4WD trucks.
1	110-70014	4" Strut Spacer Component Box for 2007*-2018 GM 1500 2WD/4WD trucks and SUVs.
2	210-90634	White Body Basic Rear Shock for 2" to 3" over stock on 2000-2020 GM 1500 trucks and SUVs.

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 4" Standard lift kit for 2014-2018 GM 1500 2WD/4WD trucks with OE stamped steel or aluminum control arms. Please read this sheet completely before beginning installation.

TECHNICAL INFORMATION

- This kit is also compatible with 2019 "classic" body style models.

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 work to prepare for the installation 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. Please follow instruction set **8112** to install the front suspension lift kit, which is packaged inside 110-70010.
2. After completing the front lift, follow instruction set **7204** packaged inside 110-70014 to install the rear block and u-bolt kit.

This completes the installation steps, enjoy your new Cognito 4" Standard Lift Kit!



Cognito Motorsports, Inc. 4”-6” IFS Front Lift System for 2007-2018 GM 2WD & 4WD 6 Lug Trucks and SUV’s

Before starting the installation process please find the appropriate parts breakdown and check off each part to ensure your kit is complete

Parts Breakdown for 2WD Trucks & SUV’s for Front Suspension Lift Kits

110-K0507 (Old SKU: FSLK100441)

110-70010		
Part #	Qty	Description
8378	1	Front Cross Member
8379	1	Rear Cross Member
1923	1	Skid Plate
8390	1	Sway Bar Spacer Bracket, Driver
8391	1	Sway Bar Spacer Bracket, Passenger
1545	1	Clip nut bar, front crossmember
HP9107	1	Sway Bar Spacer Hardware
HP9151	1	4" 1/2 ton Hardware
HP9155	1	Hardware sway bar end link
5822	2	Sway Bar End Link 4" 1/2 ton

110-70011		
Part #	Qty	Description
8380	1	Driver Spindle
8381	1	Passenger Spindle

110-K0509 (Old SKU: FSLK100443)

110-70010		
Part #	Qty	Description
8378	1	Front Cross Member
8379	1	Rear Cross Member
1923	1	Skid Plate
8390	1	Sway Bar Spacer Bracket, Driver
8391	1	Sway Bar Spacer Bracket, Passenger
1545	1	Clip nut bar, front crossmember
HP9107	1	Sway Bar Spacer Hardware
HP9151	1	4" 1/2 ton Hardware
HP9155	1	Hardware sway bar end link
5822	2	Sway Bar End Link 4" 1/2 ton

110-70013		
Part #	Qty	Description
8398	1	Driver Spindle
8393	1	Passenger Spindle

Parts Breakdown for 4WD Trucks & SUV's for Front Suspension Lift Kits

110-K0506 (Old SKU: FSLK100440)

110-70010		
Part #	Qty	Description
8378	1	Front Cross Member
8379	1	Rear Cross Member
1923	1	Skid Plate
8390	1	Sway Bar Spacer Bracket, Driver
8391	1	Sway Bar Spacer Bracket, Passenger
1545	1	Clip nut bar, front crossmember
HP9107	1	Sway Bar Spacer Hardware
HP9151	1	4" 1/2 ton Hardware
HP9155	1	Hardware sway bar end link
5822	2	Sway Bar End Link 4" 1/2 ton

110-70011		
Part #	Qty	Description
8380	1	Driver Spindle
8381	1	Passenger Spindle

110-70012		
Part #	Qty	Description
8388	1	Driver Differential Upper Mount
8387	1	Passenger Differential Mount
5370	2	.87" 6-Lug Axle Spacer
HP9153	1	Hardware for Differential
HP9076	1	Front axle spacer hardware

110-K0508 (Old SKU: FSLK100442)

110-70010		
Part #	Qty	Description
8378	1	Front Cross Member
8379	1	Rear Cross Member
1923	1	Skid Plate
8390	1	Sway Bar Spacer Bracket, Driver
8391	1	Sway Bar Spacer Bracket, Passenger
1545	1	Clip nut bar, front crossmember
HP9107	1	Sway Bar Spacer Hardware
HP9151	1	4" 1/2 ton Hardware
HP9155	1	Hardware sway bar end link
5822	2	Sway Bar End Link 4" 1/2 ton

