

## KISSsoft - 3D geometry (STEP interface)

### SP 3 - **Face offset is not correct when saving the 3D system model of cylindrical gear**

The face width offset was set in the opposite direction when saving 3d system model of cylindrical gear.

This is now fixed.

### SP 3 - **Negative crowning is not correct for 3D geometry of bevel gear**

Negative crowning is not correctly applied for 3D geometry of bevel gear.

The problem is solved now.

## KISSsoft - Bearing calculation

### SP 3 - **Focus of input type rpm or angle was not correct when selecting a shaft file w10 as reference**

In the ISO/TS 16281 module (W051), the focus of the input type rpm or angle was not correctly updated when selecting a shaft file w10 file as reference

### SP 3 - **Roller diameter of needle cage assemblies was sometimes considered wrong due to a numerical precision effect**

For needle cages, the diameter of the roller must fit to the designation of the inner and outer diameter. Due numerical precision effects it could happen that this check would claim that the inner geometry details do not fit. This was fixed

## KISSsoft - CAD interface

### SP 3 - **Siemens NX: Interface to NX1872**

Siemens NX: Interface to NX1872 added

### SP 3 - **Bevel gears couldn't be generated with Solid Edge ST10 MP12 and newer versions**

Bevel gears couldn't be generated with Solid Edge ST10 MP12 and newer versions. It is fixed now.

### SP 3 - **SolidWorks: Interface to SolidWorks 2020**

Interface to SolidWorks 2020 added

## KISSsoft - COM

### SP 3 - **Sizing root rounding did not work**

The function SizeToolTipRadius did always size the tool tip radius for gear one. Any index passed via COM was not considered.

## KISSsoft - Gear calculation

### SP 3 - **Planetary system contact analysis was crashing with unequal facewidth**

The planetary system contact analysis was crashing in case of unequal facewidth, this is fixed.

### SP 3 - **Wrong unit for moment of inertia (J) in the gear user interface**

The unit for the moment of inertia (J) was not correct in the user interface (Tab Rating->Details). The unit is now corrected to  $\text{kg}\cdot\text{cm}^2$ . The results were not affected.

### **SP 3 - New Warning/Error Message shown if contact analysis is called with wrong center distance**

In case that contact analysis is called with a center distance smaller than the minimum allowed center (free of backlash) distance, a confirmation message with a warning is appearing: "Der Achsabstand im Tab 'Kontaktanalyse' ist kleiner als der spielfreie Achsabstand %5.3f (Klemmen). Dies wird zu Fehlern in der Kontaktanalyse führen. Möchten Sie fortfahren?". In case of a center distance exceeding the maximum allowed center distance ( $a \geq (da1/2 + da2/2)$ ) an error message is shown and the calculation is aborted: "Der Achsabstand im Tab 'Kontaktanalyse' ist grösser als der grösstmögliche Achsabstand. Die Zahnräder berühren sich nicht mehr ( $a \geq da1/2 + da2/2$ )"

### **SP 3 - Hardening depth graphic not shown correctly in imperial units**

Hardening depth graphic was not shown correctly for imperial units (using measured points from a DAT file). This is fixed, the results were not affected!

### **SP 3 - Improvement: line breaks in the modifications tab**

A flag has been added to the modifications tab to show long text either truncated or with line breaks. The layout of the modification part of the report was also improved.

### **SP 3 - KISSsoft stopped working when opening manufacturing drawing**

KISSsoft stopped working when opening manufacturing drawing (under the 2D graphics), when the face width of a gear was set to 0. This is now fixed.

### **SP 3 - Not possible to select cutting tools in 4 gear chains**

It was not possible to select cutting tools (hobbing cutter, pinion type cutter) from the database in the tab reference profile. The problem was limited only to the 4th gear. This is now fixed.

### **SP 3 - Wrong VHJ approximation for bevel gears with shafts**

The bevel gear contact analysis with shafts was approximating wrongly the VHJ misalignment. This is fixed.

### **SP 3 - Measurement grid report for fillet surface gives error when using very high number of rows**

Measurement grid report for fillet gives an error when using a very high number of rows. This is now fixed, but it's still recommended to use a reasonable number of rows.

### **SP 3 - Worm wheel measuring grid calculation**

In some cases, the worm wheel measuring grid calculation resulted in inconsistent warning messages. This is now fixed.

