



Manuals.plus /

› ZTUOAUMA /

› ZTUOAUMA 24V 90A DC Motor Controller Instruction Manual

**ZTUOAUMA 1212P-2502 1115-510004-00**

# ZTUOAUMA DC Motor Controller Instruction Manual

Model: 1212P-2502 1115-510004-00

## INTRODUCTION

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This manual provides comprehensive instructions for the installation, operation, and maintenance of the ZTUOAUMA 24V 90A DC Motor Controller, part numbers 1212P-2502 and 1115-510004-00. This controller is designed for use with specific electric pallet forklifts, including the Big Joe Electric Pallet Forklift EPT20-15ET and MEF15 models, serving as a direct replacement for Curtis 1212P-2502 controllers. Please read this manual thoroughly before installation and operation to ensure proper function and safety.

## SAFETY INFORMATION

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Always observe the following safety precautions to prevent injury or damage to the equipment:

- Disconnect all power to the forklift before attempting any installation, maintenance, or repair.
- Ensure that installation is performed by qualified personnel familiar with electrical systems and forklift maintenance.
- Verify correct voltage and current ratings before connecting the controller. This controller is rated for 24V and 90A.
- Avoid contact with live electrical components.
- Protect the controller from moisture, dust, and extreme temperatures.
- Do not attempt to modify the controller. Unauthorized modifications can void the warranty and create safety hazards.

## PRODUCT OVERVIEW

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The ZTUOAUMA DC Motor Controller is a permanent magnet type controller designed for precise motor speed and torque control in electric pallet forklifts. It features robust construction and is engineered for direct replacement,

ensuring OEM quality and function.



Image: Front view of the ZTUOAUMA DC Motor Controller, displaying its model number (1212P-2502), voltage (24V), and current (90A) on a white label. The unit is black with various connectors visible.



Image: Top-down view of the controller, highlighting the various white multi-pin connectors and larger metal terminals for power connections. Markings like M1, M2, B-, B+ are visible near the terminals.

## SPECIFICATIONS

Feature	Detail
Part Number	1212P-2502, 1115-510004-00
Voltage	24V
Current	90A
Type	Permanent Magnet DC Motor Controller
Compatible Applications	Big Joe Electric Pallet Forklift EPT20-15ET, MEF15 (Replacement for Curtis 1212P-2502)
Included Components	Plastic Controller
Manufacturer	ZTUOAUMA

## INSTALLATION / SETUP

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Follow these steps for proper installation of the DC Motor Controller:

- 1. Preparation:** Ensure the forklift's power is completely disconnected and the battery is isolated. Wear appropriate personal protective equipment (PPE).
- 2. Locate Existing Controller:** Identify the current motor controller in the forklift. Note its mounting position and all connected wiring. It is recommended to take photos for reference.
- 3. Disconnect Wiring:** Carefully disconnect all electrical connectors and power terminals from the old controller. Label each wire if necessary to ensure correct re-connection.
- 4. Remove Old Controller:** Unmount the old controller from its housing or mounting bracket.
- 5. Mount New Controller:** Position the ZTUOAUMA DC Motor Controller in the same location as the old unit. Secure it firmly using appropriate fasteners.

