



## INSTALLATION INSTRUCTIONS

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**3100 - 3200**  
**3" DROPPED FRONT SPINDLE**  
**73-87 1/2 TON C-10 PICK-UP / 1/2 TON BLAZER / JIMMY**  
**73-91 SUBURBAN 1/2 TON**

### CONGRATULATIONS!

You were selective enough to choose a **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 this 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 the 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 the installation process.

**Note:** We **DO NOT RECOMMEND** using wheel ramps while performing this installation.

### RECOMMENDED TOOLS:

- Blocks and Wheel chocks
- Ratcheting Socket Wrench
- Safety Glasses
- Properly rated floor jacks and support stands
- Combination Wrench
- Torque wrench: 0-75 lb ft. range

### KIT INSTALLATION

1. Belltech 3" Dropped Front Spindles are designed to work with factory wheels and most aftermarket wheel. Because it is not possible to test every wheel for this application, you must determine carefully that the wheels you choose do not have wheel rim contact with any suspension components.
2. Make sure the vehicle is on a flat surface, preferably asphalt or concrete. Block the rear wheels and set the parking brake.
3. Raise the front of the vehicle with a floor jack and place jack stands in a stable position on the frame rails, not under the lower control arms. Remove the wheel and tire assembly (Photo 1).
4. Remove the brake caliper by removing the two caliper bolts accessible from the backside of the brake caliper. Using an allen-wrench socket head, remove the top caliper bolt (Photo 2) and the bottom caliper bolt (Photo 3). **CAUTION:** 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, letting it hang from the chassis, to prevent damage to the line (Photo 4).

The following application instructions apply to the following:

**73-87 Heavy Duty Brake - 1.25" Thick Brake Rotor**  
**73-91 Light Duty Brake - 1" Thick Brake Rotor**

5. Remove the grease cap (Photo 5), cotter pin (Photo 6) and the nut from the spindle pin. Carefully slide the assembly of the pin not letting the outer bearing fall out of the hub (Photo 7). Remove the entire hub and rotor assembly from the spindle (Photo 8). Set it aside in a safe place.
6. Remove the dust cover from the spindle by removing the three bolts from the face of the cover (Photo 9)
7. Remove the cotter pin from the outer tie rod end (Photo 10). Loosen the nut, but don't remove it completely (Photo 11). With a large hammer, strike the side of the steering arm until the tie rod frees itself (Photo 12). **CAUTION: DO NOT STRIKE THE NUT OR TIE ROD END ITSELF.** This will damage the part. Swing the rod out of the way.
8. Place a floor jack under the lower control arm and lift until a slight compression of the suspension is achieved (Photo 13). Turn the spindle to access the lower ball joint without interference.
9. Remove the cotter pin and loosen the lower ball joint nut on the threads (Photo 14, 15). DO NOT remove the nut completely. Strike the lower portion of the spindle beside the ball joint, this will loosen it from the taper (Photo 16).
10. Loosen the 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 ball joint, this will loosen it from the taper (Photo 17).
11. Remove the top nut along with the bottom nut.
11. Raise the upper control arm to disengage the upper ball joint and lift the spindle off of the lower ball joint (Photo 18).
12. Place the new Belltech spindle on the lower ball joint and replace the nut (Photo 19). Pull the upper control arm down so the upper ball joint is in its correct position in the spindle and replace the nut (Photo 20, 21). Tighten both nuts and install the cotter pins.
13. Install the tie rod end back into position on the steering arm. Tighten the nut and install the cotter pin (Photo 22).

15. Before re-installing 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 recoat the inner bearing cavity.
16. Re-install the hub and rotor assembly onto the new spindle. Make sure the bearing, washer and nut is in the correct position (Photo 23).
17. Tighten the spindle nut to 12ft lbs. While turning the wheel forward by hand to seat the bearings. Back off the nut to a "just loose" position. Hand-tighten the spindle nut. Loosen the spindle nut (not more than 1/2 flat) to align the nearest hole in the spindle pin with the slots in the nut.
18. Insert the cotter pin into the hole in the spindle pin (Photo 24). Bend the ends of the cotter pins against the nut and cut them off so they will not interfere with the dust cap. Install the dust cap (Photo 25).
19. Install the caliper onto the new spindle (Photo 26). Make sure the brake pads are in their correct position. Tighten the mounting hardware (Photo 27). Make sure there is no interference between the brake lines and other components.
20. If severe toe-out conditions exist, loosen the two nuts on the tie rod adjusting sleeves and turn them approximately 2 to 2 1/2 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 (Photo 28).
21. Install the wheels and tires onto the truck. Turn the wheels by hand to make sure the wheel and tire does not contact any suspension components. Depending on you wheel choice, some slight grinding of the lower control arm may be necessary. **CAUTION: Always wear eye protection when using power tools** (Photo 29)
22. Raise the vehicle with a floor jack, remove the stands and lower to the ground. Check to see that there are no clearance problems. Take immediately to a qualified alignment shop.

