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INSTALL INSTRUCTIONS:

2018-2021 Polaris RZR XP Turbo
S & 2019-2021 OE Replacement
Trailing Arm Kit
SKU: 360-90620

PARTS LIST FOR SKU: 360-90620

QTY.	PART #	DESCRIPTION
1	8594	2018 Polaris RZR, XP, TURBO-S, OE Replacement Driver Trailing Arm
1	8595	2018 Polaris RZR, XP, TURBO-S, OE Replacement Passenger Trailing Arm
2	UNI-BALL-WSSX12T-F1	Uni-Ball Wssx12T 3/4", F-1 Tight Fit Teflon Liner
2	H-IRR-1.3/8"	1.375" Internal Retaining Ring
4	6118	RZR XP1K Trailing Arm Rod End Misalignment Spacer
2	HP9134	4PK Cushion Clamp Hardware Pack
2	H-63124	6" Black Cable Tie
1	90909	Rock Scraper for Cognito OE Replacement Trailing Arms

HP9134 – Cushion Clamp Hardware Pack

QTY.	PART #	DESCRIPTION
4	HARDWARE-0708753	1/4" Wire/Tube P-Clamp
4	HARDWARE-10-32X5/8-SHCS	10-32 x 5/8" Lg. SHCS
4	HARDWARE-10-32-LOCKNUT	10-32 Nylock Nut
8	HARDWARE-10-32-SS-FW	No. 10 SAE Flat 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

These Cognito OE replacement trailing arms are an off-road inspired box sheet metal design in order to be stiff enough to handle abuse OEM trailing arms will not. The nature of this suspension geometry introduces issues when a bottom out occurs which causes a torsional bending load in the trailing arm, of which the OE trailing arms narrow design will not handle repeatedly. The design also incorporates brake line mounting tabs to utilize the OE brake line mounts and maintain the OE wheelbase and track width.

REQUIREMENTS

- Installation requires a qualified mechanic
- A vehicle 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.
- Read instructions carefully and study the pictures before attempting installation.

TECHNICAL INFORMATION

- Check the parts and hardware packages against the parts list to assure that your kit is complete before starting
- Each kit, and optional kits, are packaged separately. Therefore installation procedures are covered in separate instructions. Familiarize yourself with each specific set of instructions before beginning.
- Follow the OE specifications when replacing or re-installing OE fasteners, retainers, and hardware specified in the OEM manual

INSTALLATION

1. Before lifting the vehicle, locate the brake line p-clamp mounted to the frame near the passenger side trailing arm pivot (Figure 1A). Remove the mounting bolt using a T25 Torx bit or wrench (Figure 1B).

Figure 1A: Locate Passenger Brake Line P-clamp



Figure 1B: Mounting Bolt Removed



2. Raise the rear of your RZR up and support by the frame so that the suspension droops out and tires are off the ground by at least an inch (Figure 2A). Use a 3/4" socket to remove the (4) passenger side rear tire lug nuts and remove tire (Figure 2B).

Figure 2A: Lift Vehicle



Figure 2B: Remove Lug Nuts and Tire



3. Locate the Dynamix shock control sensor mounted to the top of the rear shock (Figure 3A). Remove the connector by pressing the locking tab and remove (Figure 3B).

Figure 3A: Dynamix Shock Sensor



Figure 3B: Sensor Removed



4. Use (2) 18mm wrenches to remove the lower shock pivot mounting bolt on the OE trailing arm and rotate rearward to remove the shock from mount (Figure 4A). Swing the shock rearward while watching the shock sensor to prevent damage and support (Figure 4B).

