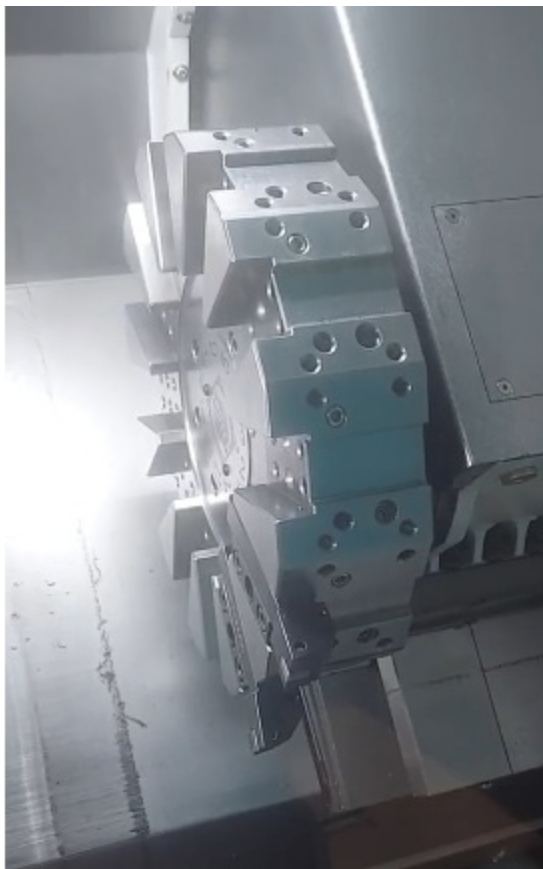




Eliminating Radial Movement in the Turret During Clamping and Unclamping

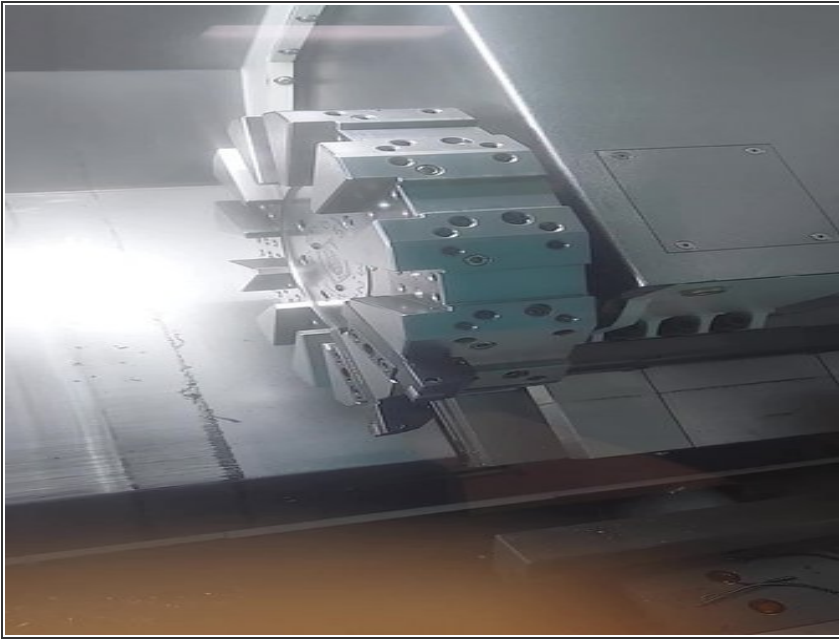
Written By: Ryan Levrini



INTRODUCTION

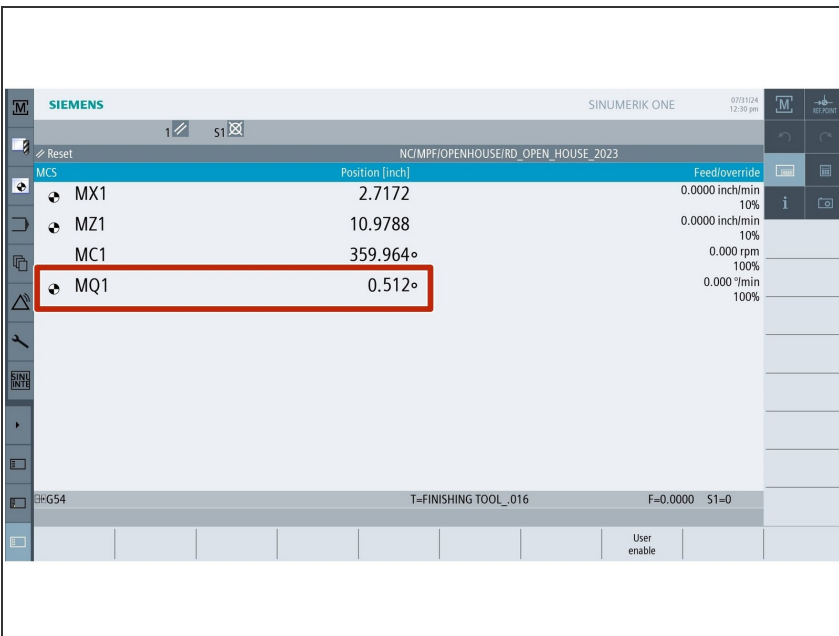
This guide will explain how to remove radial movement of turret when clamping and unclamping.

Step 1 — Visual Demonstration of Movement



- ① This shows slight angular movement of the turret when it clamps and unclamps to move to the next station.