110-70013		
Part #	Qty	Description
8398	1	Driver Spindle
8393	1	Passenger Spindle

110-70012		
Part #	Qty	Description
8388	1	Driver Differential Upper Mount
8387	1	Passenger Differential Mount
5370	2	.87" 6-Lug Axle Spacer
HP9153	1	Hardware for Differential
HP9076	1	Front axle spacer hardware

Parts Breakdown for Bundled Single SKU Lift Packages

110-P0781

110-70010		
Part #	Qty	Description
8378	1	Front Cross Member
8379	1	Rear Cross Member
1923	1	Skid Plate
8390	1	Sway Bar Spacer Bracket, Driver
8391	1	Sway Bar Spacer Bracket, Passenger
1545	1	Clip nut bar, front crossmember
HP9107	1	Sway Bar Spacer Hardware
HP9151	1	4" 1/2 ton Hardware
HP9155	1	Hardware sway bar end link
5822	2	Sway Bar End Link 4" 1/2 ton

110-70011		
Part #	Qty	Description
8380	1	Driver Spindle
8381	1	Passenger Spindle

110-70012		
Part #	Qty	Description
8388	1	Driver Differential Upper Mount
8387	1	Passenger Differential Mount
5370	2	.87" 6-Lug Axle Spacer
HP9153	1	Hardware for Differential
HP9076	1	Front axle spacer hardware

110-90646		
Part #	Qty	Description
BLOCK-S3.0	2	3" Straight Steel Fabricated Block
UB-.625X2.6X11.5	4	5/8" x 11.5" U-Bolt w/ hardware
Install Sheet	1	Install Sheet #7024

110-70060		
Part #	Qty	Description
8436	1	2014 GM 1500 Factory Skid Plate
HP9162	1	½ Ton Factory Skid Plate Adaptor Hardware

110-70014		
Part #	Qty	Description
8392	2	4" Strut Spacers
HP9152	1	Hardware Pack

Part #	Qty	Description
210-90634	2	White Body Basic Rear Shock

Installation # 8112

110-P0782

110-70010		
Part #	Qty	Description
8378	1	Front Cross Member
8379	1	Rear Cross Member
1923	1	Skid Plate
8390	1	Sway Bar Spacer Bracket, Driver
8391	1	Sway Bar Spacer Bracket, Passenger
1545	1	Clip nut bar, front crossmember
HP9107	1	Sway Bar Spacer Hardware
HP9151	1	4" 1/2 ton Hardware
HP9155	1	Hardware sway bar end link
5822	2	Sway Bar End Link 4" 1/2 ton

110-70013		
Part #	Qty	Description
8398	1	Driver Spindle
8393	1	Passenger Spindle

110-70012		
Part #	Qty	Description
8388	1	Driver Differential Upper Mount
8387	1	Passenger Differential Mount
5370	2	.87" 6-Lug Axle Spacer
HP9153	1	Hardware for Differential
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110-90646		
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BLOCK-S3.0	2	3" Straight Steel Fabricated Block
UB-.625X2.6X11.5	4	5/8" x 11.5" U-Bolt w/ hardware
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110-70060		
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HP9162	1	½ Ton Factory Skid Plate Adaptor Hardware

110-70014		
Part #	Qty	Description
8392	2	4" Strut Spacers
HP9152	1	Hardware Pack

Part #	Qty	Description
210-90634	2	White Body Basic Rear Shock

Installation # 8112

Requirements

- Maximum wheel backspacing is 4.75"
- Do not use a tire that is more than 4" wider than the rim width on a 4 1/2" or more backsaced wheel.
- Set at 4 to 5", suggested tire size is 33" tall and up to 12.5" wide. Set at 6", suggested tire size is 33" tall and up to 12.5" wide on a 10" wide rim with 4.25 to 4.6" back spacing. Call Cognito Motorsports for wheel and tire suggestions if necessary.
- Follow alignment specs at the end of this instruction set.

