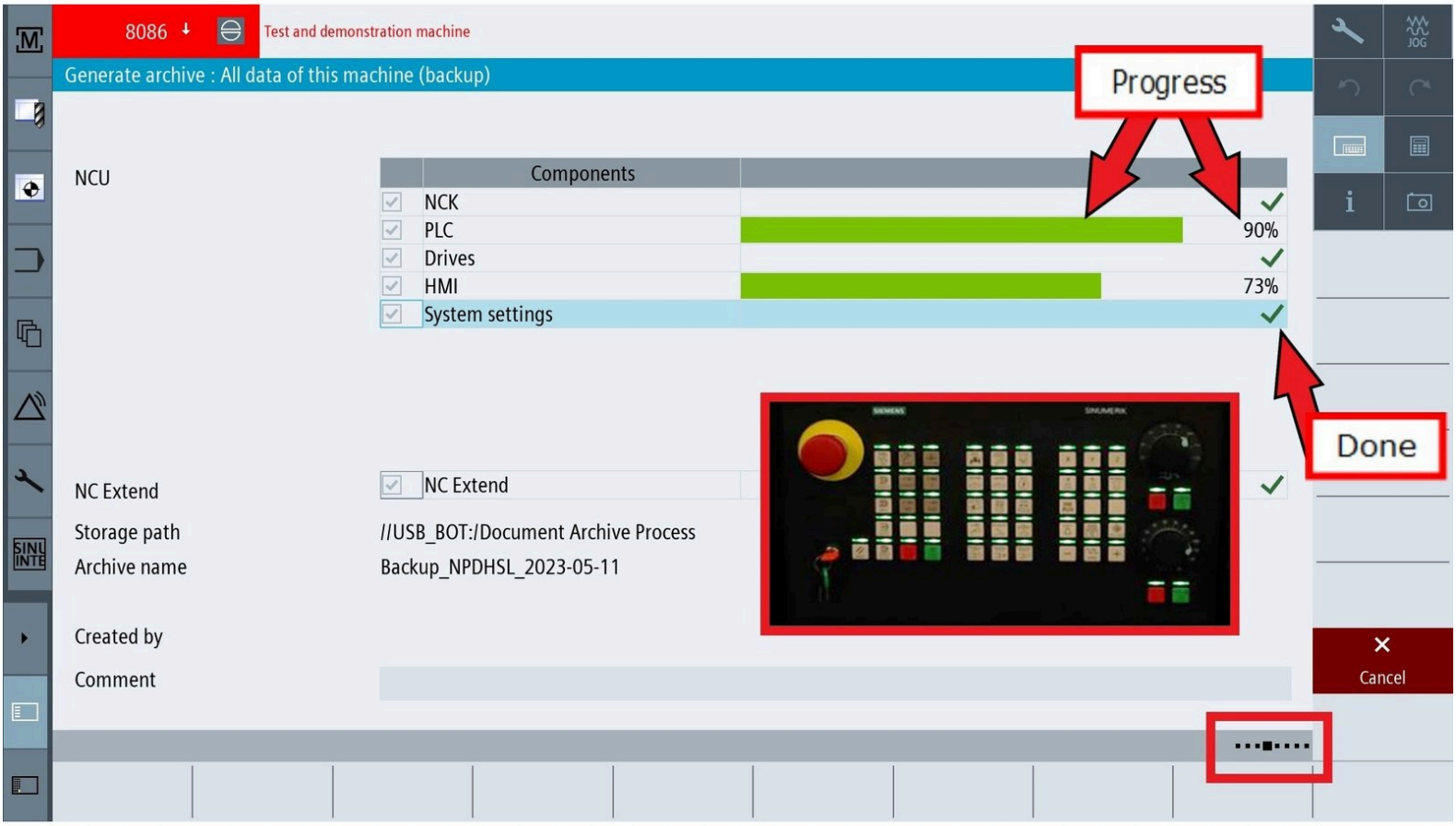
VMCsi & TC - Panel Processing Unit (PPU) Replacement

Instructions on removal and replacement of the Panel Processing Unit (PPU) for the Siemens CNC.

