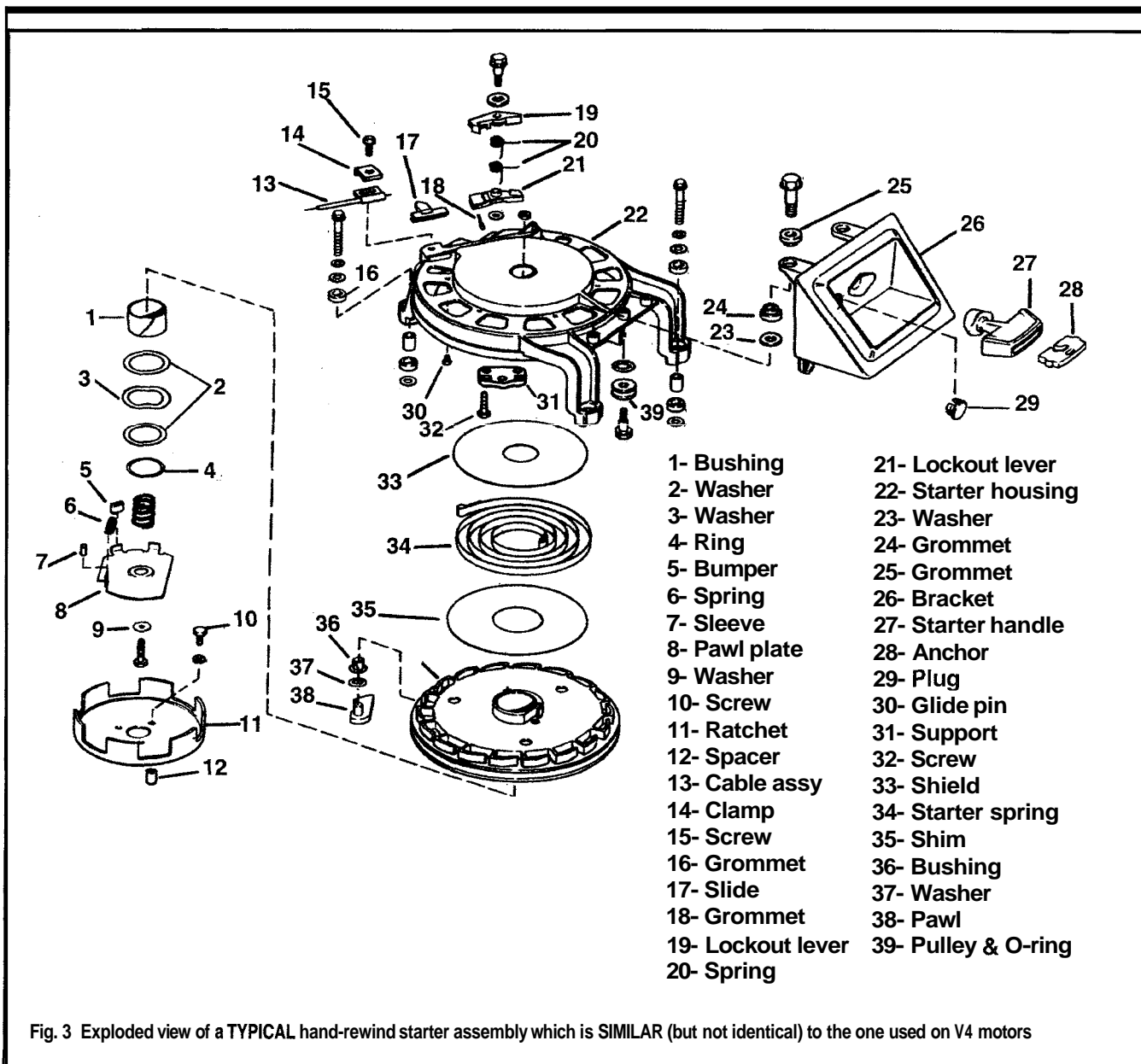


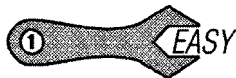
HAND REWIND STARTER 10-3



slightly different procedures and will be covered individually. Similar to most outboards, the starter is mounted atop of the flywheel on three mounting legs. The unit has a large rectangular pawl plate visible on the underside surface.

