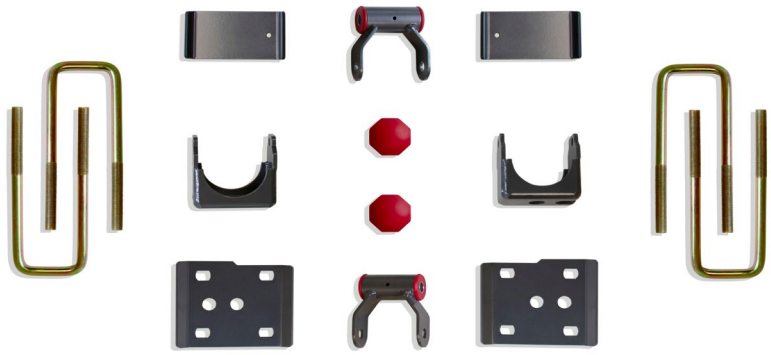
**PART# 303150 FLIP KIT**
**2004-2014 F-150 2WD/4WD**

**PART# 303250 FLIP KIT**
**2015+ F-150 2WDD/4WD**



4 HOUR INSTALL TIME

Recommended Tire size
31x10.50

| 303150 Components | Hardware |
|---|---|
| (2) 3031AR AXLE RELOCATOR | (2) M10-1.5 X 60MM HEX CAP SCREW |
| (2) 3031UBP SPRING PLATE | (2) M10-1.5 STOVER NUT |
| (2) 3031UBR U-BOLT RETAINER PLATE | (4) M10 FLAT WASHER |
| (1) 913109 9" U-BOLTS & HARDWARE | (2) M14-2.0 X 110 HEX CAP SCREW |
| (2) LOW PROFILE BUMP STOP | (2) M14-2.0 NYLOCK NUT |
| (2) 713120 LIFT SHACKLE | (2) M14 FLAT WASHER |

| 303250 Components | Hardware |
|---|---|
| (2) 3031AR AXLE RELOCATOR | (2) M10-1.5 X 60MM HEX CAP SCREW |
| (2) 3031UBP SPRING PLATE | (2) M10-1.5 STOVER NUT |
| (2) 3031UBR U-BOLT RETAINER PLATE | (4) M10 FLAT WASHER |
| (1) 913109 9" U-BOLTS & HARDWARE | (2) M16-2.0 X 120 HEX CAP SCREW |
| (2) LOW PROFILE BUMP STOP | (2) M16-2.0 NYLOCK NUT |
| (2) 713220 LIFT SHACKLE | (2) M16 FLAT WASHER |

**NOTE:**

*AXLE SHIMS MAY BE NEEDED IF DRIVELINE VIBRATION IS EXPERIENCED
*TRIMMING OF THE LEAF SPRING CENTER PIN BOLT IS REQUIRED

*4WD MODELS WILL EXPERIENCE ADDITIONAL DROP EQUAL TO THE HEIGHT OF THE FACTORY LIFT BLOCK

*PROVIDED SHACKLES NEED TO BE GREASED THOROUGHLY

**Please double check the parts list before beginning installation to ensure all parts are present. If there is something missing, please contact Maxtrac Suspension (714) 630-0363. Please have the boxes present if parts are missing or damaged**

**PRIOR TO INSTALLATION:**
**1. Factory service manual is recommended to have on hand.**
**2. Secure and properly block vehicle prior to beginning installation.**
**3. Always wear safetly glasses when using power tools or working under the vehicle**
**4 Modification to any part will void the warranty associated with that product**

