



Horse Tiller Wraparound Bumper Guard
OEM-290-255 / 290-255-081

THANK YOU!

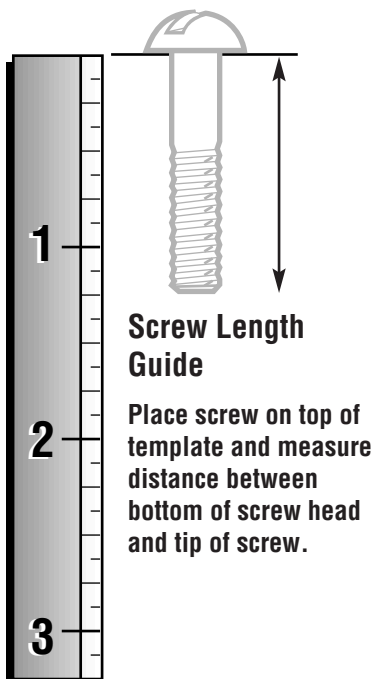
Thank you for buying a Bumper/Guard for your Horse Model Tiller. To ensure safe and proper installation of the Bumper/Guard, please read and carefully follow all instructions. If you have any questions or concerns, be sure to contact us for assistance.

Unpack and Check Parts

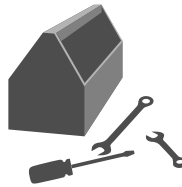
Check the contents of the shipping carton against the Parts List. Let us know if any parts are missing or damaged.

Parts List			
Ref. #	Part #	Description	Qty.
1	1910731	Wraparound Assembly	1
2	736-0169	Lockwasher, 3/8"	2
3	710-0514	Screw, Hex hd., 3/8"-16 x 1"	2
4	1909748	Spacer, 1/2"	1
5	736-0921	Lockwasher, 1/2"	1
6	710-3181	Screw, Hex hd., 1/2"-13 x 1-1/2"	1
7	1910730	Bottom Brace Assembly	1
8	710-0805	Screw, Hex Hd., 5/16"-18 x 1-1/2"	2
9	736-0119	Lockwasher, 5/16"	2
10	710-0267	Nut, Hex, 5/16"-18	2
11	777S30653	Decal	1
—	1909784	Hardware Kit (includes Refs 2-6 & Refs. 8-10)	—

Fig. 1: Contents of shipping carton.



Tools Needed



- (2) 1/2" Wrenches*
 - (1) 9/16" Wrench*
 - (1) 3/4" Wrench*
 - (2) 7/16" Wrenches**
 - (1) Flat Blade Screwdriver
 - (1) Needle-nose Pliers
- * Adjustable wrench can be substituted
 ** For newer model electric start tillers



CAUTION

Before installing the Bumper/Guard, stop the engine, wait for all moving parts to stop, and allow the engine to cool.

Disconnect the spark plug wire and move it away from the spark plug.

Remove the key from the keyswitch on electric start models.

A. PREPARING YOUR TILLER

1. **Stop the engine and wait for all moving parts to stop. Disconnect the spark plug wire and move it away from the spark plug. Remove the ignition key on electric start models.**
2. Put the tines on the ground by pulling the depth regulator lever back and all the way up.
3. Using needle-nose pliers, twist and remove the red plastic thread protector plugs located on the two engine mounting bars (A, Fig. 2). Discard the plugs.
4. Remove and discard the red plastic thread protector plug (B, Fig. 3) at the front of the transmission.
5. On each side of the tiller, there is a screw (Fig. 4), with a jam nut, that holds each engine mounting bar in place. Using a 1/2" wrench, unthread each jam nut (not the screws) several turns.
6. Using the same wrench, slowly and carefully tighten each screw (Fig. 4A) until you feel the screw touch the engine mounting bar. **DO NOT USE EXCESSIVE FORCE!** Tighten each screw just enough to prevent the engine mounting bars from turning when you later install the bumper mounting screws.
7. On tillers equipped with 6HP Tecumseh Engines:
 - a.) Disconnect the throttle lever from the handlebar. (If the throttle cable is inside the handlebar, see your Owner's Manual for how to disconnect the cable at the engine.)
 - b.) Remove the cable mounting clips on the handlebar and route the throttle lever and cable up through the center of the wraparound (see E, Fig. 5).
 - c.) Set the wraparound over the engine and reattach the throttle lever and cable.

