

Service Bulletin 1013 Adjusting XMT-1125 and XMT-1135 Controller Boards

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Product

- 4962 SIEG X2D Mini Mill
- 4959 SIEG C3 Mini Lathe
- Other mini mills and mini lathes manufactured by SIEG

Issue

Potentiometers on the motor controller board might not be properly adjusted.

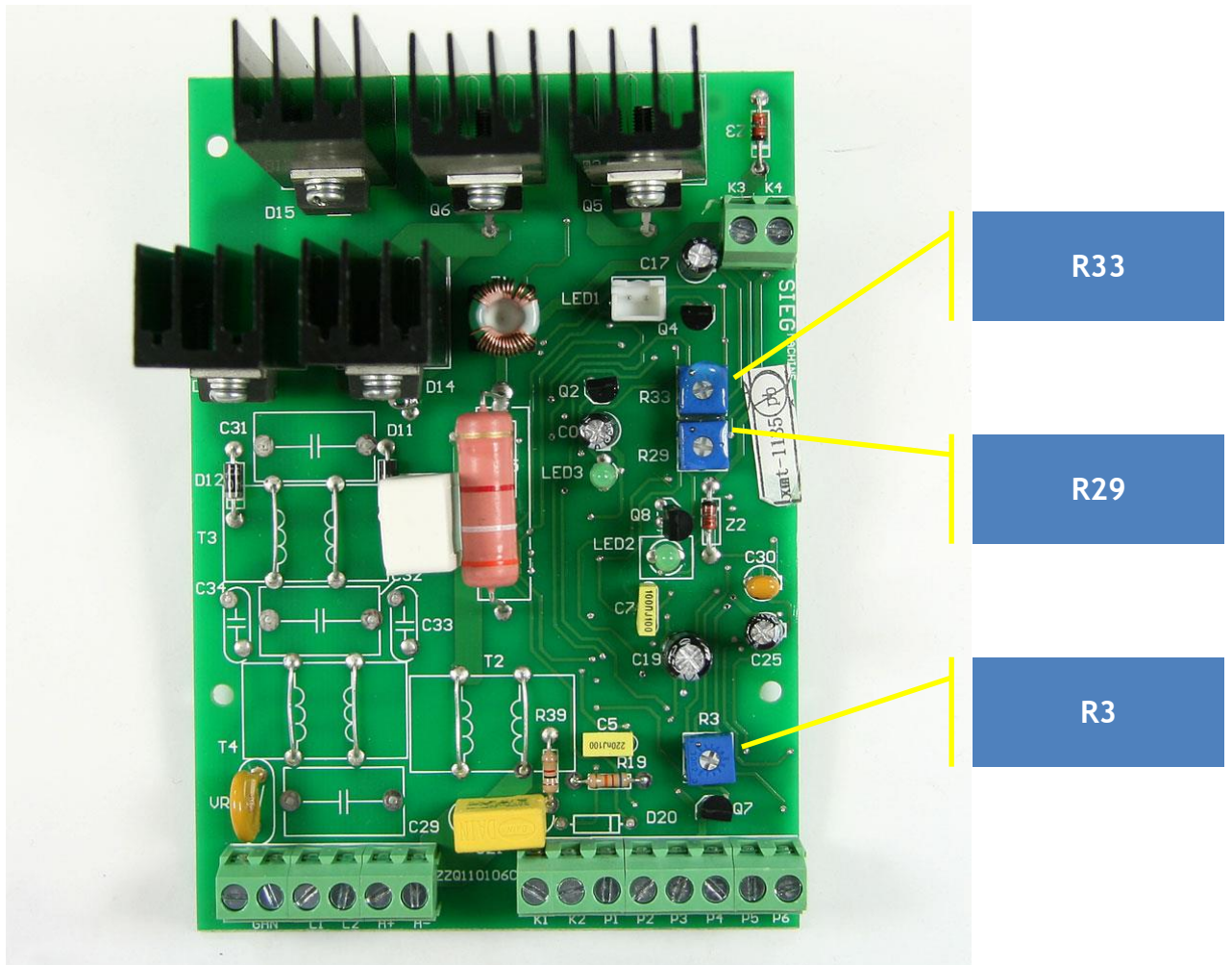
Symptoms

Symptoms of a machine that needs adjustment can include any of the following:

- The drive trips off under a light load.
- Machine continues to run when speed control knob is in the off position.
- Machine speed “hunts” or varies with speed control knob in a fixed position.

Solution

There are three blue potentiometers on the controller board. Adjusting these can eliminate or reduce the symptoms above.



Adjustments

R33 sets the amount of internal motor speed feedback that the board uses to maintain the desired speed. If it's set incorrectly, it will either make the machine hyper-sensitive to load changes and overcompensate or fail to maintain a given set speed with varying load. Turn R33 in the counterclockwise direction to increase the value.

R29 sets the current overload trip point - it has a very sensitive adjustment, so no more than 1/8 turn or even less at a time before re-checking. Turn R29 in the counterclockwise direction to increase the value.

R3 has no effect on speed regulation, it merely sets the maximum speed that the speed control pot can be adjusted to.

The drive trips off under a light load.

First check for a mechanical problem (spindle too tight or other physical resistance to turning) Unplug the motor wires in control box, then touch the terminals of a 9-volt battery to the motor wires and check that the motor will turn slowly and smoothly. Reconnect motor, start the machine at zero rpm,

and then slowly increase to maximum with no workpiece in the machine. If it trips, then turn R29 counterclockwise 1/8 of a turn and retest. If it still trips, try the 'hunting' fix described below. If no joy, the board needs updates or service to reduce its acceleration speed.

Machine continues to run when speed control knob is in the off position.

If the machine has an XMT control board then replace the speed control potentiometer (P/N 3472), there is no adjustment for this problem.

If the machine has an FC250BJ/110V or FC350BJ/110V board then locate the blue 10 turn potentiometer marked "speed" and adjust for zero RPM with the speed control knob at minimum (counterclockwise just before it clicks to off).

Machine speed "hunts" or varies with speed control knob in a fixed position.

Check the motor brushes for wear and/or sparking when running. Look down the brush holder and inspect the commutator for burn marks. For XMT series boards, adjust R33 1/8 of a turn at a time and retest.

Another option

If none of these adjustments work or you simply want someone that knows what they are doing to help, we suggest you send your board to olduhfguy.com.