Introduction

- Installation requires a qualified mechanic.
- Prior to installation on used vehicles, carefully inspect the vehicle's steering and driveline systems, paying close attention to the tie rod ends, pitman and idler arms, ball joints, and wheel bearings. Also check steering to frame attaching points for stress cracks. The overall vehicle must be in excellent working condition: repair or replace all worn parts.
- 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.
- Secure and properly rack the vehicle on a hoist prior to beginning installation.
- Always wear safety glasses when using power tools.
- Use extreme caution when cutting is required under the vehicle: the factory undercoating may be flammable. Be careful of all fuel lines, fuel tanks, brake lines, and electrical harnesses.
- When tightening bolts, foot-pound readings are listed on the Torque Specification Chart at the end of the instructions unless otherwise specified.
- Front-end alignment will be necessary after completion.
- Exhaust modification may be necessary.
- Drive line(s) modification may be necessary.

Front End Disassembly

- 1) **Always work on a properly supported vehicle.** With the vehicle on a car hoist, lift the vehicle off of the ground and remove the front wheels.
- 2) Remove the outer tie rod end from the stock spindle by first removing the nut then tapping on the bottom of the tie rod stud, Figure 1.



Figure 1: remove outer tie rod end from spindle

- 3) **4WD ONLY!** Skip to Step 4 for 2WD. Remove the tin cap from the spindle to expose the axle nut, remove axle nut with 36mm socket. Remove 6 bolts holding inner CV axle joint to the differential flange, See Figure 2. Turn the spindle (like steering toward the middle of the truck) to expose the back of the spindle, drop the inner end of the CV axle under the differential, and pull the outer end of the CV axle out of the spindle hub bearing and remove axle from vehicle.



Figure 2: unbolt CV axle from differential

Installation # 8112

- 4) Unbolt the brake line bracket from the top of the spindle. If the stock upper control arms will be replaced and/or brake lines replaced, remove the brake line bracket from the upper control arm now. Remove the brake calipers by removing the 2 bolts fastening the caliper to the spindle; it is easiest to hang the caliper from the frame with a short bungee cord or something of the like. Now remove the torx bolt (and or) remove clips from the wheel studs, and then remove the brake rotors (clips can be discarded at this time as aftermarket wheel will not fit with clips installed). See Figure 3. If installing new brake lines, unbolt the steel clamp from the upper control arm and the other from the top of the spindle. Then remove the front rubber brake line by taking the clip off of the top of the line and unscrewing the fitting. Next, unscrew the bolt on the banjo fitting of the caliper and discard the brake line. Repeat on the other side. Later on, re-assemble the new lines in the opposite manner, being sure that copper crush washers are used on both sides of the banjo fitting on the caliper. There is a left and right side brake line on this vehicle, see the banjo fitting orientation to determine the correct side.

