



## Electric Starter Kit

For CCR 2000 and CCR 3000 Snowthrowers  
Serial Nos. 7000001 and Up

Part Nos. 84-5291, 84-5292,  
105-2955, and 105-2956

Installation  
Instructions

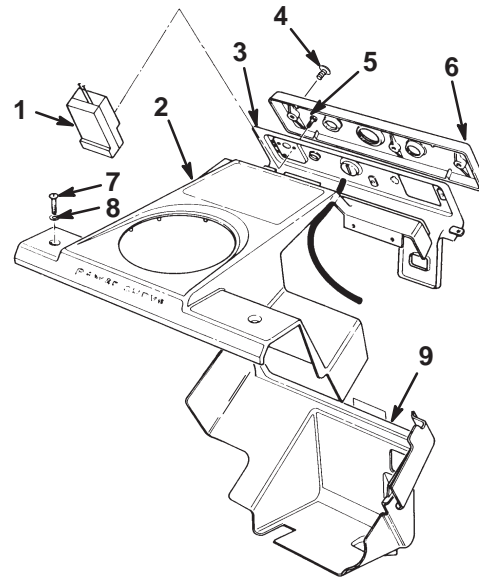


### Warning



Installing the new starter improperly may result in an electric shock or even death when operating the starter.

- Have a Toro Master Service Dealer or an Authorized Service Dealer with a high potential tester to perform a high potential test on the new starter before using it for the first time.
- If you are uncomfortable installing the starter kit, have a Toro Master Service Dealer or an Authorized Service Dealer with a high potential tester to install the kit.



m-2837

## Removing the Old Starter

1. Stop the engine and wait for all moving parts to stop.
2. Remove the key from the switch.
3. Remove the 3 short self-tapping screws, and remove the control nameplate from the control panel (Fig. 1).

Figure 1

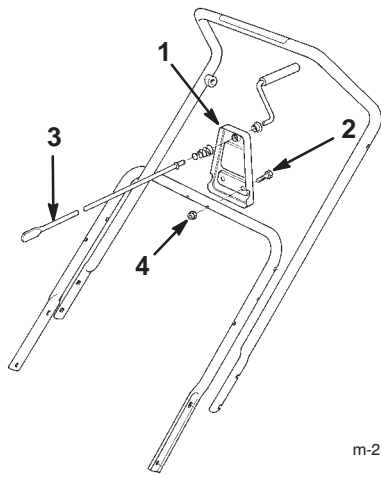
- |                                 |                       |
|---------------------------------|-----------------------|
| 1. Switch assembly              | 6. Control nameplate  |
| 2. Upper shroud assembly        | 7. Phillips screw (2) |
| 3. Control panel                | 8. Flat washer (4)    |
| 4. Short self-tapping screw (3) | 9. Lower shroud       |
| 5. Long self-tapping screw (3)  |                       |

**Note:** You can leave the control nameplate on the starter rope.

4. Disconnect the wire from the spark plug.
5. Remove the fuel tank cap and use a hand pump to pump the fuel into an approved fuel container.

## Removing the Chute Crank Assembly

Remove the 2 hex-head bolts and locknuts that hold the chute crank support to the lower handle, and remove the chute crank assembly from the handle (Fig. 2).



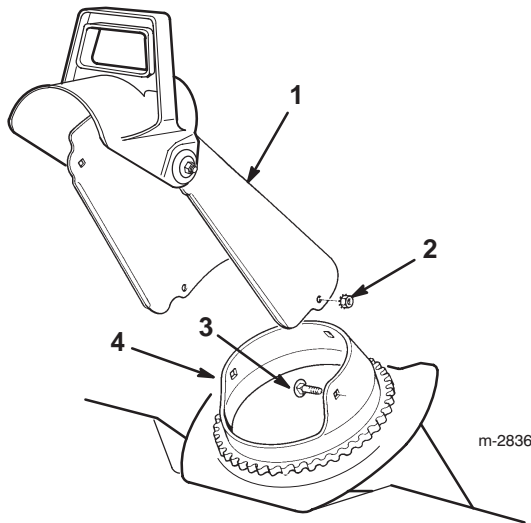
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**Figure 2**

- |                        |                         |
|------------------------|-------------------------|
| 1. Chute crank support | 3. Chute crank assembly |
| 2. Hex-head bolt (2)   | 4. Locknut (2)          |

## Removing the Discharge Chute

Remove the 3 carriage bolts and locknuts that hold the discharge chute to the chute gear ring, and remove the discharge chute from the chute gear ring (Fig. 3).



