

Briggs & Stratton 593843

Briggs & Stratton 593843 Voltage Regulator Instruction Manual

1. INTRODUCTION

This manual provides essential information for the proper installation, function, and maintenance of your Briggs & Stratton 593843 Voltage Regulator. The voltage regulator is a critical component in your engine's electrical system, responsible for converting alternating current (AC) from the stator into direct current (DC) and maintaining a stable voltage output to charge the battery and power electrical accessories.

2. SAFETY INFORMATION

- Always disconnect the battery's negative terminal before performing any work on the engine's electrical system to prevent accidental short circuits or electrical shock.
- Wear appropriate personal protective equipment, including safety glasses and gloves, when working with engine components.
- Ensure the engine is cool before beginning any maintenance or installation procedures.
- If you are unsure about any procedure, consult a qualified service technician or refer to your engine's specific service manual.
- Keep children and pets away from the work area.

3. SETUP AND INSTALLATION

The Briggs & Stratton 593843 Voltage Regulator is a genuine OEM replacement part designed for various Briggs & Stratton engine models. Proper installation is crucial for optimal performance and safety. Always refer to your specific engine's service manual for detailed, model-specific installation instructions and wiring diagrams.



Image 1: Briggs & Stratton 593843 Voltage Regulator. This image shows the grey-colored voltage regulator, a compact electronic component with several electrical terminals.

General Installation Steps (Consult Service Manual for Specifics):

1. **Locate the Existing Regulator:** Identify the location of the old voltage regulator on your engine. It is typically mounted near the engine block or under the engine shroud.
2. **Disconnect Wiring:** Carefully disconnect all electrical connectors and wires attached to the old regulator. Note the position and color of each wire for correct re-connection. Taking a photograph before disconnecting can be helpful.
3. **Remove Old Regulator:** Unbolt or unmount the old voltage regulator from its position.
4. **Install New Regulator:** Mount the new Briggs & Stratton 593843 Voltage Regulator in the same location, ensuring it is securely fastened.
5. **Reconnect Wiring:** Reconnect all electrical connectors and wires to the new regulator, ensuring they match the original configuration. Pay close attention to polarity.
6. **Reconnect Battery:** Once the regulator is securely installed and wired, reconnect the battery's negative terminal.
7. **Test System:** Start the engine and check the battery charging voltage with a multimeter to ensure it is within the manufacturer's specified range (typically 13.5-14.5 volts DC).

4. OPERATING PRINCIPLES

The Briggs & Stratton 593843 Voltage Regulator operates automatically once the engine is running. Its primary function is to regulate the electrical output from the engine's stator (alternator) to a consistent DC voltage level suitable for charging the battery and powering the engine's electrical accessories. This prevents both undercharging and overcharging of the battery, which can lead to battery damage or failure of other electrical components.

5. MAINTENANCE

The voltage regulator itself typically requires minimal maintenance. However, periodic inspection of the surrounding electrical system is recommended:

- **Inspect Wiring:** Regularly check all wires and connectors leading to and from the voltage regulator for signs of wear, fraying, corrosion, or loose connections.
- **Clean Connections:** Ensure all electrical terminals are clean and free of dirt, grease, or corrosion. Use a wire brush or electrical contact cleaner if necessary.
- **Environmental Protection:** Keep the area around the regulator free from excessive dirt, debris, and moisture, which can contribute to corrosion or damage.

6. TROUBLESHOOTING

If you experience issues with your engine's charging system, the voltage regulator may be a contributing factor. Here are common symptoms and troubleshooting steps:

Symptom	Possible Cause	Action
Battery not charging or undercharging	Faulty voltage regulator, loose or corroded wiring, faulty stator, dead battery.	Test battery condition. Inspect all wiring and connections. Test stator output (AC voltage). Test regulator output (DC voltage). Replace faulty component.
Battery overcharging (e.g., boiling battery, strong sulfur smell)	Faulty voltage regulator (most common cause), incorrect wiring.	Immediately disconnect battery. Test regulator output. Replace regulator if it fails to regulate voltage. Verify correct wiring.
Erratic electrical performance, dimming lights	Loose connections, intermittent regulator failure, low battery charge.	Check battery charge. Inspect all electrical connections for tightness and corrosion. Test regulator and stator.

Note: Testing electrical components like the voltage regulator and stator typically requires a multimeter and knowledge of specific testing procedures outlined in your engine's service manual. If you are not comfortable performing these tests, seek professional assistance.

7. SPECIFICATIONS

Specification	Value
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Specification	Value
Product Dimensions	2.88 x 3.38 x 4 inches
Item Weight	7.7 ounces
Manufacturer	Briggs and Stratton
Item Model Number	593843
ASIN	B00THQHTB6