

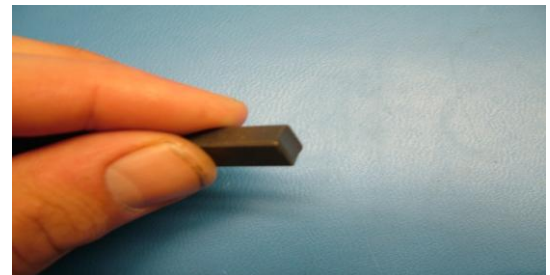
Sherline Products - Dc Motor Recall Repair Instructions

The reason for this modification is we recently had a couple of failures caused by the temperature sensor sliding inside it's insulator and shorting against the motor case even though it's clamped in place. We consider this a serious defect that must be corrected immediately. You have the choice of returning the motor and speed control or making this simple modification yourself. We believe most of our customer base would rather make this modification at home than sending the motor and speed control to Sherline. The goal is to apply the epoxy in between the end of the thermal sensor and the side of the motor case. This is to prevent an electrical short from occurring. This repair can be done with using non conductive 2 part epoxy found at most local hardware stores. Note: Not all the spindle motors shipped by Sherline were supplied by Hill House. This repair is only intended for Hill House motors.

First take and remove the motor and speed control assembly from your machine as per Sherline Assembly instructions just in reverse order. Ensure that the motor is unplugged from the wall outlet and there is no power on the motor or speed control at all.



Once this is done begin disassembling the motor by taking a flat head screw driver and removing the two brush inserts located on the bottom outside of the case. Take special care to mark and or remember which brush goes in what location, i.e.; right and left. This is done because of the wear on the brushes from prior use. If you look closely at the brush when you remove it you will notice that there is a groove worn into the end of it. It is VERY IMPORTANT that you pay attention to this groove and when you replace the brush to ensure it goes back in EXACTLY as it came out. (this is to prevent excessive wear on the brush).



Once you've completed removing the brushes begin taking the two mounting screws out. Using a 3/8 nut driver remove the two mounting screws located at the very bottom of the motor assembly. Again make sure you mark and or remember what bolt is allocated to what hole, i.e.; right and left.



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Once the chassis bolts are removed (again make sure you have annotated which screw and brush assembly is allocated to which hole) you can now begin to disassemble the motor casing. Very carefully take the top section of the motor in one hand and the bottom section in the other and cautiously remove the lower section (the cup). It may take some strength to remove the cup just be very careful and pull downwards away from the main case.



Now that you have disassembled the motor we will be doing the repair/preventative maintenance on the cup of the motor. Take and mix the epoxy and its catalyst (as recommended by Sherline Products) in a separate bowl or surface. Once you have thoroughly mixed the two components of the epoxy begin to apply in between the cup and the thermal. Ensure you get a suitable amount to cover the entire gap between the bowl and thermal and also make a bridge type covering that goes from the area between the thermal and cup and over the thermal (creating an insulation around and against the thermal). Once you have applied this allow to set for 4 hours minimum.



This is where the Epoxy will be applied..



A sample of what it should look like when epoxy has been applied. Note how it is in between the thermal and the cup creating and "insulating barrier."



Once the epoxy has hardened, you can begin to reassemble the motor in reverse order of these instructions. Take extra precaution when reattaching the cup to make sure the black wire connected to the brush mount is as far away from the center of the cup as possible so it does not touch or possibly rub with the windings. Also make sure you are aligning the chassis through bolt holes with the cup mounting holes. Do not forget to put the brushes and screws back into their original positions, i.e. right and left

A quick guide to reassembling the DC Motor;



Again make sure you are putting the brushes back in their original positions.