HEXAGON

Release Notes
ESPRIT EDGE 2024.3

31 July 2024

Contents

Welcome to ESPRIT EDGE! **3**

Move Machine Axes **3**

Probing C-axis Center Find **4**

Post processor language additions for rotary probing: 5

5-Axis Circle Segment Finishing – Passes from drive profile **6**

5-Axis Remachining (Preview) **7**

Nexus Application 3D Whiteboard **8**

End of life of Gear and Cam commands **9**

Issues fixed in ESPRIT EDGE 2024.3 ..... **10**

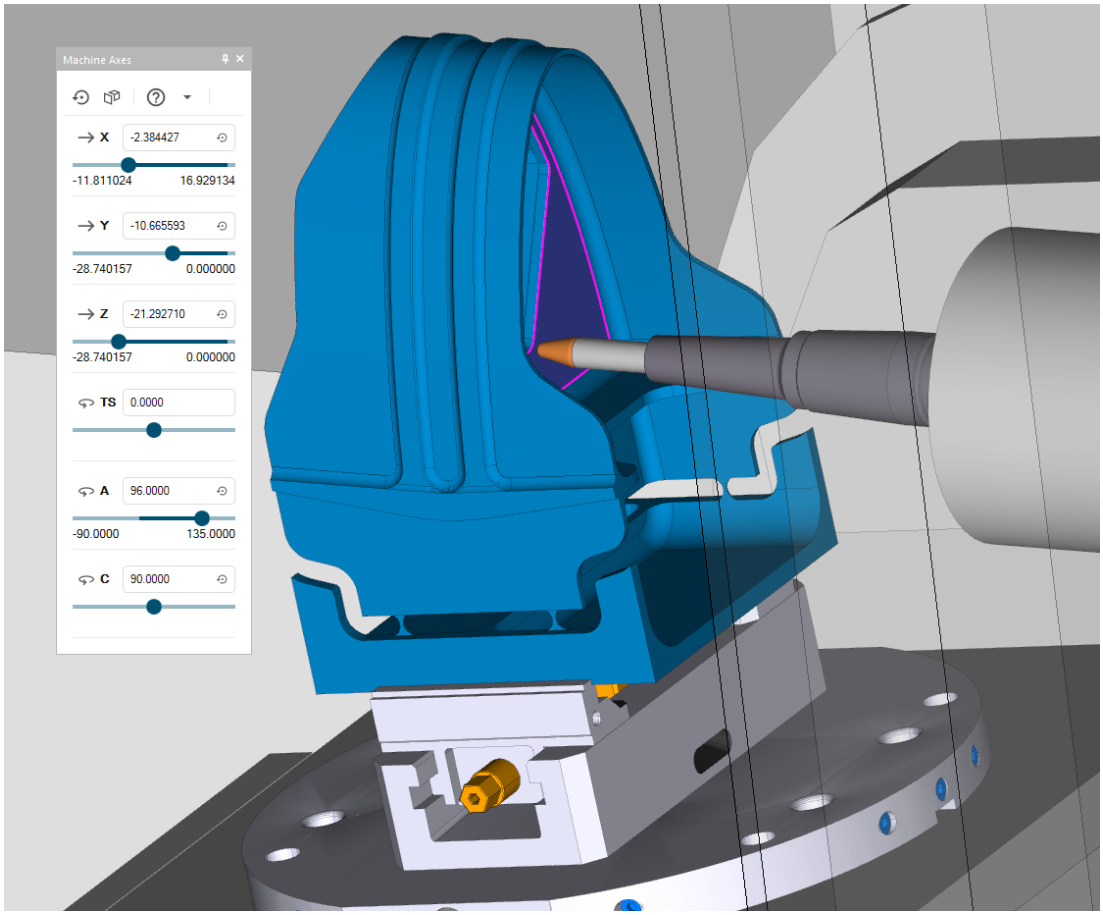
Welcome to ESPRIT EDGE!

Welcome to the evolution of production CAM software. Welcome to ESPRIT EDGE!

