

2017-Present Can-Am Maverick X3 XRS Trailing Arm Kit

INSTALL INSTRUCTIONS:

2017-Present Can-Am Maverick X3 XRS Trailing Arm Kit
SKU: 370-90364

PARTS LIST FOR SKU: 370-90364

QTY	PART #	DESCRIPTION
1	8475	DRIVER TRAILING ARM
1	8476	PASSENGER TRAILING ARM
1	90154	Trailing arm kit
2	UNI-BALL-WSSX12T-F1	Uni Ball Wssx
2	HARDWARE-IRR-1.3/8	Internal Retaining Ring



PARTS LIST FOR SKU: 90154

QTY	PART #	DESCRIPTION
1	2319	REAR SHOCK GUARD MOUNT
2	6134	REAR SPRING RETAINER
2	HP9170	Cushion Clamp Hardware Pack
1	HP9193	T/A HARDWARE

PARTS LIST FOR SKU: HP9170

QTY	PART #	DESCRIPTION
6	HARDWARE-0708753	Clamp W/Vinyl Cushion
6	HARDWARE-10-32X5/8-SHCS	Head Cap Screw
6	HARDWARE-10-32-LOCKNUT	Lock Nut
12	HARDWARE-10-32-SS-FW	Flat Washer

PARTS LIST FOR SKU: HP9193

QTY	PART #	DESCRIPTION
2	HARDWARE-M12X1.75X130	Hex Flange Bolt
2	HARDWARE-M12-FLATWASHER	Flat Washer
2	HARDWARE-M12X1.75-LN	Hex Lock Nut
4	HARDWARE-1/4-20X5/8-SSBH	Button Cap Screw
6	HARDWARE-10-32X1/2-TR	Thread-Cutting Screws

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.



INTRODUCTION

Thank You for purchasing the Trailer Arm Kit.

The Cognito OE Replacement Trailing Arm Kit is designed as a direct replacement for the OE X3 trailing arms. These arms have a robust boxed sheet metal design which increases strength while keeping weight to a minimum.

The fixed-length chassis pivot is superior to a heim joint because it no longer requires adjustment and there are no threads to pull or damage.

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 except the shock bolt and the brake line retaining bolts, so retain all removed hardware for re-use.
2. 2. Raise the rear of your Maverick 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.
3. 3. Using an **18mm** socket and wrench, remove the sway bar end link from the trailing arms and lift the sway bar out of the way.
4. 4. Drill out the rivets holding the brake line clamps to trailing arm.
5. 5. Remove axle nut cover with a flat head screwdriver. Take out the cotter pin and remove the axle nut with a 30mm socket.
6. 6. Remove the two bolts holding each brake caliper to the spindle and tie the calipers up out of the way. Mark the hubs LEFT and RIGHT and remove them from the spindle.
7. 7. With a **19mm** wrench and **18mm socket**, remove the inner radius rod bolt from the spindle. Retain the hardware.
8. 8. With an **18mm** wrench and socket, remove the two bolts that go through the upper and lower radius rods and the spindle. Retain hardware.
9. 9. Remove spindles from the arm and axle.
10. 10. Remove the rear shocks. They will need to be completely removed to install the new Cognito spring retainer and shock guard bracket. Be sure to support the trailing arm so it doesn't fall after removing the shock bolt.
11. 11. Take out the pivot bolt for the trailing arm with an **18mm** wrench and socket and remove the trailing arm.
12. 12. Locate the Cognito trailing arms. The Uniball bearings and internal retaining rings are preinstalled at the factory. Ensure the retaining ring is properly seated inside the pivot end. If you did not buy the Cognito trailing arm rock guards use the supplied button head bolts to plug up the two mounting holes on each side of the trailing arms.
13. 13. Locate the 4 included misalignment spacers and insert one into each side of the trailing arm pivot end from the previous step. Fasten the Cognito trailing arms to the frame pivots with the stock bolt and nut. Torque to **77 ft.lbs.**
14. 14. Using the original hardware, bolt the sway bar end link to the trailing arm and tighten to **77 ft.lbs.** If replacing the end links with the Cognito end link, use the provided hardware.
15. 15. Next, the shocks need to be retrofitted to fit. With a punch and hammer or shock adjuster tool, loosen the lock nut on the shock body and screw it up **3-4 inches**. Screw the adjuster nut up to the lock nut.
16. 16. Push the bumpstops up the shaft and remove the stock shock retainer. It is the piece that the shock guard is mounted too. Using an 8mm socket, remove the 3 screws holding the shock guard to the retainer.
17. 17. Install the new Cognito spring retainer on the bottom of the shocks as well as the new supplied shock guard bracket.

Figure 1: The shocks should look as pictured after installing the spring retainer and shock guard bracket.



18. Screw down the adjuster and lock nut for the spring until there is some pressure on the spring. Do not tighten the lock nut at this time as the ride height will need to be set.
19. Mount the shock back to the frame and use the new **M12 bolt** and hardware to mount the bottom of the shock to the Cognito trailing arms. Use a washer under the head of the bolt and under the nut. Torque to **77 ft.lbs.**
20. Put the spindle into the trailing arm. Swing the arm away from the car and line up the radius rods and the axle to go to their respective locations. Using the stock hardware, bolt the upper and lower radius rod through the arm and spindle. Bolt up the middle radius rod to the spindle. This bolt has two thin washers from the factory. One washer goes between the radius rod and the spindle and the other goes between the nut and the spindle. Torque these three bolts to **77 ft.lbs.**
21. Place the hub back onto the axle and into the spindle, lining up the splines. Put the axle nut washer and nut onto the axle and torque to **184 ft.lbs.** Back it off slightly if needed to get the cotter pin installed in the castle nut and hole in the stub of the axle. Bend the cotter pin to secure.
22. Locate the brake calipers and mount them to the spindle. Torque to **37 ft.lbs.**
23. Route the brake lines as shown in **Figure 2** to the Cognito trailing arm. Locate the hardware pack with the brake line clamp hardware. Remove the OEM brake line clamps from the brake line and install the new ones. Fasten the clamps to the trailing arm with the **#10 hardware**. A washer goes between the bolt head and the clamp, and another washer between the nut and the tab on the trailing arm.



24. Install the tires back onto the hub. Torque the lug nuts to **89ft.lbs** in an X pattern.
25. Set the car back onto the ground and adjust the ride height. Recommended for **30 inch** tires is **15"** from ground to bottom of skid plate. After adjusting, tighten the locknut.

REMINDER: It is important to bleed the brakes and check fluid levels after changing any brake lines or brake components on a vehicle to insure proper function of the brake system. Please follow proper procedure and verify brake system is functioning properly before using 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.