Figure 4A: Rear Shock Removal



Figure 4B: Rear Shock Supported

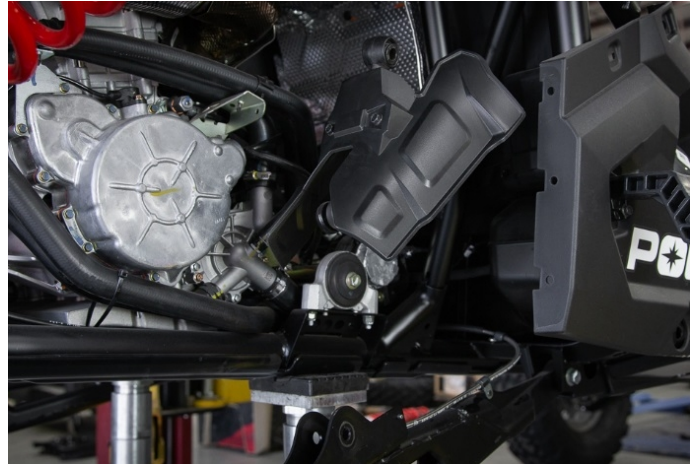


5. Use (2) 18mm wrenches to remove the lower sway bar end link pivot mounting bolt on the OE trailing arm and rotate rearward to remove the end link from the mount (Figure 5A). Rotate the sway bar end link rearward in position (Figure 5B).

Figure 5A: Rear Sway Bar End Link Removal



Figure 5B: End Link Position



6. Locate the rear brake line shield on the rear of the trailing arm (Figure 6A). Use (2) 10mm wrenches to remove the (2) mounting bolts and nuts. The mounting nuts are located inside the trailing arm, so a second wrench is required (Figure 6B). Remove the shield to expose the rear brake line (Figure 6C).

Figure 6A: Rear Brake Line Shield



Figure 6B: Shield Mounting Nuts



Figure 6C: Shield Removed



7. Locate the (3) brake line p-clamps on the rear trailing arm (Figure 7A). Use a 9/64" drill bit to remove the mounting rivets (Figure 7B). Once all the rivets are removed, allow the brake line to hang freely (Figure 7C).

Figure 7A: Brake Line P-Clamps



Figure 7B: Drill Rivets Out



Figure 7C: Brake Line Removed



8. Locate the cotter pin on the rear axle hub nut (Figure 8A). Use a pair of needle nose pliers to straighten the pin and remove. Using a 27mm socket, remove the axle hub nut from the axle (Figure 8B).

Figure 8A: Rear Axle Hub Cotter Pin & Nut



Figure 8B: Rear Hub Nut Removed



9. Locate the rear radius arm and bearing carrier pivot mounting bolts (Figure 9A) Use (1) 18mm wrench and (1) 18mm socket to remove the lower radius arm pivot mounting bolt on the OE bearing carrier (Figure 9B). Swing radius rod down to remove from bearing carrier saddle (Figure 9C).

Figure 9A: Radius Arm Pivot



Figure 9B: Bolt Removal

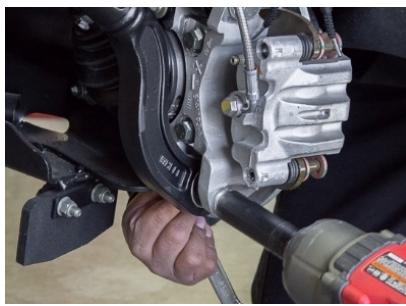


Figure 9C: Radius Arm Removed



10. Use (1) 18mm wrench and (1) 18mm socket to remove the upper radius arm pivot mounting bolt on the OE bearing carrier and lift radius rod up to remove from bearing carrier saddle (Figure 10A). Swing the trailing away from the center of vehicle to remove from axle (Figure 10B). Swing the axle up and support so that the axle is not hanging on the CV joint (Figure 10C).

Figure 10A: Upper Radius Rod Removed



Figure 10B: Axle Removed



Figure 10C: Axle Removed



11. Locate the (2) brake caliper mounting bolts on the spindle bearing carrier (Figure 11A). Use a 15mm socket to remove the mounting bolts (Figure 11B). Once the brake caliper is removed, place underneath the center of the vehicle so that the brake line is not damaged during the remaining part removal and installation process. Remove the hub from the bearing carrier (Figure 11C).