ESPRIT EDGE 2024.3 introduces a host of new features and enhancements. We are committed to continually developing, improving, enhancing, and innovating.

Discover below what's new with the ESPRIT EDGE 2024.3 version.

Move Machine Axes



Is the machine’s machining envelop large enough for machining the workpiece? Is the workpiece raised enough to reach all the features of the part? Is the tool long enough to reach the floor?

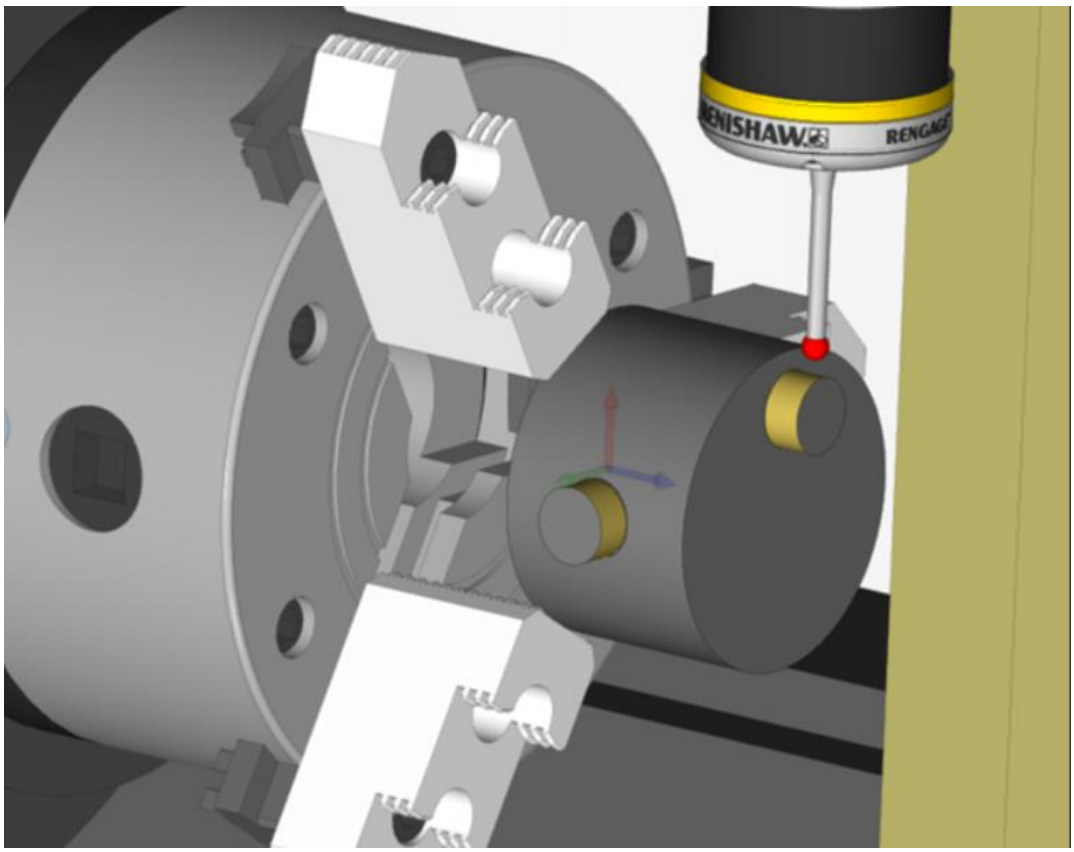
A new capability in ESPRIT EDGE helps answering such questions: In machine view, a new control enables moving the programmable axis of the machine and get a real time feedback on possible collisions.

What you need to know:

- Go to **Home** >> **Show/Hide** and select **Machine Axes** to turn on the visibility of axis control.

- Select a tool assembly in the tool manager to load or select a tool while moving axes.
- Toolbar at the top of the Machine Axes pane enables:
    - Rest all axes to their Home positions.
    - Position axes relatively to the workpiece by digitizing a face of the workpiece.
    - Set the collision handling either by ignoring or reporting or stopping motion on collision.

