

Suburban 5099A

Suburban 5099A (SW12DE) RV Water Heater Instruction Manual

1. INTRODUCTION AND OVERVIEW

The Suburban 5099A (SW12DE) Water Heater is designed to provide reliable hot water service for recreational vehicles. This model offers dual-fuel operation, utilizing both gas and electric power to meet your hot water demands. It features a durable porcelain steel tank with foam insulation and a replaceable anode rod for enhanced corrosion protection. The unit is engineered for efficient performance and ease of use, ensuring a comfortable experience during your travels.

This manual provides essential information for the safe and effective installation, operation, and maintenance of your Suburban 5099A (SW12DE) Water Heater. Please read all instructions carefully before attempting any procedures.

2. SAFETY INFORMATION

WARNING: Improper installation, adjustment, alteration, service, or maintenance can cause property damage, personal injury, or loss of life. Refer to the owner's manual. Installation and service must be performed by a qualified service technician.

- Always ensure the water heater tank is full of water before operating the electric element or gas burner to prevent damage to the heating elements.
- Turn off all electrical power and the gas supply to the appliance before performing any service or maintenance.
- Do not use gasoline or other flammable, combustible, corrosive vapors and liquids in the vicinity of this or any other appliance.
- Hot water can produce third-degree burns in 5 seconds at 140°F (60°C). Exercise caution when using hot water.
- Gas appliances should be installed and/or serviced by a qualified service technician.

3. PRODUCT FEATURES

- **12,000 BTU/hour Gas Burner:** Provides high-recovery heating for rapid hot water.
- **1440-watt Incoloy Electric Element:** Allows for heating using campground or generator power.

- **Dual Operation:** Use gas, electric, or both simultaneously for a faster recovery rate (up to 16.2 gallons per hour).
- **Porcelain Steel Tank:** Durable construction designed to resist corrosion.
- **Replaceable Anode Rod:** Absorbs corrosive electrolytic action, prolonging the life of the tank.
- **Foam Insulation:** Specially fitted copolymer insulation jacket to retain heat and boost efficiency.
- **One-Piece, Die-Formed Metal Control Housing:** Protects controls from weather while offering easy access.
- **Direct Spark Ignition:** For easy and reliable gas operation.



Figure 1: Internal components of the Suburban 5099A (SW12DE) Water Heater, showing the gas burner assembly, electric element, and control housing.

4. SETUP AND INSTALLATION

The Suburban 5099A (SW12DE) Water Heater is designed to fit cut-out openings of prior models, simplifying replacement. Access door and frame are easily installed on any type of RV side. Note that the access door, frame kit, and indoor switch are sold separately. It is crucial to purchase both the water heater and the door for a complete system. Competing manufacturers' assemblies are not interchangeable.

It is highly recommended that gas appliances be installed and/or serviced by a qualified service technician to ensure safety and proper function.

5. OPERATING INSTRUCTIONS

The SW12DE model offers flexible operation with both gas and electric heating options. The water heater gas ignition is controlled by a switch mounted on the inside of your RV (sold separately).

Operating Modes:

- **Gas Heating System:** Utilizes the 12,000 BTU/hour burner for rapid heating. Ideal for off-grid use or when quick recovery is needed.
- **Electric Heating System:** The 1440-watt Incoloy electric element allows you to heat water using campground or generator power. This provides a recovery rate of 6.1 gallons per hour.
- **Hybrid Mode (Gas & Electric Simultaneous):** For the fastest recovery rate of 16.2 gallons per hour, use both gas and electric simultaneously. This mode is ideal for high demand situations.

Ensure the water heater tank is completely filled with water before activating any heating mode. Refer to your RV's internal control panel for water heater activation.

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Video 1: This video demonstrates the various operating modes (Gas, Electric, Hybrid) of a hybrid RV water heater, including instant sensing and durable construction. While featuring a 6-gallon model, the principles of operation are applicable to the SW12DE.

6. MAINTENANCE

Regular maintenance is crucial for the longevity and efficient operation of your Suburban water heater.

Anode Rod Inspection and Replacement:

The porcelain-lined steel water heater tank utilizes an anode rod to absorb electrolytic action, preventing corrosion of the tank itself. The anode rod is a sacrificial component and will deplete over time. It should be inspected every time you drain the water heater tank. If the rod is mostly eaten away, replace it with a new one. Always keep a spare anode rod in your RV.

Draining the Water Heater:

Before draining, ensure all electrical power and gas supply to the appliance are turned off. Allow the water to cool to a safe temperature. Open the pressure relief valve to release pressure, then remove the anode rod to drain the tank. Flush the tank to remove any sediment.

7. TROUBLESHOOTING

If your Suburban water heater is not igniting on gas, but the electric element functions, a common issue can be with the control board. The igniter may not click, and the gas valve might open and close without successful ignition.

Control Board Inspection and Replacement:

- Locate the control board, typically found inside the water heater compartment, attached to the top or side.
- Carefully remove the control board from its housing.
- Inspect the board for any visible burn marks, particularly around connections like Q3. Burn marks indicate a faulty board.
- If the board is damaged, replace it with a new Suburban control board (Part No. 520814).
- The replacement process is typically a simple plug-and-play connection.

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Video 2: This video demonstrates a common issue with Suburban water heaters where the gas ignition fails. It shows how to locate, inspect, and replace the control board, highlighting burn marks as a sign of failure.

8. SPECIFICATIONS

Specification	Value
Model	5099A (SW12DE)
Item Weight	46.1 pounds
Product Dimensions	24.1 x 48 x 16.8 inches
Wattage (Electric Element)	1440 Watts
BTU/hour (Gas Burner)	12,000 BTU/hour
Recovery Rate (Electric)	6.1 gallons per hour
Recovery Rate (Gas & Electric)	16.2 gallons per hour

Tank Material	Porcelain Steel
Corrosion Protection	Replaceable Anode Rod

9. WARRANTY INFORMATION

The Suburban 5099A (SW12DE) Water Heater comes with a Limited 2 Year Warranty. Please refer to the warranty documentation included with your product for full terms and conditions.

10. SUPPORT

For technical assistance, troubleshooting beyond the scope of this manual, or professional service, please contact a qualified RV service technician. Ensure they are familiar with Suburban water heater systems.