

Zoeller 507-0005

Zoeller 507-0005 Basement Sentry Battery Backup Pump Instruction Manual

[Installation](#) [Operation](#) [Overview](#) [Safety Information](#) [Setup & Specifications](#) [Maintenance](#) [Troubleshooting](#) [Warranty & Support](#)

1. PRODUCT OVERVIEW

The Zoeller 507-0005 Basement Sentry is a 12V/DC battery backup pump system designed to provide emergency water removal when the primary AC pump fails due to power outages or mechanical malfunction. This system is intended for clear water applications in residential or commercial environments, offering an additional layer of protection against basement flooding.

Key features of the 507-0005 model include:

- Provides protection when the primary AC pump fails or during power outages.
- Features battery burn-out and overcharge protection.
- Utilizes a reliable low voltage float switch for activation.
- Includes a self-contained 10 amp battery recharger.
- Comes with a non-corrosive polyethylene battery case and lock strap.
- Equipped with a solid-state automatic controller, alarms, and light indicators for system status.



Figure 1: Zoeller 507-0005 Basement Sentry Battery Backup Pump unit. This image displays the main components of the backup pump system, including the pump, controller, and battery case.

2. SAFETY INFORMATION

Read all instructions carefully before installation and operation. Failure to follow these instructions may result in property damage, serious injury, or death.

General Safety Precautions:

- Always disconnect power before servicing the pump or battery system.
- Ensure proper grounding to prevent electrical shock.
- Do not operate the pump with damaged cords or plugs.
- Keep hands clear of moving parts during operation.
- This pump is designed for clear water only. Do not use for flammable or corrosive liquids.
- Wear appropriate personal protective equipment (PPE) during installation and maintenance.

Proposition 65 Warning:

WARNING: This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

3. SETUP AND INSTALLATION

The Zoeller 507-0005 system requires a separate sump pump and a 12V deep cycle marine battery (not included) for complete functionality. Ensure all components are purchased separately before beginning installation.

Installation Steps:

1. **Prepare the Sump Pit:** Ensure the sump pit is clean and free of debris. The primary sump pump should be installed and operational according to its manufacturer's instructions.
2. **Position the Backup Pump:** Place the Zoeller 507-0005 backup pump in the sump pit, ensuring it is positioned above the primary pump's intake but below its discharge level. The float switch must have unrestricted movement.
3. **Connect Discharge Piping:** Connect the backup pump's discharge to the main discharge line using appropriate PVC piping and fittings. A check valve should be installed on the backup pump's discharge line to prevent water from flowing back into the pit.
4. **Install Battery Case:** Place the non-corrosive polyethylene battery case in a dry, accessible location near the sump pit. Secure it with the provided lock strap.
5. **Connect Battery:** Connect a fully charged 12V deep cycle marine battery (not included) to the battery recharger/controller unit. Ensure correct polarity (+ to + and - to -).
6. **Connect Controller:** Connect the backup pump to the automatic controller unit. Plug the controller's power cord into a standard 120V AC outlet. The 10 amp battery recharger will begin charging the battery.
7. **Test the System:** After installation, manually lift the float switch to activate the backup pump and verify proper operation. Ensure water is discharged correctly and the system activates and deactivates as expected.



Figure 2: Components of the Zoeller 507-0005 system ready for installation. This image illustrates the pump, controller, and battery case, highlighting their roles in the setup process.

4. OPERATION

The Zoeller 507-0005 Basement Sentry operates automatically to provide backup pumping when needed. The system's solid-state automatic controller continuously monitors the primary power and water levels.

Automatic Operation:

- When the primary AC power is interrupted or the primary sump pump fails, the water level in the sump pit will rise.
- The reliable low voltage float switch of the backup pump will activate when the water reaches a predetermined level.
- The backup pump will then begin pumping water out of the sump pit using power from the connected 12V battery.
- Once the water level drops and the float switch deactivates, the pump will turn off.

