



INSTALLATION INSTRUCTIONS

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4995

Center-Carrier Bearing Adjustment Slide Assembly Installation Instructions 1/2 Ton Silverado/Sierra (GMT 800/880) Extended Cab

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.

This kit has been specifically engineered for the new GMT 800 series 1/2 Ton extended cab GM trucks utilizing a two-piece driveline design with a center-carrier support bearing assembly. This Adjustment Slide kit allows the driveline to be adjusted **both** vertically and horizontally to assist in eliminating, or greatly reducing driveline vibrations occurring **after the vehicle has been lowered**. **WE RECOMMEND** using only high quality Belltech lowering components with this kit.

Note: *For stock vehicles exhibiting distinct driveline vibrations, **WE RECOMMEND** installing our other center-carrier alignment kit, P/N 4994. This kit allows the required fine-tuning of the side-to-side (horizontal) center carrier bearing position to eliminate driveline vibrations on stock extended-cab trucks.*

As this is a vehicle-safety related installation, **WE RECOMMEND** that a qualified mechanic at a properly equipped repair facility perform it. **WE ALSO RECOMMEND** that the installation be performed on a firm, flat and level surface, such as seasoned asphalt or concrete. **Remember, the use of safe and properly maintained equipment is very important!**

Safety Note: Proper use of safety equipment and eye/face/hand protection is absolutely necessary when performing the following procedures!

REQUIRED TOOLS

Before beginning this installation, review the following tool list and read and understand these instructions completely. **DO NOT** start this installation without **ALL** of the tools listed. Minimum tools required for this installation are:

- Properly rated Floor Jack and Support Stands
- Standard Wrench and Socket Set
- Torque Wrench
- Transmission Plug or Drain Pan
- Scribe and Straight Edge
- C-Clamps or Locking Pliers
- Hammer and Center Punch
- Drill Motor with a 3/8" Twist Drill
- Reciprocating Action Saw with Fine-toothed Blade
- 10'-12' of brightly colored String and Tape
- Cleaning solvent and rag

KIT INSTALLATION

1. Properly lift and support the vehicle as described in the vehicle Owner's or Shop Manual.
2. Using a minimum of four (4) jack stands rated for the vehicle's weight, position the stands so that they properly contact both the forward and rearward frame rails of the vehicle. Slowly lower the vehicle onto the stands and, before placing the vehicle's entire weight on them, check that they properly and securely contact the frame rails.

IMPORTANT NOTE:

Check for safe vehicle stability before proceeding under the vehicle to begin the following procedures. **NEVER** work under a vehicle supported only by a jack. Always use properly rated jack stands to support the vehicle.

SUPPORTING THE DRIVELINE

1. Support the driveline center-carrier bearing (CCB) using a support stand or lift jack.
2. Note the driveline's slip-yoke orientation to the transmission tail shaft and rear axle pinion shaft. The slip-yoke is indexed to the output shaft, with a splined-key, so that it can be re-installed in the same orientation later.
3. Mark the orientation of the rear driveline U-Joint to the rear axle-pinion shaft. Loosen and remove the two nuts and U-bolts securing the U-joint to pinion shaft.
4. Remove the two nuts securing the CCB to the frame cross-member mounting bracket.
5. Remove the rear U-joint from the rear pinion. Remove the driveline front yoke from the transmission, being careful not to damage the seal. Store the driveline assembly in a safe place to prevent damage. Note: A small amount of transmission fluid may leak from the tail-shaft. Use a transmission plug to contain hazardous spills.

1. CCB MOUNTING BRACKET MODIFICATION

The factory CCB mounting bracket, located on the frame cross member (Photo 1) must be modified so that the CCB can be adjusted upward to allow for the correct driveline angle adjustment.

