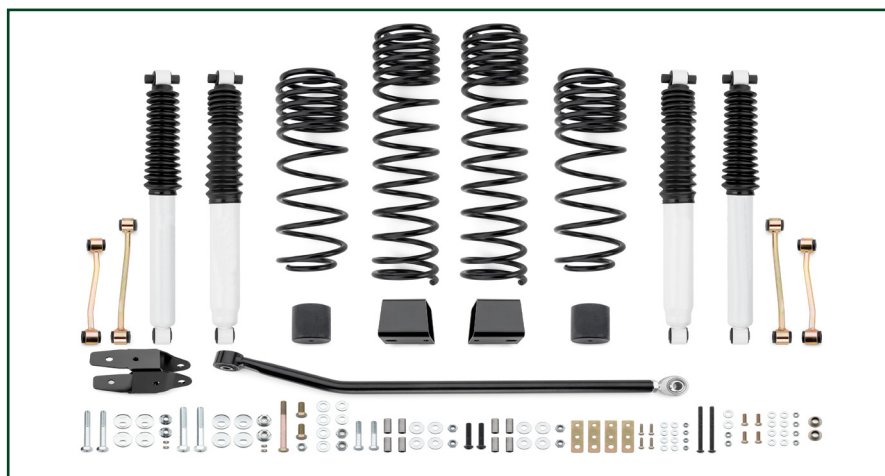


Quadratec® 3.5" Suspension Lift

Installation Manual: For Jeep Wranglers JL #16400-1517



Make sure you park the vehicle on a level concrete or asphalt surface. Many times a vehicle is not level (side-to-side) from the factory, but is usually not noticed until a lift kit has been installed which makes the difference more visible. Using a measuring tape, measure the front & rear (both sides) from the ground up to the center of the fender opening above the axle. Record this information below for future reference.

Driver Side Front: _____

Passenger Side Front: _____

Driver Side Rear: _____

Passenger Side Rear: _____

PARTS LIST

REAR COIL SPRING QTY 2
FRONT COIL SPRING QTY 2
FRONT ADJUST TRACK BAR QTY 1
FRONT SWAY BAR LINKS QTY 2
REAR SWAY BAR LINKS QTY 2

REAR TRACK BAR RELOCATION BRACKET QTY 1
REAR SHOCK QTY 2
FRONT SHOCK QTY 2
HARDWARE BOX QTY 1

Quadratec®

⚠ WARNING ⚠

TO REDUCE RISK OF SERIOUS INJURY OR PROPERTY DAMAGE: READ ALL SAFETY MESSAGES AND UNDERSTAND ALL INSTRUCTIONS AND PROCEDURE NOTICES BEFORE ATTEMPTING TO INSTALL OR USE THIS PRODUCT.

⚠ CAUTION ⚠

RISK OF EYE INJURY! SAFETY GLASSES MUST BE WORN AT ALL TIMES WHILE INSTALLING OR MAINTAINING THIS PRODUCT. TORQUE AND RECHECK FASTENERS AFTER 250 MILES AND FREQUENTLY THEREAFTER. DO NOT USE IF DAMAGED.

NOTICE

PARK THE VEHICLE ON FLAT, LEVEL GROUND AND SET THE EMERGENCY BRAKE. ALWAYS SUPPORT FRAME RAILS USING JACK STANDS

A FEW WORDS ABOUT PRODUCT SAFETY:

Your Quadratec Jeep Lift Kit is intended to enhance the utility and enjoyment of your off road capable vehicle. Follow safety information and installation recommendations. Throughout these instructions is important safety information that is generally preceded by one of three signal words indicating the relative risk of injury, property damage or adverse consequence.

The signal words mean:

⚠ WARNING ⚠

A HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, COULD RESULT IN DEATH OR SERIOUS INJURY. YOU CAN BE KILLED OR SERIOUSLY HURT IF YOU DON'T FOLLOW INSTRUCTIONS.

⚠ CAUTION ⚠

A HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, COULD RESULT IN A MINOR OR MODERATE INJURY. YOU CAN BE MODERATELY HURT AND ALSO MAY SUFFER PROPERTY DAMAGE IF YOU DON'T FOLLOW INSTRUCTIONS.