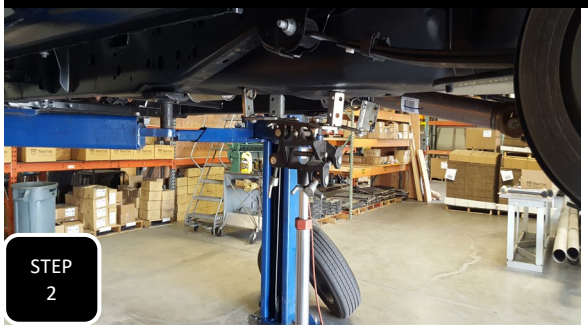
AFTER REMOVING PARTS FROM VEHICLE, SAVE HARDWARE FOR REINSTALLAT

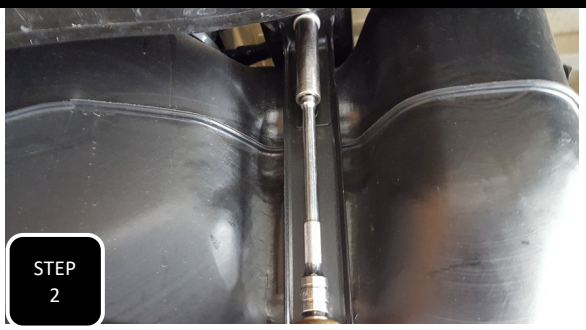
REVISED JAN 2024



**Step 1** Jack up the rear of the vehicle and support under the frame rails with jack stands. Keep an adjustable jack under the differencial for height adjustment.

**NOTE:** The bolts at the front of the leaf spring are installed from the inside facing outward. In order to remove them, you need to either drop the gas tank and the exhaust or in lieu this, the axle can be shifted side to side while you pivot the leaf spring down, under the axle.




**Step 2** Place an adjustable jack centered under the gas tank and then unbolt the two straps that hold it in place. **NOTE: REMOVING THE TANK IS EASIER IF THE TANK IS CLOSE TO EMPTY.**

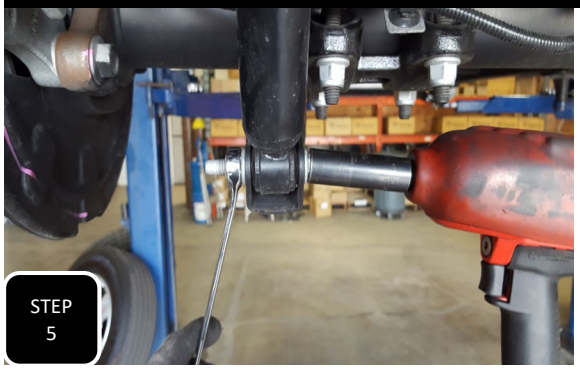


**Step 3** Un-hook both straps from the other side of the tank and set the straps aside to be re-installed at a later time. Next, lower the tank a little bit and detach the filler neck by loosening the hose clamp



**Step 4** Lower the tank enough to expose the head of the spring bolt then loosen and remove the spring bolt. Next, loosely re-install the the bolt from the outside facing inward.

## SHIFTING THE AXLE SIDE TO SIDE INSTEAD OF DROPPING THE GAS TANK AND EXHAUST




**Step 5** Place an adjustable jack under the differential and apply some pressure. Next, unbolt both shocks at both ends and remove both rear shocks



**Step 6** Secure the axle to the adjustable jack and then unbolt the U-bolts, on both sides and remove the U-bolts.



**Step 7** Remove both rear bump stops from the frame.



**Step 8** Working on only the driver's side, loosen the bolt at the front of the leaf spring and then unbolt the shackle from the frame. Next, remove the shackle bolt at the frame.



**Step 9** Double check that the axle is balanced & properly secured to an adjustable jack on wheels. Lower the axle and roll it towards the passenger side. Next, lower the leaf spring around the axle and then re-center the axle under the truck. **NOTE: BE CAUTIOUS NOT TO OVER EXTEND ANY WIRES OR BRAKE LINES**



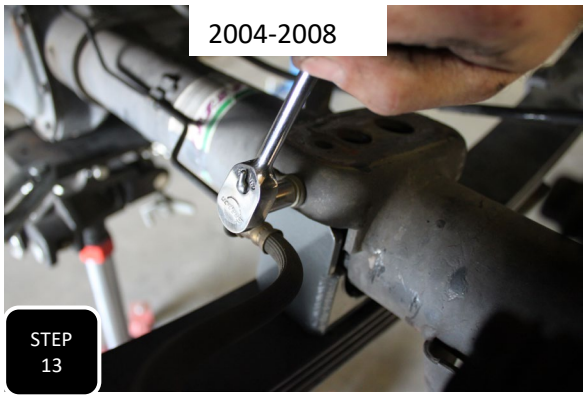
**Step 10** Now shuffle the axle to the driver's side and pivot the passenger side leaf spring down, around the axle.

