



Prospector 2012 Release Summary

December 2011

Overview

Prospector 2012 is a major release that includes significant enhancements as well as customer requested software modifications and corrections. All corrections from 2010 Service Pack 1 are also included in this release. This release summary describes the software changes. Refer to the What's New help for even more information about Prospector 2012.

Installation

Prospector 2012 is the first release from AMT Software. Accordingly the installation paths for program files and data files have been modified to reflect this. By default program files are installed under the directory indicated by the Windows environment variable ProgramFiles. For a typical installation the program files are installed in:

c:\Program Files\AMT Software\Prospector

Note that if you choose to install the 32-bit edition of Prospector on a 64-bit edition of Windows the installation path is:

c:\Program Files (x86)\AMT Software\Prospector 2012.

Similarly, program data files are installed where the environment variable ProgramData indicates. For a typical installation, c:\Program Data\AMT Software\Prospector on Windows Vista, Windows Server 2008 and Windows 7 and c:\Documents and Settings\All Users\Application Data\AMT Software\Prospector on Windows XP.

| Operating System | Program Data Path |
|-------------------------|--|
| Windows XP | C:\Documents and Settings\All Users\Application Data\AMT Software\Prospector |
| Windows Vista | C:\Program Data\AMT Software\Prospector |
| 2008 Server | C:\Program Data\AMT Software\Prospector |
| Windows 7 | C:\Program Data\AMT Software\Prospector |

Program settings and configurations stored in the registry for users and local machine have also been changed.

Automatic Migration of Data from a Previous Version

At the conclusion of the installation process the installation program will inspect your computer looking for a previous version of Prospector. If any previous version of Prospector is detected on the computer, the data files and settings the older version of Prospector are copied to the new installation path. Settings stored in the registry are also migrated. This means that if you have customized program data files such as PowerSource databases and post processors, those file(s) and settings will be copied and ready for use in Prospector 2012.

Licensing

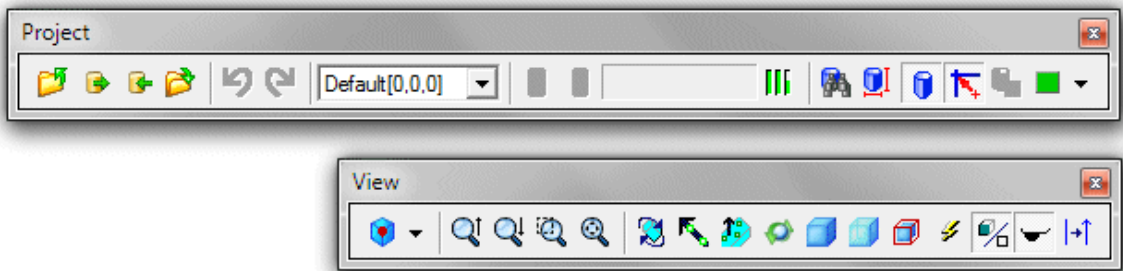
If you are using floating licenses, a new license file will be sent you via e-mail prior to or concurrent with the shipment of your Prospector 2012 software. Because the licensing authority has changed to AMT Software it is necessary for you to install the FlexNet floating license software from Flexera along with your new license file. The software for this installation is included on the CD with your ToolDesigner software.

AMT Software has licensed both the 32-bit and 64-bit editions of FlexNet. This means that you can designate a 64-bit computer as the license server. This was not possible in previous releases.

If you are using node-locked licensing (USB key) you will not need to update your hardware key. There are no changes for node-locked licensing.

Windows Modernization

In keeping with the refreshed look of Windows 7, the icons and appearance of Prospector, Prospector Design and PowerSource Insight and Tooling has gone through a makeover to be consistent with Window standards. You'll notice the appearance of icons and menus throughout the applications have been updated for this release to be consistent with Windows:



Modernized icons are used throughout Prospector 2012

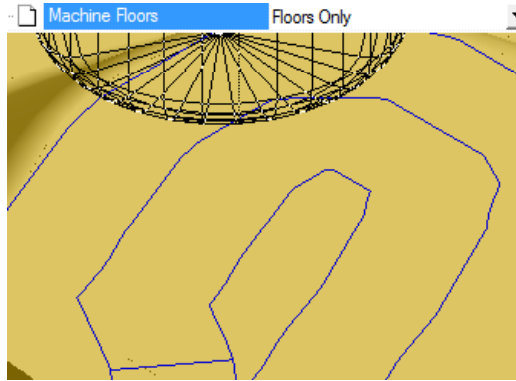
Although the appearance of the icons has been refreshed, their location in the user interface has not changed. If you have customized toolbars, the redesigned icons will be used for those as well.

