belltech®

INSTALLATION GUIDE

PART NUMBER: 2514 / 2515
LOWERING SPINDLE
GM 1500 TRUCK 2WD / 4WD | 2016-2018
GM 1500 SUV 2WD / 4WD | 2014-2020

-2” FRONT LOWERED RIDE HEIGHT

**** 2514 MUST USE 17” WHEELS OR LARGER AND 2515 MUST USE 18” WHEELS OR LARGER****

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PHONE: 800-445-3767 | EMAIL: INFO@BELLTECH.COM

THANK YOU

Thank you for choosing our high quality Belltech product. We have spent a great deal of time developing our line of products so that you will receive maximum performance with minimal difficulty during installation. Soon your vehicle will be on the road looking and feeling much improved.

Please take a moment to read all instructions and warnings prior to installation of your new Belltech product and before operating your vehicle. If you have any questions or concerns regarding any step in the installation process, please do not hesitate to call or email our customer support specialists who are trained to help you through any portion of this process.

Before You Begin:

It is of the utmost importance that you confirm all of the components listed on the parts list is in the kit. You can find this list located on the last page(s) of your instructions. Do not begin installation if any part is missing. Instead, please call our Belltech customer service specialists.

Belltech Customer Support:

Phone: 1-800-445-3767

Email: info@belltech.com

Safety Information:

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

Proper use of safety equipment and eye/face/hand protection is absolutely necessary when performing any of the following instructions.

We strive for an exceptional experience for all our valued customers. If for any reason you need assistance with your Belltech products, please do not return the product to the store you purchased from, but rather call our dedicated customer service experts, from 7am to 5pm PST.

We recommend that a qualified mechanic, at a properly equipped facility, perform this installation.

It is very helpful to have an assistant available during installation.

Before Driving Your Vehicle:

It is important to double check all brake hoses, cables, and other components to be sure there is no interference. You must also check for wheel/tire to chassis/body interference. If any issues are found, review your installation instructions to be sure no steps were missed and any problems are corrected.

Make sure your vehicle is aligned immediately following installation.

Check all hardware and re-torque at intervals for the first 10, 100, and 1000 miles.

Some of Belltech's products are designed to improve your vehicle's off-road performance. Leveling/lifting your vehicle may result in an altered center of gravity. It is crucial to use extreme care when operating your vehicle to prevent rollover and/or loss of control.

Any changes in your vehicle's suspension may result in transformed handleability. Please test-drive your vehicle in a remote location so you can become accustomed to the revised driving characteristics.

Perform headlight check and adjustment.

Failure to drive any modified vehicle in a safe manner may result in harm or death.

Never operate your modified vehicle under the influence of drugs, alcohol, or lack of adequate sleep.

Always wear your seatbelt.

DIFFICULTY:

INSTALLATION TIME: 1-2 Hours + Alignment

RECOMMENDED TOOLS:

- Properly rated floor jack
- Support stands
- Wheel chocks
- Metric socket wrench set
- Metric wrench set
- Screwdriver set
- Pliers
- Tape measure
- Medium weight ball peen hammer and center punch
- Torque wrench rated up to 200 ft lbs.

SPECIALTY TOOLS:

- Tie rod end removal tool
- Ball joint separator tool
- Transmission jack
- Abrasive cutter or grinder

FITMENT GUIDE

Part# 2514 must use 17” wheels or larger.

Part# 2515 must use 18” wheels or larger.

Please be sure to check for interference.

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.

INSTALLATION PREPARATION:

Before beginning the installation process, measure the hub to fender heights for your vehicle and record them in the “Before” section. After your vehicle has been modified, record the new measurements in the, “After” section. This way, you can compare the resulting height to the original. When taking the measurements, measure vertically from the center of the wheel to the inner edge of the fender.

