

Replace Part



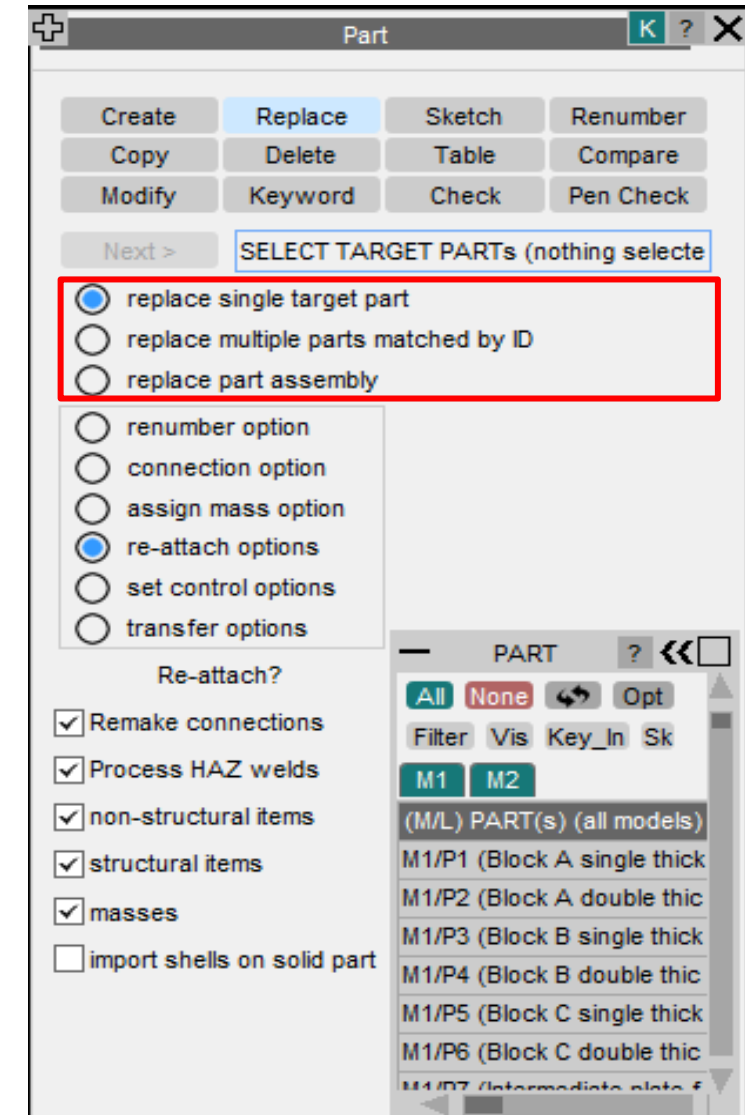
What is replace part?

- This function allows the user to replace one or more parts in a target (original) model with those from a source (donor) model.
- “Replace” means to substitute the original part(s), including the nodes and elements, in a model with those from a source model.
- Various options are available for reconnecting the new mesh to avoid introducing errors.