Revised Help System

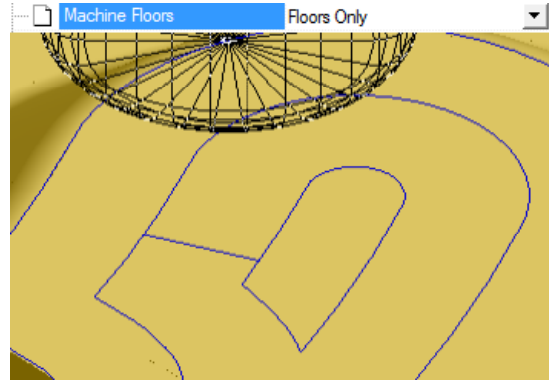
The Help provided with your software has been revised and updated to use HTML format. Virtually all the relevant product documentation can be viewed and navigated using any internet browser (Internet Explorer, Chrome, Firefox, ...). Previous versions used a compiled HTML format (.chm) which became problematic because the help could not be launched from newer versions of browsers because of security measures that have been added to those programs.

3D Machining

Revisions to the calculations for Z-Planar With Clear machining when using the Floors Only or Insert Levels At Floors has been revised to produce much smoother clearing paths when flat areas of the job are machined:

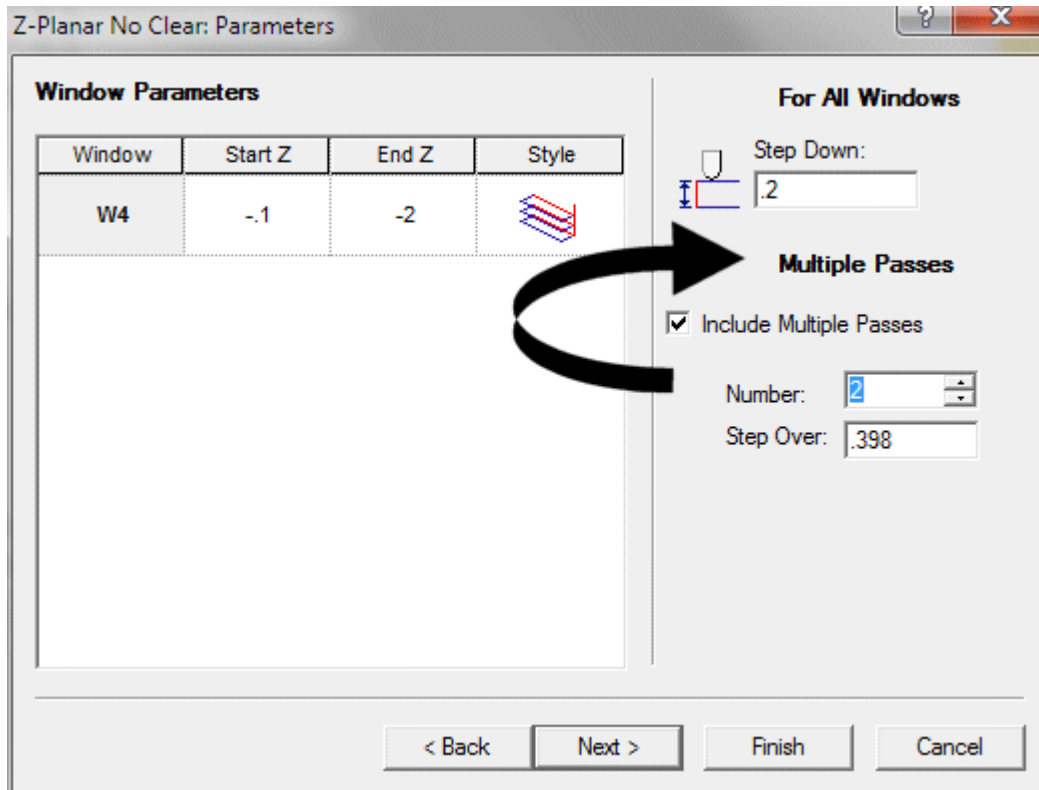


Flat areas would sometimes be cleared by “choppy” paths that could cause dwell marks in material.

