

Arco SW622

Arco Marine SW622 Starter Solenoid User Manual

Model: SW622 | Brand: Arco Marine

1. INTRODUCTION

This manual provides essential information for the safe and effective installation, operation, and maintenance of the Arco Marine SW622 Starter Solenoid. This 12-volt, isolated base solenoid is specifically designed for use in BRP-OMC marine applications. Please read this manual thoroughly before proceeding with installation or use to ensure proper function and longevity of the product.

2. PRODUCT OVERVIEW

The Arco Marine SW622 is a critical component in your marine engine's starting system. It acts as an electromagnetic switch, allowing a small current from the ignition switch to control a much larger current flow from the battery to the starter motor, thereby engaging the engine. Its isolated base design provides enhanced electrical safety in marine environments.



Figure 1: Arco Marine SW622 Starter Solenoid. This image displays the solenoid's main body, the Arco logo, and the primary and control terminals for electrical connections.

3. SAFETY INFORMATION

WARNING: Electrical work can be hazardous. Always disconnect the battery's negative terminal before performing any electrical installation or maintenance to prevent electric shock or damage to the electrical system.

- Ensure the engine is off and cooled down before beginning work.
- Wear appropriate personal protective equipment, including safety glasses and gloves.
- Verify that the replacement solenoid matches the specifications of the original part.
- **Do NOT overtighten connector nuts.** Excessive torque can damage the solenoid housing or terminals, leading to premature failure. Tighten connections securely but avoid applying excessive force.
- Keep all electrical connections clean and free from corrosion.
- Consult a qualified marine technician if you are unsure about any installation steps.

4. INSTALLATION INSTRUCTIONS

Follow these steps for proper installation of the Arco Marine SW622 Starter Solenoid:

1. **Preparation:** Disconnect the negative (-) battery cable from the battery. Ensure all tools are clean and in good condition.
2. **Locate Old Solenoid:** Identify the existing starter solenoid on your BRP-OMC marine engine. Note the position and connection of each wire. Taking a photograph before disconnection can be helpful.
3. **Disconnect Wires:** Carefully disconnect all wires from the old solenoid. Label them if necessary to

ensure correct re-connection.

4. **Remove Old Solenoid:** Unbolt and remove the old solenoid from its mounting location.
5. **Mount New Solenoid:** Position the new Arco Marine SW622 Solenoid in the same location as the old one. Secure it using appropriate mounting hardware.
6. **Connect Wires:** Reconnect the wires to the new solenoid's terminals. Ensure that the battery cable, starter motor cable, and ignition switch wires are connected to their correct terminals. Refer to your engine's specific wiring diagram if available.
 - Typically, the large terminal connected to the battery positive (+) cable and the large terminal connected to the starter motor cable are the main power terminals.
 - The smaller terminals are for the ignition switch (trigger) and ground (if applicable).
7. **Secure Connections:** Tighten all nuts on the terminals firmly but avoid overtightening. Overtightening can strip threads or crack the solenoid housing. A snug fit is sufficient to ensure good electrical contact.
8. **Reconnect Battery:** Once all connections are secure and verified, reconnect the negative (-) battery cable.
9. **Test:** Attempt to start the engine to confirm proper operation of the new solenoid.

5. OPERATION

The Arco Marine SW622 Starter Solenoid operates automatically as part of your engine's starting sequence. When the ignition key is turned to the "START" position, a low-current signal is sent to the solenoid's control terminals. This signal energizes an electromagnet inside the solenoid, which then pulls a plunger, closing a high-current circuit between the battery and the starter motor. This allows the large current required to turn the engine over. Once the key is released from the "START" position, the solenoid de-energizes, opening the circuit and stopping the current flow to the starter motor.

6. MAINTENANCE

Regular maintenance helps ensure the reliability and longevity of your starter solenoid:

- **Visual Inspection:** Periodically inspect the solenoid and its connections for signs of corrosion, loose wires, or physical damage.
- **Clean Connections:** If corrosion is present on the terminals, disconnect the battery (negative terminal first) and carefully clean the terminals and wire connectors with a wire brush and a suitable electrical contact cleaner. Reconnect securely.
- **Check Mounting:** Ensure the solenoid remains securely mounted and does not vibrate excessively.
- **Environmental Protection:** While designed for marine environments, protecting the solenoid from excessive moisture and salt spray can extend its life.

