



# Service Advisory

W-124

Models: 12A-979U190 (LC210 SS) Self-Propelled Mower

Date: April 20, 2001

Subject: SuperStarter™ Starting System

The White Outdoor SuperStarter™ (or Briggs & Stratton Touch-N-Mow™) starting system is a revolutionary new starting feature giving your customers the convenience of a mechanical self-starting system, without the associated battery maintenance and battery replacement of an electric starter system. Once energized, the SuperStarter will start the engine with the push of a button. The purpose of this advisory is to alert you of important safeguards, diagnostics, and overall service procedures unique to the SuperStarter starting system.

First and foremost, is to learn safe handling and service procedures of the LC210 SS Self-Propelled Mower. It is important that you and any of your staff, who may handle this mower in any way, READ, UNDERSTAND, and FOLLOW the warnings and instructions in the Operator's Manual and on the mower.

**IT IS IMPORTANT TO READ AND UNDERSTAND THIS SERVICE ADVISORY.**



**WARNING**

**SuperStarter Starting System: If these instructions are not followed, traumatic amputation or severe laceration can result.**

- ALWAYS **disconnect** spark plug, de-energize starter, lock and remove safety key (Briggs & Stratton part number 695951) BEFORE performing ANY service to the engine or mower.
- DO NOT attempt any maintenance or repairs to the SuperStarter.
- NEVER assume starter is de-energized, even if safety key is in LOCK AND REMOVE position and/or removed from engine.
- BEFORE removing grass or other debris from under mower deck; BEFORE changing oil, air filter or spark plug; BEFORE removing blade for servicing; BEFORE performing any other service to engine or mower; BEFORE transporting mower - ALWAYS **DE-ENERGIZE SUPERSTARTER** .
- ALWAYS **lock and remove safety key and store in a safe place** until next use. The safety key is designed and intended to be removed from engine when not in use. Removing safety key will prevent unsupervised or unexpected starting of mower by children or unsuspecting adults. The safety key must be in the locked position before it can be removed.
- Keep hands and feet out from under mower deck and away from rotating parts when de-energizing the SuperStarter.

**WARRANTY:** Normal warranty procedure applies.

Briggs & Stratton Service Dealers should refer to Service Bulletin no. 693 before servicing the starting system. Contact your Central Sales & Service Distributor for engine service parts.

The SuperStarter contains various metallic wear components. It is NOT abnormal for small amounts of metal filings/powder to accumulate on the mower deck over time. It is also NOT abnormal for the engine to stop with a ratcheting sound. This sound is the SuperStarter control being reactivated/energized for the next start. This is normal and does not indicate a problem with the starter.

Service Manager	Parts Manager	Sales Manager	Service Tech.	Service Tech.

Circulate and Initial

## GENERAL INFORMATION



**WARNING:** Be familiar with the location and operation of all controls on the mower. Know how to stop the machine and disengage these controls quickly.

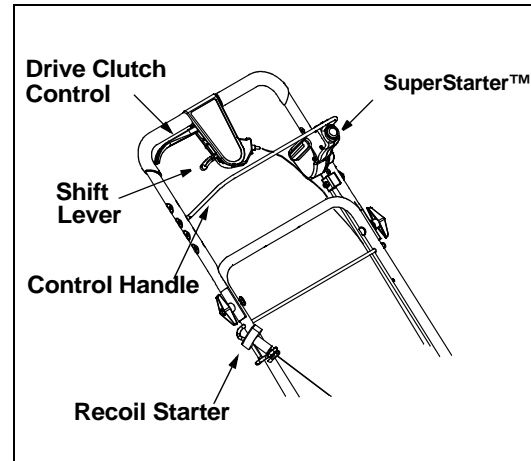
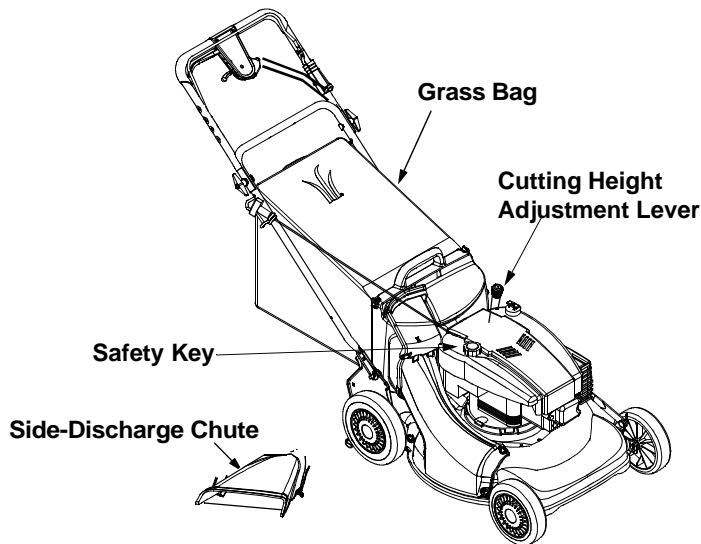