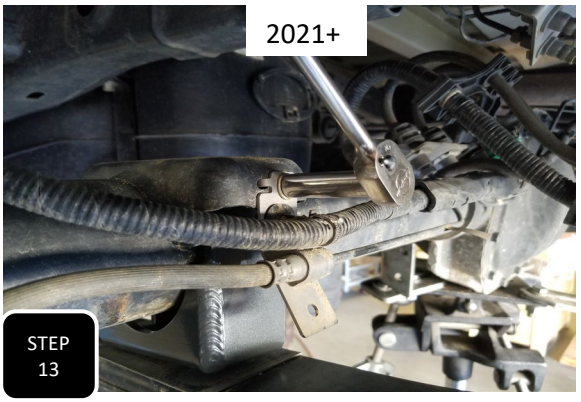


**Step 11** Before securing the spring back to the frame, remove both shackles and install the new, shorter, lift shackles using the provided "Thin head" bolt at the leaf spring. There is only one washer per shackle which goes with the nut, on the opposite side of the frame. Attach the shackle to the frame using the factory bolt. **NOTE: THE GREASE FITTING CAN POINT EITHER WAY, BUT IS EASIER TO ACCESS IF FACING REARWARD.**

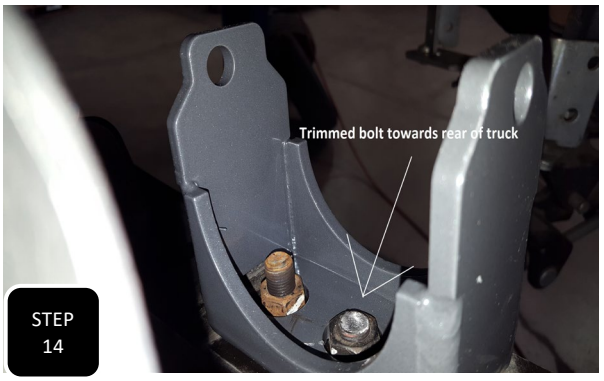


**Step 12** On the center pin closer to the rear of the truck, mark the excess of threads sticking past the nut. Next, place two clamps on the leaf spring pack so that the center pins can be safely unbolted and the U-bolt retainer plate can be removed. Finally, take the marked center pin and cut the excess threads off then re-install both center pins from the

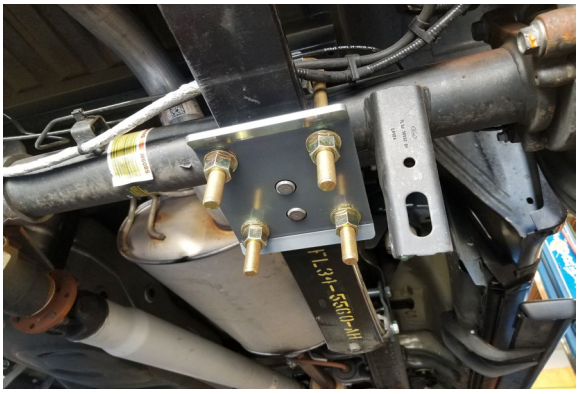


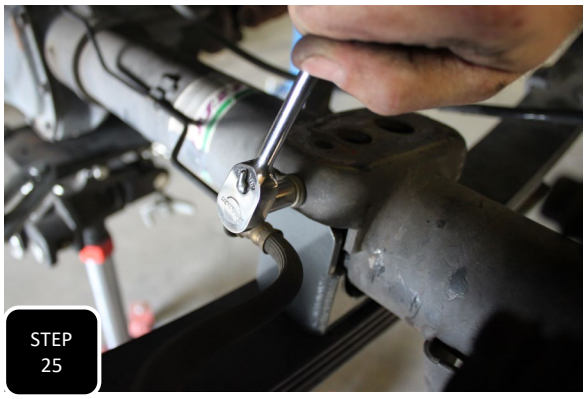

**Step 13** With the axle still jacked up, unbolt the line guide bracket on the back of the factory spring perch.

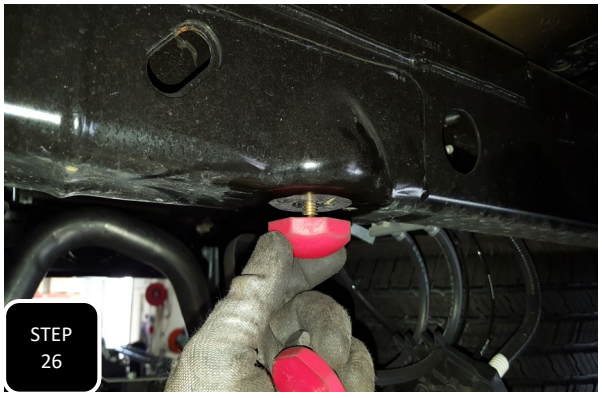

**Step 14** With the axle still jacked up, insert the axle relocator (the U-shaped bracket) on top of the leaf spring with the the open notch facing the front of the truck.

