

## ZF4HP22 NO REVERSE (F CLUTCH CYLINDER FAILURE)

**COMPLAINT:** Vehicles equipped with the ZF4HP22 may come to the shop with a complaint of intermittent or no reverse. All of the other ranges may seem fine.

**QUALIFICATION:** During the road test it may be noted that there is no engine braking in manual first or second gear.

**CAUSE:** If an examination of the valve body fails to pin point the problem, an internal inspection will be necessary. Severe ring groove wear on the (F) clutch cylinder where the (E) clutch rides or even ring grooves missing because of wear is possible (SEE FIGURE 1). with a new ring installed on the drum, side clearance should be .003-.006 in. (SEE FIGURE 1).

**CORRECTION:** A new F clutch cylinder must be installed if any wear or damage is found. New sealing rings must also be installed. Steel rings must be used for the E clutch sealing grooves. The part number for the F clutch cylinder is 24-23-1217-088.

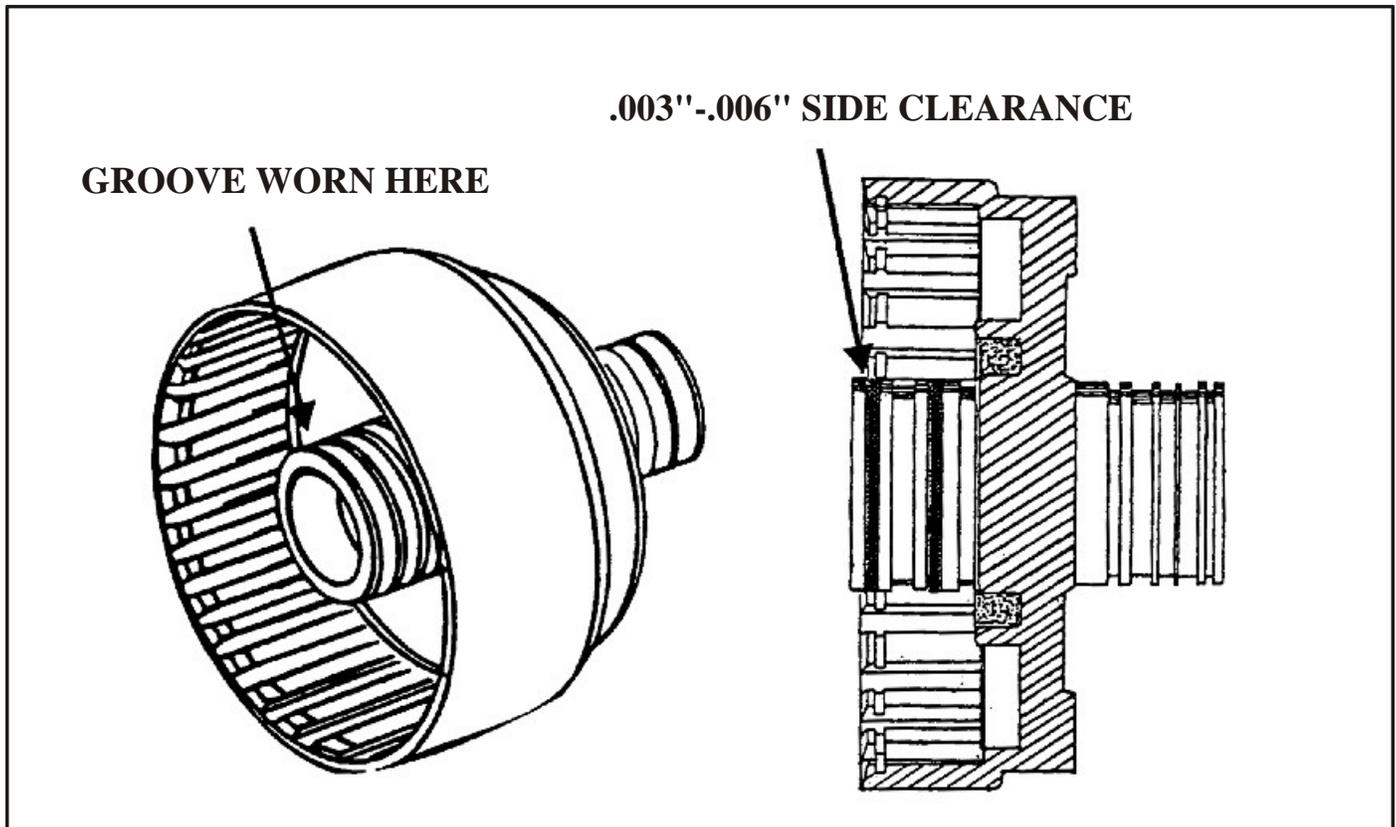


Figure 1