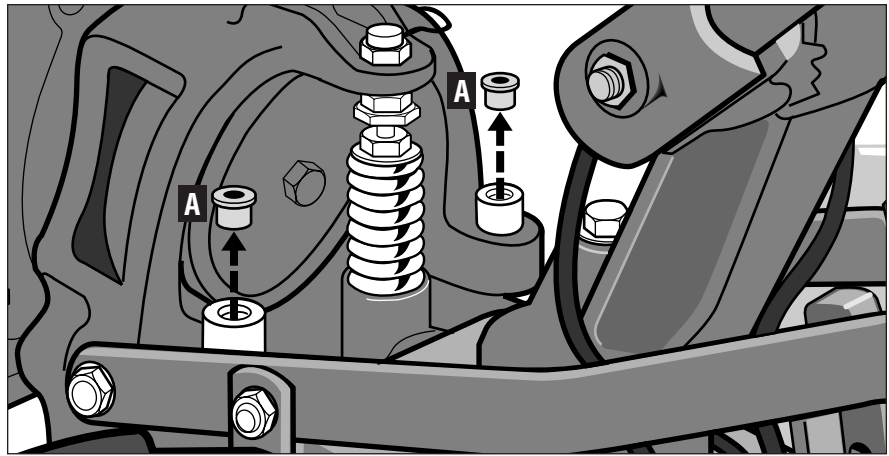


Fig. 2

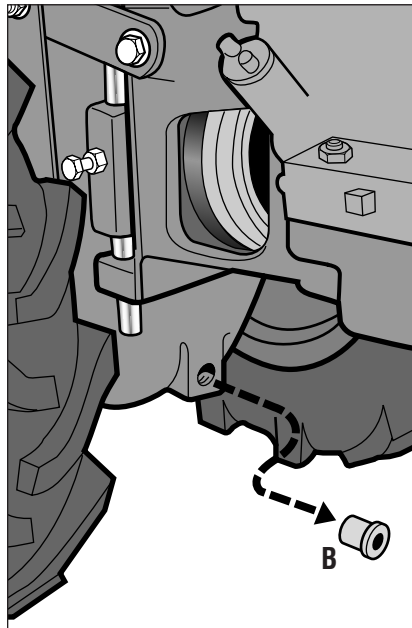


Fig. 3

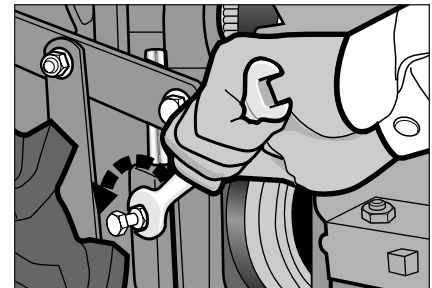


Fig. 4

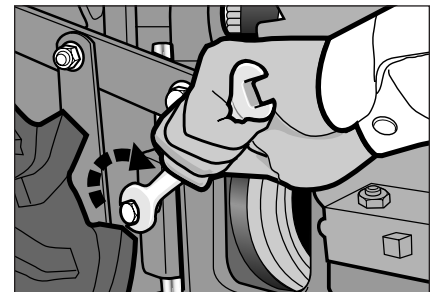


Fig. 4A

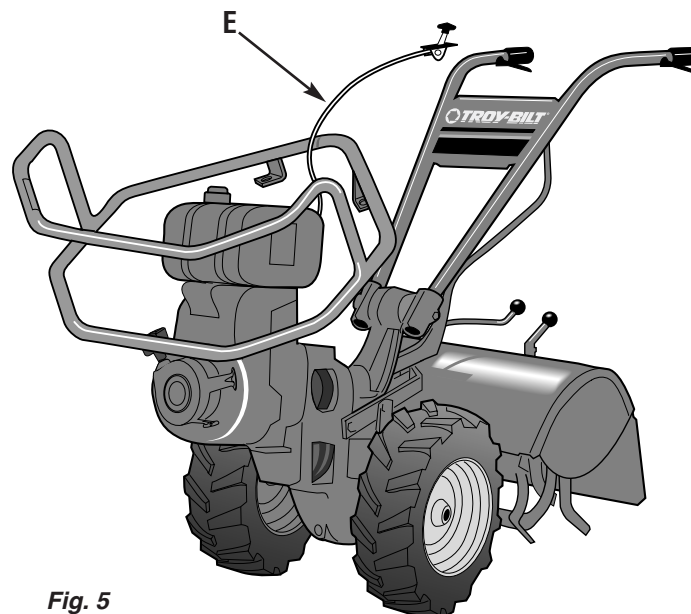


Fig. 5

B. ADDITIONAL PREPARATION STEPS FOR ELECTRIC START MODELS ONLY



WARNING

- Batteries can generate explosive gases. Keep sparks, flames, or other ignition sources away at all times. Always shield eyes when working near batteries.

- Before working with electrical wires or components, disconnect the battery ground (negative [-]) cable from the battery. Bend the cable safely away from any metal parts.

- Do not lay tools or any metal parts across the battery terminals as this could result in sparking or a short circuit.

1. If the battery is installed on your tiller, extreme care must be exercised to prevent the possibility of a short circuit from occurring while installing the bumper assembly. Read the WARNING above and follow all battery safety rules printed in your Horse Model Owner's Manual.
2. Disconnect the ground (negative [-]) cable from the battery post and bend it away from any metal parts. Cover the exposed battery post with a thick (1/2" or more) layer of cardboard or newspaper and tape the covering in place.

NOTE: Depending upon your engine model, various electrical wires and cables may have to be temporarily disconnected in order to install the bumper wraparound. Use the following steps that apply to your unit. Call the factory Technical Service Department if you have any questions about wires or cables that are not covered in the following steps.

