

## 2700

# 2700 DROPPED FRONT SPINDLE (Steering Knuckle) INSTALLATION INSTRUCTIONS

## CHEVROLET ASTRO VAN / GMC SAFARI VAN (2 WHEEL DRIVE ONLY)

## 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**: <u>**DO NOT**</u> 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**: <u>**DO NOT**</u> 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 SAE
- Torque wrench: 0-75 lb ft. range
- Ratcheting socket wrench and socket set SAE
- Safety Glasses
- Ball-joint separator & mallet

### 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.** Park the vehicle on a smooth, level concrete or seasoned asphalt surface and activate the parking brake. Block the REAR wheels of the vehicle with appropriate wheel chocks; making sure the vehicle's transmission is in 1<sup>st</sup> gear (manual) or "Park" (automatic).
- **3.** Using a properly rated floor jack, lift the rear wheels of the vehicle off the ground. Place support stands, rated for the vehicle's weight, and in the factory specified locations. Refer to the vehicle Owner's Manual. Prior to lowering the vehicle onto the stands, make sure the supports will securely contact the chassis.

- 4. It is very important that the vehicle is properly supported during this installation to prevent personal injury and chassis damage! Make sure that the supports stands are properly placed prior to performing the following procedures. We **DO NOT RECOMMEND** using wheel ramps while performing this installation.
- 5. Remove the brake caliper from the spindle by removing the two caliper bolts. **Caution**: Use a wire to support the caliper. **Do not** let the caliper hang freely to prevent damage to the brake line (Photo 1).
- 6. Now that the assembly has been removed, inspect the condition of the upper and lower ball joints and tie rod ends for wear. Replace if necessary.
- 7. Place the Belltech spindle onto the lower ball joint, and replace the nut and cotter pin (Photo 2).
- 8. Lift the upper control arm and place the upper ball joint into position on the spindle. Replace the upper ball joint nut and cotter pin. (Photo 3)
- 9. Place the tie rod end into position on the spindle and replace the nut and cotter pin.
- **10.** This step is very important. Replace the small rubber gasket onto the spindle, then the dust cover.
- **11.** Replace the rotor onto the spindle. Be sure not to over tighten the castle nut after the outer bearings have been re-installed. Now replace the cotter pin and dust cap (Photo 4).
- **12.** Re-attach the brake caliper. At this point, check all the clearances on the brake lines to make sure there is no interference. At this point the brake pads can be easily replaced before re-installation of the caliper if necessary.
- **13.** Tighten and torque all hardware to specs above.
- **14.** Put on the front wheels and take the van directly to your nearest alignment shop to align the front end.
- **15.** Test-drive the vehicle in a remote location so that you can become accustomed to the revised driving characteristics and handling. Be aware that the vehicle will handle substantially different now that it has been modified.
- **16.** Installation is complete. Check <u>all</u> of the hardware and re-torque at intervals for the first 10, 100, 1000 miles.

PART#	DESCRIPTION	QTY
2700-350	Front Spindle Left-side	1
2700-450	Front Spindle Right-side	1
110908	Cotter Pin 7/64" x 1 ¼" Zinc	2
110910	Cotter Pin 1/8" x 1 1/2" Zinc	6

## PART LIST FOR 2700 DROPPED SPINDLE KIT





# INSTALLATION INSTRUCTIONS

## 6300 FLIP KIT CHEVY ASTRO VAN / GMC SAFARI VAN

# Thank you for being selective enough to choose our high quality 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**: <u>DO NOT</u> 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: <u>DO NOT</u> 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

### ! NOTICE

Please note that this kit (6300 or 6302) was not designed to be used with the factory rear Anti-Sway Bar. You will need to use the Belltech Anti-Sway Bar in place of the OEM bar for added clearances (Part Number 5528). This bar will also fit on a stock vehicle.

## 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. Remove the rear wheels. Remove the U-bolts and inner axle tube retaining plates.
- 3. Remove the ground cable from the battery. Loosen the screw clamp on the fill tube going into the gas tank. Pull the protective plastic shroud around the passenger side of the tank away from the body. This will most likely break the plastic fasteners. New ones are provided in the hardware kit. Unscrew the four bolts holding the gas tank support straps in place. The fill hose will pull away from the tank. CAUTION: Let the tank down slowly so the connecting hoses won't be damaged. Gasoline fumes are extremely flammable; extinguish all open flames and no smoking during this period of time. (Picture #3)

4. Remove the two bolts holding the front springs into the hanger housing. Save these bolts for use in reinstallation. (Pictures #4 & #5) Lubricant may have to be used in aiding the bolt removal. Lower the

floor jack slightly so the spring bracket will slide out of the hanger housing. (Picture #6) (Note: Power tools may be of help in the removal and re-installation process.)

