Altair HyperWorks Desktop 2019 Tutorials
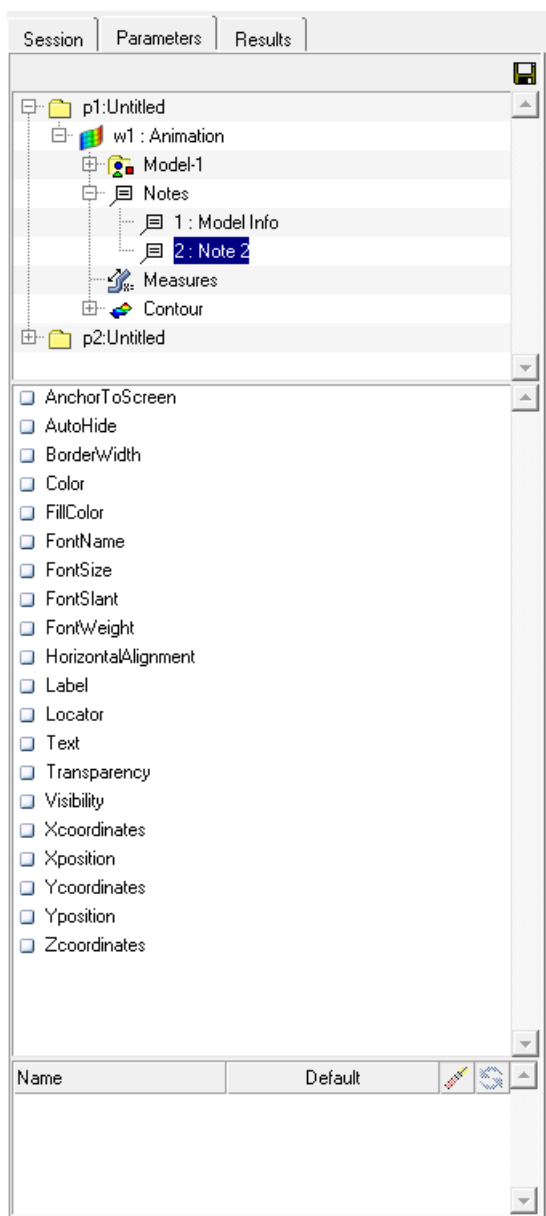
HWD-0035: Report Parameters

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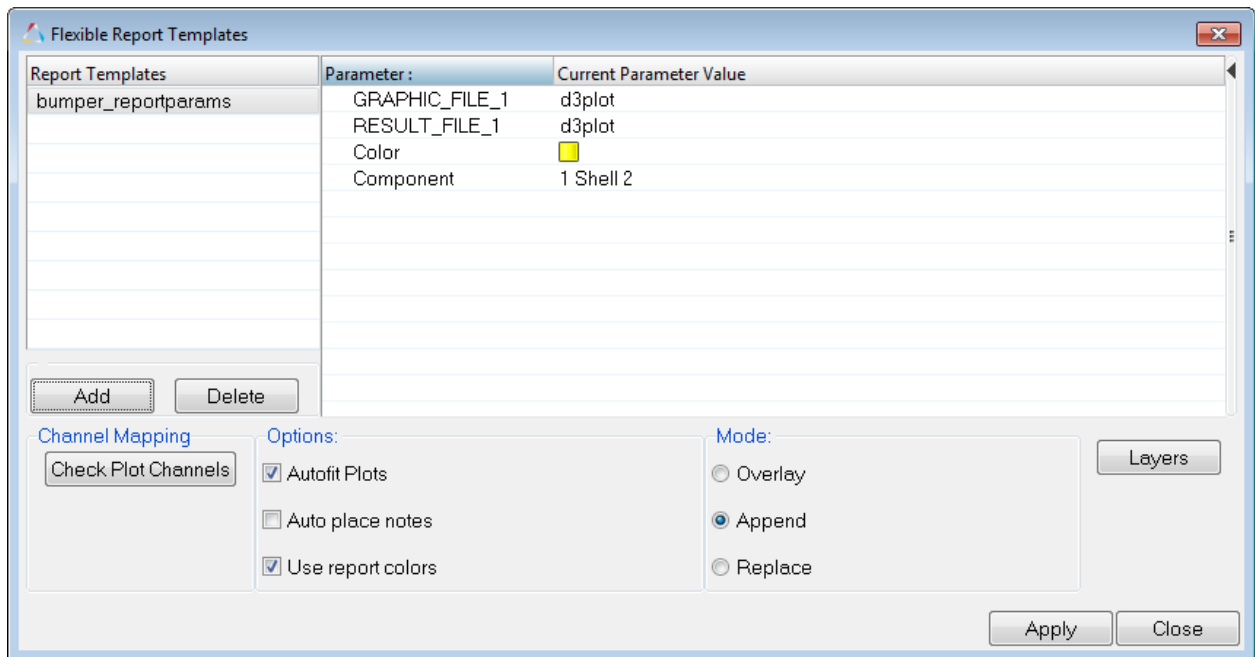
In this tutorial, you will learn how to:

- Generate report parameter templates.

Tools

The **Parameter Browser** allows you to customize and automate the repeatable process of generating entire analysis sessions in HyperWorks Desktop.   The reality of automation is that it's not always desirable to re-apply automation scripts exactly as they were originally defined.   To remedy this, the **Parameter Browser** includes a graphical user interface for defining parameters that can be changed when an automation script is executed.   To display the browser, select ***View > Browsers > HyperWorks > Parameters*** from the menu bar.

After the parameters are defined, you can save the automation script and run it from the **Flexible Report Templates** panel.
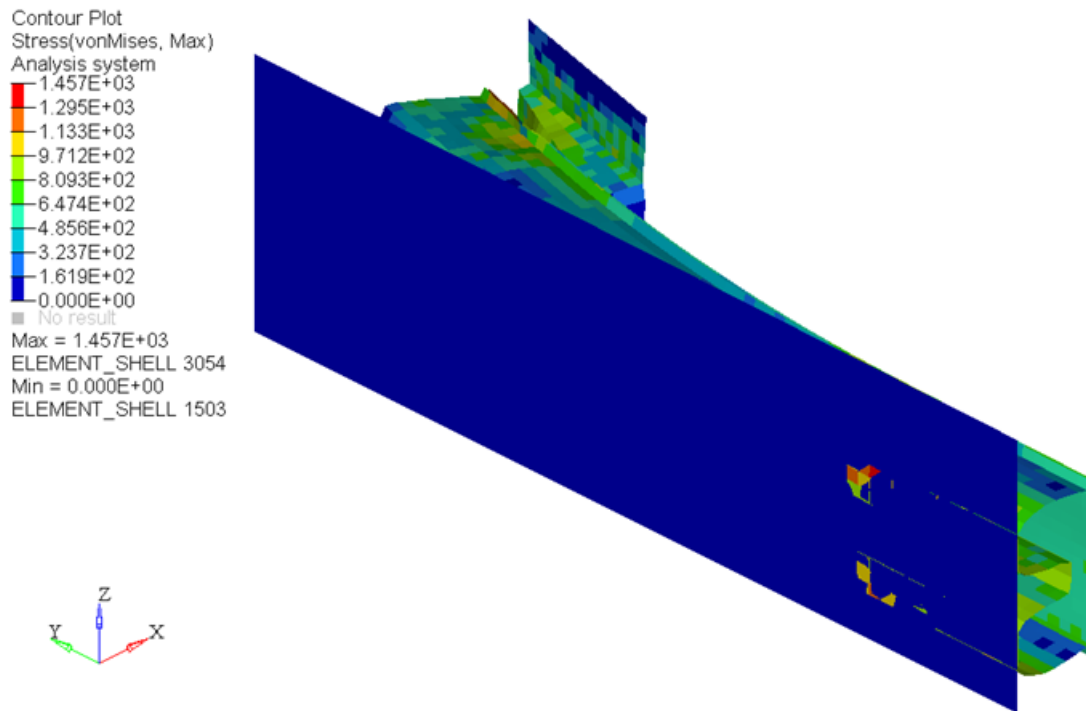

Exercise: Using the Parameter Browser

This exercise uses the model file, d3plot, for the model and results.

Step 1: Loading and contouring the model.

