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AW 19EBE015-48V1K20R

AW 20"x4" Fat Tire 48V Ebike Electric Rear Wheel Bicycle Kit Instruction Manual

Model: 19EBE015-48V1K20R

1. Introduction

This manual provides comprehensive instructions for the installation, operation, and maintenance of your AW 20"x4" Fat Tire 48V Ebike Electric Rear Wheel Bicycle Conversion Kit. Please read this manual thoroughly before installation and use to ensure safe and optimal performance of your electric bicycle.
This kit is designed to convert a standard 20" bicycle with 4" fat tires into an electric bicycle, offering a powerful 1000W brushless hub motor and a dual-mode controller for enhanced efficiency and reliability.

2. Package Contents

Upon opening the package, please verify that all the following components are present and undamaged:

- 1x Motor Wheel
- 1x Controller
- 2x Brakes (Levers)
- 2x Throttle Sleeves
- 2x Twist Throttles
- 1x LCD Display
- 1x PAS Sensor
- 1 Set of Flywheel
- 1 Set of Torque Arm
- 10x Wire Ties
- 1x Spoke Adjuster
- 2x Winding Pipes

Note: Battery, charger, and tire are not included and must be acquired separately.



Image 2.1: All components included in the AW Ebike Electric Rear Wheel Bicycle Conversion Kit.

3. Technical Specifications

Feature	Specification
Overall Dimension (Dia.xW)	16 9/16" x 8 7/16"
Compatible Tire Size	20" x 4"
Rim Diameter	16 9/16"
Hub Length	9 7/16"
Rear Dropout Spacing	6 11/16"
Motor Diameter	9 1/2"
Spokes Length	2 13/16"

Spoke Screw Type	12G
Controller Power	1000W
Controller Voltage	48V
Motor Speed	510 RPM
Hub Torque	58.5 N.M
Compatible Battery	48V 20 Ah (Not Included)
Suitable Brake Type	Disc / V-brake
Weight Capacity	330 Lbs
Climbing Angle	20 Degrees
Net Weight	23.6 Lbs

The kit features a powerful 48V 1000W brushless and gearless hub motor, designed for efficient operation and a maximum riding speed of 45 KM/H. The dual-mode controller ensures continued motor function even if Hall effect components fail, switching to non-Hall effect mode.

4. Safety Information

Always prioritize safety when installing and operating your ebike conversion kit. Failure to follow these safety guidelines may result in injury or damage to the product.

- Ensure all connections are secure and properly insulated before operating the ebike.
- Always wear a helmet and appropriate safety gear when riding.
- Familiarize yourself with local regulations regarding electric bicycles.
- Do not operate the ebike in adverse weather conditions, especially heavy rain, as components may not be fully waterproof.
- Regularly inspect brakes, tires, and all electrical connections for wear or damage.
- The electric wheel is designed for conventional bicycles only; do not use with tricycles, tractors, or other non-compatible vehicles.
- It is recommended to have the kit installed by a professional bicycle mechanic or an automobile repair shop with a standard business license for modification.
- The brake levers are designed to cut off power to the motor when applied, enhancing safety during braking.

5. Setup and Installation

This section outlines the general steps for installing the ebike conversion kit. Professional installation is recommended.

5.1. Pre-Installation Checks

- Ensure your bicycle frame has a rear dropout spacing of 6 11/16" to accommodate the motor wheel.
- Verify that your bicycle can accommodate a 20" x 4" fat tire.
- Gather all necessary tools, including wrenches, screwdrivers, and cable cutters.

5.2. Motor Wheel Installation

1. Remove your bicycle's existing rear wheel.
2. Install the new motor wheel into the rear dropout of your bicycle frame. Ensure the wheel is centered and securely fastened with the axle nuts.
3. Attach the provided torque arm to prevent axle rotation under motor power.
4. Install the flywheel (cassette) onto the motor wheel hub.



Image 5.2.1: Rear view of the motor wheel, showing the hub and wiring connection point.



Image 5.2.2: Close-up view of the motor wheel's cassette (flywheel) for chain engagement.