3. For 6HP Tecumseh Engines: If the engine has a black plastic terminal (F, Fig. 6) on the recharging line, pull the terminals apart. Then proceed to Step C, "Installing the Bumper" on page 4.

4. Briggs and Stratton Engines:
 - a. A green engine shutoff wire leads from the ignition switch, across the back of the engine, and over to the bottom, right side of the engine. If the wire is attached to a clip (G, Fig. 7), depress the clip and remove the wire. If the wire connects to another wire by means of plastic terminals (H, Fig. 8), pull the terminals apart.

- b. If the green wire is secured to the engine fuel line with plastic wire ties, loosen the ties by pressing down on the tie's small locking tab while pushing the long end of the tie backwards. If the wire is connected to a clip on the back of the engine, remove the wire from the clip.

- c. Move the green wire off to the left side of the tiller.

- d. A red recharging wire with plastic terminals (I, Fig. 9) leads from the solenoid to behind the starter motor. Disconnect the terminals by spreading apart the two tabs on the larger terminal. Move the wire off to the left side of the tiller.

- e. Disconnect the starter motor cable (J, Fig. 9) from the stud on the starter motor. Replace the mounting hardware on the stud.
- f. Disconnect the ignition ground cable (K, Fig. 9) from the stud on the side of the engine. Replace the mounting hardware on the stud.

