

## FLYWHEEL MACHINING

Flywheel resurfacing is critical to clutch performance. It is extremely important to restore the proper step dimension when applicable. Unfortunately there is no specification for maximum machining of a flywheel. The amount of material a flywheel is machined can vary anywhere from .005 to .050 of an inch. depending on condition.

Removing too much material from the flywheel may cause release problems. As the overall thickness of a flywheel is reduced, the clutch set up geometry is changed. In fact, the clutch assembly is moved further away from the release bearing.

Flywheel shims are now available to solve this problem. We DO NOT recommend this procedure because:

(A) The starter drive will not engage the ring gear properly, and (B) Use of flywheel shims could encourage installation of a flywheel that is too thin. Lack of structural integrity may cause a "thin" flywheel to explode.

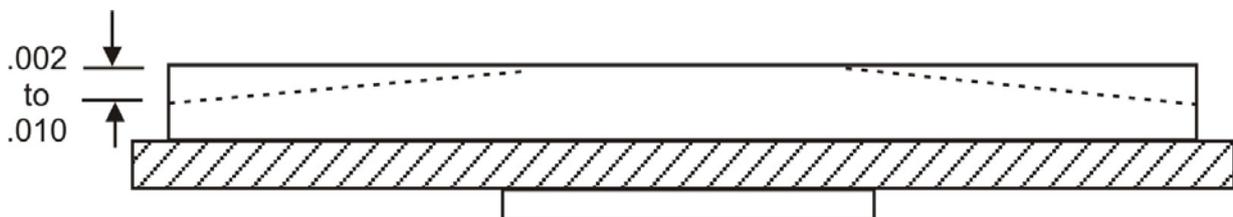
### **Flywheel Re-Surfacing**

The flywheel should be resurfaced whenever the clutch is replaced. The flywheel wears along with the clutch disc and cover assembly.

If the flywheel is not properly resurfaced, the clutch disc will not make proper contact, resulting in premature wear, chattering and/or release problems. Applying emery cloth or sand paper to the flywheel surface is not an option to resurfacing! This may improve the appearance of the flywheel surface, but has no effect on hard spots, surface cracks or wear.

Flywheels should be resurfaced using a purposed built flywheel grinding machine. It is difficult to obtain the proper finish and parallelism on a drum/rotor lathe.

Flywheel cross section showing usual taper from standard wear of flywheel after +/- 70,000 miles.



## MOUNTING

All starting ring gears (except the screwed ones) have a diameter slightly inferior to the size of the flywheel where they are mounted, ranging from 0.20 and 0.50mm, depending on its diameter. That is why the mounting is carried out by means of a previous heating, which allows sufficient expansion for its setting up in the flywheel. It is VERY IMPORTANT to follow instructions.

1. Heating must be done as uniform as possible and never with a gas burner, as this process causes great temperature differences to the pieces.
2. the temperature should be 250°. A temperature higher than 350° will affect the gear tooth hardness. Cooling is never to be performed quickly.
3. An accurate centering of the pieces in the flywheel is an absolutely essential condition.
4. The original center distance should be maintained. Serious damage could result both for the ring gear and for the pinion or even for the engine

## CHAMFER GUIDE

**Chamfered for Front  
Pinion Entry**



**Unchamfered Tooth  
No Entry**



**Chamfered for Rear  
Pinion Entry**

