PROSPECTOR
THE GOLD STANDARD IN MOLDMAKING

with powersource TECHNOLOGY

Prospector 2021 Release Summary

Overview

Prospector 2021 is a major release that includes significant enhancements as well as customer requested software modifications and corrections. This release summary describes the software changes.

Platform Support

The table below lists the supported operating systems for Prospector 2021:

| Operating System	Revision Level
Windows 10	All
Windows Server 2019	All
Windows 7[1]	Service Pack 1 or later
Windows Server 2016	All
Windows Server 2012	R1 & R2

[1] This will be the last release for the Windows 7 operating system. This popular operating system is no longer supported by Microsoft. Although it is likely that future releases of Prospector will install and run without incident on Windows 7 computers, quality assurance testing will no longer performed to ensure this. AMT Software recommends that you upgrade to a supported operating system.

Licensing Prospector

There are no changes to the software license enforcement. You do not need a new license code to run the 2021 release.

3D Programming

The option to machine floors for Z-Planar With Clear has been modified to produce proper results for the clearing cuts when there are small regions at the periphery of the area to be cleared.
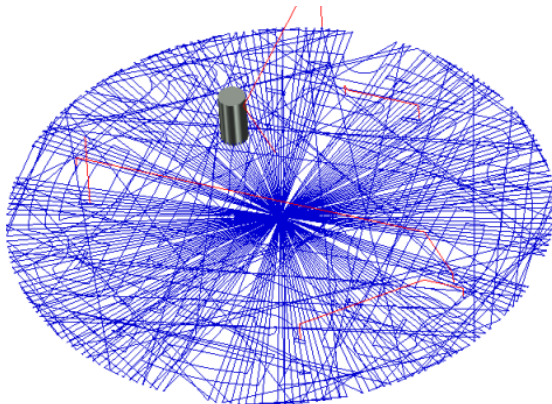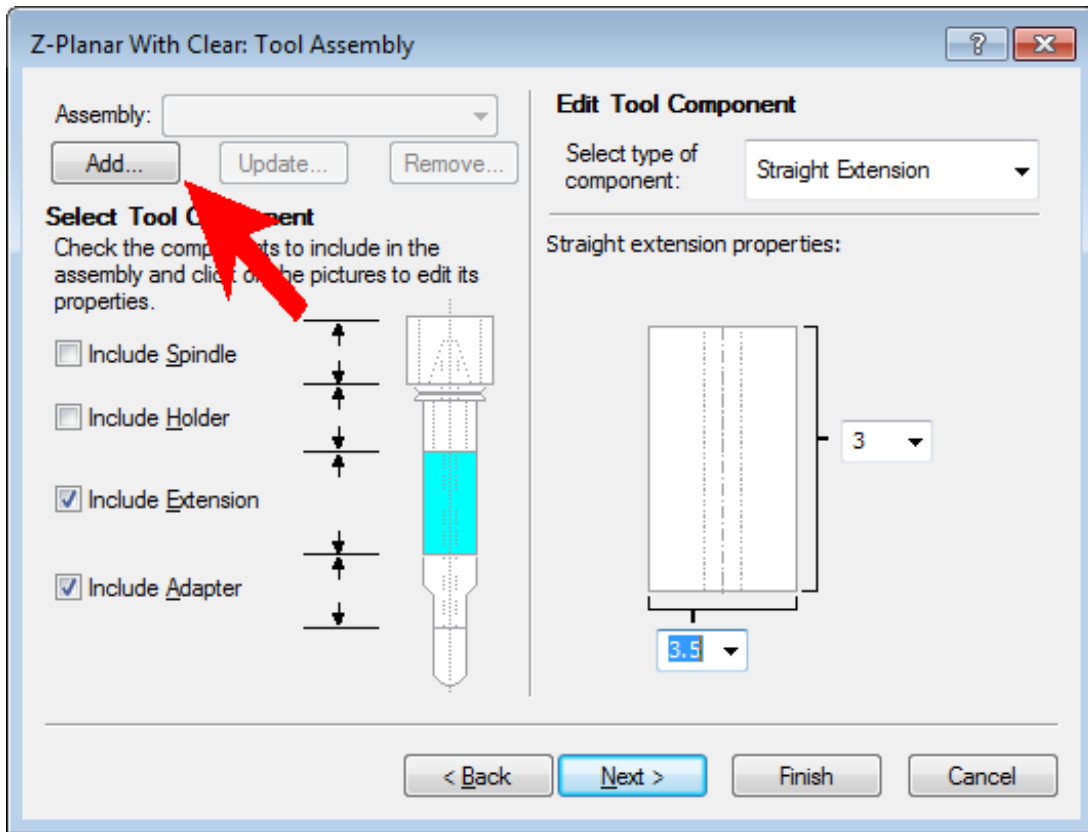