Written By: Trent Plungas



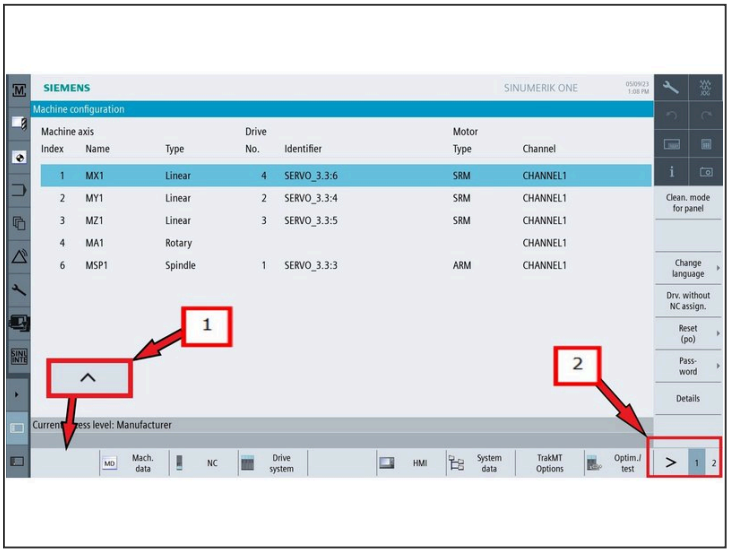
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INTRODUCTION

Replace the Panel Processing Unit (PPU) on a VMCsi or TCsi: archive, swap the PPU, move the SD card to the new unit, and restore. Take the archive before you power down; it is the only way to put the machine data back on the new PPU.

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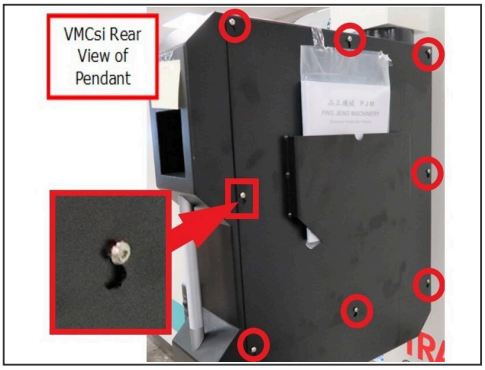
Step 1 — Create Archive of Current System

