belltech®

INSTALLATION GUIDE

PART NUMBER: 2102
LOWERING SPINDLE
GM BLAZER / JIMMY 2WD | 1998-2004

-2” FRONT LOWERED RIDE HEIGHT

300 W. PONTIAC WAY. CLOVIS, CA 93612
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 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
- Tape measure
- Hammer and rubber mallet
- Black spray paint
- Safety glasses
- Torque wrench rated up to 100 ft lbs.

SPECIALTY TOOLS:

- Tie-rod end removal tool
- Angle grinder or die grinder equipped with cutoff wheel
- Face shield

FITMENT NOTE:

Not all possible wheel sizes and backspacing can be tested. Cautiously check the wheel assembly to the spindle, suspension component, and fender/body clearance before tightening the 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.

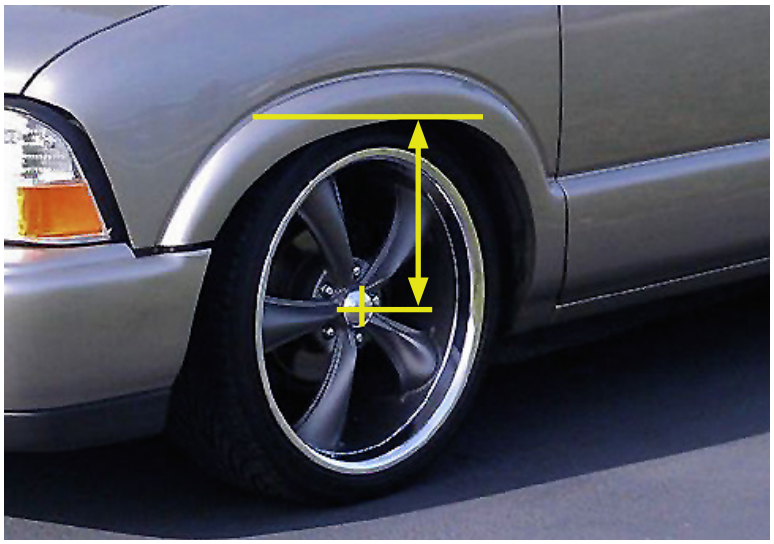
Before:

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.

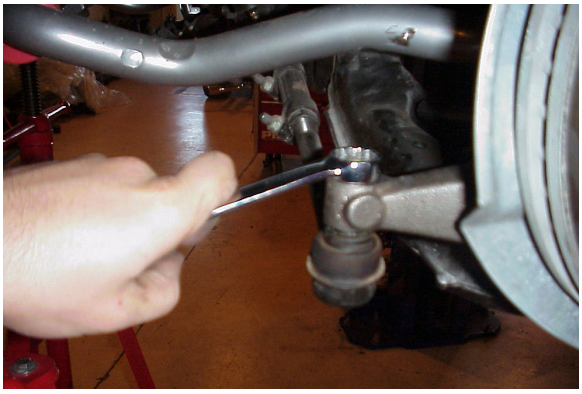
Technician reminder:

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

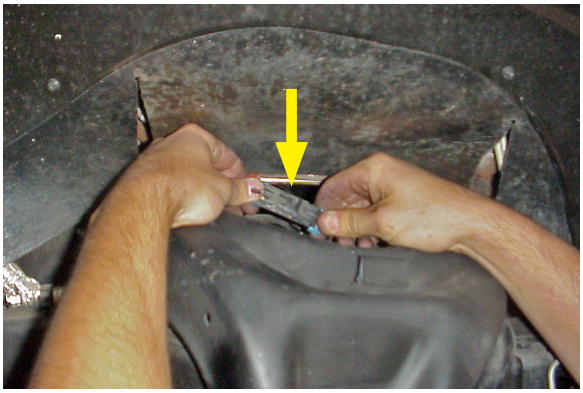
9. Use a 13mm socket and open end wrench to detach the front sway bar end links from both the left and right lower control arms.

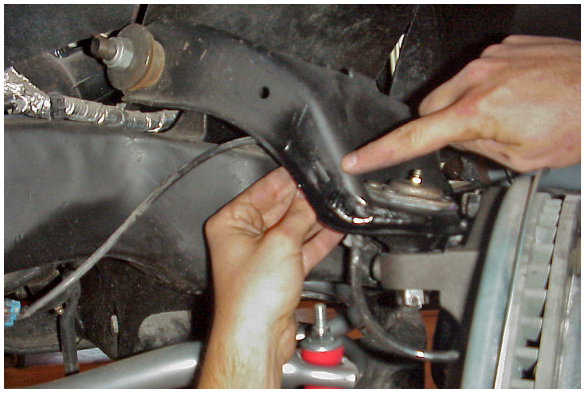
10. Remove the cotter pins securing the tie-rod end nuts to the steering arms of spindle. Remove the 19mm nuts to detach the tie-rod ends from the steering arms.