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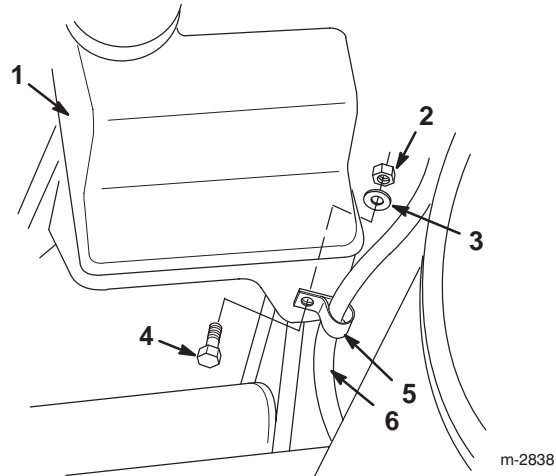
**Figure 3**

- |                    |                      |
|--------------------|----------------------|
| 1. Discharge chute | 3. Carriage bolt (3) |
| 2. Locknut (3)     | 4. Chute gear ring   |

## Removing the Shrouds, Control Panel, and Switch Assembly

1. Remove the 2 Phillips screws, 4 flat washers, and 2 locknuts that hold the upper shroud assembly to the frame, and remove the upper shroud assembly (Fig. 1).

2. Remove the 2 hex-head bolts and curved washers, and remove the lower shroud and control panel from the lower handle (Fig. 1).
3. Remove the 3 long self-tapping screws, and remove the switch assembly and attached starter wires from the control panel (Fig. 1).
4. Remove the hex-head bolt, the flat washer, and the locknut, and remove the R-clamp from the starter wires (Fig. 4).
5. Slide the bottom cover from under the axle and hold it out of the way.



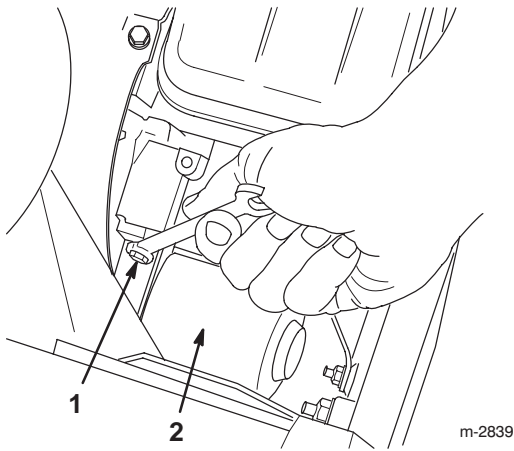
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**Figure 4**

- |                |                  |
|----------------|------------------|
| 1. Fuel tank   | 4. Hex-head bolt |
| 2. Locknut     | 5. R-clamp       |
| 3. Flat washer | 6. Starter wires |

## Removing the Old Starter Motor

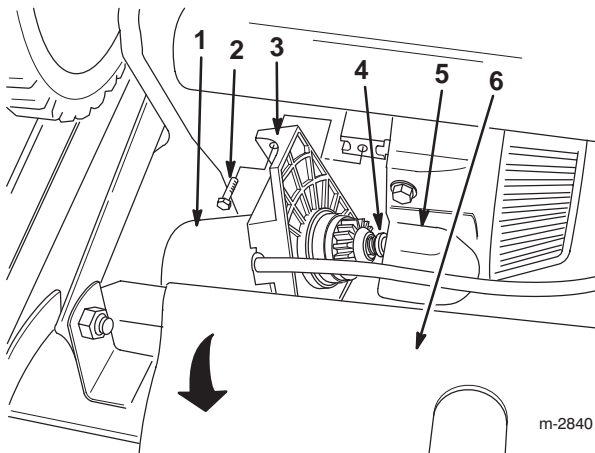
1. Remove the upper starter motor mounting bolt (Fig. 5).



