Description of New Features and Bug Fixes at Version 3.01b

Description

#	Type	Feature	Description
1	New	Text Results	A new 'Text Results' option to write 'All' the relevant text results to a single text file. This merges all the individual Text Results spread sheets in to one ASCII text file based on a user defined column width.
2	New	User Defined Graph Axes	The User can now set up a set of Graph and display axis that can be recalled via a convenient short cut command Ctrl+U. This user graph axes set apply to all sections and are saved in the users INI file. Convenience functions are given to copy current settings to these User settings.
3	Bug Fix	Joggle Symbol	Previously it was possible for the value in the Joggle symbol to be placed outside the viewing area, this has been resolved at this release.
4	Bug Fix	Advanced Statics Data	A bug introduced at version 3.01a meant that the 'Advanced' statics data did not display properly and was thus not editable. This has been resolved at this release.
5	Bug Fix	Text Results	Previously it was possible to cause a program crash when displaying text results for Cam or Valve values if the user had selected zero decimal points for the output display of Jerk values at design speed. This was due to a overflow when converting a large number to an integer. This has now been trapped for and the overflow will result in a string of '****' instead.
6	New	Text Results	The user can now change the units used to display the Velocity, Acceleration and Jerk for Cam and Valve 'Text Results' listings on the Design Speed Columns. Local menu allow the user to swap between mm, m and G as appropriate.
7	New	Limit Settings	The user has had the option to save the warning limits used for the 'red' warnings on the report table into a saved data file. This did mean that if a user imported a data file with limit warnings in they would replace any the user had subsequently defined and saved with their INI settings. At this release a new option has been added to the 'Setup' menu to "Ignore limit 'settings' when loading file" to enable them to retain their own limit settings.
8	Change	Joggle Sizes	Previously if the user swapped between Degrees and Radians for the angular units display then the joggle step sizes defined would be scaled by an internal units correction. This meant that they would not be convenient round numbers. At this release different joggle step size values are used for the two angle units and thus the user can set each of them to suitable round numbers. Applies to Velocity, Acceleration and Jerk curves.
9	New	Maximum 'G'	A new result has been added to the Report display being the maximum acceleration at the design speed expressed in terms of 'G'. An extra limit warning setting has been added to go with this new result.

| 10 | Bug Fix | Tappet Offset | Previously if the user had specified a radial offset for the tappet in a direct acting system, it's drawn position was not changed to reflect this offset. This has been corrected at this release. |
| 11 | Change | Contact Stress | For the direct acting flat tappet, the contact stress calculations checked for running off the tappet and corrected the contact length if a reduced (or zero) contact length was identified. The same approach has now been included for a cylindrically radiused direct acting tappet (i.e. not spherical radius), so that as the contact line runs off the tappet corrections are made to the contact length. |