1. From HyperView, load the **d3plot model** file, located in the ../tutorials/mv_hv_hg/animation/bumper folder.

2. Select the **Contour** panel from the toolbar, .

3. Contour the model for **vonMises stresses**.

4. Click **Apply**.

5. Click **Start/Pause Animation**, , to start the animation.

6. Click the **Start/Pause Animation** button again to stop the animation.

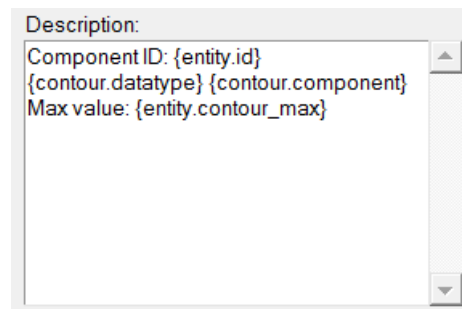7. Click **Animation Controls**, , to open the panel.

8. Use the **Current Time** slider to set the current time `0.03`.

Step 2: Create a note on the model.

1. Click the **Note** icon, 💬 , to open the panel.
2. Click **Add** to add a new note.
3. Choose **Entity** for **Attach to:**.
4. Change the entity collector to **Component**.
5. Click **Component**, then **By ID**.
6. Enter `2` for **Component ID** in the **Select by ID** dialog.
7. Click **OK** to close the dialog box.
8. In the **Description** field, enter `Component ID:`.
9. For **Field names**, select **Entity ID** and click **Insert Field.**
10. Press ENTER to start a new line in the **Description**, then select **Contour datatype** and click **Insert Field**.
11. Select **Contour component** and click **Insert Field**.
12. Press ENTER to start a new line and enter `Max value:`.

13. Select **Entity contour max val** and click **Insert Field**.

Description:

```
Component ID: {entity.id}
{contour.datatype} {contour.component}
Max value: {entity.contour_max}
```
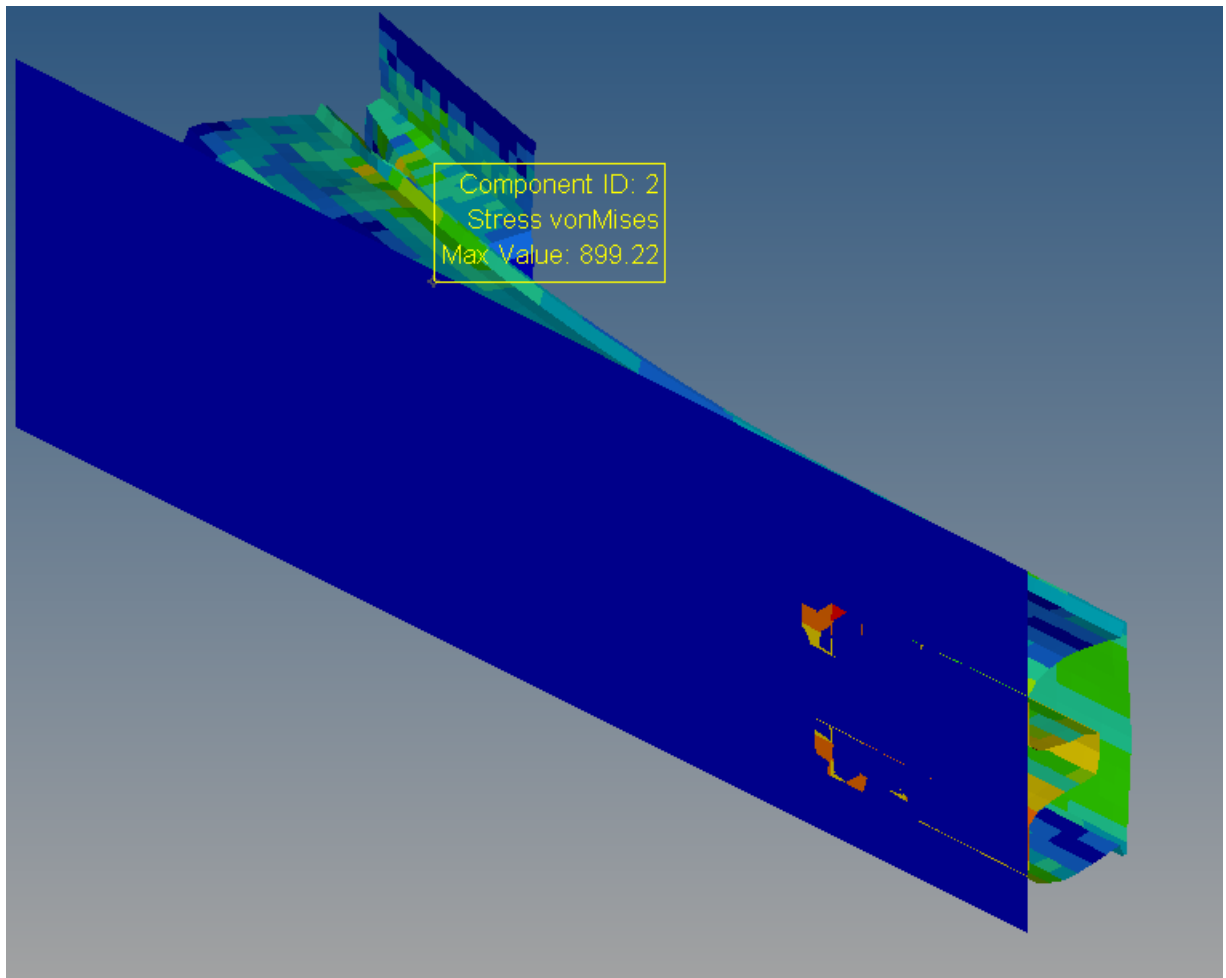
Description after entering information.

