

Version 6.3 Service Pack 2 Release Summary
July 2006

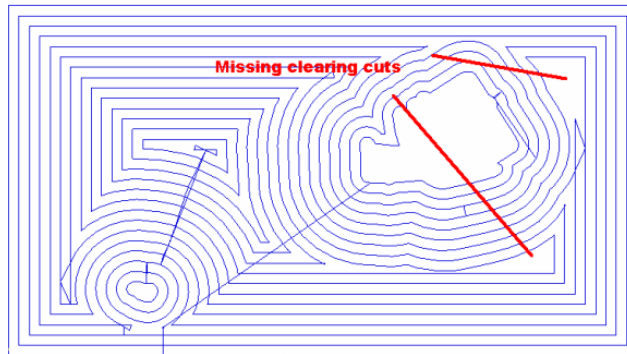
Overview

Prospector 6.3 Service Pack 2 is an update release that contains important software corrections to rectify problems that have been reported against Version 6.3 and Version 6.3 SP1. Service Pack 2 incorporates all software corrections since the release of Version 6.3 therefore it is **not** necessary to install Service Pack 1 then install Service Pack 2.

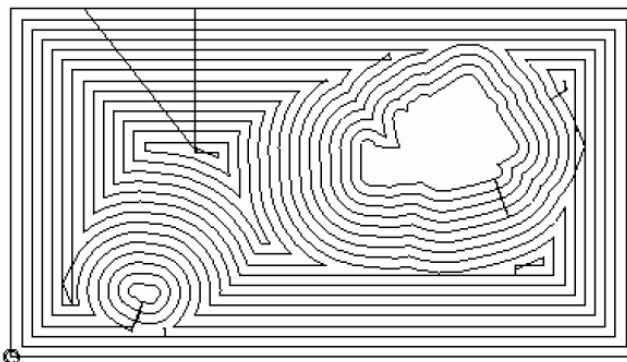
This release summary describes the software changes for both Service Pack 1 and 2.

Z-Planar Spiral Clearing

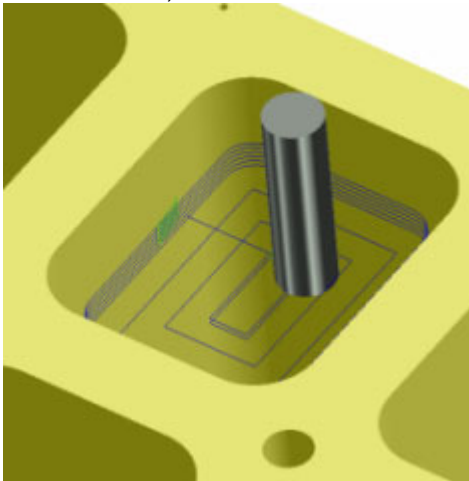
Spiral clearing has been revised to ensure each level of the program will be completely cleared before proceeding to the next level. This correction addresses discrete cases reported in Version 6.3 where one or more levels would omit some of the clearing cuts. This can result in leaving standing stock or the tool will encounter a heavy stock condition when the area is cleared at a lower level.



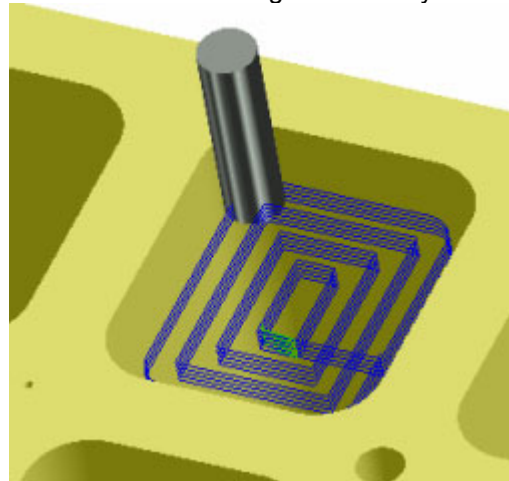
Above is an example of a single level of a clearing program created in Version 6.3. In 2 areas of the level, clearing cuts were missing. This has been corrected to insert the needed clearing cuts to completely clear each level as shown below:



