

DB Electrical TRM0079

DB Electrical TRM0079 Tilt Trim Motor Instruction Manual

Model: TRM0079

1. INTRODUCTION

This instruction manual provides essential information for the proper installation, operation, and maintenance of your DB Electrical TRM0079 Tilt Trim Motor. Please read this manual thoroughly before attempting any installation or operation to ensure safe and efficient use of the product. This unit is designed as a replacement tilt and trim motor for various marine applications, specifically compatible with Volvo Penta models.

2. SAFETY INFORMATION

- Always disconnect the battery before performing any installation or maintenance on the tilt trim motor to prevent electrical shock or accidental operation.
- Wear appropriate personal protective equipment, including safety glasses and gloves, during installation and maintenance.
- Ensure the boat is securely supported and the outdrive is in a safe position before working on the tilt trim system.
- Handle hydraulic fluid with care. Refer to the fluid manufacturer's safety data sheet.
- If you are unsure about any part of the installation or repair process, consult a qualified marine technician.
- This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm (Proposition 65 warning).

3. PRODUCT OVERVIEW AND SPECIFICATIONS

The DB Electrical TRM0079 is a 12-volt replacement tilt and trim motor designed for marine applications. It includes the pump and reservoir as a complete unit.



Figure 3.1: DB Electrical TRM0079 Tilt Trim Motor. This image shows the complete unit, including the electric motor, hydraulic pump, and fluid reservoir, with electrical connections visible.

Technical Specifications:

- **Unit Type:** Tilt & Trim Motor (Includes Pump & Reservoir)
- **Voltage:** 12 Volts
- **Rotation:** RE (Reverse)
- **Overall Dimensions:** Approximately 9" W x 7.5" H (22.86 cm W x 19.05 cm H)
- **Motor Body Diameter (OD):** 3 inches (76.2 mm)
- **Shaft Diameter (OD):** 0.315 inches (8 mm)
- **Length:** 5.906 inches (150 mm)
- **Material:** Metal
- **Item Weight:** 6.5 Pounds (2.95 kg)

Compatible OEM Part Numbers:

- API MARINE: PT408N
- ARROWHEAD: TRM0079
- EMP Units: 4-6806
- J & N: 430-22086

- LESTER: 10856
- QUICKSILVER: 8M6007551
- SIERRA MARINE: 18-6806
- VOLVO: 3587079, 3857079, 3857489, 3858069, 3860879
- WAI: 10856N

This unit is compatible with all Volvo Penta models requiring these specifications.

4. INSTALLATION

Proper installation is crucial for the performance and longevity of your tilt trim motor. It is recommended that installation be performed by a qualified marine technician.

Pre-Installation Steps:

1. **Verify Compatibility:** Before beginning, confirm that the TRM0079 unit is the correct replacement for your specific marine engine and outdrive model. Compare the specifications and OEM part numbers provided in Section 3 with your existing unit.
2. **Gather Tools:** Ensure you have all necessary tools, including wrenches, screwdrivers, hydraulic fluid, and a container for draining old fluid.
3. **Disconnect Power:** Disconnect the boat's battery to prevent accidental electrical activation during installation.
4. **Secure Outdrive:** Position and secure the outdrive to prevent movement during the removal and installation process.

Removal of Old Unit:

1. Carefully disconnect the electrical wiring from the old tilt trim motor. Note the wiring configuration for reinstallation.
2. Place a drain pan beneath the unit. Disconnect the hydraulic lines from the old pump. Allow all hydraulic fluid to drain completely.
3. Remove the mounting bolts securing the old tilt trim motor assembly to the transom or mounting bracket.
4. Carefully remove the old unit from the boat.

Installation of New Unit:

1. **Mounting:** Position the new DB Electrical TRM0079 unit in the mounting location. Secure it using the appropriate mounting bolts. Ensure all connections are tight and secure.
2. **Hydraulic Line Connections:** The TRM0079 unit comes with various adapter fittings (silver and brass) and O-rings. It is critical to use the correct adapters and O-rings for a leak-free connection.
 - The silver fittings are generally required.
 - Select the brass fittings that match your original motor's hydraulic lines.
 - Ensure the larger O-ring is placed on the male portion of the silver adapter.
 - Ensure the smaller O-ring is placed on the male hose end that feeds into the brass adapter.
 - Tighten all hydraulic connections firmly but do not overtighten.
3. **Electrical Connections:** Connect the electrical wiring to the new motor, matching the configuration noted during removal. Ensure all connections are clean, secure, and free from corrosion.
4. **Fill with Hydraulic Fluid:** Fill the reservoir with the recommended hydraulic fluid. For Volvo Penta systems, 10-weight hydraulic oil is typically specified. Dexron ATF (Automatic Transmission Fluid) is

often a suitable alternative as it is also a 10-weight hydraulic oil. Do not overfill.

5. **Bleed the System:** After filling, cycle the tilt and trim system up and down several times to bleed any air from the hydraulic lines. Monitor the fluid level and top off as needed.
6. **Reconnect Power:** Reconnect the boat's battery.

5. OPERATION

The DB Electrical TRM0079 Tilt Trim Motor operates by controlling the angle of your boat's outdrive. This allows for optimal performance, fuel efficiency, and shallow water operation.

- Use the designated tilt/trim switch on your boat's control panel to raise or lower the outdrive.
- **Trimming:** Adjusting the outdrive angle while underway to optimize boat performance and ride quality.
- **Tilting:** Raising the outdrive completely out of the water for trailering, shallow water navigation, or maintenance.
- Avoid operating the trim system continuously for extended periods to prevent overheating.

6. MAINTENANCE

Regular maintenance ensures the longevity and reliable operation of your tilt trim motor.

- **Fluid Level Check:** Periodically check the hydraulic fluid level in the reservoir. Top off with the recommended 10-weight hydraulic oil (e.g., Dexron ATF) if necessary.
- **Inspect for Leaks:** Regularly inspect all hydraulic lines and connections for any signs of leaks. Address any leaks immediately to prevent system failure.
- **Electrical Connections:** Check electrical connections for corrosion, looseness, or damage. Clean and tighten as needed.
- **General Cleaning:** Keep the exterior of the motor and reservoir clean from dirt, salt, and debris.

7. TROUBLESHOOTING

This section addresses common issues you might encounter with your tilt trim motor.

Problem	Possible Cause	Solution
Motor does not operate or operates slowly.	Low battery voltage. Corroded or loose electrical connections. Low hydraulic fluid level. Air in the hydraulic system. Motor malfunction.	Check battery charge and connections. Inspect and clean all electrical terminals. Check and top off hydraulic fluid. Bleed the hydraulic system (cycle up/down). Consult a marine technician for diagnosis.
Hydraulic fluid leaks.	Loose hydraulic fittings. Damaged O-rings or seals. Cracked reservoir or lines.	Tighten all hydraulic connections. Ensure correct adapters and O-rings are used (refer to Section 4). Replace damaged O-rings or seals. Inspect for physical damage and replace components as necessary.

Problem	Possible Cause	Solution
Motor is louder than original unit.	Normal operational characteristic for some replacement units. Air in the hydraulic system.	If operation is smooth and effective, this may be acceptable. Bleed the hydraulic system.

8. WARRANTY AND SUPPORT

DB Electrical provides a 1-year warranty on this product. This warranty covers manufacturing defects and ensures the product will function flawlessly when installed correctly. In the rare event of a product malfunction within one year of purchase, DB Electrical will replace the unit. For warranty claims or technical support, please contact DB Electrical customer service.

For further assistance, please refer to the official DB Electrical website or contact their customer support directly.