Incorrect clearing cuts on the floor area of this part because of small regions at the periphery.
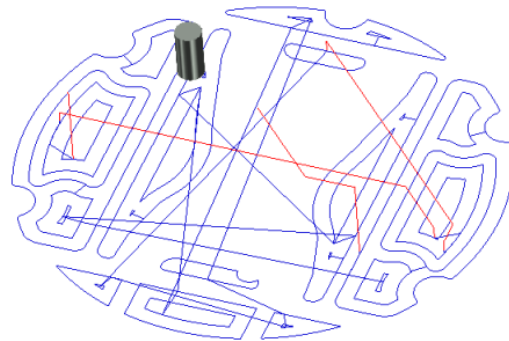
Correct clearing results in 2021.

## Named Tool Assemblies - Associating a Tool with a Tool Assembly

The tool assembly page of the program wizard has been enhanced to allow you to associate a tool assembly with a particular tool.

Define the components of the tool assembly you wish to use for this particular tool. Click Add… to associate this assembly with the tool and assign a name to the assembly.
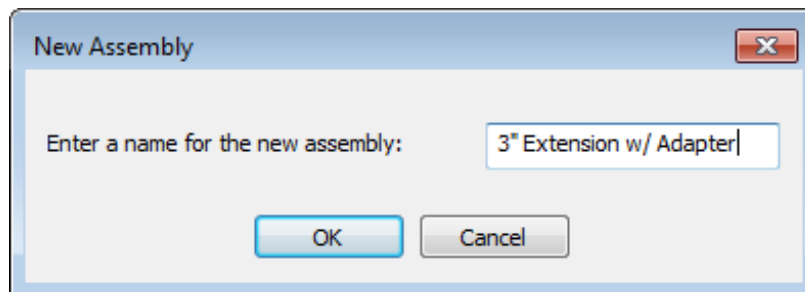