**Step 15** Lower the axle down into the relocator then place the smaller plate (the U-bolt retainer) on top of the original spring plate. Next, run the provided U-bolts downward and through the provided spring plate, then loosely install the washers/nuts. **NOTE: THE U-BOLT RETAINER PLATE IS THE SAME SIZE AS THE SPRING PERCH AND SHOULD SIT IN THE SAME ORIENTATION. ONCE BOTH SIDES HAVE BEEN INSTALLED, TORQUE THE U-BOLTS TO 75 FT/LBS.**



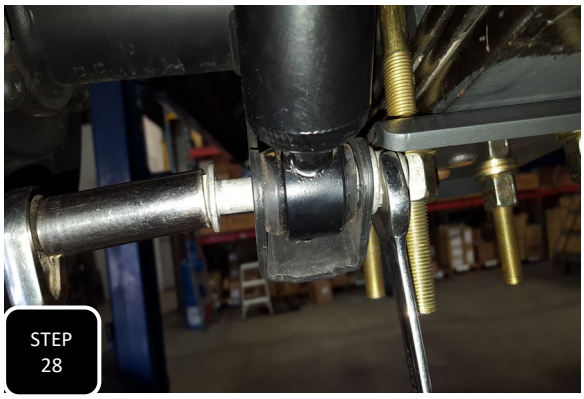

**Step 25** Re-attach the brake line guide bracket to the factory spring perch. **NOTE: THE PROVIDED AXLE RELOCATOR HAS A HOLE THAT WILL ALLOW FOR THE BOLT TO CLEAR THE RELOCATOR.**




**Step 26** Screw in the provided low profile bump stops. **NOTE: SOMETIMES THE FACTORY THREADS IN THE FRAME ARE GUMMED UP WITH THREAD LOCKER SO IT WILL HELP TO CHASE THEM WITH A 3/8-16 TAP.**



**Step 27** Locate the new, shorter shocks and shock sleeves. Thoroughly grease all 4 bushings and then using a bench vise, press the sleeves into the shock bushings. **NOTE: IT WILL HELP TO PIVOT THE SHOCK UP AND DOWN WHILE CLOSING THE VISE.**





**Step 28** Before installing, hold the shock with the shaft pointed upward and fully compress each shock 2 or 3 times, allowing them to rebound to full extension inbetween. Next, install the shocks using the factory hardware,, with the shaft attached at the frame and the body at the axle. **NOTE: INSTALLING THE SHOCKS UP-SIDE DOWN MAY CAUSE THEM TO NOT WORK AT ALL.**

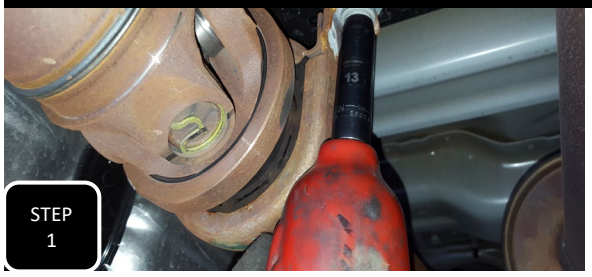


**Step 29** Install the wheels/tires and lower the truck to the ground. Jump on the rear bumper a few times to ensure that the suspension is settled and then tighten up the bolt at the front of the leaf spring and the two bolts at each shackle. **NOTE: THESE BOLTS MUST BE TIGHTENED WITH THE SUSPENSION AT RIDE HEIGHT OR THE TRUCK WILL NOT SEE THE PROPER AMOUNT OF DROP AND THE BUSHINGS WILL WEAR OUT PREMATURELY.**

## *MAKE SURE TO THOROUGHLY GREASE THE SHACKLE BUSHINGS*

IF YOUR TRUCK IS EQUIPPED WITH A 2 PIECE DRIVE SHAFT THEN PROCEED WITH STEP 1 OF THE DRIVE LINE INSTRUCTIONS. IF YOUR TRUCK IS EQUIPPED WITH A 1 PIECE DRIVE SHAFT THEN SKIP TO STEP 6.

