



# INSTALLATION INSTRUCTIONS

2352

2" LOWERING SPINDLE

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## 15-20 FORD F150 2WD CREW-CAB/ REG CAB

MUST USE 20" WHEELS OR LARGER

Fits MOST 20" wheels. Please be sure to check for interference.

Thank you for being selective enough to choose our high quality BELLTECH PRODUCT. We have spent many hours developing our line of products so that you will receive maximum performance with minimum difficulty during installation

**Note:** Confirm that all of the hardware listed in the parts list is in the kit. **Do not** begin installation if any part is missing. Read the instructions thoroughly before beginning this installation.

**Warning:** **DO NOT** work under a vehicle supported by only a jack. Place support stands securely under the vehicle in the manufacturer's specified locations unless otherwise instructed.

**Warning:** **DO NOT** drive vehicle until all work has been completed and checked. Torque all hardware to values specified.

**Reminder:** Proper use of safety equipment and eye/face/hand protection is absolutely necessary when using these tools to perform procedures!

**Note:** It is very helpful to have an assistant available during installation. Some provided images may show addition holes / hardware, if instructions do not reference discrepancies please continue with the provided steps.

**Warning:** **Not all possible wheel sizes and backspacing can be tested. Cautiously check wheel assembly to spindle, suspension component, and fender/body clearance before tightening lug nuts and rotating the wheel assembly. Belltech is not responsible for any wheel, tire, suspension component, and/or body damage caused by failure to check for interference.**

### RECOMMENDED TOOLS:

- Properly rated floor jack and two (2) support stands
- Wheel chocks
- 1/2" drive torque wrench
- Metric socket wrench set
- Metric wrench set
- Tape measure
- Safety Glasses

## **KIT INSTALLATION**

**WE RECOMMEND** that a qualified mechanic, at a properly equipped facility, perform such installation. **WE RECOMMEND** that the installation be performed on a firm, flat and level surface such as seasoned asphalt or concrete.

**The use of safe, and proper equipment, is very important!**

### **1) JACKING, SUPPORTING AND PREPARING THE VEHICLE**

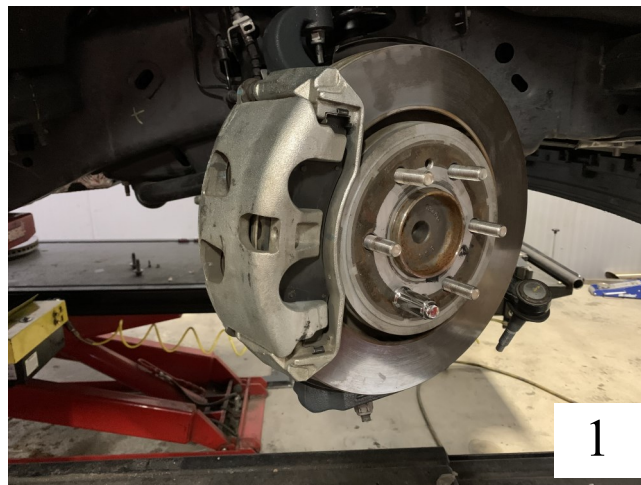
- a) Block the rear wheels of the vehicle with appropriate wheel chocks. Make sure the vehicle's transmission is in "PARK" (automatic) or 1st gear (manual). Activate the parking brake.
- b) Loosen, but **DO NOT REMOVE** the front wheel lug nuts.
- c) Lift the front of the vehicle off the ground using properly rated floor jack. Lift the vehicle so that the front tires are approximately 6-8 inches off the ground surface.
- d) Support the vehicle using two (2) support stands, rated for the vehicle's weight. The stands should be positioned in the factory specified locations. (Refer to the vehicle Owner's Manual) Prior to lowering the vehicle onto the stands, make sure the supports will securely contact the chassis. **It is very important that the vehicle is properly supported during this installation to prevent frame damage and personal injury! Make sure that the support stands are properly placed prior to performing the following procedures.**
- e) Lower the vehicle onto the stands slowly and check for possible interference with any brake lines, wire and or cables.

### **!SAFETY REMINDER!**

**Check for safe and vehicle stability before proceeding under the vehicle to the begin the following procedures. Never work under a vehicle supported by ONLY a jack. Always use properly rated support stands to support the vehicle.**

## 2) STEERING KNUCKLE REMOVAL

- a) Starting on the passenger's side of the vehicle; remove the wheel from the vehicle. **(PHOTO 1)**
- b) Remove the steering arm tie rod end. **(PHOTO 2)**
- c) Remove the brake line bracket attached to the steering knuckle. **(PHOTO 3)**
- d) Remove the brake caliper assembly from the steering knuckle. **(PHOTO 4)** With a metal hook/wire or Zip-tie, attach the caliper to chassis so that it doesn't dangle and damage the brake line. Remove the Rotor.

