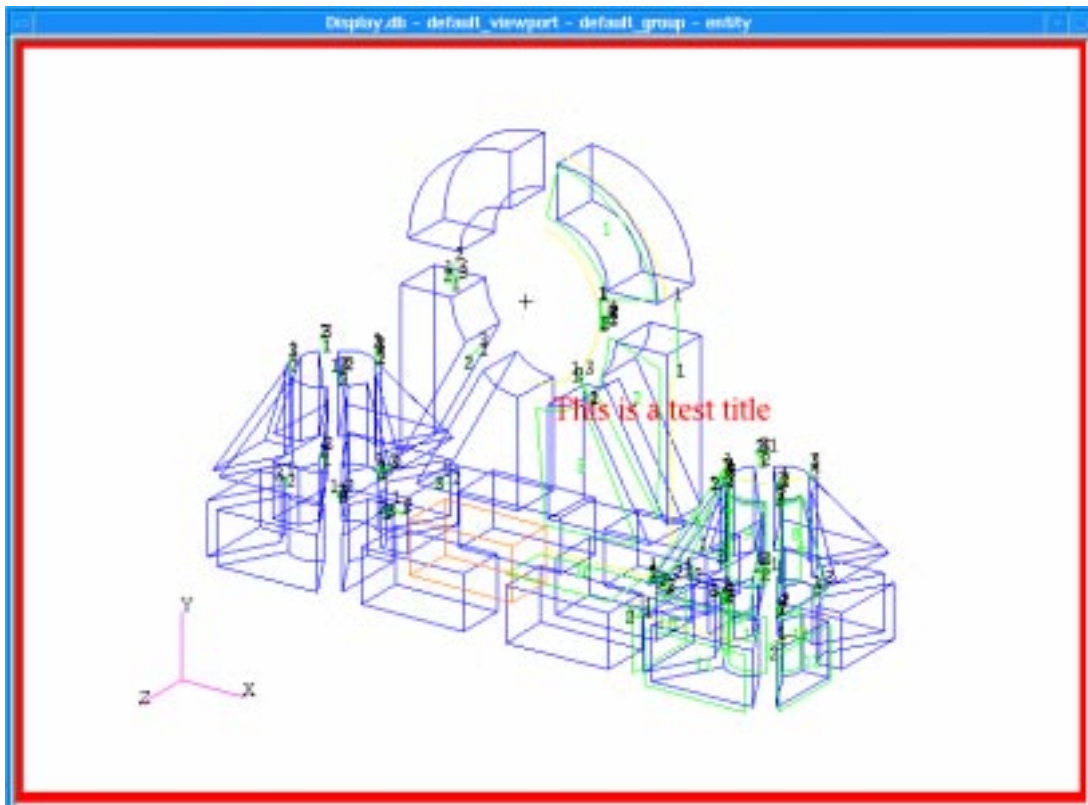


WORKSHOP 6

Display Exercise



Objectives:

- Become familiar with various display options.
- Create and use your own named attribute sets.
- Add text to display.



Model Description:

In this exercise you will access the MSC.Patran model used in your first exercise and practice modifying its render style with various display options. You will also learn how to define titles for the model and identify MSC.Patran entities by highlighting them.

Suggested Exercise Steps:

- Create a new database and name it **display.db**.
- Play the session file **exercise_1.ses** to build the model.
- Change the display attributes.

-Set all entity labels off, turn surface labels on and change the render style to **Shaded/Flat**, then back to **Wireframe**.

-Adjust the Geometric display properties to:

- Display Lines = 0.
- Parametric Directions = ON.
- Chordal Tolerance = 1.0.

-Inspect the display of the model, then set:

- Chordal Tolerance = 0.005.
- Geometric Shrink = 0.30.

-Add text to the display. Create the title, **This is a test title**, using a *Font Size* of **18** and a Color of **Red**.

- Use Highlighting to identify different entities in the display, like identifying the location of **solids 19 & 23**.

Exercise Procedure:

1. Create a new database and name it **display.db**.

File/New...

