

G-05: Chart Dimensions

SAFETY FIRST

- Follow all Caterpillar facility safety standards when performing this task.
- The machine is operating in order to position the indicator to the hole. Be aware of moving machine parts.

EQUIPMENT

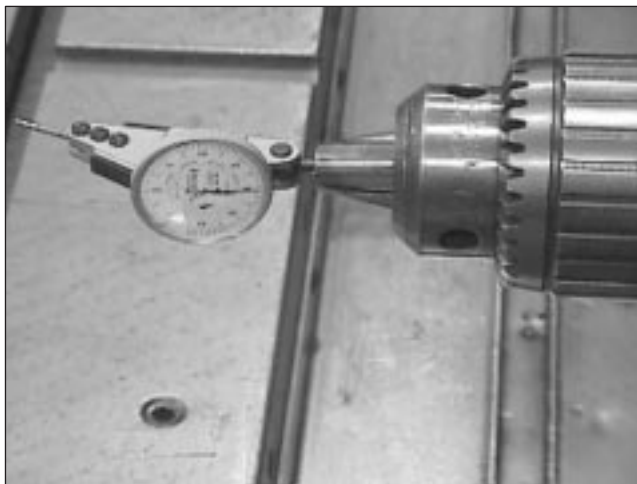
- dial indicator (at least .001" depending on tolerance)

RESOURCES

- print, if available

Chart Dimensions (DevLieg – Manual Mill)

1. **Install the dial indicator in the spindle chuck.**



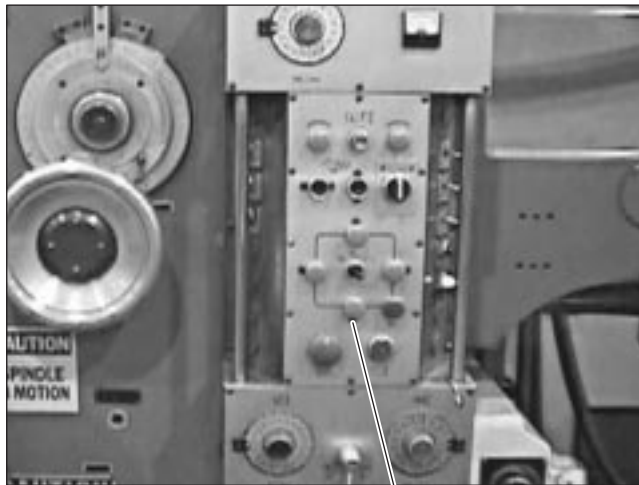
Installed Dial Indicator

2. **Verify that the machine is set up according to Toolmaker procedures.**

Warning: The following steps require moving the work head to locate dimensions. Be aware of moving equipment and rotating parts; they can cause personal injury.

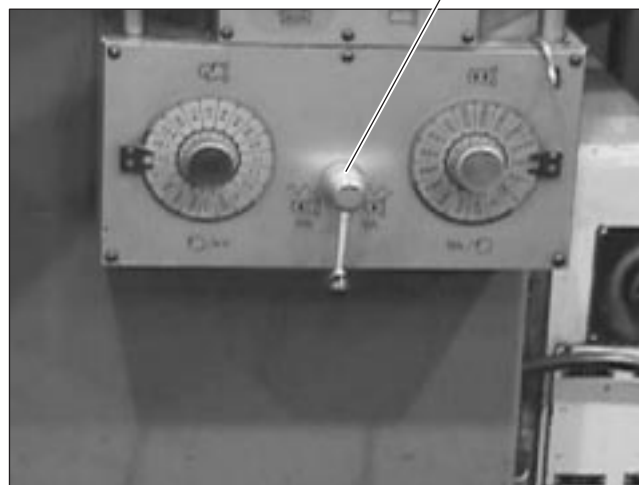
3. Move the spindle to the first hole.

- Position the work head using the automatic controls on the control panel.



