

CHEVY MINI STARTER

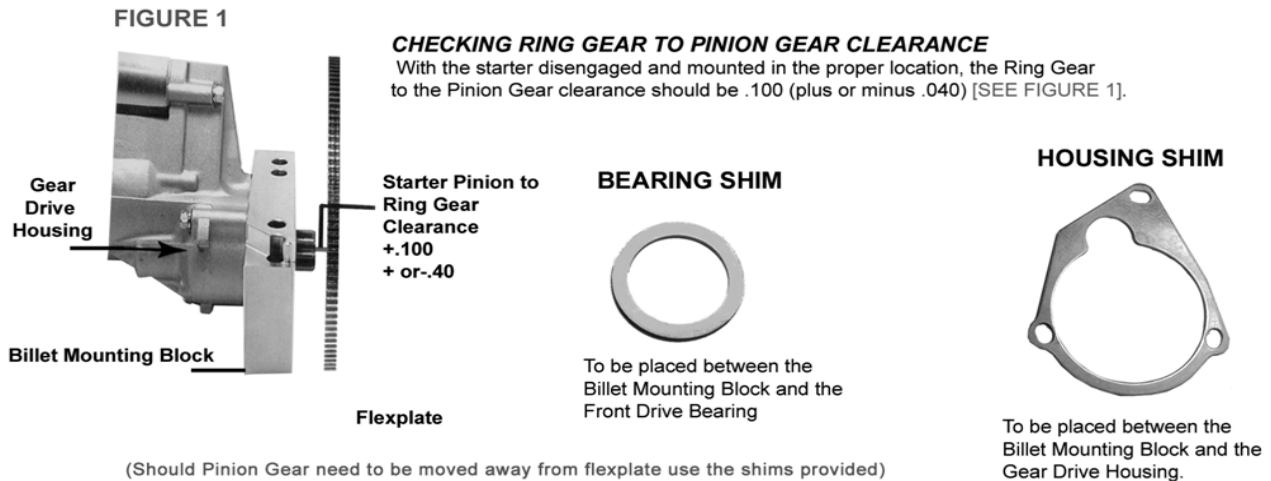
INSTALLATION INSTRUCTIONS

**Proper mounting of the starter is important because this determines whether the starter pinion will engage properly with the ring gear.*

INSTALLATION:

[1] **MOUNT STARTER.** Make sure the mounting surface of the engine block is smooth, flat and free of debris. Torque starter mounting bolts to engine manufacturer's specifications, typically 32 ft. lbs.

[2] **CHECK PINION CLEARANCE.** (see Figure 1) There should be 1/16" minimum from the back side of ring gear to the front edge of the teeth on the starter pinion. Check in at least three locations on the ring gear. If not in spec, verify that the ring gear is properly mounted and proceed with both clearance shims.



***** IF SHIMMING IS NECESSARY BOTH THE BEARING AND HOUSING SHIM MUST BE USED *****

[3] **CHECK PINION ENGAGEMENT.** Pull pinion out to engage ring gear. This can be done by using a tool to pry the pinion out of the starter.

[PLEASE NOTE: After releasing the pinion it may STAY ENGAGED in the ring gear until the engine is started. This is normal for gear reduction starters and does NOT require shimming to correct.]

Insert a wire gauge to check for proper clearance between the ring gear and starter pinion (see Figure 2). There should be a 0.020" to 0.035" clearance measured from the valley of the starter pinion to the tip of the ring gear tooth. (#1 standard paper clip is usually about 0.035" in diameter and makes an easy tool.) Check clearance at least three places on the ring gear. If the clearance is too small, add one shim at a time between the starter and engine block to bring it into specifications.

