

400707, 42A777, 42A707, 42B707, 460777, 400417, 400777, 402415, 402437, 402707, 422437

Electric Starter Replacement Manual

For Briggs & Stratton V-Twin Lawn Mower Engines

1. PRODUCT OVERVIEW

This document provides essential instructions for the installation, operation, maintenance, and troubleshooting of your new electric starter. This starter is designed as a direct replacement for various Briggs & Stratton V-Twin lawn mower engines.

Important: Always ensure the engine is off, cool, and the battery is disconnected before performing any installation or maintenance procedures.

2. COMPATIBILITY

This electric starter is compatible with the following Briggs & Stratton V-Twin engine models:

- 400417-0119-01, 400417-1501-01, 400417-1502-01
- 400437-0015-01, 400437-0016-01, 400437-0111-01, 400437-0112-01, 400437-0113-99, 400437-0120-01, 400437-0121-99, 400437-0122-01, 400437-1200-01, 400437-1202-01, 400437-1205-01, 400437-4015-01, 400437-4016-01
- 400447-1201-01, 400447-1203-01, 400447-1206-01, 400447-1207-01, 400447-4002-01
- 400707-0010-01, 400707-0030-01, 400707-0040-99, 400707-0041-01, 400707-0100-01, 400707-0101-01, 400707-0102-99, 400707-0110-01, 400707-0111-01
- 40A777-1201-01, 40A777-1221-01, 40A777-1226-01, 40A777-1227-01, 40A777-1250-01
- 42A707-1107-01, 42A707-1237-01, 42A707-1238-01, 42A707-1238-02, 42A707-1251-01, 42A707-1252-01, 42A707-1269-01, 42A707-1273-01, 42A707-1293-99, 42A707-1299-01, 42A707-1300-01, 42A707-1550-01, 42A707-1600-01, 42A707-1623-99, 42A707-1624-01, 42A707-1625-01, 42A707-1631-99, 42A707-1652-01, 42A707-1653-01, 42A707-1655-01, 42A707-1707-E1, 42A707-1838-A1, 42A707-2107-E1, 42A707-2238-E1, 42A707-2238-E2, 42A707-2240-99, 42A707-2299-E1, 42A707-2300-E1, 42A707-2550-E1, 42A707-2600-E1, 42A707-2625-E1, 42A707-2652-E1, 42A707-2653-E1, 42A707-2655-E1
- 42A777-1127-01, 42A777-1201-01, 42A777-1236-01, 42A777-1271-01, 42A777-1272-01, 42A777-1285-01, 42A777-1286-01, 42A777-1295-01, 42A777-1298-01, 42A777-1727-E1, 42A777-1886-A1
- 422447-4059-01

Please verify your engine model number before installation. If unsure, consult your engine's manual or contact a qualified technician.

3. SPECIFICATIONS

Specification	Value
Voltage	12 Volts
Rotation	Counter-Clockwise (CCW)
Number of Teeth	16
Starter Type	PMDD (Permanent Magnet Direct Drive)
Gear Outer Diameter	1.587 inches (40.3 mm)
Mounting Ear 1 Hole	8.3 mm Unthreaded
Mounting Ear 2 Hole	8.3 mm Unthreaded
Mounting Ear 3 Hole	10.3 mm Unthreaded
Field Case Length	4.25 inches (108 mm)
Weight	5.655 lbs (2.57 kg)
Material	Metal

4. SAFETY INFORMATION

- Always wear appropriate personal protective equipment (PPE) such as safety glasses and gloves when working on machinery.
- Ensure the engine is completely off and cool before beginning any work.
- Disconnect the battery's negative terminal first, then the positive terminal, to prevent accidental starting or electrical shorts.
- Keep hands, hair, and loose clothing away from moving parts.
- Refer to your lawn mower's or engine's original service manual for specific safety precautions and procedures.

5. INSTALLATION (SETUP)

This section outlines the general steps for replacing an electric starter. Specific procedures may vary depending on your engine and equipment model. Always consult your equipment's service manual for detailed instructions.