NOTICE

CAREFUL ATTENTION IS REQUIRED TO THIS INSTRUCTION OR OPERATION BUT DOES GENERALLY NOT RELATE TO PERSONAL INJURY. DAMAGE TO YOUR QUADRATEC® PRODUCT OR OTHER PROPERTY MAY RESULT IF YOU DON'T FOLLOW INSTRUCTIONS.

BEFORE YOU BEGIN INSTALLATION:

Congratulations on your purchase of Quadratec® Lift Kit for your Jeep® Wrangler. This custom Lift Kit has been designed for protection, long life, and great looks. When unpacking, check to make sure all parts are included and not damaged due to shipping. If any part is missing or broken, please call Customer Service at 800-745-6037 as soon as possible. Thank you again for your purchase and let's start the installation process.

⚠ CAUTION ⚠

READ ALL SAFETY MESSAGES AND ALWAYS WEAR SAFETY GLASSES WHEN WORKING WITH TOOLS.

NOTICE

THIS PRODUCT IS INSTALLED UNDERNEATH THE VEHICLE AND REQUIRES ACCESS TO THE UNDERSIDE. WE RECOMMEND USING A VEHICLE LIFT SUCH AS THOSE FOUND IN MOST REPAIR SHOPS TO ACCESS THIS PART OF THE VEHICLE. ALWAYS USE CAUTION WHEN WORKING UNDER YOUR VEHICLE.

NOTICE

WE ALSO RECOMMEND THAT YOU HAVE A HELPER NEARBY AS SOME OF THE STEPS OUTLINED BELOW WILL BE MUCH EASIER WITH THE HELP OF ANOTHER SET OF HANDS.

AFTER INSTALLATION IS COMPLETE:

⚠ CAUTION ⚠

HAVE A QUALIFIED ALIGNMENT CENTER ALIGN THE VEHICLE TO THE FACTORY SPECIFICATIONS.

REQUIRED TOOLS

Safety Glasses	$\frac{9}{16}$ Socket	15mm Socket	24mm Socket
Pliers	8mm Socket	18mm Socket	$\frac{7}{32}$ Hex Key Socket
Wrench	10mm Socket	19mm Socket	6mm Hex Key Socket
Ratchet	13mm Socket	21mm Socket	Jack Stands
Measuring Tape		22mm Socket	Floor Jack

3.5-4" KIT PART LIST

FRONT AND REAR BUMP STOPS

- $\frac{5}{16}$ X 1 FINE THREAD BOLT QTY 4
- $\frac{3}{8}$ X 4 1/2 BUTTON HEAD BOLT QTY 2
- $\frac{5}{16}$ SAE WASHER QTY 8
- $\frac{3}{8}$ SAE WASHER QTY 2
- $\frac{5}{16}$ FINE THREAD LOCK NUT QTY 4
- $\frac{3}{8}$ COARSE THREAD LOCK NUT QTY 2

BRAKE LINE EXTENSION

- JL BRAKE LINE BRACKET QTY 4
- $\frac{1}{4}$ SAE WASHER QTY 8
- $\frac{1}{4}$ X 1 FINE THREAD BOLT QTY 4
- $\frac{1}{4}$ FINE THREAD LOCK NUT QTY 4

TRACK BAR

- JL TRK BAR ROD END BUSHING QTY 2
- $\frac{3}{4}$ INCH RIGHT HAND JAM NUT QTY 1
- $\frac{3}{4}$ HD ROD END QTY 1

UPPER REAR TRACK BAR RELOCATION BRACKET

- $\frac{1}{2}$ X 5 FINE THREAD BOLT QTY 1
- $\frac{9}{16}$ X 1 $\frac{1}{4}$ FINE THREAD BOLT QTY 2
- $\frac{1}{2}$ SAE WASHER QTY 2
- $\frac{9}{16}$ SAE WASHER QTY 4
- $\frac{1}{2}$ FINE THREAD LOCK NUT QTY 1
- $\frac{9}{16}$ FINE THREAD LOCK NUT QTY 2