Because this starter is used on fairly large horsepower powerheads, the actual number in the field is rather small. As can be imagined, the operator of such a motor must be somewhat stout.

follows: pull the starter rope partially out of the pulley, then use a bolt to wedge the pulley against the starter housing, holding it in position against spring pressure. Another option is to tie a slipknot in order to hold it in this position and keep tension off the starter handle. Carefully pry the rope anchor out of the handle and then separate the rope from the anchor and the handle. While holding tension on the rope, release the bolt or slipknot and then slowly allow the rope to rewind into the pulley until spring tension is fully released.



REMOVAL

◆ See Figures 3 and 4

1. For safety, disconnect the spark plug leads, then ground them to the cylinder head.

2. If equipped with a starter lockout cable, these models normally use a lockout slider mounted to the top of the housing (as opposed to a cable with plunger used on many smaller Evinrude/Johnson models). To release the lockout cable, remove the screw from the cable clamp, then separate the lockout slide from the housing.

3. If necessary for replacement or service, remove the starter handle as

It is NOT necessary to remove the starter handle bracket in order to remove the starter housing.

4. Remove the bolts (usually 4) securing the power pack to the flywheel cover.

5. Remove the bolts securing the hand rewind starter assembly to the powerhead (on these models there are usually 3 bolts arranged in a triangle, 2 on the legs of the assembly, near the rope handle, and an additional bolt opposite them). Carefully lift the assembly from the powerhead.

6. If the starter handle bracket must be replaced, disengage the stop switch connector at the power pack and the stop switch ground wire, then remove the 4 bolts securing the starter handle bracket along its flange.

10-4 HAND REWIND STARTER

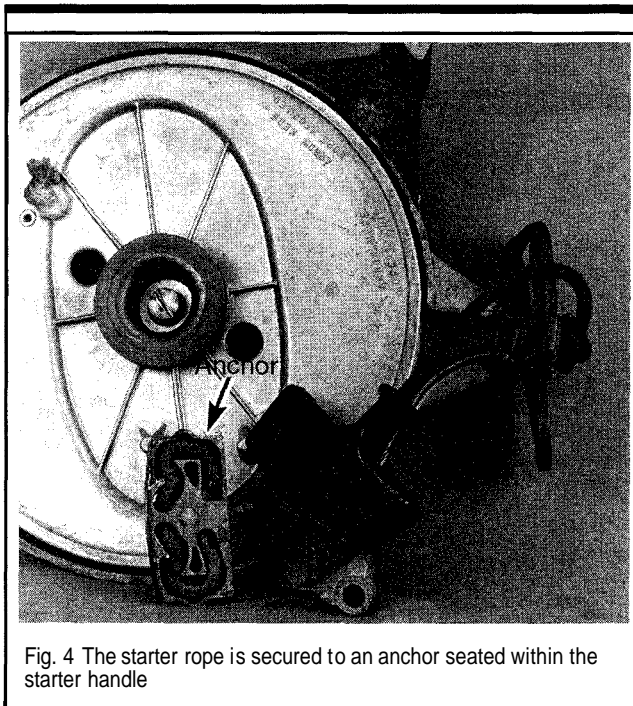


Fig. 4 The starter rope is secured to an anchor seated within the starter handle



DISASSEMBLY

- ◆ See Figure 3

No special tools are required in order to disassemble the hand rewind starter assembly for these motors. However, the Evinrude/Johnson Starter Spring Winder and Installer (No. 392093) is recommended for installation. Please review the assembly procedure before proceeding.

** CAUTION

The spring is under a tremendous amount of tension, wear safety glasses and heavy gloves to protect yourself.