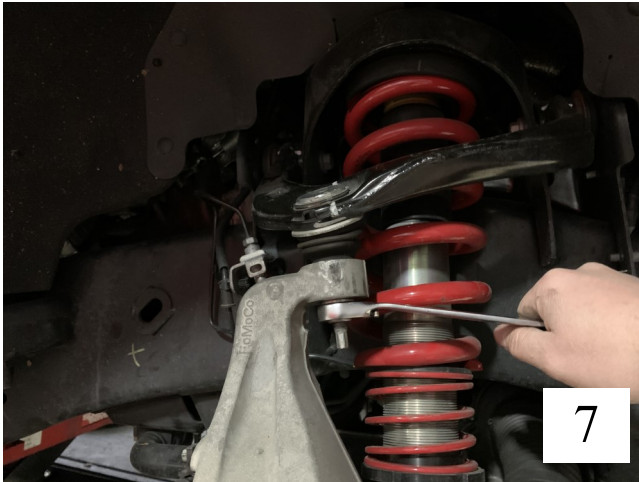


- e) Remove the OEM dust shield. **(PHOTO 5).**

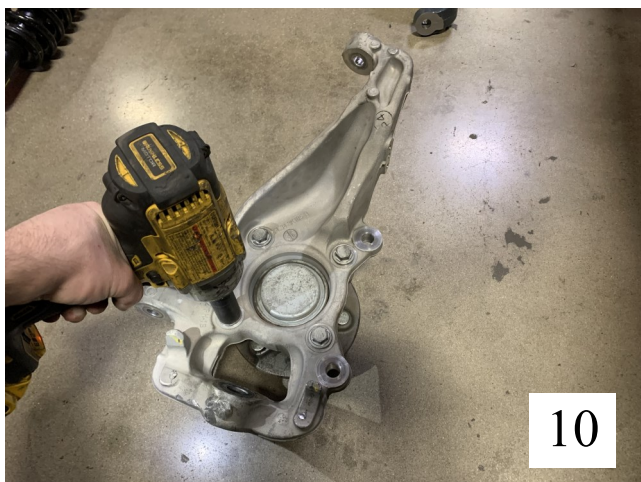


## 2) STEERING KNUCKLE REMOVAL cont...

- f) Remove the ABS sensor from the hub. **(PHOTO 6)**
- g) Unthread the upper control arm ball joint nut, but do not completely remove. **(PHOTO 7)**
- h) Use a hammer, and hit the side of the ball joint to release it from the steering knuckle. **(PHOTO 8)**
- i) Unthread the lower control arm ball joint nut, but do not completely remove.
- j) Use a hammer, and hit the side of the ball joint to release it from the steering knuckle.

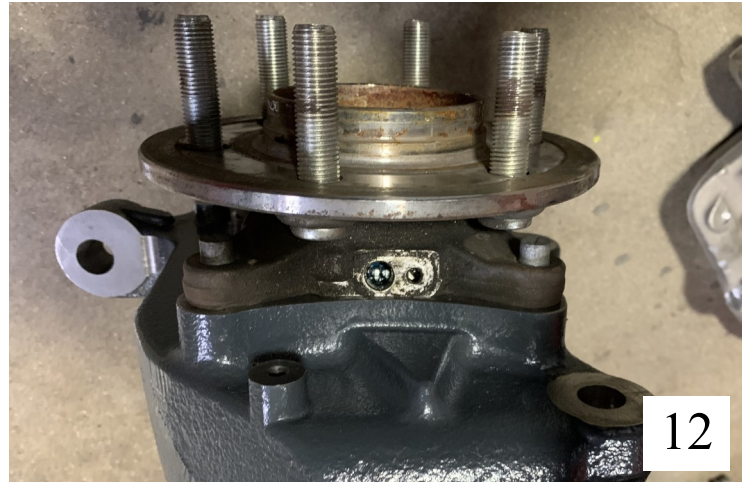


- k) Remove the upper ball joint nut and remove the upper ball joint from the steering knuckle **(PHOTO 9)**
- l) Repeat step for the lower ball joint.
- m) Once steering knuckle is removed, remove the back hub bolts; remove hub from OEM steering knuckle. **(PHOTO 10)**

