belltech®

INSTALLATION GUIDE

PART NUMBER: 2700
LOWERING SPINDLE
GM ASTRO / SAFARI 2WD | 1985-2002

-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 the components listed on the parts list are 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 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, in 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:

2-3 Hours + Alignment

RECOMMENDED TOOLS:

- Properly rated floor jack
- Support stands
- Wheel chocks
- Metric socket wrench set
- Metric wrench set
- Hex key socket set
- Tape measure
- Hammer and rubber mallet
- Safety glasses
- Spray paint
- Torque wrench rated up to 150 ft lbs.

SPECIALTY TOOLS:

- Tie-rod end removal tool
- Ball joint removal tool
- Angle grinder

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.

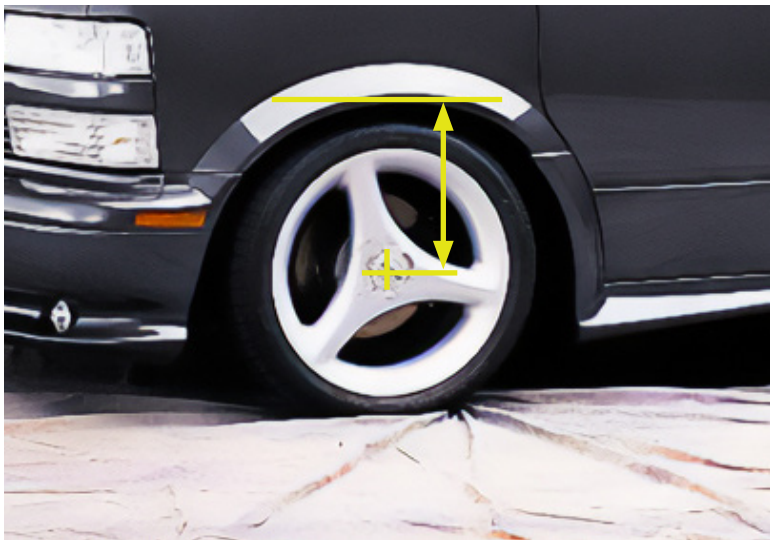
Before:

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 first 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 vehicle's weight. The stands must be positioned in the factory specified locations. (Refer to the owner's 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 one's self or to the vehicle.
7. Lower the vehicle slowly onto the stands.
8. Remove the front wheels.

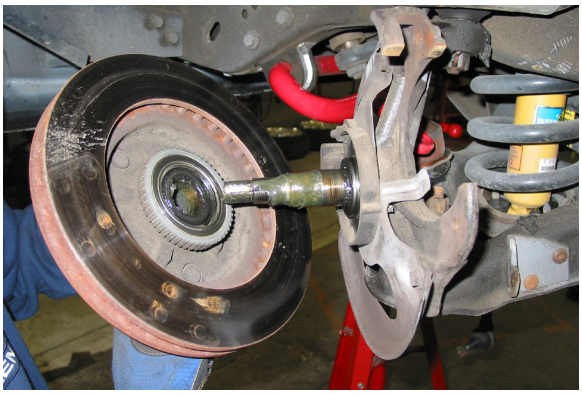
Technician reminder:

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.

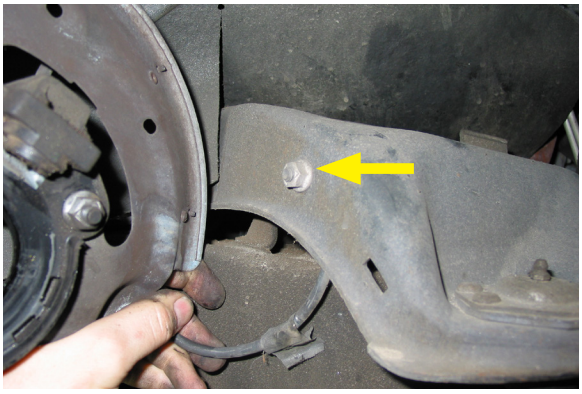
OEM SPINDLE REMOVAL

9. Remove the brake caliper by removing the two 10mm hex key guide bolts accessible from the backside of the brake caliper. 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.

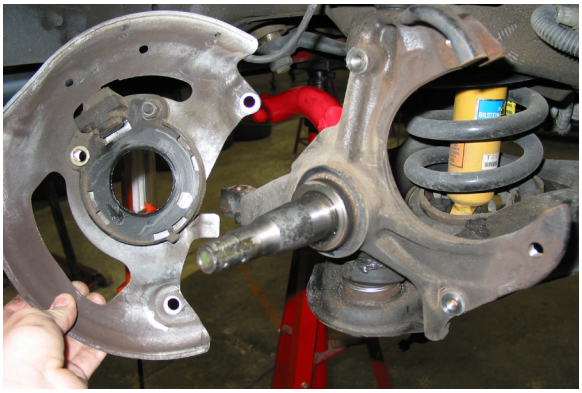
10. Remove the hub and rotor assembly from the spindle by removing the grease cap, cotter pin, and the nut from the spindle pin. Carefully slide the rotor assembly off the spindle pin, do not let the outer bearing fall out of the hub.