# DRIVE LINE INSTRUCTIONS





**NOTE: GO DRIVE THE TRUCK FIRST. ONLY RELOCATE THE CARRIER BEARING "IF" DRIVE LINE VIBRATION IS EXPERIENCED.**

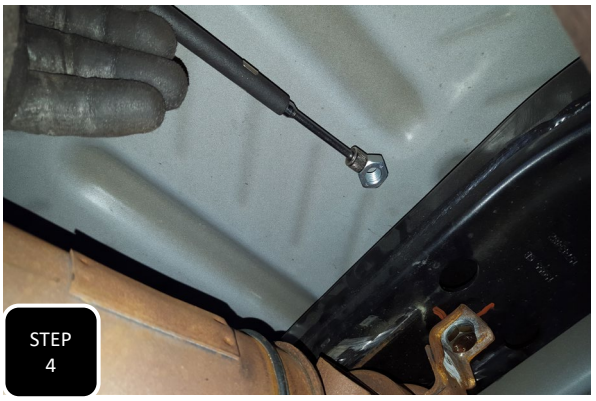
**Step 1** Place an adjustable jack under the drive shaft and remove the two bolts at the carrier bearing then lowe the drive shaft, down and out of the way.



**Step 2** Using an angle grinder with a cut off wheel, cut the carrier bearing mount along the two welds and remove the mount. Next, clean up any sharp edges and spray paint all bare surfaces for rust prevention.



**Step 3** Mark the carrier bolt holes to center and then drill them out using a 7/16" drill bit. **NOTE: CENTER THE HOLES AS CLOSE AS POSSIBLE. THIS MAY BE DIFFICULT TO BE EXACT.**

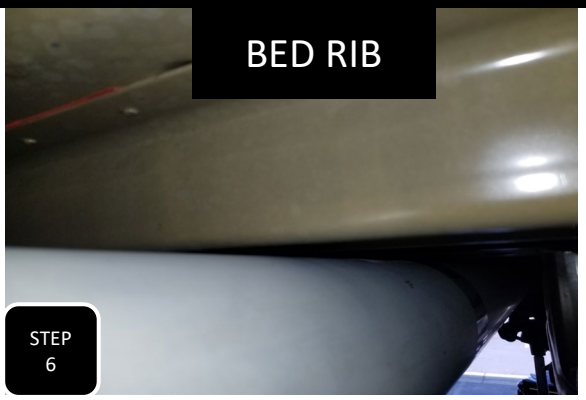




**Step 4** Attach the carrier bearing to the cross member using the provided M10 hardware. **NOTE: PRYING UP ON THE BODY AND USING A MAGNET TO HOLD THE NUT WILL EASE IN GETTING IT STARTED SINCE THE GAP ABOVE THE CROSSMEMBER IS TIGHT.**



**Step 5** Tighten the bolts down and torque them to 40 ft/lbs.

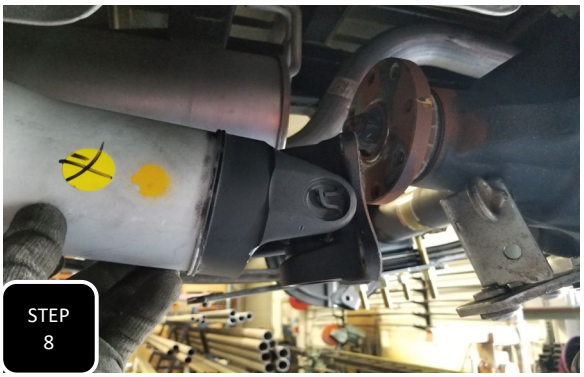
## 1 PIECE DRIVE SHAFT


**Step 6** Models with a 1 piece drive shaft have a cross member and a bed rib, both located closer to the transmission, that the drive shaft will slightly contact when the suspension bottoms out.