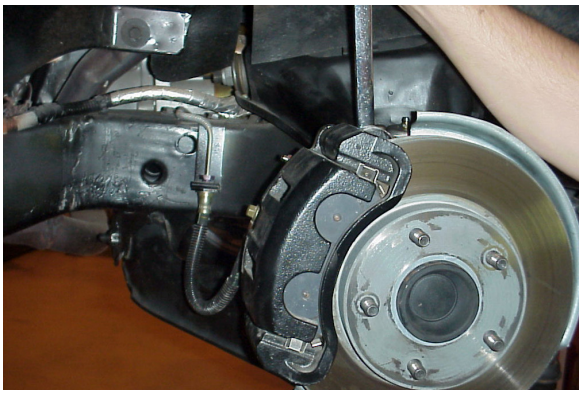
11. Using a hammer, strike the side of the steering arm until the tie-rod end disengage from their tapered bore. Move the tie-rods up and away from the spindles, toward the front of the vehicle.

12. Working from the driver's side of the vehicle, use a small flat-bladed screwdriver to carefully unplug the ABS sensor wire from the main wiring harness just above the upper spring pocket located behind the rubber splash guards. Detach the sensor wire clips from the frame and upper control arm.





13. Remove the two 18mm bolts attaching the brake caliper mounting bracket to the spindle. DO NOT remove the caliper from the mounting bracket.

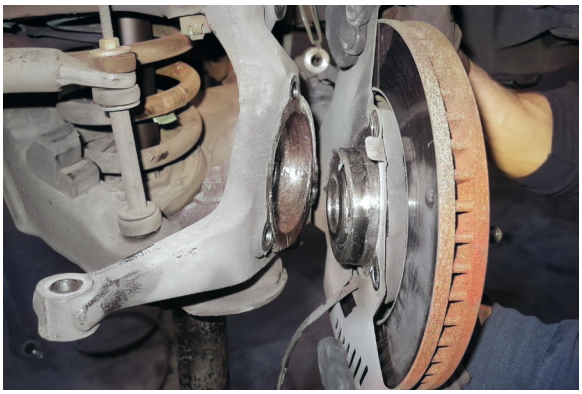


14. Remove the caliper from the spindle assembly by sliding it up and away from the brake motor, ensure not to stretch or damage the rubber brake hose. When the brake caliper is removed, do not allow it to hang unsupported from the brake line. Support the caliper with a piece of wire or cord to prevent damage to the brake line.

15. Remove the brake rotor from the hub assembly.

OEM SPINDLE REMOVAL CONTINUED

16. Remove the three 18mm hub assembly retaining bolts on the backside of the spindle and detach the hub assembly.



17. Place a floor jack under the lower control arm and lift until a slight compression of the suspension is achieved. Turn the spindle to access the ball joints without interference.

18. Remove the cotter pin securing the upper ball joint. Loosen the 22mm castle nut by two full turns but DO NOT completely remove the castle nut.

19. Using a medium weight hammer strike the spindle upper ball joint tab until the ball joint disengages from its tapered bore. Coil spring tension will force the ball joint from its tapered bore when the upper ball-joint tab is struck with a hammer. The castle nut will prevent the spindle from completely separating from the upper control arm. DO NOT attempt this procedure without the upper ball joint nut loosened and in place.

Technician reminder:

Use extreme caution when working with coil springs as they store a large amount of energy and can do great harm to both persons and property.

20. Raise the floor jack up to release pressure on the spring. Remove the cotter pin and loosen but do not remove the lower ball joint 24mm nut. Strike the lower portion of the spindle beside the ball joint, this will dislodge it from the taper.

21. Once they are both loose, remove the upper nut and lift the control arm to free the spindle. Now remove the lower nut and slide the spindle off the lower ball joint.

UPPER CONTROL ARM MODIFICATION

Technician note:

This modification is required to provide clearance between the upper control arms, lowering spindle,and the brake caliper.

22. Only trim the areas marked in white.

23. Use an angle grinder or die grinder equipped with a cutoff wheel to trim the upper control arm. Grind the surfaces back so that no sharp edges are present.