Before:

LF:_____

RF:_____

LR:_____

RR:_____

After:

LF:_____

RF:_____

LR:_____

RR:_____

JACKING, SUPPORTING, AND PREPARING THE VEHICLE

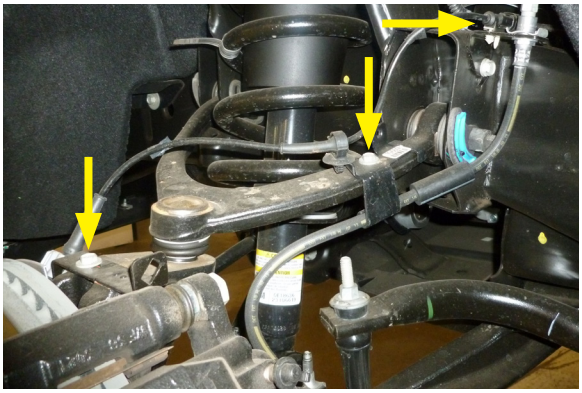
1. Park your vehicle on a smooth, level, concrete or seasoned asphalt surface.
2. Block the rear wheels of the vehicle using wheel chocks. Make sure the vehicle's transmission is in "PARK" (automatic) or 1st gear (manual).
3. Activate the parking brake.
4. Loosen, but do not remove, the front wheel lug nuts.
5. Lift the front of the vehicle off the ground using a properly rated floor jack. Lift the vehicle so the front tires are approximately 6-8 inches off the ground.
6. Place support stands rated for the vehicles weight. The stands should be positioned in the factory specified locations. (Refer to the owners manual). Prior to lowering the vehicle onto stands, make sure the support stands will contact the chassis. It is very important that the vehicle is properly supported to prevent any harm to ones self or to the vehicle.
7. Lower the vehicle slowly onto the stands.
8. Remove the front wheels.

Technician reminder:

Never work under a vehicle supported only by a jack. It is necessary to place support stands securely under the vehicle in the manufacturer's specified locations unless otherwise instructed.

OEM SPINDLE REMOVAL

9. Remove the 10mm bolts to detach the brackets connecting the hydraulic brake line and ABS sensor to the top of the spindle and the upper control arm. Also disconnect the ABS sensor plug from the frame.



10. Remove the 5mm hex key bolt to detach the wheel speed sensor at the hub bearing
11. Remove the 15mm end link nut and bolt to detach the end link assembly. This allows added movement when removing spindle.
12. Remove the two 18mm brake caliper bolts to detach the brake caliper assembly from the spindle. Use a zip-tie or wire hook to hold the caliper on the chassis to prevent damage to the brake line.
13. **4WD ONLY:** Remove the drive shaft nut in the center of the hub assembly with a 36mm socket.
14. With a T30 TORX key, remove the brake rotor retaining bolt and slide the brake rotor off the hub.
15. Break loose the 21mm tie-rod ball joint nut. Keep the nut partially threaded onto the stud. Use a tie-rod removal tool to dislodge the upper ball joint stud from the spindle.

Technician reminder:

In some cases it may be necessary to break the ball joints free from the seat in the taper. A firm, forceful strike to the mounts usually will allow the ball joints to dislodge. Do this only at the designated striking locations.

16. Break loose the 18mm upper control arm ball joint nut with. Keep the ball joint nut partially threaded on to the ball joint; doing so keeps the arm from swinging up and helps hold the assembly in place. Use a ball joint removal tool to dislodge the upper ball joint stud from the spindle.
17. Loosen the lower ball joint nut for ball joint removal using a 24mm socket. It may be helpful to use an hex key inserted into the lower ball joint to prevent spinning. Use a ball joint removal tool to dislodge the lower ball joint stud from the spindle.

