FORM NO. 3313–691

TORO®

PART NO. 66-6130

INSTALLATION INSTRUCTIONS

103, 111 COMMERCIAL WALK MOWER ELECTRIC START KIT

Note: Left and right sides are determined from the operating position.

REPLACE ALTERNATOR STATOR

1. To prevent accidental starting of engine, remove the wire from the spark plug.

2. Remove blower housing mounting screws (4) and lift off blower housing, recoil assembly and debris guard (Fig. 1).

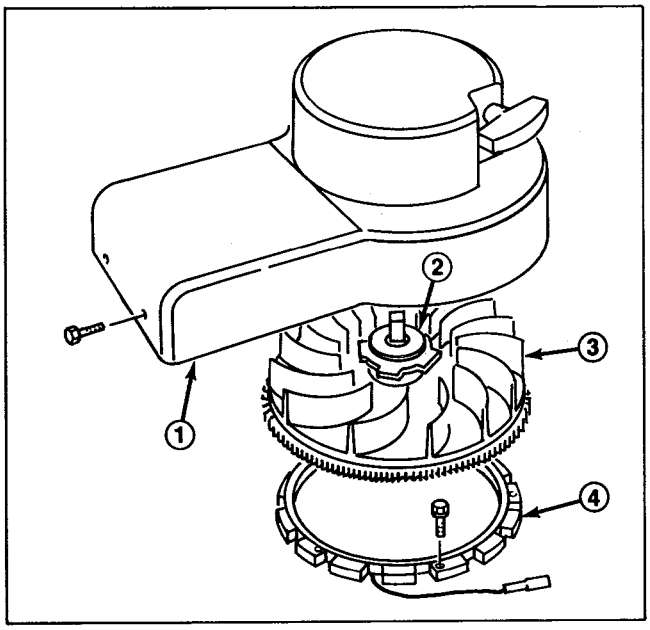


Figure 1

1. Blower housing
2. Rewind starter clutch assembly
3. Flywheel
4. Alternator stator

3. To expose alternator stator, remove rewind starter clutch assembly and flywheel (Fig. 1).

Note: A starter clutch and flywheel puller are required to remove the parts in step 3. To obtain the tools, contact your local Briggs & Stratton dealer.

4. Remove screws (4) securing alternator stator to engine. Disconnect stator wire from harness. Note how wire is routed to harness connector (Fig. 1 & 3).

5. Install new stator and secure with mounting screws. Route wire the same as previous wire, but do not connect into harness.

6. Install the flywheel, clutch assembly and blower housing.

INSTALL STARTER MOTOR

1. Remove screws and lockwashers (2) securing ring guard to left side of engine (Fig. 2).

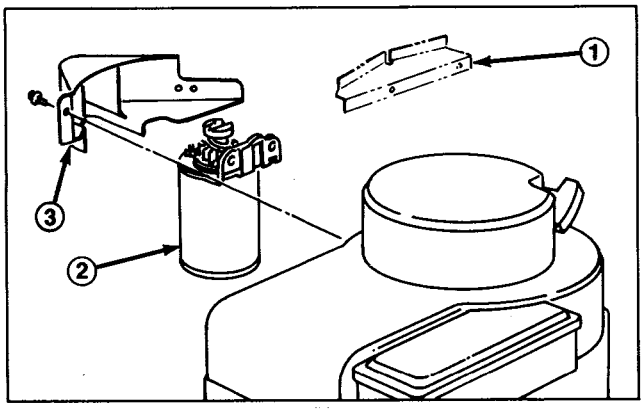


Figure 2

1. Ring guard
2. Starter motor
3. Motor cover — model 111

2. Using original fasteners, mount starter motor to engine (Fig. 2).

3. Using (2) screws, install new motor cover to engine (Fig. 2).

Note: Two motor covers are supplied. Model 103's use the cover with one mounting hole on each end and a half-moon cutout at the lower center; Model 111's use the cover with two mounting holes on one end, one mounting hole on the opposite end and no half-moon cutout (Fig. 2).

4. Disconnect wire harness from clutch connector, governor plate terminal, engine mounting bolt (Fig. 3) and clutch switch on control panel. Remove cable ties securing harness to handle and remove and discard harness.

