

**Fig. 33—Incorrect Tooth Contact Pattern (Increase Spacer Thickness)**

drive gear teeth.

The gear tooth contact pattern will disclose whether the correct rear pinion bearing mounting shim has been installed and the drive gear backlash set properly. Backlash between the drive gear and pinion must be maintained within the specified limits until correct tooth contact pattern is obtained.

(2) Observe the contact pattern on the drive gear teeth and compare with those in Figs. 32, 33 and 35 to determine if pattern is properly located. With pinion depth of mesh and gear backlash set properly, your contact pattern should resemble that in Fig. 32. Notice that the correct contact pattern is well centered on both drive and coast sides of the teeth. When tooth contact patterns are obtained by hand, they are apt to be rather small. Under the actual operating load, however, the contact area increases.

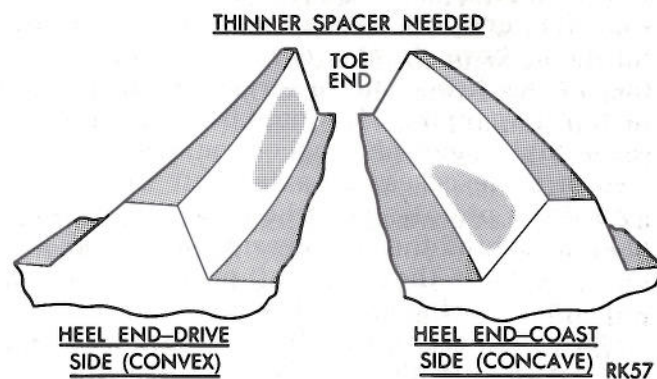
(3) If after observing the contact pattern you find it resembles that in Fig. 33, the drive pinion is too far away from centerline of the ring gear, the contact pattern will appear high on the heel on drive side and high on toe on coast side. To

correct this type tooth contact pattern, increase the thickness of shim located between the drive pinion and rear pinion bearing cone (Fig. 34), which will cause the high heel contact on drive side to lower and move toward the toe; the high toe contact on coast side will lower and move toward the heel.

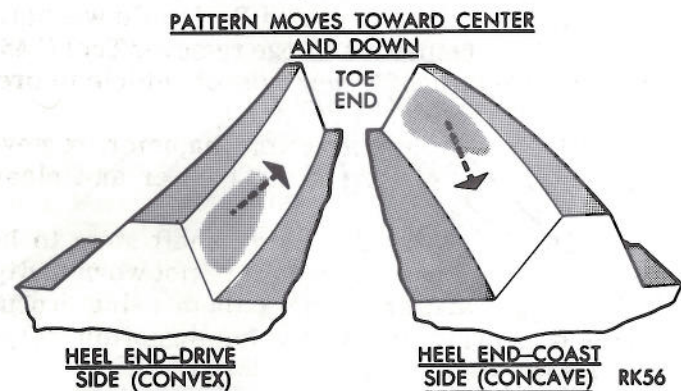
(4) If after observing the contact pattern you find it resembles that in Fig. 35, the drive pinion is too close to the centerline of the ring gear, the pattern will appear low on the toe on drive side and low heel contact on coast side. To correct this type tooth contact pattern, decrease the thickness of shim located between the drive pinion and rear pinion bearing cone (Fig. 36), which will cause the low toe contact on drive side to raise and move toward the heel; low heel contact on coast side will raise and move toward the toe.

(5) When correct tooth contact pattern is obtained, install propeller shaft, aligning scribe marks made during disassembly. Tighten clamp screws to 170 in. lbs. (19 N·m).

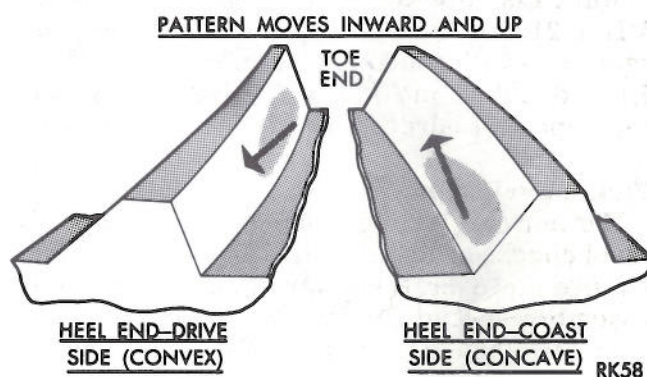
(6) Install new axle shaft bearing seals with Tool C-4203 and handle C-4171, flat side of tool. Must be against seal (Fig. 6). Carefully slide axle shafts in place, install the "C" locks in recessed grooves of axle shafts, pull outward on each shaft



**Fig. 35—Incorrect Tooth Contact Pattern (Decrease Spacer Thickness)**



**Fig. 34—Effect on Tooth Contact Pattern as Spacer Thickness Is Increased**



**Fig. 36—Effect on Tooth Contact Pattern as Spacer Thickness Is Decreased**