FRONT SWAY BAR LINKS

- ES25 SLEEVE QTY 4
- $\frac{7}{16}$ USS FLAT WASHER QTY 4
- 12MM X 70MM METRIC BOLT QTY 2
- 12MM METRIC LOCK NUT QTY 2

REAR SWAY BAR LINKS

- ES25 SLEEVE QTY 4
- $\frac{7}{16}$ USS FLAT WASHER QTY 4
- 12MM X 65MM BUTTON HEAD BOLT QTY 2
- 12MM METRIC LOCK NUT QTY 2

FRONT INSTALLATION - STEP 1



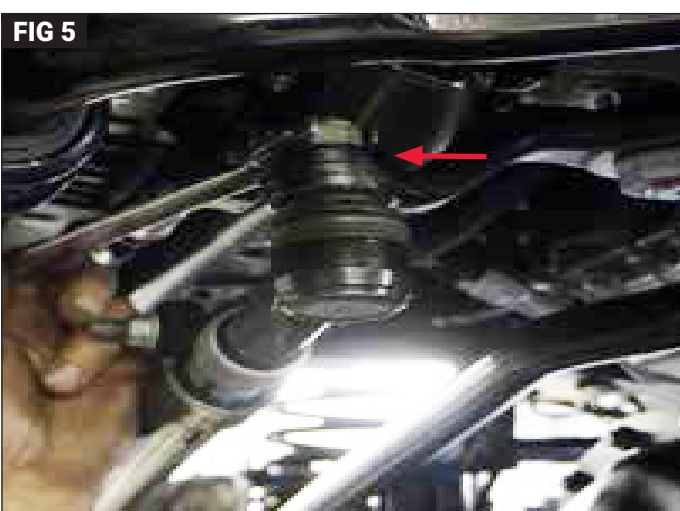
Put on safety glasses. Park your vehicle on flat level ground. Set the emergency brake and block the rear tires. Raise the front of the vehicle, support the frame rails, and front differential using jack stands. Remove the front tires using a 22mm socket. (Fig 1) Remove the factory front skid plate using a 13mm socket. (Fig 2)

STEP 2



Remove the factory front sway bar end links using a 6mm hex key socket and 18mm socket. (Fig 3) Next, remove the factory front track bar using a 21mm socket. (Fig 4)

STEP 3



Disconnect the factory drag link from the factory pitman arm using a 21mm socket. (Fig 5) Remove the factory front shocks using a 18mm socket. (Fig 6)

STEP 4



Disconnect the factory front brake line brackets from the factory front lower control arms using a 15mm socket. (Fig 7) Mark the location of the factory front driveshaft flange at the front differential and disconnect using a 15mm socket. (Fig 8)

STEP 5



Disconnect the wiring harness from the passenger side factory front upper control arm using pliers. Disconnect the wiring harness from the factory 4wd actuator. Lower the front differential and remove the factory front coil springs. Use pliers to remove the vent hose. (Fig 9) Install the new Quadratec front coil springs and new front bump stop spacers to the factory front bump stop pads using the supplied $\frac{3}{8}$ " x 4 $\frac{1}{2}$ " button head bolts, $\frac{3}{8}$ " washers, $\frac{3}{8}$ " nuts a $\frac{7}{32}$ " hex key socket and $\frac{9}{16}$ " socket. (Fig 10) **NOTE:** Be sure when installing the new front coil springs that the tabs of each factory front upper coil spring isolators are aligned with the holes of the factory front upper coil spring mounts.