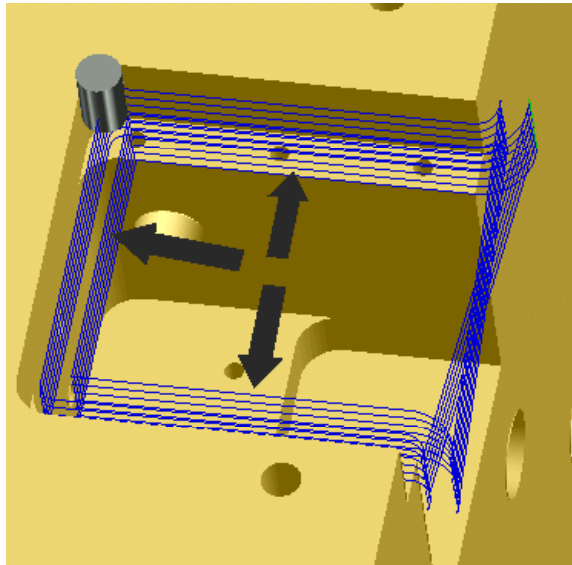


Prospector 2012 produces far smoother paths in these areas to produce a better finish.

An option to take multiple passes for 3D Z-Planar No Clear machining has been added to the Parameters page of the Program/New wizard:

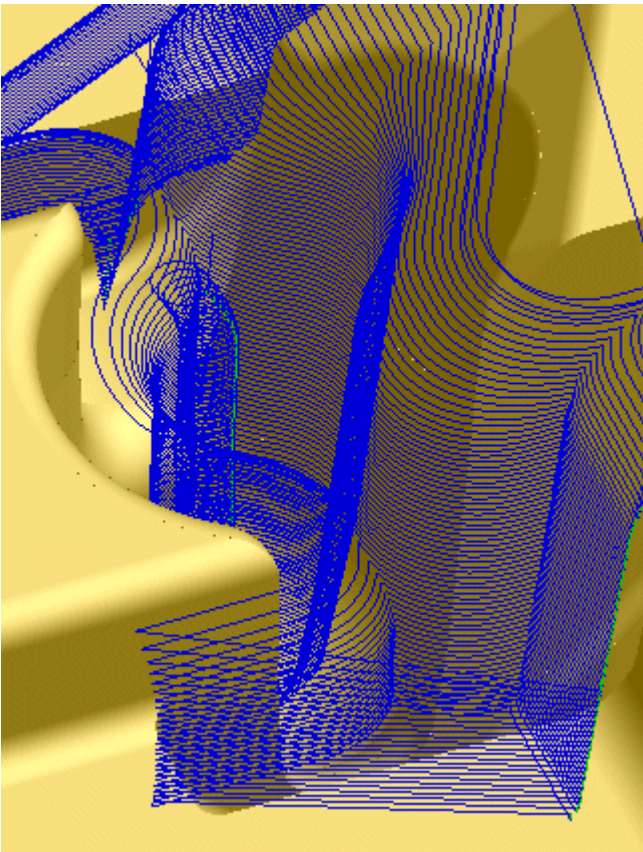


This option allows you to “walk” the cutter into areas of job where there is too much stock to remove in a single pass. Instead of having to produce 2 separate programs to remove the stock, you can specify any number of passes to take for each level.