Figure 9

### Blade Control Handle

The blade control handle is located on the upper handle of the mower. The blade control handle and the starter control button must be depressed in order to operate the unit. Release blade control handle to stop the engine and the blade and to energize the SuperStarter™. See Figure 9.



**WARNING:** The blade control handle is a safety device. Never attempt to bypass its operations. Doing so, may result personal injury through contact with the rotating blade. The blade will rotate whenever the engine is running and when self-starter is de-energized.

### Cutting Height Adjustment Lever

The cutting height adjustment lever is located above the left rear wheel.

### Drive Clutch Control

The drive clutch control is located on the upper handle. Squeeze the drive clutch control to engage the drive system; release to disengage. Release the clutch control to slow down when approaching an obstacle, making a turn, or stopping the mower. See Figure 9.

### Shift Lever

The shift lever is located on the drive clutch control housing on the upper handle. This lever is used to

select the forward speed of the mower. When changing speed selection, release the drive clutch control. See Figure 9.

**NOTE:** Slide the shift lever to a different speed position only when the engine is running. Otherwise it may cause damage to the mower.

### Safety Key

The safety key is located on the engine. See Figure 9. It is a safety device used to activate and deactivate the SuperStarter™ system. The SuperStarter™ system will not work without the key in its proper position. See the engine manual for details on the safety key.

**NOTE:** The safety key must be in the "Run" position to start the mower using either the SuperStarter™ or the recoil starter system.

### Recoil Starter

The recoil starter is attached to the right lower handle. It is used to start the engine when the SuperStarter™ is in the **de-energized** mode. See Figure 9.

### SuperStarter™ Control Button

This button is located on the upper left side of the upper handle. See Figure 9. The start control button must be depressed fully while pulling the blade control handle toward upper handle for the engine to start. The starter control button will automatically return to the off/up position once the blade control handle is released.

**NOTE:** The SuperStarter™ control button must be depressed to start the engine with either the SuperStarter™ or the recoil starter system.

## OPERATION

### Before Starting



**WARNING:** Read, understand, and follow all instructions and warnings on the machine and in the Operator's Manual before operating.

- Attach spark plug wire to spark plug. Make certain the metal cap on the end of the spark plug wire is fastened securely over the metal tip on the spark plug.
- Check proper drive clutch operation using the neutral adjustment test.

### Neutral Adjustment Test

To perform the neutral adjustment test answer the following questions.

- With the drive clutch control released, push mower forward and pull it backward. Does it move freely?
- Squeeze the drive clutch control and pull the mower backward. Do the rear wheels lock?
- If you answered "yes" to all three questions, you can start your mower now.
- If you answered "no" to any of the three questions, you will have to adjust the drive clutch control.

### Gas & Oil Fill-Up



**WARNING:** Use extreme care when handling gasoline. Gasoline is extremely flammable and the vapors are explosive. Never fuel machine indoors or while the engine is hot or running. Extinguish cigarettes, cigars, pipes, and other sources of ignition.

### Starting Engine First Time

**NOTE:** Use recoil starter rope to start engine for the very first time. The mower is shipped with the safety key in the locked position and the SuperStarter™ in the de-energized mode.

