Predator Virtual CNC™ - KBA #2300009

Knowledge Base Article for improving CNC verification and simulation

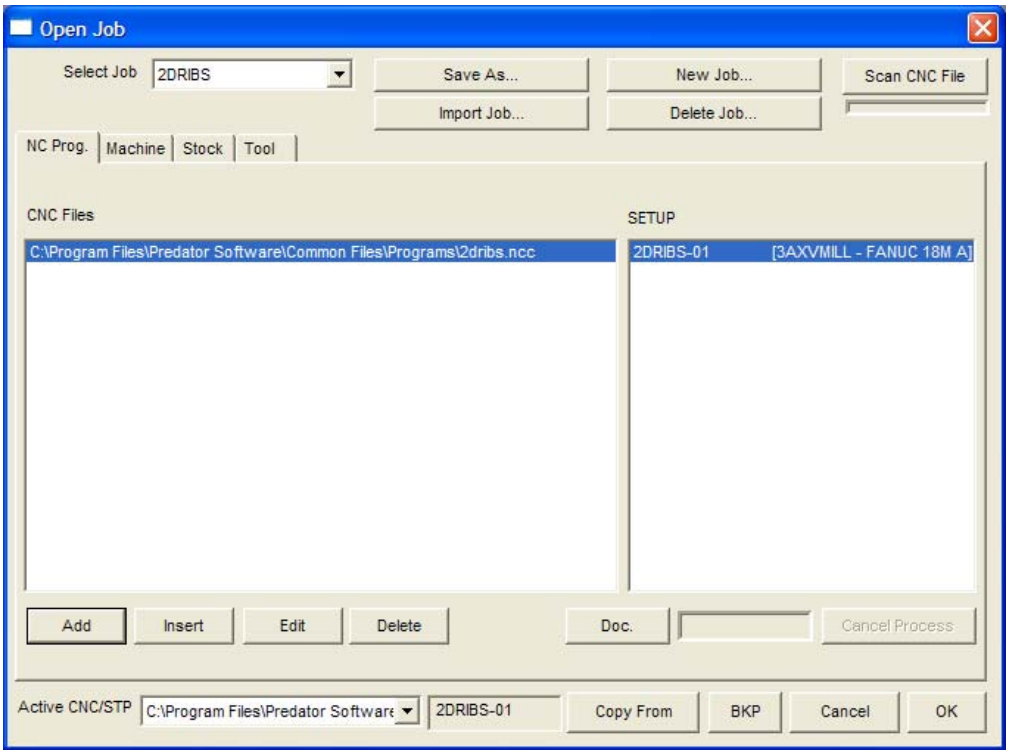
Issue

Creating a New Job in Predator Virtual CNC.

Solution

Within Predator Virtual CNC creating a new job is simple. Step through the following:

1. From the File menu select Open or push the Open toolbar button and the following Job dialog will be displayed.

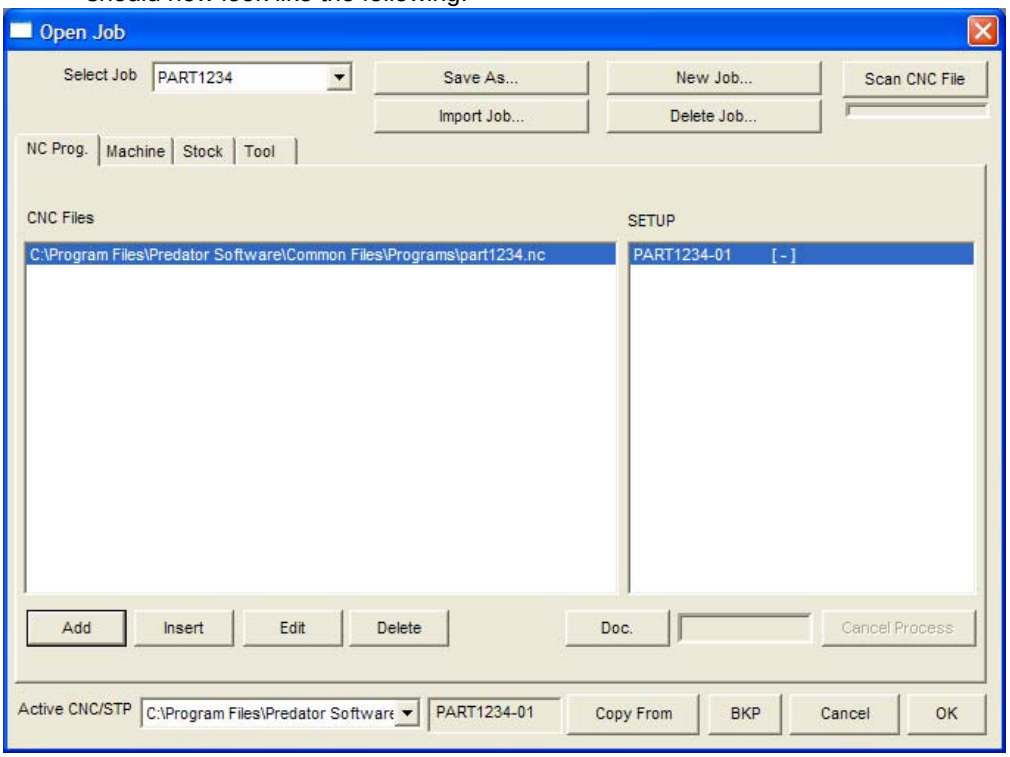


2. Push the New Job… button and type an appropriate job filename and click the Save button. Often the filename is a part number.
3. Push the Add button and select an appropriate CNC program. The Job dialog

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should now look like the following:

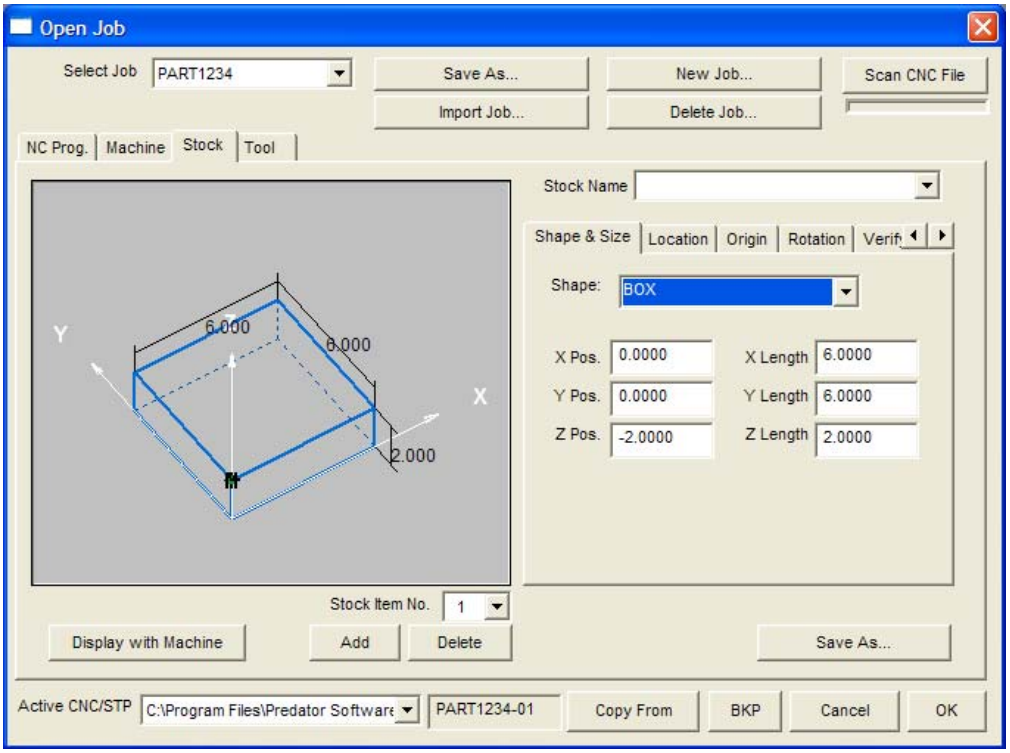


NOTE: The Machine Tab allows for diameter, length and fixture offset values to be specified.

4. Click the Machine Tab and select the appropriate CNC in the machine pulldown.
5. Push the Scan CNC File button.
6. Click the Stock Tab and fine tune the stock shape.

NOTE: Every stock and fixture shape has a X, Y and Z position from the machine origin. This position defines where the sock shape is positioned within the machine's cutting envelope.