Figure 11A: Brake Caliper Mounting Bolts



Figure 11B: Brake Caliper Removed



Figure 11C: Hub Removal



12. Locate the (4) bearing carrier mounting bolts (Figure 12A). Use (1) 15mm wrench and (1) 15mm socket to remove the bearing carrier bolts from the trailing arm (Figure 12B).

Figure 12A: Bearing Carrier Mounting Bolts



Figure 12B: Bearing Carrier Removed



13. Locate the trailing arm front pivot mounting bolt (Figure 13A). Use (1) 15 mm wrench and (1) 15mm socket to remove the front pivot mounting bolt and nut. Once the bolt is removed, slide the trailing arm out of the saddle and remove (Figure 13B).

Figure 13A: Trailing Arm Front Pivot



Figure 13B: Trailing Arm Removed



14. Locate the passenger side Cognito trailing arm (Part # 8595) (Figure 14A). The Uni-ball bearing, retaining ring, and spacers are preinstalled and secured with a black cable tie at the factory (Figure 14B). Ensure the retaining ring is properly seated inside the pivot end.

Figure 14A: Cognito Trailing Arm



Figure 14B: Trailing Arm Pivot Components



15. Locate the trailing arm bearing carrier and (4) OE fasteners, washers, and nuts, removed in step 12 (Figure 15A). Install the bearing carrier on the Cognito trailing arm with (1) washer between the trailing arm and (1) lock nut (Figure 15B). Use (1) 15mm wrench and (1) 15mm socket to tighten the (4) mounting bolts and nuts, but do not torque at this time (Figure 15C).

Figure 15A: Bearing Carrier & Hardware

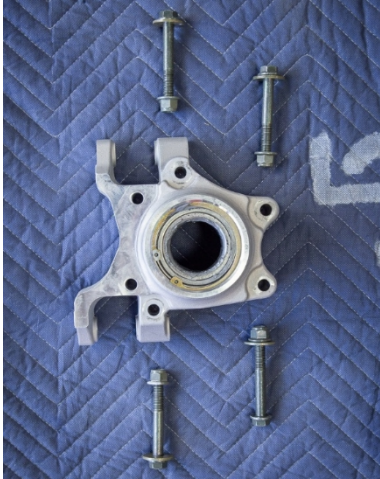


Figure 15B: Hardware

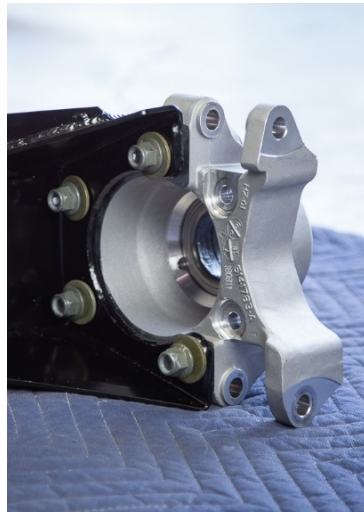


Figure 15C: Bearing Carrier Installed



16. Before starting step 16, route the brake line above the frame pivot pocket (Figure 16A). Remove the black cable holding the spacers in place and insert into to the frame pivot pocket. Align the spacers with the mounting hole and assemble using the OE bolt, washer, and nut, removed in step 13. Install the washer between the nut and inner frame mount and torque to 70 ft.-lbs.

Figure 16A: Brake line Routing



Figure 16B: Front Pivot Pocket



17. If replacing the OE end links with Cognito sway bar end links, refer to those instructions before proceeding. Using the original hardware, removed in step 5, install the sway bar end link to the trailing arm, but do not tighten at this time (Figure 17A). Using the original hardware, removed in step 4, attach the lower shock eyelet to the trailing arm, but do not tighten at this time (Figure 17B). Torque the shock and sway bar mounting bolts to OE torque specification (70 ft.-lbs.). Insert the Dynamix shock sensor connector, removed in step 3 (Figure 17C).