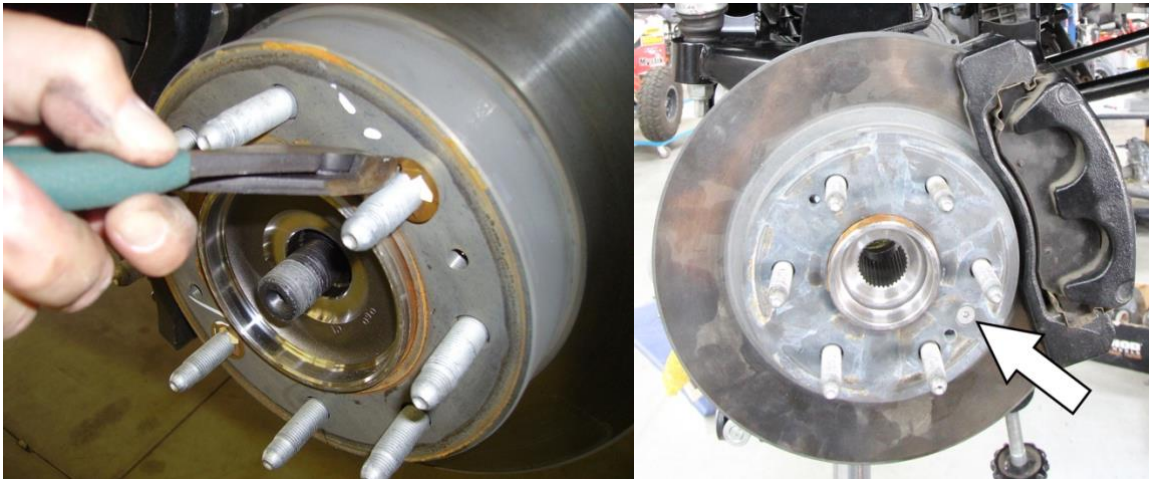


Figure 3: Remove torx bolt (and or) clips

- 5) Next, use a box end ratchet wrench to remove the 3 nuts that secure the top of each coil over shock to the frame. Then Remove both anti-sway bar links, which connect the sway bar to the lower control arms. Disconnect the wheel speed sensor from the harness on top of the rear pivot pocket of the upper control arm. Remove the lower shock fasteners, and remove the shocks from the vehicle.
- 6) Detach the upper and lower control arms from the spindles. Do this by loosening the nut on the upper and lower control arm ball joints, but leave a few threads engaged. With the control arm and spindle assembly hanging, hit the spindle with a large hammer on the boss that surrounds the ball joint stud until the taper seat breaks loose, see Figure 4.
- 7) Hang on to the spindle and remove the ball joint nuts, and remove the spindle assembly from the vehicle. See Figure 5

Installation # 8112



Figure 4: break loose upper ball joint, and lower ball joint



Figure 5: shock and spindle removed

- 8) If you purchased, or your kit includes the Cognito upper control arm kit, remove the factory upper control arms at this time and refer to those instructions for installation a little later. If not, do not remove the factory upper control arms.
- 9) 4WD ONLY! Skip to Step 12 for 2WD. Remove front differential skid plate and discard, if so equipped. Unplug the differential's electronic coupler(s) and breather hose. Unbolt the front drive shaft from the differential yolk.
- 10) 4WD ONLY! Skip to Step 12 for 2WD. Now using a reciprocating saw, cut the back of the driver side lower control arm rear frame pocket off as shown in Figure 6. Make the cut 1.5" back from the center of the hole. This allows room for the differential to drop down without hitting the frame. Now cut the passenger side in the same manner, to make room for the differential mount.

Installation # 8112

- 11) 4WD ONLY! Skip to Step 12 for 2WD. After cutting the back of the pockets off, remove the factory crossmember from the vehicle as shown in Figures 7. You should retain this crossmember and removed frame section for later replacement if you should decide to return the vehicle to stock. Support the bottom of the front differential with a transmission jack to prepare to unbolt the differential from the truck. It is best to use a bracket on a transmission jack that will bolt to the front differential. It mounts to 2 bolts on the axle flanges of the front differential. With the differential supported, remove the 4 fasteners holding the differential in place, lower down the differential safely as this is a very heavy item.



Figure 6 & 7: cut & removal required to make room for the repositioned differential.

- 12) Using a reciprocating saw, cut the passenger front cross member frame pocket as shown in Figure 8 to make room for the new front cross member. Now cut the driver's side in the same manner.



Figure 8: Cross Member Cut

Lift Kit Installation and Front End Re-assembly

- 13) This step will begin the installation process. **Do not tighten any fasteners until instructed to.** Unless otherwise specified, flat washers will always be used under the heads of bolts and under nuts. Therefore, one bolt with one nut will require 2 flat washers. Future torque may be called out in each step, this means do not torque now, but you will be instructed to return and torque at a later step.
- 14) 4WD ONLY! Skip to Step 16 for 2WD. As shown in Figure 9, bolt the 8388 driver side differential mount to the factory differential mount using the 2 metric bolts in HP9153. Place a lock washer on each bolt followed by a flat washer. Future torque will be 40 ft-lbs.