7. TROUBLESHOOTING

If your engine fails to start, and you suspect the solenoid, consider the following:

Symptom	Possible Cause	Solution
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Symptom	Possible Cause	Solution
Engine does not crank, no sound from solenoid.	<ul style="list-style-type: none"> Dead or low battery. Loose or corroded battery cables. Faulty ignition switch. Open circuit to solenoid control terminal. 	<ul style="list-style-type: none"> Charge or replace battery. Clean and tighten battery connections. Test ignition switch. Check wiring to solenoid control terminal for continuity.
Solenoid clicks, but engine does not crank or cranks slowly.	<ul style="list-style-type: none"> Low battery charge. Corroded or loose main power cables to starter/solenoid. Faulty starter motor. Internal solenoid failure (contacts not making full connection). 	<ul style="list-style-type: none"> Charge battery. Clean and tighten all main power connections. Test starter motor. Replace solenoid if other causes are ruled out.
Solenoid remains engaged after key is released.	<ul style="list-style-type: none"> Stuck solenoid contacts. Faulty ignition switch (not returning to OFF). 	<ul style="list-style-type: none"> Immediately disconnect battery. Replace solenoid. Test and replace ignition switch if necessary.

Always consult a professional marine mechanic for complex electrical issues.

8. SPECIFICATIONS

Model Name:	Arco SW622 Solenoid for BRP-OMC - 12 Volt, Isolated Base
Part Number:	SW622
Voltage:	12 Volt
Base Type:	Isolated Base
Compatibility:	Designed for BRP-OMC applications
Material:	Plastic (housing)
Color:	Black
Item Weight:	10.08 ounces (approx. 0.29 kg)
Item Dimensions (LxWxH):	3 x 3 x 3 inches (approx.)
Replaces Part Numbers:	Mercury 47886, Mercury 47886T, BRP-OMC 380095, BRP-OMC 383622, BRP-OMC 389398, BRP-OMC 389493, BRP-OMC 395419, BRP-OMC 582708, BRP-OMC 586180, Sierra 8-5808

9. WARRANTY INFORMATION

This product is covered by a manufacturer's warranty. For specific details regarding warranty coverage,

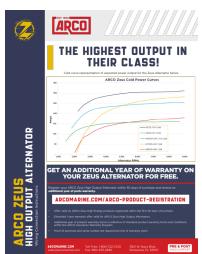
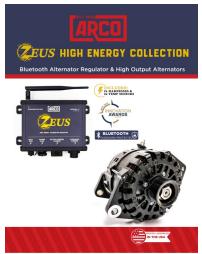
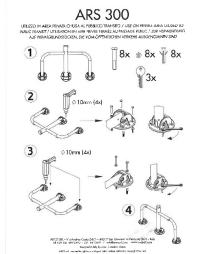
terms, and conditions, please refer to the documentation included with your purchase or contact Arco Marine directly. Keep your proof of purchase for warranty claims.

10. SUPPORT AND CONTACT

For technical assistance, questions regarding installation, or warranty inquiries, please contact Arco Marine customer support. Visit the official Arco Marine website for the most current contact information. You can also visit the [Arco Store on Amazon](#) for additional product information.

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Related Documents - SW622

	<p>ARCO Zeus High Output Alternator: Wiring, Features, and Warranty</p> <p>Comprehensive guide to ARCO Zeus High Output Alternators, covering wiring instructions, temperature sensor mounting, internal/external regulator options, weather pack connector crimping, and warranty registration. Includes performance curves and technical specifications.</p>
	<p>ARCO Zeus High Energy Collection: Bluetooth Alternator Regulators & High Output Alternators</p> <p>Explore the ARCO Zeus High Energy Collection, featuring advanced Bluetooth Alternator Regulators and high-output alternators for marine, RV, and commercial applications. Enhance battery charging and power systems with ARCO's innovative technology.</p>
	<p>ARCO Zeus Installation Audit and Instructions for Sprinter Van</p> <p>Comprehensive guide for installing the ARCO Zeus high-output alternator and external regulator kit in a Mercedes-Benz Sprinter Van (2.0L OM654). Covers pre-power on audit checks, wiring, component mounting, system requirements, and kit contents.</p>
	<p>ARCO ARS 300 Parking Barrier Assembly Instructions</p> <p>Step-by-step assembly instructions for the ARCO ARS 300 parking barrier, detailing component identification and installation steps. Includes company information and product specifications.</p>



[ARCO Zeus RV-C Integration Guide](#)

Guide for integrating the ARCO Zeus High Energy Alternator Regulator with RV-C systems, detailing physical connections and configuration steps for both Zeus and compatible hardware like Victron Cerbo GX.



[ARCO Frameless Rectangle Shower Door Kit Installation Instructions & User Guide](#)

Comprehensive installation instructions and user guide for the ARCO Frameless Rectangle Shower Door Kit. Includes tools required, materials list, step-by-step assembly, and product dimensions.