In a discrete case, several levels of a Z-Planar program omitted the clearing cuts entirely:



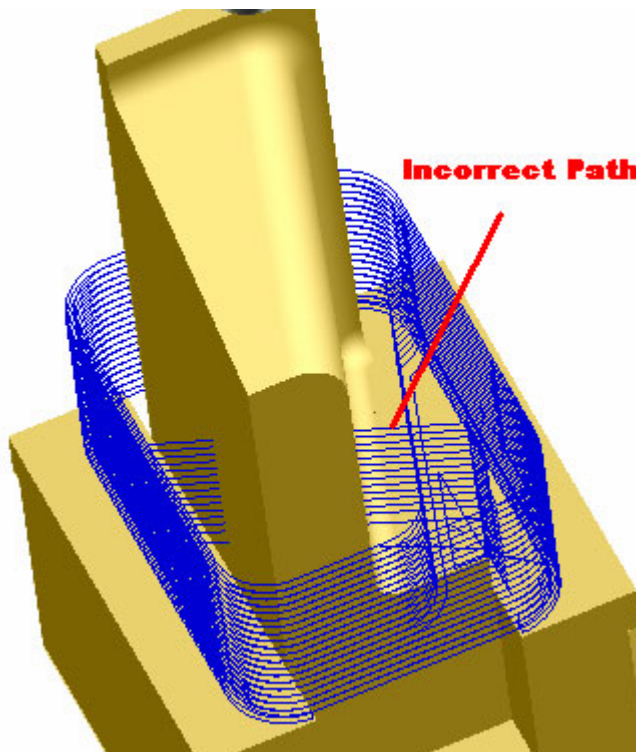
Part way through this program, the interior clearing cuts were omitted for several levels. Only the outer boundary was cut for these levels.



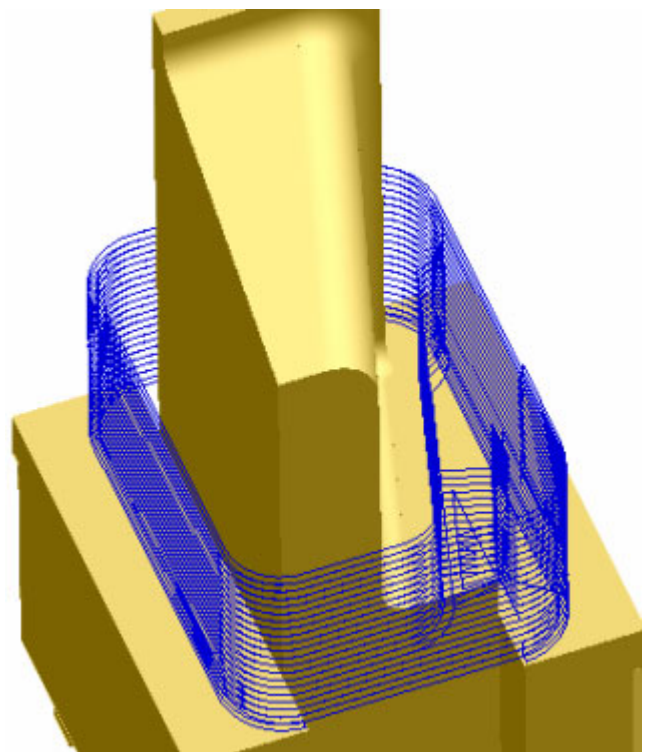
The correct results in Service Pack 2. All levels are cleared.

Instances of programs machining levels out of order (cutting lower level(s) first then returning to machine upper levels) have been corrected.

When moving to the start point of the next level, the cutter path would feed through the part data instead of choosing an interference-free path:



On just certain levels of this job, the program does not use an interference-free path to return to the start.