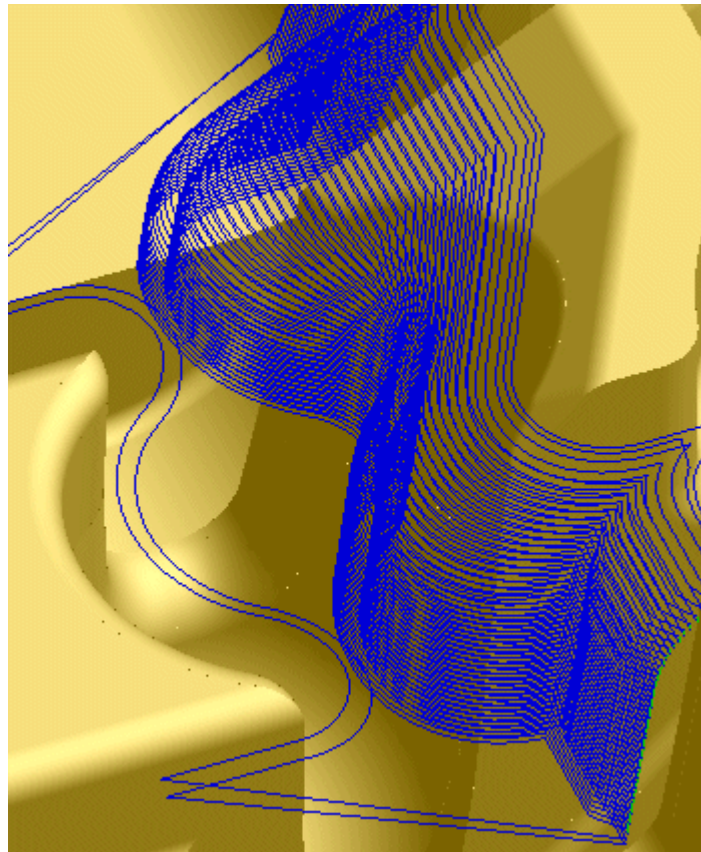


This Z-Planar No Clear program takes 2 passes to completely remove the stock.

The ability to specify a minimum pocket radius for Z-Planar No Clear programs has been added for this release. Like Z-Planar With Clear programs, this setting prevents the tool from entering areas of the job that could cause the tool to break or bottom out:

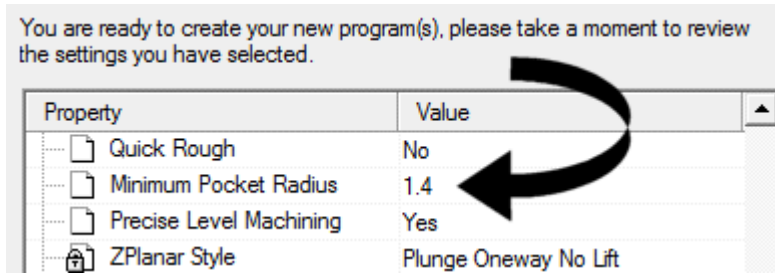


Without a minimum pocket radius set, the tool descends as far as possible into any pocket region it can fit into.



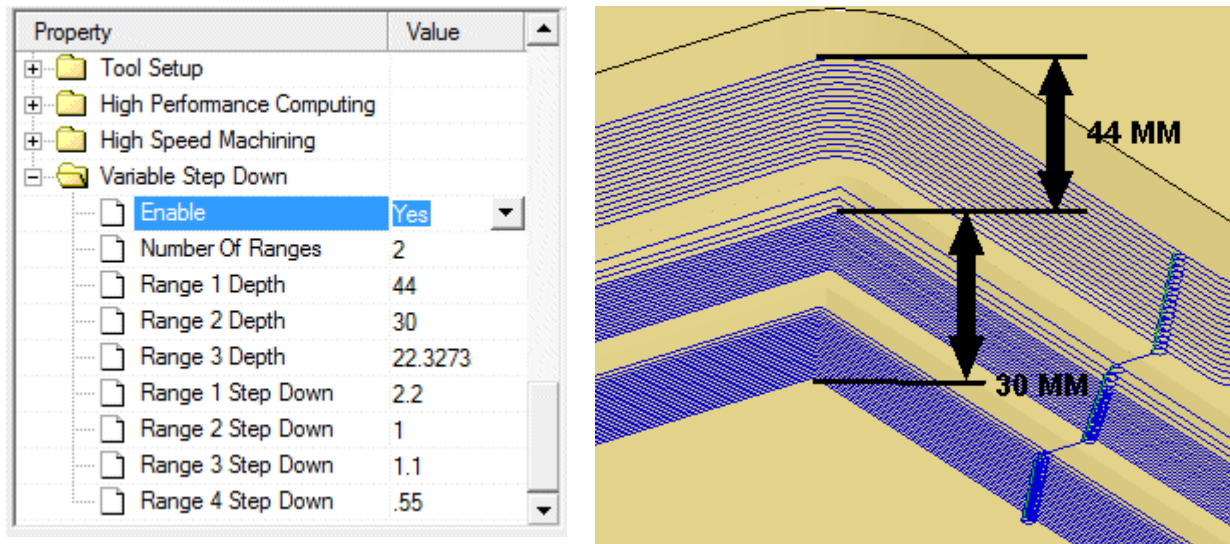
With a minimum pocket radius specified, you can prevent the tool from entering regions where it could bottom out and/or cause tool breakage.

