

2017-Present Radius Rod Kit

INSTALL INSTRUCTIONS:
2017-Present Radius Rod Kit
SKU: 370-90370/370-90371/370-90378/370-90372/370-90379
PARTS LIST FOR SKU: 370-90370

QTY	PART #	DESCRIPTION
8	6141	MISALIGNMENT SPACERS
2	8479	Lower Radius Rod
4	UNI-BALL-WSSX10T-F1	Uni Ball
4	HARDWARE-IRR-1-3/16"	Retaining Ring
4	HARDWARE-63124	Black Cable Tie

PARTS LIST FOR SKU: 370-90371

QTY	PART #	DESCRIPTION
2	8478	Middle Radius Rod Adjustable
8	6141	MISALIGNMENT SPACERS
4	RODEND-JMX10T	ROD END
4	HARDWARE-36264	Jam Nut

PARTS LIST FOR SKU: 370-90378

QTY	PART #	DESCRIPTION
2	8508	Middle Radius Rod Non-Adjustable
8	6141	MISALIGNMENT SPACERS
4	UNI-BALL-WSSX10T-F1	Uni Ball
4	HARDWARE-IRR-1-3/16"	Retaining Ring

PARTS LIST FOR SKU: 370-90372

QTY	PART #	DESCRIPTION
2	8477	Top Radius Rod Adjustable
8	6141	MISALIGNMENT SPACERS
4	RODEND-JMX10T	ROD END
4	HARDWARE-36264"	Jam Nut
4	HARDWARE-63124	Black Cable Tie


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.

Modification of vehicle suspension can interfere with ride-height sensors, active suspension, lane departure features, semi-autonomous, and autonomous driving features. It is the responsibility of the mechanic to determine feature compatibility prior to installation. Recalibration of sensors may be required in the event of any modification.

PARTS LIST FOR SKU: 370-90379

QTY	PART #	DESCRIPTION
2	84507	Top Radius Rod Non-Adjustable
8	6141	MISALIGNMENT SPACERS
4	UNI-BALL-WSSX10T-F1	Uni Ball
4	HARDWARE-IRR-1-3/16"	Retaining Ring



INTRODUCTION

Thank you for purchasing our Radius Rod Kit.

The OEM Can-Am radius rods under heavy duty use are prone to bending and wearing out the bearings in the ends which become very sloppy. A bent or broken radius rod can cause much more damage sometimes breaking or bending rear axles, rear CV joints, trailing arms, rear shock shafts, and sway bar end links. - The Cognito upper and middle radius rods use rod ends that are right hand thread, so that if the jam nuts come loose, the length does not change and cause damage. The lower radius rods are a fixed length. Any adjustment can be made with the upper and middle radius rods.

TECH NOTES

- Read instructions carefully and study the pictures (if included) before attempting installation.
- If this product was purchased as part of a bundle/package. Familiarize yourself with each set of instructions included with the bundle/package before beginning.
- Check the parts and hardware packages against the parts list to assure that your kit is complete before starting.

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.



INSTALLATION

1. All hardware will be re-used, so retain all removed hardware for re-use.
2. Raise the rear of your X3 up and support by the frame so that the suspension droops out and tires are off the ground by at least an inch. Remove rear tires using **19mm** socket.
3. Remove the fasteners holding the outer ends of the stock radius rods to the spindle bearing carriers, and the inner ends from the chassis and radius rod plate. Remove stock radius rods from the car.
4. If installing uppers and/or middles, locate the included rod ends and jam nuts. Thread the jam nuts all the way onto the rod ends, finger tight. Now lubricate the threads of the radius rod bars, then thread in the rod ends into all the ends of the radius rod bars, thread them all the way in. a. If installing the fixed upper or middle radius rods no adjustments will be required. Put misalignment spacers inside each end, then go to step 9.
5. The 2 longest bars are the middle rods and the 2 shortest are the upper rods. The lower radius rod is a fixed length. Tighten the jam nut on one end of the upper and/or middle radius rods.
6. Put a misalignment spacer in each side of the rod end. If installing upper and/or middle, grab the corresponding stock radius rod and put a bolt through one end of the Cognito radius rod and one end of the stock radius rod so they are parallel.
7. Put another bolt through the other end of the stock radius rod and through the other rod end of the Cognito radius rod to match the stock length. Tighten the jam nut. It is difficult to tighten these jam nuts when installed on the car, and we don't want the length to change; therefore we are tightening the jam nuts on the bench/vise prior to installing on the car.
8. Do Step 6 and 7 for each upper and/or middle radius rod.
9. Since the lower Cognito radius rod is fixed, there is no length matching needed. Put a misalignment spacer in each end of the Uniball bearing and install on the car.
10. Now install one end of the radius rod assemblies to the spindle bearing carriers. The middle radius rod had two thin washers on the outer mounting point when it was removed. One goes between the misalignment spacer and the spindle, and the other goes between the spindle and locknut. Tighten to **77 ft-lbs.**
11. Install the inner ends of the radius rods onto the studs sticking out of the frame and put the radius rod plate back on and then the nuts. Torque each nut to **77 ft.lbs.**
12. Install rear wheels and torque to **89 ft.lbs.**
13. If the alignment is slightly off and you are still using the OEM radius rod plate, it is caused due to the large holes in the stock radius rod plate. For minuet adjustments, simply loosen the nut on the radius rod plate and pull/push the tire in the direction you desire to change, and then tighten the nut back to **77 ft.lbs.** The middle radius rod adjusts the toe and the upper radius rod adjusts the camber.



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.