



## GTS 150 to GTS 200 Engine Conversion Kit

For 21-inch Super Recycler<sup>®</sup> Lawn Mowers

Model No. 105-1293

### Installation Instructions

## Loose Parts

**Note:** Use the following chart to identify the parts you need to install the kit.

Description	Qty.	Use
Engine screws	3	Installing the new engine
Throttle control and cable assembly	1	Replacing the new throttle control and cable
Cable ties	2	Installing the cable ties
Rope stop	1	Installing the rope stop
Engine decal (98-2002)	1	Installing the decal

## Before Installing the Kit



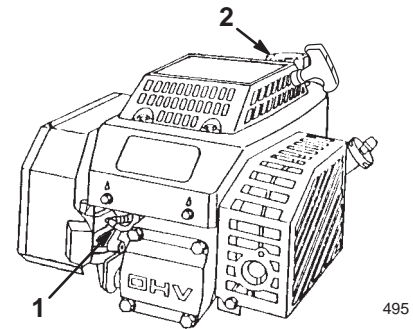
### Caution



If you leave the wire on the spark plug, someone could accidentally start the engine and seriously injure you or other bystanders.

Disconnect the wire from the spark plug before you install the kit. Set the wire aside so that it does not accidentally contact the spark plug.

1. Disconnect the wire from the spark plug (Fig. 1).



**Figure 1**

1. Spark-plug wire
2. Fuel tank cap

2. If the engine is hot, allow it to cool down.



### Warning



If you spill gasoline on a hot engine, it could ignite and burn, causing serious personal injury.

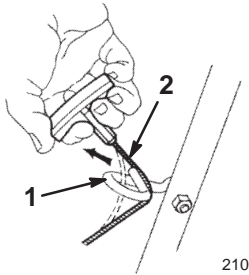
Drain gasoline from a cold engine only.

3. Transfer the fuel from the fuel tank into a clean, approved gasoline container.
4. Drain the engine oil. Refer to your *Operator's Manual* for more information.

## Disassembling the Old Components

### Removing the Starter Rope

Remove the starter rope from the rope guide (Fig. 2).



**Figure 2**

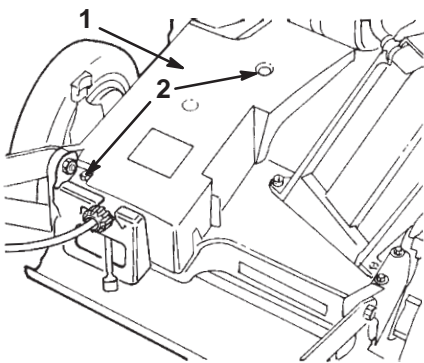
1. Rope guide
2. Starter rope

### Removing the Cable Ties

Cut the cable ties that hold the cables to the handle.

### Disconnecting the Throttle Cable

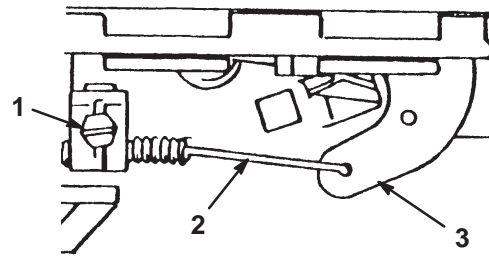
1. Remove the 2 bolts that secure the belt cover to the deck (Fig. 3). Set the cover and the bolts aside.



**Figure 3**

1. Belt cover
2. Bolts

2. Loosen the cable clamp screw and disconnect the throttle cable from the throttle lever (Fig. 4).

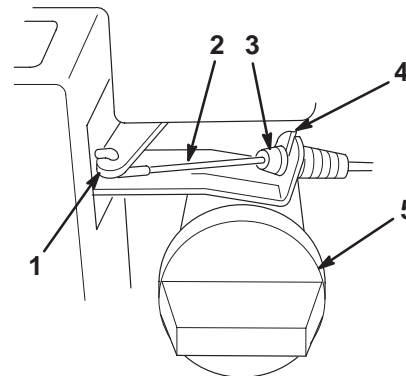


**Figure 4**

1. Cable clamp screw
2. Throttle cable
3. Throttle lever

### Disconnecting the Blade Brake Cable

1. Disconnect the blade brake cable from the brake arm (Fig. 5).



**Figure 5**

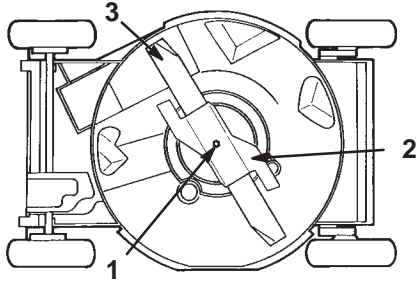
1. Brake arm
2. Brake cable
3. Brake cable fitting
4. Brake assembly
5. Dipstick

2. Use a pliers to squeeze the tabs on the top and bottom of the cable fitting, and slide the brake cable out of the brake assembly (Fig. 5).

## Removing the Blade Assembly

Remove the following items (see Figure 6):

- bolt
- lock washer
- accelerator
- blade

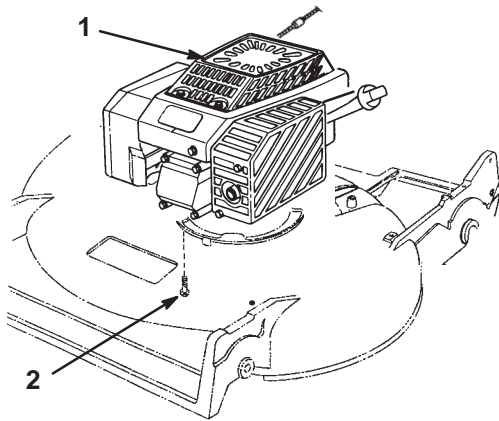


**Figure 6**

1. Bolt and lock washer
2. Accelerator
3. Blade

## Removing the Old Engine

Remove the 3 engine screws and carefully lift the engine off the housing (Fig. 7). Discard the screws and the engine.



