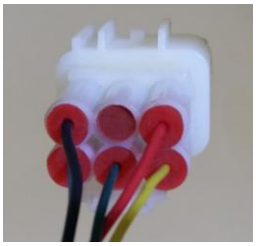


P:9.1

Products Maintainence & Service

1 Electric Motor hall measurement：

1) Instrument： Multimeter **,** controller or 5V battery.

2) Detailed schedule：

①. Check the motor has connected with controller， and the electric lock/ignitor is on.（if don t connect with controllers, there should external connection with 5VDC battery）。

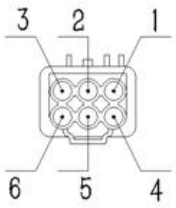
②. Set the multimeter to voltage test(DC)， As picture 9.3 shown below， connected Blake probe with（COM）， connected Red probe with（VΩHz）.

③. Connected the Red probe with the red wire of Hall. in the same way, connect the black probe with the black wire of Hall, in order to confirm the 5VDC is normal.

④. Connected the Red probe with Red wire of Hall（As picture 9.1 shown）， and connected Black Hall outgoing line (Yellow/Green/Blue, any one is okay), then turn the motor slowly by hand)， the multimeter should change between 5V(actual 4.2V~4.8V) to 0V，it means the Hall sensor is work/okay. If the voltage keep 5V to 0V， the Hall sensor is not work

Picture 9.3

⑤. Use the same method to test the rest two Hall wires, in order to confirm weather the Hall sensor damage.

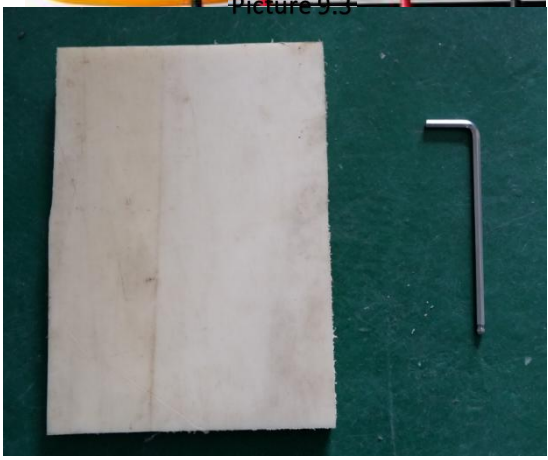


P: 9.2

3). Precautions：

①. Once the motor connected with controller， we should confirm the controller power supply firstly. (The Red/Black line which Multimeter measured should be 5VDC).

②. External 5VDC power, positive pole connected with red wire of Hall, negative pole connected with Black wire of Hall, not allowed to access anti-Line.



P: 9.4

2. Disassemble the motor：

1). Instrument : 4mm Allen wrench, hammer, plastic board Or Nylon board. (As picture 9.4 show).

2). Method：

①. Use 4mm Allen wrench to disassemble the screws (Electric outlet side) one by one.

②. Grasp the Motor Hub with both hands, the motor shaft downwards (As picture 9.5 shown), then put your strength knocking the motor to rubber mat, in order to separate the Motor rim and Motor stator.

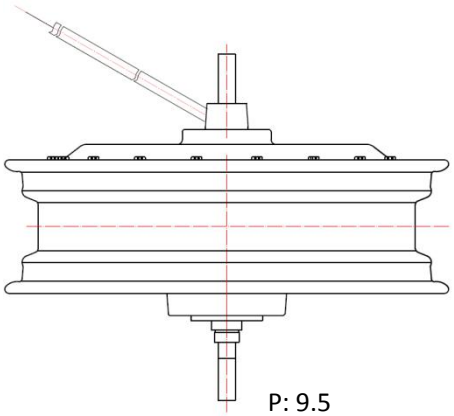
3) Precautions：

①. Disassembled all the Motor shaft accessories before disassembling the motor.

②. There has Strong magnetic steel paste on the Motor rotor, For safety, please don't

reach your hand to Motor inside cover. (When the motor didn't completely disassembled down, then the motor stator was sucked bake and hurt your hand).

③. Due to the enameled without shell protection after motor disassembled, it should be carefully placed, don't bump the coil.



P: 9.5

3. Replace the Hall sensor：

1). Instrument：Scissor, Electric iron, Multimeter.