5.3. Controller and Wiring

5. Mount the controller securely to your bicycle frame, typically in a location protected from elements.
6. Connect the motor's power cable to the controller. Ensure the arrow-to-arrow connection is correct.
7. Connect the brake levers to the controller. These levers are designed to cut off motor power when activated.
8. Install the twist throttles on the handlebars and connect them to the controller.
9. Mount the LCD display on the handlebars and connect its cable to the controller.
10. Install the PAS (Pedal Assist System) sensor near the pedal crank and connect it to the controller.
11. Use the provided wire ties and winding pipes to neatly route and secure all cables, preventing entanglement and damage.



Image 5.3.1: Side view of the motor wheel, highlighting the robust hub and spoke design.



Image 5.3.2: Front view of the motor wheel, showcasing its overall structure.

5.4. Battery Connection

- Connect your 48V 20Ah compatible battery (not included) to the controller's main power input. Ensure correct polarity.
- Secure the battery to the bicycle frame using a suitable battery mount (not included).

6. Operating Instructions

6.1. Powering On/Off

To power on the system, press and hold the power button on the LCD display. The display will illuminate, showing speed, battery level, and mileage. To power off, press and hold the power button again.

6.2. Throttle Operation

The twist throttle provides on-demand electric assistance. Twist the throttle towards you to engage the motor and increase speed. Release the throttle to disengage the motor.

6.3. Pedal Assist System (PAS)

The PAS senses your pedaling cadence and provides electric assistance automatically. This allows for comfortable riding with less fatigue, especially beneficial for long distances. The LCD display may allow adjustment of PAS levels, if applicable to your specific display model.

6.4. Braking

The installed brake levers are designed to cut off power to the motor when activated, ensuring safe and effective braking. Always use both brakes for optimal stopping power.

7. Maintenance

Regular maintenance is crucial for the longevity and safe operation of your ebike conversion kit.

- **Cleanliness:** Keep the motor, controller, and electrical connections clean and free from dirt and debris. Use a damp cloth; avoid high-pressure washing.
- **Connections:** Periodically check all electrical connections for tightness and signs of corrosion.
- **Cables:** Inspect all cables for fraying, cuts, or damage. Replace damaged cables immediately.
- **Brakes:** Ensure brake pads are not excessively worn and brake levers are functioning correctly, cutting off motor power when applied.
- **Tires:** Maintain proper tire pressure for optimal performance and safety.
- **Motor:** The brushless motor is generally low-maintenance. Avoid submerging the motor in water.
- **Storage:** When storing the ebike for extended periods, especially in cold conditions, ensure the battery is partially charged (e.g., 50-70%) and stored in a cool, dry place.

8. Troubleshooting

This section addresses common issues you might encounter with your ebike conversion kit.

Problem	Possible Cause	Solution
Motor not engaging / No power	Battery low or disconnected; Loose electrical connections; Controller issue; Brake levers engaged.	Check battery charge and connection; Inspect all wiring for secure connections; Ensure brake levers are fully released; Consult a professional if controller is suspected.
Motor stutters or runs intermittently	Loose motor cable connection; PAS sensor misalignment; Hall sensor issue (controller may switch to non-Hall mode).	Check motor cable connection; Verify PAS sensor alignment and cleanliness; If issue persists, controller may be operating in non-Hall mode, which is normal.
LCD display not working	Loose display cable; Power issue.	Check display cable connection to controller; Ensure main power is on.
Reduced range or power	Battery degradation; Improper tire pressure; Excessive load.	Check battery health and charge fully; Inflate tires to recommended pressure; Reduce load if possible.

If you encounter issues not listed here or if solutions do not resolve the problem, please contact customer support or a qualified technician.

9. Warranty and Support

This product is manufactured by AW. For any technical assistance, warranty claims, or support inquiries, please refer to the contact information provided at the point of purchase or visit the official AW website.
Please retain your proof of purchase for warranty purposes. The manufacturer's warranty typically covers defects in materials and workmanship under normal use. Damage resulting from improper installation, misuse, neglect, or unauthorized modifications is not covered.
For additional protection, consider purchasing extended protection plans available from authorized retailers. For example, 3-Year and 4-Year Protection Plans may be available.

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