Figure 9: install driver diff mount

- 15) 4WD ONLY! Skip to Step 16 for 2WD. As shown in Figure 10, bolt the 8387 passenger side differential mount to the factory differential using the 2 factory nuts with captured washers, Future torque will be 60 ft-lbs.



Figure 10: install passenger diff mount

Installation # 8112

- 16) Bolt the rear crossmember into place using the factory 5/8 Hardware. See Figure 11. Future torque will be 100 ft-lbs.

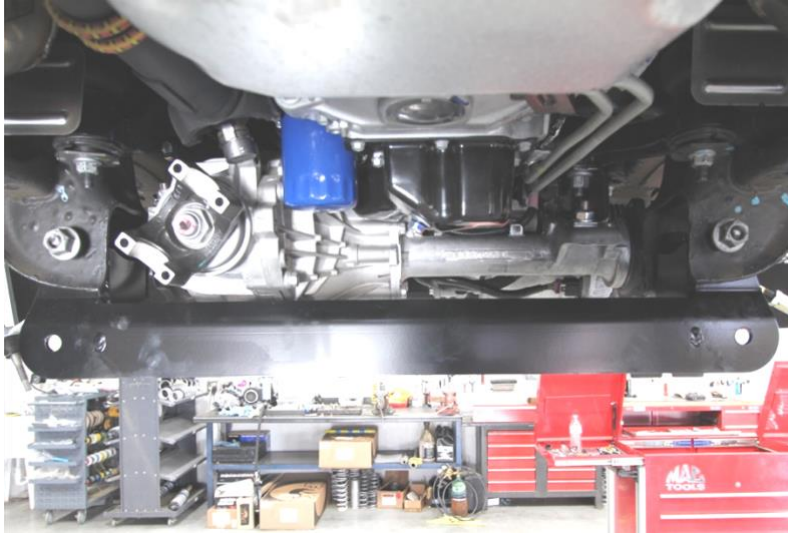


Figure 11: bolt in rear crossmember.

- 17) 4WD ONLY! Skip to Step 21 for 2WD. As shown by the red area in Figure 12, cut the passenger side differential mounting perch with a cut off wheel.

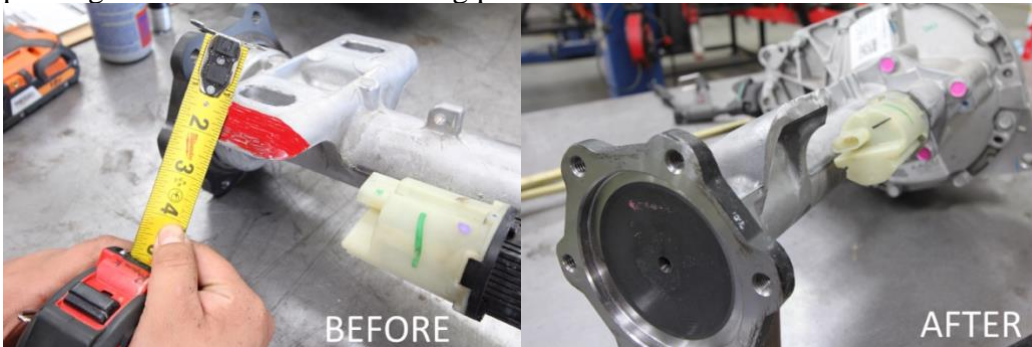


Figure 12: Passenger Diff Mounting Perch cut.

- 18) 4WD ONLY! Skip to Step 21 for 2WD. As shown by the black line in Figure 13, cut the power steering pump casting to clearance the differential.



Figure 13: Power Steering Casting cut.

Installation # 8112

- 19) 4WD ONLY! Skip to Step 21 for 2WD. Lift the front differential into place and bolt the passenger side mounting flange of the front differential to the 8387 passenger differential mount using the 9/16x1.3/4" bolts, nuts and washers from HP9153. Future torque will be 80 ft-lbs.
- 20) 4WD ONLY! Skip to Step 21 for 2WD. Bolt the driver side mounting flange of the front differential to the 8388 driver differential mount using the 1/2x1.3/4" bolts, nuts and washers from HP9153. Future torque will be 60 ft-lbs.
- 21) Using the 5/8 factory hardware, and a helper, hold the front crossmember into place as shown in Figure 14, and bolt into place securing the front crossmember in the original front lower control arm mounting holes. Future torque will be 100 ft-lbs.