### PART LIST FOR 3100 DROPPED SPINDLE KIT

PART NUMBER	DESCRIPTION	QTY.
3100-350	SPINDLE CASTING LH	1
3100-450	SPINDLE CASTING RH	1
3100-110	COTTER PIN PACK	1



**PHOTO 4**



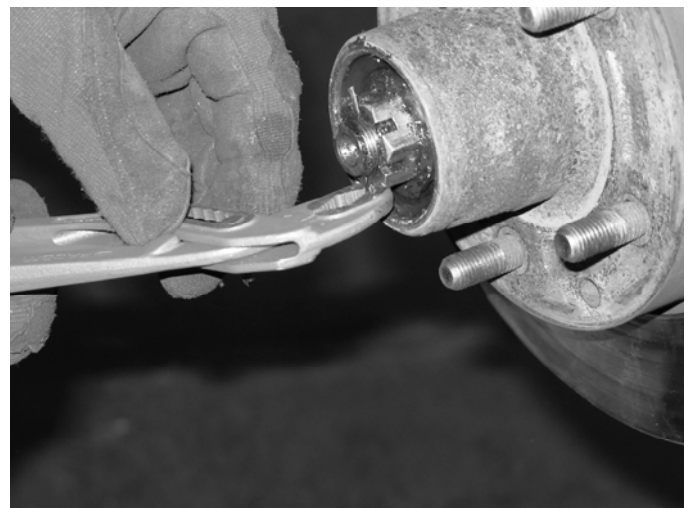
**PHOTO 1**



**PHOTO 5**



**PHOTO 2**



**PHOTO 6**

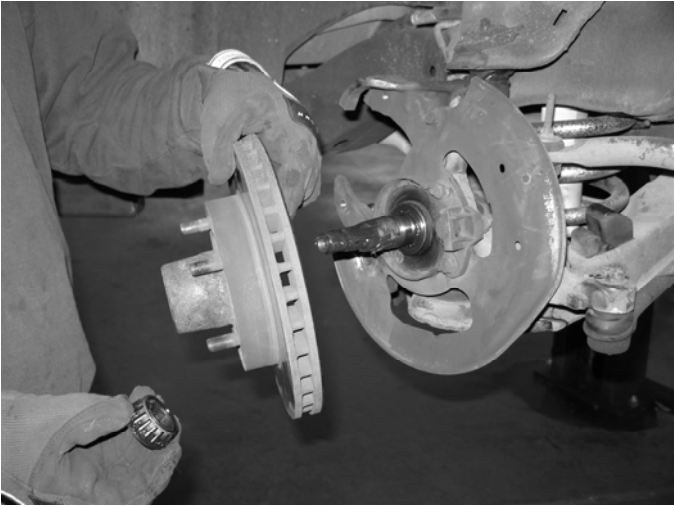
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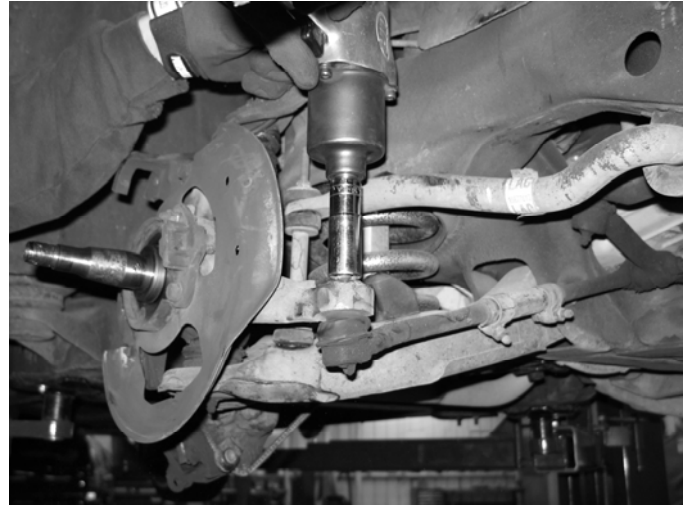
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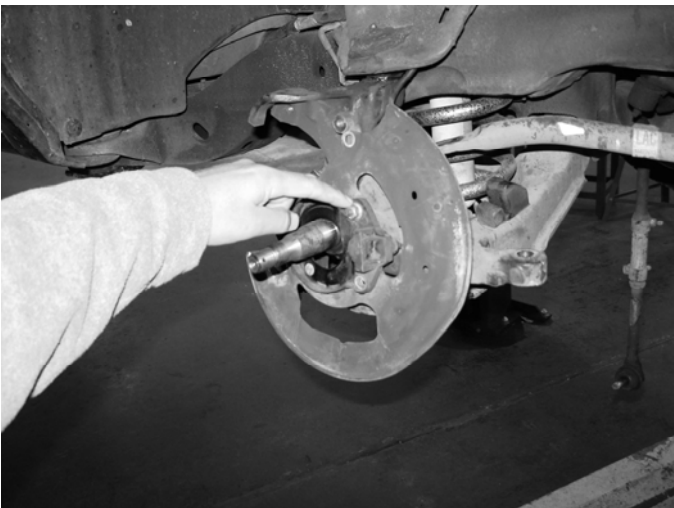
**PHOTO 10**