1. Place lawn mower on a level surface outdoors.
2. Remove plastic wrap under fuel cap.
3. Check oil level.
4. Add fuel.
5. Open shut off valve (if equipped) 1/4 turn.
6. Push spark plug wire firmly on spark plug.
7. Turn SuperStarter™ safety key 1/4 turn clockwise to RUN position.
8. Firmly push primer bulb three times.
9. While standing at the operating position and behind

the upper handle, depress the starter control button fully with your right thumb.

10. Using your left hand, pull the blade control handle all the way toward the upper handle.
11. Release the button.
12. Grasp the recoil rope starter handle with your right hand and slowly pull towards you until you feel a slight resistance, then pull firmly until your arm is fully extended.
13. If engine does not start by second pull, repeat steps 8, 9 10, 11 and 12.

### Starting Engine Second Time

**NOTE:** Follow these instructions if the SuperStarter™ is already in the energized mode.



**WARNING:** NEVER assume starter is in the de-energized mode, even if the key is in the locked position and/or removed from the engine. ALWAYS de-energize starter prior to performing any maintenance or service to the engine and/or mower. Follow instructions on the engine and/or machine to de-energize starter.

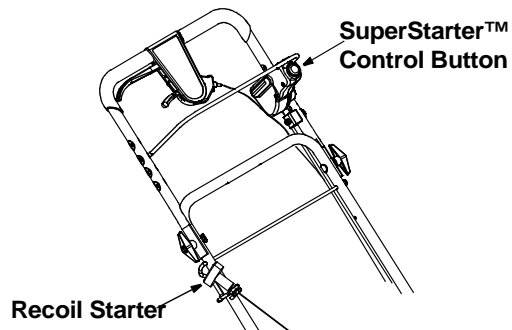


Figure 10

1. Check oil lever and add fuel, if necessary.
2. Open shut-off valve (if equipped) 1/4 turn.
3. Turn safety key clockwise 1/4 turn to Run position.
4. If the engine is cold, firmly push primer bulb on the engine three times.
5. While standing at the operating position and behind the upper handle, depress the starter control button fully with your right thumb.
6. Using your left hand, pull the blade control handle all the way toward the upper handle. See Figure 10. Starter will de-energize and engine will start. (NOTE: If engine does not start, release blade control handle and follow steps 8, 9, 10, 11 and 12 in the "First Time Starting Engine" instructions.)

**NOTE:** If any problems are encountered, refer to the Trouble Shooting Tips.

## To Stop Engine and Blade



**WARNING:** The blade will continue to rotate for three seconds after the blade control lever is released.

1. Release safety blade control handle and the start control button will automatically return to the off/up position. The engine and the blade will stop within a few seconds.

**NOTE:** Engine may stop with a ratcheting sound. This sound is the SuperStarter™ control being reactivated/energized for the next start.

2. Turn safety key 1/4 turn counterclockwise to “Lock” position. Remove key and store in a safe place.

## To De-Energize SuperStarter™

- Remove spark plug wire from spark plug. Turn safety key to RUN position (1/4 turn clockwise).
- While standing in the operating position, depress the starter control button fully with the thumb of your right hand.
- Using your left hand, pull the control handle all the way toward the upper handle.
- Release the button and wait until the blade and the starter stop rotating.
- Release the control handle and the SuperStarter™ button will automatically pop back to Off position.
- Remove the key.

**NOTE:** Engine will crank upon actuating equipment-starting controls, but will not spark if the spark plug wire was removed from the spark plug as described above. Once the engine has stopped cranking, the SuperStarter™ is de-energized.



**WARNING:** SuperStarter™ System: If the instructions, listed below, are not followed, amputation or severe laceration can result.

- ALWAYS disconnect spark plug, de-energize starter, lock and remove safety key BEFORE performing ANY service to the engine or mower.
- DO NOT attempt any maintenance or repairs to the SuperStarter™.
- NEVER assume starter is de-energized, even if the key is in LOCK AND REMOVE position and/or removed from engine.
- Always DE-ENERGIZE the SuperStarter™ BEFORE removing grass or other debris from under mower deck; BEFORE changing oil, air filter or spark plug; BEFORE removing blade for servicing; BEFORE performing any other service to engine or mower; BEFORE transporting mower.

