Altair HyperWorks

Altair HyperView 2019 Tutorials

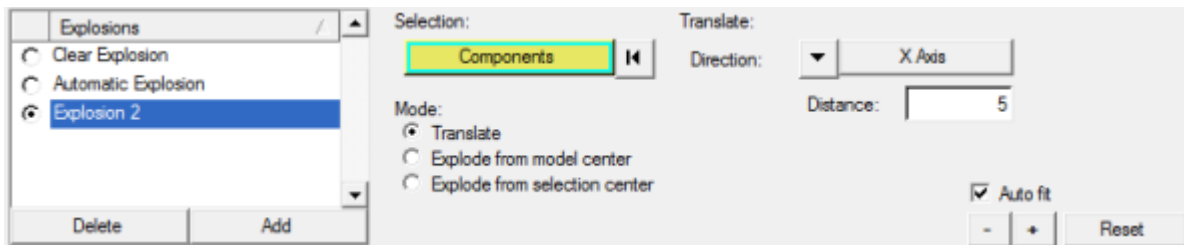HV-5010: Using Exploded View

HV-5010: Using Exploded View

In this tutorial, you will:

- Perform an automatic explosion
- Translate a part/component
- Translate a portion of the model
- Explode the model from the selection center
- Explode the model from the model center

Tools

To access the **Exploded View** panel, click the *Exploded View* panel button on the **Visualization** toolbar.

The **Exploded View** panel allows you to explode models so you can adjust your view of the model.
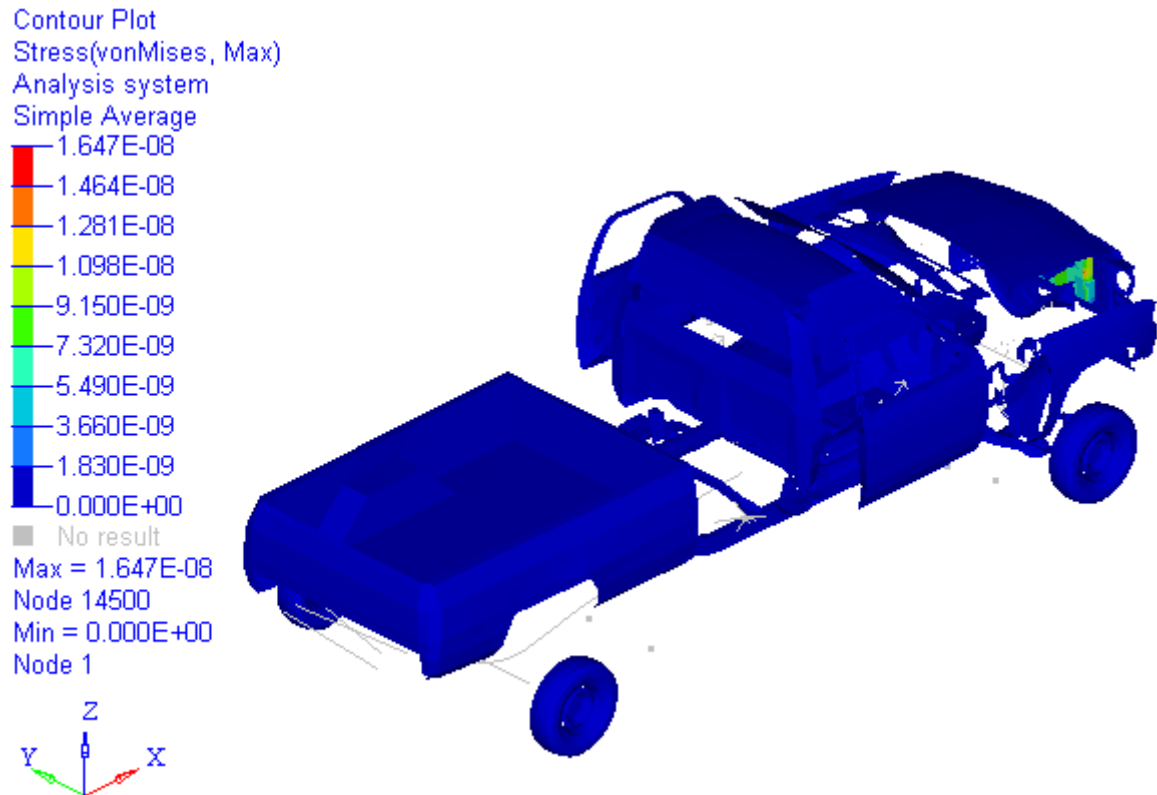
Exercise: Using the Exploded View Panel

This exercise uses the d3plot file as both the model and the results file.

Step 1: Perform an automatic explosion.

1. Load the d3plot file, located in the animation\truck folder.

2. Click the *Contour* panel button on the **Result** toolbar.

3. Contour the model.

    – Select *Stress (t)* for the result type and *vonMises* for the data component.

    – Select *Simple* averaging using the analysis system.

    – Click *Apply*.

4. Select the *Exploded View* panel button on the **Visualization** toolbar.

5. Activate the ***Automatic Explosion*** radio button.

   The model automatically explodes based on pre-defined settings for center of gravity, direction, and magnitude.