Technician reminder:

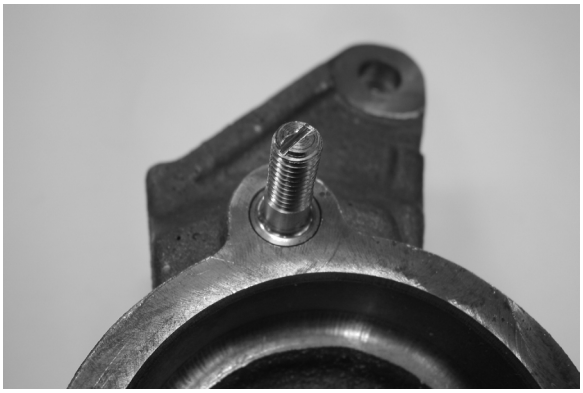
Always wear eye protection when using cutting or grinding power tools.

24. Paint all bare metal surfaces with fast drying chassis black spray paint.

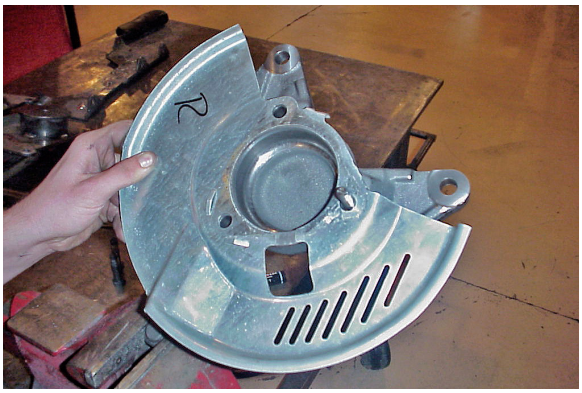
25. If necessary, additional material can removed following the Belltech lowering spindle and brake caliper installation.

BELLTECH SPINDLE INSTALLATION

26. Working on bench surface, install larger end of threaded stud into threaded hole in the new Belltech lowering spindle and tighten using a flat head screwdriver. Ensure the larger central diameter portion of stud is flush with hub face of lowering spindle.

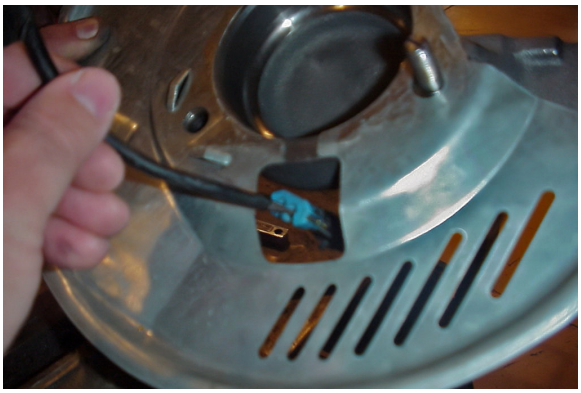


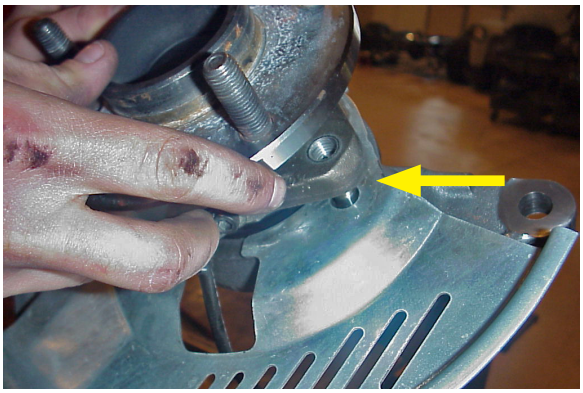
27. Place the brake backing plate onto the hub face of the lowering spindle in the same orientation as removed. Be sure to have the inner portion of the backing plate facing the inner portion of the vehicle. Align the holes in the backing plate with the holes and stud of the spindle upright.



28. Place a thin coating of chassis grease or anti-seize compound on the diameter of the hub assembly that mates with the central bore of the lowering spindle.

29. Place the hub assembly, in the same orientation as removed, over the central bore of the lowering spindle and the threaded stud. Ensure the ABS sensor wire is oriented relative to the brake backing plate. Carefully push the hub assembly into the spindle until the threaded stud protrudes through the threaded hole in the hub flange.