CONTROL PANEL ASSEMBLY

1. Remove nut securing clutch switch to control panel and remove switch (Fig. 4).

2. Cut away the panel decal to expose the ignition switch mount hole.

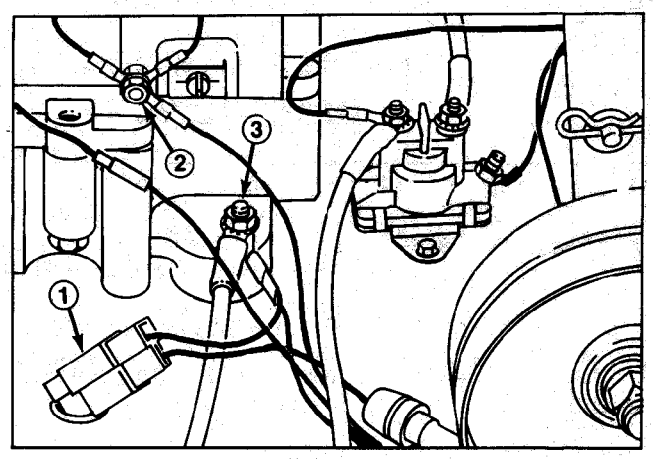


Figure 3

1. Clutch connectors
2. Governor plate & terminal
3. Engine mounting bolt
4. Alternator stator wire

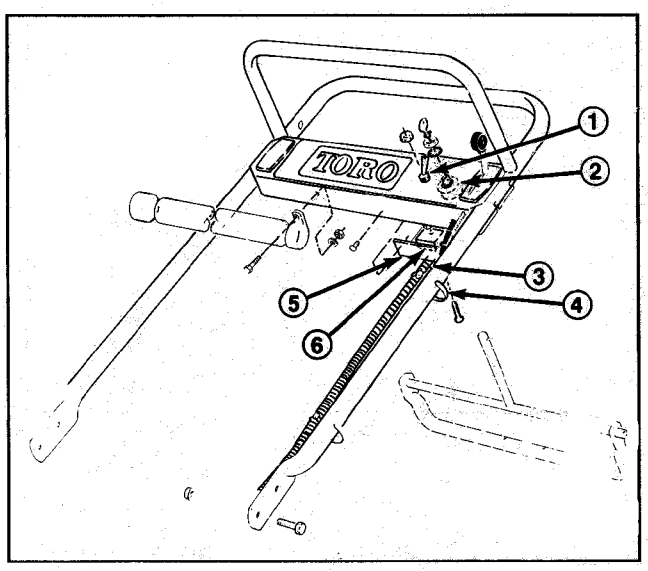


Figure 4

1. Clutch switch
2. Ignition switch
3. Wire harness
4. Cable tie
5. Bottom panel
6. Bridge rectifier

3. Making sure mounting holes are aligned, install new control panel over existing decal.

4. Reinstall clutch switch to control panel.

5. Mount ignition switch on control panel and secure with lockwasher and hex nut (Fig. 4).

6. Remove bottom panel and bridge rectifier from kit and secure bridge rectifier to bottom panel with machine screw and locknut (Fig. 4).

7. Connect wire harness (yellow & green) to clutch switch, ignition switch and bridge rectifier (blue & red).

8. Using self tapping screws, mount bottom panel to control panel. Secure harness to handle with (2) cable ties (Fig. 4).

INSTALL ENGINE WIRING COMPONENTS

1. Remove left rear engine mounting bolt. Install new bolt and torque mounting nut to 170-200 in.-lb (Fig. 5).

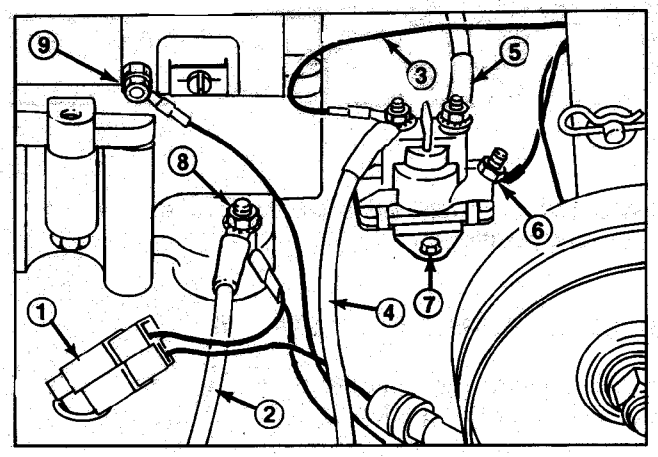


Figure 5

1. Clutch connectors
2. Negative battery cable
3. Orange wire
4. Positive battery cable
5. Starter motor cable
6. Rear solenoid terminal
7. Self tapping screw
8. Engine mount bolt
9. Governor plate terminal

2. With small stud terminal of solenoid positioned to the rear, mount solenoid to frame with (2) self tapping screws (Flg. 5).

