Predator Virtual CNC™ - KBA #2300008

Knowledge Base Article for improving CNC verification and simulation

Issue

Predator Virtual CNC fails to display any tool motion or stops displaying tool motion in the middle of a CNC program.

Solution

This situation can occur when specific M codes are present within the CNC program and are not identified within the reverse post. On many CNCs a M2 is an end of program. Predator Virtual CNC requires that any valid M codes that begin with an M2 such as M21-M29 or M200-M299 must be defined within the reverse post. If M21-M29 or M200-M299 codes are found within the CNC program and not defined within the reverse post then Predator Virtual CNC will read an M21-M29 or M200-M299 as an M2 or end of program.

So if Predator Virtual CNC should fail to display any tool motion or stops displaying tool motion in the middle of a CNC program, look for M21-M29 or M200-M299 within the CNC program. Typically M21-M29 and M200-M299 are miscellaneous M codes that have been added by the machine builder. Usually within Predator Virtual CNC, these M codes should be ignored. If an M21-M29 or M200-M299 codes are found within the CNC program, then edit the reverse post and look if the appropriate M codes are defined or ignored. To ignore any G or M code, add them to the Ignore section of the reverse post. Refer to the following example.

```
$IGNORED: #1
"M20"     :    Ignore     ; (Oriented Spindle Off)
"M21"     :    Ignore     ; (Special Coolant #1)
"M22"     :    Ignore     ; (Special Coolant #2)
"M23"     :    Ignore     ; (Special Coolant #3)
```

Without the above definitions within the reverse post, Predator Virtual CNC will recognize M20-M23 as an M2 or end of program.

NOTE: A similar problem can occur if M301-M309 codes are present within the CNC program and are not identified within the reverse post. In this case, Predator Virtual CNC will recognize the M301-M309 as an M30 or end of program.

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References

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

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The information in this article applies to:

- Predator Virtual CNC v3.x
- Predator Virtual CNC v4.x
- Predator Virtual CNC v5.x
- Predator Virtual CNC v6.x

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