11. Locate the 13mm ABS cable retainer bolt on the upper control arm. Use a ratchet and wrench to remove the nut and bolt. Ensure there is no accidental damage to the cable, retainer, or the mounting hardware. Move the ABS cable out from behind the upper control arm to prevent damage during the dust shield removal.



12. Remove the upper and lower 10mm bolts; and the 13mm bolt near the ABS sensor from the face of the cover. DO NOT remove the upper ABS sensor bolt. Detach the cover from the spindle and safely hang it behind the spindle.



OEM SPINDLE REMOVAL CONTINUED

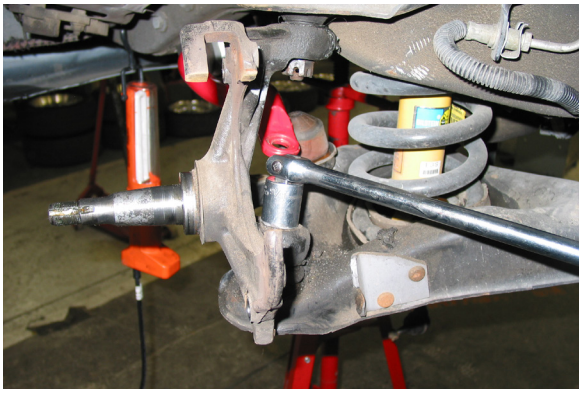
13. Remove the cotter pin from the 17mm nut on the tie rod end. Loosen the nut, but do not remove it completely. Use a tie rod puller or use a hammer to strike the side of the steering arm until the tie rod end is dislodged; swing the rod out of the way.

Technician reminder:

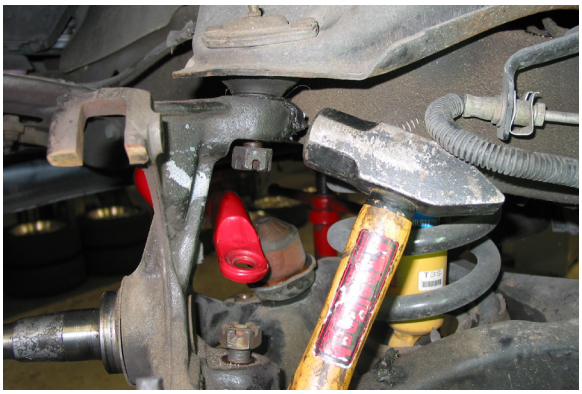
Do not strike the nut or the tie rod end itself as this may damage the steering components.

14. 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 lower ball joint without interference.

15. Remove the cotter pin and loosen but do not remove the lower ball joint 27mm nut. Strike the lower portion of the spindle beside the ball joint, this will dislodge it from the taper.



16. Loosen the 22mm upper ball joint nut with the same procedure as the lower, leaving the nut on the threads. Using the hammer method as above, loosen the upper ball joint from its position.



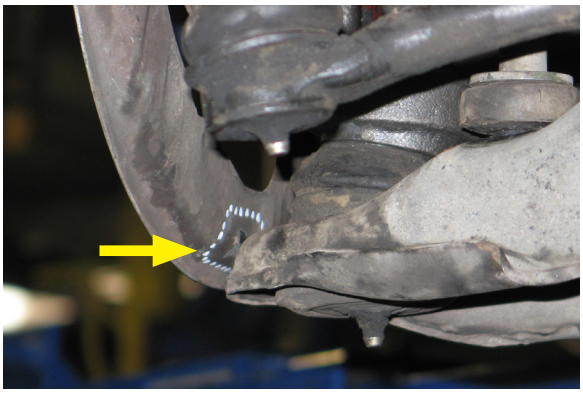
17. Once they are both loose, remove the upper nut and lift the control arm to free the spindle. Now remove the lower nut and slide the spindle off the lower ball joint.

BELLTECH SPINDLE INSTALLATION

18. Place the new Belltech drop spindle on the lower ball joint and secure it with the ball joint nut. Lift the upper control arm and place the ball joint into position on the spindle. Torque the upper ball joint nut to 61 ft lbs. and the lower ball joint nut to 90 ft lbs. Secure them with the supplied cotter pins.

19. Install the tie rod end into the steering arm on the new spindle, tighten and torque the nut to 35 ft lbs. Install a new cotter pin.

20. The dust shield must be modified to clear the new spindle. On the backside or inside of the dust shield, located approximately 5” from the point shown in the image below, a concaved clearance indentation needs to be added (see white dotted out line) to prevent interference with the lower control arm when the lower control arm moves upward.