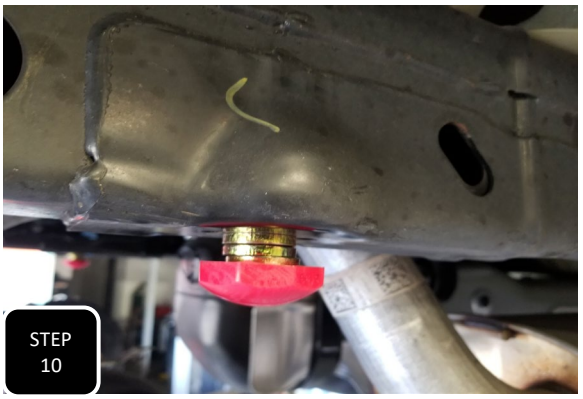
**Step 7** With the axle jacked up and the drive shaft close to where it will contact, mark a center line for where the drive shaft is going to contact both the crossmember and the bed rib. Next, mark about 2 inches out both ways from your center line. This will be the area that you are going to clearance to avoid contact.


**Step 8** Unbolt the drive shaft at the diff and remove the drive shaft.



**Step 9** Using an angle grinder with a cut off wheel, cut the cross member on your marked lines and then at each end to connect the lines. Next, remove the piece that was cut out, clean up any sharp edges, and spray paint for rust prevention. **NOTE: YOU ARE ONLY REMOVING THE THICKNESS OF THE BOTTOM OF THE CROSSMEMBER. THE 3 DIMENSIONAL STRENGTH OF THE CROSS MEMBER IS STILL INTACT.**


**Step 10** The bed rib is made from a much thinner material and can be clearanced using a hammer. **NOTE: TO AVOID ANY CUTTING, YOU CAN ADDED WASHERS TO SPACE THE BUMP STOPS DOWN, BUT THIS WILL EVEN FURTHER MINIMIZE YOUR LIMITED AMOUNT OF UPTRAVEL AND CAUSE FOR A ROUGHER RIDE.**

**-Make sure to check the vehicle's tow before driving.**

**-The headlights should be adjusted after modifying the stance of the vehicle.**

**-The vehicle's alignment will need to be adjusted.**

**-All suspension components should be re-torqued after 500 miles.**

MaxTrac suspension

# RIDE HEIGHT SHEET

*THIS SHEET MUST BE FILLED OUT PRIOR TO CALLING WITH ANY DISCREPENCIES

YEAR _____ MAKE _____ MODEL _____

4WD / 2WD / AWD

## MEASUREMENTS

*MOST ACCURATE MEASUREMENT IS FROM THE BOTTOM OF THE RIM, STRAIGHT UP TO THE BOTTOM OF THE FENDER

*TRUE HEIGHT WONT BE ACCURATE UNTIL VEHICAL IS ALIGNED

*THE VEHICLE'S CASTER WILL BE INCREASED OR DECREASED IF ONLY THE FRONT OF THE VEHICLE IS MODIFIED

| | BEFORE | AFTER | DIFFERENCE |
|---|---|---|---|
| DRIVER FRONT | _____ | _____ | _____ |
| DRIVER REAR | _____ | _____ | _____ |
| PASSENGER FRONT | _____ | _____ | _____ |
| PASSENGER REAR | _____ | _____ | _____ |

# LIMITED LIFETIME WARRANTY

**Max Trac Suspension makes no warranty, expressed or implied, as to the merchantability, fitness for purpose, description, quality, productiveness, accuracy or any other matter with respect to every product, all such warranties being hereby specifically and expressly disclaimed by Max Trac. Max Trac may offer technical advice or assistance with regard to the products based on laboratory and/or field experience and customer understands and agrees that such advice represents only good faith opinions and does not constitute a warranty or guarantee. The sole and express warranty provided by Max Trac is to warrant that the products sold as listed comply with Max Trac's specification at the date and time of manufacture. Max Trac makes no warranty that such products shall meet such specification at any time after installation of products. Use of such product is specifically not warranted, and Max Trac specifically excludes from this express warranty parts subject to normal wear and tear after one year, finish after one year, damage resulting from failure to follow recommendations in installation manuals, competition or off-road use, and damages caused by aftermarket products. Max Trac's liability and customer's exclusive remedy for any breach of this limited express warranty is limited to repair, replacement, or refund at Max Trac's option and in Max Trac's sole discretion. There are no warranties which extend beyond the description on the face hereof.**

Our limited lifetime warranty excludes the following items: bushings, bump stops, ball joints, tie rod ends, rod end/heim joints, and shock absorbers. These parts are subject to immediate wear and tear and are not considered defective when worn. They are warranted for twelve (12) months from the date of purchase only for defects in workmanship.