### **SP 3 - Self locking warning message**

In some special cases (axis angle  $\leq 90^\circ$ ), the self locking warning message was not shown correctly for crossed helical worms. This is now fixed.

### **SP 3 - Load bins and damage accumulation curve not shown in the SN curve graphics**

Load bins and damage accumulation curve were not shown in the SN curve graphics in cases when:

\*Check both cases and document unfavorable case

and/or

\*Check both cases and document the more realistic case were selected in Tab rating-> Details. This is now fixed.

### **SP 3 - Operating pitch line in the meshing graphics**

Operating pitch line was not shown in the meshing graphics in case that gear 1 was a worm. The issue is fixed now.

### **SP 3 - Problem with gear body deformation of first gear in contact analysis**

The gear body deformation of the first gear (input as .resu file) was considered in the wrong Y-direction of the contact analysis. This is fixed.

### **SP 3 - Problem with H and J misalignment in bevel contact analysis**

The bevel gear contact analysis was calculating the gear offset due to H and J misalignment wrongly. This is fixed.

### **SP 3 - Factors ZR and ZV according ISO and DIN**

According ISO6336 and DIN3990 for factors ZR and ZV the sigHlim-value of the softer material has to be used. Up to now, the lower sigHlim was used. This corresponds in 99.9% of the cases also with the material having the softer surface. This is now changed, the sigHlim-value of the softer material (in terms of HB, HV or HRC) is used.

### **SP 3 - Problem with number of load spectrum bins in modification sizing.**

Number of bins of load spectrum was not correct if considered in modification sizing. This is fixed.

### **SP 3 - Convert tooth thickness allowance deactivated for globoidal worm wheels**

Convert tooth thickness allowance from tooth thickness at reference diameter is now deactivated for globoidal worm wheels. This is affecting the Asn convert button in the Tab Tolerances.

### **SP 3 - Radius of curvature of a read-in tooth form consisting of splines**

Radius of curvature of a read-in spline tooth form consisting of splines was not displayed correctly for external gears. This is now fixed.

### **SP 3 - Conversion from Gleason data not working in special cases**

In some special cases, when mean circular thickness was an input, the conversion from Gleason data was not correct for bevel gears. This is now fixed.

### **SP 3 - AGMA 6015 check for limitations were not correct**

Check for AGMA 6015 limitations was not correct for the diametral pitch limit. This is now fixed. Now even if the limitations are not fulfilled, the warning message is given and the calculation runs through.

### **SP 3 - Problem with planetary systems with unequal facewidth**

Contact analysis of planetary gears with unequal face width was not considering the unequal face width correctly. This is fixed.

### **SP 3 - Geometry part of cylindrical gear report reworked**

The geometry part of the cylindrical gear report was resorted and reformatted to give an easier access to the data presented.

### **SP 3 - Sabic material LUBRICOMP RFL-8036/RVL36**

Sabic material LUBRICOMP RFL-8036/RVL36 was renamed to VERTON RFL-8036/RVL36. The calculation data did not change!

### **SP 3 - MrK and MdK were not calculated correctly from the tooth form**

In some cases, the MrK and MdK was not calculated correctly from the tooth form (they were set to 0 or a small value). This is now fixed.

### SP 3 - **Profile shift coefficient conversion of master gears was not working**

Profile shift coefficient conversion of master gear was not working. This is fixed.

### SP 3 - **Rough sizing was ignoring own input of b/mn, and similar, sizing ratios.**

The rough sizing of gears was always setting back the ratios, such as b/mn, to predefined ratios defined in tab 'Sizing' of dialog 'Module Specific Settings' in case of 'Area of use for the gear' is set to 'Own input of b/mn, b/a, b/d1'. This is fixed

### SP 3 - **The final machining setting was not stored in calculation file**

The final machining setting in tab 'Manufacturing' was not stored in calculation file. This is fixed. There was no impact on the results.

### SP 3 - **Static root safety factor sigS/sigF in results window for 4 gears**

Static root safety factor sigS/sigF was not shown correctly in the results window for the last gear in a 4-gear chain. This is now fixed.

