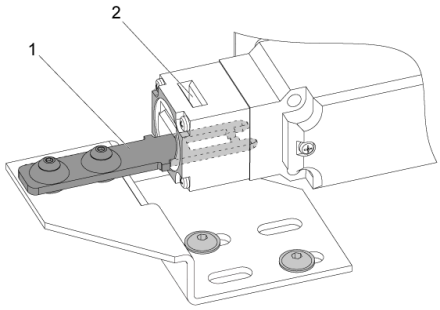
Electrical Safety Door Interlocks - Troubleshooting Guide

LAST UPDATED: 10/20/2023

Electrical Safety Door Interlocks - Troubleshooting Guide

Applies to machines built from: June, 1999

Introduction



1. Locking key [1]
2. Locking mechanism [2]

Symptom Table

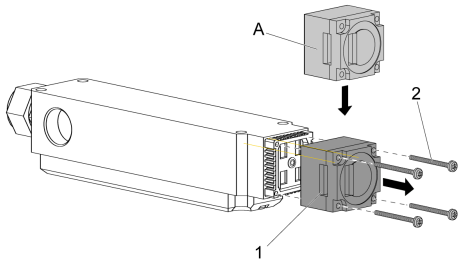
SYMPTOM	POSSIBLE CAUSE	CORRECTIVE ACTION
Alarm 223 DOOR LOCK FAILURE	Worn components	Replace the switch head (P/N 93-2309). Refer to the **Damaged Components** section.
	The switch or key misaligned	Check the switch and key alignment
	No power to the switch	Measure the voltage at the I/O PCB

Damaged Components

Corrective Action:

If you see damage or wear on the switch, it must be replaced. Damage is typically from misalignment. Go to Section 3 to align the door lock.

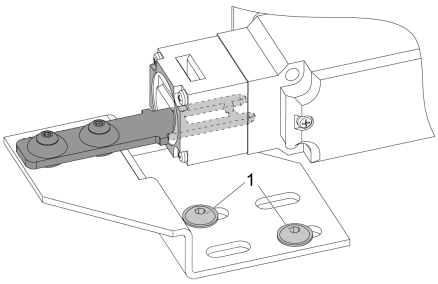
Replace the door interlock switch head if damaged. This can be done to EUCHNER switches that have a part number that ends with a K, N, or M.

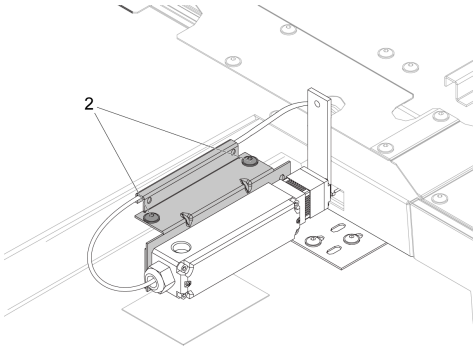


Remove the old interlock head [1] from the actuator body. Install the new interlock HEAD [A]. Use a Torx driver to tighten the (4) screws [2]. Do not over-tighten the screws.

Test the interlock: With the pendent key in Run Mode, close the doors. Run the spindle at more than 1000 RPM. Make sure the doors lock.

Alignment





Corrective Action:

Inspect the door rollers and tracks. Make sure there is no contamination or loose components.

Check all interlock components and align them if necessary.

Close the doors. Loosen the (2) screws [1] enough so the bracket can move. Open and close the door. Tighten the screws.

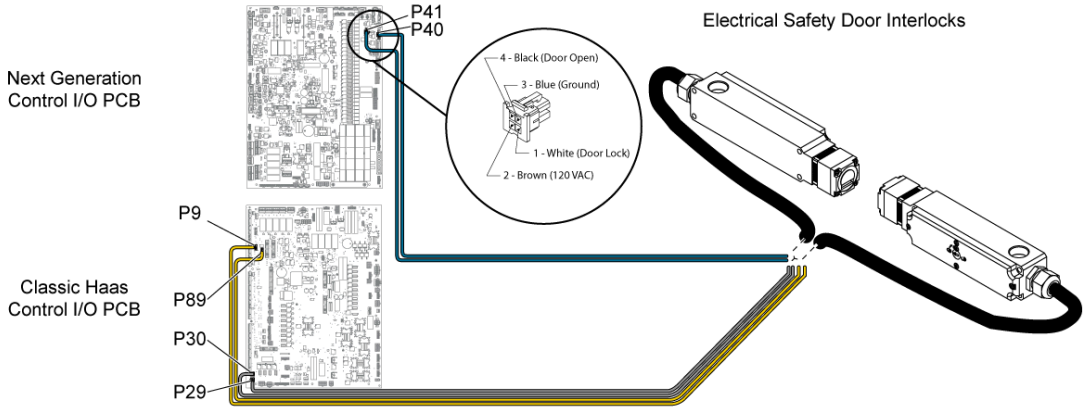
If further alignment is necessary, repeat the process above for the (2) screws [2] that hold the sensor to the machine.

Voltage

Corrective Action:

- With the pendent key in Run Mode, command the spindle to 100 RPM, then measure the voltage at the I/O and the door lock solenoid.
- Verify that voltage is present at connectors (P29 and P30 on a Classic Haas Control (CHC), or P40 and P41 on a Next Generation Control (NGC)) when the door is closed and locked.
- If there is not 120 VAC, troubleshoot the I/O PCB.

Electrical Diagram


Next Generation
Control I/O PCB
P41
P40
4 - Black (Door Open)
3 - Blue (Ground)
1 - White (Door Lock)
2 - Brown (120 VAC)
Electrical Safety Door Interlocks
P9
Classic Haas
Control I/O PCB
P89
P30
P29