- ALWAYS lock and remove safety key and store in a safe place until next use. The safety key is designed and intended to be removed from engine when not in use. Removing key will prevent unsupervised or unexpected starting of mower by children or unsuspecting adults. The safety key must be in the locked position before it can be removed.

## Using the Lawn Mower

- Thoroughly inspect the area where the equipment is to be used. Remove all stones, sticks, wire, bones, toys and other foreign objects which could be tripped over or picked up and thrown by the blade.



**WARNING:** Thrown objects can cause serious personal injury.

- For best results, do not cut wet grass because it tends to stick to the underside of the mower, preventing proper discharge of grass clippings, and could cause you to slip and fall. New grass, thick grass or wet grass may require a narrower cut.
- When using side-discharge mower, the best mowing pattern is one that allows the clippings to discharge towards the uncut part of the lawn. This permits recutting of the clippings to further pulverize them. When cutting high weeds, discharge towards cut portion, then recut at right angles to initial.
- For a healthier lawn, always cut off one-third or less of the total length of the grass. Lawn should be cut in the fall as long as there is growth.



**WARNING:** If you strike a foreign object with your mower, stop the engine. Remove wire from spark plug and de-energize starter, thoroughly inspect the mower for any damage, and repair the damage before restarting and operating the mower. Excessive vibration of the mower during operation is an indication of damage. The unit should be promptly inspected and repaired.

## TROUBLESHOOTING TIPS

When the SuperStarter will not start the engine, the first step in trouble-shooting is to determine whether or not a problem truly exists with the SuperStarter. Control cable, cable travel, or general engine starting problems may exist.

1. Check the pivot points on the control handle. The control handle must operate freely as it pivots in the LH and RH holes of the upper handle. There was a production change pertaining to the number of holes in the upper handle. An upper handle with 5 holes on the LH side and 4 holes on the RH side must have the control handle located in the second hole from the top. An upper handle with 4 holes on the LH side and 3 holes on the RH side must have the control handle located in the top/first hole.
2. Check control cable (part number 746-1141) travel. Refer to illustration on page 6 (Fig. 1) CONTROL CABLE TRAVEL MEASUREMENTS. Safety key must be in the RUN position when measuring cable travel. Note the position of the control handle when measuring cable travel. If **not** within specifications, cable may need to be replaced. There are no adjustments for cable travel.
3. If cable travel **is** within specifications, attempt to start engine using the recoil starter. Note: Safety key must be in the run position. Depress SuperStarter control button and pull control handle toward upper handle. Release control button. Then use recoil starter rope to start engine.
4. If engine fails to start using the recoil starter, trouble-shoot fuel, air intake, and ignition systems, etc. to determine reason for starting problem. Specifically, check ignition ground wire routing to stop terminal, mounted on SuperStarter. If stop wire is pinched between starter housing and cylinder, the engine will not start. **Never start engine with ground wire removed from stop terminal.** This will damage the starter.
5. If engine starts with recoil starter, allow engine to warm up before releasing control handle. During control handle release a loud ratcheting/winding sound **should** be heard during engine shut down. This is normal and confirms the power-spring of the SuperStarter is being energized.
6. If a loud ratcheting/winding sound **is not** heard during control handle release, and control cable travel **is** within specifications, the problem is in the SuperStarter. The entire starter will need to be replaced. There are no parts serviceable on the SuperStarter. **WARNING: Refer to Briggs & Stratton Service Bulletin no. 693 before attempting service.**
7. If a loud ratcheting/winding sound **is** heard during control handle release, attempt to re-start engine using SuperStarter.
8. If the SuperStarter **does not** crank the engine, and control cable travel **is** within specifications, the problem **is** in the SuperStarter. The entire starter will need to be replaced. There are no parts serviceable on SuperStarter. **WARNING: Refer to Briggs & Stratton Service Bulletin no. 693 before attempting service.**
9. If the SuperStarter **does** crank the engine, the problem **is not** with the SuperStarter.