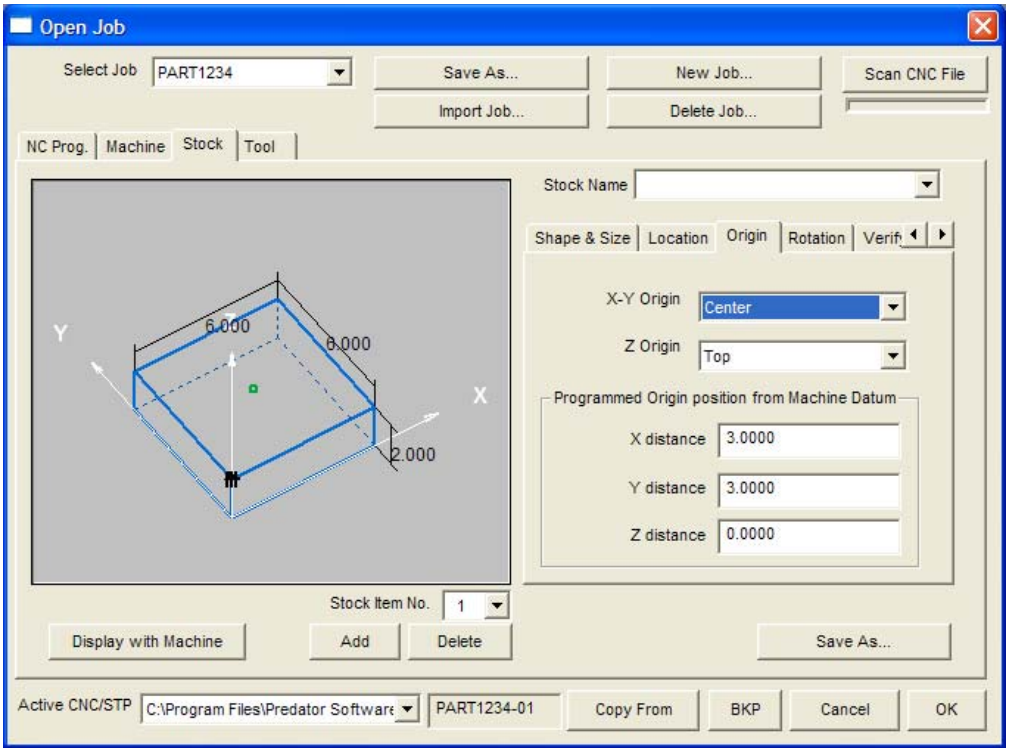
In the image to the right the programming origin, stock origin and machine origin are the same position and so they are overlap in the preview window.



7. The programming origin, a green square, in the Stock Preview, must match the actual origin used. To adjust the origin click the Origin sub tab. In the following example the programming origin is defined as the top center of the stock.

NOTE: The stock preview displays the machine origin as a black “M”. For simple jobs the machine origin does not matter. The machine origin does matter when simulating 4 and 5 axis machining or when full machine simulation will be run.

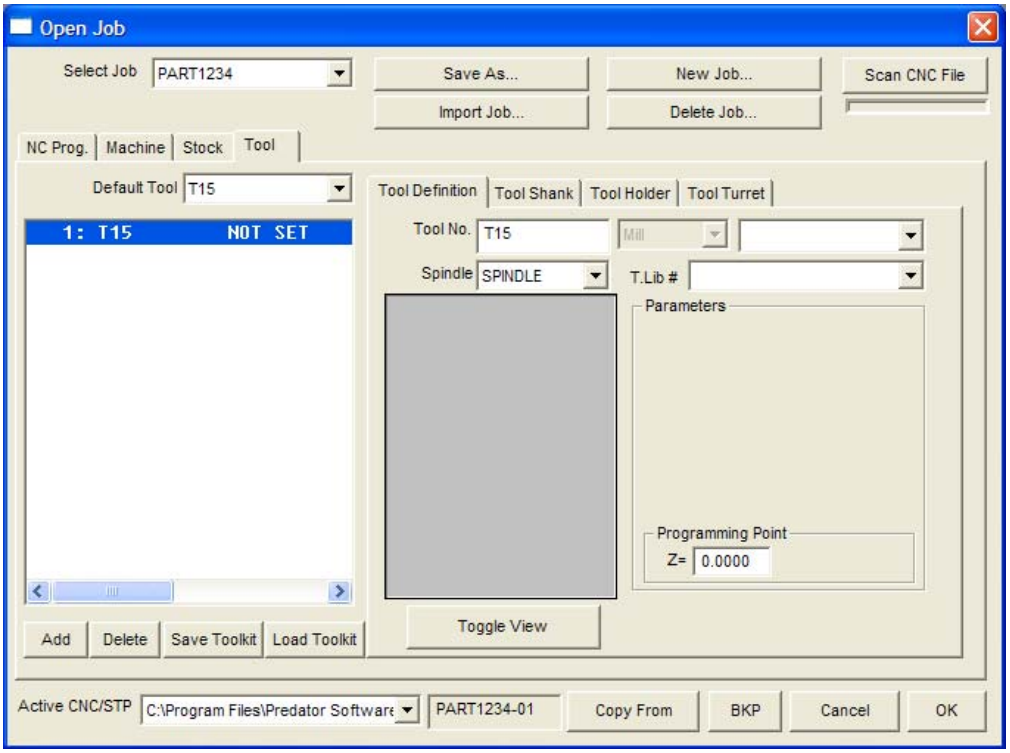
The stock preview displays a stock origin as a black plus. The stock origin is specific to Predator Virtual CNC and it is used to simplify moving multiple stock and fixture shapes all at once. The stock origin can be adjusted with the Location Tab. This feature is for advanced users. If you new to Predator Virtual CNC always leave the stock origin to be X0, Y0 and Z0.