1. Remove the starter assembly from the top of the powerhead.
2. Remove the shoulder screw and rope guide from the starter housing.
3. Remove the bolt retaining the lockout lever, the lockout lever springs, housing washer and, on the other side of the housing, the pulley support with screw. Remove the components.
4. Place one hand under the housing to prevent all the large pawl plate and other small parts from flying loose. Keep one finger over the center bolt.
5. Remove the large center nut from atop the center of the starter housing. Carefully turn the starter housing over without disturbing any parts.

** CAUTION

The rewind spring is a potential **hazard**. The spring is under tremendous tension when it is wound—a real "tiger" in a cage! If the spring should accidentally be released, severe personal injury could result from being struck by the **spring**. Therefore, the following steps must be performed with care to prevent personal injury to self and others in the area.

6. Lift off the center bolt and washer, and then lift off the starter pawl plate and the plate return spring (the spring is attached to the side of the pawl plate and to a post on the starter housing).
7. Remove the center spring, starter pawl and spring washer from the starter housing.
8. Use a small prytool to carefully pry out the pulley locking from the housing (normally mounted to the center of the assembly, under the spring). Lift off the friction plates (flat washers) surrounding the spring washer beneath the plate.

9. Hold the pulley and the housing together tightly and turn the complete assembly over with the legs extending downward in the normal manner. Now, lower the complete assembly to the floor. When the legs make contact with the floor, release your grip. The pulley will fall and the spring will be released from the housing almost instantly and with considerable force. However, the legs should contain the spring and prevent it from lashing out causing possible injury to self or others in the area. If the spring was not released from the housing as just described, the only safe method is to again jar the legs on the floor and dislodge the spring.

10. If necessary, unwind the rope out of the pulley groove.



CLEANING & INSPECTION

- ◆ See Figures 3, 5 and 6

Wash all metallic parts in solvent, and then blow them dry with low-pressure compressed air.

Remove any trace of corrosion and wipe all metal parts with an oil-dampened cloth.

Inspect the rope. Replace the rope if it appears to be weak or frayed. If the rope is frayed, check the pulley and housing (especially the holes through which the rope passes and the rope guide pulley) for rough edges or burrs. Remove the rough edges or burrs with a file and polish the surface until it is smooth.

- Replacement ropes on these models should be trimmed to a length of about 96 1/2 in. (245cm). Use a heat source or small open flame to fuse 112 in. (12mm) of each end to help prevent fraying.

Inspect the starter spring end hooks. Replace the spring if it is weak, corroded or cracked. Inspect the inside surface of the pulley rewind recess for grooves or roughness. Grooves may cause erratic rewinding of the starter rope.

Check all starter components for signs of wear or damage. Be sure to check the pawl for wear and replace, as necessary.

Check the lockout assembly components for wear or damage and replace, as necessary.



ASSEMBLY

- ◆ See Figures 3, 7, 8, 9, 10, 11, 12, 13, 14 and 15

The outer spring hook (loop) is installed on the pin located in the starter housing found inline with one of the housing legs, just adjacent to the

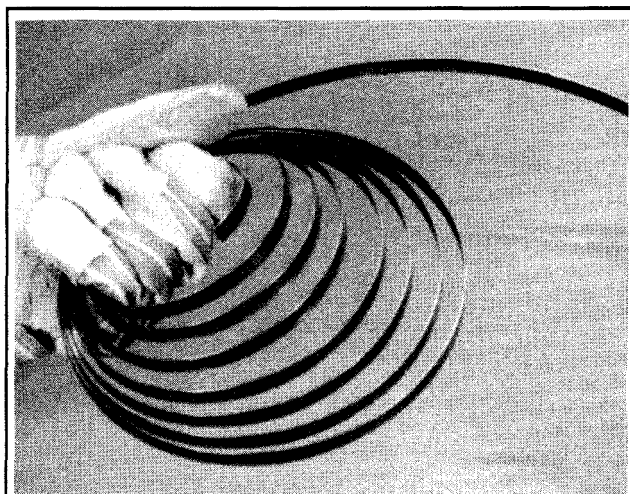


Fig. 5 Inspect the spring for wear, damage or corrosion—handle with care