



**PART# 103220C/103420C**

**2009-2014 FORD F-150 2WD/4WD  
2015-2020 FORD F-150 2WD/4WD**

**2" FRONT LOWERING SPINDLES**



**2 HOUR INSTALL TIME**



**Recommended Tire size  
31x10.50**

Components	Hardware
(1) DRIVE SIDE SPINDLE	(2) M14-2.0 JAM NUT
(1) PASS SIDE SPINDLE	(2) M14 INT LOCK WASHER
(2) BRAKE BRACKET SPACERS	(2) M16-2.0 JAM NUT
	(2) 5/8" INT LOCK WASHER

**\* ONLY FITS 22" RIMS OR BIGGER \***

\*SOME OEM 20" RIMS WILL FIT, ONLY IF THEY ARE A STANDARD MOUNT RIM THAT DOES NOT HAVE THE RAISED AREA ON THE I. D. OF THE TRIM TOWARDS THE INNER EDGE, BUT WE STILL ONLY CALL FOR FITMENT OF 22" OR BIGGER

\* REQUIRES TRIMMING OF THE LOWER BALL JOINT

\*SOME, EARLY RUN SPINDLES, WILL REQUIRE A SLIGHT CLEARANCING OF THE BACK OF THE CASTING SO THAT THE 4WD VACUUM HUB ACTUATOR SITS FLUSH TO THE SPINDLE

**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 safety glasses when using power tools or working under the vehicle**
- 4 Modification to any part will void the warranty associated with that product**

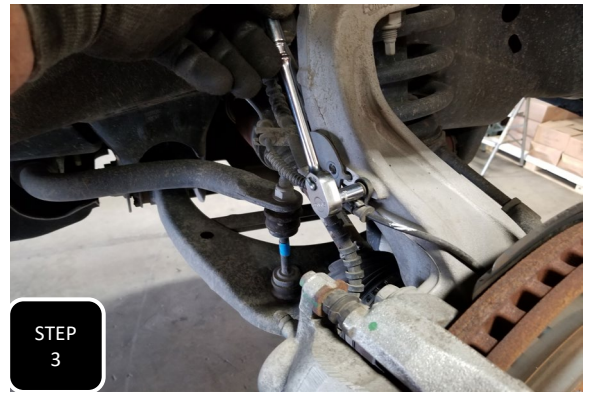
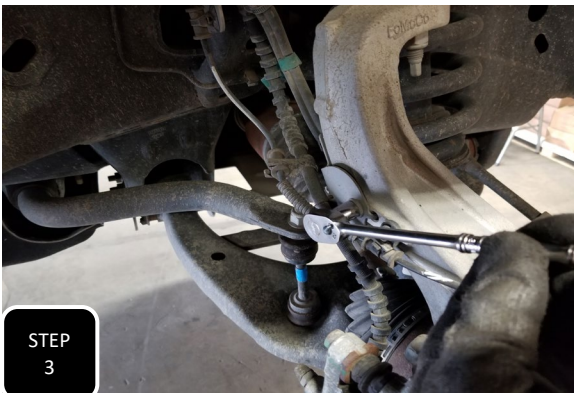
AFTER REMOVING PARTS FROM VEHICLE, SAVE HARDWARE FOR REINSTALLATION EDITED 2/28/2025



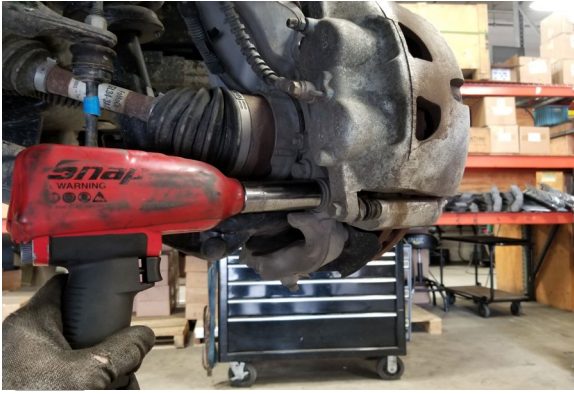
**Step 1** Jack up the front of your vehicle and support under the frame with jack stands.



