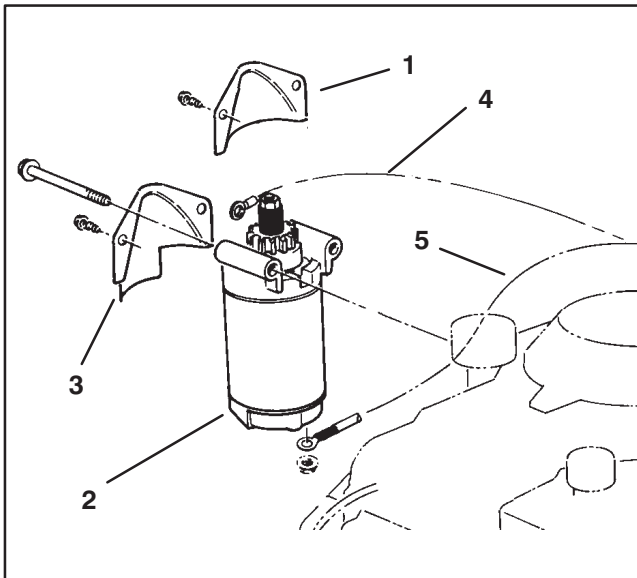




PART NO. 74-0980

**INSTALLATION
INSTRUCTIONS**
**ELECTRIC START KIT
PROLINE MODELS 30175, 30176, 30177**
INSTALL STARTER MOTOR (Fig. 1)

1. Remove (2) screws securing starter cover to right side of engine. Retain screws but cover may be discarded (Fig. 1).
2. Mount starter motor and the large ring terminal end of 14" black cable to engine with (2) flange head screws and spacers. Ring terminal to be mounted on left flange head screw, positioned between screw head and starter motor (Fig.1).
3. Install new starter cover to engine with (2) screws previously removed (Fig.1).

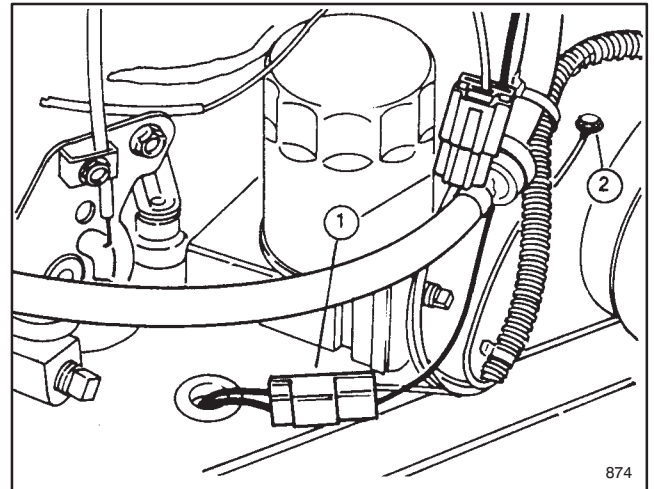

Figure 1

- | | |
|----------------------|--------------------|
| 1. Old starter cover | 4. 14" black cable |
| 2. Starter motor | 5. 12" red cable |
| 3. New starter cover | |