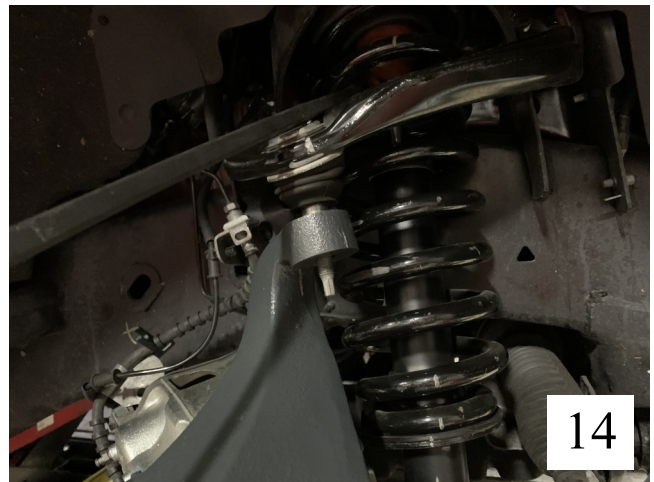
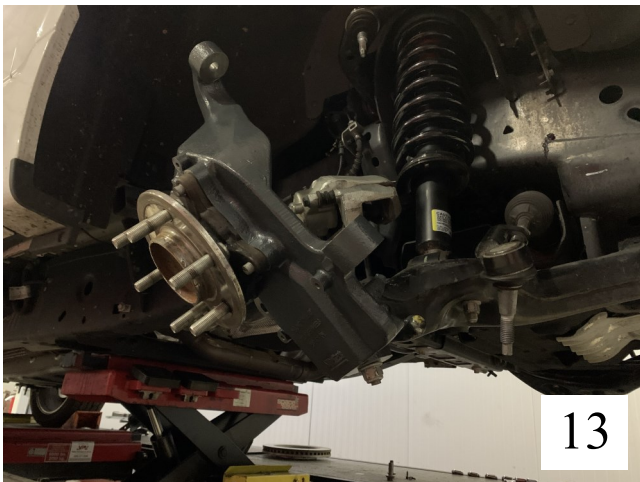


### 3) **BELLTECH STEERING KNUCKLE INSTALLATION**

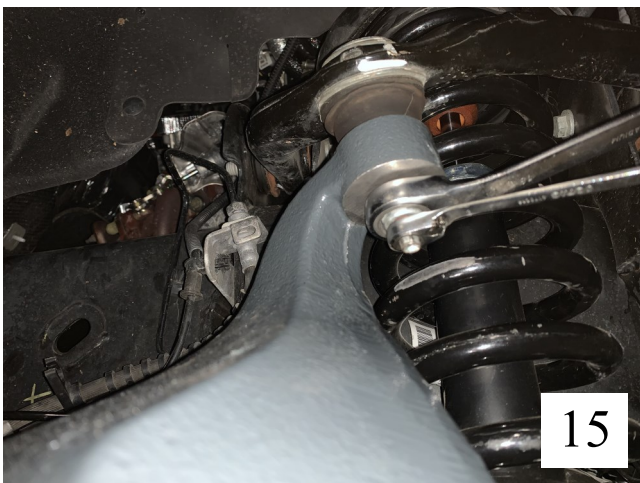
- a) Install the OEM hub onto the BELLTECH 2352 steering knuckle.. **(PHOTO 11)** Make sure the ABS sensor is facing upward. **(PHOTO 12)**



- b) Install the *BELLTECH* steering knuckle onto the bottom ball joint first. Secure the bottom nut; hand tight only. **(PHOTO 13)**
- c) Install the upper ball joint on to the *BELLTECH* steering knuckle, Secure upper ball joint nut; hand tight only **(PHOTO 14)**



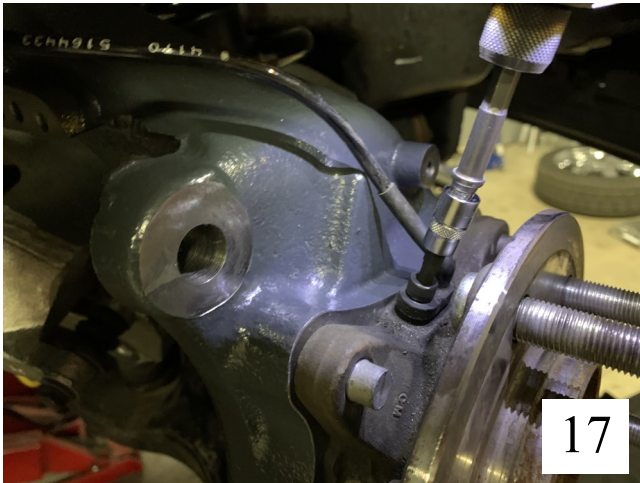
- d) Tighten the upper ball joint and bottom ball joint **(PHOTO 15 & 16)**