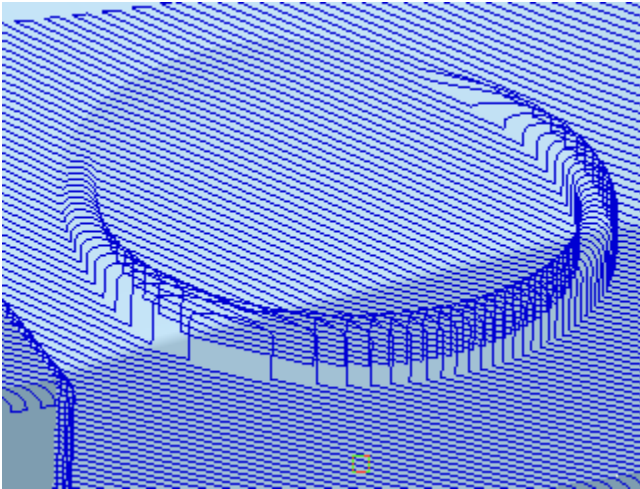
The correct results in Service Pack 2.

The corrections to spiral clearing affect both 3D Z-Planar With Clear programs and 2D Pocketing.

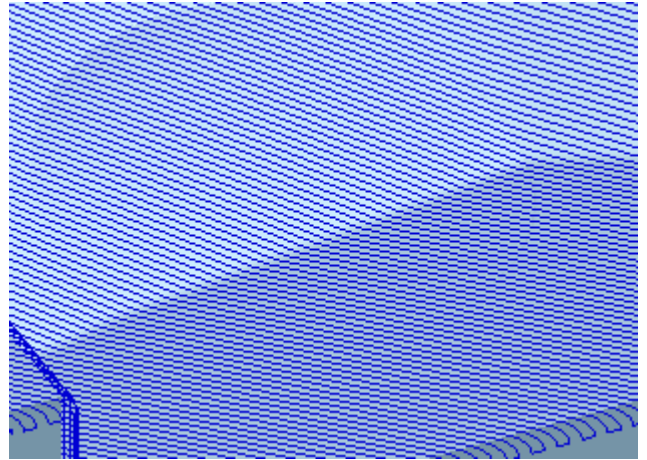
Importing Parasolid Data

The Parasolid kernel is used to import part data and create the shaded model display of the part. Parasolid may reject a face (surface) of a solid body and/or fail to produce a display. Should this happen, Prospector will now report this as a design defect and state clearly that the nature of the problem. In previous versions, could stop importing data after when the first invalid entity is reported by the Parasolid kernel instead of continuing on to import the remainder of the part data.

A discrete problem with certain periodic surface definitions allowed by Parasolid data could affect lace cutting:



The definition of the underlying periodic surface caused this lace cut to lift instead of staying on-surface.



The correct results in Service Pack 2.

Performance

Part data that contains surfaces with many very small inner trim boundaries can cause lengthy program generation time. Software modifications for program generation has been modified to identify this condition. If the inner boundaries are too small with respect to the size of the tool plus the stock allowance (i.e. these regions collapse when offset), they are omitted from processing. This speeds performance by many magnitudes when this particular condition is prevalent in the part data.

When Parasolid data is imported for machining, part data is refined in the same manner as IGES or PDB data files. This corrected several issue related to excessive cutter path generation time.

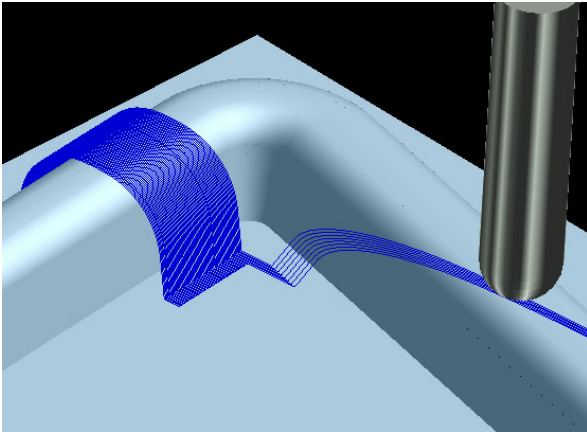
2D Pocketing & Profiling

Profiling or pocketing using a bull or ball cutter, the resulting cutter path would leave too much stock in cases where the walls were drafted. This has been corrected in Service Pack 2.