The setting for Minimum Pocket Radius is on the Finish page of the Program/New wizard:



As with all settings you can configure a rule or expression to automatically establish a minimum pocket radius for Z-Planar No Clear programs using PowerSource Insight.

A new feature to allow for a variable step down for 3D Z-Planar programs has been added for the 2012 release. This feature allows you to decrease the step down when machining deeper parts of the job to minimize tool deflection. This new feature is implemented on the Finish page of the New 3D Program wizard as an advanced option:

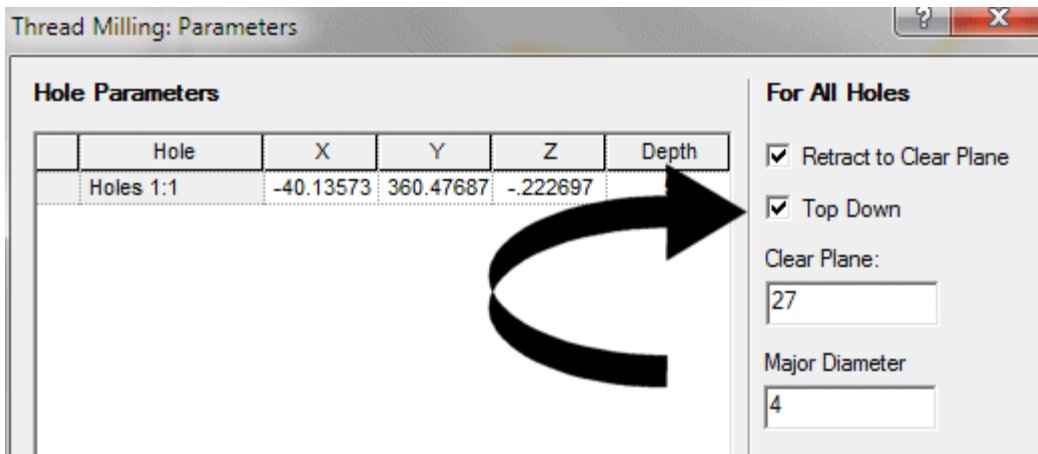


The Variable Step Down parameter group allows you to identify up to 4 ranges of depths for a program. For each range, you can specify a step down for levels that will fall in that range. In the example above, we want to have 2 ranges. The first range will use a step down of 2.2 MM and begin at the first level of the program and continue until a depth of 44 MM is achieved. The program continues for the next 30 MM (or until the programmed end Z is achieved) using a reduced step down of 1 MM.

Using PowerSource Insight, you can program rules you might wish to use for establishing a variable step down. You can establish criteria for when to enable variable step down as well as what ranges to use and reduction in the step down for each range. Default rules are provided as an example.

Thread Milling

A new option has been added for thread milling to allow the machining to be done in the $-Z$ direction:



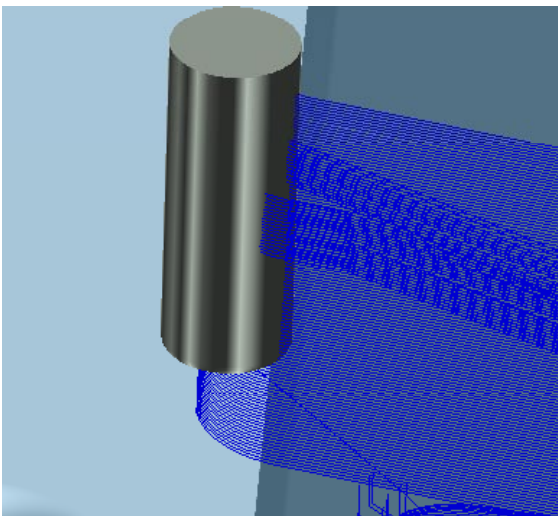
Enabling the Top Down switch will cause the machining to begin at the top of the hole and proceed to the bottom. By default thread milling is performed in the $+Z$ direction.

