

**Version 1082**  
**August 18, 2025**

- Fix issue with application causing when selecting lugs
- Fix Shackle Capacity Check table and related variables such as side load and the calcs displayed
- Adjusted load case table to show original input values

**Version 1081**  
**July 10, 2025**

- Fix issue with webview causing analysis to crash

**Version 1080**  
**June 30, 2025**

- Fix Dcyl and Tcyl values not updating correctly when a MecaStack file was imported

**Version 1079**  
**June 06, 2025**

- Fix issue with Monthly licenses reverting to Demo
- Fix issue with File Info in Analysis TOC hiding Key Image

**Version 1078**  
**June 03, 2025**

- Added the option to omit Tki on Trunnion Stubs
- General changes made to improve application performance
- Fixed a memory leak issue if analysis was ran multiple times before closing the application

**Version 1077**  
**May 22, 2025**

- Fix validation issues for Twk & Twa
- Fix issue with missing report sections
- Fix issue with table headers missing from WRC

**Version 1076**  
**May 13, 2025**

- Performance Improvements
- Improve Report Window
- Improve Report Layout

**Version 1075**  
**April 4, 2025**

- OPF side load added to the shackle checks
- Cheek plates use 1/2 of total load on the lug since there are 2

**Version 1074**  
**March 21, 2025**

- Trunnion and Stub needed new Override of Allowable Local Stress added
- The proper plane for In-Plane loads was not correct for Stub and Trunnion
- Fix bug with loads input when having a value in OPF

**Version 1073**  
**March 18, 2025**

- Fix issues with shackles
- Fix issues with lift validation
- Fix graphical issues with lift
- Added local stress options to override allowable stress used
- Fix issue with ibeam transverse lug causing crash

**Version 1072**  
**March 14, 2025**

- Add Out-Of-Plane load factor that automatically considers a % of in-plane loads acting out of plane on the lug.
- WRC Correct load transformation for Cylinder Transverse type of lug
- WRC Correct formula displayed for Rm (Value was correct)
- Local Stress basis not being retrieved for Cylinder Longitudinal and Cylinder Transverse configurations
- Local Line load stress not being checked for Cylinder Longitudinal
- Bednar Line Loads had incorrect axes defined for Cylinder long lug
- WRC 537 Corrected to match intent of the standard, which will lead to different results than past analysis. The changes have resulted in some cases where the local stress is larger, and others where it is smaller.
- Lifting System wouldn't allow you to rotate lugs
- Lifting system used lug loads for last lug, rather than the loads calculated for that particular lug

**Version 1071**  
**March 04, 2025**

- Lug Pair with an off-center hole ( $W2 < 0$ ) would not display correctly
- Stub configuration added Full Penetration option for Keeper Plates and Lug Pipe Attachment
- Stub add ability to specify Inner and Outer Keeper plate thickness
- Cyl Long Lug Pair Radial wasn't displaying correctly
- Cyl Long Lug changed local stress to use C1/C2 per 'Pressure Vessel Design Manual' By Moss (3rd Edition) Figure 5-10
- Local stress Combined Intensity was not considering the negative case for the +/-, so the worst case was not always being captured.
- Allow Fx and Fz to be entered as negative, which can play a roll in local stress for Trunnion/Stub options.
- Fix ghost errors from appearing on a lug in a lifting system

**Version 1070**  
**February 10, 2025**

- Fix issue of a blank UI when launching the application by clicking on a file.

**Version 1069**  
**February 6, 2025**

- Fix value issue with Trunnion Pipe OD

**Version 1068**  
**January 30, 2025**

- Fix crash on validation error on Lug Stiffeners.
- Fix issue with invalid lug types for certain lifting systems
- Fix table of contents for lifting system
- Fix loads not generating for lugs on lifting systems

**Version 1067**  
**January 20, 2025**

- Major Rewrite to Improve Output formatting to be more condensed and compact
- Added subscripts, greek letters and two columns for most of output to look more professional
- Output will default to summarized version that shows only Worst Case Calculations, rather than showing detailed calculation for all loads. There is an option to revert to the detailed format formerly used.
- Fixed output for WRC local stress checks for Trunnion and Pipe stubs, which was messed up.

- Fix some weld calculations for Trunnion and Stub calculations which had the wrong axis selected for Polar properties
- Fix various other errors or inconsistencies found in the calculations.
- Combined the Cylinder Longitudinal and Cylinder Longitudinal w/ Rings into a single configuration
- Cylinder Longitudinal added ability to have 2 lugs (Pair) that are either Radial or Tangential. These could be used for large pressure vessels or tailing lugs on stacks.
- For Lug configurations that lap the attachment (i.e. Plate Parallel) an option was added to attach the lug by bolting rather than welding.
- Lifting analysis revised to combine the three options for stacks (Trunnions, stubs and lugs) into a single option, where the user can pick any of these options.
- Stack Lifting allows trunnions to be used for tailing on stack configurations
- Stack Lifting Trunnions and Trunnion Stubs allow a non-spreader bar lifting option, so that side loads are considered due to the slings going to a single point
- Full penetration weld option for lugs that lend themselves to that type of weld
- Cylinder Vertical option now gives user the ability to specify stiffening rings that are any shape (Channel, Angle, IBeam, etc..) or even a custom shape.

**Version 1066**  
**November 25, 2024**

- CEFSharp Rollback to fix issue with running MecaLug and MecaStack at the same time.