**Figure 5**

- |                                      |                  |
|--------------------------------------|------------------|
| 1. Upper starter motor mounting bolt | 2. Starter motor |
|--------------------------------------|------------------|

- Carefully tip the snowthrower upside down.
- Pull the bottom cover down below the axle and remove the lower starter motor mounting bolt (Fig. 6).



**Figure 6**

- |                                      |                              |
|--------------------------------------|------------------------------|
| 1. Starter motor                     | 4. Pinion stop               |
| 2. Lower starter motor mounting bolt | 5. Pinion cup                |
| 3. Housing mount                     | 6. Bottom cover (shown down) |

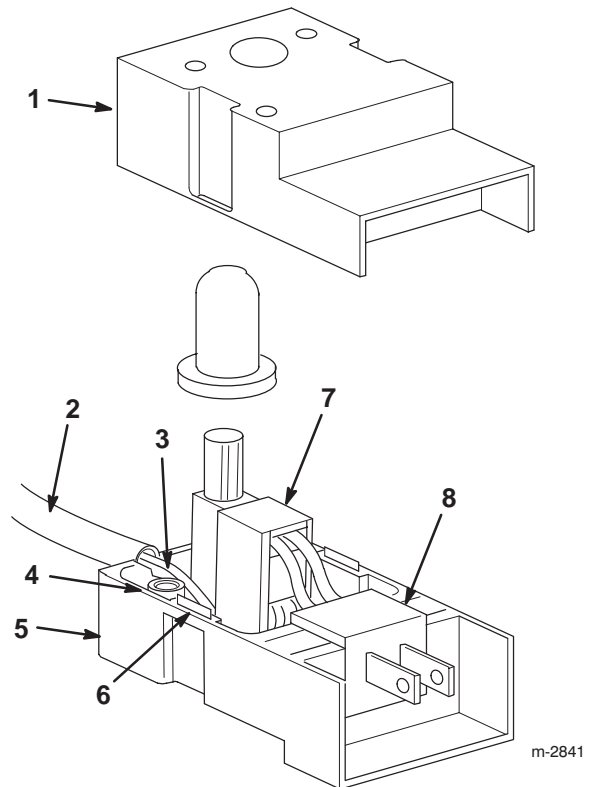
- Slide the starter motor away from the pinion cup, and remove the starter motor and the attached switch assembly from the snowthrower (Fig. 6).

## Installing the New Starter

### Installing the New Wiring

Parts 84-5291 and 84-5292 only

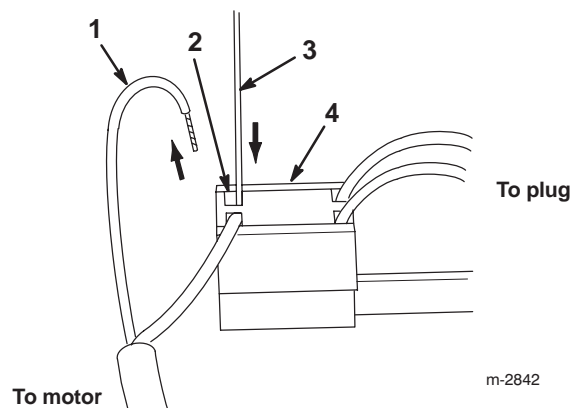
- Push in the locking tabs and separate the switch housing cover from the switch housing base (Fig. 7).



**Figure 7**

- |                         |                        |
|-------------------------|------------------------|
| 1. Switch housing cover | 5. Switch housing base |
| 2. Outer insulation     | 6. Locking tab (2)     |
| 3. Switch wire          | 7. Switch              |
| 4. Screw boss           | 8. AC connector        |

- Pull the switch and the AC connector out of the switch housing base (Fig. 7).
- Insert the smooth end of a small drill bit into the switch contact openings, depress the flat springs inside the contact openings, and pull the old starter wires out of the switch (Fig. 8).



