Altair

HyperWorks

HM-3530: Changing a Curvature Using Map to Geometry

Model Files

This exercise uses the `bumper_morphing.hm` file, which can be found in the `hm.zip` file. Copy the file(s) from this directory to your working directory.

Exercise: Changing the Curvature of a Bumper to a Curved Line

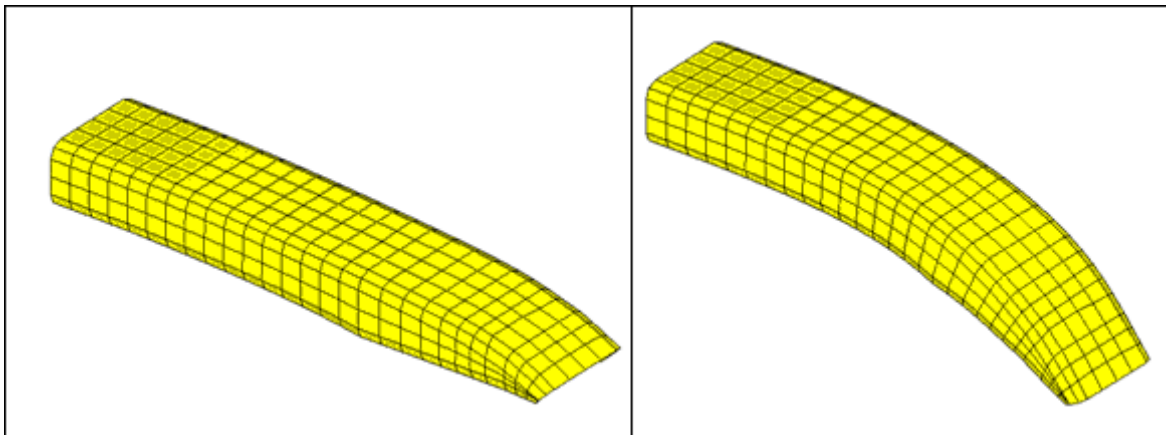In this exercise, you will use the *line difference* approach to morph a bumper to conform to a new section line.

Figure 1: Bumper before and after morphing

Step 1: Load and review the model.

Open the HyperMesh file, `bumper_morphing.hm`.

Step 2: Morph the bumper.

1. Open the **map to geom** panel by clicking *Morphing* > *Map to Geometry* from the menu bar.

2. Change the geometry selector to *line difference*.

3. Select the *from line (Line A)* and the *to line (Line B)* as shown in figure 2.

4. Toggle the morphing entity (2nd column) from *map domains* to *map nodes*.

5. Select *nodes >> displayed*.

6. Use *no fixed nodes* (2nd column, 2nd row).

7. Use ***map by line axis*** morphing with a `1.0` **mvbias** and **fxbias** (column 3).
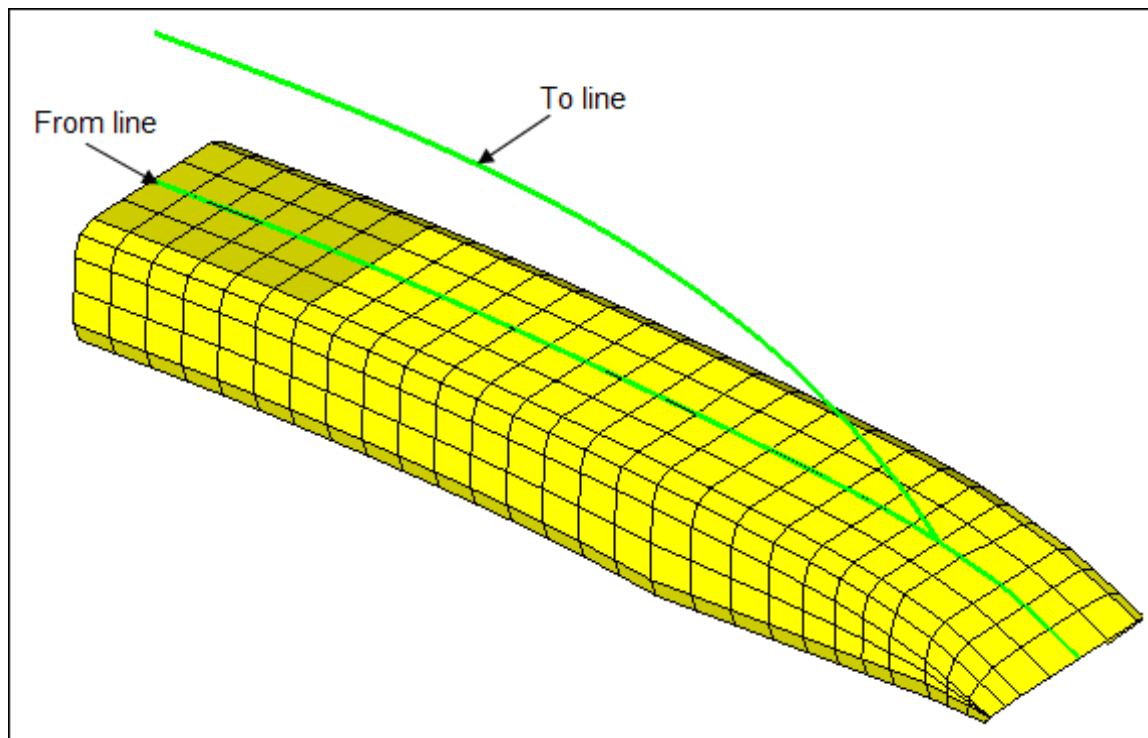

Figure 2: The ***from*** line and the ***to*** line

8. Click ***map***.

Summary

The profile of the bumper is changed to follow the new section line.