Probing C-axis Center Find



A new cycle type for the Probing cycle enables probing of a rotary axis using only rotary motions to find the centre of a feature on the part.

The cycle accepts probing of a hole, a circular boss, a pocket or a rib on the part.

In all scenarios, the centre of the feature (median plane, hole/boss centre) must intersect the C-axis of rotation.

After positioning the part at the centre of the feature, the system performs rotary motions on both sides of the part till contact.

The result of the probing cycle can be used to update the workoffset.

Post processor language additions for rotary probing:

New example:

- **Ex_Probe_CAxisCenterFind**
  Ex_Probe_CAxisCenterFind generates the code for a probing cycle that finds the center of an internal or external feature by rotating the rotary axis clockwise and counterclockwise.

New formattable dimension:

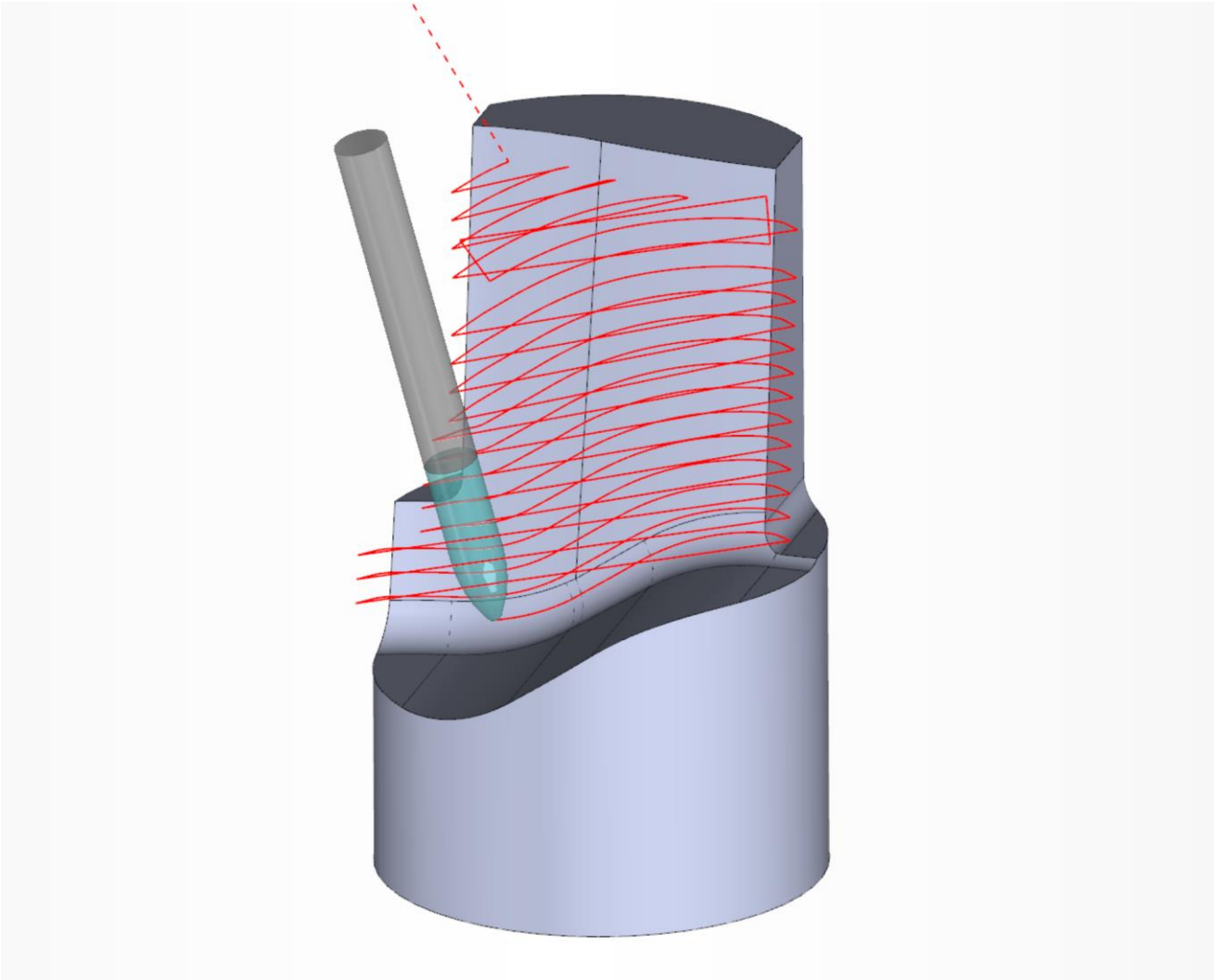
- **ProbeCenterlineDistance**
  Specifies the distance from the C-axis center of rotation to the measurement position in a C axis Center Find cycle. To be used only with G68 tilted work plane function.