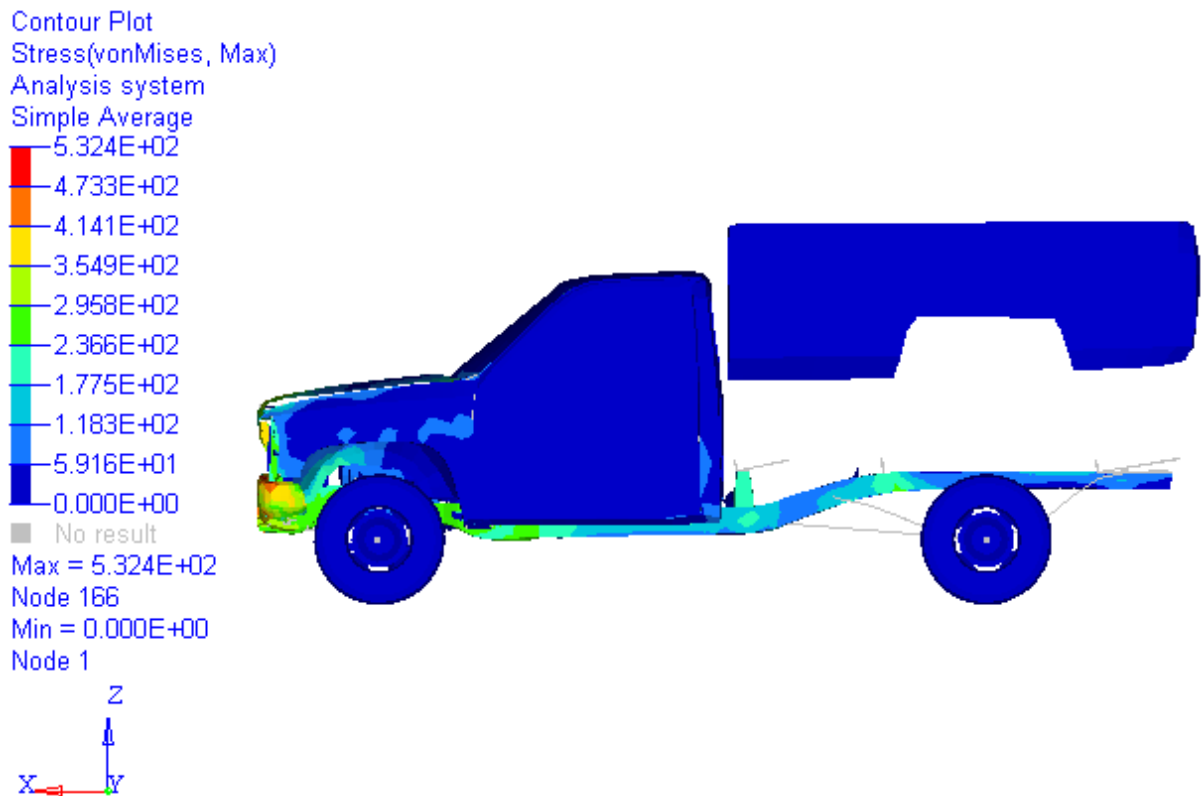## Step 2: Translate a part/component.

1. Click ***Add***.

2. Pick the truck bed from the model on the screen.

3. Change the **Direction** to ***Z Axis***.

4. Press ⊞ for several seconds and observe the movement of the truck bed.

   The truck bed is translated upward.

5. Choose the right view of the truck, by clicking on the ***XZ Right Plane View*** button on the **Standard Views** toolbar.

6. Animate the model ▶.

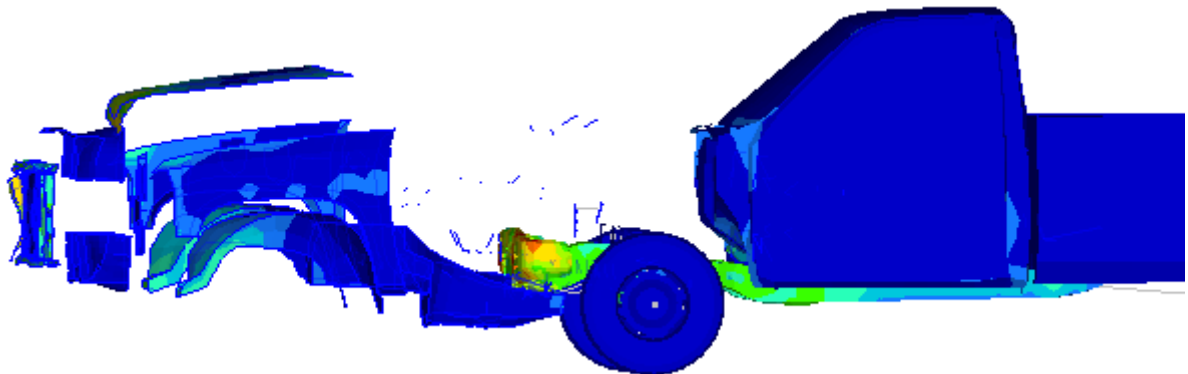   The animation shows the simultaneous movement of the entire exploded model.

Contour Plot
Stress(vonMises, Max)
Analysis system
Simple Average
- 5.324E+02
- 4.733E+02
- 4.141E+02
- 3.549E+02
- 2.958E+02
- 2.366E+02
- 1.775E+02
- 1.183E+02
- 5.916E+01
- 0.000E+00
- No result
Max = 5.324E+02
Node 166
Min = 0.000E+00
Node 1

7. Stop the animation.

Step 3: Explode the model from the selection center.

1. ***Add*** another explosion.

2. Select ***Explode from selection center***.

3. Use the quick window mode to select the front end of the model.

    The front end automatically explodes.

Step 4: Explode the model from the model center.

1. ***Add*** another explosion.

2. Select ***Explode from model center***.

3. Verify the **Scale factor** is set to ***Uniform***.

4. Click ⎡ - ⎤.

5. Change the **Scale factor** to ***Component***.

6. Enter:

   1 for **X**

   0 for **Y**

   0 for **Z**

7. Click ⎡ + ⎤ to move the selected components in X direction only.

   You can activate the radio button on the list of exploded views during a presentation. The model is displayed based on the saved exploded view that is activated.