STEP 6



Reinstall the factory front driveshaft using a 15mm socket and the four factory bolts. (Fig 11)

STEP 7

FIG 12



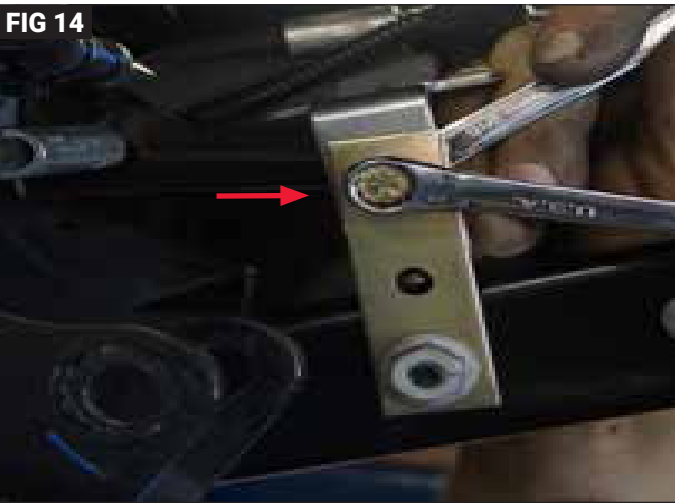
FIG 13



Connect the factory drag link to the factory pitman arm using the factory hardware and a 21mm socket. (Fig 12) Connect the factory hose to the front differential using pliers. Connect the wiring harness to the factory 4wd actuator. (Fig 13)

STEP 8

FIG 14



Install the new Quadratec front brake line brackets to the factory front lower control arms using the factory hardware and a 15mm socket. Connect the factory front brake line brackets to the new Quadratec front brake line brackets using the supplied $\frac{1}{4}$ " x 1" bolts, $\frac{1}{4}$ " washers, $\frac{1}{4}$ " nuts and a $\frac{7}{16}$ " socket. (Fig 14)

STEP 9

Install the new Quadratec front shocks using the supplied polyurethane bushings, steel sleeves, factory hardware and a 18mm socket. (Fig 15) **NOTE:** The new front shocks use the larger inside diameter polyurethane bushings and longer steel sleeves for the front upper shock mounts. The smaller inside diameter polyurethane bushings are used on the shorter steel sleeves for the front lower shock mounts.

FIG 15



STEP 10

FIG 16



FIG 17



Install the new Quadratec front sway bar end links using the supplied steel sleeves, 12mm x 70mm bolts, $\frac{7}{16}$ " USS washers, 12mm nuts, factory hardware, a 18mm socket and 19mm socket. (Fig 16) **NOTE:** On the driver side of the vehicle, install the factory lower bolt with the large washer to the bushing side of the new front sway bar end link. Next, install the factory front skid plate using the factory hardware and a 13mm socket. (Fig 17)

STEP 11

FIG 18



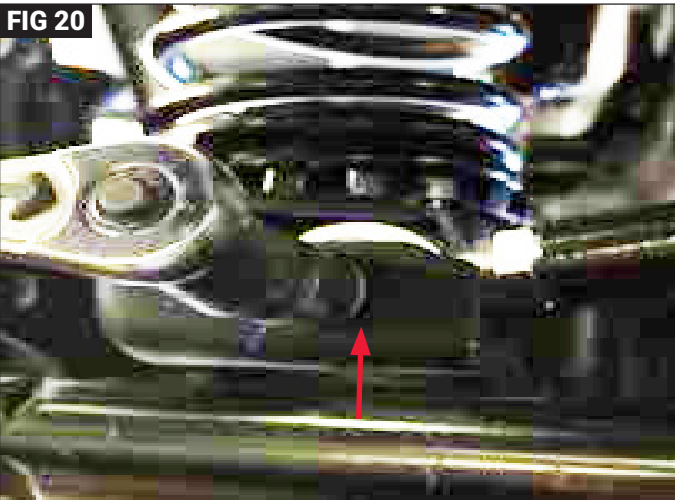
FIG 19



Install the front tires using a 22mm socket and lower the front of the vehicle to the ground. (Fig 18) Install the fixed end of the new Quadratec adjustable front track bar to the frame using the factory hardware and a 21mm socket. Do not tighten at this time. (Fig 19) Please proceed to align the axle with the track bar.