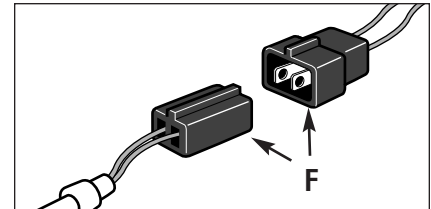


Fig. 6

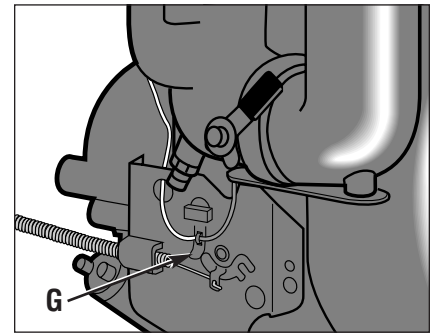


Fig. 7

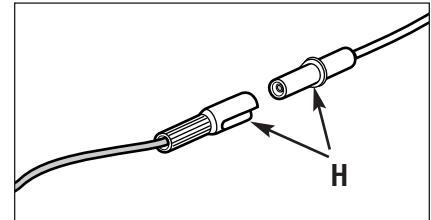


Fig. 8

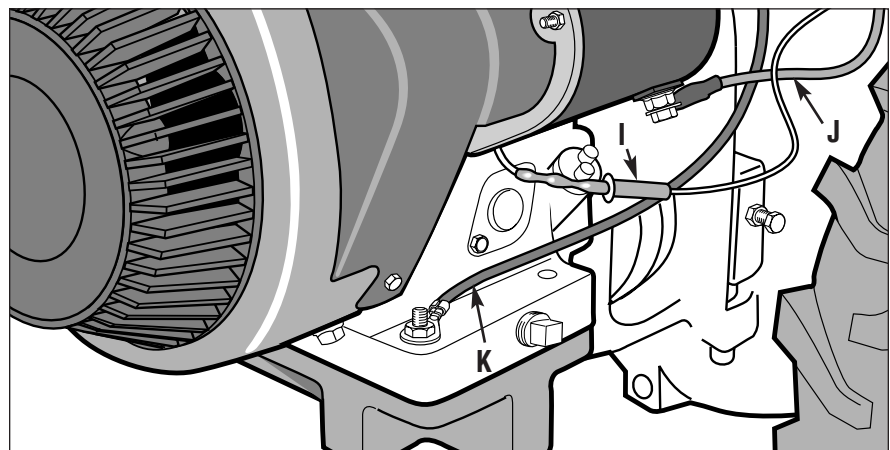


Fig. 9

C. INSTALLING THE BUMPER

NOTE: The throttle cable is positioned below the wraparound, with the exception of the 6HP Tecumseh model.

1. For NON-ELECTRIC STARTING models:

- a.) Hold the wrap-around level and carefully lower it over the fuel tank and the air cleaner assembly (Fig. 10).
- b.) Align the holes in the L-shaped legs on the wrap-around with the holes in the tops of the two engine mounting bars (L, Fig 10).
- c.) Loosely attach the legs with two 3/8"-16 x 1" screws (M, Fig. 10) and 3/8" lock washers (N). Leave the screws very loose for now.
- d.) Go to Step 3 on page 5.

2. For ELECTRIC STARTING models:

- a.) Put the Wheels/Tines/PTO Lever in NEUTRAL.
- b.) Hold the wraparound level and carefully lower it over the fuel tank and the air cleaner assembly (Fig. 10).

NOTE: If your tiller has an hour meter, remove it so the bumper can fit under the battery bracket. Reinstall the meter after you finish the installation steps.

- c.) Lower the front of the wrap-around almost to the floor, as shown in Fig. 11. Now, slide the small curved portion (with L-shaped legs) between the bottom of the battery bracket and the top of the engine mount.

NOTE: If the wraparound will not fit between the battery bracket and the engine mount, use a 9/16" wrench to loosen the two screws that attach the battery bracket legs to the transmission cover. Tilt the battery bracket backward and insert the wraparound. Retighten the bracket mounting screws securely.

- d.) Align the holes in the L-shaped legs on the wrap-around with the holes in the tops of the two engine mounting bars (L, Fig 10).