### SP 3 - **Sound pressure level according to Masuda**

Sound pressure level according to Masuda: In equation 5 of the paper Teruo Masuda, Prediction Method of Gear Noise Considering the Influence of the Tooth Flank Finishing Method, the power W in the term '20 log(W)' was used in HP according equation 1 from Kato. But in eq. 5, W should be used in kW. This is now fixed, the dB values acc. Masudo are now a bit lower.

## KISSsoft - General

### SP 3 - **Toothed belt PG 14mm Power Grip had wrong data for the power**

The toothed belt PG 14mm Power Grip HTD from Gates had some wrong data for the power in the Z091-011.dat file.

### SP 3 - **Graphic property font size was not restored**

For graphics that have a font size property, the value was not stored after a recalculation.

## KISSsoft - Graphics

### SP 3 - **Wrong order of line load in load distribution graphic of planetary system contact analysis**

The "Normal force distribution on Tooth (Line Load)" graphic for planetary contact analysis was showing the planet load in the wrong order. Because of this, the graphic was showing load on planets where no load was. This is fixed.

### SP 3 - **Lineload and gap graphic was showing wrong curve when 'Always calculate transmittable torque (utilization)' option is used**

The lineload and gap graphics have been showing 4 curves instead of the one correct line in case of 'Always calculate transmittable torque (utilization)' option is used. In case of load spectrum the lineload and gap graphic is deactivated. This is fixed.

### SP 3 - **Empty graphics in bevel gear contact analysis**

Graphics capable of showing evaluation (available for e.g. hertzian stress 3D of bevel gear contact analysis) have been empty. This is fixed.

### SP 3 - **Pitch point C added to gear pump graphics**

The pitch point C was missing in gear pump graphics. This made the gear pump results a bit unclear and is fixed now.

## KISSsoft - KISSdesign

### SP 3 - **Delete in calculation view versus shaft view**

Deleting elements (for example gears) from the calculation view (clicked on the respective gear element, and pressed the "Delete" button on the keyboard) is deleting the gear\*\* from the model. However, only the reference of the given gear to the calculation should be removed.

### SP 3 - **Rough sizing did crash on cancel**

Canceling the rough sizing did cause a crash in cases where shaft calculation related data had been changed.

### SP 3 - **Merging bug in sketcher**

Dropping an axis onto a dot did merge the shafts instead of making them coaxial.

### SP 3 - **Fix for center distance transfer from KISSdesign rough sizing to gear calculation**

The rough sizing data from KISSdesign was not properly transferred to the gear calculation sub module (for ex. center distance). This is now fixed.

### SP 3 - **Fix for recurring message when coming back from shaft calculation to KISSdesign**

When coming back from shaft calculation to KISSdesign, a message informing the user that elements could not be added directly in the shaft calculation was always popping up if the model had some connection elements. This is now fixed and should only happen when necessary.

### SP 3 - **Fix for planetary animation and bearing representation in 3D view**

In the 3D view, the initial planet was not rotating, and the planets connection bearings were not properly represented (creating two normal bearings for inner and outer shafts instead of just one connecting bearing). This is now fixed.

### SP 3 - **Fix 3D animation of planetary gear sets**

The original planet of a planetary gear set was not rotating around the carrier axis in the 3D view, this is now fixed.

## KISSsoft - Proof of strength with local stresses

### SP 3 - **FKM method, local stress: The roughness value wasn't set correctly**

The roughness value Rz wasn't set correctly, the value was always the same.

## KISSsoft - Root stress FEM calculation

### SP 3 - **3D FEM root stress cannot be calculated when modifications are applied.**

The 3D FEM root stress calculation stopped when some modifications were applied. This is fixed.

## KISSsoft - Shaft calculation

### SP 3 - **Required fatigue safety had no influence in the graphic display of usage**

Required fatigue safety had no influence on the usage. Now the curve for the usage is calculated with  $100 \cdot S_{Dreq}/S_D$ .

### SP 3 - **Distributed mass element in eigenfrequencies calculation.**

When a distributed mass element extends over many different geometrical elements, there are cases where the mass is not taken correctly into account.

### SP 3 - **Input for load spectrum did not work for bevel gears**

The input for the load spectrum of a bevel gear did not work.

### SP 3 - **Bearing service life factors report was not shown for connecting bearings**

In case of connecting bearings in a shaft calculation, the bearing service life factors report is not shown.

