Description of New Features and Bug Fixes at Version 4.03m

			Description
1	Bug Fix	Formatted Point Forces	Previously the Formatted Point forces output was not robust in its listing of defined forces. The output was dependent on the right load case being the 'display' one. This has been resolved at this release.
2	Change	Default coords type 9	The default co-ordinates for template 9 have been modified such that they no longer give an 'error' message on the default bump travel displacement limits.
3	Bug Fix	Drag Lines	Previously when switching into dynamic viewing the 'drag' lines would be left drawn implying still in 'drag' mode. This has been resolved by always redrawing when switching into dynamic viewing.
4	Change	Point coincidence	Added a duplicate of the switch menu for Coincident point picking into the 'Graphics' menu. Original menu entry in 'Solver' menu was not an intuitive location.
5	Change	Default Coords type 30	The default co-ordinates for template 30 have been modified such that they no longer give an 'error' message on the default bump travel displacement limits.
6	New	New	Added two new general types 74 and 75 for 'steered slot' points 1 and 2. These are used to identify the outboard 'steering' point when a ball joint is converted to a 'slot'. Previously the solver could no longer identify the outer ball joint if it was converted to a slot.
7	Bug Fix	Template Parts	A trap has been added to the solver such that the parts order for a point connected to ground no longer needs the ground part to be the second part identified in the template.
8	Bug Fix	Template Pre-fill	The Template level 1 pre-fill tool was not resetting the number of bushes back to the original number when cancelled. This has now been fixed.
9	Change	Template Pre-fill	To support the implementation of item 7 above, the auto fill will detect a connection to ground irrespective of the parts order.
10	Bug Fix	Single Step View	Previously selecting 'single step' view from the menus could result in nothing being drawn in the 3D viewer. This happened if a 'single step' position had not previously been picked. This is trapped for and if not defined is set to the 'static' position.
11	Bug Fix	Control Values	A trap has been added to prevent a problem occurring when the user has not specified the x values for a control element. Previous divide by zero is stopped.
12	Bug Fix	Insert Rows	The spline editor tool used for element properties such as control element data, did not correctly implement the 'insert' and 'delete' row functions. This has been resolved.
13	Bug Fix	Bump Stop Force	A trap has been added to prevent a problem occurring when the user has not specified the x values for a bump stop element.

			Previous divide by zero is stopped.
14	Bug Fix	Non-linear rack	A trap has been added to prevent a problem occurring when the user has not specified the x values for the non-linear rack bush. Previous divide by zero is stopped.
15	Bug Fix	Drive shaft Losses	A trap has been added to prevent a problem occurring when the user has not specified the x values for the drive shaft losses. Previous divide by zero is stopped.
16	Bug Fix	Adding Spring / damper	Previously when adding items to the model such as Springs and Dampers if the user failed to complete the two point picks, or picked the same point twice, this could cause a problem in correctly identifying if an element was in the model. Further traps and menus have been added such that these particular user errors are trapped for and the user warned about their error.
17	New	Gen Type	The template definition has been extended so that a single point can now have up to three general types assigned to it. Previously this was limited to only two. The inclusion of a third 'gen type' per point allows for a single point to be for example the spring, damper and bump stop point.
18	Bug Fix	Mesh Rigid Part	A trap has been added to stop users picking the same point twice when meshing a rigid part. The mesh action is aborted and the user warned.
19	Bug Fix	User Sdf	Previously a button on the 'Point type' tab was drawn oversize partially obscuring the display. This has been fixed.
20	New	Getting Started	A menu has been added to the 'help' section that can be used to open the 'Getting Started' document from the <install> folder.
21	Change	User Templates	The user templates file is now looked for on start up in three locations. The <install> folder then the <database> folder and finally the users local 'Home' folder. Additional menu options have been added to the template editor that provide direct reading and writing of a template to each of these locations.
22	New	File New	The new file dialogue display has been modified to include some template 're-set' options. This provides a simpler single selection method of creating a new model using the original 'default' templates. The re-reading of the templates is only performed as part of the 'done' event.
23	Change	Adobe	To support reading of the Getting started pdf document from within the interface the application now searches for an installed pdf reader on start up. Since application names for pdf readers may vary a change has been implemented that allows the user to define the executable names to search for when attempting to locate the installed software. This change has been extended to include the executables for Word, Excel etc. for the same reason. These can be edited through the Setup menu.
24	Change	Point Tolerance	The values used to set all point tolerances to… is now locally stored. Thus its value is retained whilst the program is open.

25	Bug Fix	Convert to Axle	The convert to axle routine has been extended to include support for some of the newer elements and data methods. This includes bump stop properties, Point definitions that are by equation and control elements. Traps have been added on the convert to axle function to ensure sufficient space exists in the template for the new reflected points and elements.
26	Bug Fix	Spacer	Their was a problem with the spacer when used in templates other than No 1. This has now been resolved.
27	Bug Fix	Definition Values	Previously their were problems editing the King Pin properties through the 'view definition values' options. This only occurred when the corner was defined in –ve Y. This has now been fixed.
28	Change	User Line Labels	The labels used on the pop-up menu for editing the graph user lines referenced +ve and –ve Y but did not switch if the default corner was switched from +ve Y to –ve Y. This has now been fixed.
29	Change	Pre-loads	The spring and bump stop pre-load solver options are now switched 'off' in their respective rate solver options are turned off.
30	New	Command mode	A function has been added to the command mode such that if a short command is not recognized a message is displayed that indicates the command not recognized.
31	Bug Fix	Un braked hubs	The compliant solver has been modified to handle un-braked hub loads that are not applied at the tyre contact patch. Previously the assumption was made that all loads were applied at the TCP. This has now been resolved.
32	New	Roll Bar Solver	The roll bar solver option has been split into two, rate and pre-load. This makes it structurally the same as the implementation for the spring and bump stop. This enables a roll bars stiffness to be included in the compliant solution without the kinematic rotation pre-load being added.
33	Change	Optimizer Weighting	The X distance weighting used in the solver has been changed to check that all entered weighting values are +ve. Previously the user could incorrectly enter –ve values and thus generate a negative overall score.
34	New	Roll Bar Solver	The roll bar solution has been modified in line with other components such as the spring and bump stop. The inclusion of the roll bar is now split into rate and incremental pre-load. As with the other components if you un-select 'rate' this implies that the pre-load forces will also not be included.
35	New	Add Roll Bar	A new alternative method for including a roll bar has been added. The connection of the roll bar is made directly at the picked point.
36	Change	Bush Stiffness	The bush editor display has been changed for points that have been tagged as having a 'special' function in the model but left set to rigid. Any specific default stiffness settings that are applied to this point in the compliant model are displayed as the 'greyed' out stiffness values.