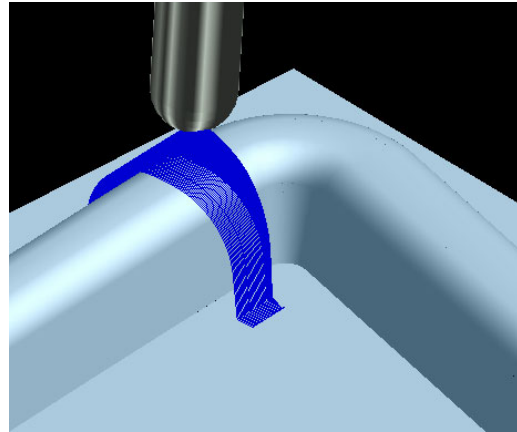
Radial Machining

In a discrete case, a stray cut would result when trimming the radial cuts to the input curves. This has been corrected in Service Pack 2 to omit any cuts that fall outside the curves after being trimmed.

In discrete cases where there is an abrupt change in the direction of radial curves, the software could fail to produce the proper cuts. An example is a sharp corner as shown below:



In the corner of this part, the radial program doesn't follow the inside corner of the radial curve. It wrongly continues on over the part until it intersects the curve.



The correct results in Version 6.3 Service Pack 2.

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
6273	Lace program pulls away from the wall of one side of this cavity.
6315	Display of the part data from Parasolid is causing the windows that are created to be shifted out of position.
6317	Some pockets in this job are not cut to the full depth.
6318	Program gouge on a surface with a degenerate trim region.
6323	Spiral clearing is causing a gouge.
6326	Rapid motion for rib machining can cause a gouge if multiple curves are used and last passes only is enabled.
6327	Cutter path generation time is excessive for this part data.
6333	Radial program generates cuts that reverse direction and crosses over the part.
6335	Program fails to generate when using the cutter path engine optimized for the Pentium 4 processor.
6337	Copy/Paste of radial programs is not copying all of the program data.
6338	Remachining sequence of programs will not completely process.
6340	Incomplete spiral clearing for Z-Planar With Clear program.
6342	Zig-zag style cutting for flow machining does not work.
6343	Ordering of levels for this Z-Planar With Clear program is incorrect.
6344	Ordering of levels for this Z-Planar With Clear program is incorrect.
6345	Program gouge.
6354	Excessive amount of time needed to generate programs for this part.
6355	This part data causes a crash when making a new 3D program.

6356	Program gouge.
6357	Program gouge.
6358	Expose methods to allow attachments to be inserted into a setup programmatically.
6359	Add a graphic indicator to setups to show if it has an attachment.
6363	Parasolid models with very small arcs (0.00001 R) for trim curves will not import.
6366	Program gouge.
6373	Incomplete spiral clearing for Z-Planar With Clear program.
6374	Incomplete spiral clearing for Z-Planar With Clear program.
6376	Pencil trace cutter path gouges the part because it is not lifting high enough to clear the stock.
6377	After Project/Get or Project/Open, sometimes the part data is not visible.
6378	Application error when creating new 3D program with this Parasolid model.
6379	Application error when creating new 3D program with this Parasolid model.
6381	Lifts for lace cuts can lift too high under certain conditions when optimized lifts is disabled.
6384	Can not read projects from Version 4.2 that contain imported programs.
6376	Tool is not retracting high enough in this particular pencil trace program.
6377	Sometimes the part data is not visible when this project is opened.
6381	Lifts between cuts for this lace program are too high if optimized lifts is disabled.
6381	Can not read old projects from Version 4.2 that contain imported programs.
6393	This radial program produces a stray cut.
6394	An error occurs when attempting to import more than 6 programs at a time.
6405	Part data will not display properly when this project is opened.
6408	Z-Planar With Clear program is skipping levels.
6409	Z-Planar program is gouging the part.
6410	Excessive compute time is needed to generate this program.
6411	Excessive program generation time & gouges when cutting this Parasolid model.
6415	Lace cut program is gouging the part.
6416	Lace cut program is not staying on-surface when cutting this Parasolid model.
6417	Excessive compute time is needed to generate this program.
6419	Z-Planar program with spiral clearing is gouging the part.
6421	2D pocking is cutting the pocket undersize when drafted walls are specified.