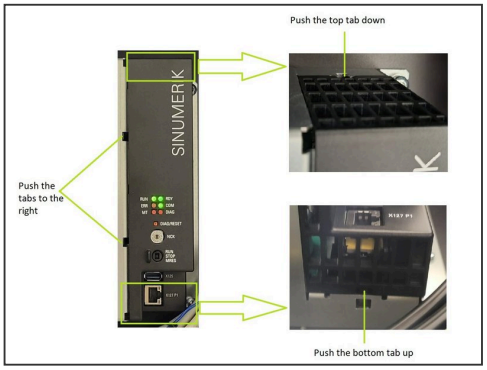


- Archive Current System

Step 2 — Turn off Power - Remove PPU Cover







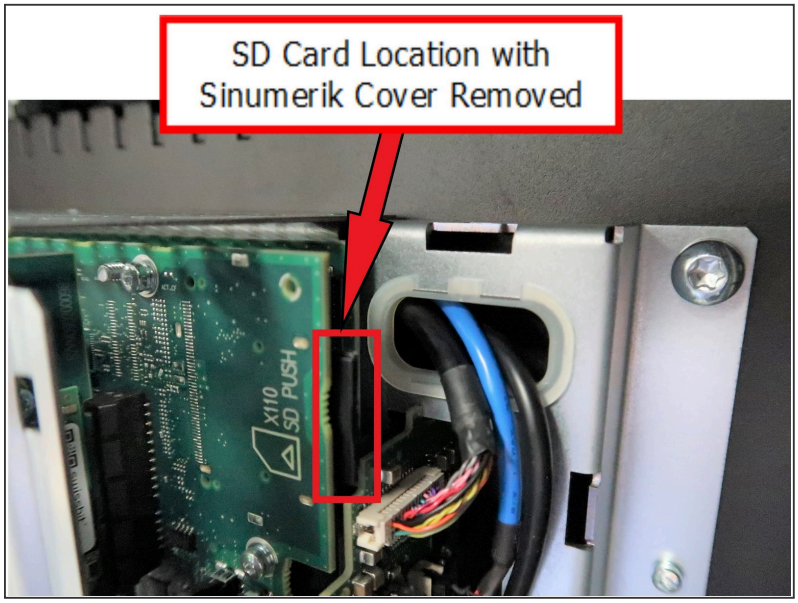
⚠ Press **E-Stop**, then turn off the machine by turning the breaker on the electric panel cover counterclockwise.

- Remove the rear pendant cover by loosening all **eight 6 mm** hex screws. Refer to the inset photo showing the slots for the screws. You can easily lift off the rear panel cover by clearing the slots and then find a safe place to store it.

  ⚠ **The pendant back cover is heavy.**

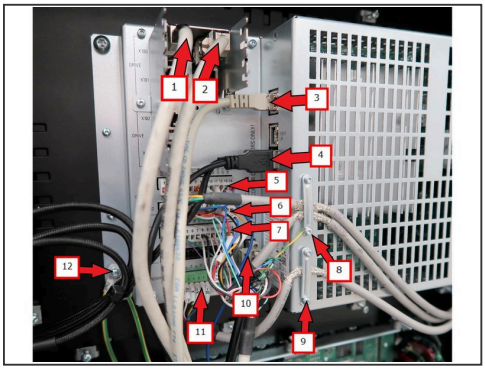
- Press the top, bottom, and side tabs of the plastic cover on the back of **PPU1740**, as indicated by the arrows, to release the cover. The SD card is located in the top area under the circuit board.

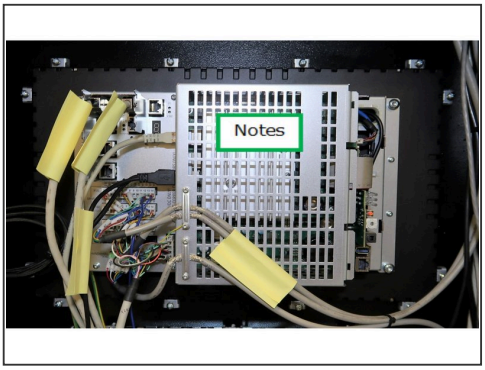
Step 3 — Remove SD Card



- The **SD card** is located on the top right behind the plastic cover.
- Gently press the **SD card** inward to unlock and remove it.