New Symbolic Codes:

- **ProbeZCAxisCenterFind**
  ProbeZCAxisCenterFind designates the code for a probing cycle that finds the center of an internal or external feature when probe along the Z axis.

- **ProbeXCAxisCenterFind**
  ProbeXCAxisCenterFind designates the code for a probing cycle that finds the center of an internal or external feature when probe along the X axis.

5-Axis Circle Segment Finishing – Passes from drive profile



The 5-Axis Circle Segment Finishing cycle adds an option to generate cut passes by offsetting a drive profile.

It enables creation of continuous passes at either the top or the bottom of the zone to be machined, preventing leaving any residual material in a critical area.

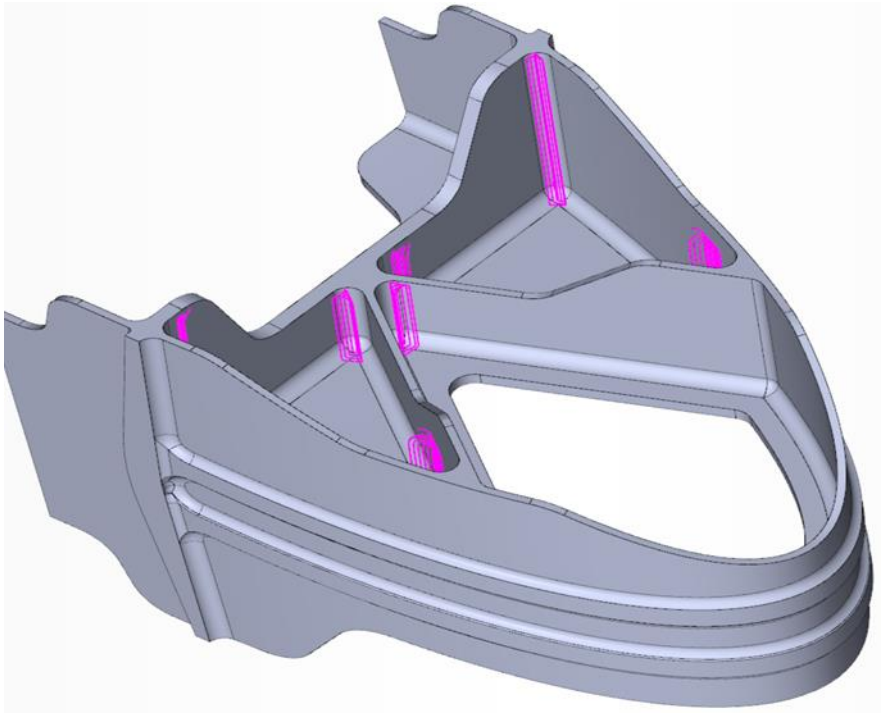
This option is an alternative to the existing option creating cut passes perpendicular to a user-defined direction.

In both cases, the cycle automatically positions the tool axis to optimize cut pass coverage on the planar and curved face(s) and to avoid collisions between the tool assembly and the model.

Drive profile can be defined by selection of loops or of edges of the model, either at the bottom (option Lower Profile Offset) or at the top (option Upper Profile Offset) of the area to machine.

The selected Edges or Loops must be at the border of the Part and Check elements.