Assign a name to this assembly and click OK.
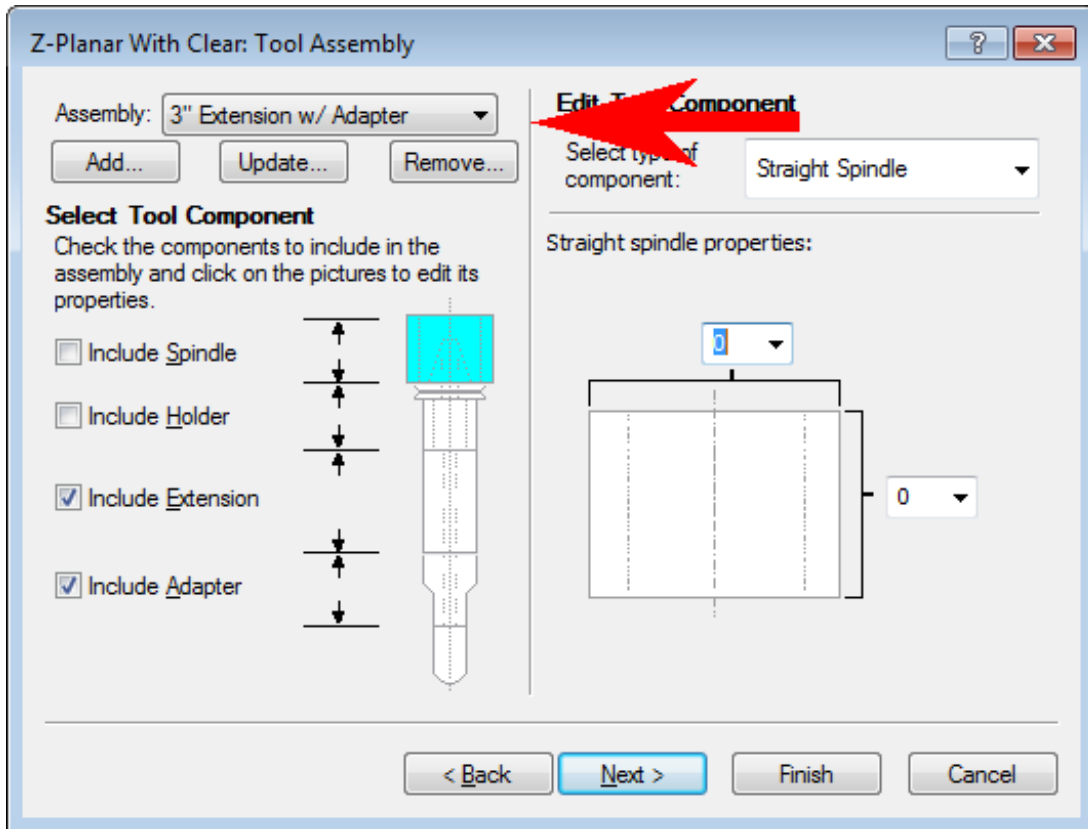
The next time you choose to use that particular tool for a new program, the tool assembly associated with that tool will be available for selection in the drop-down menu.

If you need to modify a named assembly, make whatever dimensional changes of component changes you wish and click Update. You will be prompted to confirm the changes:
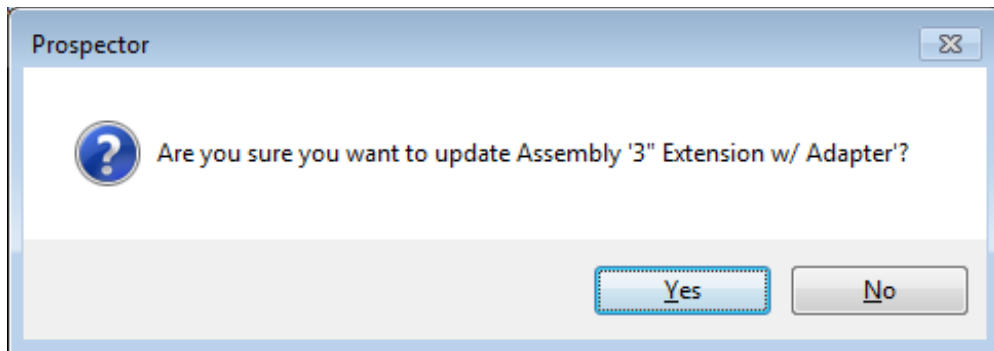
Click OK to make permanent the changes.

Similarly you can remove a previously defined assembly by clicking Remove. You'll be prompted to confirm that you want to remove the assembly definition.

<u>*Notes about named tool assemblies:*</u>

A named assembly is associated **<u>*only*</u>** with the specific tool you chose on the tooling page. For example, a named assembly defined for a .5 ball cutter **<u>*isn't*</u>** available for selection for a .5 flat cutter.

Any number of named assemblies can be associated with a given tool. Choose which named assembly you wish to use for a particular tool from the drop-down menu.

A named assembly is associated a particular tool **<u>*and*</u>** specific machining strategies. If an assembly is defined for a particular tool for Z-Planar With Clear that assembly can be chosen when creating 2D pocketing programs. Similarly a named assembly for a tool defined when creating a Z-Planar No Clear program will also be available for 2D profiling. This convention corresponds to how tooling is grouped according to machining strategies in PowerSource Tooling.