Step 4 — Note PPU Wire Locations



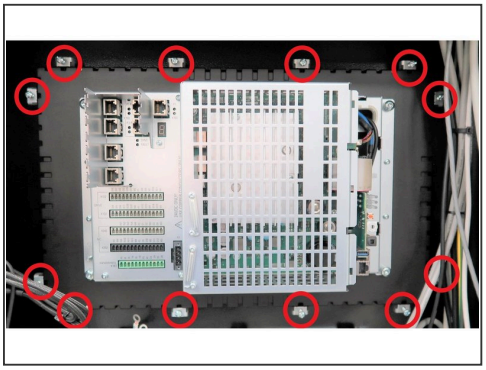
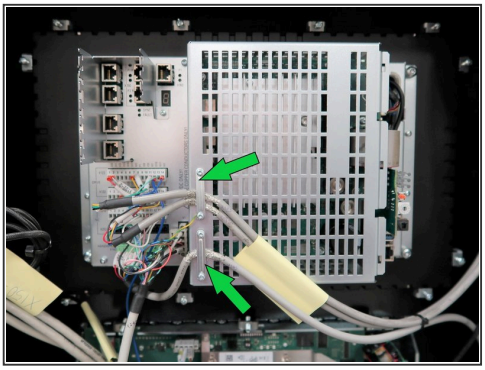
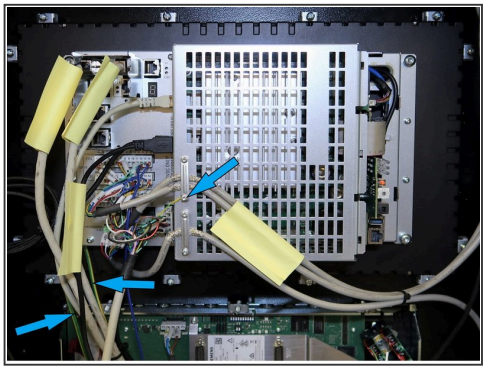




- Remove each wired connection as listed. **Label the wires** if needed to ensure clarity for reattachment.
- Remove **wires (1) & (2)** by pressing the lock. Press the lock to disconnect the **LAN connection (3)**. For the **two USB cables (4)**, ensure the front cable reconnects to the front USB port and the back cable to the back port after replacing the PPU.
- **Cables (5), (6), and (7)** are pressed into place; squeeze both ends carefully to remove them from the PPU. These similar cables must be returned to their correct locations. The green cable **11** also requires a squeeze on both ends to remove and may not have a label.

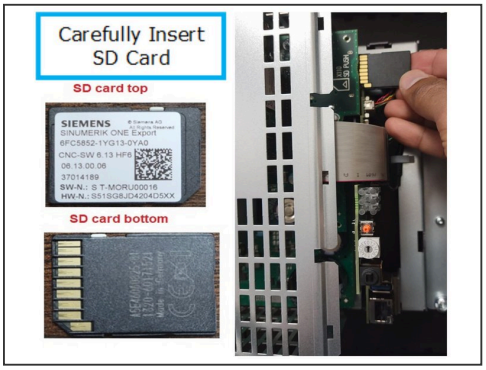
  ⓘ **(5) - X 122 (6)- X 132 (7) - X 242 (11) - X 143**
- Loosen the screw for **(8)** and remove the ground wire with two cables. Loosen the screw for **(9)** and remove the cable. For **(10)**, use a jeweler’s flat blade screwdriver to release the X1 cable. Remove the two ground cables **(12)**.
- Refer to the labeled picture for added notes on **wire locations**. Remove all wires from the PPU as indicated.
- Clamps around the PPU perimeter secure it to a bracket on the pendant. When reinstalling, ensure **each screw tightens** securely, locking the plastic arm inside the PPU groove.