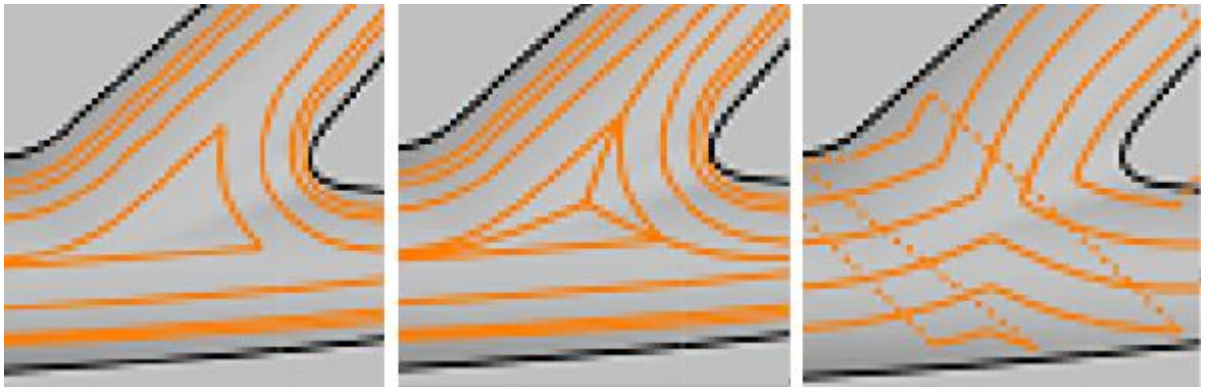
5-Axis Remachining (Preview)



The 5-axis Remachining cycle is still in Preview. To see the new cycle, go to File > Options > Preview Features and check Enable 5x Remachining.

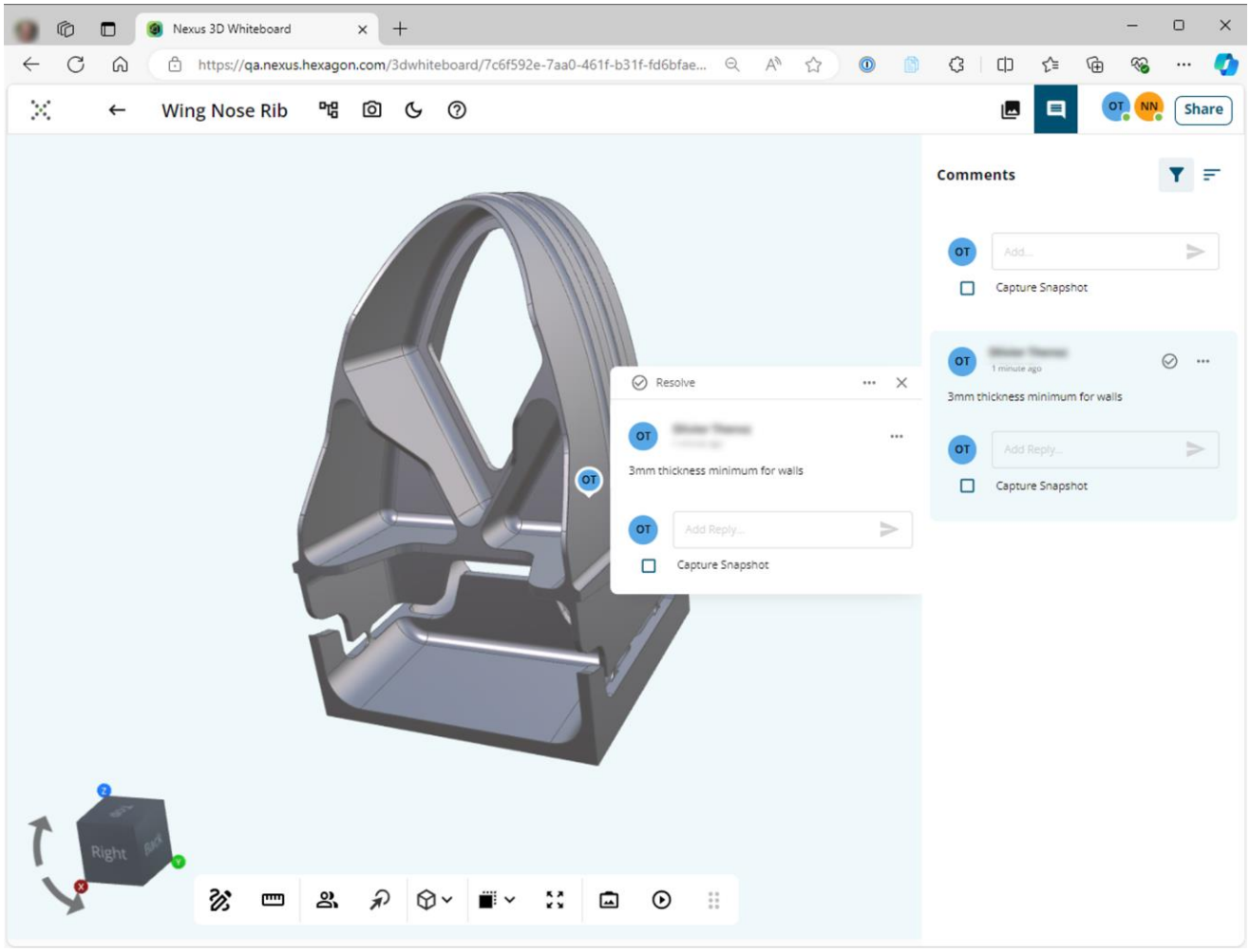
With ESPRIT EDGE 2024.3, there is more control over the shape of the passes: 2 new options create a central passes cleaning the centre of the corner uniformly without residual material.