Figure 14: installing front crossmember

- 22) Locate the factory lower control arms, and the rest of the hardware in HP9151. Insert the proper lower control arm into place in the suspension kit sub frame pockets, and hold in place by inserting the 5/8x5" bolts through the front a-arm pivot from the front side of the vehicle, and then the 5/8x6" bolts through the rear a-arm pivot from the back side of the vehicle.
- 23) Locate the 1545 Clip Nut Bar. From the front side of the front crossmember, slide the clip nut bar down into the top of the crossmember. Install the 1923 skid plate. Bolt to the clip nut bar inserted in the front crossmember first, then to the bottom of the rear crossmember using the hardware from HP9151. See Figure 15.



Figure 15: install 1923 skid plate

- 24) If your purchase included the Cognito upper control arm kit, install it per included instructions at this time.
- 25) **If you purchased coilovers instead of strut spacers, skip this step to see shock installation instructions for coilover installation.** If installing 110-70014 Front Strut Spacer Kit, install the spacers onto the strut tops as shown in Figure 16 below and tighten the six M10x1.25 flange nuts to 37 Ft.-lbs. (50 Nm) using a 16mm socket.



Figure 16: Strut spacers installed on struts

Installation # 8112

26) If you will be installing the Fox or Cognito coilover shock, and the coil spring is not already preloaded, use a spring compressor if possible, to compress the spring for 2" preload for a ride height of about 10" over stock. Preload the spring 3" for a ride height of about 12" over stock. Once the truck is finished and sitting on the ground, you can use a spanner wrench or other tool to dial in the shock preload adjuster to achieve correct ride height. Do not preload the shock too far, achieving a ride height over 12". If a spring compressor is not available, you will have to adjust the preload on the truck with a spanner wrench, always raise the truck frame so the wheel droops out while tightening the preload adjuster. There is a left and right side shock if the shock has a remote reservoir, the hose will exit the shock and point toward the front of the vehicle. Install the appropriate shock on the appropriate side of the vehicle, along with the appropriate reservoir mount. The reservoir mount goes on top of the frame shock mounting pocket, the included 3/8" bolts, lock washers, and flat washers secure it and then pass thru the frame and thread into the top shock mount. Tighten these bolts to 20 ft-lbs now. See Figure 17.



Figure 17: Fox remote reservoir shock mounting

27) If you are using the factory tie rod assembly see the supplement installation instructions.

Installation # 8112

1) If you are using the factory tie rod assembly, it needs to be shortened 1". Remove the outer tie rod end from the adjuster. Cut 1" off of the end of the outer tie rod, and then re-chamfer the hole to clean up the first thread, See Figure 18.



Figure 18

2) Secure the outer tie rod in a vise grip. Using a 9/16" drill bit, drill the hole in the outer tie rod 1" deeper. Then using an M16-1.50 tap, tap the outer tie rod to extend the threads 1", See Figure 19.



Figure 19

- 3) Re-install the outer tie rod end onto the tie rod adjuster 1/4" from being bottomed out.
- 28) Disassemble the bearing hub assembly and brake rotor shield from each of the factory spindles. Clean the mating surfaces of the bearing hub and brake rotor shield thoroughly and transfer all of these parts to the appropriate Cognito spindle. Apply a small amount of thread locker to the spindle hub bolts before fastening them. Torque the bearing hubs to the spindles to 95 ft-lbs. at this time. See Figure 20.