2). Material：Hall sensor, Dry glue, Lashing band

3） Operation step：

①. Base on the Previous Page first line, according to Motor Hall sensor measuring method, confirm that Hall sensor damage.

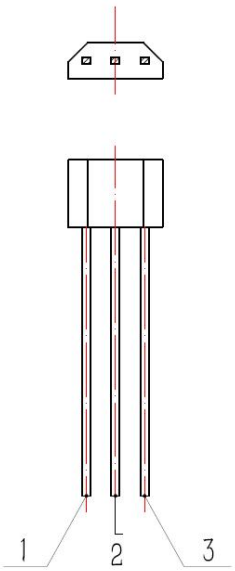
②. Base on the Previous Page second item, according to Motor disassemble method, open the Motor

③. Use Scissor to clip the lashing brand and damage Hall. (Clip along the welding position of Hall line)

④. Use slotted screwdriver and blade to take out damage hall, clean up the Hall groove.

⑤. Put new Hall into the clean up Hall groove and immobilization by Dry glue.

⑥. Take down the casing of three Hall lines which clip from the damage Hall, and use Electric iron to boil out the welded connection which soldered before, then sheathe the 1x25mm Heat-Shrinkable T bush(RSBA) on the Hall line.



1Red line VCC
2Black line GND
3 Signal line

P:9.6

⑦. Use Electric iron to solder the three Hall Pin, welding Hall Foot with(As picture 9.6 showed) Hall line(Electric Iron best temperature is 380±20℃), welding time of single Hall Foot should less than 1s; check the welded firm after welding, than use Heat-Shrinkable T bush(RSBA) to cover the Hall pin and weld, use Heat Gun to blew up the RSBA, finally wiped silica gel on the Hall foot for insulating treatment.

⑧. After the operation, arrange the Motor line, fastening by Lashing band.

⑨. Check the replace Hall work normal, method like Previous Page first line (Motor hall measurement).

4). Precautions：

①. Before Installing the Hall, it's necessary to get rid of static electricity.

②. When assemble the Hall, packing of the hall should install the neat, can't be incline and install out-position.

③. Before welding Hall, we should check the Electric iron, weather is electric leakage.

4. Replace the electric bearing：

1). Instrument：Pressure bearing tooling, press Or hammer.

2). Material： Bearing

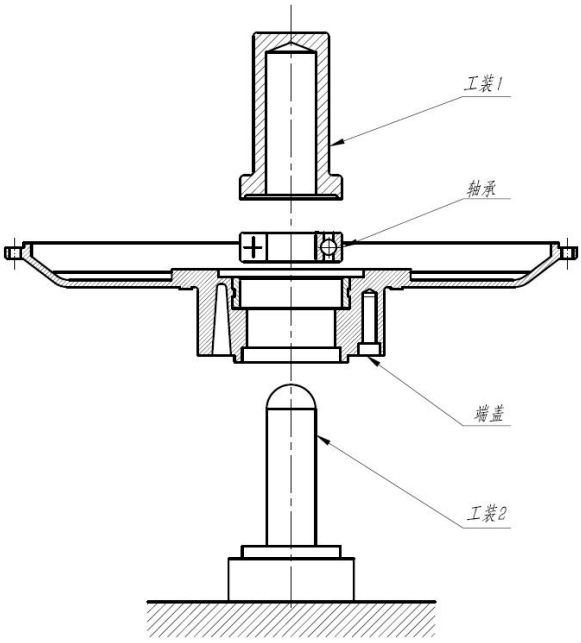
3). Operation method：

①. According to the Motor disassemble method Previous Page expressed, disassemble the Motor.

②. Turn the Motor cover respectively by hands, confirm the damage bearing (Undamaged bearing shouldn't have abnormal sound).

③. Take out the Motor bearing from the bearing chamber.

④. Clean up the bearing chamber, then push the new bearing to bearing chamber. (As picture 9.7 showed)



P:9.7

⑤. After pushing, turn the Motor cover, check the replace bearing, confirm weather the bearing is install in-position and has abnormal sound).

⑥. Picture 9.8 is Motor bearing pressure equipment installation diagram.

4). **Precautions：**

①. Bearing pressure equipment most need frock press bearing outer race, Picture 9.7 Frock 1

②. Bearing pressure equipment process should improve bearing chamber vertical with bearing.

Can't be incline, Picture 9.7 frock 2 is guiding shaft.

③. Before frock the bearing need to check the frock surface and bearing chamber clean.