

#1253: SolidThinking – Inspire

Product: SolidThinking Inspire

Product Version: Inspire 2016.2 or above

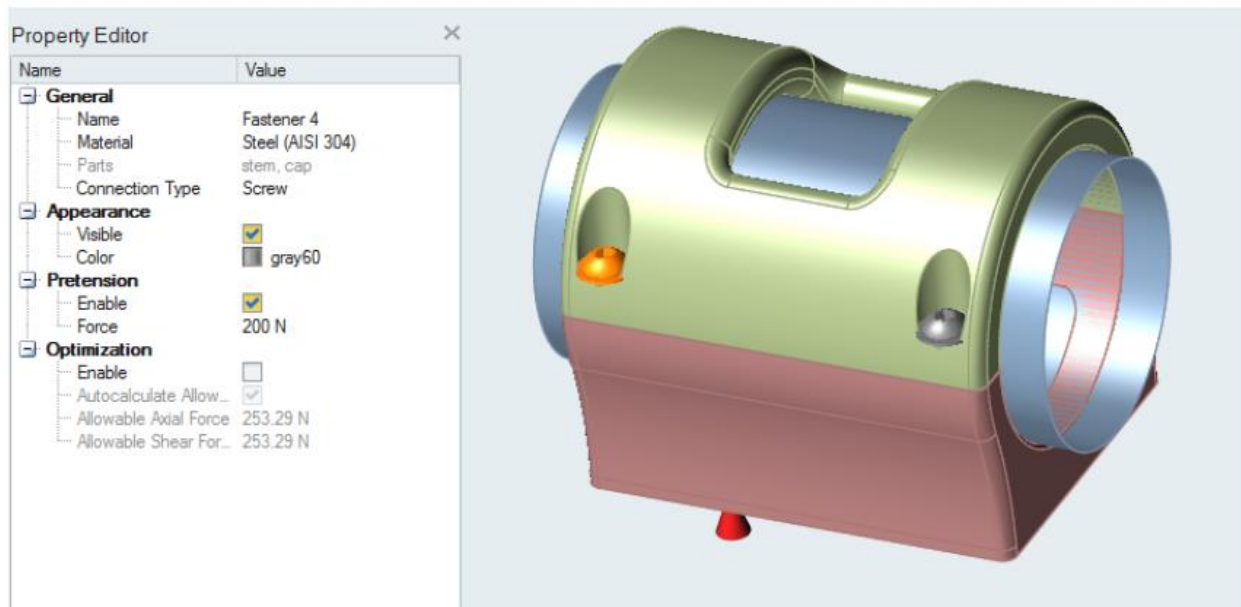
Topic Objective

Pretension in SolidThinking

Topic Details

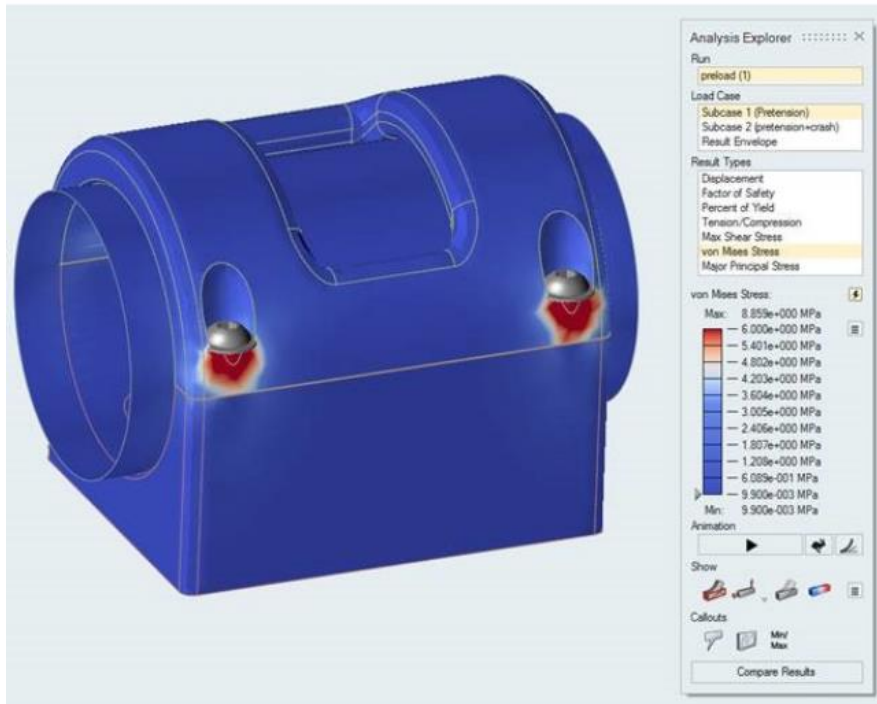
Applying pretension to bolted and screwed connections allows a more complete understanding of the behavior of a structure. Often these preloads are of a significant magnitude and can influence design decisions. Typical examples are clamping structures such as bearing housings or bicycle handlebars and seat-posts. In engines, cylinder bore distortion can be a critical design requirement highly influenced by the loads generated by the bolt down of the cylinder head.

Pretension can be enabled on a fastener or multiple fasteners by selecting them, enabling pretension in the Property Editor, and entering a pretension force. This pretension is then included as a load in all load cases.



Enabling and defining pretension in the Property Editor

A load case with no other external loads will apply the pretension loads only. When running any model that includes pretension, **Inspire** automatically creates and runs a load case with only pretension loads.



Results showing automatically generated load case: Subcase 1