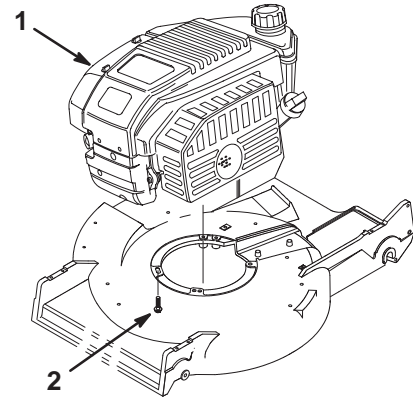
**Figure 7**

1. Old engine
2. Engine screw (3)

## Installing the Conversion Kit

### Installing the New Engine

1. Carefully set the new engine onto the housing (Fig. 8).



**Figure 8**

1. New engine
2. New engine screw (3)

2. Secure the engine with 3 new engine screws (Fig. 8), torquing them to 250 to 400 in-lb (28 to 45 N·m).

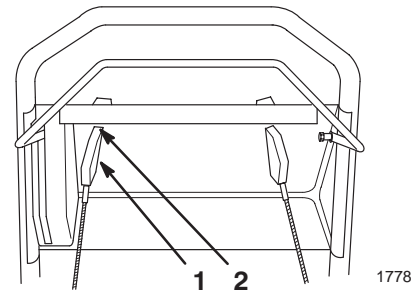
### Installing the Blade Assembly

Install the blade assembly in the *reverse order* of its removal. Refer to Removing the Blade Assembly on page 3.

**Important** Torque the blade bolt to 50 ft-lb (68 N·m).

### Replacing the Throttle Control and Cable

1. Pry up the tab on the backside of the control panel that holds the old throttle control in place (Fig. 9).

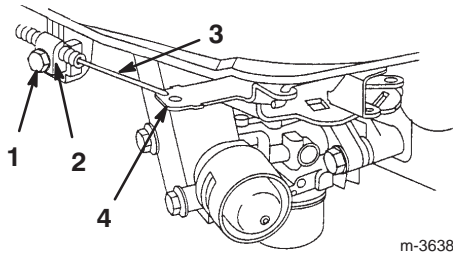


**Figure 9**

1. Back side of throttle control
2. Tab

2. Remove the old throttle control assembly and discard it.
3. Install the new throttle control.
4. Secure the new throttle control by setting the tab in its original position.

5. Route the new throttle cable the same way as the old cable had been.
6. Connect the new throttle cable to the throttle arm on the engine (Fig. 10).



**Figure 10**

- |                      |                   |
|----------------------|-------------------|
| 1. Cable clamp screw | 3. Throttle cable |
| 2. Cable clamp       | 4. Throttle arm   |

7. Move the throttle to the (*Fast*) position.
8. Push the throttle arm to the rear of the engine as far as possible.
9. Install the new cable clamp and the cable clamp screw to the engine (Fig. 10). Tighten the cable clamp screw to lock the throttle cable in place.
10. Install the belt cover (Fig. 3).

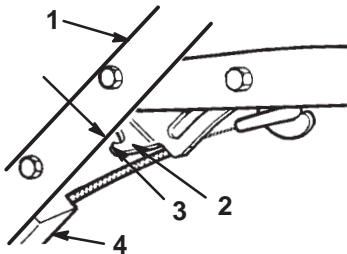
## Connect the Blade Brake Cable

Connect the blade brake cable in the *reverse order* of its disconnection. Refer to Disconnecting the Blade Brake Cable on page 2.

## Adjusting the Blade Brake Cable

1. Move the control bar toward the handle until you remove the slack in the cable (Fig. 11).

**Note:** The gap between the brake lever and the handle must be 3/16 to 1/4 in. (5 to 6 mm).



**Figure 11**

- |                |                                |
|----------------|--------------------------------|
| 1. Handle      | 3. 3/16 to 1/4 in. (5 to 6 mm) |
| 2. Brake lever | 4. Cable bracket               |

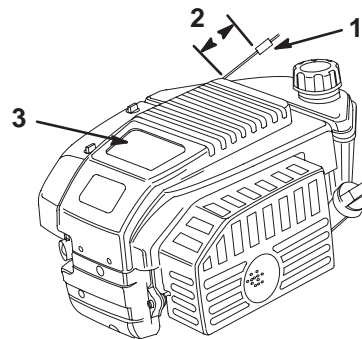
2. Loosen the jam nut on the brake cable (hand-push models only) or the nut on the cable bracket (self-propel models only). Insert a 3/16 to 1/4 in. (5 to 6 mm) thick object between the brake lever and the handle.
3. Turn the cable adjuster on the brake cable (hand-push models only) or pull down on the cable conduit (self-propel models only) until you remove all the slack from the wire.
4. Tighten the nut.

## Installing the Starter Rope

Install the starter rope in the rope guide (Fig. 12).

## Installing the Rope Stop

Crimp the rope stop onto the starter rope about 2 inches (5 cm) from the recoil opening on the engine (Fig. 12).



**Figure 12**

- |                 |                      |
|-----------------|----------------------|
| 1. Rope stop    | 3. Decal P/N 98-2002 |
| 2. 2 in. (5 cm) |                      |

## Installing the Cable Ties

Attach the cables to the handle using the new cable ties.

## Installing the Decal

Install the new decal on the engine (Fig. 12).

## Using the New Engine

To operate and maintain your new engine, refer to your engine owner's manual.