

## **【LUXON AGILE】 About the axial stroke width of the rotor shaft**

~In order to maintain motor performance, we will release a replacement AGILE dedicated pipe type SHIM.~

### **【Importance of axial direction and stroke width】**

LUXON AGILE adjusts the axial stroke width by fitting a washer type SHIM (A in the figure below) on the pinion gear side of the rotor shaft and a pipe type SHIM (B in the figure below) on the end bell side.



The axial stroke width is very important from the viewpoint of running performance and motor protection, and even a slight individual difference level of a few commas in the rotor manufacturing process has an effect.



It's important to have a stroke width of about 0.3 to 0.5mm in the axial direction of the shaft

### **【Our products finely are adjusted the stroke width for each.】**

To correct this slight manufacturing error, we have prepared several washer-type SHIM (A) with different thicknesses and fine-tuned the clearance of all motors.

A problem arises even if the stroke width is large or small. When replacing the rotor, be sure to use the washer type SHIM (A) that is attached to the original rotor.

If you have multiple AGILE dedicated rotors and you do not know the washer-type SHIM (A) that was originally installed, use a SHIM that has an axial clearance of about 0.3 to 0.5mm. (Pipe type SHIM is all the same size)

**【Be careful when the stroke width of the rotor shaft gradually increases over time!】**

If the gear is worn down and the pinion gear and spur gear are not properly meshed (not vertical), or the front side SHIM is fitted with another motor SHIM, there is almost no stroke width. If excessive stress is applied in the direction of the end bell and the vehicle continues to run in this state, the pipe type SHIM (B) on the end bell side may wear out and wear out.

When the pipe type SHIM is worn down, the rotor stroke width becomes extremely large, causing problems such as "the rotor magnet part comes into contact with the sensor element" and "the sensor signal cannot be transmitted normally". Therefore, if you feel that the stroke of the rotor shaft has increased, we recommend replacing the pipe type SHIM (B).

### 【How to replace SHIM】

When replacing the SHIM, it is necessary to disassemble the motor just as when replacing the rotor. Please follow the steps below. (SHIM replacement is performed in step 3-1 below)

\* As shown in 3-2, using our optional blade rotor replacement tool (OP-15056 / JPY2,000-) enables smooth replacement.

