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Briggs & Stratton 397358

Briggs & Stratton 397358 Magneto Armature Instruction Manual

Genuine Replacement Part for 5 HP and 550 Series Engines

1. Product Overview

The Briggs & Stratton 397358 Magneto Armature is a genuine OEM replacement part designed for select 5 HP horizontal and vertical shaft engines, as well as 550 series engines. This component is crucial for the ignition system, ensuring reliable spark generation for engine operation. It serves as a direct replacement for the original ignition coil, points, and condenser system, offering a modern, maintenance-free solution.

Key Features:

- Genuine Briggs & Stratton replacement part.
- Replaces older ignition coil, points, and condenser systems.
- Ensures proper fit and performance for engine longevity.
- Designed for select 5 HP horizontal/vertical shaft and 550 series engines.

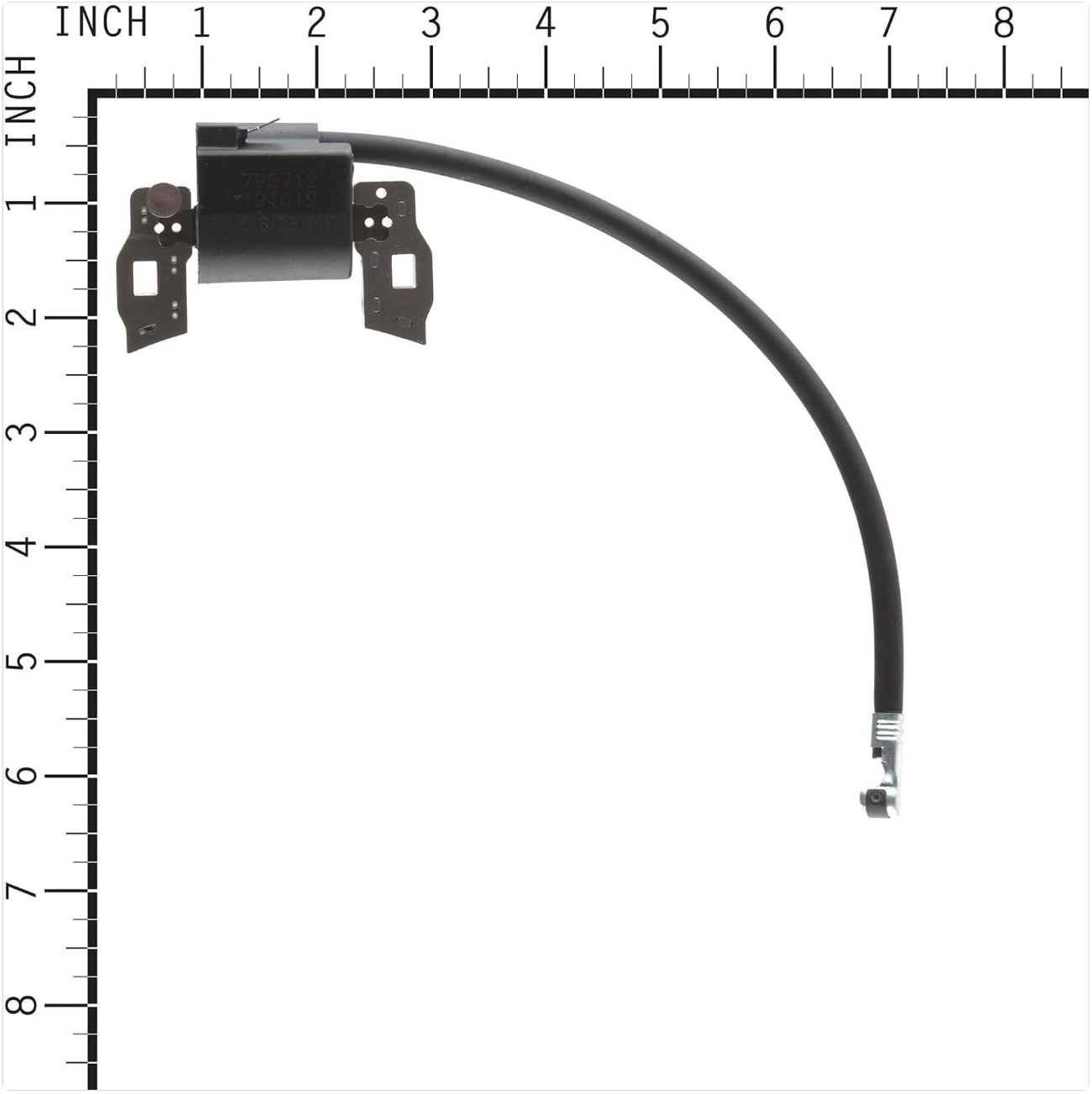

Figure 1: Briggs & Stratton 397358 Magneto Armature. This image displays the complete magneto armature with its coil and spark plug wire.

2. Installation Instructions

Proper installation of the magneto armature is essential for correct engine function. Always ensure the engine is cool and the spark plug wire is disconnected before beginning any maintenance or installation procedures.