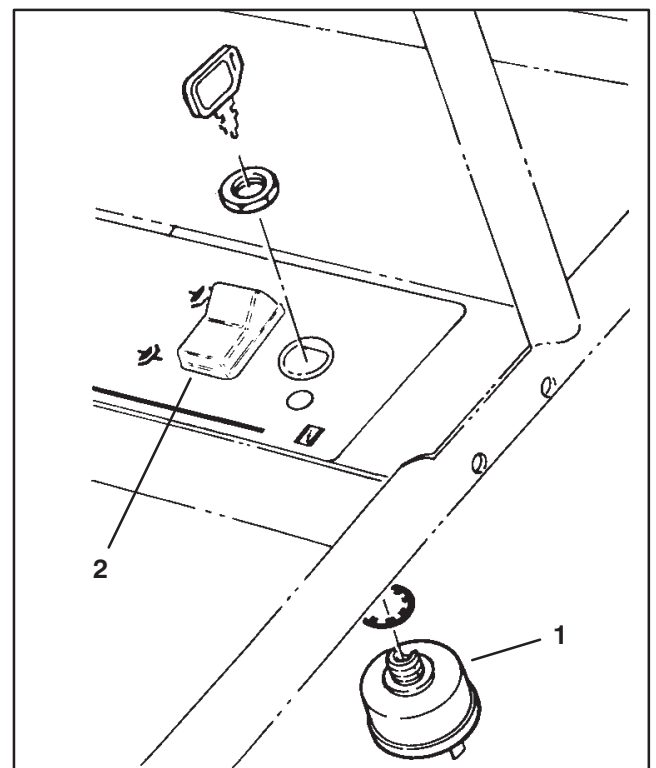
REPLACE WIRE HARNESS (Fig. 2 - 4)

1. Disconnect wire harness from clutch and engine connectors. Also, remove self tapping screw and washer securing remaining wires to frame. (Fig. 2).
2. Remove bottom of control panel to expose upper wire harness connections.
3. Remove screw and nut securing interlock module to bottom of control panel and remove module. Unplug connectors from relay secured to bottom of control panel. Unplug wire harness connectors from ignition switch, clutch switch and control bail switch. Remove cable ties securing harness to handle and remove harness.

4. Remove nut and lock washer securing ignition switch to control panel and remove switch from panel (Fig. 3).


Figure 2

1. Engine & Clutch Connectors
2. Self Tapping Screw & Washer


Figure 3

1. Ignition Switch
2. Clutch Switch

5. Install new control panel decal over existing decal, making sure holes are aligned.
6. Install new ignition switch to control panel with lock washer and hex nut (Fig. 3).
7. Connect new interlock module connectors to harness connectors. Mount interlock module and small ring terminal from wire harness to bottom of control panel with screw and nut previously removed. Connect wire harness to ignition, clutch, and control bail switches.
8. Install bottom of control panel and clip fuse holder to underside of control panel at end of bottom panel..
9. Secure wire harness to throttle cable and fuel line with (2) cable ties.
10. Remove (2) screws securing rectifier to left rear corner of engine and remove rectifier. Install new rectifier with screws previously removed (Fig. 4).
11. With spade terminals positioned to the rear, mount the right side of solenoid and the small ring terminal end of 14" black cable, from starter motor, to frame with a self tapping screw. Mount the left side of solenoid and the small ring terminal end of 22" black, negative (-) battery cable and small, two wire, ring terminal from clutch connector, to frame with a self tapping screw (Fig. 4).