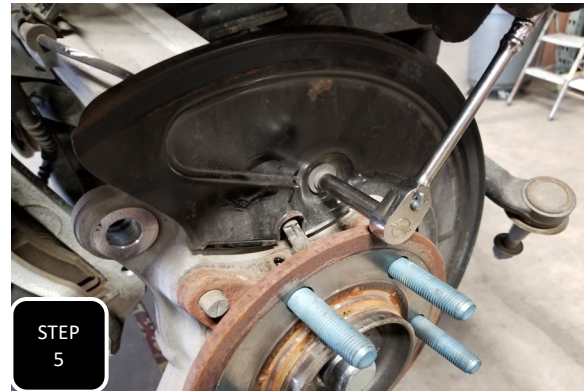
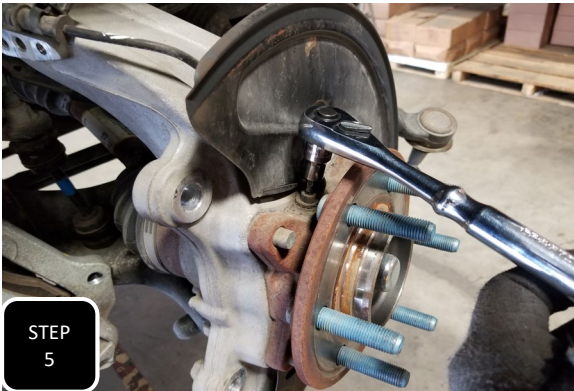
**Step 2** Unbolt the tie rod and break loose by hitting the side of the steering arm with a hammer.  
**NOTE: NEVER HIT THE TIE ROD ON THE THREADS.**



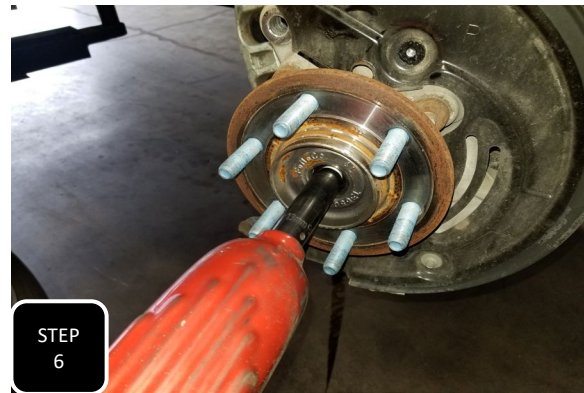
**Step 3** Unbolt the brake line and ABS line guide brackets from the side of the neck of the spindle and save the hardware for re-installation.



**Step 4** Unbolt the brake caliper and support out of the way then remove the brake rotor.  
**NOTE: NEVER ALLOW THE BRAKE CALIPER TO HANG BY THE BRAKE LINE.**



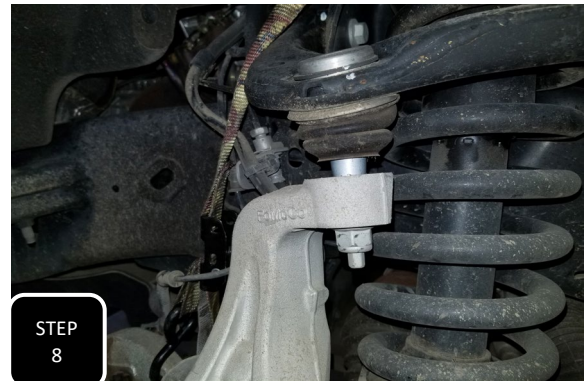
**Step 5** Unbolt the ABS sensor at the wheel bearing and hang the ABS sensor up out of the way so that it does not get damaged during the install. You will need to remove the dust shield's upper mounting bolt in order to gain clearance to remove the ABS sensor.



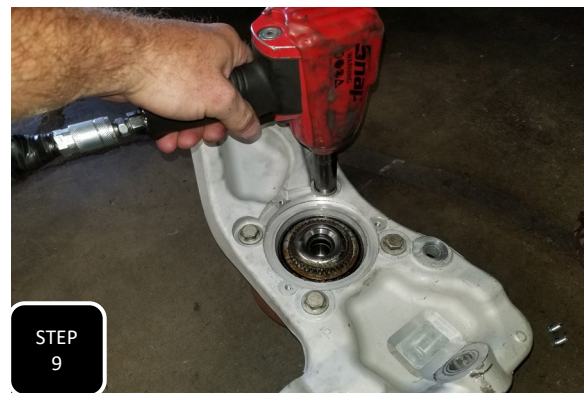
**Step 6** On 4wd models, pop off the dust cap in the middle of the hub and then remove the retainer nut attaching the axle to the wheel bearing. **For 2wd models, skip to step 8.**



**Step 7** Remove all 3 bolts attaching the hub actuator to the back side of the spindle and save the bolts for re-installation.