**Version 1065**  
**November 15, 2024**

- Fix DeferRefresh Error
- Fix Key Diagram for Cylinder Vertical Lugs to show H1 from hole to top of cylinder
- Cylinder Vertical Lugs fix the forces and moments used for weld, as well as display eWeld value
- Weld stress corrections to fx,fy and fz.
- Weld stress forces and moment equations displayed were corrected
- Weld stress torsional stress modified to account for X and Y components by introducing  $\alpha$ t
- Weld stress checks changed to address some incorrect breaking of forces and moments into x, y and z components.

**Version 1064**  
**October 18, 2024**

- Fix material database issues

**Version 1063**  
**October 7, 2024**

- Correct Allow Tens Stress on Net Area (Eqn 3-2) which was using Fy instead of Fu in some instances
- Made several changes across code base to reports and UI

**Version 1062**  
**September 11, 2024**

- Corrected value for PinDia on Pin Bearing Stress Calculations

**Version 1061**  
**August 29, 2024**

- Improve Application Opening Speed
- Cleaned up some reports
- Added some values to reports

**Version 1060**  
**July 29, 2024**

- Fix 'DeferRefresh' is not allowed error
- Clarify Lug rotation is relative to Local Lug Axis, not global axis
- Fixed problem with 2 lift point with 1 crane asymmetric to measure crane height relative to pt 1 rather than pt 2, and fixed descriptions to reference pt 2 rather than pt 4.
- Added option to specify horizontal welds only on Lug Configurations that have a lug welded parallel to the plate.

**Version 1059**  
**May 29, 2024**

- Allowable local stress reference added so basis was more clear.
- Added information on Categories to determine an equivalent Impact Factor basis
- Fix issue with application crash on loads for stubs

**Version 1058**  
**May 8, 2024**

- Fix issue with LiftLug & TailLug Not updating
- Welding stress broken up to calculate weld stress And weld size as separate checks to make summary clearer

**Version 1057**  
**April 29, 2024**

- Fixed AttachPlate Not being saved to file
- Fix issue where section properties lead to NaN when section property break at OD of hole.

**Version 1056**  
**April 5, 2024**

- Fix some issues found with import of MecaStack file primarily related to Tailing Lug (CylLong)
- Metric input echo was sometimes converted twice resulting in very high values

**Version 1055**  
**Mar 7, 2024**

- Correct description & units for weld stress Polar Modulus
- WRC 537 checks were using incorrect Rm And T values, And Beta2 formula was shown incorrectly

**Version 1054**  
**Feb 23, 2024**

- Fix input value errors on values  $\geq 1000$  getting reset

**Version 1053**  
**Feb 12, 2024**

- Fix bug that didn't populate all data for Lifting Sys when read from File
- Shackle Model 2130 25 ton wasn't drawing correctly

**Version 1052**  
**Jan 24, 2024**

- Local Stress Basis was being set globally rather than lug specific as it was intended.
- Fix issues with printing models
- Fix Performance Related issues
- Speed improvements for New File, Save File, and Load File
- Fix Table Width too wide on PDF
- Fix Installation on ARM Platforms
- Fix Print Preview of 3D Model Error

**Version 1051**  
**Sept 26, 2023**

- Fix Misc Analysis Errors
- Fix Analysis Table Note Errors
- Fix NullReferenceException errors
- Fix Analysis Settings missing Validation errors and warnings
- Improved Report Buttons Layout
- Loading time improved
- Local Stress was throwing an error for line loads

**Version 1050**  
**August 20, 2023**

- Report settings improvements to add and remove a header/footer.

**Version 1049**  
**August 10, 2023**

- Fix Invalid TC Validation When Shackle Manual is Selected
- Add Advanced Print Preview Capabilities.
- Fixed Brazilian Structure Shape Errors.

**Version 1048**  
**July 17, 2023**

- Fix validation of issues when no shackle specified
- Fix Report a Bug unable to send error
- Fix Various Report formatting issues
- Fix Scientific Notation Data Entry issues
- Update Analysis Window
- Fix PDF Report formatting issues
- Fix export report tables to Excel error
- Update graphics library (Eyeshot 2023)

**Version 1047**  
**June 6, 2023**

- Fix issues editing lugs when no lug selected

**New Report Functionality**

- Export Tables to Excel
- Custom Report Header
- Custom Report Footer
- Improved Formatting
- Reduced File Sizes
- Improved performance and responsiveness
- Copy to Clipboard Capabilities
- Single window preview

**Version 1046**

- Fix issues with cheek and stiffener for configurations with beams
- Clean up issues found with calculation reports

**Version 1045**

- Beam selection for lug configurations was not selectable

**Version 1044**  
**March 1, 2023**

- Fix Material.xml sync process and correct some misspellings in database
- Fix CylTran weld direction
- Fix Material.xml sync process
- Fix problems with stiffener selection
- Bug with Attachment beam selection using new stiffener window

- Fix bug where crash when lug index doesn't work

#### **Version 1043**

- Add lines around tables
- Fix problems when duplicate loads and analysis wouldn't run
- Fix issue with shackle drawing wrong
- Add validation to loads to try to warn when they look like wrong units being used.

#### **Version 1042**

- Fixed security issue when there is no license present for a new user.
- Fix issue with values for CylVer: Ls and Location, and CylLong Local Stress Basis not being saved.

#### **1041**

- Fix problem with specifying a manual pin diameter
- Fig G-2140 Inside\_Dia values and add missing G-2140 sizes from 0.5 to 21 ton
- Shackle data was incorrectly based upon US Tons when it should have been metric tons. This was incorrect but was a conservative mistake.