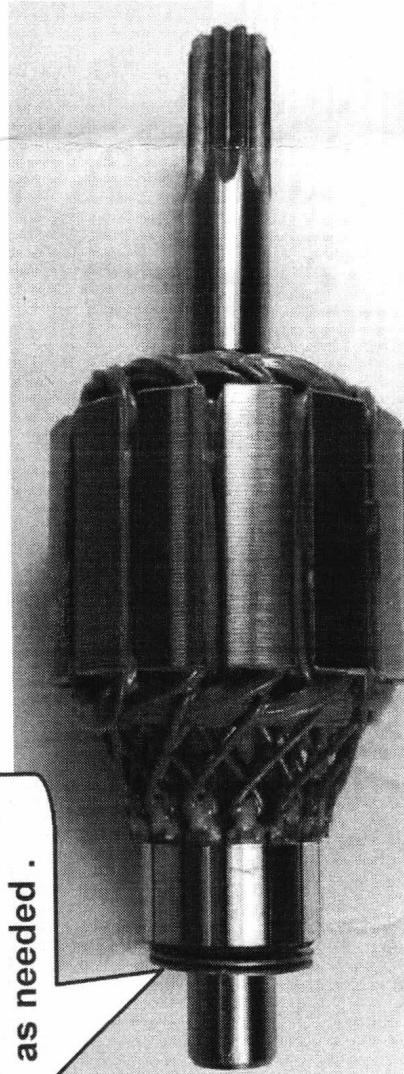
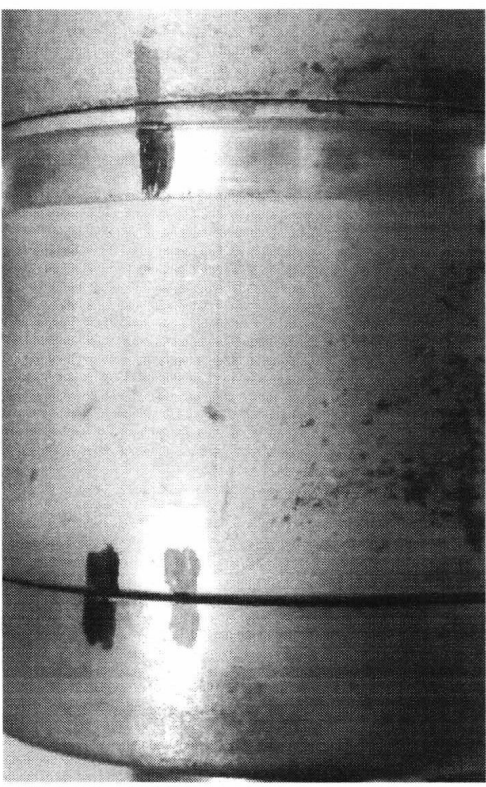
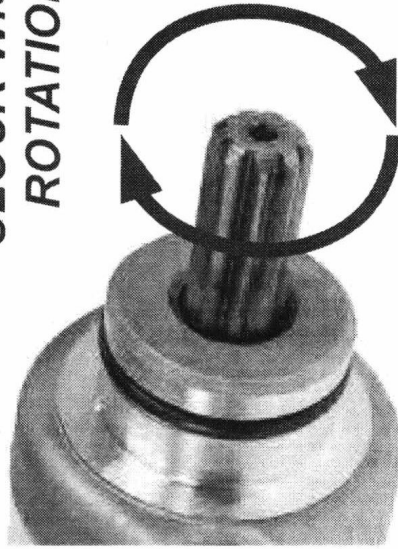


- **BEFORE** disassembly of the starter motor, draw unique index marks across the magnet body to both end-caps. The starter **must** be reassembled with the same alignment of the magnet body to the drive and commutator end-caps.
- Putting the starter back together with the body upside-down or not aligned correctly will cause the starter to run “rough”, backward, or not at all!!
- **ATTENTION:** If you have already disassembled the starter without marking the magnet body to end-cap orientation you must follow the instructions on Page 2 before continuing.
- Two shims are provided, install 1 or 2 on the commutator end of the new armature shaft as needed to keep the armature away from the brush-plate. ***Failure to use shims may result in damage to the armature caused by contact with the brush-plate. SEE PHOTO BELOW***

Install shims here as needed .



**CLOCK-WISE
ROTATION**



Magnet Body to End-cap Orientation if Starter Disassembled Before Marking

- There is a mark that is cast into the commutator end-cap which must align between the magnets. See Photos below. There are four magnets in the body (two North and two South with like magnets being 180° apart).
- There is no practical way to tell which direction the starter will turn (**Clock-Wise or Counter Clock-Wise**) until the unit has been re-assembled.
- If after re-assembling the starter you have determined that the starter direction is incorrect, simply repeat the instructions below by making another mark on the magnet body that is 90° ($\frac{1}{4}$ turn) in either direction from the first mark (again mark the center of two magnets) and align this second mark to the cast mark on the End-cap, the starter should now spin in the opposite direction.