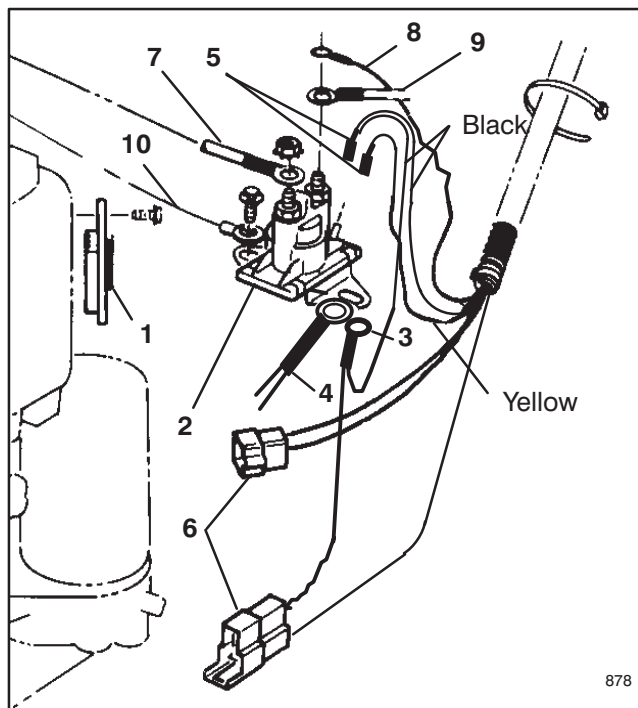


Figure 4

- | | |
|------------------------------------|---|
| 1. Rectifier | 7. Bottom starter motor cable (12" red) |
| 2. Solenoid | 8. Ring terminal wire with fuse (gray) |
| 3. Small ring terminal (two wires) | 9. Positive battery cable |
| 4. Negative battery cable | 10. Top starter motor cable (14" black) |
| 5. Spade terminal (yellow) | |
| 6. Engine & clutch connectors | |

12. Press spade terminals of yellow and double black wires from harness onto terminals at rear of solenoid (Fig. 4).
13. Secure male and female clutch and engine connectors (Fig. 4).
14. Secure larger ring terminal end of 12" red starter motor cable to front terminal of starter solenoid with locknut and opposite end of wire to bottom of starter motor (Fig. 4).
15. Secure ring terminal wire (gray) from harness and 21" red, positive (+) battery cable to top, rear terminal of starter solenoid with locknut (Fig. 4).

INSTALL BATTERY (Fig. 5 & 6)

1. Mount battery holders to left rear corner or cutting unit carrier frame with (2) 3/8-16 x 1-3/4" lg. cap-screws and locknuts.
2. Peel off backing from battery pads and affix pads to battery holder, positioning as shown in Fig.5. Rubber battery pads should be centered on battery holders.
3. Fill battery with electrolyte and charge, refer to ACTIVATING AND CHARGING BATTERY.

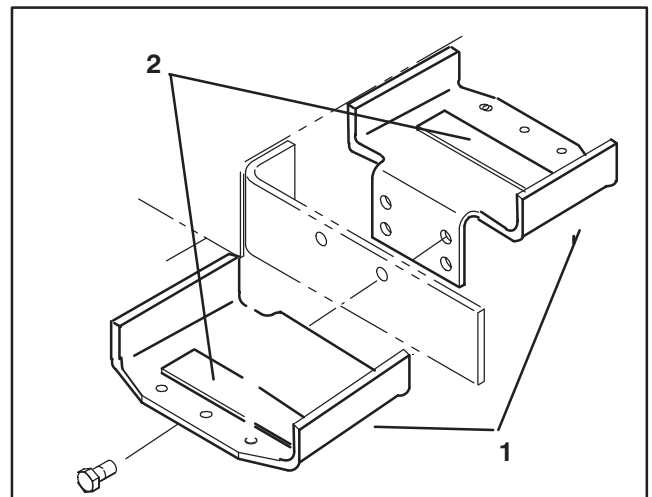


Figure 5

1. Battery holders
2. Battery pads

4. Position battery onto holders with terminal posts toward engine. Battery should be centered on battery holders.
5. Install red terminal boot onto positive battery cable the black terminal boot onto the negative battery cable.
6. Install the positive (red) battery cable to positive (+) battery terminal and the negative (black) battery cable to the negative (-) battery terminal and secure with carriage bolts and locknuts.



WARNING

Connecting cables to the wrong post could result in personal injury and/or damage to the electrical system. Make sure battery or cables do not interfere or rub on engine.

