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**Briggs & Stratton 690981, 690982**

# Briggs & Stratton Push Rods Instruction Manual

Models: 690981 (Steel) & 690982 (Aluminum)

## 1. Product Overview

This manual provides essential information for the installation and maintenance of genuine Briggs & Stratton Push Rods, models 690981 (Steel) and 690982 (Aluminum). These components are critical for the proper operation of your engine's valve train, ensuring precise valve timing and efficient engine performance.



Image 1.1: Genuine Briggs & Stratton Push Rods (one steel, one aluminum).

## 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.

- Ensure the engine is completely cool and disconnected from any power source (e.g., spark plug wire removed) before beginning any work.
- Wear appropriate personal protective equipment (PPE), including safety glasses and gloves.
- Work in a well-ventilated area.
- Keep all tools and parts organized to prevent misplacement or accidental damage.
- Refer to your specific engine's service manual for detailed disassembly and reassembly procedures.

## 3. Setup and Installation

This section outlines the general steps for replacing engine push rods. Specific procedures may vary depending on your engine model. Always consult your engine's service manual for precise instructions and torque specifications.

### 3.1. Tools Required

- Socket set and ratchet
- Torque wrench
- Feeler gauges (for valve lash adjustment)
- Gasket scraper (if replacing gaskets)
- New gaskets (if required)

### 3.2. Installation Procedure

1. **Preparation:** Ensure the engine is cool. Disconnect the spark plug wire to prevent accidental starting. Remove any engine shrouds or components obstructing access to the cylinder head and valve cover.
2. **Remove Valve Cover:** Carefully unbolt and remove the valve cover. Be mindful of any gaskets that may need replacement.
3. **Identify Push Rods:** Locate the existing push rods. Note their positions and lengths, as Briggs & Stratton engines often use different length push rods for intake and exhaust valves (e.g., steel for exhaust, aluminum for intake).



Image 3.1: A single push rod, typically one steel and one aluminum are used.

4. **Remove Old Push Rods:** Gently lift out the old push rods. Inspect them for bends, wear, or damage. If a push rod is bent, investigate the cause (e.g., valve guide issues, valve sticking).
5. **Install New Push Rods:** Insert the new Briggs & Stratton push rods into their correct positions. Ensure the ends seat properly in the lifters and rocker arms. The steel push rod (Part # 597785) is typically for the exhaust valve, and the aluminum push rod (Part # 690982) is for the intake valve.



Image 3.2: Example of a Briggs & Stratton part number label, showing "690981 ROD-PUSH".

6. **Adjust Valve Lash:** This is a critical step. With the piston at Top Dead Center (TDC) on the compression stroke, adjust the valve lash (clearance) according to your engine's specifications using feeler gauges. Incorrect valve lash can lead to bent push rods or poor engine performance.
7. **Reinstall Valve Cover:** Clean the mating surfaces and install a new valve cover gasket if necessary. Reattach the valve cover, tightening bolts to the manufacturer's specified torque.
8. **Final Checks:** Reconnect the spark plug wire. Double-check all connections and ensure no tools or debris are left in the engine compartment.

## 4. Operating Considerations

Once the new push rods are installed and valve lash is correctly set, the engine should operate smoothly. Listen for any unusual noises, such as ticking or knocking, which could indicate improper valve lash or other issues. Proper installation of these components ensures the engine's valves open and close at the correct times, maintaining optimal performance.

## 5. Maintenance

While push rods themselves typically do not require routine maintenance, their longevity is directly tied to the overall health of the engine's valve train and lubrication system.

- **Regular Oil Changes:** Ensure engine oil is changed at recommended intervals using the correct type and viscosity. Clean oil prevents wear on lifters, camshaft lobes, and rocker arms, which directly impact push rod function.
- **Valve Lash Inspection:** Periodically check and adjust valve lash according to your engine's service manual. Incorrect lash can put undue stress on push rods.
- **Engine Cleanliness:** Keep the engine clean, especially around the cylinder head and cooling fins, to prevent overheating. Overheating can cause valve guides to shift, leading to bent push rods.

## 6. Troubleshooting

If you experience issues after installing new push rods, consider the following common problems and solutions:

| Symptom | Possible Cause | Solution |
|---|---|---|
| Engine ticking noise | Incorrect valve lash; Worn lifter or rocker arm; Bent push rod (unlikely if new) | Re-check and adjust valve lash. Inspect lifters and rocker arms for wear. |
| Engine misfires or runs rough | Incorrect valve timing due to improper push rod installation or valve lash. | Verify push rod placement (steel/aluminum) and re-adjust valve lash. |
| New push rod bends shortly after installation | Underlying issue not resolved (e.g., shifted valve guide, sticking valve, excessive carbon buildup). | Thoroughly inspect valve guides, valves, and cylinder head for damage or obstructions. Consult a professional if needed. |

## 7. Specifications

Key specifications for Briggs & Stratton Push Rods (Models 690981 & 690982):

- **Part Numbers:** 690981 (Steel), 690982 (Aluminum)
- **Material:** Steel (690981), Aluminum (690982)
- **Package Dimensions:** 5.59 x 5.08 x 0.47 inches
- **Item Weight:** 0.01 ounces (per set)
- **Manufacturer:** Briggs & Stratton
- **ASIN:** B01DUK4V9W

## 8. Warranty and Support

As genuine Briggs & Stratton parts, these push rods are covered by the manufacturer's standard warranty for replacement parts. For specific warranty details or technical support, please refer to the official Briggs & Stratton website or contact an authorized Briggs & Stratton service dealer.
For further assistance, you may visit the Briggs & Stratton Store on Amazon or consult your engine's specific service manual.


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