14. Click **Color** and select **yellow** for the note color.
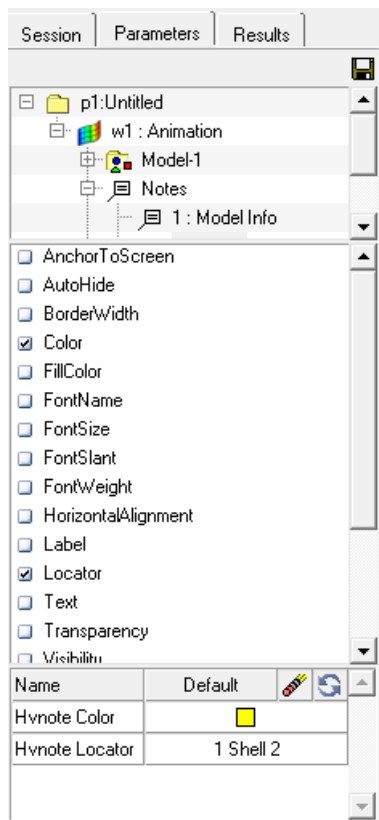15. Activate the **Move to entity** option.

16. Click **Apply** to create the note.

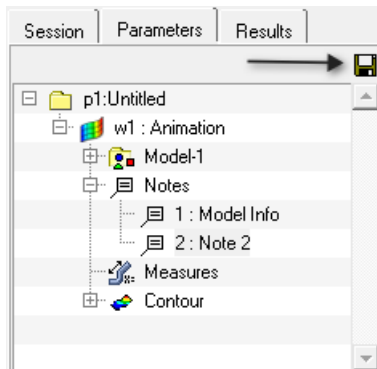## Step 3: Saving the parameters.

1. From the **View** menu, select **Browsers > HyperWorks > Parameters**.

2. Expand the tree for the following items in this order:

   - p1: Untitled
   - w1: Animation
   - Notes
   - 2: Note 2.

3. Place check marks next to *Color* and *Locator*.

4. Right-click on the parameter *Hvnote Color* and click *Show in Tree*.

   Notice the parameter is highlighted in the tree.

5. Right-click again on *Hvnote Color* and click *Remove*.

   The parameter is now unchecked on the tree.