**PHOTO 8**



**PHOTO 11**



**PHOTO 9**



**PHOTO 12**



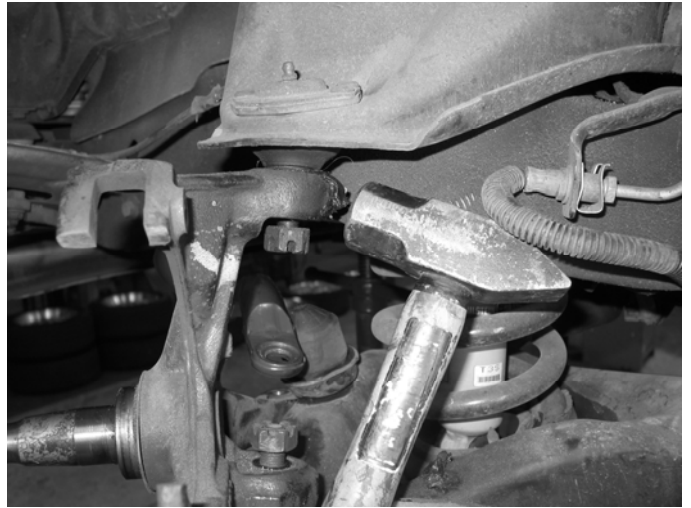
**PHOTO 13**



**PHOTO 16**



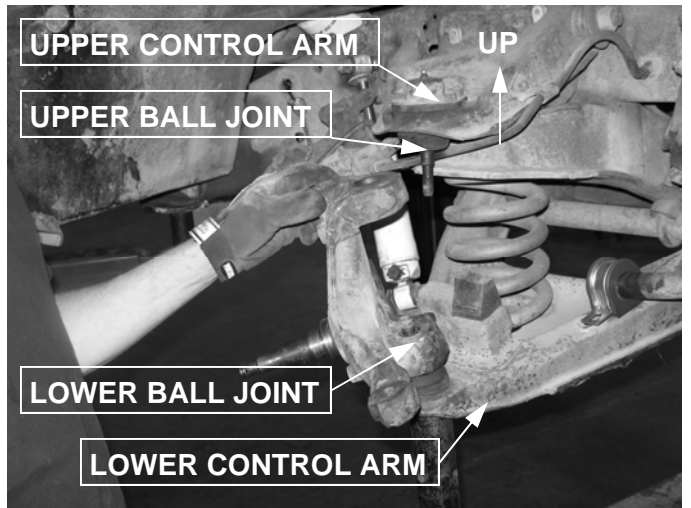
**PHOTO 14**



**PHOTO 17**



**PHOTO 15**

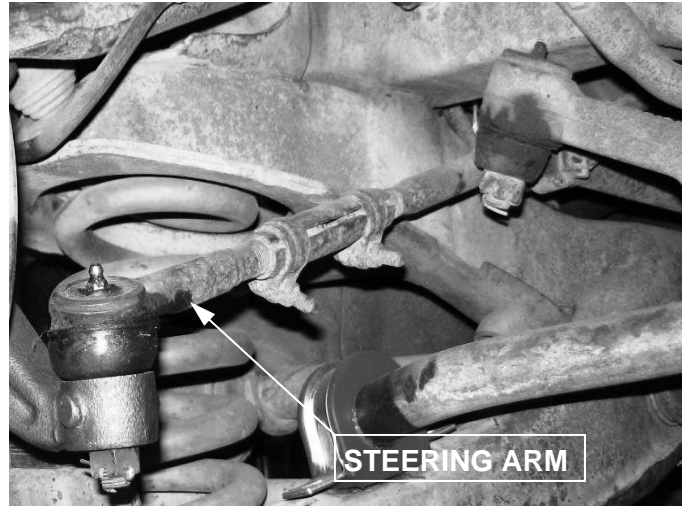


**PHOTO 18**





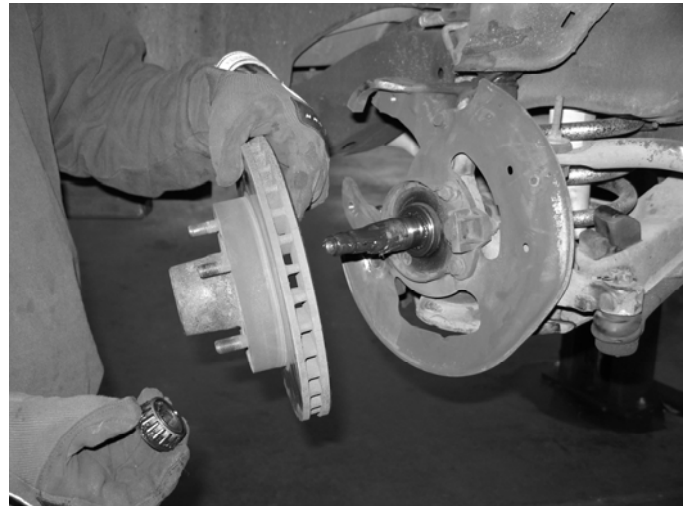