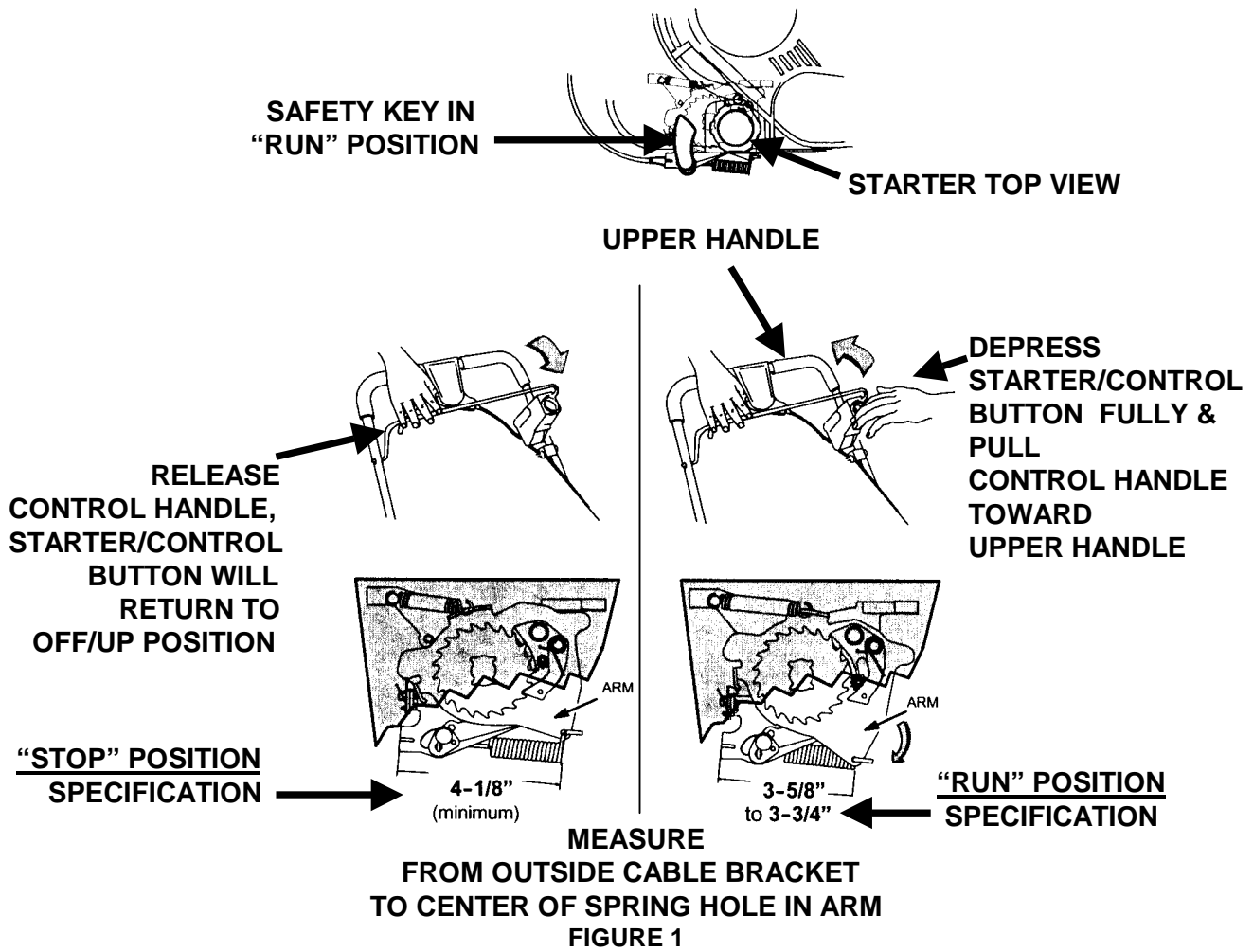
## MANUAL DE-ENERGIZING SUPERSTARTER

Refer to illustration on page 6 (Fig. 2) MANUAL DE-ENERGIZING SUPERSTARTER.

