



Welcome in next chapter. This time we are going to focus on Variable Section Sweep - VSS



Part introduced at left is a great of the shape which can be addressed with Variable Section Sweep.

In addition the following operation are going to be introduced this time

*Extend



*Offset



At beginning prepare sketches for overall size of part.

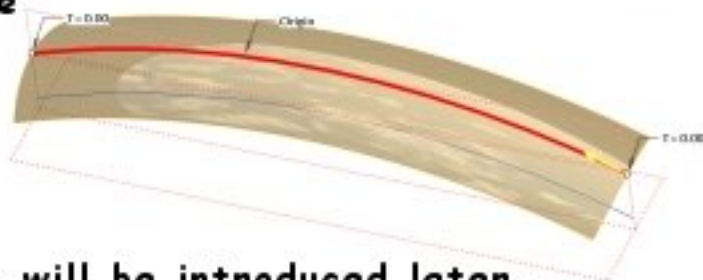
Then prepare sketches with major contours.



Create first surface by VSS feature using upper curve as trajectory.

Origin trajectory lays on datum plane so the surface is going to be normal to it - this is controed by Normal to trajectory option.

Of course the normal direction could be different but this will be introduced later.

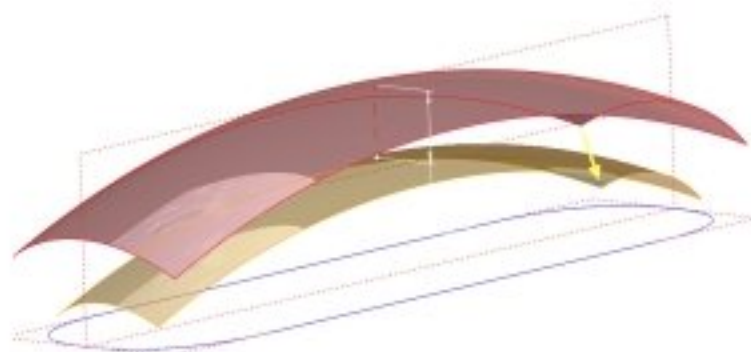


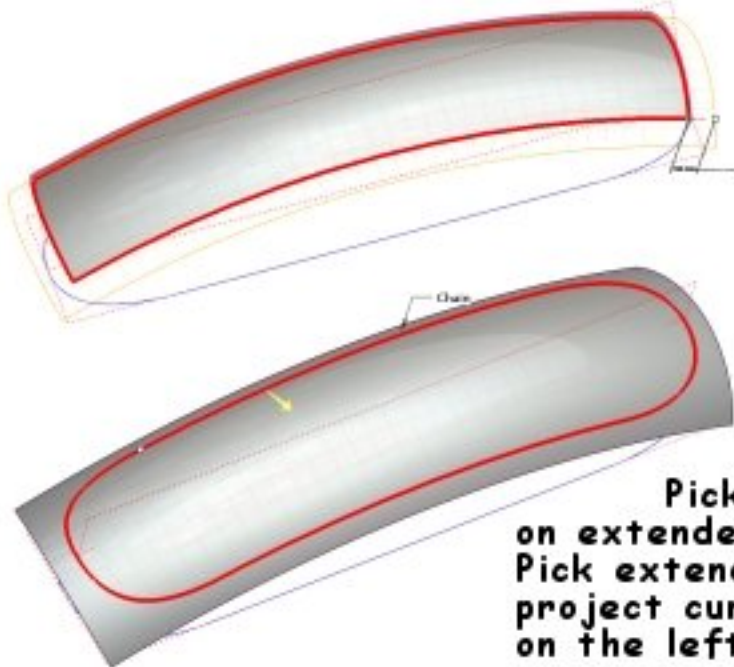
Now, create a sketch of contour seen form top.

Create new surface as an offset from original one by Edit > Offset > 2mm



Rememeber - some of functions in Pro/E are disabled until geometry/features are chosen.



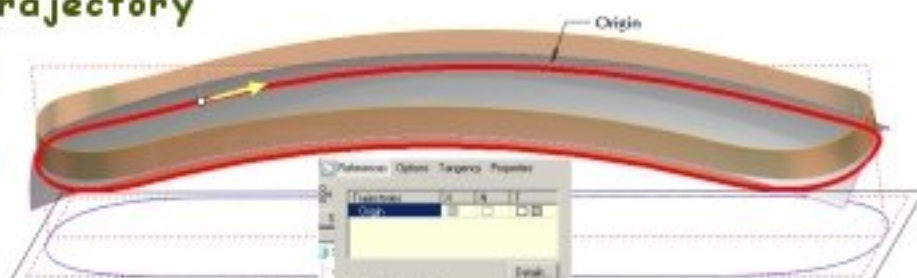


Just created surface is to short to project on it sketch with contour seen form Top. To extend surface pick an edge, hold Shift button and use RMB to collect whole chain.