6. Click *Color* again in the tree.

7. Click in the *Name* field for **Hvnote Color** and enter Color.

8. Click in the *Name* field for **Hvnote Locator** and enter Component.
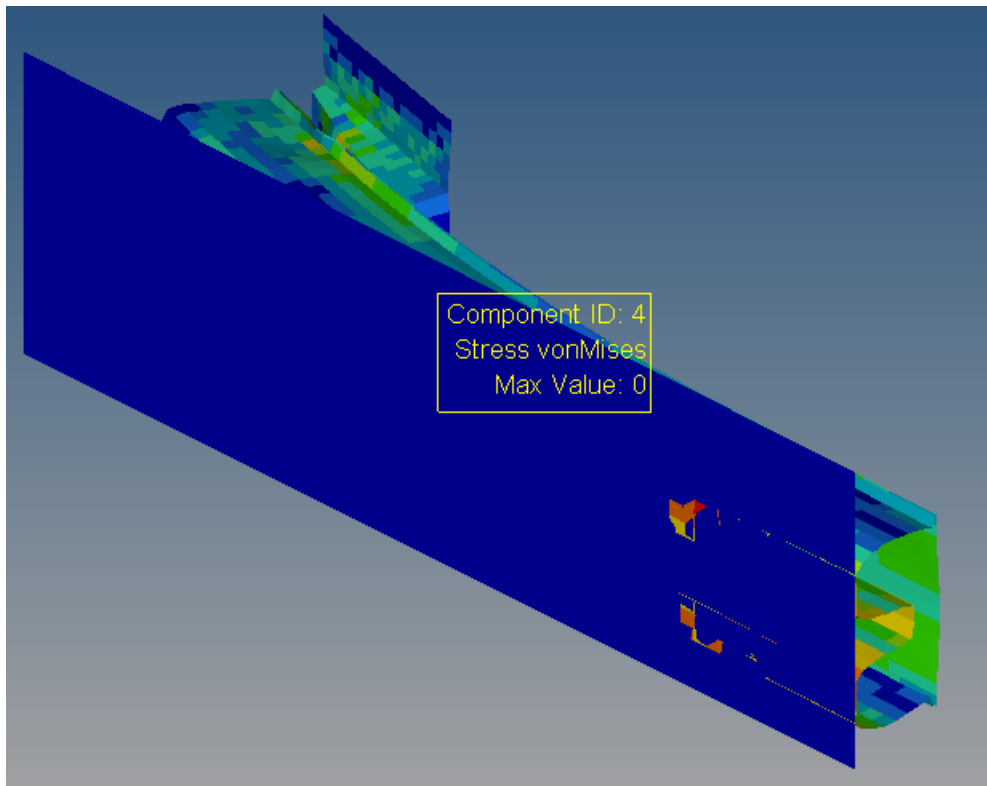
9. Click the *Save* icon in the **Parameter Browser**.

10. Enter the name `bumper_reportparams` in the **Save Report File** dialog.

11. Click *Save* to save the parameters.

Step 4: Importing the report parameters.
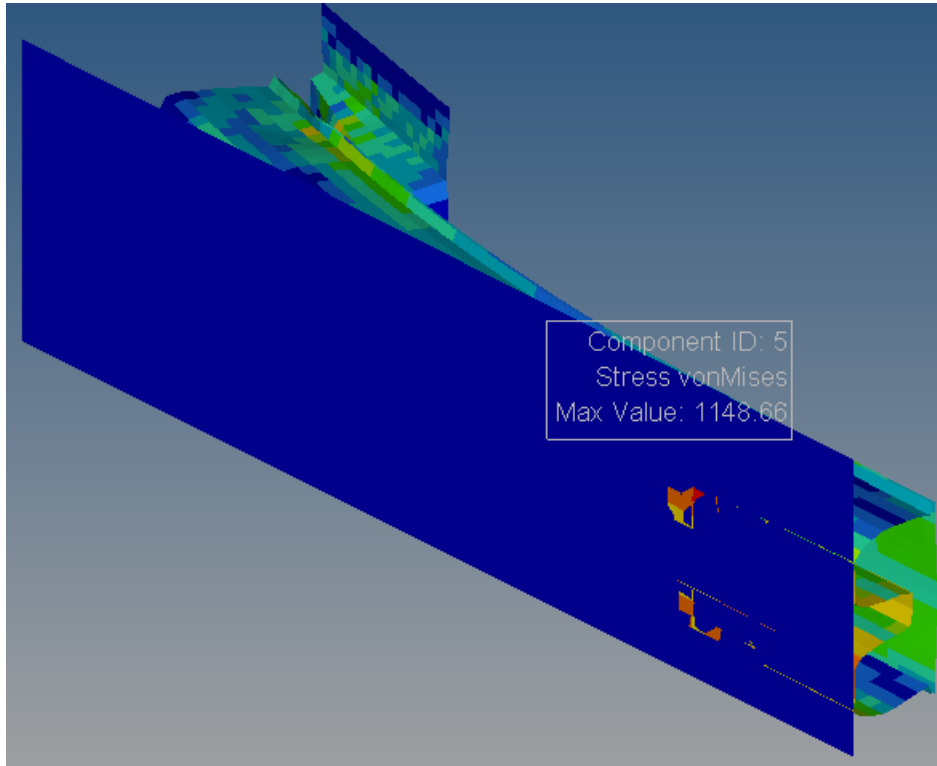
1. From the **File** menu, click **New > Session** to clear the session.