New Database Name

display

OK

New Model Preference

Tolerance

◆ **Default**

OK

2. Play the session file, **exercise_1.ses** to build your model.

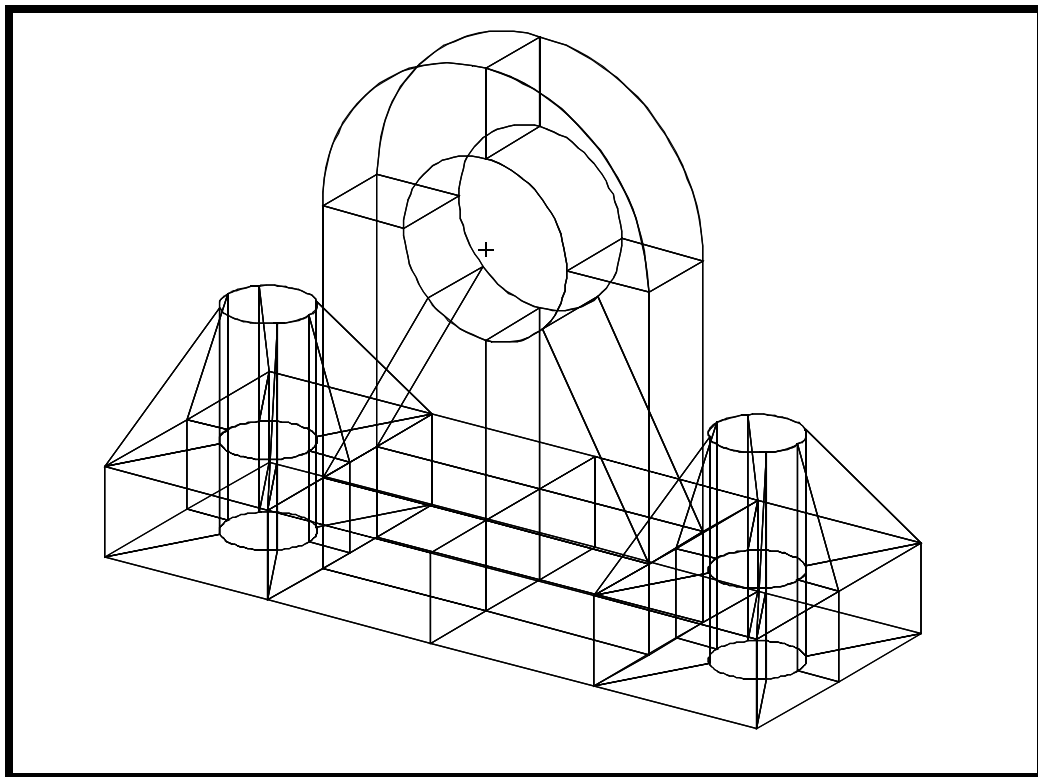
File/Session/Play...

Play From File

exercise_1.ses

Apply

After your model has been created it should look like the one shown in the figure below.



3. Turn on the surface labels

Display/Entity Color/Label/Render...

Entity Types Colors and Labels

Surface:

Label

Apply

4. Change the render style to shaded/flat, and change the shade color.

On the **Entity Color/Label/Render** form

Render Style:

Shaded/Flat

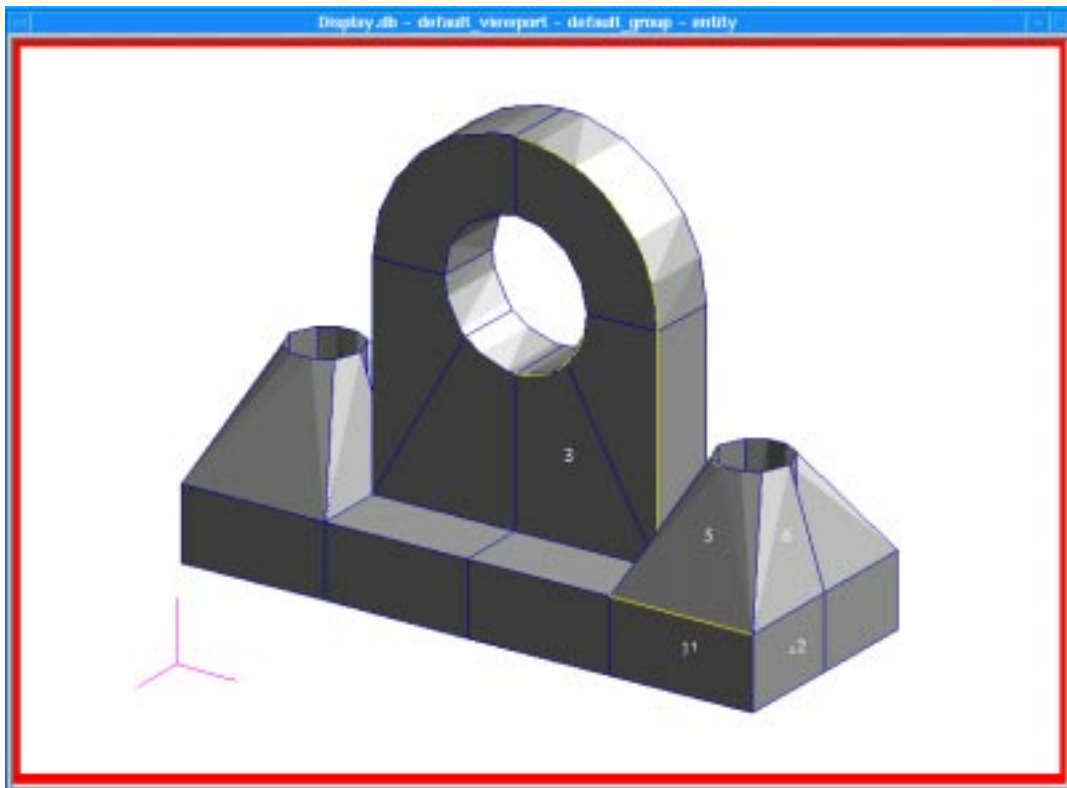
Shade Color:

Any Color

Apply

**Change
Render Style**

Your model should now look similar to the one shown below.



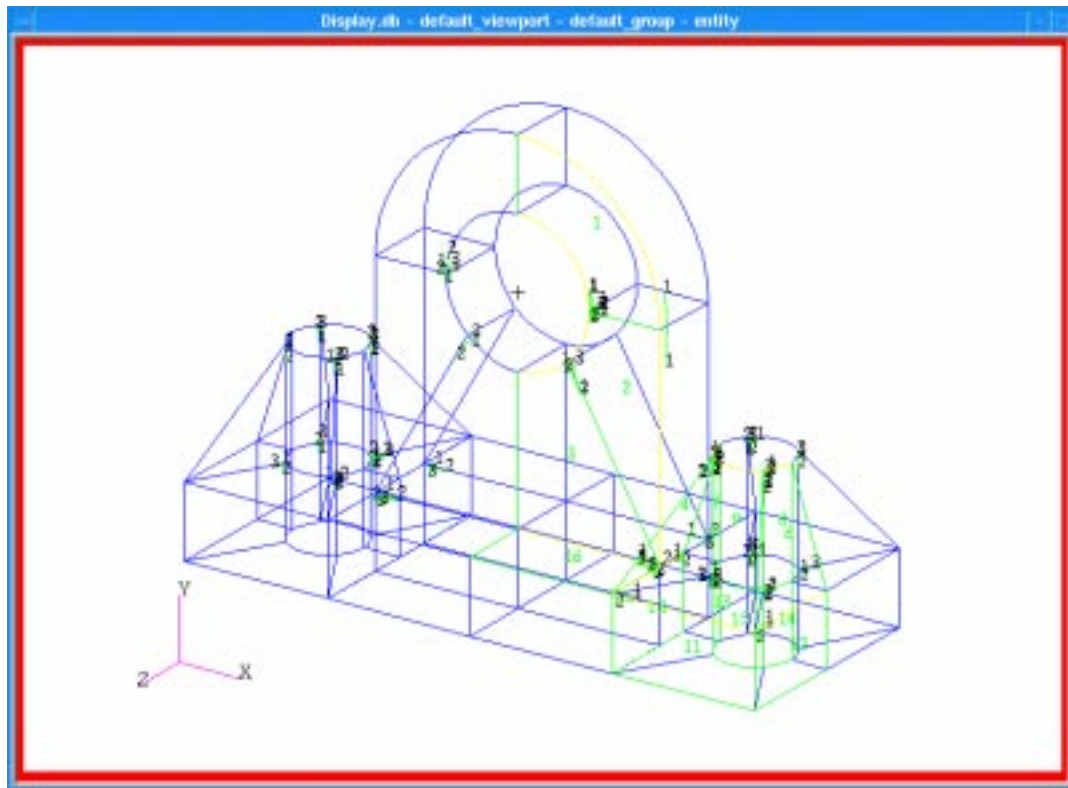
5. Change the display back to **Wireframe**, turn the parametric direction display on. Set the chordal tolerance to 1.0. Change the chordal tolerance back to 0.005 (default) and re-render the model.