Step 2 — Checking Q-Axis Angle

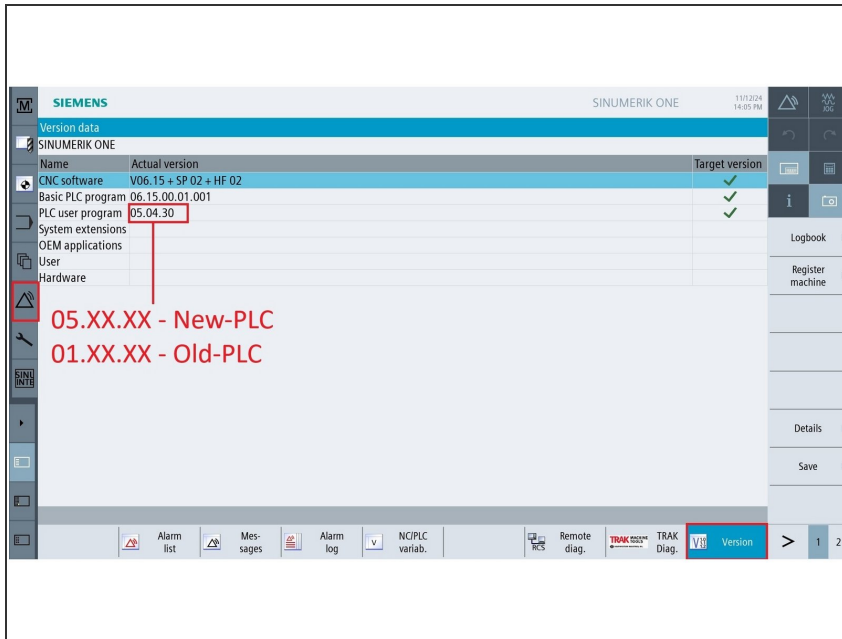


- ① Removing tools from the turret is not necessary for re-referencing the turret.
- [Set Manufacture Password.](#)
 - Index turret to **Position 1**.
 - Go to **[Machine]**, On the MCP, press **[JOG]** and **[REF POINT]**.
 - Read the angle reported for MQ1—this is your Q-axis.

- ① The **Q-axis** represents the degree of rotation of the turret. At **Position 1**, the greater the **Q-axis** angle is from **zero**, the more radial