3) **BELLTECH STEERING KNUCKLE INSTALLATION cont...**

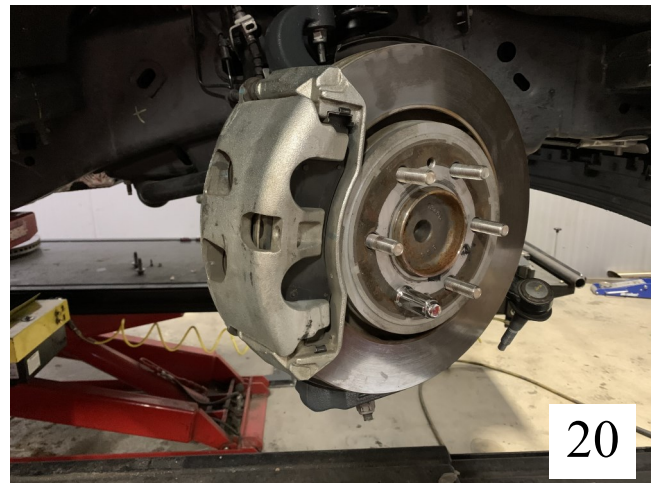
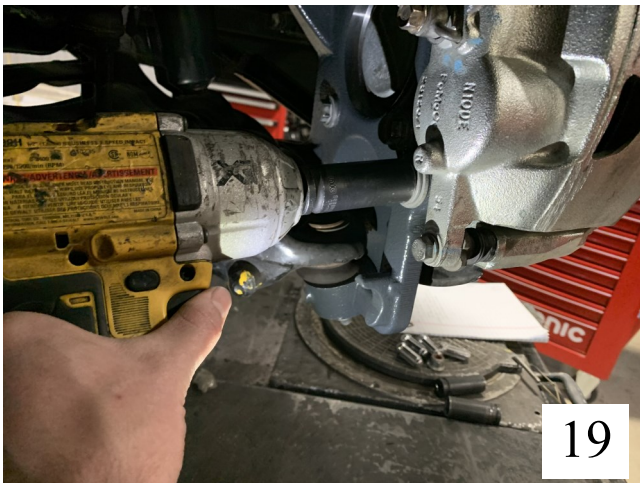
e) Install the ABS sensor onto the BELLTECH 2352 steering knuckle. **(PHOTO 17)**

f) Install the OEM dust shield and rotor onto the *BELLTECH* steering knuckle. **(PHOTO 18)**



g) Install the rotor & caliper onto the *BELLTECH* steering knuckle using the OEM bolts.

**(PHOTO 19 & 20)**



h) Install the OEM brake line brackets onto the *BELLTECH* steering knuckle. **(PHOTO 21)**

i) Install and tighten the steering tie rod onto the *BELLTECH* steering knuckle. **(PHOTO 22)**



### 3) **BELLTECH STEERING KNUCKLE INSTALLATION cont...**

j) Double check all the OEM brake lines are secured. (PHOTO 23)

k) Installation complete. Repeat process on driver side. (PHOTO 24)



### 4) **FINALIZING INSTALLATION**

- a) Check that all components and fasteners have been properly installed, tightened and torqued.
- b) Check the brake hoses, and any other components for any possible interference.
- c) Install both passenger and driver side wheels.
- d) Lift the vehicle and remove the support stands. Carefully lower the vehicle to the ground.
- e) Visually inspect the wheel alignment after the vehicle has been set down and rolled to relieve any tension. It may be necessary to manually adjust the toe on the steering arms before the vehicle is driven.
- f) Test-drive the vehicle in a remote location so that you can become accustomed to the revised driving characteristics and handling. Be aware that the vehicle will handle substantially different now that it has been modified.
- g) We recommend the vehicle be taken in to a qualified wheel alignment facility to be aligned to factory specifications. This should be done after the vehicle has been test driven and all modifications have been completed.
- h) Check **ALL** of the hardware and re-torqued at intervals for the first 10, 100, 1000 miles.

<b>PARTS LIST</b>		
<b>PART #</b>	<b>DESCRIPTION</b>	<b>QUANTITY</b>
2352-325	STEERING KNUCKLE LH	1
2352-425	STEERING KNUCKLE RH	1