Quick Replacement Guide — Vehicle Barrier Transmission Mechanism

Model WJDNSBG101HM (24V DC / 350W Servo Mechanism) for WEJOIN WJNSBG101-H Series

1. Prerequisites & Required Tools

- **Replacement Mechanism:** WEJOIN WJDNSBG101HM (24V DC brushless motor with integrated worm-gear transmission core).
- **Hardware Tools:** Complete socket wrench set (19mm for M12 boom bolts / M16 anchor bolts), Allen keys set, open-end wrenches, and circlip pliers (for cotter pin manipulation).
- **Diagnostic Equipment:** Digital multimeter for verifying zero-voltage condition prior to handling.

2. Step 1: Preparation & Disassembly

1. Power Isolation: Disconnect the primary AC power supply (110–240 VAC) feeding the barrier unit at the main breaker or circuit disconnect.

2. Cabinet Access & Clutch Release: Unlock the cabinet door using the master key. Shift the electronic clutch lever down to the OFF (O) position to disengage the motor clutch and unlock the mechanism.

3. Boom Arm Dismantling: Unscrew the 2 M12x70mm hex bolts holding the boom clamping plate to the barrier bracket support. Carefully lift and remove the boom arm assembly from the cabinet.

4. Disconnecting Cabling: Unplug the motor power plug and motor sensor/encoder plug from the DZE4H-OS main control board.

3. Step 2: Mechanism Unmounting & Replacement

1. Removing Old Mechanism: Unscrew the internal triangular mounting block bolts holding the mechanism core to the barrier cabinet frame. Extract the old mechanism assembly.

2. Mounting New Mechanism: Position the new WJDNSBG101HM mechanism inside the housing. Align it with the mounting points and firmly tighten the triangular securing blocks.

3. Re-establishing Installation Direction (Left vs Right): Verify drive orientation. If reversing direction (e.g., Left-hand to Right-hand installation):
• Remove cotter pin using pliers.
• Extract limit pressure rod from bottom.
• Re-insert limit pressure rod into corresponding hole (Left installation: outer hole from right; Right

installation: inner hole from left).
• Re-lock cotter pin and set parameter A-05 = 2 (Left) or A-05 = 3 (Right) on the controller.

4. Wiring Connection: Plug the motor power harness and motor sensor interface firmly back into the designated sockets on the DZE4H-OS control board.

4. Step 3: Boom Remounting & Mechanical Limit Adjustment

1. Remounting Boom Arm: Re-attach the boom securing plate onto the mechanism drive shaft using the 2 M12x70mm hex bolts, flat washers, spring washers, and M12 nuts. Tighten securely with a wrench.

2. Mechanical Limit Adjustment: Adjust the mechanical limit bolts so that when the boom arm is perfectly horizontal (0°), it firmly presses against the limit stopper bar. When the boom moves to vertical (90°), it must clear the limit bar without contacting it.

3. Clutch Engagement: Shift the electronic clutch lever back UP to the ON (I) position to lock the motor gear train.

5. Step 4: Controller Calibration & Parameter Setup

1. Power On: Re-apply main AC power. Verify the display shows software version Pcxx followed by system voltage uL24.

2. Speed Preset Setup (A-13 Parameter): Press and hold '=' and '▲' simultaneously for 2 seconds to enter Advanced Menu. Navigate to A-13 and select preset code based on installation orientation and boom length:
• A-13 = 39 (Left) / 40 (Right): Straight / Folding Boom ≤ 3m
• A-13 = 41 (Left) / 42 (Right): Straight / Folding Boom ≤ 4m
• A-13 = 43 (Left) / 44 (Right): Straight / Folding Boom ≤ 5m
• A-13 = 45 (Left) / 46 (Right): Straight Boom ≤ 6m
Press '=' to confirm. (This automatically configures parameters P-00~P-09, P-13, P-15, and sets A-33 = 2).

3. Fine-Tuning Horizontal & Vertical Alignment: Execute open/close cycles via remote or control board buttons:
• Vertical Alignment (P-09): If boom is < 90°, increase P-09. If > 90°, decrease P-09.
• Horizontal Alignment (P-08): If boom is uneven at 0°, adjust P-08 value or fine-tune mechanical closing stop bolt.
• Limit Shake Reduction: If top position shakes, decrease P-06 and P-02. If bottom position shakes, decrease P-07 and increase P-03.

6. Technical Specifications Summary — WJDNSBG101HM

Parameter	Technical Specification
Motor Operating Temperature	-35°C ~ +70°C
Motor Power	350W
Running Speed Range	1 to 6 seconds (adjustable)
Motor Input Voltage	24V DC ±10%
Compatible Barrier Models	WJNSBG101HL34LED, WJNSBG101HR34LED (WJNSBG101-H Series)
MTBF	6,000,000 cycles