2. Click the **Open Reports Panel** icon, 📈, to open the dialog.

    The `.tpl` should be loaded in the dialog.

3. If the `.tpl` does not show up, click **Add** to select the `.tpl` file.

4. Select the `bumper_reportparams.tpl` file created in the last step or
    `bumper_reportparams.tpl,` located in the
    `../tutorials/mv_hv_hg/animation/bumper`.

5. Change the **Component** text from **1 Shell 2** to `1 Shell 4`.

6. Click **Apply** to apply the changes.

The bumper results are displayed with the note attached to **Component 4**.

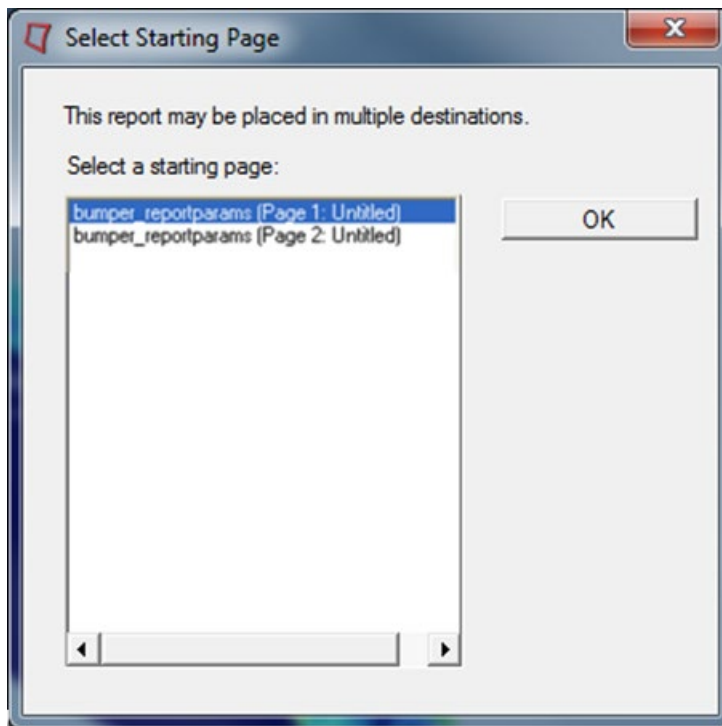## Step 5: Using the Report Definition to add further views.

1. Change the text in the **Component** to `1 Shell 5`.

2. Change the **Color** of the note.

3. Be sure the ***Append*** radio button is active.

4. Click ***Apply*** to add the new report.

Notice a second page is added with results and new note for **Component 5**.