- e.) Loosely attach the legs with two 3/8"-16 x 1" screws (M, Fig. 10) and 3/8" lock washers (N). Leave the screws very loose for now.

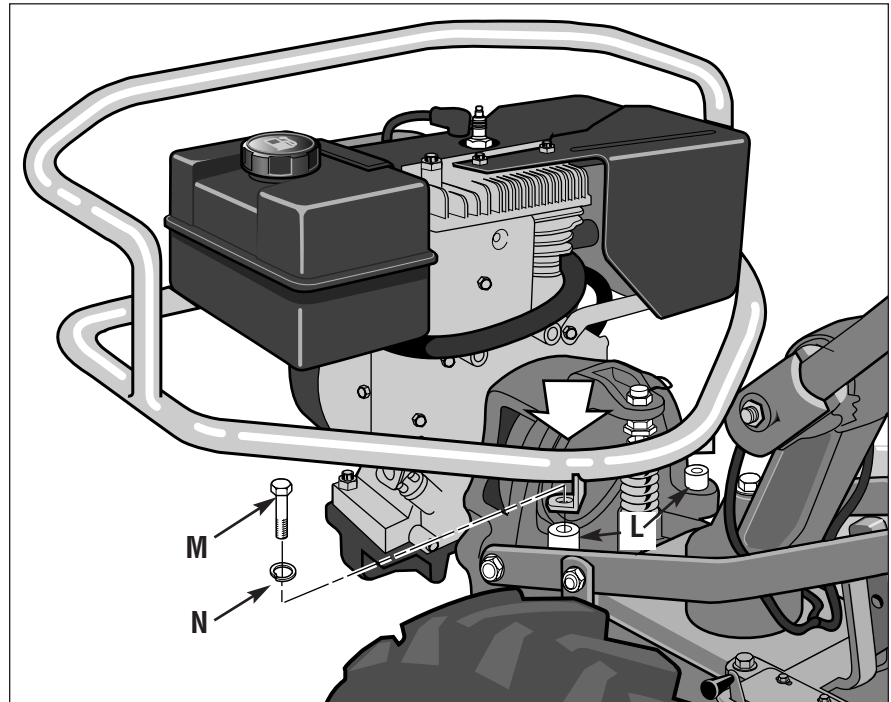


Fig. 10

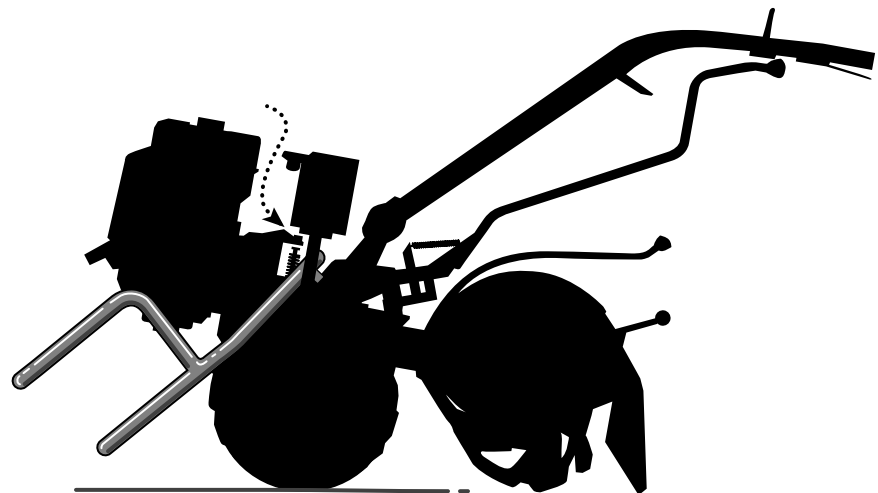


Fig. 11

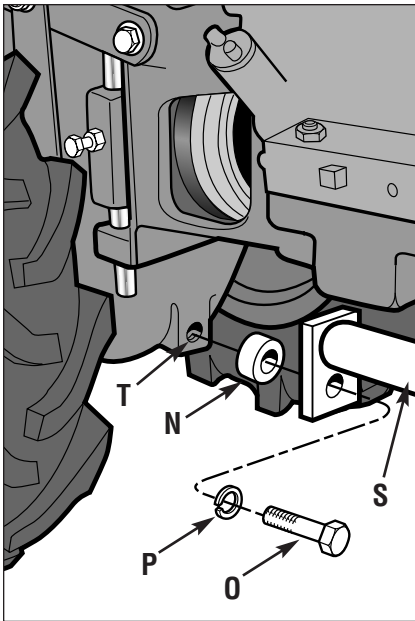


Fig. 12

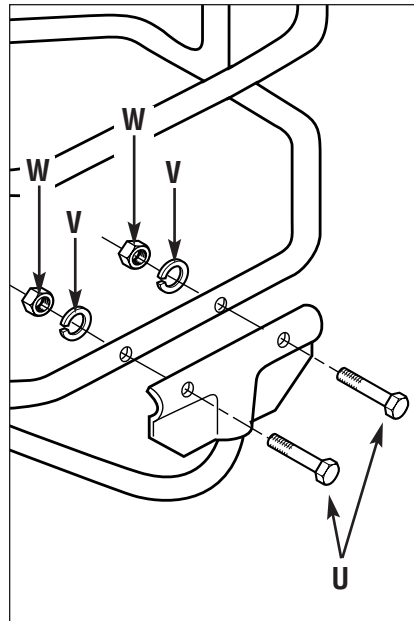


Fig. 13

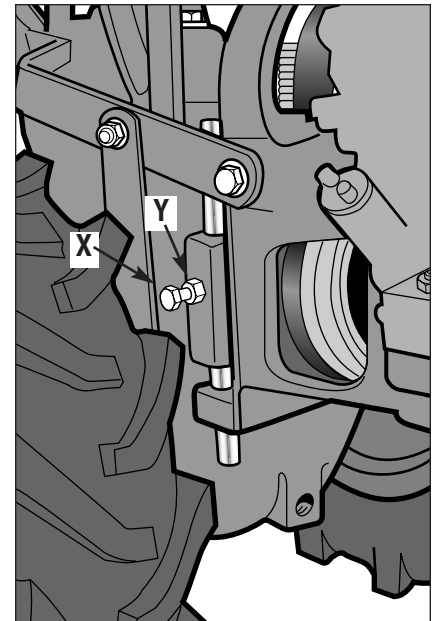


Fig. 14

3. Assemble the 1/2"-13 x 1-1/2" screw (O, Fig. 12), 1/2" lock washer (P) and spacer (N) to the end of the bottom brace (S).
4. Thread the screw (O) into the threaded hole of the transmission (T). Do not tighten the screw securely at this time.
5. Loosely attach the bracket on the bottom brace to the front of the wraparound using two 5/16"-18 x 1-1/2" screws (U, Fig. 13), 5/16" lock washers (V) and 5/16" hex nuts (W).
6. Check that the wraparound is not touching any of the engine parts. Then securely tighten the mounting hardware as follows:
 - a.) Tighten screw (O, Fig. 12) at front of transmission.
 - b.) Tighten screws (M, Fig. 10) on top of motor mount bars.
 - c.) Tighten screws (U, Fig. 13) at front of wrap-around.
 - d.) Unlock the two engine mounting bars by first backing off each screw (X, Fig. 14) no more than 1/4-turn. Then, using two wrenches, hold each screw to prevent it from turning and tighten the jam nuts (Y, Fig. 14) securely against the side of the motor mount.

NOTE: This completes the bumper assembly steps for NON-ELECTRIC START tillers. The remaining assembly steps are for ELECTRIC START tillers only.

IMPORTANT: SEE SPECIAL RECOIL STARTING INSTRUCTION ON PAGE 6.

