

# Model Modified



# What is the Model Modified function?

- The model modified function allows the user to check whether a model has been modified since it was read in or if it has changed compared to another model/file.
- Model modified will display the differences in a tree format, allowing the user to easily investigate the differences.



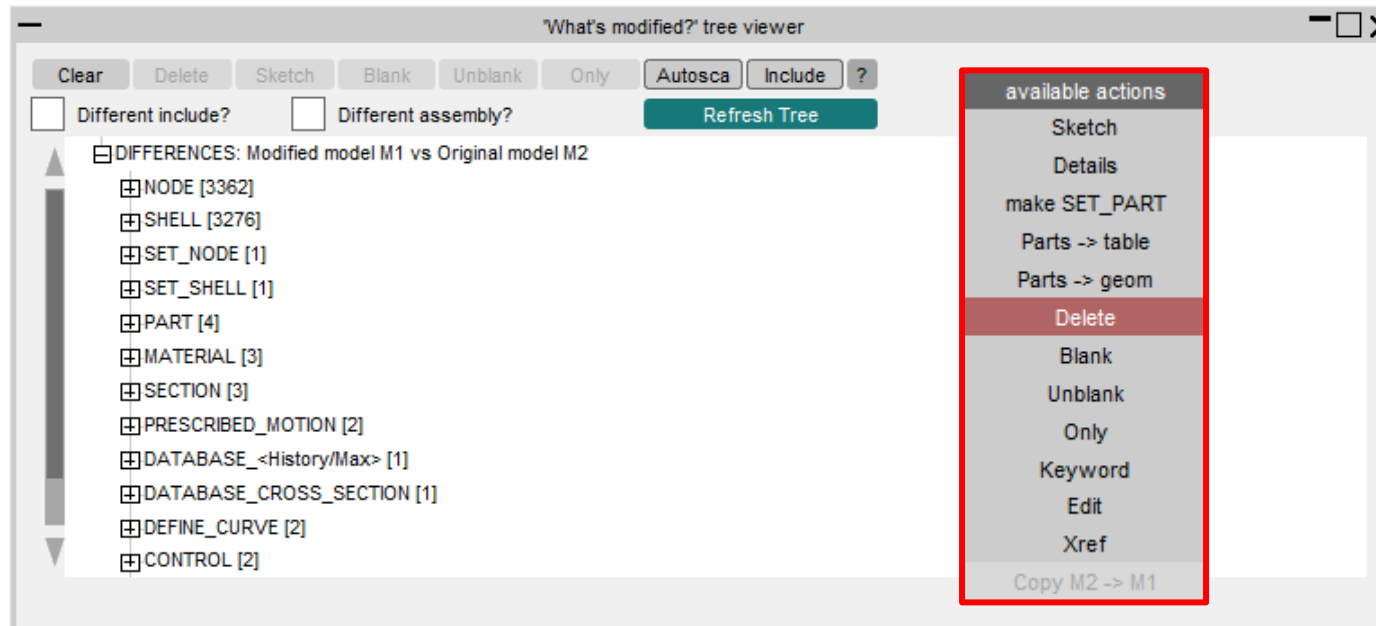
# Model Modified Panel

- Within the panel on the left there are options for what to compare the modified model to:
  - Original model in disk.
  - Another model in PRIMER.
  - Any other specified file on disk.
- There are also options of how to output the results of the comparison, by default the output will be displayed in a Tree View but it can also be sent in the form of a listing to the screen or to a file.
- PRIMER will report items that have been created in the modified model (only in the modified model), items that have been deleted from the original model (only in the original model) and items that have been matched across models which have been modified (differ).

The screenshot shows the 'Model functions' panel in PRIMER. The 'Model modified?' section has a dropdown menu set to '1 (Test)'. Below this, the 'Compare to:' section has three buttons: 'Original' (highlighted with a red box and a red arrow), 'Model', and 'File'. The 'Options' button is also visible. The 'Output to:' section has three buttons: 'Screen', 'Clipboard', and 'Tree View' (highlighted with a red box and a red arrow). Below these are several checkboxes and radio buttons for comparison options, including 'Check for item in different include/missing include', 'Use names when comparing Parameter fields', and 'Compare titles unconditionally' (selected). The bottom section contains options for 'Part vs Part compare' and 'Connection compare'.

# Tree viewer

- The tree viewer displays the differences in an easy to navigate way.
- This view allows you to easily see the differences by grouping them by entity types at the first layer then at the second layer defining which entity in the model is different.
- When an entity is right clicked the pop-up menu as shown below will appear on screen. This allows you to investigate/visualise the differences (see next slides).
- The option “Different include?” will allow you to consider an item being in a differently named include file as a difference.



# Pop-up Menu (Keyword Option)

- By pressing “Keyword” in the pop-up menu, the two keyword cards relating to these entities (one from each model) will be displayed.
- The differences between these two cards are highlighted with a yellow background.
- From here the user can make changes to each entity and this will update the entity accordingly.

