

## RATION 247.881721, 31BS62EE799

# RATION Carburetor Instruction Manual

For Craftsman, MTD, and Sears Snow Thrower Models 247.881721, 31BS62EE799

## 1. INTRODUCTION

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This manual provides essential instructions for the installation, operation, maintenance, and troubleshooting of your RATION replacement carburetor. This carburetor is designed for specific Craftsman, MTD, and Sears snow thrower models, including 247.881721 and 31BS62EE799. Please read this manual thoroughly before attempting any installation or maintenance to ensure safe and correct usage.

## 2. SAFETY INFORMATION

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**WARNING: Failure to follow these safety instructions could result in serious injury or property damage.**

- Always disconnect the spark plug wire before performing any maintenance or installation to prevent accidental engine starting.
- Work in a well-ventilated area when handling gasoline. Gasoline is highly flammable and its vapors are explosive.
- Wear appropriate personal protective equipment (PPE), such as gloves and eye protection, during installation and maintenance.
- Ensure the engine is cool before working on the carburetor to avoid burns.
- Dispose of old fuel and parts responsibly according to local regulations.
- Refer to your snow thrower's original owner's manual for additional safety precautions specific to your equipment.

## 3. PACKAGE CONTENTS

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Verify that all items listed below are present in your package:

- RATION Carburetor Assembly
- Gaskets (various sizes for mounting)
- Fuel Filter
- Fuel Line (if included)
- Primer Bulb (if included)



*Figure 3.1: RATION Carburetor assembly, including the main carburetor unit, various gaskets, a red fuel filter, and a black primer bulb with fuel line.*

## 4. INSTALLATION INSTRUCTIONS

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This section outlines the general steps for replacing your snow thrower's carburetor. Specific procedures may vary slightly depending on your snow thrower model. Always refer to your snow thrower's service manual for detailed instructions.

### 4.1. Tools Required (Typical)

- Socket wrench set
- Screwdriver set (flathead and Phillips)
- Pliers

- Fuel line clamps or pinch-off tool
- Clean rags
- Container for draining fuel

## 4.2. Carburetor Replacement Steps

1. **Prepare the Snow Thrower:** Ensure the engine is cool. Disconnect the spark plug wire to prevent accidental starting. Turn off the fuel supply valve (if equipped) and drain the fuel tank into an approved container.
2. **Access the Carburetor:** Remove any engine covers, air filter housing, or other components that obstruct access to the carburetor. Note the routing of fuel lines and linkages.
3. **Disconnect Components:** Carefully disconnect the fuel lines, throttle linkage, and choke linkage from the old carburetor. Use fuel line clamps to minimize fuel spillage if the tank cannot be fully drained.
4. **Remove Old Carburetor:** Unbolt the old carburetor from the engine. Pay attention to the gaskets between the carburetor and the engine/intake manifold. These will need to be replaced.
5. **Install New Carburetor:**
  - Clean the mounting surfaces on the engine and intake manifold.
  - Place new gaskets in their correct positions. Ensure they match the old gaskets.
  - Mount the new RATION carburetor onto the engine, ensuring proper alignment. Secure it with the original bolts, tightening them evenly.
6. **Reconnect Components:** Reattach the throttle linkage, choke linkage, and fuel lines to the new carburetor. Ensure all connections are secure and properly routed. Install the new fuel filter in the fuel line if replacing.
7. **Reassemble and Test:** Reinstall any removed covers or air filter housing. Refill the fuel tank with fresh, appropriate fuel. Reconnect the spark plug wire. Prime the carburetor (if applicable) and attempt to start the snow thrower. Check for fuel leaks.



Figure 4.1: Detailed view of a carburetor component, illustrating potential connection points or internal structure.

## 5. OPERATING INSTRUCTIONS

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After successful installation of the RATION carburetor, your snow thrower should operate as intended. For detailed operating procedures, including starting, stopping, and using the snow thrower, please refer to the original owner's manual provided with your snow thrower. The carburetor's function is to mix fuel and air for combustion; its operation is integrated into the snow thrower's overall system.

### **First Start After Installation:**

- Ensure the fuel tank is filled with fresh, clean fuel.
- Prime the carburetor by pressing the primer bulb several times until fuel is visible (if equipped).
- Set the choke and throttle according to your snow thrower's starting procedure.
- Start the engine. It may take a few pulls or attempts for the fuel system to fully pressurize and for the engine to run smoothly after a carburetor replacement.
- Allow the engine to warm up for a few minutes before operating under load.

## 6. MAINTENANCE

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Proper maintenance of your carburetor and fuel system will ensure reliable performance and extend the life

of your snow thrower.

- **Fuel Quality:** Always use fresh, clean gasoline. Stale or contaminated fuel is a primary cause of carburetor issues. Consider using a fuel stabilizer, especially during storage.
- **Fuel Filter:** Regularly inspect and replace the fuel filter (if equipped) as part of your routine maintenance. A clogged fuel filter can restrict fuel flow to the carburetor.
- **Storage:** Before long-term storage (e.g., off-season), either run the engine until it runs out of fuel or drain the fuel tank and carburetor bowl to prevent fuel degradation and gumming.
- **Air Filter:** Ensure the air filter is clean and free of debris. A dirty air filter can affect the air-fuel mixture and carburetor performance.

## 7. TROUBLESHOOTING

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If you encounter issues after installing the RATION carburetor, consult the following common troubleshooting steps:

Problem	Possible Cause	Solution
Engine will not start	No fuel, incorrect choke/throttle setting, spark plug issue, fuel line blockage, primer not working.	Check fuel level. Verify choke/throttle. Check spark plug. Inspect fuel lines for kinks or blockages. Ensure primer bulb is functioning.
Engine runs rough or stalls	Improper air-fuel mixture, vacuum leak, old/stale fuel, clogged fuel filter.	Ensure all carburetor mounting bolts are tight. Check for damaged gaskets. Use fresh fuel. Replace fuel filter.
Fuel leaks	Loose fuel line connections, damaged gaskets, cracked fuel line.	Tighten all fuel line clamps. Inspect and replace any damaged gaskets. Replace cracked fuel lines.

If these steps do not resolve the issue, it is recommended to consult a qualified service technician or refer to your snow thrower's service manual.

## 8. SPECIFICATIONS

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- **Brand:** RATION
- **Part Type:** Replacement Carburetor
- **Compatibility:** Craftsman, MTD, Sears Snow Throwers
- **Compatible Models:** 247.881721, 31BS62EE799
- **UPC:** 670308216108
- **ASIN:** B0F1TJS4WT

## 9. WARRANTY AND SUPPORT

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For warranty information or technical support regarding your RATION carburetor, please contact the seller or manufacturer directly. Keep your purchase receipt as proof of purchase. Specific warranty terms and conditions may apply.