### SP 3 - **Bearing factors were shown with wrong unit in bearing service life factors report**

Bearing factors X, Y, X0, Y0 were shown with unit N in the bearing service life factors report although indeed non-dimensional.

### SP 3 - **Fixed inaccurate formula symbol in the bearing sizing dialog**

In the bearing sizing dialog, the bearing rating life was shown as Lh instead of Lnh.

### SP 3 - **Added confirm message box to cancel calculations in case a bearing type does not support ISO/TS 16281**

In case a model is configured to be calculated using ISO/TS 16281 but some bearing types are not supported in KISSsoft with this calculation method, a confirm message is shown before starting the calculation.

### SP 3 - **Exporting general supports to plain journal bearing calculation files was not disabled and failed**

As of Release 03-2018, plain journal bearings are a separate element in the shaft calculation. General supports should not be used anymore to model journal bearings, however exporting them was still listed as an option that however failed on execution. The export of general supports to plain journal bearing calculation files was thus disabled.

## [KISSsoft - Shaft-hub-connections](#)

### SP 3 - **Backlash values in the individual shaft/hub reports**

Backlash values in the individual shaft/hub reports didn't make much sense. Instead, the effective jtv and jnv (for the use with gears) values are now shown.

## [KISSsoft - Splines calculation](#)

### SP 3 - **Tolerance fields for Flat Root Side Fit according ANSI B92.1 corrected**

Tolerance fields for Flat Root Side Fit according ANSI B92.1 corrected

## [KISSsys - General](#)

### SP 3 - **Windows layout issues in KISSsoft when called from KISSsys**

KISSsoft did not show the last windows layout when it was called from KISSsys. Sometimes the W010 element tree was missing or graphic windows were randomly positioned.

### SP 3 - **Fix for working pressure angle set in shaft calculation with effective profile shift**

In cylindrical gears, when calculating with operating center distance and manufacturing profile shift, the resulting working pressure angle set in the shaft calculation was wrong. This is now fixed.

### SP 3 - **Fix for transferred center distance when effective profile shift is set**

When the effective profile shift was set in the gear calculation, a wrong center distance was communicated to the system. This is now fixed.

### SP 3 - **New button in GEMS interface to calculate the bevel deviations**

A new button was added in the GEMS interface template to directly calculate the deviations of the

current gear set.

### SP 3 - **Fix stepped planetary gear pair churning losses calculation**

Stepped planetary gear pair churning losses calculation were not considered properly because there is no real proposition in the ISO TR 14179. We adapted the calculation of standard planetary churning losses to give a more consistent result taking into account carrier rotation.

## **KISSsoft Changelog Version 2019 - Service Pack 2**

### [KISSsoft - 3D geometry \(STEP interface\)](#)

#### SP 2 - **The 3D system model of bevel gear had wrong position when saved with H, J, V misalignment**

The 3D system model of bevel gear had wrong position when saved with H, J, V misalignment. This is fixed.

### [KISSsoft - Bearing calculation](#)

#### SP 2 - **Pressure angle of FAG thrust angular contact ball bearings**

The pressure angle of FAG thrust angular contact ball bearings was 0° instead of 60° in the KISSsoft database.

### [KISSsoft - CAD interface](#)

#### SP 2 - **SolidEdge: Interface to SolidEdge 2020**

Interface to SolidEdge 2020 implemented.

### [KISSsoft - COM](#)

#### SP 2 - **Improvement: Additional LTCA Results available via COM-Interface**

COM-Interface provides now access to sliding velocity, normalized sliding velocity, specific sliding and sliding factor.

#### SP 2 - **Calculating contact analysis step wise via COM was crashing**

The calculation of contact analysis via the CalculateCAStep method of the COM-Interface was crashing in case of unequal facewidth of the involved gears. This is fixed.

### [KISSsoft - Gear calculation](#)

#### SP 2 - **Improvement: Double Planet Stage: Position of Planet-2**

In the Sub-Window of the 4-gear stage, where double planet stage can be activated, an additional input is available: Now the position of Planet2, if on the right or on the left side of Planet1, can be defined. This affects the 2D and the 3D display.

#### SP 2 - **Active tip and root diameters in the meshing graphics**

The setting for the form diameter calculation (module specific settings) is now considered when calculating/displaying the active tip and root diameters in the meshing graphics (no load condition).