Figure 17A: Sway Bar End Link Installed



Figure 17B: Shock Installed



Figure 17C: Shock Sensor Install



18. Before starting step 18, torque the (4) bearing carrier mounting bolts to the OE torque specification (42 ft.-lbs.). Align the axle with the spindle carrier bearing (Figure 18A). Swing the trailing arm in towards the axle and into place (Figure 18B). Install the hub, removed in step 11, onto the axle snout and into bearing carrier (Figure 18C).

Figure 18A: Align Axle & Spindle Bearing Carrier



Figure 18B: Axle Installed



Figure 18C: Hub Installed



19. Locate the OE hub belleville washer, removed in step 11, and install on the axle snout with the dome side out (Figure 19A). Install the hub nut, but only (2) revolutions of thread engagement (Figure 19B) to prevent the axle from sliding out.

Figure 19A: Hub Belleville Washer

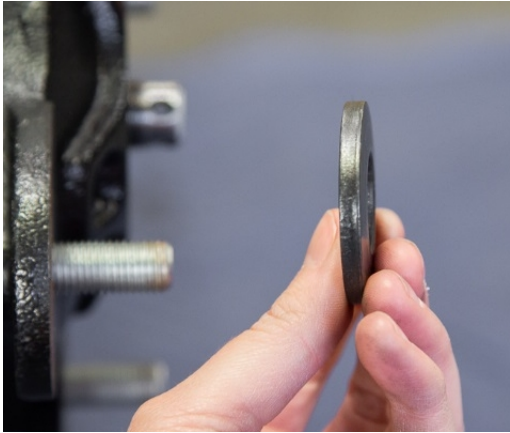
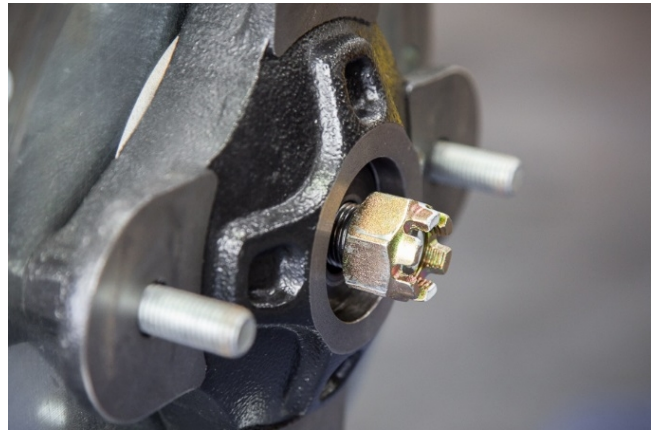


Figure 19B: Hub Nut



20. Use the OE hardware, removed in step 10, to install the upper radius rod to the bearing carrier. Insert the bolt from the rear of the vehicle towards the front with OE washer between the bolt head and bearing carrier, but do not tighten at this time. Route the brake line over the top of the upper radius rod and insert between the rotor and bearing carrier (Figure 20A). Attach the brake caliper using the OE bolts, removed in step 11, and torque to OE torque specification (46 ft.-lbs.) (Figure 20B).