Edit > Extend - make it 10 longer

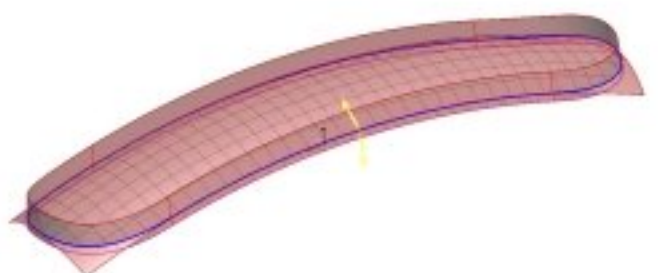
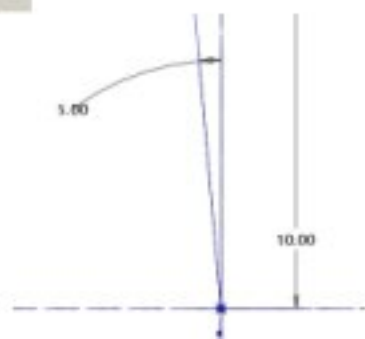
Pick Top contour and Edit > Project on extended surface. Pick extended surface Edit > Trim - choose project curve to trim surface as displayed on the left.

Use Projected curve as a trajectory for new surface. Notice - VSS in setting new surface perpendicular to existing one. It is because is placed on it.



Well, it is not an intention to leave it as it is, so set Normal to Projection option instead and choose bottom datum plane

Check the difference between Normal to Surface vs Normal to Projection!



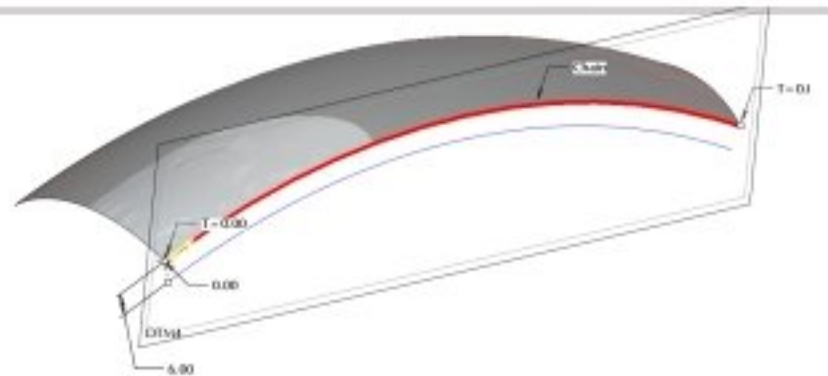
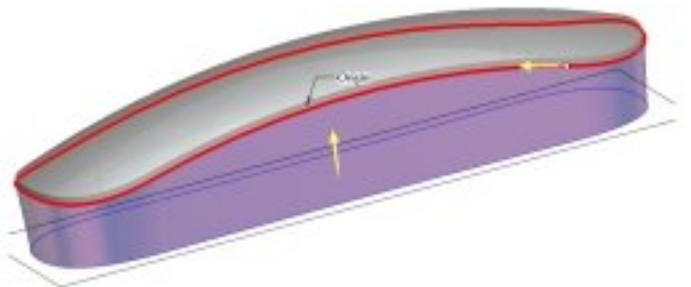
Merge all surfaces in one big quilt - Edit > Merge.





Well we could stop this tutorial at this moment but it is really worth to spend with VSS few minutes more.

Create new or redefine previous surface. Change VSS profile in this manner to make a line between datum plane and trajectory. You can see how line is changing along trajectory. This is possible because of default setting for Options > Variable Section.

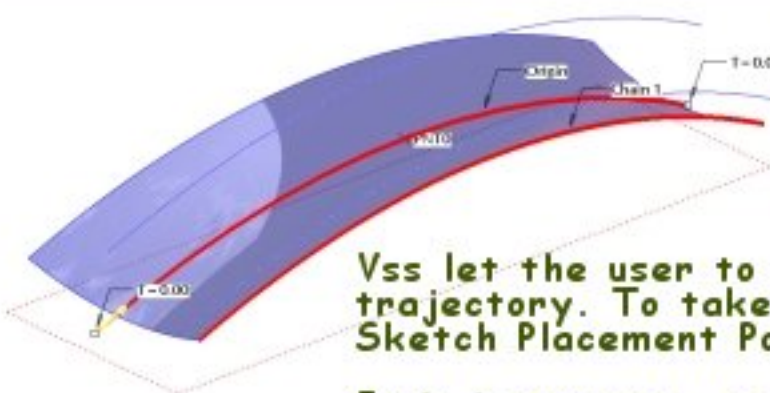


Next step is to prepare special side curve as an additional trajectory. To do so, move Insert Mode before projected curve

Before we digg VSS deeper special Datum Point has to be created. Place it on the middle of second curve form main contour Ratio 0.5

Make Datum plane through an edge. Then pick that edge and Edit > Offset.

Make it sure You are offsetting an edge along datum plane not the surface!



In VSS curve picked as first one always plays a role as Origin. Make sure to choose trajectories in following order - see at the left!

Vss let the user to create a profile at any moment of trajectory. To take advantage of this Options > Sketch Placement Point - choose created point.

It is important - such point has to placed on Origin trajectory!