A named assembly is available for selection for a specific tool and machining strategy at a particular stage of machining (Rough, Semi-Rough, Semi-Finish, Finish). For example, if you name an assembly for a 3" flat cutter for Z-Planar With Clear in the Rough stage of machining then that assembly will **<u>*not*</u>** be available for Z-Planar With Clear in the Semi-Rough stage of machining. Again this follows the same convention as the grouping of tools in PowerSource Tooling.

Named assemblies are associated with a user's login. User 'Joe' will not see or be able to access named assemblies by user 'Bill'.

2D Programming

Helical drilling program creation has been corrected to ensure that the tool diameter will never exceed the hole diameter when a non-zero draft angle is specified.
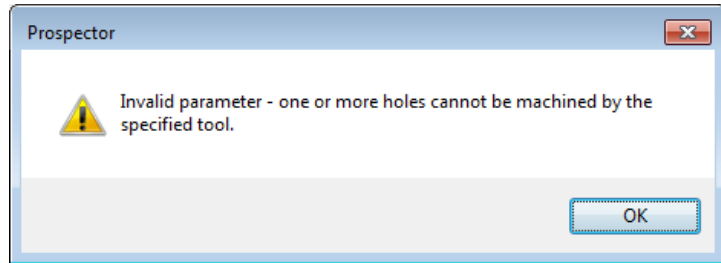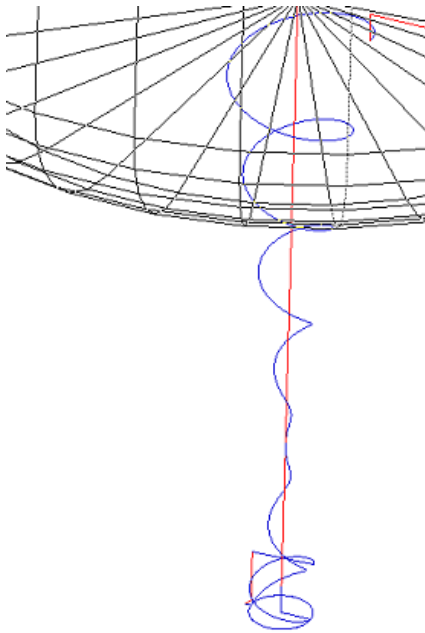
Incorrect cutter path generated by previous releases when a helical drill program used a cutter diameter that was too large.

An error dialog is now issued if it will not be possible to properly machine the hole because the tool or draft angle is too large to reach the full depth.

A 2D profiling program that machines a circle using the 'on profile' condition and a designated start point, the program generated would be displayed incorrectly showing phantom rapid motion that was not in the CL data file.
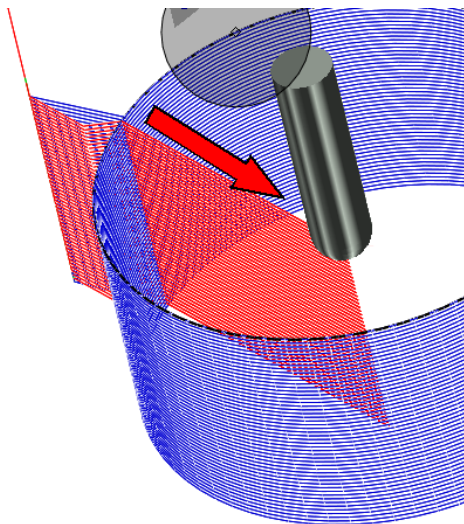
Incorrect cutter path generated by previous releases included rapid motion to the circle center.
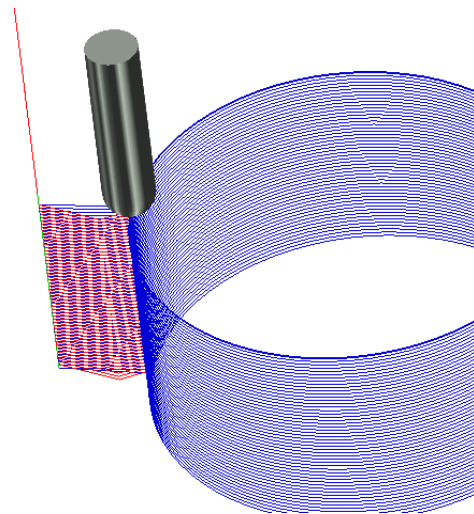
The proper cutter path in Prospector 2021.