#### SP 2 - **Bevel Gears according AGMA2003, change to static calculation eliminated**

In Bevel Gears according AGMA2003, an automatic change to static calculation happens, if load cycles were lower than 1000 cycles.

This is not wrong but may be confusing, and in AGMA2001 for cylindrical gears we do not do it.

This is now eliminated.

**SP 2 - Improvement: Worm Gear according EDIN3996**

Worm Gear according EDIN3996 is available, and last printing errors in the document were discussed, corrected and added in KISSsoft.

**SP 2 - Problem in 'Generate cylindrical gear with the read-in pinion type cutter'**

Center distance check was wrong when using the tooth form operation 'Generate cylindrical gear with the read-in pinion type cutter'. The problem only occurred for helical gears. This is now fixed.

**SP 2 - Profile modification on the flank of asymmetric gears changed without warning**

In some cases for asymmetric tooth forms, the flank of the profile modification was changed from left to right without warning. This occurred in cases when there was an error in the tooth form calculation. This is now fixed.

**SP 2 - Worm gear, Start under load modified**

The calculation of the torque to start under load is not part of the standard, but based on a note in the Niemann book.

The indication in Niemann applies for driving worm. We extrapolated the driving gear case until now, but this is not really approved in practice.

We eliminated now this case and indicate that most probably the set is self-blocking.

**SP 2 - Problem with tooth stiffness calculation in case of force close to root fillet and high pressure angle**

In case of gears with high pressure angle and load close to the root fillet, the bending lever of the Weber/Banaschek based contact analysis is negative. In such a case the stiffness calculation was wrong because only hertzian, normal and shearing deflection should be considered. This is fixed.

**SP 2 - Measurement data for worms**

Radial single-ball measurement MrK (min and max value) for worms was not calculated. Additionally, measurement data (except MdK and MdR) for worms was not correct in case if the worm had more than 3 teeth. This is now fixed.

**SP 2 - Nominal transmission ratio in rough sizing overwritten**

User defined nominal transmission ratio was overwritten (with initial value) in the rough sizing when the calculation was performed. This is now fixed.

**SP 2 - Asymmetric gears calculation**

If creating a "fresh" KISSsoft calculation file, and then converting it to asymmetric gear, the calculation was not working. This is now fixed.

**SP 2 - Tab modifications info text**

Tab modifications info text for Helix angle modification (parallel - arc minute) and Pressure angle modification (parallel - arc minute) was not correct. This is now fixed.

**SP 2 - Splines DIN 5482 example**

Shaft-hub connection DIN 5482 40x36 e9\_H10 example had the wrong profile shift in the DAT file. This is now fixed.

**SP 2 - Fine sizing of Planetary stages**

Added a Message, when Planetary stages with all elements (sun, carrier, ring) rotating are used, to better use the ratio definition with the 'z3/z1 option'.

**SP 2 - Profile modification sizing was calculating same face load factor for different loads**

The profile modification sizing dialog was calculating always the same face load factor for different load cases. This is fixed.

**SP 2 - Runout in the operating backlash calculation**

Own input of the runout error was not possible in the operating backlash calculation. This is fixed now.

**SP 2 - Absolute speed value for bevel gears with carrier speed in the report**

In the rpt template for bevel gears, the absolute speed calculated from the teeth ratio was using the virtual cylindrical number of teeth instead of the real bevel number of teeth. This is now fixed.

**SP 2 - Woehler line display for planets**

In some cases, the Woehler line for the planets was not drawn correctly. This is now fixed. It was purely a graphical error, so all the results are unchanged and correct.

**SP 2 - Path of contact in the meshing graphics (for worms)**

Path of contact in the meshing graphics was not drawn to the base diameter of the worm. This is now fixed.

**SP 2 - Wrong face load factor due to inconsistent shaft calculation**

In some cases the face load factor and its respective line load was calculated wrongly because the shaft calculation wasn't consistent after calculating the shaft bending line. This is fixed.

**SP 2 - Estimation of collision between tool shaft and gear for the power skiving checks improved**

In addition to checking for collisions between the tool shaft and gear when power skiving, the critical inner offset length, that an inner gear can be manufactured at, is calculated and displayed in the report.