STEP 12

FIG 20



With the vehicle at normal ride height and on level ground, determine if the axle is centered under the vehicle. This can be done by measuring the distance from the inside edge of the tire to the frame on both sides of the vehicle equipped with the same size and make of tires. Use the exact same points on each side of the vehicle to ensure an accurate measurement. If the two measurements are the same, then the axle is centered. If there is a difference in the two values, then the frame will need to be moved to become centered. To determine the distance of travel needed, take the difference of the two measurements and divide in half. Attach a heavy-duty ratchet strap to the frame on the side of the vehicle with the larger measurement. Attach the other end of the strap to the opposite side axle housing. Tighten the strap in small increments to pull the frame into alignment with the axle. Take a measurement after each adjustment until centered. Proceed to tighten the final torque of bolts. (Fig 20)

REAR INSTALLATION - STEP 1

FIG 1



FIG 2



Block the front tires. Raise the rear of the vehicle, support the frame rails and rear differential using jack stands. Remove the rear wheels using a 22mm socket. (Fig1) Remove the factory rear sway bar end links using a 6mm hex key socket and 18mm socket. (Fig 2)

STEP 2

FIG 3



FIG 4



Disconnect the factory rear track bar from the frame using a 21mm socket. (Fig 3) In order to gain access to the factory rear upper shock mounting bolts, remove the factory rear lower fender liners using a 8mm socket. (Fig 4)

STEP 3

FIG 5



FIG 6



Remove the factory rear shocks using a 18mm socket. (Fig 5) Disconnect the factory rear brake line brackets from the frame and rear differential using a 10mm socket and 13mm socket. (Fig 6)

STEP 4

FIG 7



Check for the appropriate slack in ABS lines, brake lines and differential vent hose. Lower the rear differential and remove the factory rear coil springs. Install the new Quadratic rear upper track bar bracket towards the outside of the vehicle using the supplied $\frac{1}{2}$ " x 5" bolt, $\frac{1}{2}$ " washers, $\frac{1}{2}$ " nut, $\frac{9}{16}$ " x $1 \frac{1}{4}$ " bolts, $\frac{9}{16}$ " washers, $\frac{9}{16}$ " nuts, a $\frac{3}{4}$ " socket, $\frac{13}{16}$ " socket and $\frac{7}{8}$ " socket. (Fig 7) **NOTE:** Install the $\frac{1}{2}$ " bolt and $\frac{9}{16}$ " bolts with the threads inward of the new rear upper track bar bracket. It may be necessary to slightly grind the welds of the factory rear upper track bar bracket on the frame in order for the new rear upper track bar bracket to be installed easily over the factory rear upper track bar bracket on the frame.

STEP 5

FIG 8



FIG 9



Install the new Quadratic rear bump stop spacers to the factory rear bump stop pads using the supplied $\frac{5}{16}$ " x 1" bolts, $\frac{5}{16}$ " washers, $\frac{5}{16}$ " nuts, and a $\frac{1}{2}$ " socket. (Fig 8) Install the new rear bump stop spacers so the angled end is towards the rear of the vehicle. (Fig 9)

STEP 6

Install the factory rear lower fender liners using the factory hardware and a 8mm socket. (Fig 10)