5. Change the value of **Component** to `1 Shell 1`.

6. Change the value of **Color** of the note.
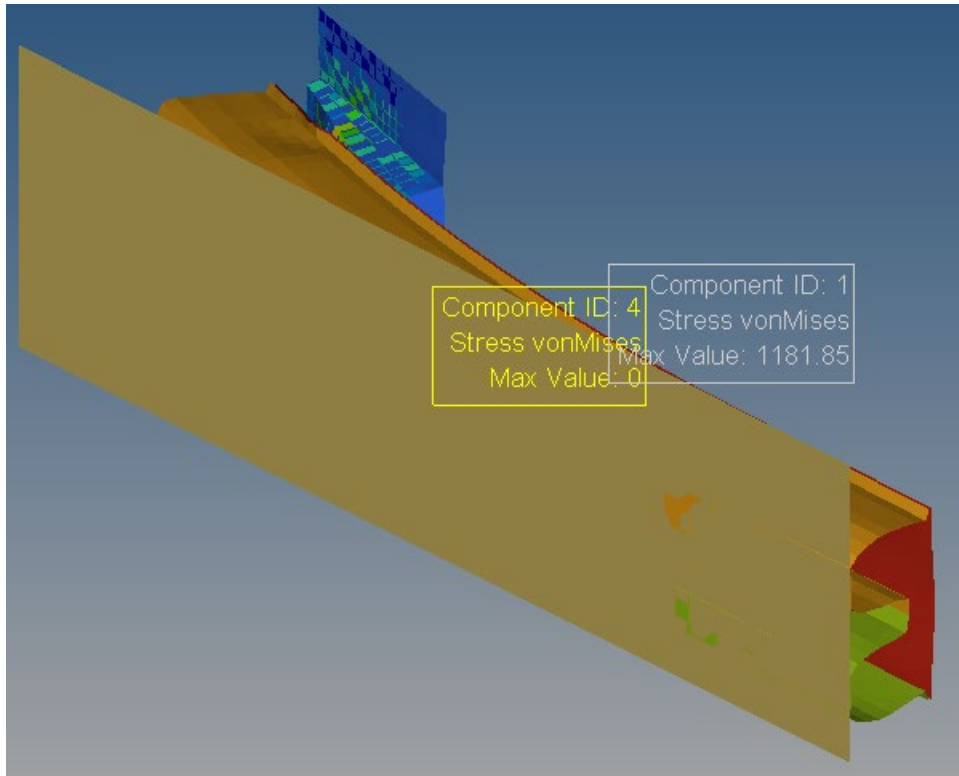
7. Click the ***Overlay*** radio button.

8. Click *Apply*.

The **Select Starting Page** dialog is displayed.

9. Accept the default selection by clicking *OK*.

10. Change to **page 1**.
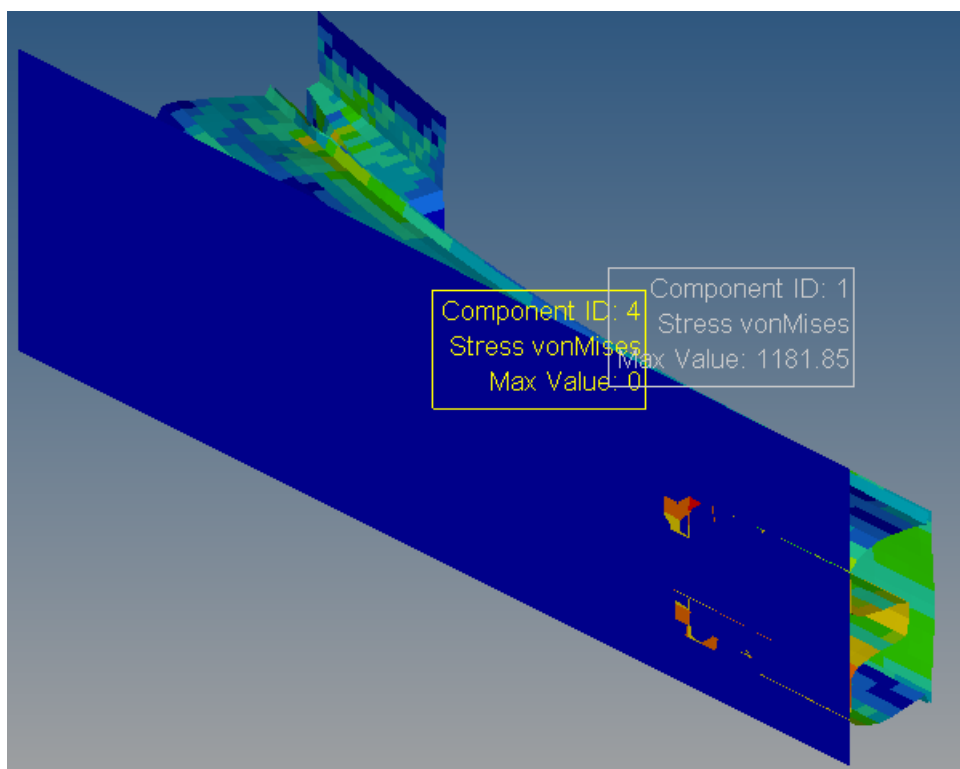

Notice the note is appended to the page selected.

11. Click the **Results** tab.

12. Click the **Files View** icon, 📇, in the **HyperView Results Browser**.

Notice there are two models in the **Files** section.

13. Right-click on the first model in the list and click *Hide*.

The model is hidden from view, revealing the contoured model.