Description of New Features and Bug Fixes at Version 4.03c

Description

1	Bug Fix	Add Point to Body	Previous versions new feature of Adding a hard point to the body in absolute position was incorrectly handled. This has now been fixed
2	New	SDF Graphs	A separate visibility switch for displaying the derivative value at the ride position on the SDF graphs has been added.
3	New	Compliance bar chart	A new autoscale routine has been added to the compliance bar chart that sets the target lines.
4	New	Graph Derivative	Added to the status bar is the current x-y graphs derivative value, displayed when hovering over a point. Only effective if derivative visibility switch is on.
5	Bug Fix	Spring Damper	Previously some templates showed rouge drawing of the spring and damper graphics. This has now been resolved.
6	New	Optimiser	Option added to bushes data on the optimiser to pre fill the min and max stiffness settings.
7	New	Optimiser	The optimiser deviation summation was previously linear. The sum now has a 'power' setting such that it can be distances squared, cubed etc.
8	Change	Spring1 and 2	Full support added for two springs in a single corner model.
9	New	Tolerance boxes	Added ability to be able to edit and drag the tolerance boxes directly through the 3d screen environment.
10	New	Data Tree	The variables available to edit through the data tree widget has been increased to include the ability to edit the point label and local point Nos.
11	New	Combined Mode	To support the introduction of the combined bump, rebound and steering mode a new editor has been added that allows the user to graphically create the required displacements.
12	New	Modal Analysis	A new feature has been added that given defined part mass properties, the modal frequencies and mode shapes can be calculated and displayed in the normal 3d viewer.
13	Change	Viewer Tool	A new dialogue control box has been added to allow a single point of control for all viewing options. This includes a new 'single position' viewing option.
14	New	Forced Damped	A new solver option to calculate and display the forced/damped response of the suspension has been included. This requires the damping properties of the bushes and dampers to be defined.
15	New	Full Axle	Support for full axle models rather than corner models has been fully implemented. Users can choose to build either single corner or full axle templates. Added to support correct modelling of

			racks, anti-roll bars and sub-frames.
16	New	Full Axle	New menu option added to automatically convert the current model and template from a single corner model to full axle model.
17	New	Compliant Rack	New option added to automatically add to he current template and model a three part compliant rack.
18	New	Units	New display function that allows users to choose display units for angle, length, mass and force.
19	New	Graph Plotting	The x-y graph plotting has been extended to include graphical elements as well as the original SDF results. Not all graphical types have a plot-able result.
20	New	Import	Import routines have been enhanced to include 'Fortran' style manipulation strings for values.
21	New	Graphical Elements	A range of new graphical items have been included. These include spheres, circles, lines, facets, plane, distance and angles.
22	New	Matlab Export	All x-y graphs can now be opened directly in Matlab as graphs with data carried over.
23	New	AVI Files	An avi file creator has been added to quickly and easily generate AVI animation files of suspension articulation.
24	New	HTML Export	Added to all multi-line textual displays the ability to export the contents as HTML in Internet Explorer.
25	New	Excel Export	Added to all multi-line textual displays the ability to export the contents as a work sheet in Excel.
26	Bug Fix	Virtual Common	A new program initialisation routine has been introduced to avoid problems seen by some users on start up when trying to allocate virtual memory.
27	New	Word Export	Added to all multi-line textual displays the ability to export the contents to Word as a text document.
28	New	Backdrop Image	The option has been added to allow users to have a bitmap stretched or tiled on their backdrop. 6 defaults are available directly from the menu or user can specify their own.
29	New	Custom Controls	Users can build their own dialogue boxes, placing buttons, switches, widgets as required.
30	New	Excel line Export	The option has been added to line listings to Export data values from the display into Excel as a new worksheet.
31	New	User defined bump	Instead of the fixed increment solution used previously for bump and rebound travel. Users can define individual positions and give each position a label.
32	New	Point listings	Two options added to list points at incremental positions. Either a single point at every position, or all points at a single position.