Installation # 8112



Figure 20: hub transferred to Cognito spindle

- 29) Now hang the spindle assemblies on the appropriate sides of the vehicle from the ball joint of the lower control arm. Then attach the upper ball joint to the spindle assembly. Tighten the lower ball joint to 100 ft-lbs; you may have to hold the stud with an Allen wrench to prevent it from spinning, while turning the nut with a boxed end wrench. Tighten the upper ball joint to 50 ft-lbs if using the stock upper control arm. If using the Cognito control arm kit, tighten the castle nut to a minimum of 50 ft.lbs lining up the cotter pin holes and then insert and fasten the cotter pin.
- 30) 4WD ONLY! Skip to Step 31 for 2WD. Turn the spindle (like steering toward the middle of the truck) to expose the back of the spindle, insert the flange end of the CV axle into the hole above and to the front of the differential, then install the stud/spindle end of the front drive axles into the Cognito spindles and fasten with factory hardware to 120 ft-lbs of torque. Carefully tap the axle stud cover back onto the spindle hub. Mount the differential end of the drive axles to the differential with hardware from package #9154, and the Cognito axle spacers in between. Use a small amount of thread locker on the axle bolts and torque to 40 ft-lbs.
- 31) Install the brake rotors and calipers on to the appropriate side Cognito spindle. Use a small amount of thread locker and torque the caliper bolts to 100 ft-lbs.
- 32) Reuse the factory brake line mounting bracket. Before securing the bracket to the upper control arm, several bends will need to be made. As shown in Figure 19, flatten bends 1 & 2, bend 3 20 degrees down, and open bend 4 15 degrees.



Figure 21: Brake line Mounting Bracket

- 33) Install the Sway Bar Spacer Brackets and Factory Sway Bar. The Sway Bar Spacer Brackets are secured to the frame using hardware from HP9107. Be sure to include a lock washer when securing the bracket to the truck frame. To install the Factory sway bar, secure the sway bar to the spacer brackets using the factory bolts and the washer and nuts from HP9107. See Figure 22.



Figure 22: Sway Bar Spacer Bracket and Factory Sway Bar

- 34) Install the heavy duty sway bar end link kit at this time. Use the instructions included in that kit. If your truck came factory with stamped steel control arms, you must install the 8241 spacer underneath the clevis bracket to space it up from the lower a-arm for clearance purposes. See Figure 23.

Installation # 8112

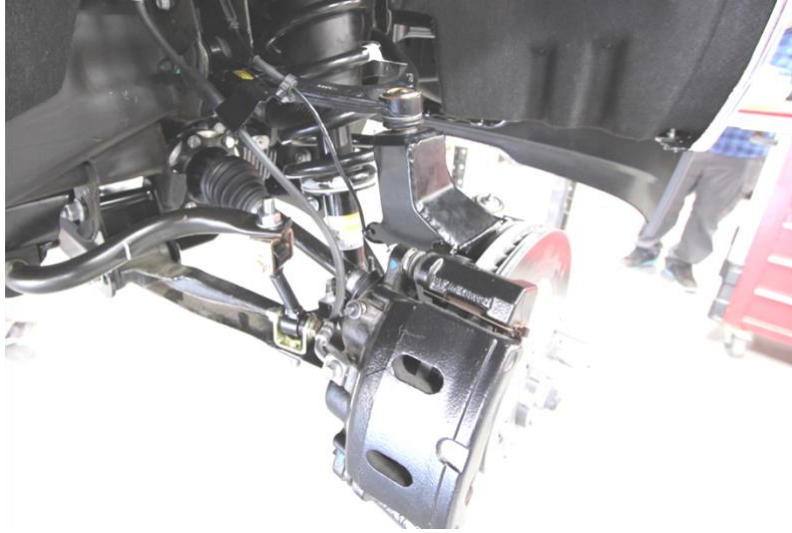


Figure 23: installation of CV axles, sway bar end links with spacers, and brake lines