This Max Trac warranty is void if (1) the vehicle is not aligned after kit installation, (2) proper maintenance is not routinely performed, (3) the Max Trac products are misused or abused in any way in either installation or service, or (4) the products are used in a way that violates federal, state, or local law or regulation in any respect. Max Trac is not responsible for vehicle compatibility with other aftermarket products. Warranty coverage does not include consumer opinions regarding ride comfort, fitment and design after product installation.

Max Trac reserves the right to change, modify or cancel this warranty without prior notice.

**WARRANTY RETURN**

Contact Maxtrac by sending an email with a copy of the original purchase receipt, along with photographs clearly illustrating the failure mode.

1. Upon validating the information provided, Maxtrac will issue a Return Manufacturer Authorization number (RMA#).
2. Return your product to Max Trac Suspension at your expense in order to execute a claim under this warranty.
3. Include the RMA# on the outside of the box. Any returns without the RMA# will be refused.

**NON-WARRANTY RETURN & CREDIT POLICY**

Your item must be in its original unused and resalable condition to be returned, unless there is a manufacturing defect. You must return the item within 30 days of your purchase. Otherwise, there will be an additional restocking fee.

1. Please contact Max Trac Suspension at (844) 535-1668 to obtain a Return Manufacturer Authorization Number (RMA#).
2. Return your product to Max Trac Suspension at your expense.
3. Include the RMA# on the outside of the box. Any returns without the RMA# will be refused.

**Return Exceptions**

Merchandise that has been installed, used, or altered may be subject to no credit.

**Restocking Fee**

All items are subject to a restocking fee based on the condition of the packaging and product.
Max Trac Suspension does not credit shipping and handling. Credit minus applicable restocking fee will be determined and issued within 10 business days of product receipt.
All returns will be credited to your Maxtrac account.

# ⚠ INSTALLATION WARNINGS

**READ INSTRUCTIONS AND WARNINGS COMPLETELY PRIOR TO INSTALLATION.**
**MAXTRAC IS NOT RESPONSIBLE FOR ANY DAMAGE OR INJURY DUE TO IMPROPER INSTALLATION OR MAINTENANCE.**

Installer is responsible to insure a safe and controllable vehicle after performing modifications. All steps and procedures described in these instructions were performed while the vehicle was properly supported on a two post vehicle lift with safety jacks. Included instructions are recommended guidelines only.

Max Trac Suspension recommends reference to the OE Service Manual corresponding to the model and year of vehicle when either disassembling or assembling factory and related components.

Use caution during all disassembly and assembly steps to insure suspension components are not over extended, causing damage to any vehicle components and parts included in this kit. Unless otherwise specified, tighten all bolts and fasteners to standard torque specifications listed within the OE Service Manual.

Suspension components that use rubber or urethane bushings should be tightened with the vehicle at normal ride height. This will prevent premature wear or failure of the bushing and maintain ride comfort.

Larger tire and wheel combinations may increase leverage on suspension, steering, and related components.

Due to payload options and initial ride height variances, the amount of lift is a base figure. Final ride height dimensions may vary in accordance to original vehicle ride height. Always measure the vehicle ride height prior to beginning of installation.

**MAXTRAC SUSPENSION DOES NOT ADVISE USING WHEELS WIDER THAN 9" OR WHEELS WITH LESS THAN 4.5" BACKSPACING. DOING SO WILL RESULT IN VOIDING ANY AND ALL MANUFACTURER WARRANTIES**

Max Trac Suspension does not recommend the combined use of suspension lifts, body lifts, or other lifting devices.

**Final Checks & Adjustments**

Once the vehicle is lowered to the ground, check all parts which have rubber or urethane components to ensure proper torque. Torque lug nuts to the wheel manufacturer specs.

Move vehicle backwards and forwards a short distance to allow suspension components to settle. Turn the front wheels completely left then right and verify adequate tire, wheel, brake line, and ABS wire clearance.

Test and inspect steering, brake and suspension components for tightness and proper operation. Inspect brakes, hoses, and ABS lines for adequate slack at full extension, and adjust as necessary.