1. **Preparation:** Park the lawn mower on a level surface. Ensure the engine is off and cool. Disconnect the spark plug wire(s) to prevent accidental starting. Disconnect the battery terminals (negative first, then positive).
2. **Locate the Starter:** Identify the existing electric starter on your engine. It is typically mounted on the engine block and connected to the flywheel.
3. **Disconnect Wiring:** Carefully disconnect the electrical wires from the old starter. Note their positions for reinstallation.
4. **Remove Old Starter:** Unbolt the old starter from the engine block. There are usually two or three mounting bolts.

5. **Inspect Mounting Area:** Clean any debris or corrosion from the starter mounting surface on the engine.
6. **Install New Starter:** Position the new electric starter onto the engine block, aligning the mounting holes. Secure it with the original mounting bolts. Do not overtighten.



Image 1: Side view of the new electric starter, highlighting the motor housing and the gear assembly.

7. **Connect Wiring:** Reconnect the electrical wires to the new starter. Ensure connections are secure and correct.



Image 2: Angled view of the new electric starter, illustrating the mounting points and the electrical terminal.

8. **Reconnect Battery:** Reconnect the battery terminals (positive first, then negative). Reconnect the spark plug wire(s).
9. **Test:** Attempt to start the engine to verify proper operation of the new starter.



Image 3: Another angled view of the new electric starter, providing a closer look at the gear and housing details.

6. OPERATION

Once the electric starter is correctly installed, its operation is integrated with your lawn mower's ignition system.

1. Ensure all safety precautions for your lawn mower are followed (e.g., engaging the parking brake, disengaging blades).
2. Insert the ignition key into the ignition switch.
3. Turn the key to the "START" position. The electric starter will engage the engine's flywheel, rotating the crankshaft to initiate combustion.
4. Once the engine starts, release the key, and it will return to the "RUN" position.
5. If the engine does not start after a few seconds, release the key, wait briefly, and attempt to start again. Avoid prolonged cranking to prevent overheating the starter or draining the battery.

7. MAINTENANCE

Proper maintenance can extend the life of your electric starter and ensure reliable engine starting.

- **Keep Clean:** Periodically inspect the starter for accumulation of dirt, grass clippings, or oil. Clean the exterior with a dry cloth. Avoid using high-pressure water directly on the starter.
- **Check Connections:** Ensure all electrical connections to the starter are clean, tight, and free of corrosion. Loose or corroded connections can impede current flow and affect starter performance.
- **Battery Health:** A strong battery is crucial for starter operation. Regularly check your lawn mower's battery charge and condition. A weak battery can cause the starter to struggle or fail.
- **Flywheel Inspection:** During other engine maintenance, inspect the flywheel teeth for wear or damage. Damaged flywheel teeth can prevent the starter gear from engaging properly.
- **Avoid Over-Cranking:** Do not continuously crank the engine for extended periods. This can overheat the starter motor and reduce its lifespan. If the engine doesn't start quickly, investigate the underlying issue.

8. TROUBLESHOOTING

If your electric starter is not functioning correctly, consider the following common issues and solutions:

Problem	Possible Cause	Solution
Starter does not engage or makes a clicking sound.	Weak or dead battery. Loose or corroded battery cables/connections. Faulty solenoid. Engine seized.	Charge or replace battery. Clean and tighten all battery and starter connections. Test and replace solenoid if necessary. Consult a mechanic for engine issues.
Starter spins but does not engage the engine.	Damaged starter drive gear (bendix). Damaged flywheel teeth.	Inspect and replace starter if drive gear is faulty. Inspect flywheel and replace if teeth are damaged.
Starter grinds or makes a harsh noise.	Misalignment of starter. Damaged starter drive gear or flywheel teeth.	Recheck starter mounting and alignment. Inspect and replace damaged components.
Starter motor overheats.	Prolonged cranking. Engine hard to start.	Limit cranking time to 5-10 seconds, allow cooling. Address engine starting issues (fuel, spark, compression).

If troubleshooting steps do not resolve the issue, it is recommended to consult a qualified small engine technician.

9. WARRANTY AND SUPPORT

This product includes a **30-day money-back guarantee** from the date of purchase. If you are not satisfied with the product, you may be eligible for a refund within this period.

For technical assistance or warranty claims, please refer to the contact information provided by your retailer or the product packaging.