Display/Geometry

Show Parametric Direction

Apply

Your model should look like the one shown below.



Change the *Chordal Tolerance* databox to **1.0** and click on the **Apply** button to see the change. Your model should look like the one shown below.



As you can now see, the *Chordal Tolerance* affects the number of line segments that are used to render the graphic image of your model. Reset the *Chordal Tolerance* databox back to its default value of **0.001**.

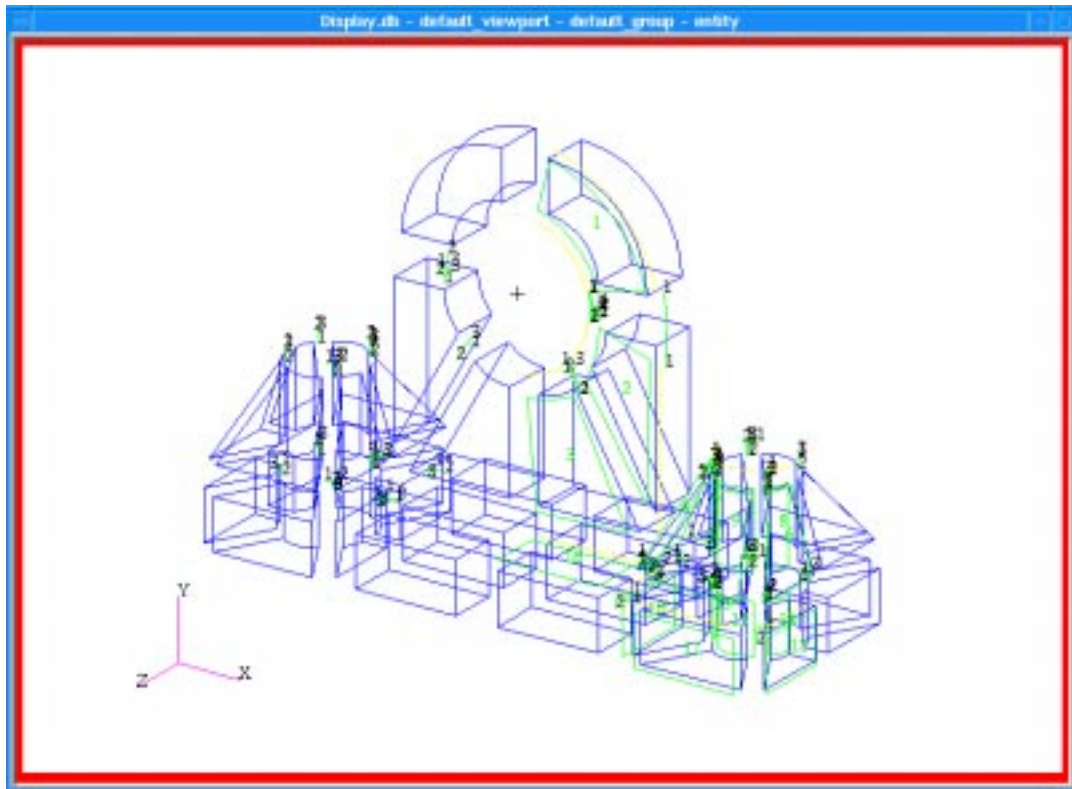
**Chordal
Tolerance**

Note: *Chordal Tolerance* only effects the screens geometric representation, not the actual geometry.

6. Render the model with the *Geometric Shrink* set to **0.30**.

**Geometric
Shrink**

Change the *Geometric Shrink* sidebar to **0.3** and click on the **Apply** button to see the changes. Your model should now look like the one shown below.



Click on the **Cancel** button to close the form.

Adding a Title

7. Create the title, **This is a test title** using a *Font Size* of **18**, and post it at the center of the viewport. Modify its color from white to **red**. Move the title.

Display/Titles...

Target Title

This is a test title

Create

Font Size

18

Title Color

red

Select the title with the left mouse button and holding it down, move the title location to a different position.

Click on the **Close** button to close the *Titles* form.