- 1a. Using an adjustable jack stand (Photo 1), adjust it to where it supports the driveline just behind the CCB mounting bracket (Photo 2a).
- 1b. Locate the mounting bolts that secures the driveline bearing support and un-bolt them.
- 1c. Using the adjustable jack stand, adjust the driveline downward out of the CCB mounting bracket so modification of the CCB mounting bracket can be done without damaging the driveline.
- 1d. Locate the marking template provided with the kit.
- 1e. Align the slots in the template with the slots in the factory CCB mount (Photo 2), making sure that the arrow points towards the front of the vehicle.
- 1f. Align the front edge of the template so that it is even with the forward edge of the CCB mount (Photo 3). Using a clamp (s) as required, securely fasten the template to the CCB mount so that it will not move.
- 1g. Using a scribe, mark the exact edge layout provided by the template (Photo 4).
- 1h. Located on the template are arrow indentions (Photo 5).Mark(scribed) the point of each indention.
- 1j. After marking the points of the scribe lines, remove the template.
- 1k. Using a scribe and a straight edge, scribe three (3) centerlines across the bracket, from the marks made from the indention points. The white lines in the (Photo 5) indicate what points to connect. The centerlines of the broken white lines are the location of where new mounting holes will be located.
- 1m. Using a center punch and a hammer, punch the two cross-hairs marked into the CCB mounting bracket.
- 1n. Using a drill motor equipped with a 3/8" diameter twist drill, drill (2) clearance holes on the center line cross-hairs, drilling them through the bracket itself.
- 1p. Using a Reciprocating Action Saw equipped with a fine tooth blade, or cut-off wheel, or similar tool, cut the CCB mounting bracket as shown (Photo 6). The shaded area is what needs to be removed from the original CCB Mounting Bracket. **IMPORTANT:** Be careful to remove only the bracket section that is indicated by the shaded white lines. (Photo 7) shows the piece of original mounting bracket looks like when cut-out.

IMPORTANT NOTE:

Due to the close proximity of the fuel tank to the CCB mounting bracket, we **DO NOT RECOMMEND** using a flame-cutting torch or plasma cutter when performing this operation.

- 1k. Paint all bare metal edges after cutting to prevent rust from forming.
- 1m. Place the kit supplied CCB Adjustment bracket above the CCB mounting bracket as shown in (Photo 8). **Note:** *When installed properly, the two legs located on the Belltech CCB adjustment bracket should be sitting atop the modified bracket with the legs facing towards the rear of the vehicle.*

- 1n. Install the mounting hardware from atop the CCB Adjustment bracket leg. Finger-tight the mounting hardware. DO NOT tighten. (Photo 8).

IMPORTANT NOTE:

- Be sure to orient the slip-yoke to the transmission output shaft as removed.
- Re-install the rear U-joint in the rear axle pinion as removed. Secure the rear U-joint to the pinion using the U-bolts and nuts removed. Torque nuts to 19ft-lbs.

2. INSTALLING THE REINFORCEMENT BRACKET

- 2a. Adjust the adjustable jack stand upward moving the driveline up into the CCB Adjustment bracket (Photo 9).
- 2b. With the driveline and CCB assembly lifted against the underside of the mounting bracket, install the CCB reinforcement bracket as shown in (Photo 10). Check to make sure the driveline assembly is located within the reinforcement bracket.
- 2c. With the mounting bolts hanging through the CCB Adjustment bracket and the modified bracket, install the mounting washers and nuts to the mounting bolts and finger-tight only. DO NOT tighten yet.
- 2d. Locate the kit supplied CCB Adjustment bracket to the center-carrier bearing assembly.
- 2e. Install two (2) 3/8-16 x 1 1/2" bolts through the slots in the CCB Adjustment bracket, from the rear face and the two top tubular rivets in the CCB assembly (Photo 11). Secure with washers and locknuts. Finger-tight the bolts, but do not completely tighten at this time.

3. CCB ASSEMBLY ALIGNMENT

In this section, we will determine the true centerline between the transmission output shaft and the rear axle pinion shaft.

- 3a. With the transmission temporarily placed in the neutral position, rotate the driveline assembly so that the closest cap on the front U-joint of the rear driveline (just behind the CCB assembly is pointing straight down.
- 3b. Using a rag dampened with a cleaning solvent, wipe clean the lower surfaces of the transmission output housing and the rear axle center-carrier housing so that the tape will adhere to them. **CAUTION: DO NOT use flammable cleaning solvents around sparks or open flames.**
- 3c. Using an approximate 10'-12' length of brightly colored string, fasten one end with tape to the centerline of the transmission output tail shaft (Photo 12).
- 3d. Stretching the string tightly, attach the other end of the string to the centerline of the transmission output shaft at the center of the rear axle pinion shaft. Make sure the string does not hang-up on the driveline assembly or other parts of the chasis.
- 3e. From the rear of the vehicle, make sure the string is stretched straight and tight.
- 3f. Visually sight the cap on the front U-joint of the rear driveline directly below. Using the side-to-side adjustment slots of the CCB assembly, align the center of the cap so it centers to the string (Photo 13).

- 3g. When the driveline assembly is correctly centered along the string, tighten and torque the two (2) vertically oriented mounting bolts (Photo 14). Torque to 45ft-lbs.
- 3h. Place the transmission back into the "Park" (automatic) or 1st gear (manual) if previously placed in neutral.

