

ALARM 2 OR ALARM 31: SPEED DEVIATION

This alarm can be caused by:

1. Bad spindle drive
2. Bad feedback from the spindle motor
3. Mechanical issues
4. Leads from drive to motor out of order
5. Bad contactor on motor leads between motor and drive
6. Bad sensor or sensor out of adjustment

To see if the drive is working:

1. Give the control a zero speed M command, and see if any alarm is generated on the drive.
2. See if the drive has now locked down the spindle. (If the spindle is not locked down, it is usually a bad drive.)
3. Check the load meter. (High load meter activity indicates a potential bad sensor.)

Setting the Sensor Gap

The following steps are for a NEW INSTALL of a Spindle Motor when the machine has a belt driven spindle. When belt tension makes the sensor gear ride too close or too far away from the sensor, an Alarm 2 or an Alarm 31 - speed deviation alarm - will occur.

When this happens, follow the steps below to re-gap the sensor:

1. Undo the fan wires inside the terminal box.
2. Remove the 4 bolts holding the fan shroud and fan to the motor.
3. Remove the 4 screws holding the sensor cover to the motor.
4. Loosen the 2 screws holding the sensor in place and slide a piece of standard copy paper or cigarette cellophane between the sensor and gear. Leave just enough gap to slide the paper out between the gear and sensor. (Lightly press the sensor to the gear using the paper or cellophane to set the gap.)
5. Tighten the 2 screws holding the sensor in place and slowly turn the motor shaft to make sure the gear and sensor are not rubbing.
6. Re-attach all the bolts and screws in reverse order.

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