Maintenance

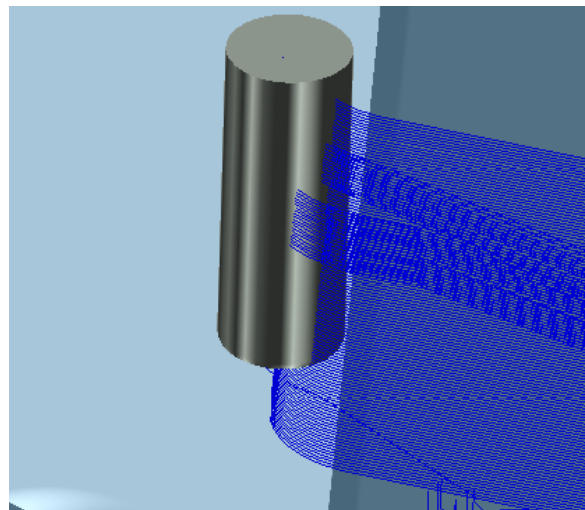
When using a configurable post processor, the Z depth for drilling and tapping is incorrect.

2D pocketing has been revised to return to the user defined plunge point before returning to the home position after completion of the last level of a pocket.

A defect has been corrected for the 3D Z-Planar and 2D profiling and pocketing machining strategies that can cause the tool to gouge the part. This affects programs under certain situations where the tool must reposition on an interference-free path but staying on the same level. Under some circumstances, the path calculated can cause a part gouge:



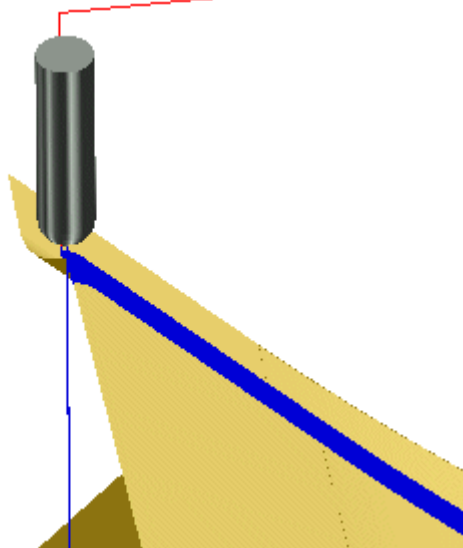
In this example, the tool is not safely clear of the wall when repositioning on a level.



This is the correct path generated by Prospector 2012.

The high speed machining option for smoothing interior corners has been modified to work for 2D pocketing for the periphery of the pocket as well as all islands. Previous versions of Prospector were ignoring island conditions when applying this HSM feature.

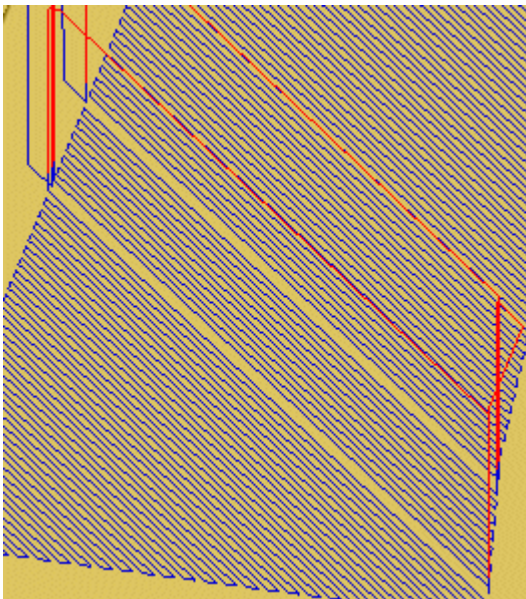
In certain discrete circumstances, a 3D flow cut program could gouge the part when the start and/or end point of a cut ended at the edge of a surface:



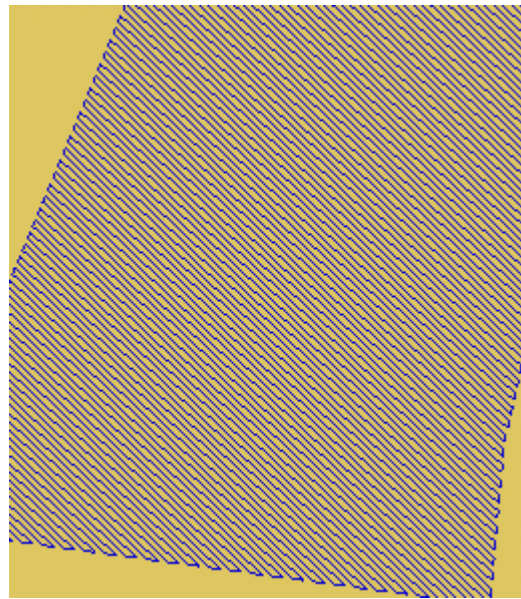
Instead of stopping at the edge of the surface, the tool would “fall off” the edge possibly gouging the part.

