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## Sierra 18-3017

# Sierra 18-3017 Impeller Instruction Manual

Model: 18-3017

## 1. PRODUCT OVERVIEW

The Sierra 18-3017 Impeller is a critical component designed for marine engine water pump systems. This impeller is engineered to provide efficient water circulation, which is essential for cooling your engine and preventing overheating. It is compatible with various MCM and outboard applications, including specific Chrysler/Force, GLM, Mallory, Mercruiser Stern Drive, and Mercury Marine models.

This impeller is often used as a replacement part in water pump kits such as 18-3217, 18-3251, 18-3314, 18-3316, 18-3317, 18-3319, 18-3320, 18-3321, and 18-3517, as well as the 18-8370 Complete Lower Gearcase Rebuild Kit.



Figure 1: Front view of the Sierra 18-3017 Impeller, showing its six flexible blades and central brass hub.

## 2. SAFETY INFORMATION

- Always disconnect the battery cables before performing any maintenance or installation on your marine engine to prevent accidental starting or electrical shock.
- Wear appropriate personal protective equipment (PPE), including safety glasses and gloves, to protect against injury.
- Ensure the engine has cooled down completely before working on the water pump system to avoid burns.
- Refer to your engine's specific service manual for detailed instructions and torque specifications relevant to your model.
- If you are unsure about any step, consult a qualified marine technician.

## 3. INSTALLATION INSTRUCTIONS

Replacing the impeller requires careful attention to detail. The following steps provide a general guide. Always consult your specific engine service manual for precise procedures.

1. **Preparation:** Ensure the engine is off and cooled. Disconnect the battery. Gather necessary tools, including wrenches, screwdrivers, and a new Sierra 18-3017 Impeller.

2. **Access the Water Pump:** Depending on your engine model, you may need to remove the lower unit or other components to access the water pump housing.
3. **Remove Old Impeller:** Carefully disassemble the water pump housing. Note the orientation of the old impeller blades. Remove the old impeller and any associated gaskets or seals. Inspect the housing for wear or damage.
4. **Clean Housing:** Thoroughly clean the water pump housing and all mating surfaces. Remove any debris, corrosion, or old gasket material.
5. **Install New Impeller:** Lubricate the new Sierra 18-3017 Impeller with a small amount of marine grease or liquid soap. Install the impeller into the housing, ensuring the blades are bent in the correct direction (usually clockwise when viewed from the top, but confirm with your engine manual).
6. **Reassemble:** Install new gaskets and seals as required by your engine's water pump kit. Reassemble the water pump housing, ensuring all bolts are tightened to the manufacturer's specified torque.
7. **Reconnect and Test:** Reconnect any removed components and the battery. Start the engine in a safe, controlled environment (e.g., with muffs or in water) and check for proper water discharge from the tell-tale (pee hole) and any leaks.



Figure 2: Angled view of the Sierra 18-3017 Impeller, highlighting the flexible blades and the central hub.

### Installation Video Reference

The following video provides a visual guide for water pump impeller replacement. While it may not feature the exact Sierra 18-3017 model, the general principles and steps are applicable.

Your browser does not support the video tag.

Video 1: General guide for water pump impeller replacement. This video demonstrates the process of replacing a water pump impeller, including accessing the pump, removing the old impeller, and installing a new one. It highlights key steps and considerations for a successful replacement.

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Video 2: Water Pump Impeller overview and replacement tips. This video provides additional insights into water pump impellers, their function, and practical tips for replacement, emphasizing the importance of proper installation for engine protection.

## 4. OPERATING CONSIDERATIONS

Once the new impeller is installed, proper operation of your engine's cooling system is crucial. After starting the engine, observe the following:

- **Water Discharge:** Confirm that a steady stream of cooling water is exiting the tell-tale (indicator stream) on your outboard or stern drive. A weak or absent stream indicates a problem.
- **Engine Temperature:** Monitor your engine's temperature gauge. It should remain within the normal operating range. An increase in temperature could indicate insufficient cooling.
- **Leaks:** Visually inspect the water pump housing and surrounding areas for any signs of water leaks.

## 5. MAINTENANCE

Regular maintenance of your impeller is vital for the longevity and performance of your marine engine. Impellers are wear items and degrade over time due to heat, friction, and exposure to chemicals and debris.

- **Inspection:** Periodically inspect the impeller for cracks, tears, or signs of hardening. Even if the engine appears to be cooling correctly, a degraded impeller can fail unexpectedly.
- **Replacement Schedule:** It is generally recommended to replace the impeller annually or every 100 hours of operation, whichever comes first. This proactive approach helps prevent engine overheating and potential damage.
- **Winterization:** During winterization, it is a good practice to inspect or replace the impeller, especially if the boat will be stored for an extended period.