Keyword: M1/SECTION\_SHELL

+ Update Reset All Check Sketch Keyword Format

Cancel Single Row Format

Keyword M1 SECTION (1/0 mod) Auto fit cols Reset cols

Filter by: SECTION\_SHELL <auto> <auto>

Section type

- ☐ ALE1D
- ☐ ALE2D
- ☐ BEAM
- ☐ BEAM\_AISC
- ☐ DISCRETE
- ☐ FPD
- ☐ POINT\_SRC
- ☐ SEATBELT
- ☒ SHELL
- ☐ SOLID
- ☐ SPH
- ☐ TSHELL
- ☐ IGA\_SHELL
- ☐ IGA\_SOLID

#	Options...	Suffices	SECD	Lab	ELFORM	Var	SHRF	F	NIP	I	PROPT	F	QR/IRID	Var	ICOMP	I	SETYP	I
			T1	F	T2	F	T3	F	T4	F	NLOC	F	MAREA	F	IDOF	F	EDGSET	Var
1	<none>		1		2		0.0		1		0.0		0.0		0		0	
			1.0		1.0		1.0		1.0		-1.0		0.0		0.0		0	

Keyword: M2/SECTION\_SHELL

+ Update Reset All Check Sketch Keyword Format

Cancel Single Row Format

Keyword M2 SECTION (1/0 mod) Auto fit cols Reset cols

Filter by: SECTION\_SHELL <auto> <auto>

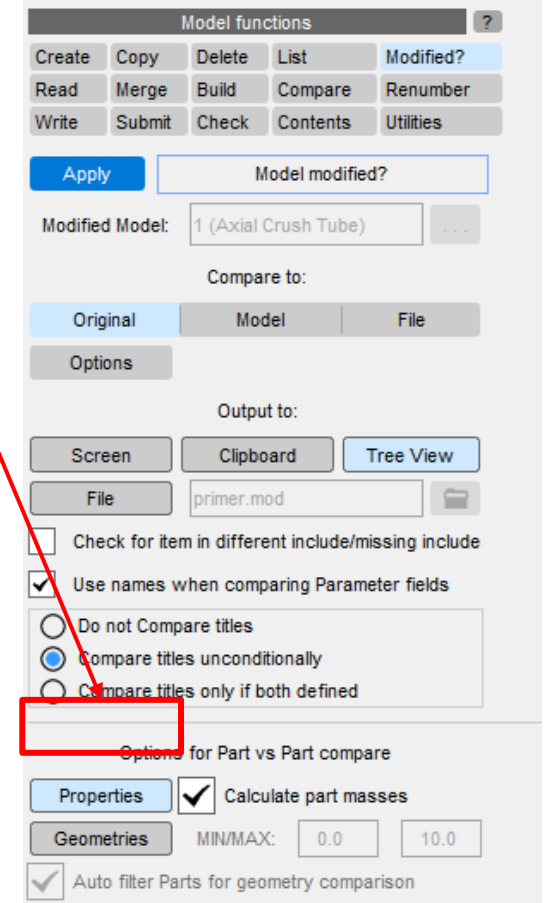
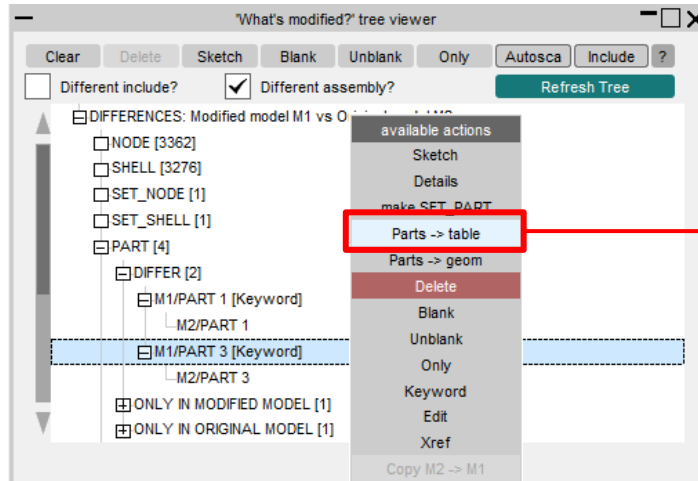
Section type

- ☐ ALE1D
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#	Options...	Suffices	SECD	Lab	ELFORM	Var	SHRF	F	NIP	I	PROPT	F	QR/IRID	Var	ICOMP	I	SETYP	I
			T1	F	T2	F	T3	F	T4	F	NLOC	F	MAREA	F	IDOF	F	EDGSET	Var
1	<none>		1		16		0.0		5		0.0		0.0		0		0	
			2.16		2.16		2.16		2.16		0.0		0.0		0.0		0	

# Pop-up Menu (Part -> table)

- Having the part “properties” option enabled means PRIMER will compared all part properties from the part table.
- For example, the \*PART card can look the same between two models, but the geometry/mesh can be different, leading to a difference in properties (mass for example).