Figure 20A: Radius Rod Bolt Orientation

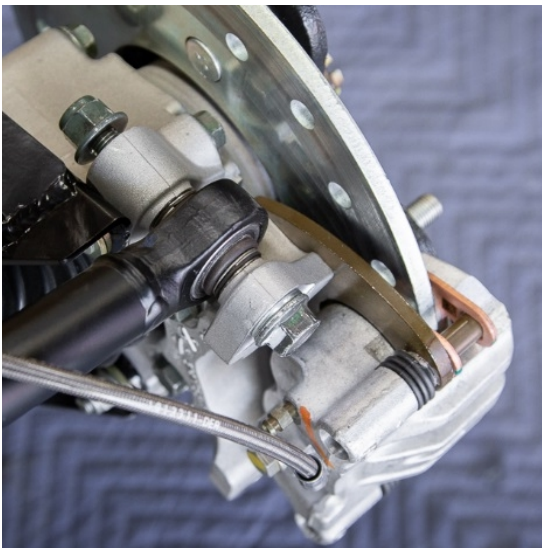
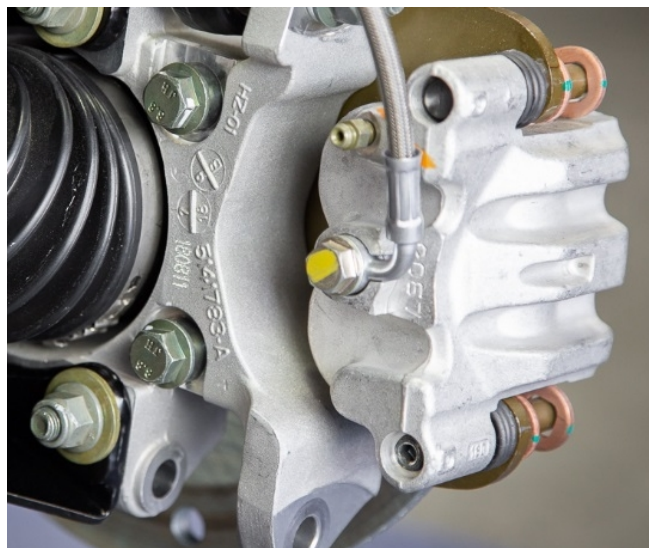


Figure 20B: Brake Caliper Installed



21. Use the OE hardware, removed in step 9, to install the lower radius rod to the bearing carrier. Insert the bolt from the rear of the vehicle towards the front with OE washer between the bolt head and bearing carrier (Figure 21A). Torque the upper and lower radius rod bolts to the OE torque specification (50 ft.-lbs.). Tighten the hub nut, but do not torque at this time (Figure 21B).

Figure 21A: Lower Radius Rod Installation

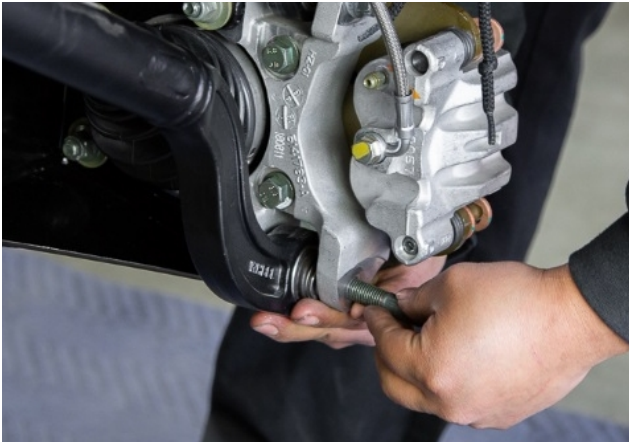


Figure 21B: Hub Nut Installed



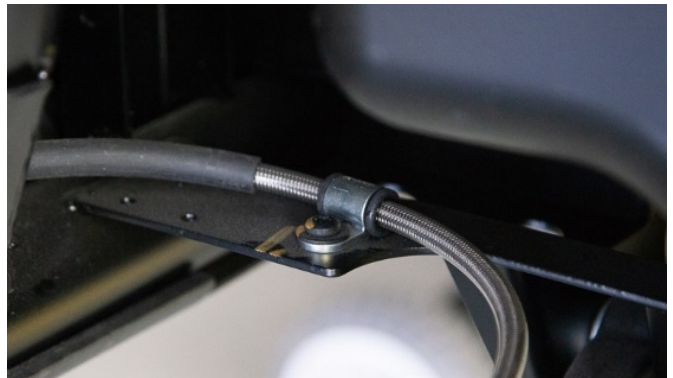
22. Locate the brake line hardware listed below from the supplied hardware pack (HP9134) (Figure 22):

- (1) – 1/4" Wire/Tube P-Clamp
- (4) – 10-32 x 5/8" Lg. SHCS Stainless Steel
- (4) – 10-32 Nylock Nut
- (8) – No. 10 SAE Flat Washer

Figure 22: Brake Line Hardware



Figure 23: Brake Line Frame Mount



23. Use the OE bolt to install the brake line P-clamp, removed in step 1 (Figure 23), and torque to OE torque specifications.