FIG 10

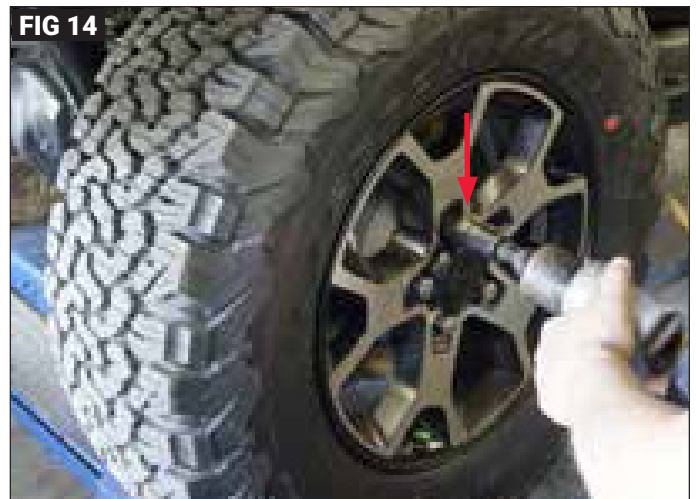


STEP 7



Connect the factory rear brake line brackets to the rear differential using the factory hardware and a 13mm socket. (Fig 11) Install the new Quadratec rear brake line brackets to the frame using the factory hardware and a 10mm socket. Slightly bend and straighten the factory rear hard brake lines. Connect the factory rear brake line brackets to the new Quadratec rear brake line brackets using the supplied $\frac{1}{4}$ " x 1" bolts, $\frac{1}{4}$ " washers, $\frac{1}{4}$ " nuts, and a $\frac{7}{16}$ " socket. Be very cautious not to damage the factory rear hard brake lines. (Fig 12)

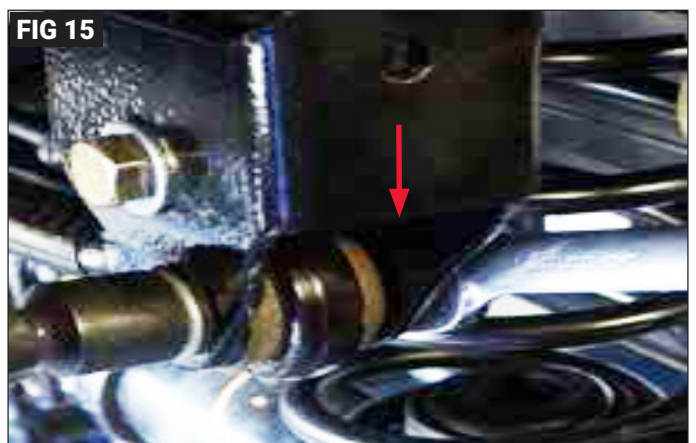
STEP 8



Install the new Quadratec rear sway bar end links using the supplied steel sleeves, 12mm x 65mm button head bolts, $\frac{7}{16}$ " USS washers, 12mm nuts, factory hardware, a $\frac{5}{16}$ " hex key socket and 18mm socket. Install the new upper end link button head bolts from the outside of the vehicle inward and the factory lower bolts with the large washer to the bushing side of the new rear sway bar links. (Fig 13) Install the rear tires using a 22mm socket and lower the rear of the vehicle to the ground. (Fig 14)

STEP 9

Connect the factory rear track bar to the new Quadratec rear upper track bar bracket using the factory hardware and a 21mm socket. Install the factory bolt with the threads towards the rear of the vehicle. (Fig 15)



FRONT LOWER & REAR UPPER CAM BOLT INSTALLATION:

FIG 1



FIG 2



One at a time, disconnect the factory front lower and rear upper control arms from the front and rear differentials using a 21mm and 24mm socket. The factory front lower and rear upper control arm brackets are scribed so they can be made a slotted hole. Knock out these notches on the front and rear half of the factory front lower and rear upper control arm brackets. (Fig 1) One at a time, connect the factory front lower and rear upper control arms to the front and rear differential using the new Quadratec eccentric cam bolts, eccentric washers, nuts, a 21mm socket, 22mm socket and 24mm socket. (Fig 28) With the vehicle on the ground and the weight of the vehicle on the tires, tighten the new Quadratec eccentric cam bolts using a 21mm socket, 22mm socket and 24mm socket. **NOTE:** These new eccentric cam bolts can be rotated forward or backward for caster adjustment and to adjust the axle pinion angle to eliminate driveline vibrations.

⚠ WARNING ⚠

AFTER THE FIRST 100 MILES, CHECK ALL HARDWARE FOR THE PROPER TORQUE AND PERIODICALLY THEREAFTER.

⚠ CAUTION ⚠

HAVE A QUALIFIED ALIGNMENT CENTER ALIGN THE VEHICLE TO THE FACTORY SPECIFICATIONS.

NOTICE

HAVE THE HEADLIGHTS READJUSTED TO THE PROPER SETTINGS.

With the vehicle placed on the ground, cycle the steering lock to lock and inspect the steering, suspension, brake lines, front and rear drivelines, fuel lines and wiring harness for proper operation, tightness and adequate clearance.