# ⚠ ADDITIONAL WARNINGS

## WARNING

Max Trac Suspension products should ONLY be installed by a certified professional mechanic with experience working on and installing suspension products. Professional knowledge and skill will typically yield the best installation results.

If you need a list of installers in your area, please contact Max Trac Suspension customer service to find one of our authorized dealers. Max Trac Suspension does not warrant work performed by any dealer, installer, or mechanic.

- All lifted vehicles may require additional driveline modifications and/or balancing.
- A Factory Service Manual for your specific Year/ Make / Model should be referenced during installation.
- Use of a vehicle hoist will greatly reduce installation time.
- Speedometer / computer calibration is required if changing +/- from factory tire diameter.
- Vehicle must be in excellent operating condition. Repair or replace any and all worn or damaged components prior to installation.

**FAILURE TO PERFORM POST INSTALLATION INSPECTION AND/OR CHECKS MAY RESULT IN VEHICLE COMPONENT DAMAGE AND/OR PERSONAL INJURY OR DEATH.**

**RECHECK ALL HARDWARE FOR PROPER TORQUE VALUES AFTER 500 MILES, AND THEN PERIODICALLY AT EACH SERVICE INTERVAL THERAFTER.**

### Vehicle Handling Warning

Increasing the height of your vehicle raises the center of gravity and **WILL** affect stability and control. Use caution on turns and when steering. Vehicles with larger tires and wheels will handle differently than stock vehicles. Take time to familiarize yourself with the handling of your vehicle after product installation.

### Wheel Alignment/Headlamp Adjustment

It is necessary after installation to have a wheel alignment performed by a certified alignment technician. Align the vehicle to factory specifications. It is recommended that your vehicle alignment be checked after any off-road driving. In addition to vehicle alignment, it is necessary to check and adjust vehicle head lamps for proper aim and alignment. If the vehicle is equipped with active or passive safety/collision monitoring and / or avoidance systems including, but not limited to, camera-or radar-based systems, check and adjust your vehicle's systems for proper aim and function.

### Braking Warning

Generally, braking performance and capabilities are decreased when significantly larger or heavier tires and wheels are used. Take this into consideration while driving. Also, changing axle gear ratios or using tires that are taller or shorter than factory height will cause an erroneous speedometer reading. On vehicles equipped with an electronic speedometer, the speed signal impacts other important functions as well. Speedometer recalibration for both mechanical and electronic types is highly recommended.

# ⚠ SAFETY WARNINGS

## SAFETY WARNING

MISUSE OF THIS PRODUCT COULD LEAD TO INJURY OR DEATH.

- Suspension systems or components that enhance the on and off-road performance of your vehicle may cause it to handle differently than it did from the factory. EXTREME CARE must be used to prevent loss of control or vehicle rollover during operation.

- ALWAYS operate your vehicle at reduced speeds and maintain distance between vehicles and obstacles to ensure your ability to control your vehicle under all driving conditions. Failure to drive safely may result in serious injury or death to the driver and passengers.

- Driver and passengers must ALWAYS wear seat belts, avoid rapid steering angles and rates and other sudden maneuvers.

- You should NEVER operate your vehicle under the influence of alcohol or drugs.

- Please check all factory components for excessive wear and tear. Please replace worn factory parts before installing any suspension kits. Failure to do so will void any Max Trac warranty.

- Please inspect all wheel bearings and hub bearings for excessive wear and replace worn components before installing suspension kits. These hub and wheel bearings may wear out sooner with installation of larger tires and wheels. MaxTrac does not warranty these factory parts at any time, also using any wheel that MaxTrac does not recommend will void any warranty of MaxTrac components.

- Constant maintenance is required to keep your vehicle safe. Thoroughly inspect your vehicle before and after every off-road use.

- It is the responsibility of the retailer and/or the installer to review all state and local laws with the end user of this product related to bumper height laws and the lifting of a vehicle before the purchase and installation of any Max Trac products.

- It is the responsibility of the driver to check the area around the vehicle for obstructions, people, and animals before moving the vehicle.

- All lifted vehicles have increased blind spots. Take note of these prior to operating the vehicle.

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**DAMAGE, INJURY AND/OR DEATH CAN OCCUR IF ANY OF THE ABOVE WARNINGS ARE NOT FOLLOWED.**