Advanced Wizard Mode when creating a Scribe program has been corrected to offer the proper program parameter choices. Previous releases did not work correctly mistaking a scribe program for a drill program.

When updating a gun drill program, it is now possible to make changes to the hole(s) to be machined on the feature selection page of the wizard. Previous versions disabled selections for holes when updating a gun drill program.

The 2D pocketing and profiling wizard could produce a program crash in certain circumstances. The programming error has been corrected to ensure that this can't happen.

The initial depth parameter on the gun drill parameters page can be modified by typing in a value:
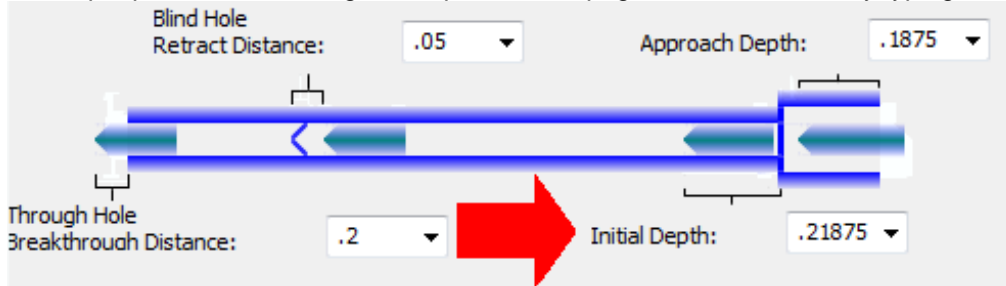
In previous versions, values could only be entered by choosing one from the drop-down menu.

Attempting to change Retract Spindle Speed in Program Properties for a gun drill program causes Prospector to go into an infinite loop (hang). This has been corrected to allow the user to type in a different spindle speed value.

PowerSource Insight and Tooling

Editing a PowerSource system database (*.sdb) in either Insight or Tooling no longer requires the user to login as Administrator or have administrative privileges. In previous releases, administrative rights were required to make any changes to a system database file. This restriction has been removed so that any user login can make changes.

The PowerSource system database has been updated to include a default setting for Breakthrough Feed Rate for gun drill programs. Previous versions omitted a default for this program parameter.

Double clicking on a system database (*.sdb) file in Windows Explorer would not open the system database file; it would always open the user.udb file. This has been corrected so that a system database file can be opened by double-clicking on it.

Some error messages in Insight and Tooling cause a dialog to be posted that is not useful to describe the issue and how to solve it. These dialog have been replaced with more user-friendly dialogs that provide helpful information about what the problem is and how to fix it.

Checking for Prospector Updates

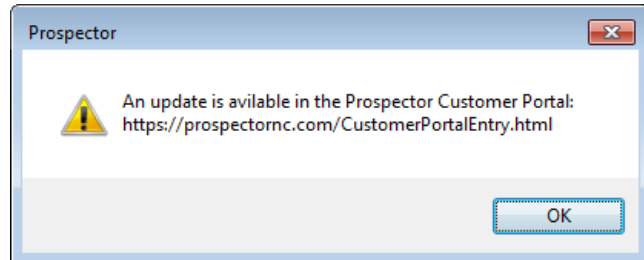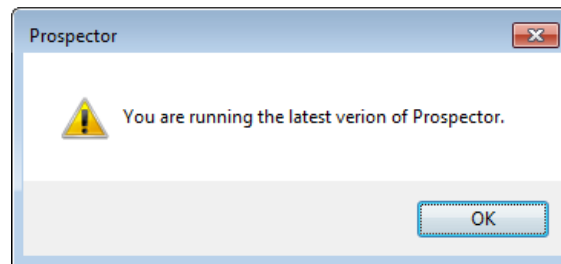The methodology for checking for updates has been modified to alert you to the availability of a newer release in the Prospector Customer Portal.
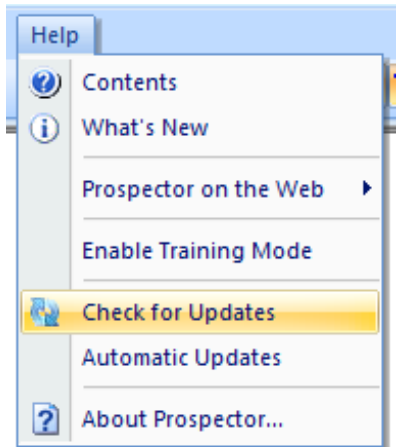
Choose Check for Updates…