Controller Indicators and Alarms:

The system's controller features light indicators and an audible alarm to communicate its status:

- **Power Indicator:** Illuminates when AC power is supplied to the controller.
- **Charging Indicator:** Shows the battery charging status.
- **Pump Active Indicator:** Illuminates when the backup pump is running.
- **Alarm:** An audible alarm will sound to indicate a system event, such as a power outage, low battery, or pump activation.
- **Alarm Off (Yellow Light):** Indicates the buzzer is currently silenced.

5. MAINTENANCE

Regular maintenance ensures the reliability and longevity of your Zoeller 507-0005 Basement Sentry system. Perform these checks periodically, especially before anticipated heavy rainfall seasons.

Monthly Checks:

- **Test Pump Operation:** Manually lift the float switch to activate the backup pump. Ensure it turns on, pumps water, and turns off when the float drops.
- **Inspect Sump Pit:** Remove any debris, dirt, or sediment from the sump pit that could obstruct the pump or float switch.
- **Check Battery Connections:** Ensure battery terminals are clean and free of corrosion. Tighten any loose connections.
- **Verify Charger Function:** Confirm the battery charger indicator shows the battery is being maintained or charged.

Annual Checks:

- **Battery Condition:** Have the 12V deep cycle marine battery tested by a qualified technician to ensure it holds a charge effectively. Replace if necessary.
- **Inspect Piping:** Check all discharge piping for leaks, cracks, or obstructions.
- **Clean Pump:** If accessible, remove the pump and clean any accumulated debris from the intake screen and impeller.



Figure 3: The Zoeller 507-0005 pump unit, illustrating areas for routine maintenance such as checking connections and cleaning.

6. TROUBLESHOOTING

This section provides solutions to common issues you might encounter with your Zoeller 507-0005 Basement Sentry system.

Problem	Possible Cause	Solution
Pump does not turn on	Float switch obstructed or stuck Low or dead battery Loose battery connections Controller not receiving AC power	Clear any obstructions around the float switch. Check battery voltage; recharge or replace if necessary. Tighten battery terminal connections. Verify AC power to the controller outlet.

Problem	Possible Cause	Solution
Pump runs continuously	Float switch stuck in 'on' position Check valve faulty or missing Pump air-locked	Clear obstructions around the float switch. Inspect and replace check valve if necessary. Ensure pump is fully submerged and free of air.
Alarm sounds frequently	Power outage Low battery voltage Pump activated due to high water	Check household power supply. Test battery and charging system. Verify primary pump operation; inspect for clogs.
Pump runs but no water is discharged	Discharge line clogged Pump air-locked Impeller obstructed	Clear any clogs in the discharge piping. Ensure pump is fully submerged and free of air. Inspect and clear any debris from the impeller.

If troubleshooting steps do not resolve the issue, contact a qualified service technician or Zoeller customer support.

7. SPECIFICATIONS

Detailed technical specifications for the Zoeller 507-0005 Basement Sentry Battery Backup Pump.

Feature	Detail
Model Number	507-0005
Brand	Zoeller
Power Source	Electric (12V DC from battery, 120V AC for charger)
Operation Mode	Automatic
Material	Polyethylene (battery case), Plastic (body)
Item Dimensions (L x W x H)	7 x 7.75 x 12.5 inches
Battery Recharger	10 Amp, self-contained
Control Device	Reliable low voltage float switch
Mounting Type	Floor mount or free-standing
Outlet Connection Type	NPT
Inlet Connection Type	Standard Sump Pump Connection
Certifications	UL, cUL

8. WARRANTY AND SUPPORT

Manufacturer's Warranty:

The Zoeller 507-0005 Basement Sentry Battery Backup Pump comes with a manufacturer's warranty. The warranty period is **12 months from the date of installation or 18 months from the date of manufacture**, whichever comes first. Please retain your proof of purchase and installation records for warranty claims.

Customer Support:

For technical assistance, warranty claims, or further information regarding your Zoeller product, please contact Zoeller customer support directly. Refer to the contact information provided in the product packaging or on the official Zoeller website.

When contacting support, please have your model number (507-0005) and date of purchase readily available.

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