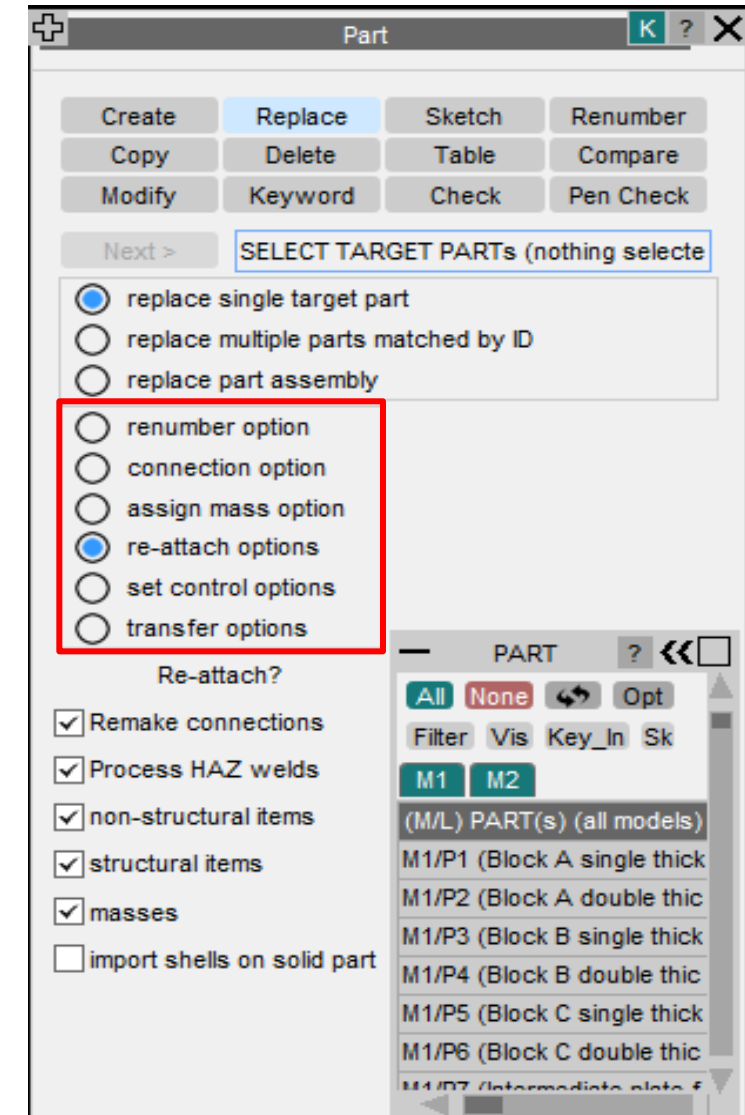
Types of Part Replace

- “Replace single target part” if the user only has one part needing replacing.
- “Replace multiple parts matched by ID” will allow the user to replace parts from the original model with parts of the same ID in the source model.
 - Using this option the user selects the target model, and the parts within the source model they wish to copy. Primer then finds all parts with matching PIDs in the target model and replaces them.
 - If any parts do not have matching PIDs the user will be given the option to ignore these parts or create new ones at that label
- Replacing a part assembly uses similar functionality to replacing multiple parts but is more useful if source and target parts do not map, e.g. parts have a different shape, internal connections, or number of parts. As a result a part assembly may be imported to carry their internal connections and references.