- 5. Remove the bottom bolts on the rear shackles. Lower the floor jack slightly so the rear spring bracket will slide out of the shackle. Remove the upper bolts holding the shackle to the frame. Remove the stock shackle and save stock mounting bolts for use in the re-assembly process. (Picture #7) Note the direction of the stock shackles to be able to install the new shackles in the correct direction.
- 6. Remove the fiberglass spring assemblies from both sides of the vehicle, by prying the rear axle perch assembly away from the rubber cushion from the spring. (Picture #8)
- 7. Carefully remove the spring saddle away from the rubber spring cushion. Be careful not to damage the rubber cushion. Again, do not remove the upper or lower rubber cushion from the spring.
- 8. Apply the lubricant on the rubber spring cushion. Place the new saddle on the rubber cushion. (NOTE: There is a right and a left side on these parts, the portion of the saddle that has the up right welded edge with the recess for the axle tube faces out on both sides.) Line up the ridges on the cushion and the recesses on the saddle and set into place with a rubber mallet.
- **9.** Install the front spacer plates into the spring hanger pockets with the joggle in the plates out away from the spring pockets and the slots facing up. Slide the round spacer tubes between the spring plates and use the new 9/16 by 6" bolts and nuts to connect the assembly together. Snug these only, you will tighten these later. (Picture #9)
- **10.** Slide the spring assembly under the rear end housing. You will have to raise the axle housing some for the next steps.
- **11.** Open the brake line clamp on the axle housing and slide the steel line out of the clamp and away from the housing slightly.
- **12.** Lift the front of the spring up and fit the spring into pockets between the new spacer plate. Slide the stock hanger bolts through the front holes of the spacer plates and springs. Lift the rear of the spring higher to line up the rear holes and slide the rear two bolts through the other holes in the plates and springs. (Picture #10)
- **13.** Install the new rear shackles to the frame using the stock hardware removed in step #5. Lift the spring into place in the bottom portion of the new shackle and insert the stock bolts. Thread on and snug these bolts only. You will tighten these later. (Picture #11)
- 14. Lower the axle assembly into place, making sure that the steel brake lines are cleared. The vertical tabs on the new saddles will position themselves into place in the spring perches on the axle when the axle is at rest. (Picture #12) Caution: Be certain the saddle tabs seat inside the axle perches.
- 15. Install the new U-bolts over the axle and through the new saddles. Place the new bottom plate with the dimple facing down away from the springs, on to the U-bolts. (Picture #12) Insert the two short spacer tubes between the axle spring perch and new saddle. (Picture #13) Insert the 7/16 by 3" hex head cap screws (2) through the spacer tubes, saddle and new lower plate. Place the new locking nut on the U-bolts and 7/16 cap screws and snug tighten only. Lower the floor jack completely so that the axle assembly is in its correct position. Re-check the axle location, making sure the brake line clearance is sufficient. (Picture #13)

- **16.** AT THIS POINT, TIGHTEN ALLTHE NUTS AND BOLTS, FRONT, REAR, AND CENTER. ITS IMPORTANT TO DOUBLE CHECK THIS PROCEDURE, MAKING SURE THAT ALL HARDWARE HAS BEEN TIGHTENED COMPLETELY.
- **17.** Lift the gas tank and re-install reversing the procedure in step #3.
- 18. Re-install the rear wheels, lifting the rear end with the floor jack if necessary.
- **19.** When wheels are on, installation is complete.
- **20.** After 1,000 miles, check and re-tighten all hardware used in the installation process. Repeat this operation every six months.

PART No.	DESCRIPTION	QTY.
6300-001	Shackle	2
6300-005	Spacer w/ Joggle	4
6300-010	Back-Up Plate w/ Dimple	2
6300-015	Saddle	2
6000-003	U-Bolt ½ x 3" x 7"	2
110403	<sup>1</sup> /2"-20 Ny Lock Nut	4
110660	Flat Washer <sup>1</sup> / <sub>2</sub> "	4
6300-020	Pivot Bushing Urethane	4
6300-025	Spacer Tube .688" x .120" x 1.625"	4
6300-027	Spacer Tube .813" x .120" x 4.375"	6
110313	7/16"-20 x 3" HHCS	4
110303	7/16"-20 Stover Lock Nut	4
110645	Flat Washer 7/16"	8
110451	9/16-18 x 6.0"	4
110453	9/16"-18 Stover Lock Nut	4
110670	Flat Washer	8
6300-030	Aveco Retainer Clip #19418	4

## PART LIST FOR 6300 FLIP KIT

