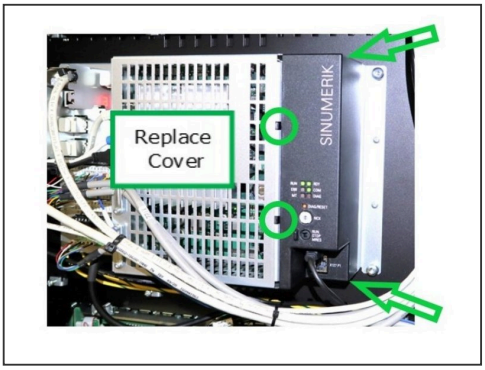
Step 5 — Complete PPU Connections

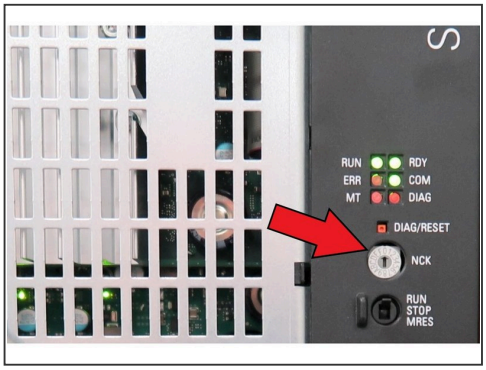




- Secure the pendant to prevent it from falling. Loosen the **twelve screws** on the clamps securing the PPU to the pendant frame. Remove the clamps and carefully lift out the original PPU.
- Unpack the new PPU and secure it in place using the **twelve clamps**. Replace the plastic cover that was removed to access the SD card on the previous PPU. Use the new PPU's packaging to safely return the old PPU.
- Begin attaching wires from **bottom up**, ensuring each connector is properly seated. Refer to the photo for one section reattached. Use the **brackets for strain relief** on the wires.
- Verify all connections are secure, especially the **three ground wires**, and remove any labels used for notes.

Step 6 — Replace SD Card

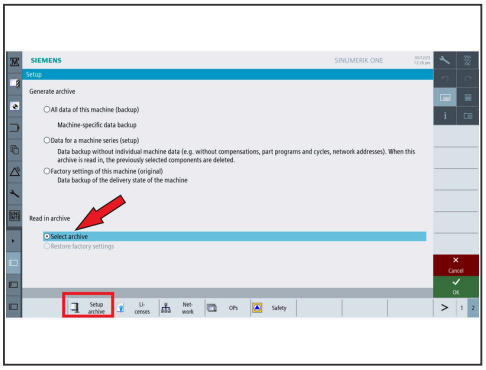


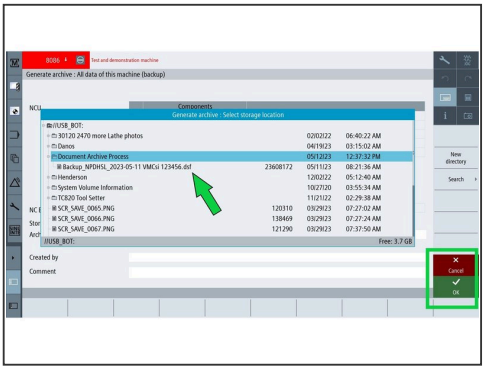


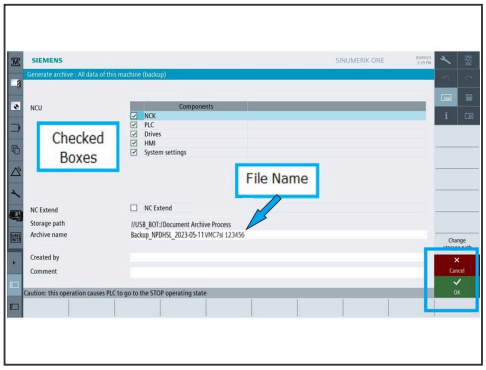


- **Remove the plastic cover** from the new PPU as shown in Step 5.
- Insert the **original SD card** into the new PPU and press until it locks in place.
- Carefully **align the side, top, and bottom tabs**, then push the cover into place.
- Rotate the **center arrow on the NCK switch** to point to "0".
- Replace the **rear metal cover** of the pendant, and use an allen key to fasten it securely.

Step 7 — Restore Archive







- Restore From Archive

Step 8 — Power Cycle Machine



- Once the machine finishes **restoring the archive**, ensure the **[E-Stop] is pressed**.
- Turn the **power off** and wait a minute before turning it back on.

ⓘ If the machine **gives an error** on the power cycle, see the next step.

Step 9 — PLC Related Alarms



- After the archive is loaded, if the control shows alarms **2000 - PLC sign of life monitoring** or **2001 - PLC has not started up**, locate the **PLC switch** at the bottom right side on the back of the PPU.
- Flip the switch to **[STOP]** from **[RUN]** and then back to **[RUN]** again.
- Power cycle the machine. Afterwards, the **PLC related alarms** should clear.