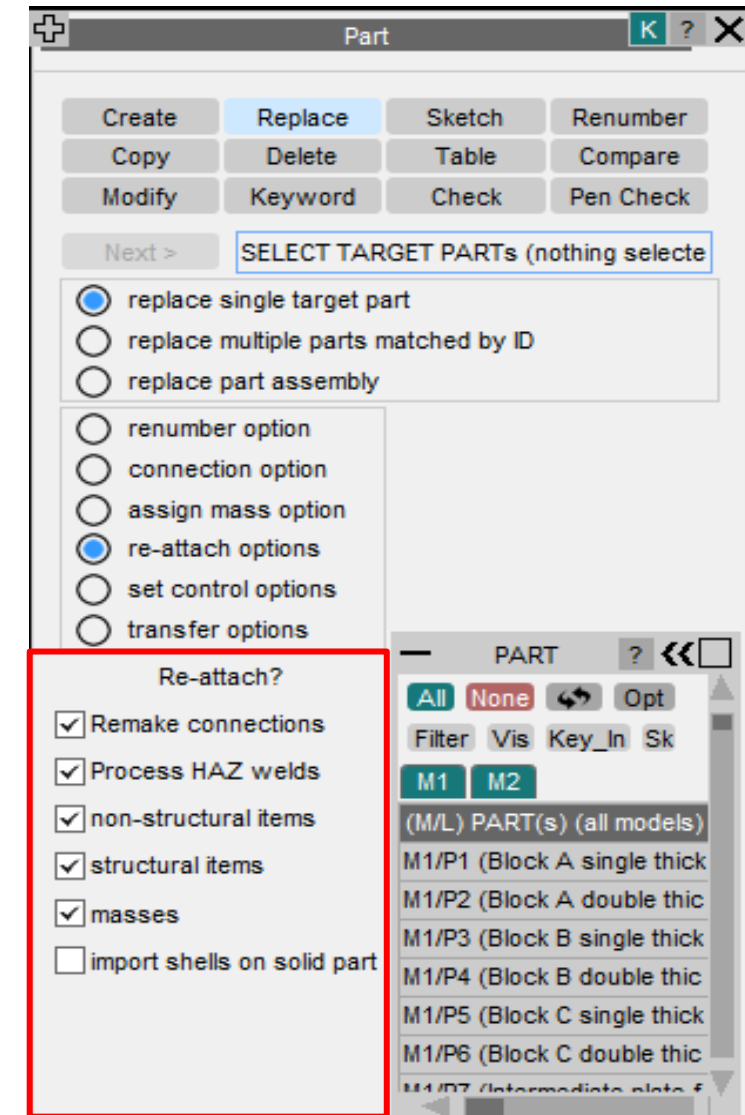
Part Replace Options

- “Renumber option” allows the user to specify the numbering rule for elements/nodes imported from the source part which clash with entities in the target model.
- “Connection option” gives the user various options when reapplying Primer connection entities in the target model after parts have been replaced.
- “Assign mass option” will allow the user to recalculate any assign mass definitions affected by the part replace.
- “Re-attach options” will allow the user to specify if entities connected to the parts being replaced should be reattached to the new mesh.
- “Set control options” will allow the user to specify how sets containing parts, nodes and elements modified by the part replace are updated.
- “Transfer options” will allow the user to transfer certain entity cards from the source model to the target model.



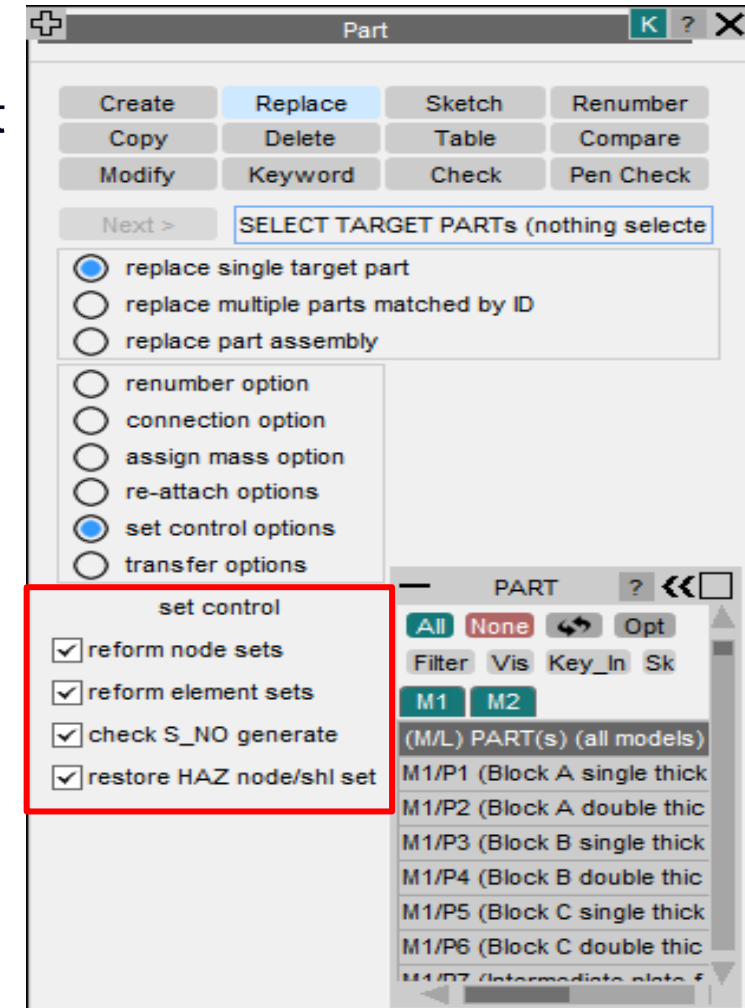
Reattach Options

- “Remake connections” will remake the PRIMER connection entities that existed in the target model attached to the parts being replaced.
- “Process HAZ welds” will undo HAZ welds up front and they will be remade (if remake connection). This will affect mesh in all layers of connection. If source parts have holes designed to fit HAZ rings, this option can be switched off and node re-attachment will sew in the weld.
- “Non-structural items” will reattach the non-structural items in the target model that were attached to the parts being replaced.
- “Structural items” will reattach the structural items in the target model that were attached to the parts being replaced.
- “Masses” will reattach the nodal masses in the target model that were on the nodes of the the parts being replaced.