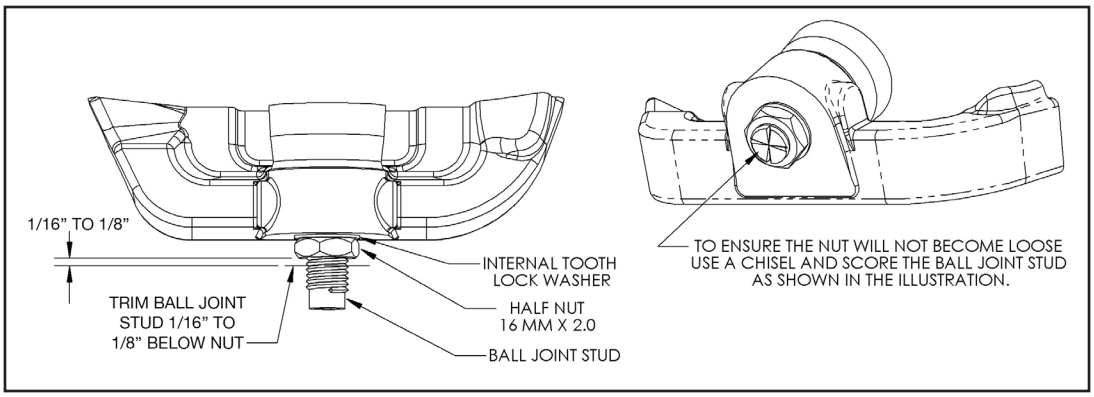
Technician reminder:

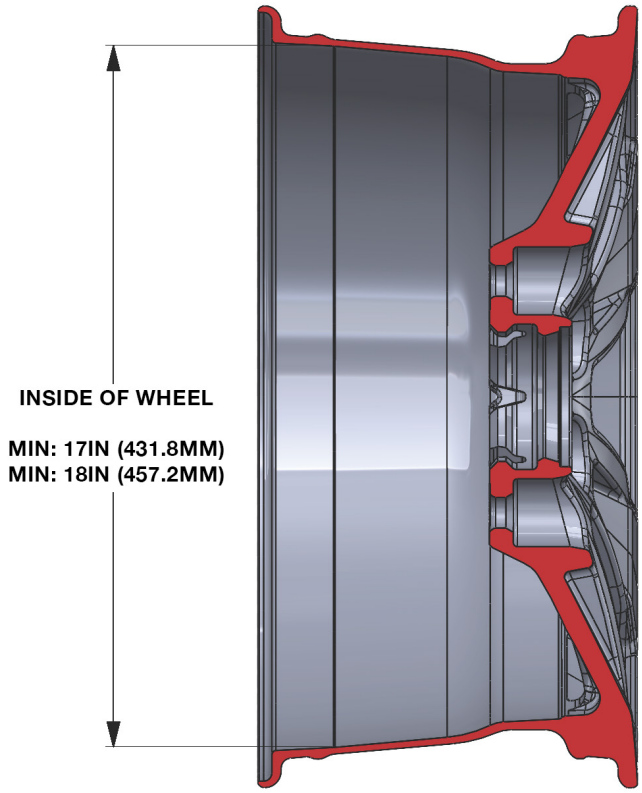
If the strut assembly is still installed, its helpful to use a jack or lifting device to support the lower control arm while removing the ball joints. Use caution when lifting the lower control arm as it is under extreme load from the spring. Ensure the lifting device base is stable and seated properly to the lower control arm to prevent it from slipping out.

18. Remove the spindle from the vehicle

Technician warning:

For 17” or 18” wheels you MUST use the supplied half nut and lock washer on the lower ball joint then trim the ball joint stud for adequate wheel clearance. The supplied lock washer and nut should be installed and torqued to 60 ft lbs. Before the ball joint stud is trimmed, ensure you leave between 1/16” to 1/8” of the stud extended out from the nut depending on your wheel clearance, this may be adjusted. Once the proper length is trimmed off, use a chisel or punch to score the edge of the threads to prevent the possibility of the nut becoming loose.