3. Connect male and female clutch connectors (Fig. 5).

4. Install ring terminal from clutch connector harness wires (black) and negative (–) battery cable (black) to left rear engine mounting bolt and secure with locknut (Fig. 5).

5. Install small ring terminal wire (red) to small stud terminal of solenoid and secure with hex nut (Fig. 5).

6. Install ring terminal from harness (orange) and positive (+) battery cable (red) to large forward post of solenoid and secure with locknut (Fig. 5).

7. Install ring terminal from starter to solenoid wire over remaining large solenoid post and secure with locknut (Fig. 5). Connect opposite end to starter terminal and secure with locknut.

8. Cut the spade type connector off the end of the black/white harness wire. Trim approximately 3/8" insulation from the end and insert the end into the ring terminal supplied with the kit. Crimp the connector to secure it to the wire and install the connector to the terminal on the governor plate (Fig. 5).

Note: A harness wire (yellow) is not used for this assembly. Fold the wire under and slip the end back into the harness insulating cover to secure it from possible damage (Fig. 6).

9. Connect engine alternator wire to (orange) harness wire (Fig. 6).

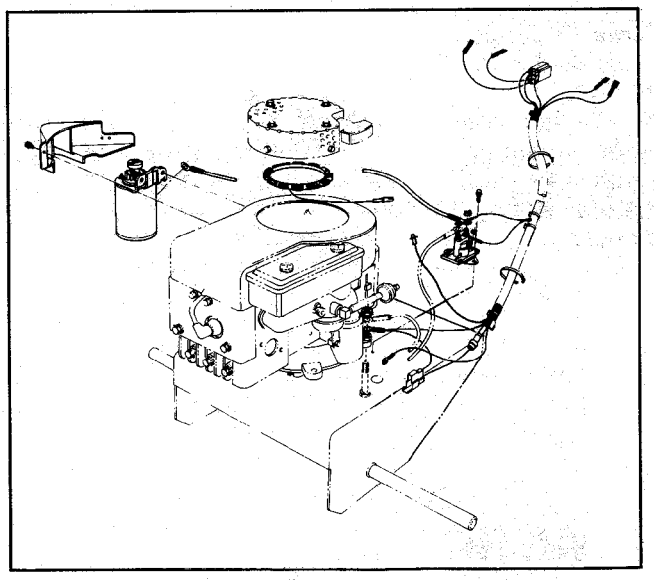


Figure 6

INSTALL BATTERY

1. Mount battery holders to left rear corner of cutting unit carrier frame with (2) 3/8-16 x 1.25" capscrews and locknuts (Fig. 7).

2. Peel backing off battery pads and affix pads to battery holder (Fig. 7).

3. Fill battery with electrolyte and charge; refer to ACTIVATING AND CHARGING BATTERY.

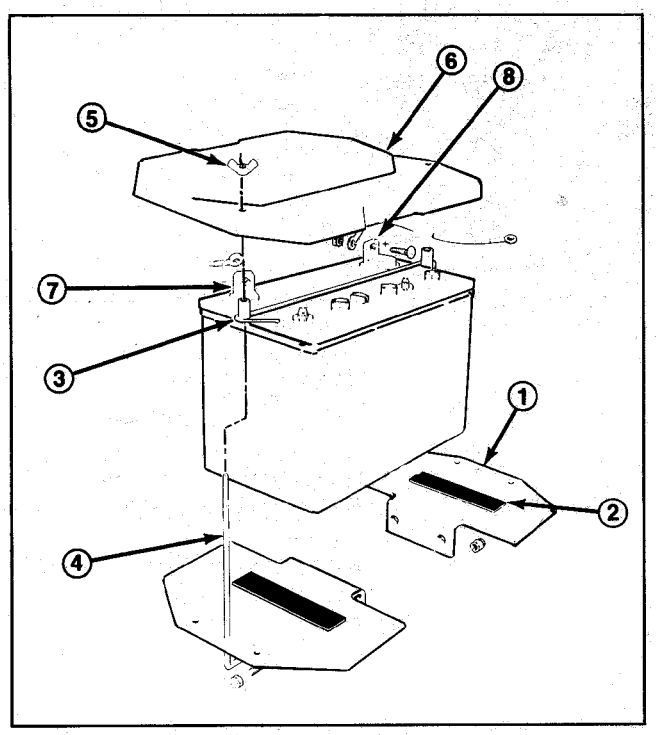


Figure 7

1. Battery holder
2. Battery pads
3. Battery strap
4. Support rod
5. Wing nut
6. Cover
7. Negative terminal
8. Positive terminal

4. Position battery onto holders with terminal posts toward engine (Fig. 7).

5. Install the positive cable to the positive (+) terminal and the negative cable (black) to the negative (–) terminal of the battery and secure with carriage bolts and locknuts (Fig. 7).