If a newer release or an update is available, this dialog will be posted.

If you are running the latest software, this dialog will be posted.

Previous releases would offer the option to download and install newer software. This old method would fail if you were not logged in as Administrator or your login did not have administrator privileges.

General Maintenance

If you choose to post process a program that has a part data violation (gouge) and apply a HSM option, you will be warned only once about the issue. Previously releases would publish multiple superfluous warnings.

Additional information has been added to the licensing log file:
        C:\Users\<user login>\AppData\Local\Temp\ Prospector_License.txt
This file is created each time you start a session of Prospector to record the nature of the software license acquired. This file is useful to help AMT Customer Service should you have a problem with your software license.

Patch surface data imported from another CAD system as IGES data retains the precise color information that was used by the CAD system to create the surfaces. Previous versions of Prospector approximated the color using the closest match to one of 16 standard colors in Prospector.

Tool rotation information in the Program Properties / General dialog would report confusing rotational information. For example, a 15 degree rotation about the X-axis would report -15 degrees about X and 180 about the Z-axis instead of just 15 degrees about X. This has been revised to report the more appropriate solution of 15 degrees about the X-axis.

The ability to publish the reference point for the block has been added for NC Comments. Certain machine monitoring software programs require the block definition to be output for further processing in post processed programs.
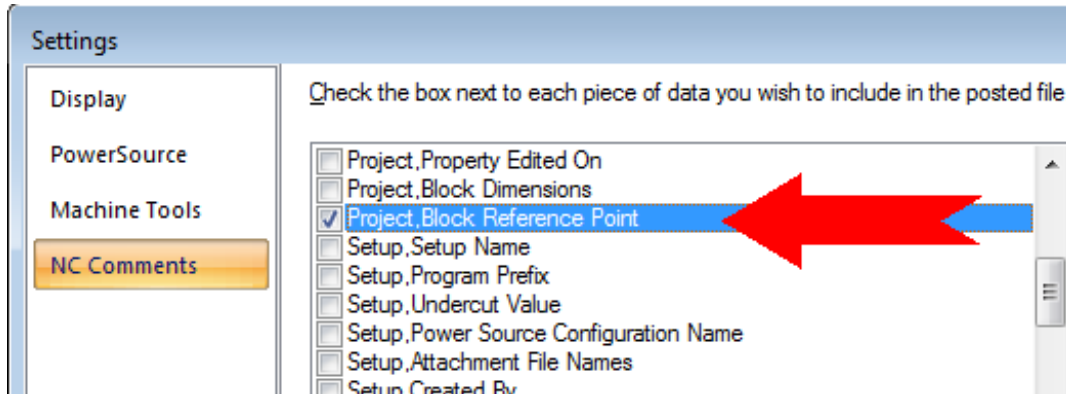
Additional information will be recorded in the crash log file:
        C:\Users\<user login>\AppData\Local\Temp\ProspectorCrash.log
in the event Prospector encounters a catastrophic error that causes a program crash. This log file is helpful to AMT Customer Service to determine the source of the error and to recommend a work-around for the problem(s) that caused the crash.

The progress meter has been revised to better show the progress towards creating the display list for part data with 1,000's of solid model faces.

Rapid motions in a workspace could be calculated incorrectly when linear interpolation of rapids is disabled. This has been rectified so that rapid motions are properly computed in all cases for programs created in alternate workspaces.