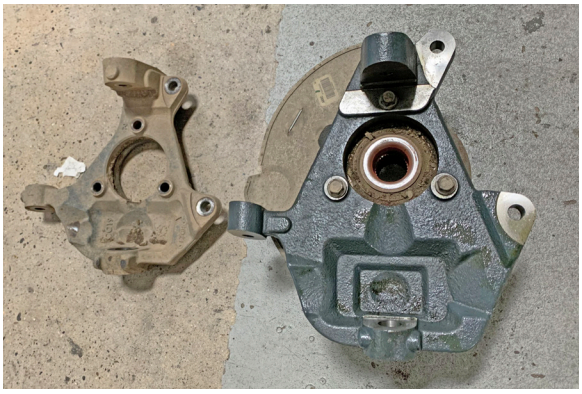




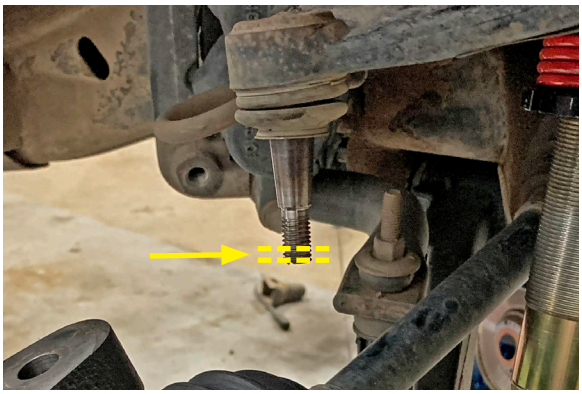
BELLTECH SPINDLE INSTALLATION

19. Remove the three 15mm bolts on the backside of the hub assembly to detach the hub and backing plate from the original spindle.

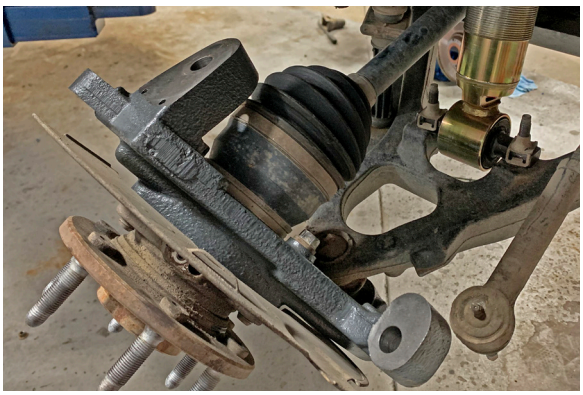
20. Attach the hub assembly and backing plate on to the new Belltech spindle. Ensure the backing plate tab is aligned with the tie rod mount to replicate its original position on the OEM spindle. Torque the three original hub bolts to 133 ft lbs.



21. **4WD ONLY:** Trim 1/4 to 1/2” off the lower portion on the upper control arm ball joint for clearance to the 4WD drive shaft CV boot.



22. **4WD ONLY:** Insert drive shaft into hub assembly opening. Ensure splines are properly aligned before continuing.



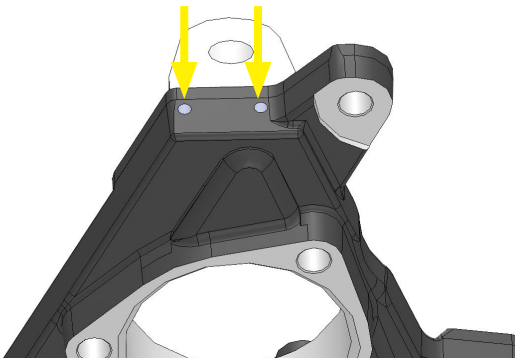
BELLTECH SPINDLE INSTALLATION CONTINUED

23. Attach the new spindle to the upper and lower ball joints and loosely thread the original nuts in place.

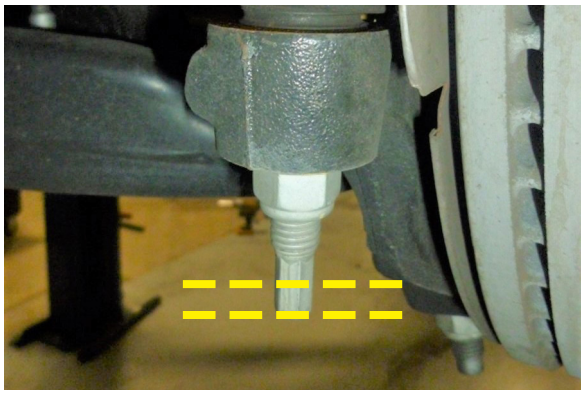
Technician reminder:

It is helpful to use a jack or lifting device to raise the lower control arm while attaching the spindle to the ball joints. Use caution when lifting the lower control arm as it is under extreme load from the spring. Ensure the lifting device base is stable and seated properly to the lower control arm to prevent it from slipping out.

