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Briggs & Stratton 398670

Briggs & Stratton Engine Parts User Manual

Model: 398670 Valve/Spring (Replaces 493765)

1. Product Overview

This manual provides essential information for the Briggs & Stratton 398670 Valve/Spring assembly, a critical replacement component for various Briggs & Stratton engines. This part is designed to ensure proper engine operation by controlling the flow of gases within the combustion chamber. It is also known to replace part number 493765.
The product is a new, genuine Briggs & Stratton part. Please note that some items may have cosmetic imperfections due to handling or storage, but are fully functional and inspected to ensure proper operation.

2. Safety Information

Always prioritize safety when working with engine components. Failure to follow safety precautions can result in serious injury or damage to equipment.

- **Disconnect Spark Plug:** Before performing any work on the engine, always disconnect the spark plug wire to prevent accidental starting.
- **Wear Protective Gear:** Use appropriate personal protective equipment (PPE) such as safety glasses and gloves.
- **Engine Cool Down:** Allow the engine to cool completely before handling any parts to avoid burns.
- **Proper Tools:** Use the correct tools for the job to prevent damage to parts or injury.
- **Consult Service Manual:** Refer to your specific engine's service manual for detailed disassembly and assembly procedures.
- **Keep Area Clean:** Ensure your work area is clean and free of debris to prevent contamination of engine components.

3. Components

The Briggs & Stratton 398670 assembly consists of two primary components:

- **Valve:** A threaded, cylindrical metal component with a slotted head and a tapered tip, designed to regulate fluid or gas flow.
- **Spring:** A coiled metal component that provides the necessary tension for the valve's operation, ensuring it returns to its proper position.



Image: Briggs & Stratton 398670 Valve and Spring assembly. The valve is a threaded, cylindrical metal component with a slotted head and a tapered tip. The spring is a coiled metal component, designed to provide tension for the valve.

4. Installation

Installation of the valve and spring requires careful attention to detail. This is a general guide; always consult your specific engine's service manual for precise instructions and torque specifications.

1. **Preparation:** Ensure the engine is cool and the spark plug wire is disconnected. Clean the area around the valve assembly to prevent debris from entering the engine.
2. **Access:** Depending on your engine model, you may need to remove the cylinder head cover or other components to gain access to the valve assembly.
3. **Remove Old Components:** Carefully remove the old valve and spring. Note their orientation and any associated retainers or seals.
4. **Inspect:** Inspect the valve seat and guide for wear or damage. Clean as necessary.
5. **Install New Spring:** Place the new spring into its designated position. Ensure it is seated correctly.
6. **Install New Valve:** Carefully insert the new valve through the spring and into its guide. Ensure the tapered tip is

facing the correct direction (typically towards the combustion chamber).

7. **Secure:** Reinstall any retainers, keepers, or seals that hold the valve and spring in place.
8. **Reassembly:** Reassemble any engine components that were removed to access the valve assembly, ensuring all fasteners are tightened to the manufacturer's specifications.
9. **Test:** After reassembly, reconnect the spark plug wire and perform a test run to ensure proper engine operation. Listen for unusual noises and check for leaks.

5. Maintenance

While the valve and spring themselves are replacement parts, their longevity is directly tied to overall engine maintenance. Regular engine maintenance helps prevent premature wear and ensures optimal performance.

- **Oil Changes:** Regularly change engine oil according to the manufacturer's recommendations. Clean oil reduces friction and wear on internal engine components, including valves.
- **Air Filter:** Keep the air filter clean to prevent dirt and debris from entering the engine, which can cause wear on valve seats and guides.
- **Fuel Quality:** Use clean, fresh fuel to prevent carbon buildup on valves and in the combustion chamber.
- **Valve Clearance:** For engines with adjustable valves, periodically check and adjust valve clearance as specified in your engine's service manual.

6. Troubleshooting

A faulty valve or spring can lead to various engine performance issues. If you experience any of the following symptoms, inspect your valve assembly:

- **Loss of Compression:** Worn or bent valves, or weak springs, can lead to poor cylinder sealing and a noticeable loss of compression.
- **Engine Misfires or Runs Rough:** Improper valve operation can disrupt the combustion cycle, causing the engine to misfire or run unevenly.
- **Excessive Smoke:** Worn valve guides or seals can allow oil to enter the combustion chamber, resulting in blue smoke from the exhaust.
- **Unusual Engine Noises:** A bent valve or a broken spring can cause ticking, tapping, or other abnormal noises from the engine.
- **Difficulty Starting:** Poor compression due to valve issues can make the engine hard to start.

If you suspect a valve or spring issue, it is recommended to consult a qualified technician or refer to your engine's detailed service manual for diagnostic procedures.

7. Specifications

Attribute	Detail
Part Number	398670
Replaces Part Number	493765
Manufacturer	Briggs & Stratton

Attribute	Detail
Product Type	Valve/Spring Engine Part
Condition	New (may have cosmetic imperfections from handling/storage)

8. Warranty Information

This Briggs & Stratton genuine replacement part includes a Manufacturer's Warranty, if applicable. The specific terms and duration of the warranty are determined by Briggs & Stratton. Please retain your proof of purchase for warranty claims.
For detailed warranty information, please refer to the official Briggs & Stratton website or contact their customer support directly. Cosmetic issues due to handling or storage, as noted in the product description, typically do not affect functionality and may not be covered under warranty unless they impair performance.

9. Support

For further assistance, technical support, or to locate authorized service centers, please contact Briggs & Stratton directly.

- **Briggs & Stratton Official Website:** www.briggsandstratton.com
- **Customer Service:** Refer to the "Contact Us" section on their official website for phone numbers and email support options.
- **Service Manuals:** Detailed service manuals for specific engine models can often be found and downloaded from the Briggs & Stratton website.

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