



INSTALLATION INSTRUCTIONS

2105 DROPPED FRONT SPINDLE CHEVY CAPRICE & IMPALA (SEDAN & STATION WAGON)

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 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.

RECOMMENDED TOOLS:

- Properly rated floor jack, support stands, and wheel chocks
- Combination wrench set
- Torque wrench: *0-75 lb ft. range*
- Ratcheting socket wrench and socket sets
- Air Chisel / Die grinder W/ cut off wheel
- Safety Glasses

KIT INSTALLATION

1. Open the hardware kit and remove all of the contents. Refer to the part list (Page 3) to verify that all parts are present.
2. Belltech 2" Dropped Front Spindles are designed to work with factory wheels and most aftermarket wheels. 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 of the suspension components.
3. Make sure the vehicle is on a flat surface, preferably asphalt or concrete. Block the rear wheels and set the parking brake.
4. 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. (Photo 1) Remove the wheel and tire assembly.
5. Remove the brake caliper by removing the two large caliper pin bolts accessible from the backside of the brake caliper. (Photo 2) **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 to prevent damage to the line. (Photo 3)

6. Remove the hub and rotor assembly from the spindle by removing the grease cap, cotter pin, and the nut from the spindle pin. (Photos 4 & 5) Carefully slide the assembly off the pin, not letting the outer bearing come out of the hub. (Photo 6) Place it in a safe place.
7. On '91' and newer cars, there is an ABS brake sensor bolted to the spindle casting. Care must be taken during the removal and reinstallation as not to damage this sensor.
8. Carefully slide the ABS cord from the backside of the dust cover attached to the spindle. (Photo 7)
9. Remove the dust cover from the spindle by removing the three bolts holding it in place. (Photo 8)
10. Carefully remove the small bolt attaching the ABS sensor to the spindle.
11. Slide the ABS sensor carefully out of the stock spindle. (Photo 9)
12. Remove the cotter pin from the nut on the outer tie rod end. (Photo 10) Loosen the nut, but do not remove it completely. (Photo 11) With a larger hammer strike the side of the steering arm until the tie rod end frees itself. **CAUTION: Do not strike the nut or tie rod end itself.** This will damage the part. Swing the rod out of the way.
13. Remove the cotter pin and loosen the lower ball joint leaving the nut on the threads. (Photo 12) 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 13)
14. Loosen the upper ball joint nut with the same procedures as the lower, leaving the nut on the threads. Using the hammer method as above, loosen the ball joint from its position. (Photo 14)
15. Place the floor jack under the lower control arm and lift until there is no tension on the ball-joints. (Photo 15)
16. Raise the upper control arm to disengage the upper ball joint and lift the spindle off of the lower ball joint. (Photos 16 & 17)
17. Place the new Belltech spindle on the lower ball joint and replace the nut. (Photo 18) Pull the upper control arm down so the upper ball joint is in its correct position in the spindle and replace the nut. (Photo 19) Tighten both nuts and install the cotter pins. (Photo 20)
18. Install the tie rod end back into position on the steering arm. Tighten the nut and install the cotter pin. (Photo 21)
19. Slide the ABS sensor through the hole on the Belltech spindle. (Photo 22) Replace the bolt and carefully tighten.
20. Remove the ABS wire bracket from the dust cover. (Photo 23) Two new holes must be drilled in the cover for repositioning of the bracket to prevent it from coming into contact with the upper control arm. Two $\frac{1}{4}$ " holes must be drilled approximately $3\frac{3}{4}$ " counterclockwise from the original threaded hole. The new holes must be drilled 1" apart on the driver side, and $\frac{5}{8}$ " apart on the passenger side. (Photo 24)
21. Turn the brackets upside down and bolt them into position on the dust cover in the new holes. (Photo 25)
22. Bolt the dust cover into position on the new spindle. Carefully slide the ABS cord into place on the brackets. (Photo 26)

23. 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
24. Re-install the hub and rotor assembly onto the new spindle. (Photo 27) Make sure the bearing, washer and nut are in the right position.
25. Tighten the spindle nut to 12 ft. 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 spindle nut (not more than ½" flat) to align the nearest hole in the spindle pin with the slots in the nut.
26. Insert the new cotter pin into the hole in the spindle pin. (Photo 20) 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.
27. Install the caliper onto the new spindle. Make sure the brake pads are in their correct position. Tighten the mounting hardware. Make sure there is no interference between the brake lines and other components. Tighten the caliper pin bolts. (Photo 28)
28. Loosen the two nuts on the tie rod adjusting sleeves, and turn them approximately 4 to 4 ½ turns until the wheels are 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 sleeve bolts. (Photo 29)
29. Install the wheels and tires onto the car. Turn the wheel by hand to make sure there are no clearance problems. Turn the wheel completely right and left to make sure the wheel and tire do not contact any other suspension components.
30. 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.
32. Impala SS models feature 17 inch, deep-offset wheels. Some slight grinding of the end of the lower control arm will be necessary. **CAUTION: Always wear eye protection when using power tools.** (Photo 30)
33. It may also be necessary to add approximately ¼" of material to the steering stop to prevent the wheel from hitting the control arm during sharp turns. (Photo 31)

PART LIST FOR CHEVY CAPRICE & IMPALA

DROPPED FRONT SPINDLE

PART No.	DESCRIPTION	QTY.
2105-350	Spindle, LH	1
2105-450	Spindle, RH	1
2100-110	Cotter Pin Pack (8)	1