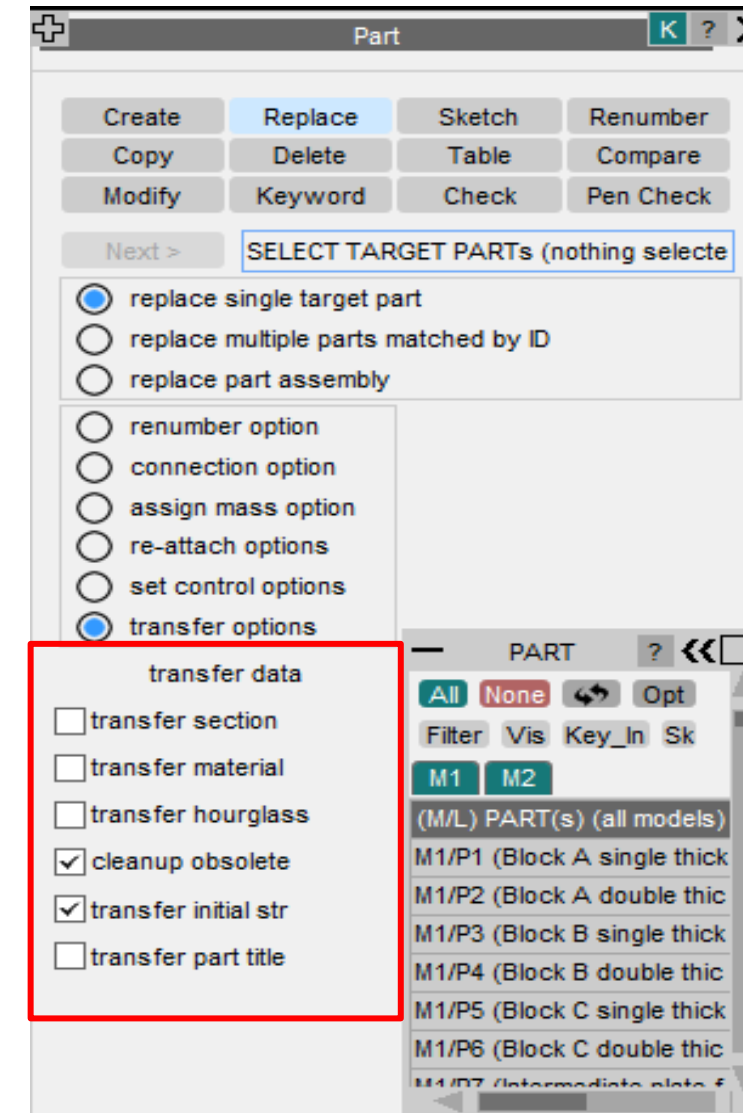
Set Control Options

- “Reform node sets” means that during part replace if all the nodes of the part being replaced are in a node set, all the nodes in the new part will be added to the set.
- “Reform element sets” means that during part replace if all the elements of the part being replaced are in a set, all the elements in the new part will be added to the set.
- “Check S_NO generate” option means Primer will check the number of nodes contained in *SET_NODE_GENERATE both before and after the process. This is designed to help detect a change in set contents.



Transfer Data Options

- “Transfer section/material/hourglass” options will transfer the appropriate cards from the source model to the target parts.
- “Cleanup obsolete” option will delete obsolete sections, materials, hourglass cards and loadcurves from the model after the process
- “Transfer initial str” option will transfer relevant initial stress and initial strain cards from the source model to the target model.
- “Transfer part title” option will transfer the title from the parts of the source model to the target model.



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