**Figure 8**

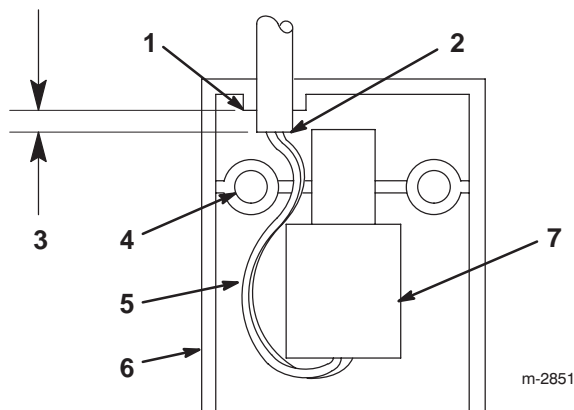
- |                    |                            |
|--------------------|----------------------------|
| 1. Starter wire    | 3. Smooth end of drill bit |
| 2. Contact opening | 4. Switch                  |

- Twist the new starter wires and insert them all the way into the contact openings (Fig. 8).
- Install the switch, the switch wires, and the AC connector into the switch housing base.
 

**Note:** Ensure that the slots in the AC connector fit into the matching cutout in the base (Fig. 7).
- Route the starter wires between the switch and the inside of the screw boss, then out through the serrated cord opening in the switch housing base (Figs. 7 and 9).
- Carefully push the starter wires down between the switch and the screw boss with a blunt object (Figs. 7 and 9).

**Important** Route the starter wires between the switch and the inside of the screw boss in the switch housing base. This prevents the screw from cutting into the insulation and/or wires when you install the switch assembly to the control panel.

- Ensure that the end of the outer insulation is at least 3/16 in. (5 mm) from the inside edge of the serrated cord opening in the switch housing base (Fig. 9).



**Figure 9**

- |   |                        |
|---|------------------------|
| 1. Inside edge of serrated cord opening | 4. Screw boss          |
| 2. End of outer insulation              | 5. Switch wires        |
| 3. 3/16 in. (5 mm) minimum              | 6. Switch housing base |
|   | 7. Switch              |

- Snap the switch housing cover back onto the switch housing base (Fig. 7).

## Installing the New Starter Motor

- Hold the bottom cover down and insert the new starter motor up through the frame.

**Note:** Position the motor so that the housing mount contacts the mating surfaces on the engine.

- Push gently on the pinion stop as necessary and insert the pinion into the pinion cup (Fig. 6).

**Important** Be careful not to pinch your finger in the pinion stop or pinion cup when you install the new starter motor.

- Install and tighten the upper and lower starter motor mounting bolts (Figs. 5 and 6).
- Install the bottom cover back into its original position above the axle (Fig. 6).

## Mounting the Switch Assembly, Control Panel, and the Shrouds

- Return the snowthrower to its upright position.
- Install the R-clamp onto the new starter wires (Fig. 4).
- Fasten the R-clamp and the attached wires to the fuel tank tab with the hex-head bolt, the flat washer, and the locknut (Fig. 4).
- Route the starter wires over the top of the fuel tank and install the switch assembly to the control panel with the 3 long self-tapping screws (Fig. 1).
- Fasten the lower shroud and the control panel to the lower handle with the 2 hex-head screws and curved washers (Fig. 1).
- Fasten the upper shroud assembly to the frame with the 2 Phillips screws, 4 flat washers, and 2 locknuts (Fig. 1).

## Installing the Discharge Chute

Fasten the discharge chute to the chute gear ring using the 3 carriage bolts and locknuts (Fig. 3).

## Installing the Chute Crank Assembly

- Insert the chute crank assembly through the hole in the upper shroud, ensuring that the end of the crank assembly seats correctly in the face gear (Fig. 2).
- Fasten the chute crank support to the lower handle with 2 hex-head bolts and locknuts (Fig. 2).

## Completing the Installation

- Install the fuel tank cap.
- Connect the wire to the spark plug.
- Install the control nameplate onto the control panel (Fig. 1).

**Note:** Ensure that the control nameplate fits over the flanges on the upper and lower shrouds, then install and tighten the control nameplate with 3 short self-tapping screws.

- Insert the key in the switch.