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› Pwc Engine Mercury Trigger 3-Cylinder 70 HP (1977-1987) Installation and Maintenance Manual

Pwc Engine WSM 134-6453

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Model: WSM 134-6453

1. INTRODUCTION

This manual provides essential information for the installation, function, and maintenance of the Pwc Engine Mercury Trigger, WSM 134-6453. This trigger is designed for Mercury 3-Cylinder 70 HP outboard motors manufactured between 1977 and 1987. It is a high-performance, OEM-style replacement part engineered to meet or exceed original equipment standards, ensuring reliable ignition system operation.

Compatibility: This trigger replaces OEM part numbers 18-5797, 68162A 3, 68162A 6, 96455A 1, and 96455A 8. It is compatible with serial numbers 4571652 through A730815.



Figure 1: Pwc Engine Mercury Trigger WSM 134-6453. This image displays the circular trigger assembly with an attached wiring harness, featuring three red connectors at the end of the wires.

2. SETUP AND INSTALLATION

Proper installation of the ignition trigger is crucial for the correct operation of your outboard motor. Due to the complexity of marine electrical systems, it is highly recommended that installation be performed by a qualified marine technician.

2.1 Safety Precautions

- Always disconnect the battery before performing any electrical work on your outboard motor to prevent accidental starting or electrical shock.
- Ensure the engine is cool before beginning work.
- Wear appropriate personal protective equipment, including safety glasses and gloves.
- Refer to your specific Mercury outboard service manual for detailed engine-specific instructions and torque specifications.

2.2 Installation Steps (General Guidelines)

1. **Access the Stator/Flywheel Area:** Remove the engine cowling and any components obstructing access to the flywheel and stator assembly.
2. **Disconnect Old Trigger:** Carefully disconnect the wiring harness of the old trigger from the power pack or junction box. Note the routing and connection points for reassembly.
3. **Remove Old Trigger:** Unbolt and remove the old trigger assembly from its mounting location, typically beneath the flywheel or within the stator assembly.
4. **Inspect Area:** Clean the mounting surface and inspect for any corrosion or damage.
5. **Install New Trigger:** Position the new Pwc Engine Mercury Trigger (WSM 134-6453) in place. Secure

it with the appropriate fasteners, ensuring it is correctly aligned. Do not overtighten.

6. **Connect Wiring:** Connect the new trigger's wiring harness to the corresponding terminals on the power pack or junction box. Ensure all connections are secure and free of corrosion. Refer to your engine's wiring diagram if unsure.
7. **Reassemble:** Reinstall any removed components and the engine cowling.
8. **Test:** Reconnect the battery. Perform a functional test of the engine in a safe environment (e.g., with muffs and water supply) to verify proper ignition and operation.

3. OPERATING PRINCIPLES

The ignition trigger is a critical component of your outboard motor's ignition system. Its primary function is to sense the position of the crankshaft and send precise timing signals to the power pack (CDI unit). The power pack then uses these signals to determine when to fire the spark plugs, ensuring the engine runs smoothly and efficiently.

A properly functioning trigger ensures accurate ignition timing across the engine's RPM range, contributing to optimal engine performance, fuel efficiency, and reduced emissions. Malfunctions in the trigger can lead to misfires, rough idling, loss of power, or a complete failure to start.

4. MAINTENANCE

The Pwc Engine Mercury Trigger is designed for durability and reliability. While the trigger itself is a sealed unit and generally does not require routine maintenance, periodic inspection of its associated components is recommended to ensure continued optimal performance.

4.1 Inspection Guidelines

- **Wiring Harness:** Annually inspect the trigger's wiring harness for signs of wear, chafing, cracks, or corrosion. Ensure all connections are tight and clean.
- **Connectors:** Check the electrical connectors for corrosion or damage. Apply dielectric grease to connections to prevent moisture ingress and corrosion.
- **Mounting:** Verify that the trigger is securely mounted and that its position has not shifted.
- **Surrounding Area:** Keep the area around the trigger and stator assembly clean and free of debris, oil, or saltwater residue.

If any damage or excessive wear is observed, consider professional inspection or replacement of the affected components.

5. TROUBLESHOOTING

If your outboard motor experiences ignition-related issues, the trigger could be a contributing factor. Below are common symptoms and general troubleshooting steps. Always consult a qualified marine technician for accurate diagnosis and repair.

5.1 Common Symptoms of a Faulty Trigger

- Engine cranks but does not start.
- Intermittent spark or no spark.
- Rough idling or poor engine performance at certain RPMs.
- Engine misfires or runs on fewer cylinders.

- Loss of power or acceleration.

5.2 Basic Troubleshooting Steps

1. **Check Connections:** Ensure all electrical connections to the trigger, power pack, and spark plugs are clean, tight, and free of corrosion.
2. **Inspect Wiring:** Visually inspect the trigger's wiring harness for any cuts, pinches, or signs of heat damage.
3. **Spark Test:** Perform a spark test on each cylinder to confirm the presence or absence of spark. This can help isolate whether the issue is ignition-related.
4. **Resistance Testing:** A marine technician can perform resistance tests on the trigger coils using a multimeter, comparing readings to factory specifications. This is the most reliable way to diagnose trigger health.
5. **Consult Service Manual:** Refer to your Mercury outboard's specific service manual for detailed diagnostic procedures and expected resistance values for the trigger.

If the trigger is determined to be faulty, replacement with a new Pwc Engine Mercury Trigger (WSM 134-6453) is necessary.

6. SPECIFICATIONS

Specification	Detail
Product Type	Ignition Trigger
Brand	Pwc Engine
Manufacturer	Water Sport Manufacturing
Model Number	WSM 134-6453 (PWC 134-6453 D)
Compatibility	Mercury 3-Cylinder 70 HP Outboard Motors (1977-1987)
Replaces OEM Part Numbers	18-5797, 68162A 3, 68162A 6, 96455A 1, 96455A 8
Compatible Serial Numbers	4571652 - A730815
Material	OEM-grade materials

7. WARRANTY INFORMATION

Pwc Engine products are manufactured to high standards of quality and performance. This product is typically covered by a manufacturer's warranty against defects in materials and workmanship. For specific warranty terms, duration, and claim procedures, please refer to the documentation provided with your purchase or contact Pwc Engine customer support directly.

Please retain your proof of purchase for any warranty claims.

8. SUPPORT AND CONTACT

For technical assistance, installation questions, or warranty inquiries regarding your Pwc Engine Mercury

Trigger, please contact our customer support team.

- **Online Support:** Visit the Pwc Engine website for FAQs and support resources.
- **Email Support:** Refer to your purchase documentation for the appropriate support email address.
- **Professional Assistance:** For complex issues, it is always recommended to seek assistance from a certified marine mechanic.