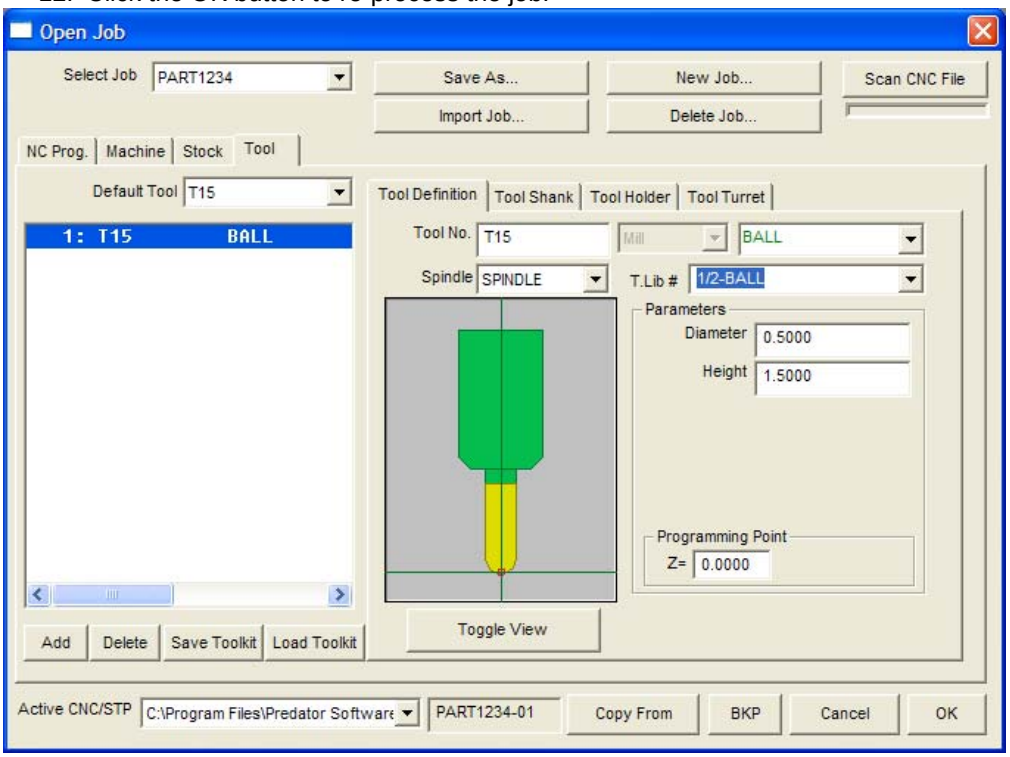
8. Click the Tool tab and specify the tooling details.

NOTE: Scanning the CNC program only found a single tool, T15. Typically, multiple tools are found within a single CNC program. Every tool must have it’s tool properties defined.

If the tool’s programming point is not the tool tip, such as the tool center, then specify the programming point.



9. Over 1000 tools are included in a tool library. To utilize these default tools, select the tool shape with the tool shape pulldown. For example, select a tool shape of Ball.
10. Select the appropriate Ball shaped tools from the T. Lib # or Tool Library Number pulldown.
11. Step # 10 would be repeated for each tool specified within the CNC program.
12. Click the OK button to re-process the job.



13. If all goes well during the processing of the job the Open Job dialog will disappear. If Predator Virtual CNC identifies any error, the errors will be displayed to facilitate updating the Job or updating the reverse post until it processes successfully.
14. From the File menu, select New and then Verify. A blue stock will appear.
15. Click the Play toolbar button to begin the simulation.

References

Should additional details be required, contact Predator Software via the following:

support@predator-software.com

The information in this article applies to:

- Predator Virtual CNC v3.x
- Predator Virtual CNC v4.x
- Predator Virtual CNC v5.x

Last Reviewed: 10/17/04