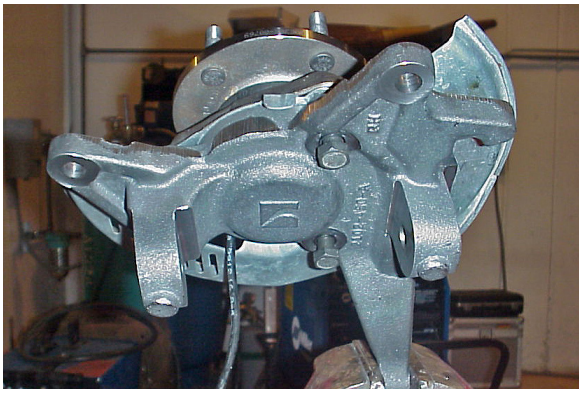
BELLTECH SPINDLE INSTALLATION CONTINUED

30. To attach the hub assembly to the spindle, loosely thread the provided locknut onto the threaded stud.

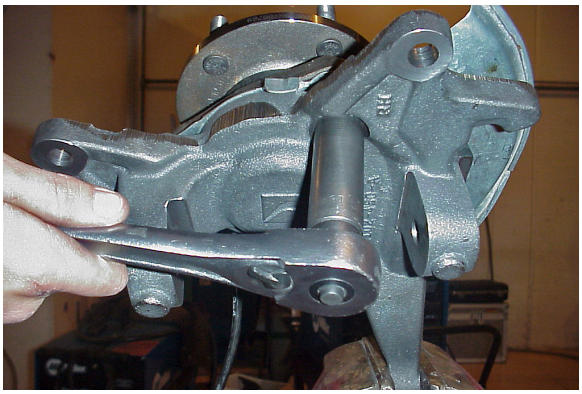
Technician reminder:

It is very important to install this locknut PRIOR to installing and tightening hub bolts.

31. From the back of the spindle, loosely thread two of the original hub attachment bolts through the holes in the spindle into the threaded holes of hub flange. Ensure the hub diameter SQUARELY aligns into the central bore of the lowering spindle.

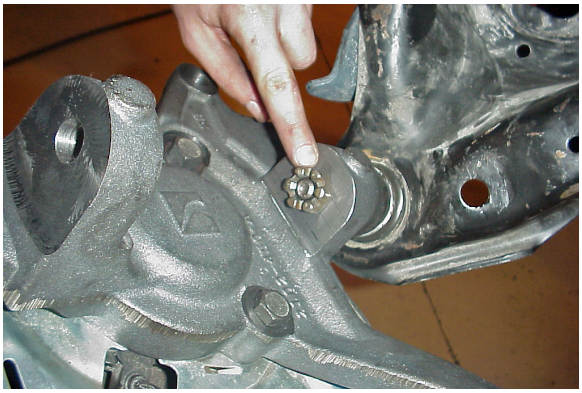


32. In sequence, tighten the locknut and the hub bolts until the hub flange is flush against the brake backing plate and the hub face of the spindle. Torque locknut to 34 ft lbs. Verify that adequate clearance exists between the backside of the hub flange and the threaded stud. Torque the original hub bolts to 70 ft lbs.

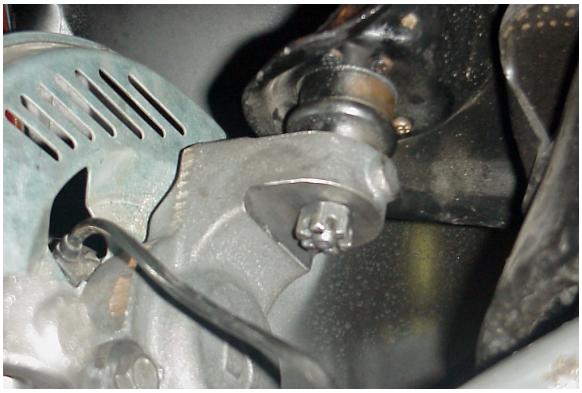


BELLTECH SPINDLE INSTALLATION CONTINUED

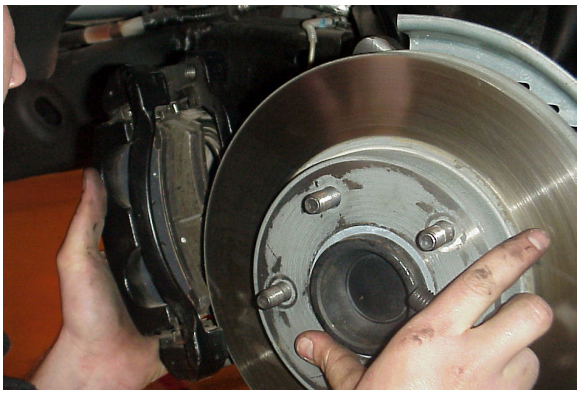
33. Mount the Belltech lowering spindle assembly over the lower ball joint stud and secure it with the original castle nut. Torque the lower ball joint nut to 61 ft lbs. Align slots in the castle nut with the hole in the stud to install a new provided cotter pin. Bend one leg of the cotter pin around the stud to secure nut.

