Maintenance Log Entry

- **Date:** March 15, 2025
- **Technician:** Luis A.
- **Machine Type:** CNC Milling Machine (Model: Viper-500)
- **Failure Type:** Power Supply Instability
- **Error Code:** PWF-022

Symptoms:

- Machine experienced unexpected halts during operation.
- Control panel displayed intermittent low voltage warnings.
- Servo motors exhibited reduced responsiveness and slight jerking.
- Occasional flickering of display indicators was noted.

Diagnostic Steps:

1. **Electrical Inspection:**
    - Inspected main power cables and connectors; found a loose terminal on the primary power input.
2. **Voltage Testing:**
    - Used a multimeter to monitor supply voltage, confirming fluctuations below optimal levels.
3. **Circuit Analysis:**
    - Checked circuit breakers and fuse integrity; one fuse was blown and replaced.
4. **Component Verification:**
    - Verified servo drive diagnostics to rule out internal malfunctions, indicating the issue was external.

Final Resolution:

- **Connector Fix:** Secured the loose terminal and replaced the degraded connector.
- **Fuse Replacement:** Replaced the blown fuse and reset the circuit breaker.
- **System Reboot:** Restarted the CNC control system, clearing error code PWF-022.
- **Validation Run:** Conducted a series of test operations, confirming stable power supply and smooth functionality.

Recommendations:

- **Routine Electrical Checks:** Schedule monthly inspections of power connections and wiring.
- **Connector Maintenance:** Replace connectors showing signs of wear proactively.
- **Power Monitoring:** Install continuous voltage logging to catch early signs of supply instability.
- **Operator Training:** Instruct operators to report any unusual behavior in power-related indicators immediately.

End of Log Entry