PART COMPARE

Dismiss View... Refresh Write... Clear Sel all

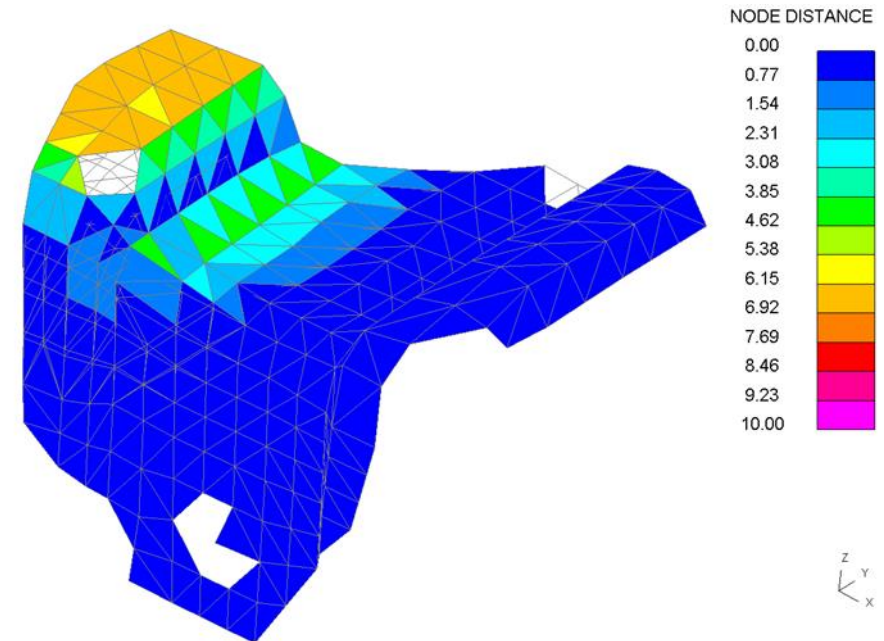
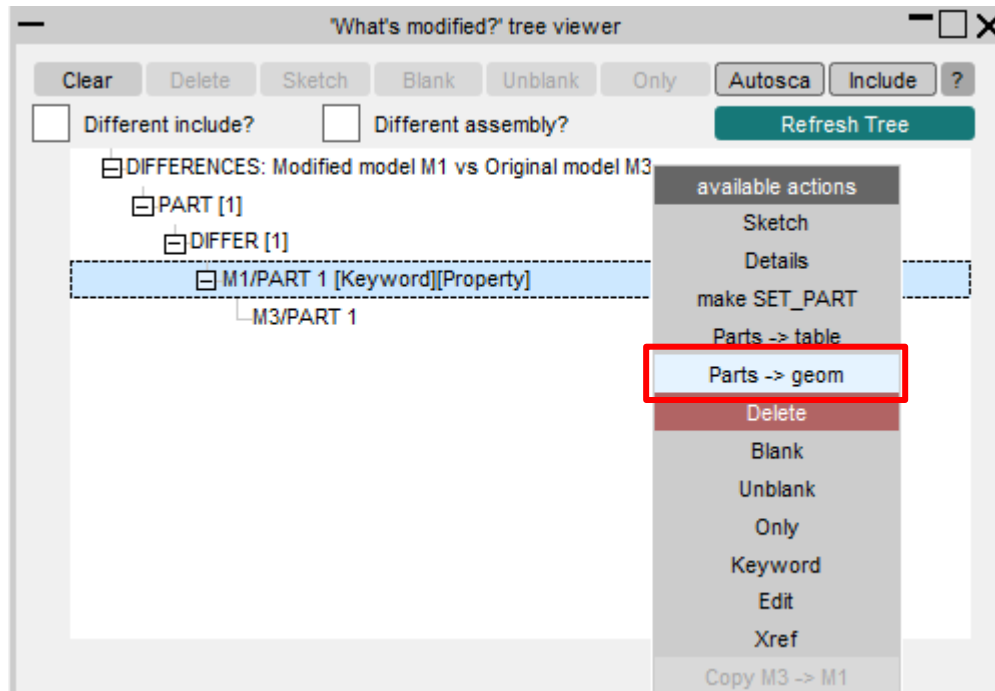
Table Changes: Undo Apply Remove selected

show M3 value difference signed diff  
show M1 value difference diff as %age

Part ID	Mass (Component)	Mass (Dyna Part)	Mass (struct)	Mass (Dyna added)	Mass Iner (XX YY ZZ)	Sect Gauge	Volume
M1/P1	0.000188483	0.000188483	0.000188475	5.94914e-09	[6.8853e-01 6.8853e-01 1.5133e-01]	3.200001	1.192994e+05
M3/P1	0.000127226	0.000127226	0.000127221	4.01567e-09	[4.6476e-01 4.6476e-01 1.0215e-01]	2.160000	8.051910e+04

# Pop-up Menu (Part -> geom)

- Geometry differences between parts can also be checked and contoured.



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