**SP 2 - Modification sizing for bevel gears**

Headers in the modification sizing dialogue (tab results) for bevel gears was not shown correctly. This is now fixed.

**SP 2 - Bending of the shaft and flank line modifications in the operating backlash calculation**

Option 'Take into account the bending of the shaft and flank line corrections' was not considered correctly in the operating backlash calculation. This was limited to special cases, when load spectrum with more than 1 bin was defined, but 'Don't consider load spectrum' or 'Only take 1 bin into account' was selected in tab Rating. This is fixed now.

**SP 2 - Grinding notch factor calculation for internal gears using form grinding**

In special case, the grinding notch for the internal gear was not calculated correctly. This only appeared for the form grinded gear, using VDI 2737 for the form factors calculation. The issue is fixed now.

**SP 2 - Alternating bending factor according ISO6336-3, annex B, for plastic materials**

ISO6336-3, annex B, is only applicable to metals. For plastic materials the Mean stress ratio is

approximated. We added now a warning message, if plastic gears are calculated.

#### **SP 2 - Conical expansion of internal gears was considered wrongly**

The face load factor calculation according to ISO 6336-1, Annex E, and the contact analysis was considering the conical expansion of the internal gear, due to load, wrongly. This is fixed.

#### **SP 2 - Generate cylindrical gear with read-in pinion type cutter**

In some special cases, the generated cylindrical gear with a read-in pinion type cutter was not correct. This is now fixed.

#### **SP 2 - Power skiving check result was sometimes not correctly listed in the fine sizing**

Sometimes the result of a power skiving check in the gear fine sizing was listed as "not checked" instead of "not possible".

#### **SP 2 - Uploading load spectrum from file did not set the inconsistent flag**

The inconsistent flag was not set when a load spectrum has been read in from a file in tab rating.

#### **SP 2 - Wrong speed in results table of contact analysis in some cases**

The speed documented in the results table of contact analysis was wrong in case of a speed < 1m/s. This is fixed.

#### **SP 2 - Number of digits increased in tool export rps report**

Number of digits increased in tool export rps report from 3 to 8.

#### **SP 2 - Report of Duty cycles**

Improvement: The Duty cycle definition in the report is changed into table format.

#### **SP 2 - 3D model not correct**

In some cases, when modification with value of 0  $\mu\text{m}$  was applied, the 3D model was not correct. This is fixed.

#### **SP 2 - GDE export for single gears**

In the module single gears the GDE menu point for the export was missing.

### [KISSsoft - General](#)

#### **SP 2 - Collision check for double planet stage in 4-gear chain**

Collision check was not correct in all cases for double planet stage in 4-gear chain configuration. This is fixed now.

#### **SP 2 - Improvement: file name info added for KUI tabs and dialogs**

The name of the file that defines a tab or dialog can now be looked up with the KUI element info system.

#### **SP 2 - Editor improvements**

- Can use Ctrl-F to start searching
- Pressing enter in the search field continues search

- If search text is changed/new, start searching from start of document
- Search wraps around after reaching the end
- Found items when searching are now using a darker selection color to be more visible
- Fixed font size changing when changing font
- Fixed font not updating when loading a new document
- Plain text files use a monospace font by default

## KISSsoft - Graphics

### SP 2 - **Bevel gears: Problems with V misalignment in contact pattern graphics**

The contact pattern graphics was showing wrong results in case of V misalignment for contact analysis with bevel gears. This is fixed.

### SP 2 - **Missing graphics added to contact analysis report**

Missing hertzian pressure and root stress graphic added to contact analysis report.

### SP 2 - **Wrong maximum sliding velocity in comment field**

The contact analysis graphic 'Kinematic' was showing the wrong maximum sliding velocity in case of unequal facewidth. This is fixed.

## KISSsoft - KISSdesign

### SP 2 - **Improvement: Group modelling offers 2 types of adding cylindrical gear pair**

The group modelling can now add cylindrical gear pairs in 2 ways: as a connection between 2 additionally added shafts and as a stand alone pair.

### SP 2 - **Improvement: Messages include their source information**

It was not possible for the user to identify whether a message was coming from the system calculation or from one of the systems sub modules.

### SP 2 - **Improvement: Power flow table show the boundary name**

The power flow table did only show the name of the boundary, now it shows the name of the coupling too.

