



Altair

HyperWorks

HM-3540: Changing a Profile Using Map to Sections

Model Files

This exercise uses the `car_section.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 Profile of the Roof of a Car

In this tutorial, you will use *map to sections* to change the profile of the car roof.

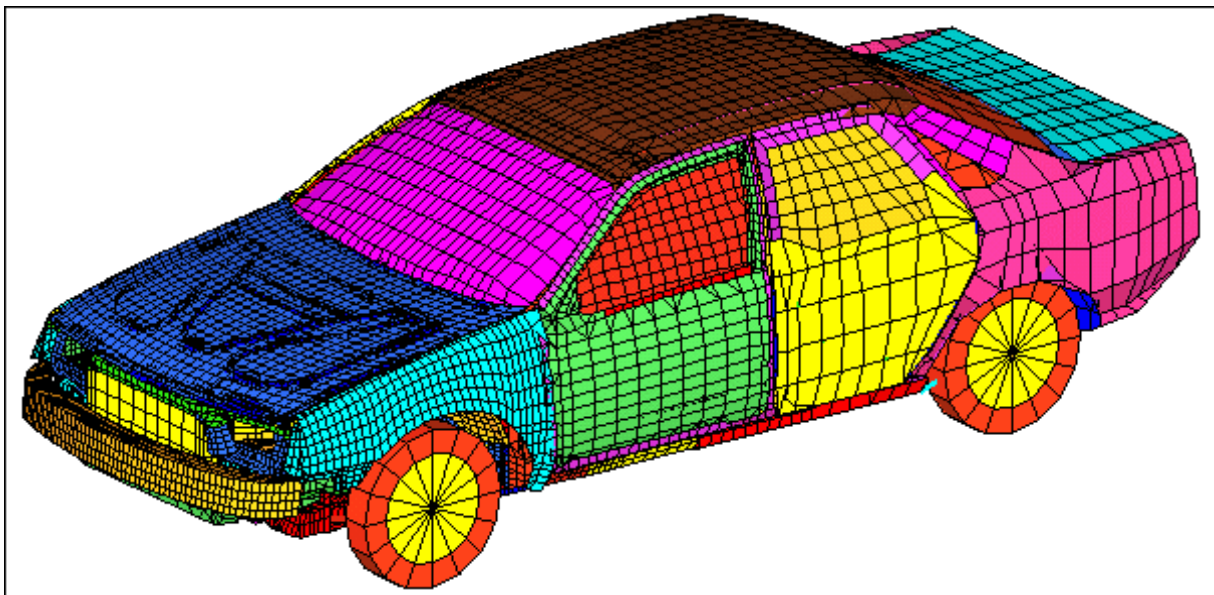


Figure 1: Car model.

Step 1: Load and review the model.


Open the HyperMesh file, `car_section.hm`.

Step 2: Morph the roof.

1. Click **Morphing > Map to Geometry** to access the **Map to geom** panel.
2. Change the mapping section type to **map to sections**.
3. Under **map to sections**, toggle **lines** to **line list**.
4. Switch **map domains** to **map elements** (2nd column).
5. Toggle **no fixed nodes** to **fixed nodes** (2nd column).
6. Keep **blend all** option selected.
7. Keep **rotate nodes** active.

8. Keep the 3rd column selector set to **map by line normal**.
9. Click first **line list** button and select **Line A** and **Line B** on the model.
10. Under **to:** click the second **line list** button and select **Line A'** and **Line B'** on the model.

Lines should be selected in the same order.

11. Under **map to elements** click the **elems** button and select elements **by collector**.
12. Pick collector **Roof**. (This may be located on the second page of collectors)
13. Click **select**.
14. Click the **XZ Right Plane View**  icon to set the view
15. For **fixed nodes** use Shift + Left Mouse Button to select all the nodes as shown in figure 2.

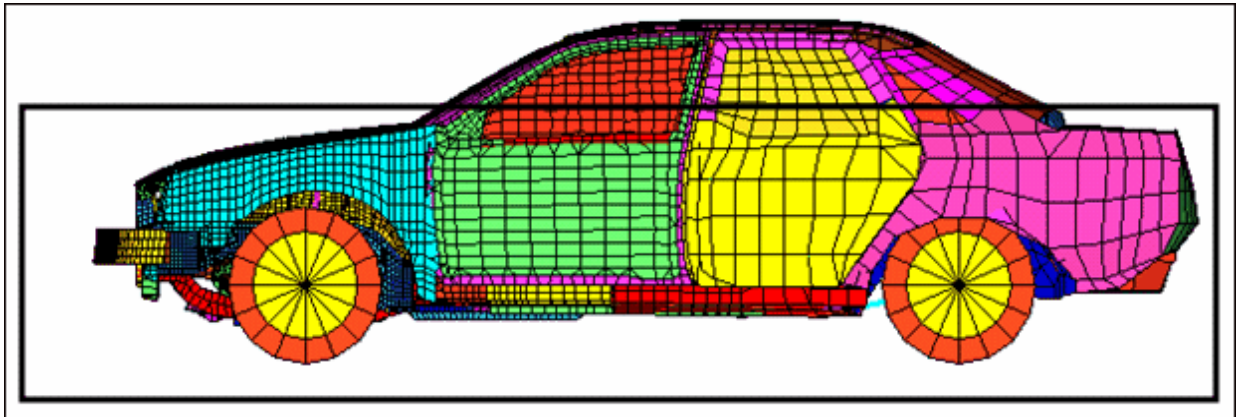


Figure 2: Selection for fixed nodes

16. Click **map**.

Summary

The roof of the car has been morphed while the mesh quality has been maintained.