Concentric | Concentric and Central Pass | Central Pass Offset



There is also a new tangent pass extension that extend passes outside opened extremities.

Nexus Application 3D Whiteboard



ESPRIT EDGE 2024.3 introduces the connection to Nexus Applications and Extensions.
3D Whiteboard is the first Nexus application available.

With this free version of 3D Whiteboard, you can try it out and create up to 3 projects.
3D Whiteboard allows you to:

- Easy collaborate
  Share design changes and queries directly with customers or your extended team, with no CAD software required.

- Increase productivity
  Use intuitive tools to collaborate with multiple stakeholders in a browser to review and agree to any changes.

- Reduced costs
  Remove the need for complicated email threads and avoid mistakes.

- Comment and mark up
  Synchronize design changes instantly, capture key moments of a meeting and return to specific view whenever needed.

To use Nexus 3D Whiteboard, you would need to create a Nexus account if you don’t have one already. Log into your Nexus account through ESPRIT EDGE by clicking on the “Connect to Nexus” button on the top right of ESPRIT EDGE (next to the Help) and then you can share your design(s) by using the “Share in 3D Whiteboard”.

End of life of Gear and Cam commands

Gear and Cam generator commands are being discontinued because of technology obsolescence. There are several profile generators available online that can replace these commands.

Issues fixed in ESPRIT EDGE 2024.3

Version 2024.3.2430.1782

Description	Issue Number (s)
API – Typo in enumerated espHoleCycleType	SW 290761
API – Objects Tool1 ToolTip does not return the tool tip value	SW 270223
API – Depth from Chamfer Diameter returned the wrong value	
Analysis – Curvature analysis graphic problem	
Annotation – Auto Dimension only works correctly on XYZ plane	SW 297353
CAD exchange – Issues with stp file used as stock	Forum 139704
Features Manager – Features and operations cannot be edited through contextual menu after copy/paste	SW 307546
Features Manager – Renaming feature group creates duplicate toolpaths when applying process	SW 307234
Features Manager – Renaming feature group deletes any feature groups after a feature/operation removal	SW 307324
Features Manager – Renaming feature group prevents feature/operation to be renamed	SW 307234
Features Manager – Missing ability to drag and drop features in and out of feature sets	SW 302897
Geometry – First point array is not considered when Create Hole Feature is set to YES	02053762
Knowledgebase – Using Feeds and Speeds from KBM multiplies feedrate listed by number of flutes	SW 301904
Links – Cannot post because of links failure	02263620
Links – Link error in file created in TNG	02263717
Links – Background simulation issue because no rotary solution is found	02249515
Links – Feedrate links issue for deburring cycle	02249297
Links – Link calculation failing between two operations	SW 306389
Links – Park to Home Creates Unnecessary Link Movement	SW 300309
Links – Wrong head rotation caused a machine collision	
Links – Collinear axis tool change links	
Links – Barfeeder drops part on rebuild	
Milling – Process cannot be applied when using custom mill	SW 305966
Milling – ProfitMilling hybrid strategy engagement issue	02241133
Milling – Pocket operation is not cutting to depth	