## 6. TROUBLESHOOTING

If you experience issues with your engine's cooling system after impeller installation, consider the following common problems and solutions:

Problem	Possible Cause	Solution
No or weak water stream from tell-tale	<ul style="list-style-type: none"><li>◦ Impeller installed incorrectly</li><li>◦ Clogged water intake or tell-tale</li><li>◦ Damaged impeller or housing</li></ul>	<ul style="list-style-type: none"><li>◦ Recheck impeller orientation</li><li>◦ Clear obstructions</li><li>◦ Inspect and replace damaged parts</li></ul>
Engine overheating	<ul style="list-style-type: none"><li>◦ Insufficient water flow (see above)</li><li>◦ Thermostat malfunction</li><li>◦ Cooling system blockage</li></ul>	<ul style="list-style-type: none"><li>◦ Address water flow issues</li><li>◦ Test/replace thermostat</li><li>◦ Flush cooling system</li></ul>
Water leaks from pump housing	<ul style="list-style-type: none"><li>◦ Improperly seated gaskets</li><li>◦ Damaged housing or seals</li><li>◦ Loose bolts</li></ul>	<ul style="list-style-type: none"><li>◦ Reassemble with new, properly seated gaskets</li><li>◦ Inspect and replace damaged components</li><li>◦ Tighten bolts to spec</li></ul>

If troubleshooting steps do not resolve the issue, seek assistance from a certified marine mechanic.

## 7. SPECIFICATIONS

- **Model Number:** 18-3017
- **Brand:** Sierra
- **Manufacturer:** Teleflex Marine
- **Item Weight:** Approximately 0.96 ounces
- **Product Dimensions:** Approximately 1.5 x 6 x 6 inches
- **OEM Part Number Equivalents:** 47-65960, 47-803631T, 47-89984, 47-89984T4, 694065, CHRYSLER FORCE 47-F694065, MERCURY MARINE 47-30221
- **Fit Type:** Universal Fit (for specified applications)

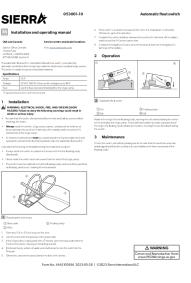
## 8. WARRANTY AND SUPPORT

Sierra products are backed by an industry-leading warranty, reflecting a commitment to quality and customer satisfaction. For specific warranty terms and conditions, please refer to the official Sierra website or contact their customer service.

For technical assistance, installation queries, or warranty claims, please contact Sierra customer support or consult with an authorized Sierra dealer or marine service center. Always provide your product model number (18-3017) when seeking support.

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### Related Documents - 18-3017

	<p><a href="#"><u>Sierra STATS Engine Diagnostics Operating Manual</u></a>            Operating manual for the Sierra STATS diagnostic tool, covering marine engine diagnostics, features, and support for major brands like Mercury, Yamaha, Suzuki, Honda, Volvo, Yanmar, Kawasaki, and BRP.</p>
	<p><a href="#"><u>Sierra All-in-1 Fuel Tank Combo Package Installation Manual</u></a>            Installation guide for the Sierra All-in-1 Fuel Tank Combo Package (models 053701-10, 053703-10). This document provides detailed instructions, scope of delivery, recommended tools, and component identification for universal outboard engine fuel systems.</p>
	<p><a href="#"><u>Sierra Automatic Float Switch 053001-10: Installation and Operating Manual</u></a>            Detailed installation and operating guide for the Sierra Automatic Float Switch (Model 053001-10). Learn how to safely install, operate, and maintain this corrosion-resistant bilge pump switch for reliable boat bilge water management.</p>



### [Leisure Suit Larry Hint Book - Sierra On-Line Game Guide](#)

Comprehensive hint book for Sierra On-Line's Leisure Suit Larry adventure game. Includes walk-throughs, maps, object locations, solutions, and FAQs to help players complete the game.



### [Sierra SRSP-18 Stock Pot Range Owner's Manual: Installation & Operation Guide](#)

Comprehensive owner's manual for the Sierra SRSP-18 Stock Pot Range, detailing installation, operation, maintenance, and troubleshooting for commercial kitchens.



### [Sierra SRMG Series Manual Griddles Owner's Manual](#)

This owner's manual provides comprehensive instructions for the installation, operation, and maintenance of Sierra SRMG series manual griddles, including models SRMG-12, SRMG-24, SRMG-36, SRMG-48, and SRMG-60. Essential for qualified personnel.