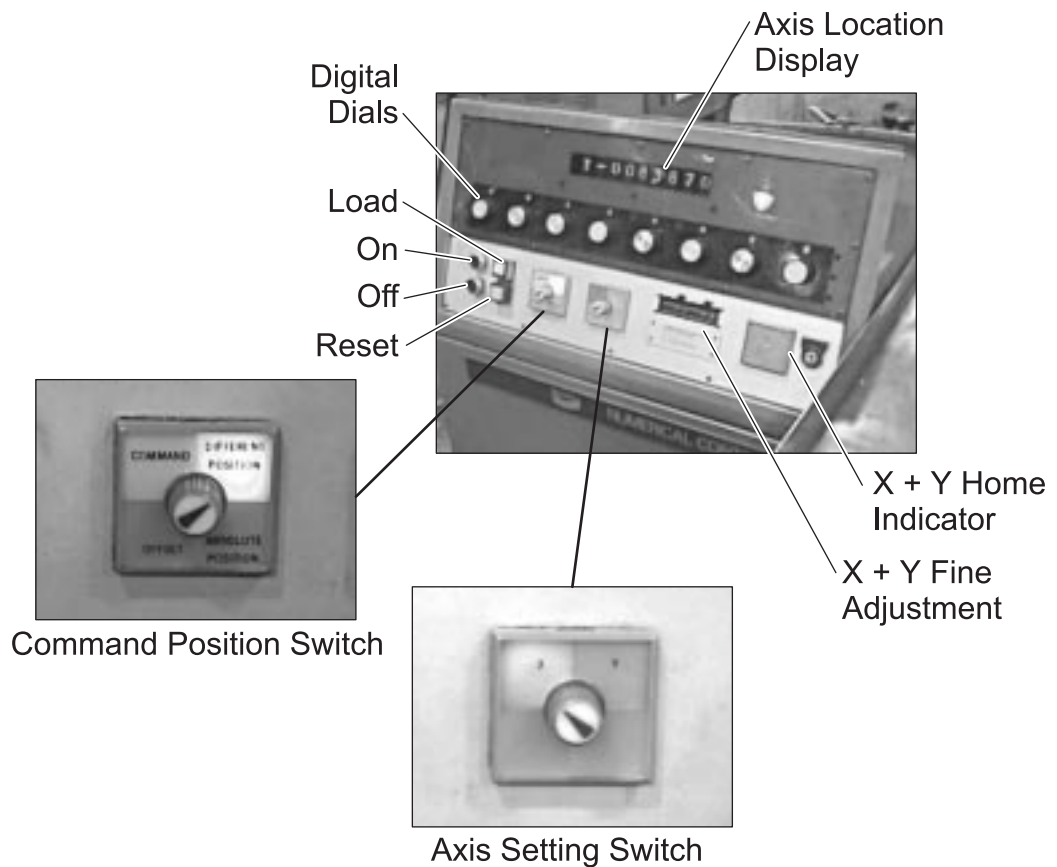
Work Head
Automatic Controls

- Feed the spindle to the hole using the adjustment on the control panel.
- Manually feed the spindle to indicate the piece.



Spindle In & Out Control

4. Center the part on the first hole according to Toolmaker procedures.
5. Set the X and Y axes.
 - Press the ON button to activate the panel.
 - Turn the Command Position Switch to the Command Position.
 - Set zero on the digital dials.
 - Turn the axis setting switch to X or Y.
 - Push the load button on every position of the Command Position Switch.
 - Read the value at the difference of position on the display (note if it is positive or negative).
 - Set the digital dials equal to the display value.
 - Move the command switch to the offset position.
 - Push the load button, and observe the home indicator illuminate.
 - Repeat the procedure for the other axis (X or Y).



6. **Move the spindle to the next hole for charting.**
7. **Center the second hole.**
8. **Record the X and Y measurements displayed on the numerical display.**
 - Change the setting to display each axis on the numerical control.
 - These measurements are the variance from the first hole.
9. **Continue charting the required dimensions, following steps 6-8, until all charting has been completed.**