4. **ANCHORING THE TOP OF THE CCB ADJUSTMENT BRACKET**

This can be performed two ways:

- 4a. Allow the driveline assembly to be lowered (hang down) so that it is supported by the CCB reinforcement bracket, earlier installed, to gain access to the area you need to get to, or....

- 4b. leave the CCB reinforcement bracket as is and transfer the mounting hole from the CCB Adjustment bracket to the support tube.

This will depend on whether you can gain entry to get a hole punch and hammer up into this area.

- 4c. Using either a small hole punch or a small drill bit, transfer the anchor hole at the top of the CCB Adjustment bracket (Photo 15) into the support tube.
- 4d. A spacer, supplied with the kit needs to be installed here. Located between the CCB Adjustment bracket and the support tube, hold the spacer there. This will keep the CCB Adjustment bracket from collapsing when you tighten down (support it) to the support tube (Photo 16).
- 4e. Using a drill equipped with a 3/8" nut driver socket, install a 1/4" self-tapping sheet metal brace-screw with a washer through the slot in the bracket and the support tube, threading securely into the center of the factory support tube frame cross-member (Photo 17).
- 4f. If you have removed mounting bolts to lower the driveline assembly, re-insert them now, finger-tightening both of them.
- 4g. Position the adjustment bracket so that the bolts are pushed all the way towards the top end of the adjustment slots. Tighten and torque to 45ft-lbs (Photo 18).

IMPORTANT NOTE:

The holes in the CCB Adjustment bracket are slotted for the sole purpose of fine-tuning the vertical CCB position and driveline angles. After completing this installation, further adjustments may be necessary, if undesirable driveline vibrations exist.

- 5. Check and make sure ALL driveline fasteners have been properly installed and tightened.
- 6. Remove the jack stands and lower the vehicle to the ground.
- 7. Check the transmission fluid level as described in the vehicle Owner's or Shop Manual. Replace any lost fluid as necessary.
- 8. Road test the vehicle after completing this installation.
- 9. If any minor driveline vibrations are detected, adjust the vertical CCB position as necessary.
- 10. Check all fasteners after 10, 100, 1000 miles.

PARTS LIST
4995
CENTER-CARRIER BEARING ADJUSTMENT SLIDE KIT

PART NUMBER	DESCRIPTION	QTY
4995-001	CENTER C.B. HOOP BRACKET	1
4995-003	CENTER C.B. VERT ADJ. BRACKET	1
4995-887	TEMPLATE C.C.B.	1
110060	HH SCREW 1/4" x 1 1/2"	1
110100	FLAT WASHER 1/4" A325	1
110255	NYLON INSERT LOCK NUT 3/8"-16	4
110625	FLAT WASHER A325 3/8"	8
112098	HHCS 3/8"-16 x 1 1/2"	4
112432	SPACER TUBE .625" x .120" x .25"	1

