



## INSTALLATION INSTRUCTIONS

6684

### TRANSMISSION CROSSMEMBER KIT DODGE RAM 1500 – 2500 - 3500

**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
- Safety Glasses

#### **KIT INSTALLATION**

1. Open the hardware kit and remove all of the contents. Refer to the part list (Page 2) 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 FRONT 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. To gain working room and greater access to the transmission cross member, block the front wheels and raise the rear end of the vehicle using a floor jack rated for this load under the center of the rear axle housing. (PHOTO 1) Place a set of jack stands rated for this load under the chassis frame rails in front of the rear leaf spring forward hanger. (PHOTO 2)
4. After lowering the vehicle onto the jack stands and checking for stability, place the floor jack under the output portion of the transmission housing and raise it sufficiently to take the load off the transmission rubber mount.
5. Remove and retain the three bolts that attach the steel mount plate to the transmission housing. (PHOTO 3) Also remove the two bolts that attach the rubber mount to the steel transmission mount plate.

6. Slide the transmission steel mount plate forward to disengage it from the exhaust hanger arm, and remove the plate from the vehicle.
7. Remove and retain for later use the 8 bolts and nuts that attach the stock transmission cross member to the vehicle chassis, raise the cross member and slide it toward the rear of the vehicle to remove it. (PHOTO 4)
8. Remove the rubber mount from the stock cross member and install it on the BELLTECH cross member, but do not tighten the flange nuts at this time.
9. Install the BELLTECH cross member in the vehicle by reversing the operation of removing the corresponding stock part. The angle cut on the side plates of the cross member must face forward. Re-install the previously retained 8 bolts and nuts and torque this hardware to 50 Ft.-lbs. (PHOTO 5)
10. Install the 5-hole plate from the kit onto the transmission using the original bolts and torque this hardware to 47-52 Ft.-lbs. **NOTE:** The threads of the bolts that attach the 5-hole plate to the transmission should have a slight amount of a thread locking agent such as LOCTITE applied to them before installation. **NOTE:** The raised boss on the 5-hole plate must be against the transmission housing.
11. Bolt together the rubber mount and the 5-hole plate using the kit supplied hardware and torque to 20-25 Ft.-lbs. **NOTE:** If the vehicle this kit is being installed in is equipped with a Bell Tech lowering kit, raise the rear of the transmission and install the required spacer before installing and torquing the rubber mount to 5 hole plate hardware. (PHOTO 6)
12. Lower the transmission down onto the rubber mount and torque the bottom rubber mount flange nuts to 50 Ft.-lbs. (PHOTO 7)
13. Lift vehicle and remove support stands. Carefully lower vehicle to ground. The installation is complete.
14. Immediately 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.
15. Installation is complete. Check all of the hardware and re-torque at intervals for the first 10, 100, 1000 miles.

### PART LIST FOR 6684 CROSS MEMBER KIT

PART No.	DESCRIPTION	QTY.
6680-050	Transmission Cross member	1
6680-052	Transmission Cross member Plate	1
110648	7/16"-20 x 7/8" Grade 8 Bolt	2
110303	7/16"-20 Grade C Lock Nut	2
110645	7/16" A325 Flat Washer	4