21. Attach the ABS line bracket to the upper control arm with the original nut and bolt; torque to 18 ft lbs.

22. Attach the brake dust shield to the face of the spindle using the original bolts; torque to 12 ft lbs.

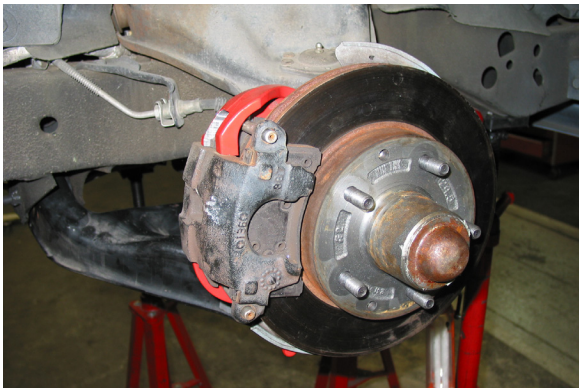
23. Before mounting the hub and rotor assembly, take time to determine that the bearings are in good condition and are packed with enough grease. Inspect the inner bearing cavity of the rotor to determine that it is sufficiently coated with grease. When in doubt, repack the bearings and coat the inner bearing cavity.

24. Mount the hub and rotor assembly onto the new Belltech spindle. Ensure the bearing, washer, and nut are in the correct position.

25. Torque the spindle nut to 12 ft lbs. While turning the wheel forward by hand to seat the bearings. Back the nut off to a “just loose” position. Hand-tighten the spindle nut to align the nearest hole in the spindle pin with the slots in the nut.

26. Insert the cotter pin into the hole in the spindle pin. Bend the ends of the cotter pins against the nut and cut them off; install the dust cap.

27. Mount the brake caliper onto the new spindle. Ensure the brake pads are in their correct position, if needed, compress the piston. Insert the caliper guide bolts and torque to 38 ft lbs. Turn the rotor assembly left and right to make sure there is no interference between the brake lines and other components.

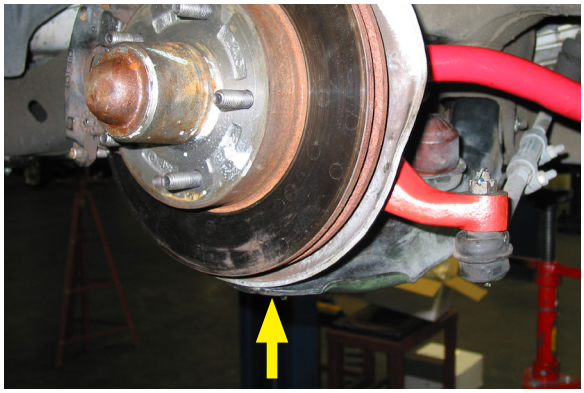


BELLTECH SPINDLE INSTALLATION

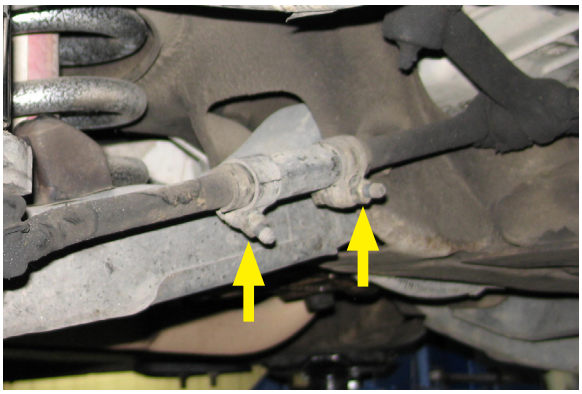
28. Mount the wheels and tires onto the truck. Turn the wheels left and right by hand to ensure the wheel and tire does not contact any suspension components. Depending on your wheel choice, some grinding on the lower control arm may be necessary.

Technician reminder:

Always wear eye protection when using power tools.



29. If there is severe “toe-out” in the wheel positioning, loosen the two 13mm nuts on the tie rod adjusting sleeves and turn them approximately 2 to 2.5 turns or until wheels appear straight. This will temporarily adjust the toe-in of the vehicle to enable you to drive the vehicle to an alignment shop. Tighten the tie rod clamp bolts and torque to 18 ft lbs.

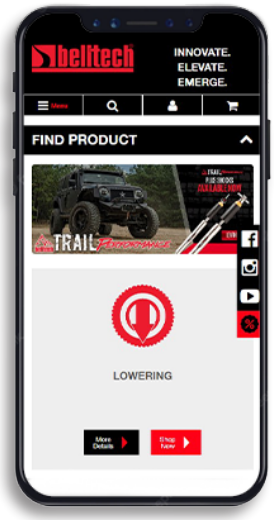


FINALIZING THE INSTALLATION

30. Lift the vehicle and remove the support stands.
31. Carefully lower the vehicle onto the flat ground.
32. Torque the lug nuts to 100 ft lbs.
33. Check that all components and fasteners have been properly installed and torqued.
34. 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.

Belltech Customer Support:

Phone: 1-800-445-3767

Email: info@belltech.com

KIT CONTENTS

2700		
Part number	Description	Qty
2700-350	LH MACHINED SPINDLE	1
2700-450	RH MACHINED SPINDLE	1
2100-110	COTTER PIN PACK	