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› ARCO 6274 Tilt Trim Motor User Manual

Arco 6274

ARCO 6274 Tilt Trim Motor User Manual

Model: 6274

PRODUCT OVERVIEW

The ARCO 6274 Tilt Trim Motor is designed for Late Model Mercury/Mariner 75-125 HP Outboards featuring a Single Ram system. This motor is engineered as a direct replacement for original equipment manufacturer (OEM) part numbers Mercury 824051, Mercury 830250A6, and Sierra 18-6775.

Key features include a 3-wire connection, 4-bolt mount, and a hollow-hex shaft for precise fitment. The motor is built with durability in mind, featuring epoxy powder coating for maximum corrosion protection and induction case-hardened motor shafts at bearing surfaces to ensure superior wear resistance. Each unit undergoes rigorous testing, with armatures tested to withstand 50 times operation voltage (12V) and performance verified at five different load levels to meet or exceed OEM standards.



Figure 1: The ARCO 6274 Tilt Trim Motor, showing the main body and attached wiring harness with ring terminals.

WHAT'S INCLUDED

The ARCO 6274 Tilt Trim Motor package typically includes:

- ARCO 6274 Tilt Trim Motor for Late Model Mercury/Mariner 75-125 HP Outboards with Single Ram
- Stainless steel mounting screws
- Shaft adapter
- O-ring
- Fill plug
- Ring terminal ends (pre-attached to wiring)

INSTALLATION AND SETUP

This section provides general guidance for replacing your tilt trim motor. Professional installation is recommended.

Pre-Installation Checks:

- Ensure the boat's battery is disconnected before beginning any electrical work.
- Verify that the ARCO 6274 motor is the correct replacement for your specific Mercury/Mariner outboard model (75-125 HP, Single Ram).
- Gather necessary tools, including wrenches, screwdrivers, and a fluid collection pan.

Removal of Old Motor:

1. Locate the existing tilt trim motor on your outboard.
2. Carefully disconnect the three electrical wires (typically blue, green, and black) from the power source, noting their connections.
3. Place a collection pan underneath to catch any hydraulic fluid that may leak during removal.

4. Unbolt the old motor from its 4-bolt mounting plate.
5. Gently remove the old motor, ensuring no damage to surrounding components.



Figure 2: The 4-bolt mounting plate of the ARCO 6274 motor, designed for secure attachment.

Installation of New Motor:

1. Inspect the mounting surface and clean if necessary.
2. Apply a thin layer of marine-grade grease to the new O-ring and position it correctly.

3. Carefully align the new ARCO 6274 motor's hollow-hex shaft with the pump assembly.
4. Secure the motor using the provided stainless steel mounting screws, tightening them evenly.
5. Connect the three electrical wires (blue, green, black) to their respective terminals, ensuring a secure connection using the pre-attached ring terminal ends.
6. Refill the hydraulic fluid reservoir with the manufacturer-recommended fluid, using the provided fill plug. Bleed the system as per your outboard's service manual.
7. Reconnect the boat's battery.



Figure 3: Detailed view of the ARCO 6274 motor's wiring, showing the three color-coded wires (blue, green, black) with pre-attached ring terminals for easy connection.

OPERATION

The ARCO 6274 Tilt Trim Motor is an integral component of your outboard's power trim and tilt system. Its primary function is to adjust the angle of the outboard engine relative to the boat's transom, allowing for optimal performance and control.

Trim Function:

The trim function allows for minor adjustments of the engine's angle while the boat is underway. This helps to optimize the boat's planing angle, reduce drag, and improve fuel efficiency. Adjusting the trim can also affect steering responsiveness and ride comfort.

Tilt Function:

The tilt function allows for raising the entire outboard engine out of the water. This is typically used for trailering, beaching, or shallow water operation to prevent damage to the propeller and lower unit. It also facilitates maintenance and inspection of the propeller.

The motor operates by converting electrical energy into hydraulic pressure, which then moves the single ram to adjust the

engine's position. Always refer to your outboard engine's specific owner's manual for detailed operating instructions and safety precautions related to the trim and tilt system.

MAINTENANCE

Proper maintenance of your ARCO 6274 Tilt Trim Motor will ensure its longevity and reliable performance. While the motor is designed for durability, regular checks are recommended.

- **Corrosion Protection:** The motor features an epoxy powder coating for maximum corrosion protection. Periodically inspect the motor's exterior for any signs of damage to this coating and address them promptly to prevent rust.
- **Shaft Wear:** The motor shafts are induction case-hardened at bearing surfaces for superior wear resistance. While designed to last, ensure the shaft remains free of debris and excessive friction.
- **Electrical Connections:** Regularly inspect the 3-wire connections for corrosion or looseness. Clean terminals and apply dielectric grease if necessary to maintain good electrical contact.
- **Hydraulic Fluid:** Check the hydraulic fluid level in your outboard's trim and tilt reservoir regularly. Top up with the manufacturer-specified fluid as needed. Refer to your outboard's manual for fluid type and capacity.
- **General Cleaning:** Keep the motor and surrounding area clean from salt, dirt, and other marine debris. Rinse with fresh water after each use in saltwater environments.

TROUBLESHOOTING

This section provides basic troubleshooting steps for common issues you might encounter with your tilt trim motor. For complex problems, consult a qualified marine technician.

Problem	Possible Cause	Solution
Motor does not operate or operates slowly.	Low battery voltage. Corroded or loose electrical connections. Blown fuse or tripped circuit breaker. Low hydraulic fluid level. Motor internal fault.	Check battery charge and connections. Inspect and clean all wire connections, especially at the motor and battery. Check and replace fuse or reset breaker. Check hydraulic fluid level and refill if necessary. If other steps fail, motor may require professional inspection or replacement.
Motor operates but engine does not tilt/trim.	Low hydraulic fluid. Air in the hydraulic system. Hydraulic pump issue. Mechanical obstruction.	Check and refill hydraulic fluid. Bleed the hydraulic system as per outboard manual. Inspect pump for damage or wear. Check for debris or obstructions preventing movement.
Motor makes unusual noises.	Low hydraulic fluid. Worn bearings or internal components. Air in the hydraulic system.	Check and refill hydraulic fluid. Professional inspection recommended. Bleed the hydraulic system.

SPECIFICATIONS

Attribute	Detail
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Attribute	Detail
Brand	Arco
Model Name	6274
Voltage	12 Volts
Horsepower Compatibility	75-125 hp (Mercury/Mariner Outboards)
Material	Plastic (housing)
Item Weight	6 Pounds (approx.)
Product Dimensions	13 x 8 x 6 inches (approx.)
Replaces Part Numbers	Mercury 824051, Mercury 830250A6, Sierra 18-6775
Connection Type	3-wire connection with ring terminals
Mounting Type	4-bolt mount
Shaft Type	Hollow-hex shaft
Corrosion Protection	Epoxy powder coated
Wear Resistance	Motor shafts induction case hardened at bearing surfaces

IMPORTANT INFORMATION

Warning: Product may contain materials cautioned by California Proposition 65.

WARRANTY AND SUPPORT

For specific warranty information and technical support regarding your ARCO 6274 Tilt Trim Motor, please refer to the documentation provided with your purchase or contact ARCO Marine directly. ARCO products are designed to meet or exceed OEM performance standards.

For further assistance, you may visit the official ARCO Marine website or contact their customer service department. When contacting support, please have your product model number (6274) and any purchase details readily available.

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page’s manual context to help answer it.

Name

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Email

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After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question