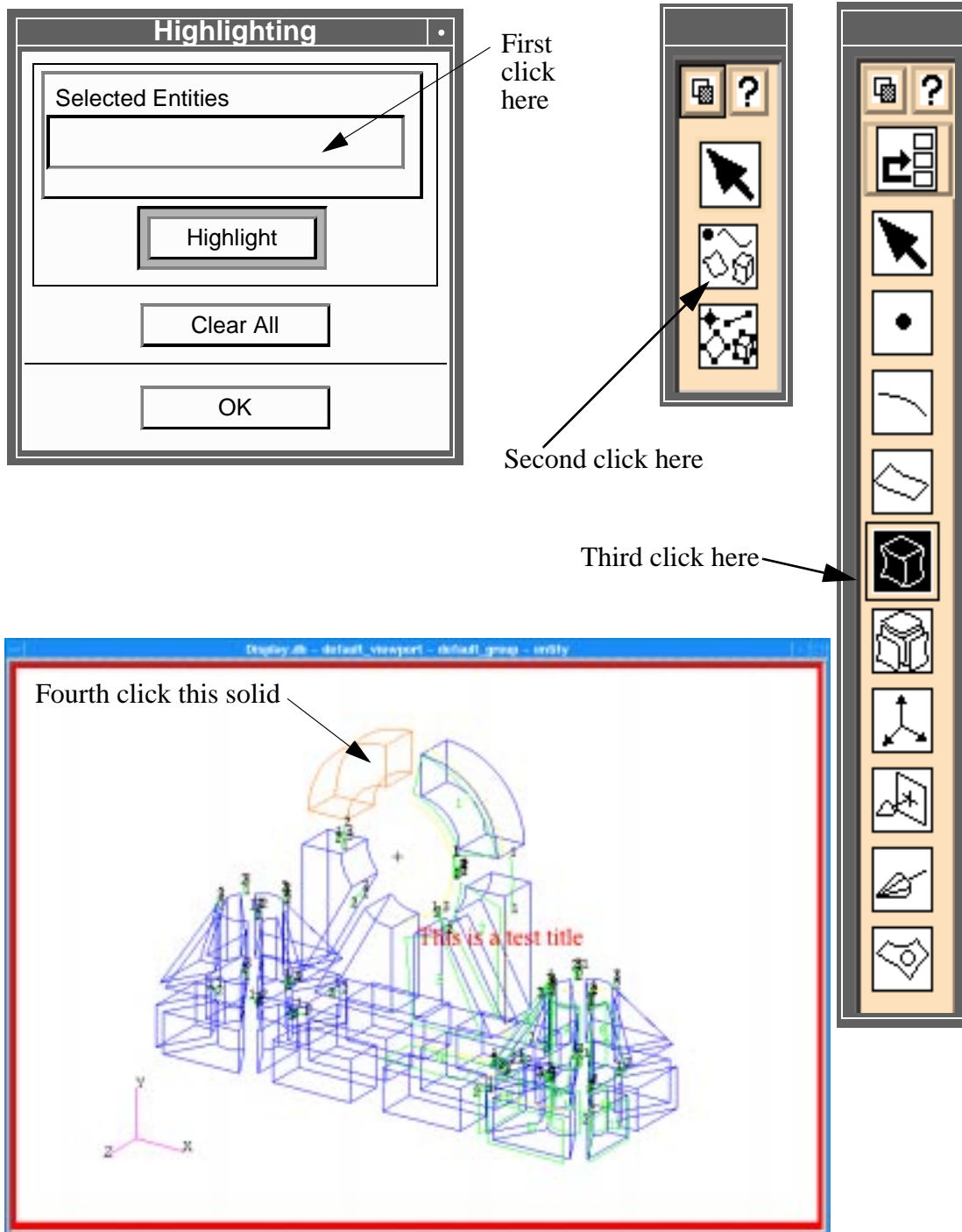
8. Without turning on the solid ID labels, identify the location of **solids 19** and **23** by *Highlighting* them. Remove all highlighting from your model.

There are two ways this can be accomplished. The first is by turning on the *Preselection Highlighting* in the **Preferences/Picking** form. There is **Label** and **Entity Highlighting** that can be activated. The preselection settings work by highlighting the entity label or the entity itself as the mouse passes over it and before it is selected. This way you know what entity you are selecting before you actually click on it. The form is shown below.