7. For 6HP Tecumseh Engines: Reconnect the black plastic terminals (F, Fig. 6). Make sure that the terminals fit together securely. Your installation is now complete. Reconnect the ground (negative [-]) cable to the battery.
8. Briggs and Stratton Engines:
 - a.) Depending on your engine model, either reattach the green engine shutoff wire to the clip (G, Fig. 7) on the control bracket, or reconnect the plastic terminals (H, Fig. 8). On engines so equipped, secure the green wire with the plastic tie(s) removed earlier.
 - b.) Reconnect the plastic terminals (I, Fig. 9) on the red recharging line.

- c. Reconnect the starter motor cable (J, Fig. 9).
- d. Reconnect the ignition ground cable (K, Fig. 9).
- e. Reconnect the ground (negative [-]) cable to the battery.

For Safety's Sake When Starting...

Slowly pull the recoil starter rope to a point outside the bumper (Fig. 15) before you give it your "startup" pull.

By doing that, you won't hit your fingernails or knuckles on the bumper as you start the engine. Also, at the end of your pull, don't just let the rope go...it could wrap around the bumper and maybe even damage the recoil start mechanism. Gently feed back the rope as the recoil rewinds it.

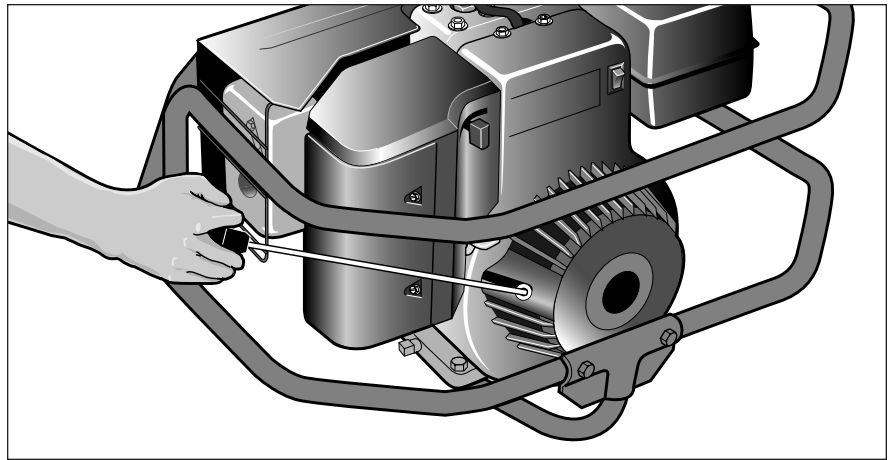


Fig. 15

Removing the Bumper Guard

Here's the easiest way to remove the Bumper Guard, using the same steps as you did to assemble it. **Before starting, disconnect the spark plug wire and let the muffler and engine cool down so you won't get burned on hot engine parts. Also see battery WARNING on page 3.**

1. On electric starting tillers, first disconnect the electric wires on certain model engines as shown in steps 2 through 4 on pg. 3.

2. Lock the engine mount bars (Steps 5 and 6 on pg. 2) and disconnect the throttle cable on 6HP tillers (Step 7 on pg. 2).
3. Loosen the screws (M, Fig. 10) on top of the engine mount bars and remove the screw (O, Fig. 12) on the bottom brace.
4. Remove the screws (U, Fig. 13) from the front of the bumper and remove the bottom brace.
5. Remove the screws on top of the engine mount bars and lift off the wraparound. Don't forget to loosen, then lock the engine

mount bar locking bolts (explained in Step 6d on pg. 5) and to reconnect the 6HP throttle cable.

6. When replacing the bumper guard, carefully follow the assembly steps starting on pg. 2.



CAUTION

Make sure all electrical wires are securely reattached as explained in Steps 7 and 8 on pg 5.

For customer assistance, visit www.troybilt.com, contact your nearest authorized dealer or:

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