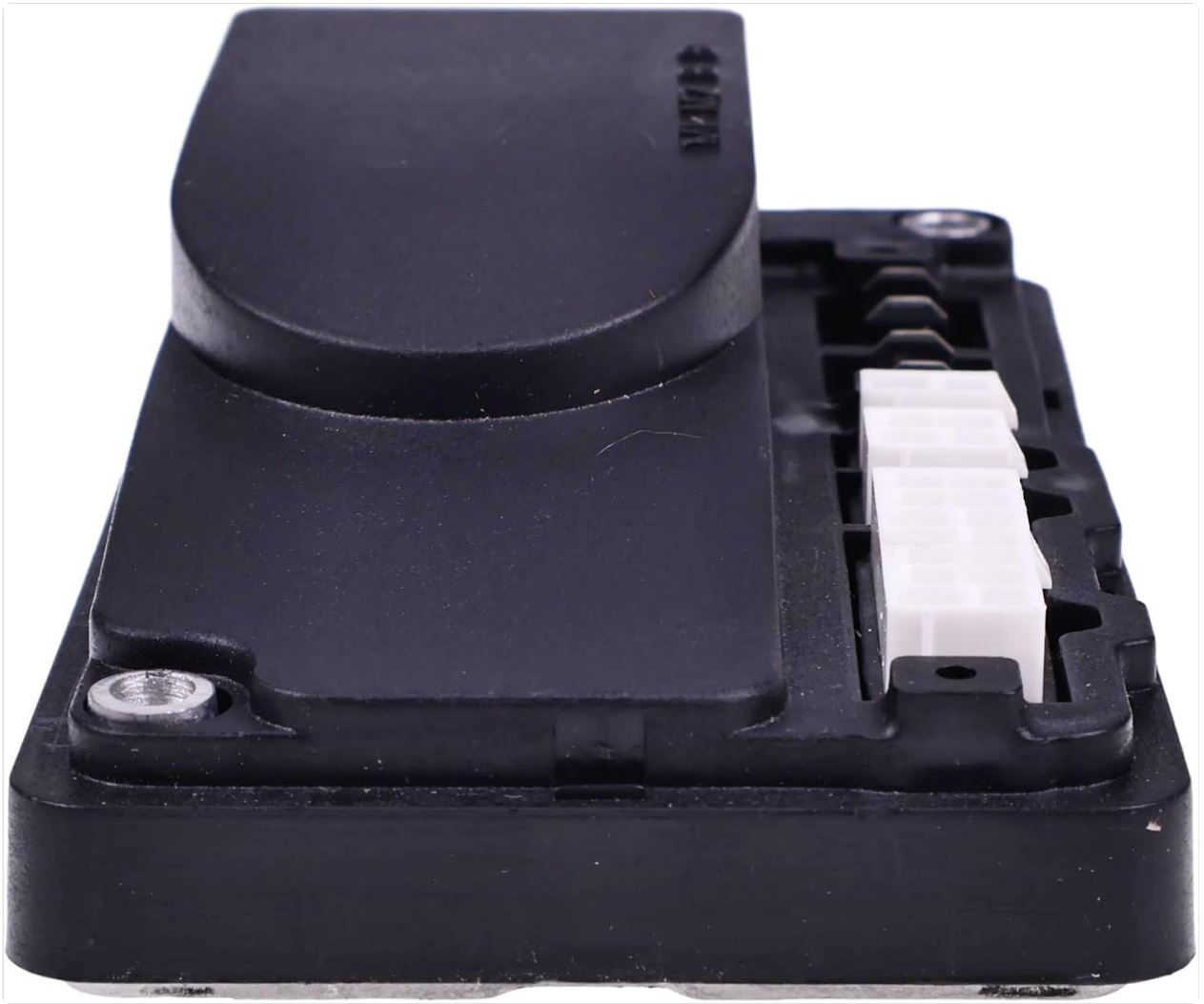


Image: Angled view of the controller, highlighting the mounting holes at the corners and the various electrical connectors, which are crucial for proper installation.

- 6. Connect Wiring:** Reconnect all electrical connectors and power terminals to the new controller, ensuring each connection matches the original configuration. Refer to your forklift's wiring diagram if available. Pay close attention to the B+, B-, M1, and M2 terminals for motor and battery connections.



Image: Detailed close-up of the white multi-pin connectors on the controller, showing the individual pins. These connectors handle control signals and auxiliary functions.



Image: Close-up of the larger metal terminals on the controller, clearly labeled M1, M2, B-, and B+. These are the main power and motor connections.

7. **Verify Connections:** Double-check all connections for tightness and correctness. Ensure no wires are pinched or exposed.

8. **Restore Power:** Carefully restore power to the forklift.
9. **Test Functionality:** Perform a functional test of the forklift to ensure the motor controller operates correctly and the forklift responds as expected.

## OPERATION

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Once installed, the ZTUOAUMA DC Motor Controller operates seamlessly with your forklift's existing control system. The controller manages the power delivery to the DC motor, allowing for variable speed and direction control based on the input from the forklift's throttle and directional switches. No direct user interaction with the controller itself is required during normal operation.

- Ensure the forklift's battery is adequately charged for optimal performance.
- Operate the forklift according to its original manufacturer's instructions.
- If any unusual behavior (e.g., erratic speed, loss of power) is observed, immediately cease operation and consult the troubleshooting section.

## MAINTENANCE

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The ZTUOAUMA DC Motor Controller is designed for durability and requires minimal maintenance. However, periodic checks can help ensure its longevity and reliable performance:

- **Visual Inspection:** Periodically inspect the controller for any signs of physical damage, corrosion, or loose connections. Ensure the housing is intact and free from cracks.
- **Cleanliness:** Keep the controller free from excessive dust, dirt, and debris. Use a soft, dry cloth to gently wipe the exterior. Do not use liquid cleaners directly on the unit.
- **Connection Integrity:** Check that all electrical connections are secure and free from oxidation. Loose connections can lead to overheating and poor performance.
- **Environmental Protection:** Ensure the environment where the forklift operates is within the recommended temperature and humidity ranges to prevent premature wear.

*Note:* All parts are strictly tested in the factory to ensure better function and durability. No user-serviceable parts are inside the sealed unit.

## TROUBLESHOOTING

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This section provides solutions to common issues you might encounter with the DC Motor Controller. For problems not listed here, or if solutions do not resolve the issue, contact customer support.

Problem	Possible Cause	Solution
Motor does not respond or operates intermittently.	Loose or corroded electrical connections. Insufficient battery charge. Faulty input signal from forklift controls.	Check and secure all wiring connections to the controller and motor. Verify battery voltage and charge if necessary. Inspect forklift's throttle and directional switches.
Motor runs at incorrect speed or is erratic.	Incorrect wiring. Interference. Damaged controller.	Review wiring diagram and ensure all connections are correct. Check for sources of electromagnetic interference. If problem persists, the controller may need replacement.
Controller feels excessively hot.	Overload condition. Poor ventilation. Loose power connections.	Reduce load on the forklift. Ensure adequate airflow around the controller. Tighten all power connections (B+, B-, M1, M2).

## WARRANTY AND SUPPORT

ZTUOAUMA stands behind the quality of its products. This DC Motor Controller is manufactured to high standards and undergoes strict factory testing to ensure optimal function and durability.

For any technical assistance, warranty inquiries, or support, please contact ZTUOAUMA customer service through the retailer where the product was purchased or visit the official ZTUOAUMA store online. Please have your model number (1212P-2502 1115-510004-00) and purchase information ready when contacting support.

*Note:* Protection plans may be available for extended coverage. Please refer to your purchase documentation for details on any applicable protection plans.