24. Install the OE P-clamp closest to the trailing arm front pivot. Use (1) bolt with (1) washer between the OE P-clamp and bolt head. Attach using (1) nylock nut and (1) washer between the nut and brake line mounting tab (Figure 24A). Do not tighten at this time. Install the OE P-clamp closest to the brake line tab located in front of the sway bar mount. Use (1) bolt with (1) washer between the mounting tab and bolt head. Attach using (1) nylock nut and (1) washer between the nut and OE P-clamp (Figure 24B). Do not tighten at this time.

Figure 24A: Brake Line Routing



Figure 24B: Brake Line Routing



25. Install the OE P-clamp closest to the brake line mounting tab located behind shock mount. Use (1) bolt with (1) washer between the mounting tab and bolt head. Attach using (1) nylock nut and (1) washer between the nut and OE P-clamp (Figure 25). Do not tighten at this time

Figure 25: Brake Line Routing

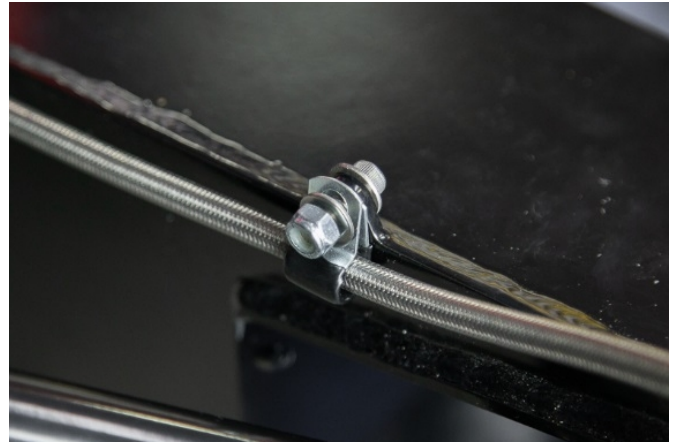


26. Use the supplied P-clamp to attach the brake line to the rear mounting tab, making sure the brake line does not wear on the upper radius rod (Figure 24A). Use (1) bolt with (1) washer between the mounting tab and bolt head. Attach using (1) nylock nut and (1) washer between the nut and 1/4" P-clamp (Figure 24B). Once the rear tab is located, torque the (4) mounting bolts to 60 in.-lbs.

Figure 26A: Brake Line Routing



Figure 26B: Brake Line Rear Location



27. Before starting the driver side Cognito trailing arm (Part # 8594) installation, reference the brake line routing near the driver side trailing arm front pivot. This will be different than the passenger side. Repeat steps (3-21) for the driver side Cognito trailing arm installation. For the driver side brake line routing, the steps are opposite in order, **(26-24)**.
28. Reference Install Sheet **7266** for Rock Scraper installation.
29. Use the OE lug nuts to install the wheel, removed in step 2, and torque to the OE torque specifications (120 ft.-lbs.).
30. Before starting step 29, make sure everything is clear from underneath the vehicle. Lower the vehicle down to ground and set static ride height. Once the vehicle is at ride height, torque the hub nut to the OE torque specification (180 ft.-lbs.) and replace OE cotter pin.
31. Roll the vehicle forward and backward to settle the suspension, while jouncing the rear of the vehicle. The height from the floor to the very rear of the car at the top of the skid plate should 13.5 inches with stock width suspension and 29" tall tires. With the long travel suspension, that distance will increase to 15.5 inches.

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.