Spacecraft Assembly - Numerical Results

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Problem Specification

- 1. Pre-Analysis & Start-Up
- 2. Geometry
- 3. Mesh
- 4. Physics Setup
- 5. Numerical Solution
- 6. Numerical Results
- 7. Verification & Validation

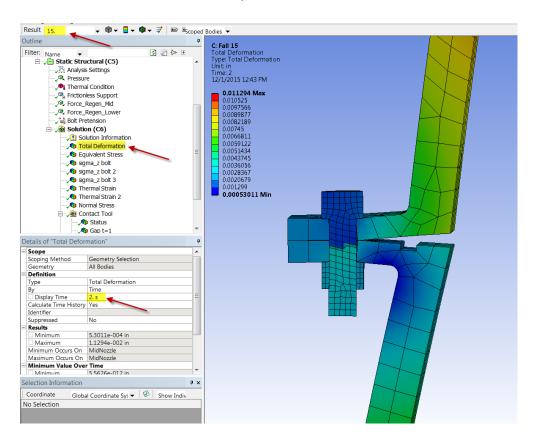
Exercises

Comments

Numerical Results

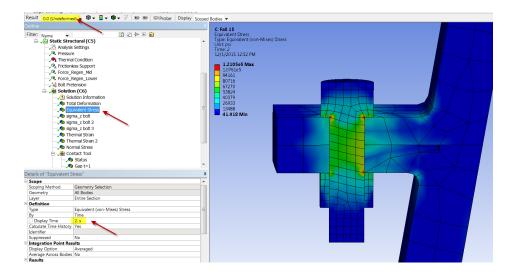
Total Deformation

The following figure shows the total deformation at the end of the second load step. Note the separation between the mid and lower nozzles. Also inspect the total deformation after the 1st and 3rd load steps.



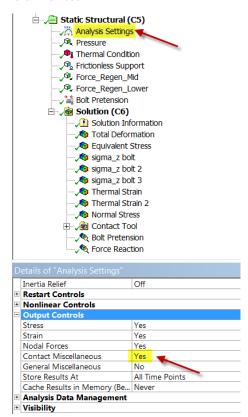
Equivalent Stress

The following figure shows the equivalent or von Mises stress at the end of the second load step. The max value occurs in the bolt. A mesh refinement study is necessary. It turns out these stress values change appreciably on refining/improving the mesh.



Contact Gap

Make sure Contact Miscellaneous is turned on before obtaining the solution. This gives you access to additional items in contact post-processing. Then follow the video.



Go to Step 7: Verification & Validation

Go to all ANSYS Learning Modules