Warnings regarding low disk space have been removed from Prospector. In some cases the low disk space warning could be posted in error when there is ample disk space available.

Point line styles (style 32 through 39) exported from ExpertCAD 3D were incorrectly translated when imported into Prospector:

Incorrect handling of point lines from ExpertCAD 3D in previous versions of Prospector.

Prospector 2021 interprets all point lines as point line style (31).

Resolved Incident and Enhancement Report

When you report a problem or request an enhancement by contacting our customer service team, you will receive a unique ID for each problem and/or requested enhancement. When we complete a release all incidents and enhancements that were addressed for that particular release are assigned a closed status. The following table lists the closed records for this release.

Record ID	Customer	Synopsis
AMT00666	Mangas Tool & Die	Add the ability to associate a tool assembly with a tool.
AMT00733	AMT	Certain properties for 2D machining that can be locked in PowerSource Insight do not appear to be locked in Prospector.
AMT00746	AMT	Helical drilling is not properly checking to ensure the tool diameter size when a drafted hole is machined.
AMT00758	AMT	The default rule for tool selection for 2D profiling will produce an error if the cutter path is a simple straight line along either the X or Y axis.
AMT00762	AMT	2D profile program using a designated start point with an 'on' condition produces incorrect results.
AMT00763	AMT	The advanced wizard mode for a scribe program does not function properly.
AMT00771	AMT	Prompt only 1 time when choosing to send to control a program that gouges the part data and uses a HSM option.
AMT00778	AMT	Certain program crash conditions do not create a crash log file to trace the root of the problem.
AMT00779	AMT	Remove the requirement for administrative privileges to edit a system database in Insight or Tooling.
AMT00781	Ramsden	The Machine Floors option for Z-Planar With Clear works poorly for this part data.
AMT00793	AMT	Add additional information to the licensing log file.
AMT00794	Oakwood	Patch surface colors from outside CAD program are not the same when brought into Prospector.
AMT00797	AMT	Missing default for Breakthrough Feed Rate in the system database.
AMT00798	AMT	Can't choose different holes to machine when performing a program update for a gun drill program.
AMT00799	AMT	Add a confirmation dialog when choosing to acquire a 30 day evaluation license.
AMT00802	AMT	The Program Properties / General dialog, the Tool Axis Information is not working properly.
AMT00804	MSI Mold Builders	Add the ability to publish the Project/Reference Point for the block dimensions as an NC comment.
AMT00810	AMT	Revise how Help/Check for Updates functions.
AMT00815	AMT	Prospector could crash when walking thru the wizard to create a Pocketing or Profiling program.
AMT00816	AMT	Can't change the initial depth by typing in a value on the gun drill parameters page.
AMT00817	AMT	Attempting to change Retract Spindle Speed in Program Properties for a gun drill program causes Prospector to hang.
AMT00818	AMT	Add information to the crash log file.
AMT00819	AMT	Progress meter for creating the display does not work well for this part data.
AMT00820	AMT	Missing a part data file from the training examples.
AMT00823	AMT	Remove the requirement for administrative privileges to edit a PowerSource system database.
AMT00828	AMT	Revamp the help for Prospector to refer to ProspectorU to get started.
AMT00829	AMT	Odd rapid motions for this lace cut created in a workspace.
AMT00831	AMT	Remove checks for low disk space.
AMT00833	AMT	Double click on a system database file doesn't open that file.
AMT00835	MSI Mold Builders	Update certain error messages that originate in the PowerSource code to be more user-friendly and descriptive of the problem.
AMT00836	AMT	Some point line styles in CAD data exported from ExpertCAD and ExpertCAD 3D are incorrectly translated when imported into Prospector.
AMT00837	AMT	Revise internet licensing to work correctly for Windows Server OS.
AMT00838	AMT	Add support for Windows Server 2019.
AMT00839	AMT	Do not write configuration files for Insight and Tooling in the bin\ directory.

| AMT00840 | Oakwood | Remachining program incorrectly engages in areas with too much stock. |
| AMT00846 | AMT | Prevent multiple displays when running under Windows Server. |