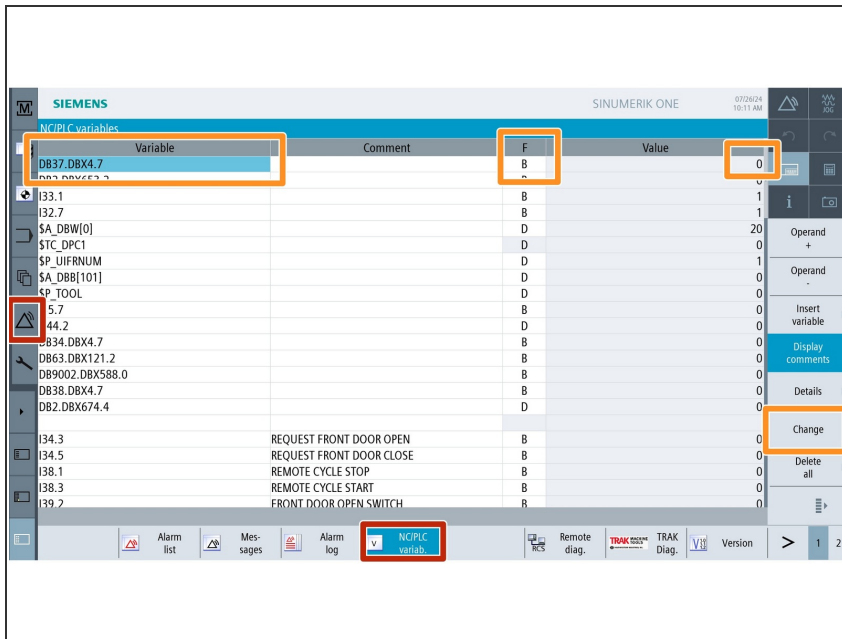
movement there is when clamping and unclamping. **Position 1** should be nearly or at **zero**.

Step 3 — Identify PLC Type



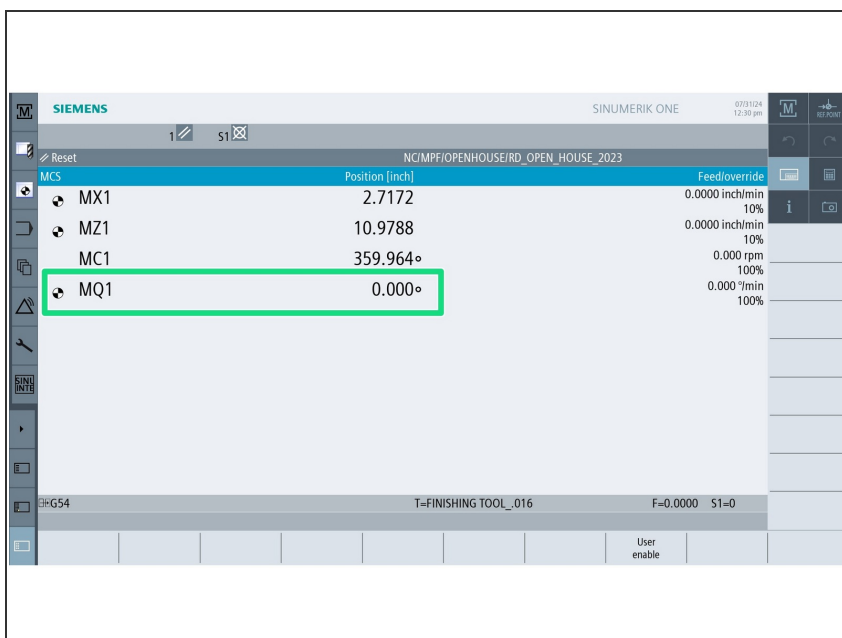
- ① This determines which DB address to use in **Step 4**.
- ① All LTY and LTY-S machines are on New-PLC
- On the control, go to **[Diagnostics]** → **[Version]**.
- Locate the PLC User Program version.
- If version starts with **05.XX.XX**, it is **New-PLC**.
- If version starts with **01.XX.XX**, it is **Old-PLC**.

Step 4 — Reference Turret Axis



- Go to **[Diagnostic] → [NC/PLC Variable]**
- In an empty row under Variable, enter the proper bit:
 - **Old-PLC** → DB34.DBX4.7
 - **New-PLC** → DB37.DBX4.7
- Set the Format to **[B]**.
- On the MCP, press both **[JOG]** and **[REF POINT]**.
- Press **[Change]**, enter **1**, then press **[Input] → [OK]**
- The bit will toggle back to 0 automatically.

Step 5 — Confirm Results and Finish



- While still at **Position 1**, verify **MQ1** now reads **0.0°**.
- Jog the turret to several positions.
- Confirm radial movement during clamping/unclamping is gone.
- **Power cycle** the machine to complete the reset.