1. **Safety First:** Disconnect the spark plug wire from the spark plug to prevent accidental starting. Ensure the engine is off and cool.
2. **Locate Old Armature:** Identify the existing magneto armature (ignition coil) on your engine. It is typically mounted near the flywheel.
3. **Remove Old Armature:** Carefully unbolt and remove the old armature. Disconnect any associated wiring. If your engine uses points and a condenser, these components will also be removed as this new armature replaces them.
4. **Install New Armature:** Position the new Briggs & Stratton 397358 Magneto Armature in the same location as the old one. Secure it with the appropriate bolts, but do not fully tighten them yet.

5. **Set Air Gap:** This is a critical step. Use a non-magnetic feeler gauge or the provided cardboard shim (often included with new armatures) to set the air gap between the armature legs and the flywheel magnets. The recommended gap is typically 0.006 to 0.010 inches (0.15 to 0.25 mm). Place the shim between the armature and the flywheel, then push the armature firmly against the flywheel.
6. **Tighten Bolts:** While holding the armature firmly against the flywheel (with the shim in place), tighten the mounting bolts securely. Once tightened, remove the shim.
7. **Connect Wiring:** Reconnect any necessary wiring. If your engine previously used points and a condenser, ensure the new armature's wiring is correctly routed and connected according to your engine's service manual. Some models may require a plug to cover the old points housing.
8. **Reconnect Spark Plug:** Reconnect the spark plug wire to the spark plug.
9. **Test Engine:** Attempt to start the engine to verify proper installation and operation.



Figure 2: Magneto Armature with scale. This image shows the physical dimensions of the armature, useful for visual confirmation during installation.

3. Operation

Once correctly installed, the Briggs & Stratton 397358 Magneto Armature operates automatically as part of your engine's ignition system. As the engine's flywheel rotates, magnets on the flywheel pass by the armature, inducing an electrical current in the coil. This current is then stepped up to a high voltage, creating a spark at the spark plug, which ignites the fuel-air mixture in the combustion chamber. This process is continuous, ensuring smooth engine operation.

4. Maintenance

The Briggs & Stratton 397358 Magneto Armature is designed to be a low-maintenance component. Unlike older systems with points and condensers, this solid-state armature requires minimal attention. However, periodic checks can help ensure its longevity and reliable performance:

- **Cleanliness:** Keep the area around the armature and flywheel free of dirt, debris, and oil buildup. Excessive grime can interfere with magnetic fields or cause overheating.
- **Wiring Inspection:** Periodically inspect the spark plug wire and all electrical connections for signs of wear, fraying, or corrosion. Ensure connections are secure.
- **Spark Plug Condition:** A healthy spark plug is vital for proper ignition. Replace the spark plug according to your engine's maintenance schedule.
- **Air Gap Check:** If ignition issues arise, re-check the air gap between the armature and flywheel to ensure it remains within specifications.

5. Troubleshooting

If your engine experiences ignition problems after installing or using the 397358 Magneto Armature, consider the following troubleshooting steps:

- **No Spark:**
    - Verify the spark plug wire is securely connected to both the armature and the spark plug.
    - Check the spark plug for fouling or damage; replace if necessary.
    - Ensure the air gap between the armature and flywheel is correctly set (0.006-0.010 inches).
    - Inspect the kill switch wiring for any shorts or disconnections.
- **Engine Runs Poorly/Misfires:**
    - A dirty or improperly gapped spark plug can cause misfires.
    - Ensure all electrical connections are clean and tight.
    - Check for proper fuel delivery and carburetor function, as these can mimic ignition issues.
- **Engine Hard to Start:**
    - Confirm the air gap is correct.
    - Check the spark plug condition.
    - Ensure the engine's compression is adequate.

If these steps do not resolve the issue, consult a qualified service technician or refer to your engine's specific service manual.

6. Specifications

Brand	Briggs & Stratton
Model Number	397358
Item Type	Replacement Ignition Coil Magneto Armature
Compatible Engine Types	Select 5 HP horizontal and vertical shaft engines, 550 series engines
Item Dimensions (L x W x H)	Approximately 1 x 7 x 8 inches (Package Dimensions: 2-3/4" L x 3-1/2" W x 4" H)
Item Weight	0.19 Kilograms
Installation Type	Screw-In or Bolt-On
Part Interchange Info	Compatible with other manufacturers' ignition coils in lawn mower engines. Interchange part numbers: BS397358 (Briggs & Stratton).
UPC / GTIN	024847825435

7. Warranty Information

The Briggs & Stratton 397358 Magneto Armature is covered by a manufacturer's warranty of **90 days for defects in material and workmanship**. This warranty applies from the date of purchase. Please retain your proof of purchase for any warranty claims. For full details and terms, refer to the official Briggs & Stratton warranty policy or contact customer support.

8. Support and Contact

For further assistance, technical support, or to inquire about service and replacement parts, please contact Briggs & Stratton directly. You can find contact information and additional resources on the official Briggs & Stratton website.

Online Resources: www.briggsandstratton.com

When contacting support, please have your engine model and serial numbers available, along with the part number 397358, for quicker service.

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