- 35) Reattach the factory tie rod end to the Cognito spindles and tighten to 80 ft-lbs of torque at this time.
- 36) Be sure the brake lines and ABS sensor wires are routed and restrained as to avoid any rubbing and binding.
- 37) 4WD ONLY! Skip to Step 39 for 2WD. A front CV driveline is required to prevent vibration at speeds over 20 MPH in 4WD, and sold separately. Cut loose the clip holding the dust boot onto the factory driveline slip yoke at the transfer case. Replace the factory driveline with a new unit from Cognito Motorsports, and use a hose clamp or zip tie to secure the dust boot to the new drive shaft. If you try and retain the factory driveline, damage to the front differential and the transfer case will occur if 4WD is used. Attach the new driveline yolk to the front differential yolk with the factory clamps and bolts, torque to 30 ft-lbs.
- 38) 4WD ONLY! Skip to Step 39 for 2WD. The pinion angle on the front differential is increased therefore $\frac{1}{2}$ quart of approved gear oil needs to be added to the front differential to ensure the pinion bearings are oiled appropriately. You will not be able to use the oil level bolt on the front differential case because it is no longer at the same angle. The oil will have to be added through the plastic case vent by unscrewing the vent from the case, adding the oil, and then re-installing the vent. If having the front differential serviced ever, the oil level check hole will not be able to be used, be sure the service person knows this.
- 39) For 2014-2018 trucks utilizing the factory front skid plate refer to instruction set #8113 that's included with part #110-70060.
- 40) At this point, inspect all hardware to ensure everything is torqued properly.

Installation # 8112

- 41) Install front wheels according to factory specifications. Please note the wheel requirement stated at the beginning of this instruction set. Do not re-install the small clips on to the wheel studs; they will interfere with most aftermarket wheels.
- 42) If you purchased new spring packs, replace the factory spring packs and use factory hardware and torque to 100 ft-lbs for 5/8" u-bolts or 80 ft-lbs for the factory 14mm u-bolts. If the 5/8" u-bolts don't quite fit through the holes in the bottom u-bolt plate, chase the holes with a 5/8" drill bit. The large bushing end of the spring goes toward the front of the vehicle. A 2.5 or 4 degree shim is recommended to reposition the differential pinion angle for driveline alignment and you must add 1 extra quart of gear oil to properly oil the pinion bearings due to the pinion angle change. Then install rear wheels and shocks. Be sure to remove the 2 clips from each rear wheel hub as they will interfere with most aftermarket wheels.
- 43) If you purchased the block and u-bolt kit, refer to the instructions included with them for installation.
- 44) Adjust headlights down to proper settings. On flat ground park squarely 25 feet back from a wall. Turn on the headlights, look at the light shining on the wall, and adjust the headlamp down until the light on the wall is approximately 4 feet from the ground.

45) Have the vehicle's front end professionally aligned using these front end alignment guidelines:

Some Cognito upper control arms have added caster built into them to increase drivability performance, therefore it's important to be sure the correct control arm is installed on the correct side of the vehicle. It's also important to make your alignment shop aware that if caster is high, that is the intention by design.

Cross caster is important in making your vehicle track straight down the road. Most roads have crown to them, high in the middle for water runoff. This crown will make your vehicle want to pull to the right. Vehicles with stock tires on them have a narrow contact patch on the ground and are not as affected as a vehicle having larger wider tires. With larger wider tires it's important to have cross caster proper in order for the vehicle to track straight on these roads. Trucks with dual rear wheels have more tire on the ground and require more cross caster. The length of the wheelbase will also affect cross caster needed.

Generally, crew cab short and long bed trucks like .8 degrees of cross caster. Dual rear wheel trucks like .9-1.0 degrees of cross caster. Your area might have roads that are crowned more or less than average therefore these numbers may need to change and your alignment shop should understand this. If your alignment tech is stating they can't align the truck, that typically means they can't get the alignment to OEM spec, and that's fine because your vehicle is no longer OEM. A good tech will understand this and the numbers and let caster run slightly out of OEM spec (Caster should always be above 2 degrees positive) while maintaining cross caster needed for the vehicle and roads so you enjoy your vehicle with aftermarket Cognito parts and your driving experience.

Installation # 8112

Torque Specification Chart

1/4" Bolts 11Ft.-Lbs.

5/16" Bolts 13Ft.-Lbs

3/8" Bolts 19Ft.-Lbs

7/16" Bolts 30Ft.-Lbs

1/2" Bolts 60Ft.-Lbs

9/16" Bolts 80Ft.-Lbs

5/8" Bolts 100Ft.-Lbs

Torque all factory bolts to factory torque.