7. Mount battery to holders with (2) support rods, battery clamp and (2) locknuts. Position support rods in mounting holes as shown in fig. 6. Tighten locknuts so battery is held securely in position and will not slide. **DO NOT OVERTIGHTEN.**

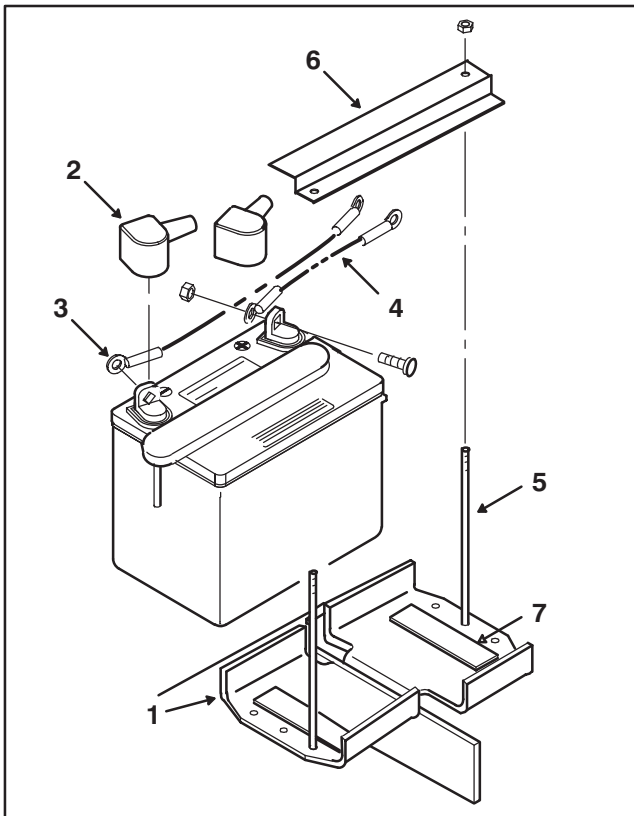


Figure 6

- | | |
|---------------------------|------------------------|
| 1. Battery holder | 5. Battery support rod |
| 2. Battery terminal boot | 6. Battery clamp |
| 3. Negative battery cable | 7. Battery pad |
| 4. Positive battery cable | |

ACTIVATE AND CHARGE BATTERY (12 VOLT)

Since battery is not filled with electrolyte or activated, the battery, if you have not already done so, must be removed from the machine so it can be filled with electrolyte and charged. Bulk electrolyte with 1.260 specific gravity must be purchased from a local battery supply outlet. Remove the battery and activate it as follows:

1. Remove filler cap from battery and slowly fill each cell until electrolyte is just above the plates. To obtain best results, let battery set for 20 minutes. Add electrolyte to the maximum capacity

2. Leave filler cap off and connect a 3 to 4 amp battery charger to the battery posts. Charge the battery at a rate of 4 amperes or less for 4 hours.

3. When battery is charged, disconnect charger from electrical outlet and battery posts.

4. Slowly add electrolyte to each cell until level is up to fill ring. Install filler cap.

IMPORTANT: Do not overfill battery. Electrolyte will overflow onto other parts of the machine and severe corrosion and deterioration will result.



WARNING

Electrolyte gases are explosive and can cause serious injury to eyes, lungs and skin. Wear safety goggles and rubber gloves when working with electrolyte or battery. Charge the battery in a well ventilated place so gasses produced while charging can dissipate. Since the gases are explosive, keep open flames and electrical spark away from the battery; do not smoke. Nausea may result if the gases are inhaled. Unplug charger from electrical outlet before connecting to or disconnecting charger leads from battery posts.

OPERATION

Starting And Stopping

1. Make sure spark plug wire is installed on spark plug and fuel valve is open.

2. Shift into neutral.

3. Move throttle control to CHOKE position before starting a cold engine.

NOTE: A warm or hot engine usually does not require any choking. To start a warm engine, move throttle control to FAST position.

4. Rotate ignition key to START. When engine starts, release key, and regulate throttle to desired speed.

NOTE: Prolonged cranking of starter may cause damage to starter if cranked more than 15 seconds per minute.

NOTE: Battery must be installed before PTO clutch will engage after electric start kit has been installed.

5. To stop engine, release control bail and control bar, shift to Neutral, move throttle to SLOW and turn ignition key to OFF. Wait for all parts to stop moving before leaving the operators position behind handle.

ELECTRICAL SCHEMATIC