FINAL NOTES:

After the installation is complete, double check that all nuts and bolts are tight. Refer to the following chart for the proper torque specifications. do not tighten the nuts and bolts where thread lock compound was used.

TORQUE SPECIFICATIONS					
INCH SYSTEM			METRIC SYSTEM		
Bolt Size	Grade 5	Grade 8	Bolt Size	Class 8.8	Class 10.9
5/16	15 FT LB	20 FT LB	6MM	5 FT LB	9 FT LB
3/8	30 FT LB	35 FT LB	8MM	18 FT LB	23 FT LB
7/16	45 FT LB	60 FT LB	10MM	32 FT LB	45 FT LB
1/2	65 FT LB	90 FT LB	12MM	55 FT LB	75 FT LB
9/16	95 FT LB	130 FTLB	14MM	85 FT LB	120 FT LB
5/8	135 FT LB	175 FT LB	16MM	130 FT LB	165 FT LB
3/4	185 FT LB	280 FT LB	18MM	170 FT LB	240 FT LB

• The above specifications are not to be used when the bolt is being installed with a bushing.

Quadratec® Exclusive Three Year Limited Warranty

Your Quadratec® branded accessories are covered by the following Limited Warranty provided exclusively by Quadratec, Inc., 1028 Saunders Lane, West Chester PA 19380.

This **Limited Warranty** is the only warranty made in connection with your purchase. Quadratec neither assumes nor authorizes any vendor, retailer or other person or entity to assume for it any other obligation or liability in connection with this product or Limited Warranty. This Limited Warranty does not apply and is not cumulative to any accessory or part distributed by Quadratec for which the Manufacturer provides a separate written warranty. All warranty claims require proof that the "WARNING" decal included with this product is properly displayed in the passenger compartment.

What is Covered:

Subject to the terms, exclusions and limitations herein and with respect only to Quadratec branded accessories first sold in the United States, Quadratec warrants to the initial retail purchaser only that your Quadratec accessory shall be free of defects in material and workmanship: for a period of three (3) years from date of retail purchase.

This **Limited Warranty** is not assignable and shall terminate upon sale of the vehicle upon which the Quadratec accessory is installed or other transfer to third persons.

All other warranties are hereby disclaimed, except to the extent prohibited by applicable law in which case any implied warranty of merchantability or fitness for a particular purpose on this product is limited to three (3) years from date of initial retail sale. Quadratec reserves the rights to: **(a.) require invoice or other proof your accessory is within the terms of this Limited Warranty as a condition of warranty service and, (b.) make future revisions to this product and Limited Warranty without prior notice or obligation to upgrade your product.**

What is Not Covered:

Your Quadratec Limited Warranty does not cover products or parts Quadratec determines to have been damaged by or subjected to: **(a.) installation damage, alteration, modification, combination with other parts, failure to maintain or improper repair or service, (b.) normal wear & tear, cosmetic damage or damage from moisture or water immersion, (c.) Acts of God, accidents, misuse, negligence, inadequate mounting or impact with vehicle(s), obstacles or other aspects of the environment, (d.) theft, vandalism or other intentional damage.**

Remedy Limited to Repair/Replacement:

The exclusive remedy provided hereunder shall, upon Quadratec inspection and at our option, be either repair or replacement of product or parts (new or refurbished) covered under this Limited Warranty. Customers requesting warranty consideration should first contact Quadratec to obtain a RGA number (610-701-3336). All labor, removal, shipping and installation costs are customer's responsibility.

Other Limitations - Exclusion of Damages - Your Rights Under State Law:

In consideration of the purchase price paid, neither Quadratec nor any independent Quadratec distributor/licensee are responsible for any time loss, rental costs, or for any incidental, consequential, punitive or other damages you may have or incur in connection with any part or product purchased. Your exclusive remedy hereunder for covered parts is repair/replacement as described above.

This **Limited Warranty** gives you specific rights. You may also have other rights that vary from state to state. For example, some states do not allow limitations of how long an implied warranty lasts and /or do not allow the exclusion or limitation of incidental or consequential damages, so the limitations and exclusions herein may not apply to you.

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Instructions Part #12999.3180

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