**Step 8** Loosen both ball joint nuts and then brake loose by hitting the side of the spindle, right at the ball joint, with a hammer. The nut will catch the spindle, then remove the spindle.



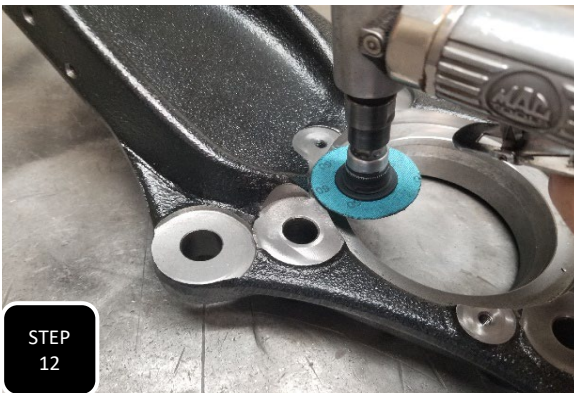
**Step 9** Unbolt all 4 hub mounting bolts and re-install the hub onto the new spindle. **NOTE: THE FACTORY DUST SHIELD WILL NOT GET RE-USED.**



**Step 10** Install the new spindle onto the truck using the factory ball joint nuts and tighten both to factory spec.



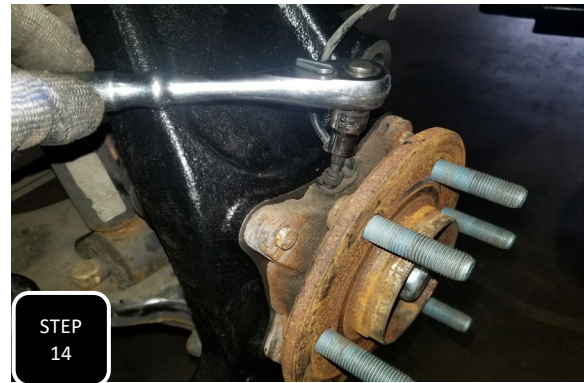
**Step 11** 4WD models will now attach the vacuum hub actuator to the spindle using the factory bolts.



**Step 12** Test fit the hub actuator by hand to make sure it sits flush. Some, early run, spindles will need a slight clearancing of the the casting which can be done using an angle grinder or pneumatic die grinder. Grind the material down just enough to clear the vacuum ports of the actuator then tighten it down to factory specs.



**Step 13** Install the axle retainer nut and tighten down by hand. **NOTE: THIS IS A VERY SMALL NUT SO DO NOT OVER TIGHTEN.**



**Step 14** Install the ABS sensor into the wheel bearing using the factory bolt and tighten.



**Step 15** Loosely install the brake rotor by sliding it onto the wheel studs.



**Step 16** Re-install the brake caliper using the factory bolts and tighten.



**Step 17** Re-attach the brake line bracket and ABS line bracket to side of the spindle along with the provided spacer using the factory bolts. **NOTE: THE GUIDE TAB ON THE BRAKE LINE BRACKET WILL NEED TO BE SLIGHTLY BENT TO CLEAR THE BRAKE LINE SPACER.**



**Step 18** Attach the tie rod to the steering arm on the spindle and tighten using the factory nut.



**Step 19** If installing smaller than 24" rims, you will need to use one of the two provided jam nuts and lock washers at the lower ball joint and then trim off the remainder of the ball joint shank. **REPEAT STEPS 1-18 ON THE OTHER SIDE.**

## **AFTER MODIFYING YOUR SUSPENSION**

**HAVE THE VEHICLE'S ALIGNMENT CHECKED**

**PROPERLY ADJUST YOUR HEAD LIGHTS FOR THE NEW STANCE OF THE SUSPENSION**

**RE-TORQUE ALL BOLTS AFTER 500 MILES**





**MaxTrac**  
s u s p e n s i o n

## 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.**