Spacecraft Assembly - Pre-Analysis & Start-Up

Authors: Rajesh Bhaskaran & Michael Mahoney, Cornell University

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

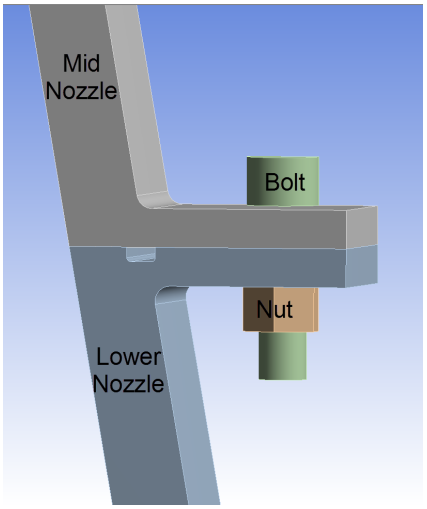
Pre-Analysis & Start-Up

In the *Pre-Analysis* step, we'll first consider how to reduce the model using periodicity. Then, we'll review the following:

- **Mathematical model**
- **Numerical solution strategy**
- **Hand-calculations of expected results**

Model Reduction

We'll model half-a-bolt assuming periodic symmetry. The reduced model has four parts which are indicated in different colors in the image below.



Mathematical Model

⚠ Under Construction

Numerical Solution Procedure in ANSYS

⚠ Under Construction

Hand-Calculations of Expected Results

⚠ Under Construction

Go to Step 2: Geometry

Go to all ANSYS Learning Modules