The image shows a dialog box titled "Picking Preferences". It contains several sections with various options:

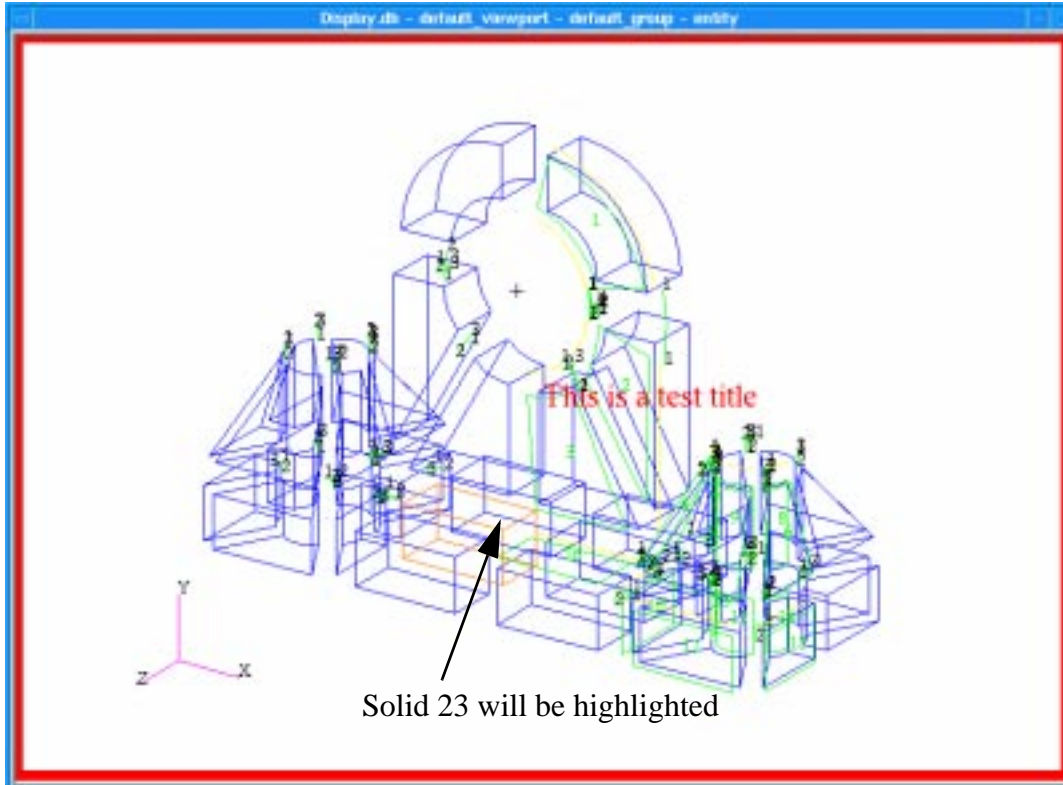
- Single Picking:** Two radio buttons are present. "Centroid" is unselected (represented by an open diamond), and "Entity" is selected (represented by a filled diamond).
- Entity Picking Cursor:** A small icon showing a cursor with a square selection box.
- Rectangle/Polygon Picking:** Three radio buttons. "Enclose entire entity" is selected (filled diamond). "Enclose any portion of entity" and "Enclose centroid" are unselected (open diamonds).
- Other options:** Three checkboxes: "Cycle picking form" (checked), "Horizontal select menus" (unchecked), and "Popup select menus" (unchecked).
- Preselection Settings:** Two checkboxes: "Label Highlighting" (checked) and "Entity Highlighting" (checked).
- Node/Point Marker Size:** A slider control with the number "10" above it.
- Close:** A button at the bottom of the dialog.

The second way is to click on **Display** in the *Main Form* and select **Highlight** from the pull-down menu. By referring to the forms and figure below, identify the solid shown in the figure by highlighting it with a mouse pick.



When you click on the solid at the top left of the model MSC.Patran highlights the solid and prints its ID in the *Selected Entities* data box of the *Highlighting* form. Click on the **Clear All** button to unhighlight

the solid. This process can be performed in reverse to identify where a particular solid exists in the model. For example, in the *Selected Entities* databox, enter **Solid 23**. Next, click on the **Highlight** button to show the solid's location.



Click on the **Clear All** button to remove the highlighting, click on the **OK** button to close the *Highlighting* form.

File/Quit...