24. Tighten the upper ball joint nut in place and torque to 37 ft lbs. plus a 90–110 degree turn.
25. Tighten the lower ball joint nut and torque to 92 ft lbs. for the original nut; or 60 ft lbs. for the supplied half nut.
26. Attach the tie-rod end to the spindle and torque the original nut to 26 ft lbs. plus a 85–100 degree turn.
27. **4WD ONLY:** Install and torque the drive shaft center hub bolt to 188 ft lbs.
28. **4WD ONLY:** It is very important to rotate the hub to check that the upper ball joint stud or nut does not come in contact with the drive shaft boot.
29. Ensure there is no dirt or debris in the sensor mounting pad and attach the ABS sensor to the hub. Torque the bolt to *115 in lbs.*
30. Mount the brake rotor onto the hub assembly and attach the brake caliper assembly over the rotor; torque the two bolts to 170 ft lbs.
31. Attach the brake line bracket to the top of the upper control arm. There are two mounting holes at the top of the spindle for the ABS bracket. Use the best hole on the spindle for your application. It may be necessary to cut the ABS bracket to clear the upper brake caliper bolt mount. If needed, cut 1/4” from the slot. Connect the ABS sensor line at the plug on the frame.



32. Rotate the spindle in both directions to confirm the brake line and ABS line have enough slack. If one or the other is too tight, pull the line through the bracket to give it the proper amount of slack.
33. **Note:** It may be necessary to also trim the lower hex portion of the tie-rod stud to clear the wheel. Trim 1/2” off the lower stud; ensure to retain the some of the hex shaft for future tightening and/or removal.

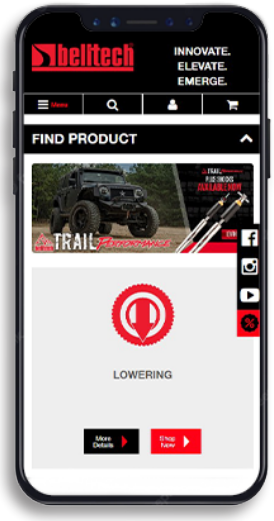


FINALIZING THE INSTALLATION

34. Mount the wheels and tighten the lug nuts.
35. Lift the vehicle and remove the support stands.
36. Carefully lower the vehicle onto the flat ground.
37. Torque the lug nuts to 140 ft lbs.
38. Check that all components and fasteners have been properly installed and torqued.
39. Read and perform all tasks in the “Before Driving Your Vehicle” section of page 1 of your instructions.

THANK YOU FOR CHOOSING BELLTECH.

You are now a part of the Belltech family and we are eager to catch a glimpse of your newly modified vehicle. Give us a shout out and let us know how much you love our product. Don’t forget, we offer other Belltech related merchandise for you and your vehicle on our website www.belltech.com



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Belltech Suspension

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If you have any questions, concerns, or warranty related issues regarding your Belltech product, please call or email our experienced customer service specialists.

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Phone: 1-800-445-3767

Email: info@belltech.com

KIT CONTENTS (2514)

DROP SPINDLE SET		
Part number	Description	Qty
2514-325	LH MACHINED SPINDLE	1
2514-425	RH MACHINED SPINDLE	1
2508-777	HARDWARE KIT	1

HARDWARE KIT		
Part number	Description	Qty
115007	16MM X 2.0” HALF NUT	2
115009	5/8” INTERNAL TOOTH LOCK WASHER	2

KIT CONTENTS (2515)

DROP SPINDLE SET		
Part number	Description	Qty
2515-325	LH MACHINED SPINDLE	1
2515-425	RH MACHINED SPINDLE	1
2508-777	HARDWARE KIT	1

HARDWARE KIT		
Part number	Description	Qty
115007	16MM X 2.0” HALF NUT	2
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