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Briggs & Stratton 298904

Briggs & Stratton Piston Kit User Manual

Model: 298904 (Replacement Part)

For Briggs & Stratton 90000 and 130000 Series Engines

Introduction

This manual provides essential information for the proper handling, installation, and maintenance of your Briggs & Stratton Piston Kit. This kit is designed as a direct replacement for original part number 298904 and is compatible with Briggs & Stratton 90000 and 130000 series engines, specifically 3.5 HP vertical and 5 HP horizontal models. Adhering to these instructions will help ensure optimal performance and longevity of your engine.

Safety Information

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

- Wear appropriate personal protective equipment (PPE), including safety glasses and gloves.
- Ensure the engine is cool and disconnected from its power source (e.g., spark plug wire removed) before beginning any work.
- Work in a well-ventilated area.
- Keep all tools and parts organized to prevent misplacement.
- If unsure about any procedure, consult a qualified technician or refer to the complete engine service manual.

Product Overview

The Briggs & Stratton Piston Kit includes all necessary components for a complete piston replacement. Familiarize yourself with each part before installation.



Image: A complete piston kit showing the piston, piston pin, two circlips, and a set of piston rings (oil ring, compression rings).

- **Piston:** The main component that moves within the cylinder.
- **Piston Rings:** Typically includes compression rings and an oil control ring, which seal the combustion chamber and regulate oil.
- **Piston Pin (Gudgeon Pin):** Connects the piston to the connecting rod.
- **Circlips (Retaining Clips):** Secure the piston pin within the piston.

Installation (Setup)

Piston installation requires precision and knowledge of engine mechanics. It is highly recommended that this procedure be performed by a qualified small engine technician.

1. **Preparation:** Thoroughly clean the cylinder bore and connecting rod. Inspect for any damage or wear. Ensure all old gasket material is removed.
2. **Piston Ring Installation:** Carefully install the piston rings onto the piston. Follow the manufacturer's specific instructions for ring orientation and gap placement. Use a piston ring expander tool to prevent damage.
3. **Piston Pin Installation:** Lubricate the piston pin and its bores. Insert the piston pin through the piston and connecting rod. Secure it with the new circlips, ensuring they are fully seated in their grooves.
4. **Lubrication:** Apply a thin coat of clean engine oil to the piston skirt, piston rings, and cylinder bore before installation.
5. **Piston Insertion:** Using a piston ring compressor, carefully guide the piston assembly into the cylinder bore, ensuring the piston's "FRONT" or "FLY" mark (if present) is oriented correctly towards the flywheel side of the engine.
6. **Reassembly:** Reassemble the engine components according to the engine manufacturer's service manual, paying close attention to torque specifications for connecting rod bolts and cylinder head bolts.

Post-Installation Checks and Break-in (Operating)

After installation, perform the following checks and follow break-in procedures to ensure proper engine function.

- **Fluid Levels:** Verify engine oil level is correct.

- **Connections:** Double-check all electrical and fuel connections.
- **Initial Start-up:** Start the engine and allow it to warm up. Listen for any unusual noises.
- **Break-in Period:** Operate the engine under light to moderate load for the first few hours. Avoid prolonged idling or full-throttle operation during this period to allow piston rings to seat properly. Refer to your engine's specific break-in recommendations.

Maintenance

Regular maintenance is crucial for the longevity of your engine and its new piston kit.

- **Oil Changes:** Change engine oil at recommended intervals using the correct type and viscosity of oil. Clean oil prevents premature wear on piston rings and cylinder walls.
- **Air Filter:** Regularly inspect and clean or replace the air filter. A dirty air filter can lead to rich fuel mixtures, carbon buildup, and reduced engine life.
- **Spark Plug:** Inspect and replace the spark plug as needed to ensure efficient combustion.
- **Fuel System:** Use fresh, clean fuel. Consider using a fuel stabilizer if the engine will be stored for extended periods.

Troubleshooting

If you experience issues after installing the piston kit, consider the following common problems:

Problem	Possible Cause	Solution
Excessive Smoke (Blue/Gray)	Improper piston ring seating, damaged rings, incorrect oil level.	Ensure proper break-in. Re-inspect piston rings for damage or incorrect installation. Verify oil level.
Loss of Engine Power	Poor compression due to improperly seated or damaged rings, incorrect valve timing.	Perform a compression test. Re-check piston ring installation and engine timing.
Unusual Engine Noises	Incorrectly installed piston pin, loose connecting rod bolts, foreign object in cylinder.	Immediately shut down the engine. Disassemble and inspect all components for proper installation and damage.

For complex issues, it is always best to consult a professional engine repair service.

Specifications

- **Product Type:** Complete Piston Kit
- **Brand:** Briggs & Stratton
- **Compatible Engine Series:** Briggs & Stratton 90000, 130000
- **Replaces OEM Part Number:** 298904
- **Piston Diameter:** 65.1 mm
- **Approximate Product Weight:** 4.54 g
- **Application:** 3.5 HP Vertical, 5 HP Horizontal Engines

Warranty Information

Specific warranty terms for this replacement piston kit are typically provided by the seller or the manufacturer at the time of

purchase. Please retain your proof of purchase. For detailed warranty information, contact Briggs & Stratton customer support or the authorized dealer from whom you purchased this product.

Support

For further assistance, technical questions, or to locate an authorized service center, please visit the official Briggs & Stratton website or contact their customer service department.
Briggs & Stratton Official Website: www.briggsandstratton.com

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