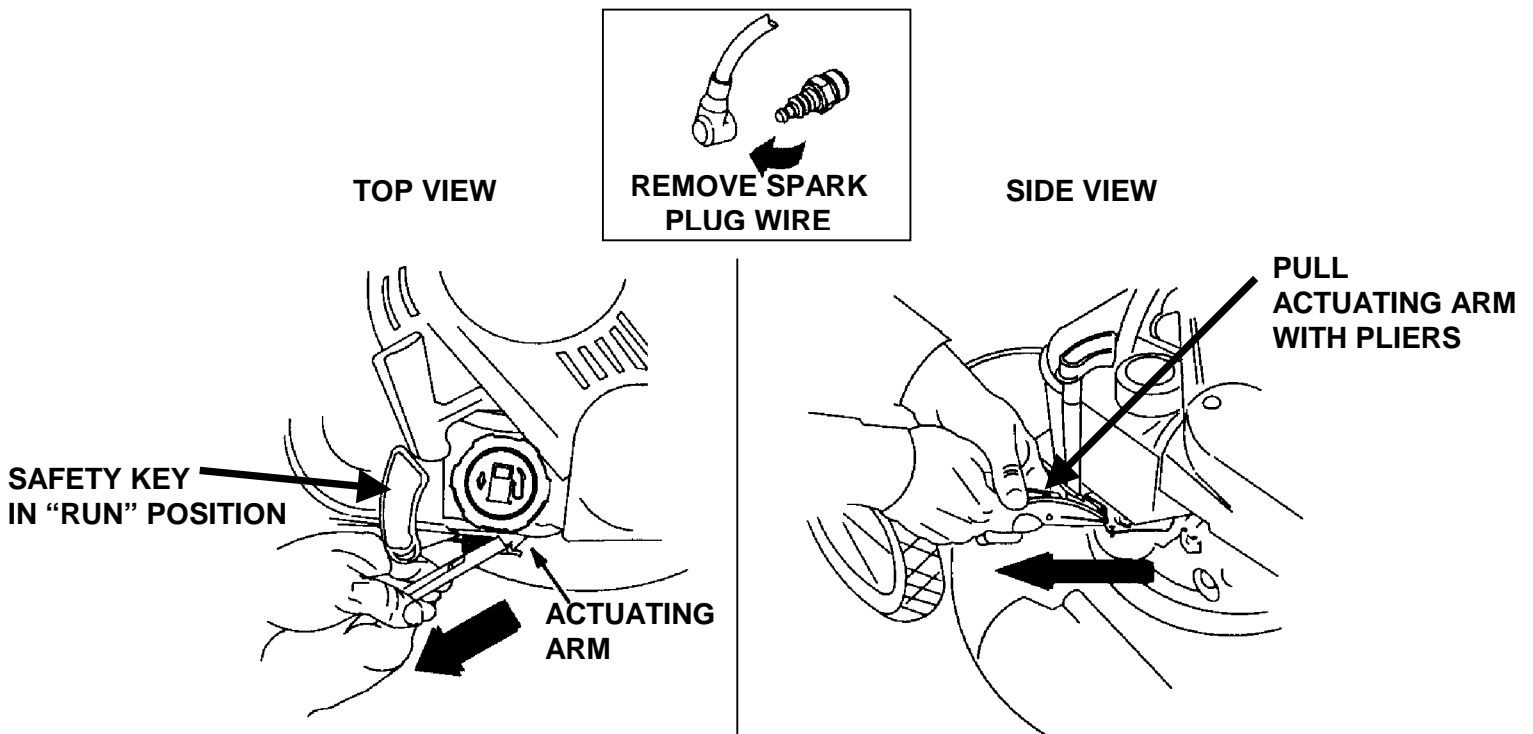
To manually de-energize the SuperStarter, disconnect spark plug wire, turn safety key to the RUN position (1/4 turn clockwise), and manually actuate the starter control by pulling the actuating arm with pliers. Refer to the top and side view illustration on page 6 (Fig. 2).

**WARNING: Keep hands and feet out from under mower deck and away from rotating parts when manually de-energizing starter.**

**CONTROL CABLE TRAVEL MEASUREMENTS**



**MANUAL DE-ENERGIZING SUPERSTARTER**



**FIGURE 2**