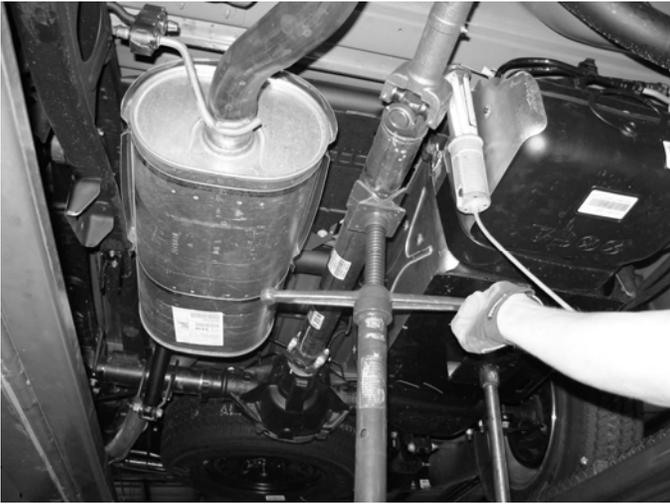


PHOTO 1

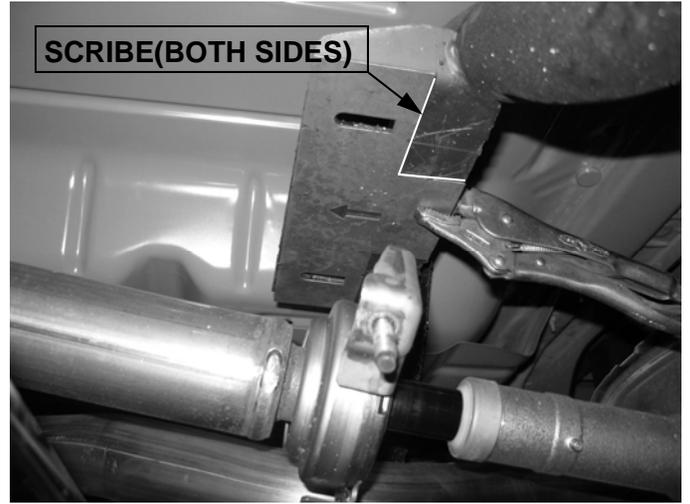


PHOTO 4

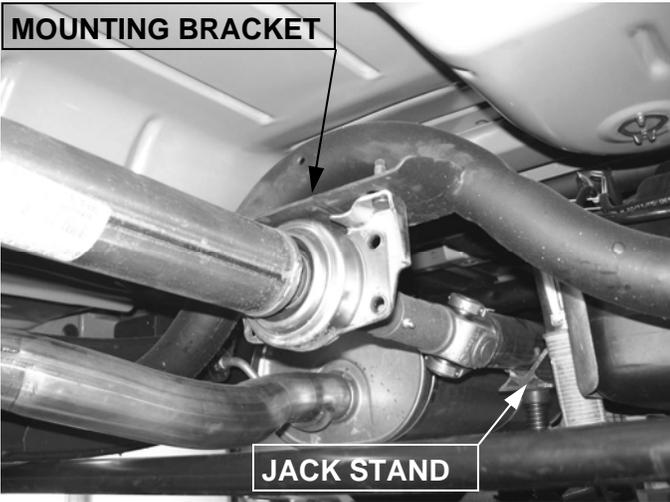


PHOTO 2A

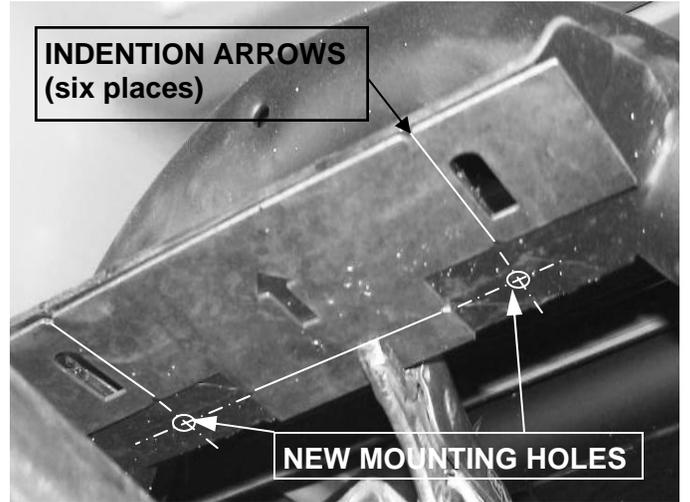


PHOTO 5

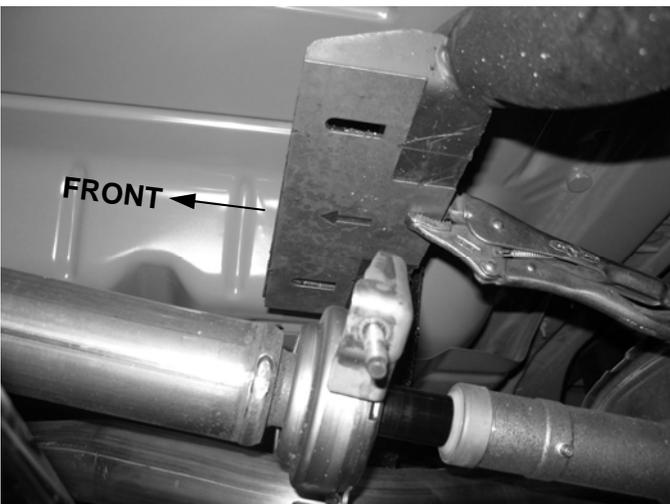
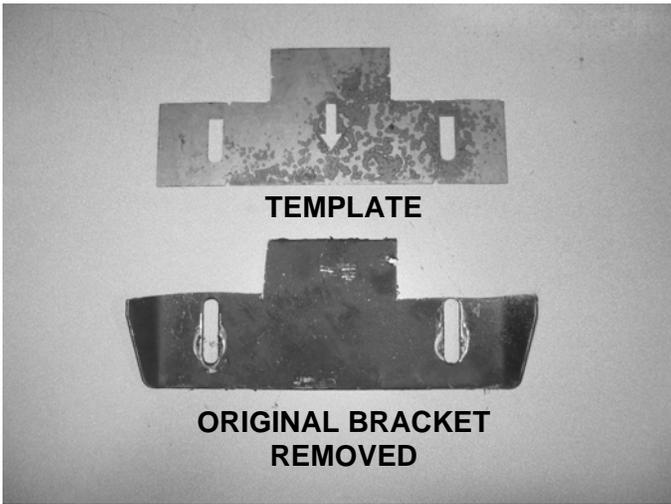