Description	Issue Number (s)
Milling – Pocket feature with arc gouges the part	
Milling – Update Rotary Machining Cutter Comp Error to Warning	
Milling – System crashing with trochoïdal machining	02271944
Milling – Tool missing length compensation register	02244739
Post Processor – Park outputs XY position when position is not used	SW 305990
Post Processor – Unable to post when a station is not selected in park operation	SW 304788
Post Processor – Cannot post due to very large file	02236484
Post Processor – Problem output for posts that support peck but not use Peck Formattable	
Post Processor – Circle Mode is ignored for helical NC output	02264411
Simulation – FreeTurn insert gouges the part in simulation	02248816
Simulation – Part in setups 2 and 3 are unclamps in simulation	SW 305303
Simulation – Collision is not detected early enough	02015631 02168541 02168630
System – Crash when inserting tapping operation into a feature group	02257264
System – Crash when switching to production mode with 2 workpieces mounted on sub spindle	SW 302681
System – Crash on rebuild of pocket operation	SW 274577
System – Processing of FreeForm Geometry setting is not saved with document	SW 306034
System – Crash when creating operations causes by incorrect position of sync	SW 305389
System – Performance issue with big parts	02233701
System – Crash after deleting a setup	02238307
System – After a setup 2 is added, operations are duplicated after the first one	SW 303721
System – Crash when operation is added after suppressed operations	02235347
System – Crash creating Report Generator	SW 303630
System – NC File Folder does not retain any Collapse Path setting	SW 300730
System – Allow ability to switch between IPR and IPM in Custom Drilling operations	SW 294446
System – System crashed when opening a ZIP file with axis with invalid limits	
System – Park gets WOT if default work offset transformation is set	
System – Incorrect work offset chosen on operation creation	SW 309292

Description	Issue Number (s)
System – Select all takes a very long time with 168 parts	
System – Posting NC Code Really Slow with 168 parts	
System – Issue with setting WOT shift	02263581
Tooling – Legacy Holder Creator set as an extension	SW 303492
Tooling – Slot Mills with thickness ≤ 0.02” cannot be created	SW 297261
Tooling – Cannot save file, Adaptive Item file reference is removed	
Toolpath – 5-axis Port Finishing and Collision Detection Trim has collisions	SW 303108
Toolpath – Inconsistent tool axis at end extremities of lateral passes	SW 302987
Toolpath – Swarf bug with Last offset = 0	SW 302987
Toolpath – Bad transition move with ProfitMilling	SW 263843
Turning – Manual turning cycle to engage tailstock results in no workplane error	SW 302953
Turning – Incorrect rotary solution solver for ID turning operation	SW 269140
Turning – Simulation makes extra move with 3x turning	
Turning – FreeTurn Tool not aligned with holder	
Turning – Missing Tool Change in Production Mode	SW 307820
Turning – Rebuild groove operation crash the system	02275888
Wire EDM – Long file load time	SW 303223
Wire EDM – Pivot progressive segment is wrong and not the same back and forward	02263408
Wire EDM – AGIEVISION, number of cuts lost causing REBUILD to fail	02321424
Wire EDM – Dual rotary scenario, incorrect PRIMARY axis value override	02376588 02329372
Wire EDM – Rebuild of operation AGIEVISION Offset information are lost	02257220
Wire EDM – Rotary values are no longer displayed in the program list	