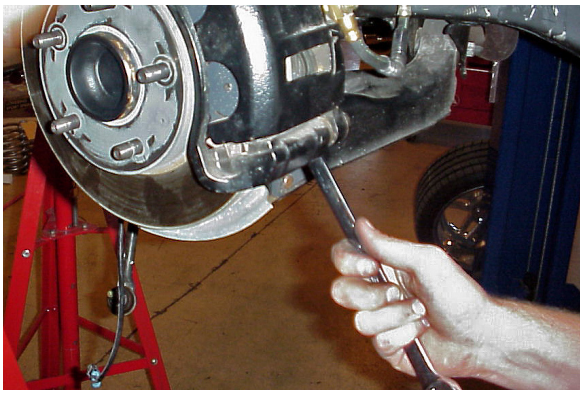


34. Use the floor jack to lift the lower control arm and spindle assembly. Push the upper control arm down until the upper ball joint stud protrudes through tab in the spindle. Thread the castle nut onto the upper ball joint stud and torque the castle nut to 79 ft lbs. Align the slots in the castle nut with the hole in the stud and install a new provided cotter pin. Bend one leg of the cotter pin around the stud to secure nut.



35. Place the brake rotor over the wheel studs and onto the hub assembly to its original position. Mount the brake caliper assembly over the brake rotor while aligning the mounting bracket with the mounting holes in the spindle. Ensure not to twist or stretch the brake hose and ensure the brake pads fit properly over the brake rotor. Torque the two caliper bolts to 133 ft lbs.





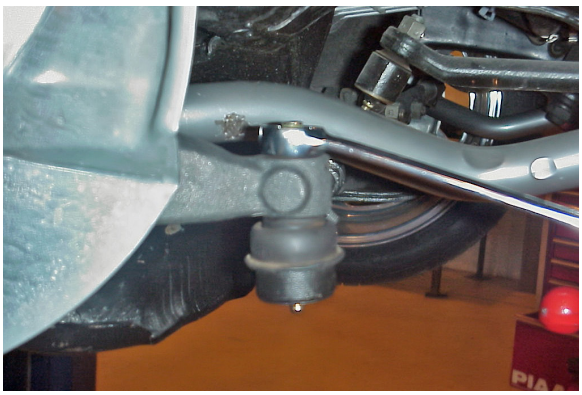
BELLTECH SPINDLE INSTALLATION CONTINUED

36. Connect the ABS sensor wire by plugging it into the harness as initially remove then attach the wire clips to the chassis and into the upper control arm.

37. Turn the spindle assembly, lock-to-lock, and check for brake hose stretching or binding. If brake hose binding exists, check to ensure that caliper was NOT twisted during re-installation.

38. Check that the spindle and the brake caliper adequately clear the upper control arm at full lock in both directions. If needed, trim the upper control arm further to gain clearance.

39. Place the tie-rod end stud into the steering arm of the spindle until it protrudes through the top of the tapered hole. Thread the castle nut onto the tie-rod end stud and torque to 39 ft lbs. Align the slots in the castle nut with the hole in the stud and install a new provided cotter pin. Bend one leg of the cotter pin around the stud to secure nut.



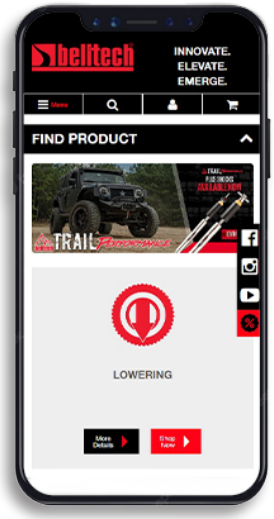
40. Attach the sway Bar end links to the lower control arms. Use a 13mm socket and open-end wrench to tighten the hardware just until grommets begin to bulge.

FINALIZING THE INSTALLATION

41. Mount the wheels and tighten the lug nuts.
42. Lift the vehicle and remove the support stands.
43. Carefully lower the vehicle onto the flat ground.
44. Torque the lug nuts to 100 ft lbs.
45. Check that all components and fasteners have been properly installed and torqued.
46. 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



belltechsuspension

Belltech Suspension

@belltechsuspension

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

Belltech Customer Support:

Phone: 1-800-445-3767

Email: info@belltech.com

KIT CONTENTS

2102		
Part number	Description	Qty
2102-325	LH MACHINED SPINDLE	1
2102-425	RH MACHINED SPINDLE	1
2102-777	HARDWARE KIT	1

2102-777		
Part number	Description	Qty
2102-002	THREADED STUD	2
112318	LOCK NUT	2
2100-110	COTTER PIN PACK	1