

RET-200 REPLACEMENT

Note: This is a guide for removing and replacing a RET-200 motor on a JMA antenna.

I. RET-200 Motor Removal

1. Remove any attached AISG cable(s) from the motor.
2. Carefully remove the 4 mounting screws and place them in a safe location.
Ensure that all of the washers stay together with each screw for re-use. See Fig. 1.
3. Carefully slide the RET-200 out from the antenna.
4. Ensure that the orange gasket is undamaged. If damaged, contact JMA Tech support for a replacement gasket. See Fig 1.
 - JMA Tech Support
 - Toll Free: [+1-888-201-6073](tel:+1-888-201-6073)
 - techsupport@jmawireless.com

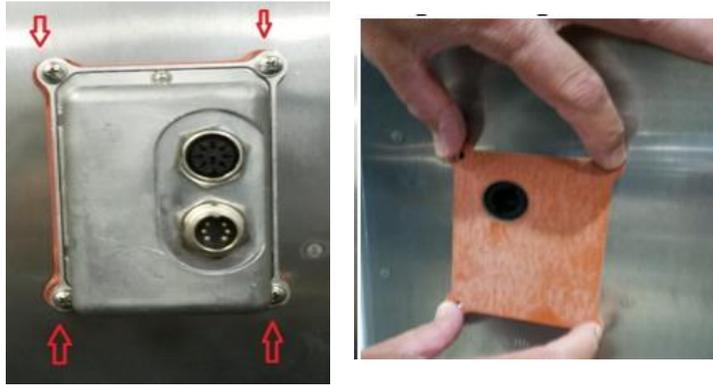


Fig. 1 – Mounting Screws and Gasket



Fig. 2 – RET Firmware Rev and Serial Number

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II. Verify RET-200 Functions – Outside Antenna

Note: This procedure verifies the condition of a suspect RET-200 by testing its calibration and tilt functions. This can also be used to verify the functionality of a new RET-200 prior to installation.

1. If the RET-200 is attached to an antenna remove it using the instructions in Step I.
2. Connect the RET-200 to the controller using an AISG cable.
3. Use the Scan the BUS to find the RET-200.
4. **Ensure that the RET-200 has the correct antenna file loaded.** Reference Fig. 2 to verify the firmware version matches the version identified in the PCU-220 controller software.
5. Force calibrate the motor by placing the shaft of a screwdriver between the prongs of the actuator and initiate the Calibration command. Hold it firmly in place to stop the actuator from turning as it moves in a counter-clockwise direction. This will force the RET into calibration. See Fig. 3.
 - **Do NOT** try to stop it again as it moves in the opposite direction (clockwise)
6. Test the Tilt functions by adjusting the tilt a few times within the Min/Max range.
7. If the antenna passed calibration and tilt setting outside the antenna, the motor is good and the antenna is now suspect.
8. Steps 2-6 can be used to verify a new RET-200 is operating correctly before installation.



Fig. 3 – Calibration with Screwdriver

III. RET Installation

1. Align the Actuator (Top Hat) to the slot in the antenna. See figure 3 & 4.
 - a. Gently turn the motor to align the screw holes. **Do NOT Use Excessive Force!**
 - b. If the screw holes line up, go to step 2.
 - c. If the screw holes do **NOT** align, remove the motor.
 - d. Connect the AISG cable to the motor.

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- e. Insert the actuator back into the slot of the antenna and hold the motor in place. See Fig. 4.
- f. Use the PCU-220 controller to scan and connect to the motor.
2. **Ensure that the RET-200 has the correct antenna file loaded.** Reference Fig. 2 to verify the firmware version matches the version identified in the controller software.
 - a. Calibrate the motor and allow the body of the motor to turn freely and the screw holes should start to get closer to alignment.
 - When the screw holes line up, firmly hold the body of the motor in place so that the screw holes stay aligned and force the calibration to end.
 - Go to step 2 to mount the motor.
 - b. If the holes are still **NOT** aligned, keep holding the motor in place and adjust the tilt one degree at a time and allow the body of the motor to turn freely to alignment.
 - c. Note the amount of travel per degree of tilt. Adjusted the tilt accordingly to get alignment.
 - d. After alignment, go to Step 3.

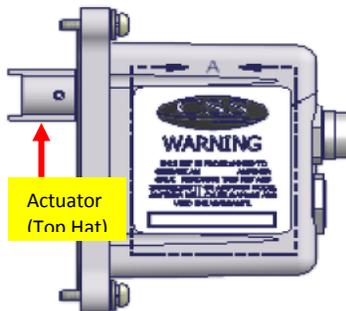
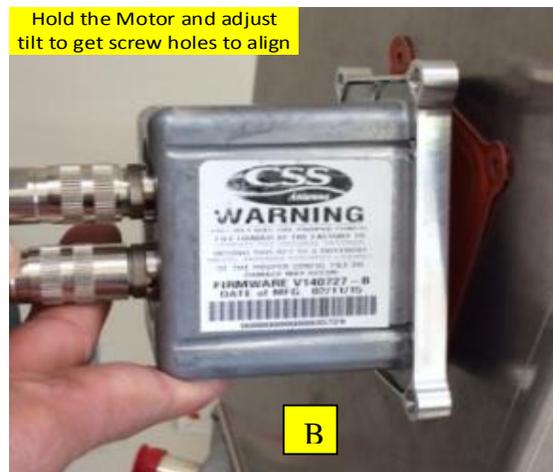


Fig. 3 – Actuator



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Fig. 4 – Aligning Screw Holes



Fig. 5 – RET Screws



Fig. 6 – Dielectric Grease



Fig. 7 – Proper Dielectric Grease Application

3. Once the screw holes are aligned, secure the motor to the housing with the four screws. Ensure that all washers are in the correct order on the screw per Fig. 5 for proper isolation.
4. Apply the dielectric grease supplied with the spare motor to both connectors on each end of the AISG cable – see Fig. 6 & 7. This provides additional moisture and corrosion protection.
5. Reconnect the AISG cable. **Do not use tools to tighten AISG cables, use hand pressure, finger tight!**
6. **You must perform a Calibration again prior to setting tilt.**