Radial programs which use a secondary curve to trim the program to could sometimes be trimmed incorrectly causing the program to possibly gouge the part.

Lace cutting has been revised to correct a discrete case where the cutter path would be incorrectly trimmed to the window:



In certain discrete cases, incorrect trimming to the window could omit cuts.



Prospector 2012 correctly trims to the window.

If high performance computing is enabled, Prospector would crash when trying to build a Z-Planar program where there is no surface data inside the window that is contained between the start Z and end Z of the program.

The Extract From Programs feature that allows for the retrieval of geometry used with other programs was incorrectly disabled when creating drilling programs.

The feature finder function for 2D machining can cause the program to hang if there is no wireframe geometry present. This was particularly true for computers with fast processors or multiple processors.

2D graphics functions such as the display of cursor stroke tracks has been modified to display properly when using OpenGL graphics acceleration. Previous versions relied on Microsoft Graphics Device Interface (GDI) in these cases which could cause incomplete or incorrect display. Prospector has been modified to do all graphic display using OpenGL to avoid the potential for display problems that arise from mixing GDI and OpenGL technologies.

Customer Closed Track IDs

Track is the electronic database system that records all customer and internally generated requests for corrections and enhancements. When you report a problem or request an enhancement, our customer service representatives will input your request into the Track system and give you a Track ID number. When we complete a release, we set the status on all records in the Track database that have been addressed to closed. The following is a list of closed customer Track IDs for this release.

| Track ID | Synopsis |
|----------|--|
| 5247 | Add multiple passes feature for Z-Planar No Clear machining strategy. |
| 6714 | Add the ability to perform thread milling from the top to bottom. |
| 6728 | Return to start point after completion of the last level for 2D pocketing. |
| 6801 | Floors only option for Z-Planar is not producing smooth |
| 6806 | Prospector Z-Planar program is causing a part gouge. |
| 6810 | Z-Depth output for hole making operations is incorrect when using a configurable post processor. |
| 6811 | Program crash if high performance computing is enabled and there are no surfaces inside the window to be machined. |
| 6812 | The Interior Corners option for high speed machining doesn't apply smoothing to islands for 2D pocketing. |
| 6816 | Prospector Z-Planar program is causing a part gouge. |
| 6818 | Prospector Z-Planar program is causing a part gouge. |
| 6820 | Prospector Z-Planar program is causing a part gouge. |
| 6821 | Prospector Z-Planar program is causing a part gouge. |
| 6824 | Prospector Z-Planar program is causing a part gouge and not reporting the problem. |

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|------|--|
| 6825 | Programs are failing to build when high speed computing is enabled. |
| 6826 | Flow cut program is causing a part gouge at the start and end of the cut. |
| 6827 | Tolerance is too tight when determining the rotation angle(s) for establishing a setup. |
| 6829 | These radial programs are not be correctly trimmed to the secondary curve thus causing a part gouge. |
| 6839 | These radial programs are not be correctly trimmed to the secondary curve thus causing a part gouge. |
| 6847 | Prospector Z-Planar program is causing a part gouge. |
| 6842 | Lace program is omitting cuts. |
| 6848 | Prospector Z-Planar program is causing a part gouge. |
| 6845 | The Extract From Programs feature is not available when creating a drilling program. |
| 6849 | Combination of using plunge with a designated start point and cutter compensation for 2D profiling with the tool positioned on the profile fails to build. |
| 6850 | Flow cut program is gouging the part. |
| 6851 | When importing an NCI file from Mastercam, the cutter compensation settings for a program are not being interpreted correctly. |
| 6854 | Add the minimum pocket radius feature to Z-Planar No Clear strategy to prevent the tool from entering small pockets. |
| 6855 | Program crashes when you attempt to create a new program with a project that contains a part data file with a single vertical surface. |
| 6856 | Lace program is gouging the part data. |
| 6857 | Installation of the software failed to identify the correct number of processors available for high performance computing. |
| 6864 | The 2D feature finding function causes the program to hang if there is no wireframe data present in the design data. |