6. Secure battery to holders with battery strap, support rods (2), battery cover and (2) 1/4-20 wing nuts (Fig. 7).

ACTIVATING AND CHARGING BATTERY (12 VOLT)

Since the battery for the mower 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:

CAUTION

Wear safety goggles and rubber gloves when working with electrolyte. Charge the battery in a well ventilated place so gases produced while charging can dissipate. Since the gases are explosive, keep open flame 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.

1. Remove filler caps 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 caps 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 caps.

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

STARTING AND STOPPING

1. Install spark plug wire and open fuel valve.

2. Shift into neutral and move deck engagement switch to OFF.

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

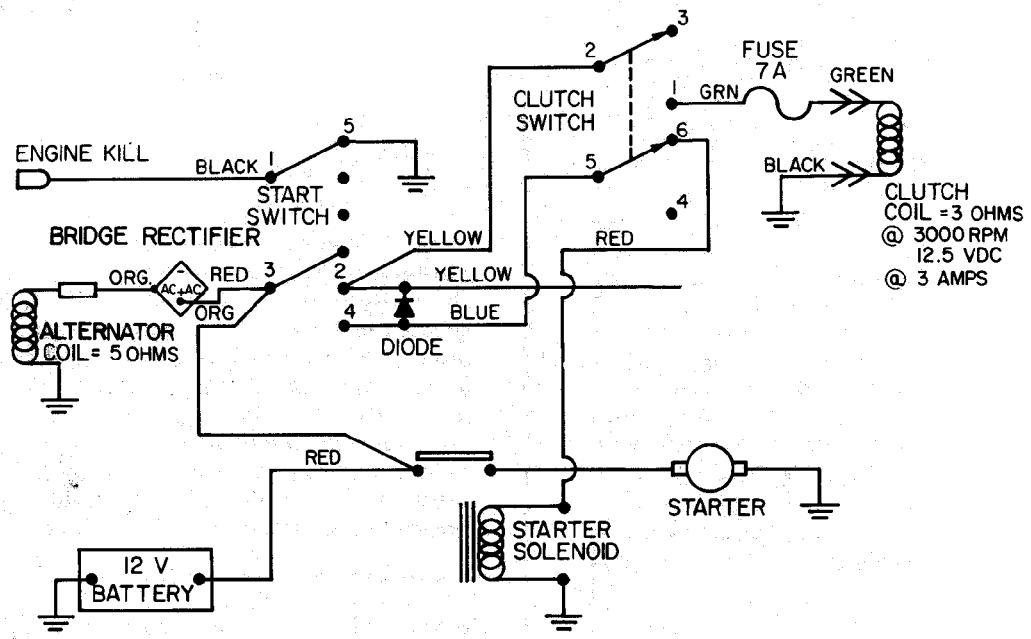
Note: A warm or hot engine usually does not require any choking. To start a warm engine, move throttle control to FAST position.

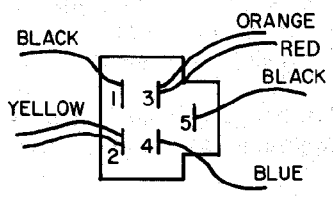
4. Rotate ignition key to START. When engine starts, release key and regulate throttle to desired speed.

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

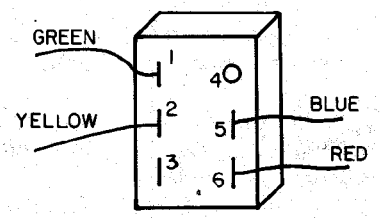
5. To stop engine, release control bar, move deck engagement switch to OFF, shift to neutral and turn ignition key to OFF. Wait for all parts to stop moving before leaving the operators position behind the handle.

WIRING SCHEMATIC





START SWITCH CONNECTOR BOTTOM VIEW



CLUTCH SWITCH BOTTOM VIEW