### SP 2 - **Improvement: keyboard short cuts for new dots activated**

The user can press a key while he adds a new dot or connection to distinguish the item type. Supported keys are B (bearing), R (carrier), S (switch), C (coupling), G (cylindrical gear), V (bevel gear).

### SP 2 - **Crash in REXS import fixed**

The REXS import crashed in case existing elements should be overwritten.

### SP 2 - **Improvement: extended drag-and-drop in KISSdesign sketcher**

- Possibility to connect planetary stages and gear chains directly in the sketcher by drag-and-drop added
- Merging shaft calculations in sketcher by drag-and-drop one axis on the other added
- Moving one shaft to another shaft calculation by drag-and-drop added

### SP 2 - **Improvement: visual feedback for drag-and-drop in trees**

Dragging elements in the trees gives a visual feedback if dropping will be possible or not.

## SP 2 - **KISSdesign sketcher graphical issues**

It was not possible to select connections if they were directly sitting over an axis.

### [KISSsoft - Shaft calculation](#)

#### SP 2 - **Bearing rating life for non-rotating but loaded bearings was infinity**

For non-rotating but loaded bearings, the corresponding bearing rating life resulted in infinity. This was fixed and for such cases the bearing rating life is now set to 1e10 h.

#### SP 2 - **Automatically setting critical cross sections sometimes caused misleading results**

In some cases, the functionality to automatically set the critical cross sections of a shaft resulted in cross sections with wrong positions.

#### SP 2 - **Missing low eigenfrequencies**

In some very few shaft examples a low (normally below 10Hz) eigenfrequency was missing.

#### SP 2 - **Drawing for angular contact thrust ball bearings in shaft editor**

All angular contact thrust ball bearings in the KISSsoft database have a pressure angle at the order of 60°. The drawing did not reflect this fact.

#### SP 2 - **For larger groove width diameters, the notch factors for the shaft strength calculation are not considered correctly**

In some models that had larger groove width diameters, parts of the surrounding shaft section were also considered as groove instead of just a smooth shaft section.

#### SP 2 - **Crash in element tree fixed**

KISSsoft crashes when removing notch elements of a shaft and adding another cylinder afterwards via context menu. This is fixed.

### [KISSsoft - Shaft-hub-connections](#)

#### SP 2 - **Radial bearing stiffness was not properly calculated in some cases**

The radial stiffness which is shown in the bearing report was not correct for some cases.

### [KISSsoft - Splines calculation](#)

#### SP 2 - **Splines manufacturing drawing**

Table with spline data in the manufacturing drawing was drawn over the profile and flankline diagram data. This is fixed now.

### [KISSsoft - Gear body FEM calculation](#)

#### SP 2 - **Bug in the generation of stiffness matrix files from the gear body calculation module**

The generation of the stiffness matrix in the gear body calculation module is not possible in some cases. This is now fixed.

### [KISSsys - General](#)

#### SP 2 - **Improvement: New methods to show or hide elements in the 3D view**

With a right click on an element, the user can now Show3DElement, Hide3DElement for individual

elements, and ShowAll3DElements, HideAll3DElements for a shaft or a group.

**SP 2 - Fix in efficiency template, user defined oil level**

The oil level could not be defined by the user anymore, only calculated. This is now fixed.

**SP 2 - KISSsys crashes in some cases, when calculating Campbell diagram**

In some KISSsys models, KISSsys was crashing when performing the Campbell diagram calculation.

## **KISSsoft Changelog Version 2019 - Service Pack 1**

### [KISSsoft - CAD interface](#)

**SP 1 - Autodesk Inventor: Interface to Autodesk Inventor 2020**

Interface to Autodesk Inventor 2020 implemented.

### [KISSsoft - General](#)

**SP 1 - Example for user defined tab comment added.**

A file comment.dui is provided under /ext/dui\_example folder as an example on how to build a user defined comment tab.

The user can copy the file into /ext/dui folder to create the comment tab in cylindrical gear pair calculation.

### [KISSsoft - Shaft calculation](#)

**SP 1 - Added possibility to specify the coefficient of friction for hypoid gear meshes in shaft module**

In past KISSsoft versions, the coefficient of friction for hypoid gear meshes in shaft module was set fix to 0.05. This value can now be changed in the module specific settings.