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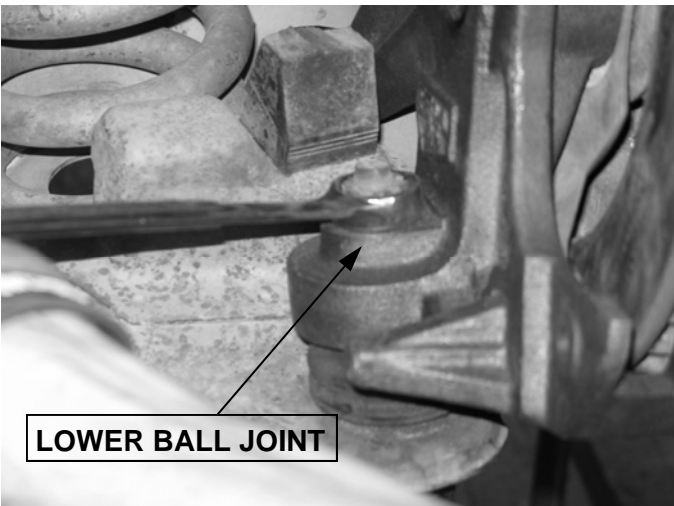
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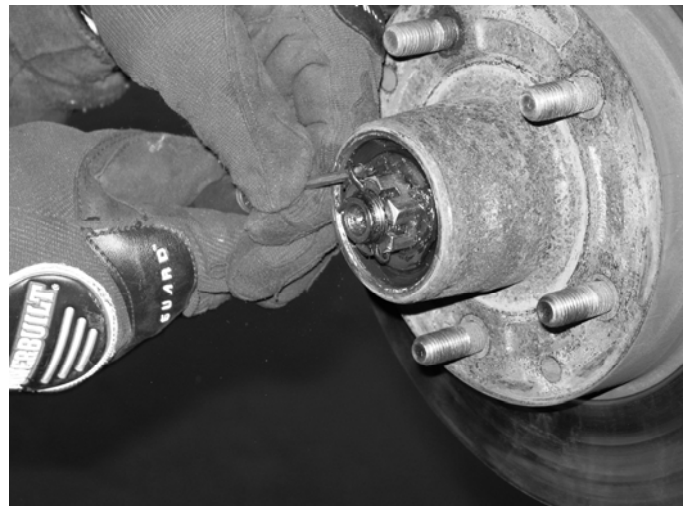
**PHOTO 20**



**PHOTO 23**



**PHOTO 21**



**PHOTO 24**



**PHOTO 25**



**PHOTO 28**



**PHOTO 26**



**PHOTO 29**



**PHOTO 27**