PHOTO 3



PHOTO 6



TEMPLATE

**ORIGINAL BRACKET
REMOVED**

PHOTO 7



PHOTO 10



CCB ADJ BRACKET

CCB MOUNT BRACKET

PHOTO 8



CCB ADJUSTMENT BRACKET

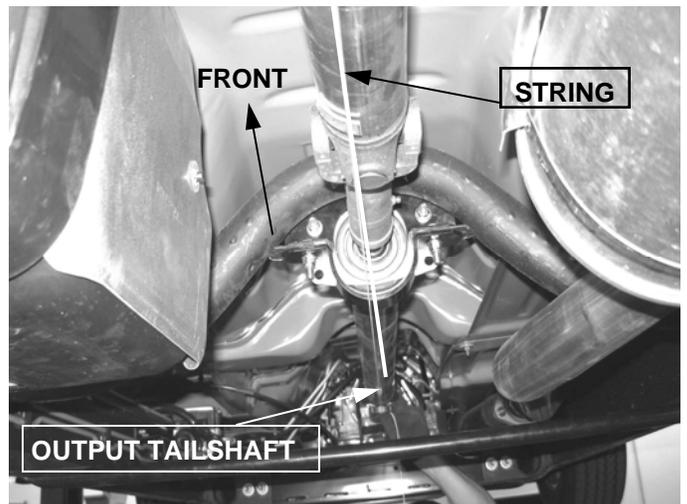
CCB ASSEMBLY

PHOTO 11



ADJUSTABLE JACK

PHOTO 9



FRONT

STRING

OUTPUT TAILSHAFT

PHOTO 12

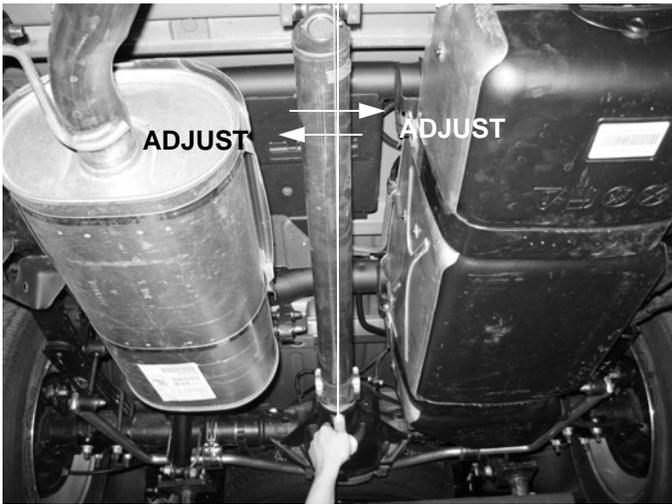


PHOTO 13

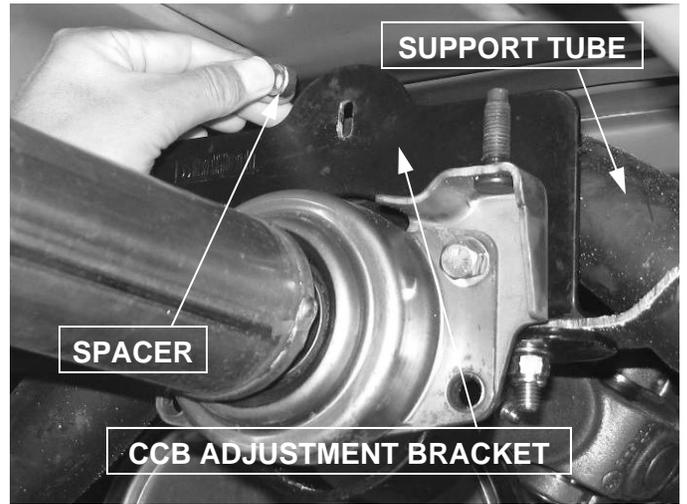


PHOTO 16



PHOTO 14



PHOTO 17



PHOTO 15



PHOTO 18