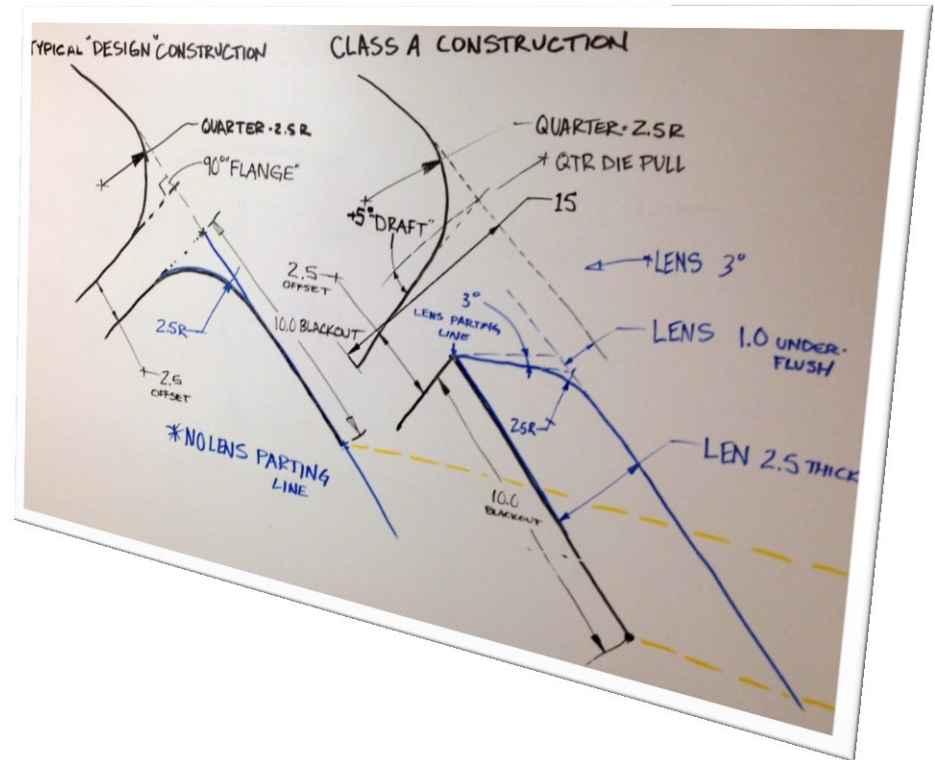
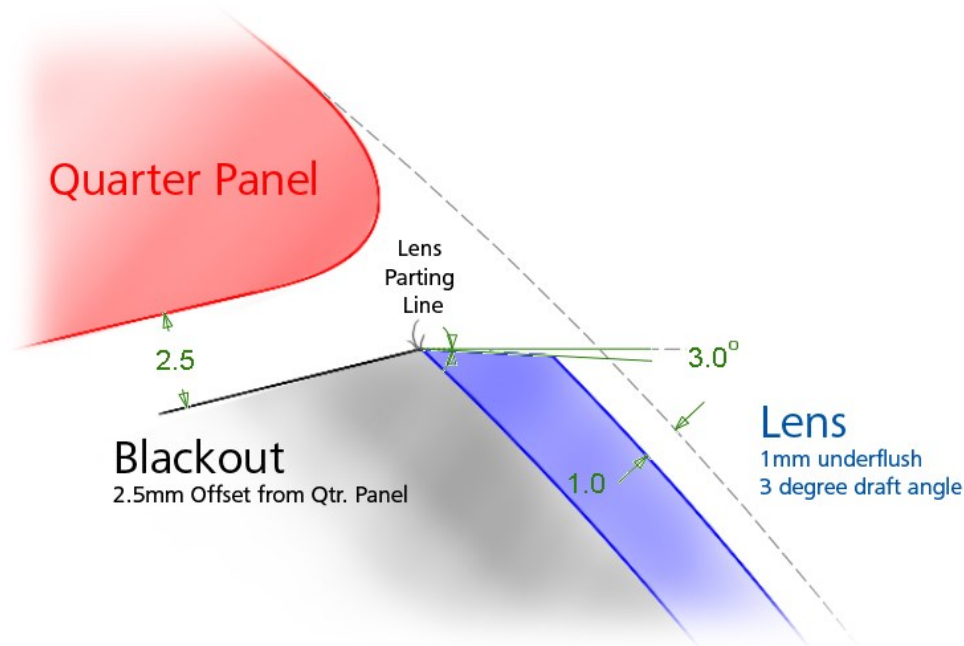


A5.27: Light Housing - Tail Lamp Lens Edge

In this tutorial the Lens surfaces are constructed to the engineering requirements shown below :



KEY CONCEPTS

Refining the Draft Surface Patch Layout

The great thing about tools such as MS Draft is that they produce a lot of surface data, easily. But with a bit more care, you can improve the surface structure and reduce your workload when it comes to checking continuity. In this tutorial, Barry uses Object Edit > Attach > Connect on fragmented Curves-on-Surface to allow fewer surfaces for the draft. Using Attach > Connect creates multi-knots and is not recommended for final curves and surfaces, but as the CoS is 'fitted' during the draft creation, then it doesn't cause any problems.

Draft to a Surface

A new Draft option in Autostudio 2016 is 'To Surface'. This replaces the Length setting with a set of surfaces that define the extent of the Draft. This will typically reduce the amount of intersecting and trimming that will be required.

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0.00	Introduction to the design criteria			
1.08	Offsetting the lens underflush 1mm	Object Edit	Offset	
1.20	Offsetting the Blackout surfaces 2.5mm	Object Edit	Offset	
1.29	Offsetting the edge of the quarter panel by 2.5mm	Object Edit	Offset	
1.56	Construct the Draft surface forward, from the blackout surface			
2.23	Using 'default' settings and chain select - not the optimum solution	Surfaces	Multi Surface Draft	<i>Bezier</i>
2.43	Analysing the surfaces from the 'default' approach			
3.17	Optimising the Draft Surfaces – Trim Convert the corner surface to create a clean edge	Surface Edit > Trim	Trim Convert	
4.26	Using the Draft to Surface option to get the correct Flange length	Surfaces	Multi Surface Draft	<i>To Surface</i>
5.15	Cleaning up the curves-on-surface to avoid small 'sliver' surfaces	Object Edit > Attach	Attach	<i>Connect</i>
6.19	Build the draft surface from the cleaned up CoS	Surfaces	Multi Surface Draft	<i>Bezier</i>
6.50	Use 3D trimming to create the lens front face	Surface Edit > Trim	Trim	<i>3D Trimming, Project, Normal, Extend</i>
8.00	Use Tubular Offset to create the 10mm blackout line	Surfaces > Rolled Edge	Tubular Offset	
8.21	Assigning components to layers			
8.43	Showing the final surfaces that you are aiming for			