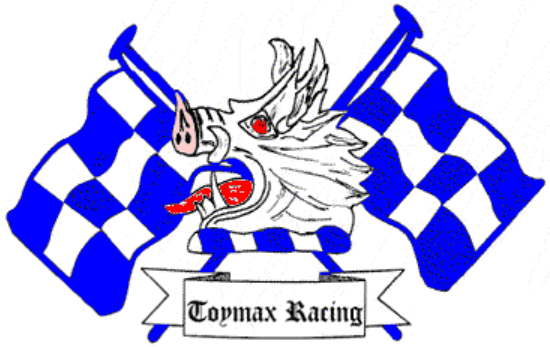
Air Technology Australia



FIBREGLASS BODY COMPONENTS DESIGN PHILOSOPHY

We have been around racing machinery for a very long time and we have observed how others go about the business of making their cars go fast, stop them, make them handle and so on. So we have learnt a great deal by watching others' mistakes and trying hard not to make any of our own.

But getting back to the Fibreglass Body Components, we noticed that some of the quicker cars had light weight material body bits in an effort to shed some weight and go faster for the given amount of power available. We thought this was a good thing. But when we started to more closely observe what was happening on the Track we noticed that all was not well.

The original shape of your car (particularly in relation to Bonnet, but applicable elsewhere as well) was designed and no doubt exhaustively Wind Tunnel tested to refine the shape and cut down the Drag Coefficient. So most people tend to replace body bits with the same shape as the original vehicle (rules aside) because they want to retain the tested body shape and its associated drag coefficient.

Imagine our surprise then when we discovered that the replacement panels used by most competitors are so flimsy that they positively deflect under the air pressures routinely applied by travelling at in some cases even moderate speeds.

There are two downsides to this:

1. In an attempt to make the bonnet more rigid they simply add more quarter turn fasteners – expensive and problematic when you want to remove the bonnet to fix something underneath. And it does not address the root problem.
2. As the bonnet deflects under wind load it changes its shape and the aerodynamic properties of the car. Tantamount to trying to push a brick through the air. Not only that, but it obviously plays havoc with the other aerodynamic aids (if any) on the vehicle meaning the downforce you thought you were going to get could be completely negated by the changes due to the reshaped bonnet. All of which is not evident while the car is standing still.

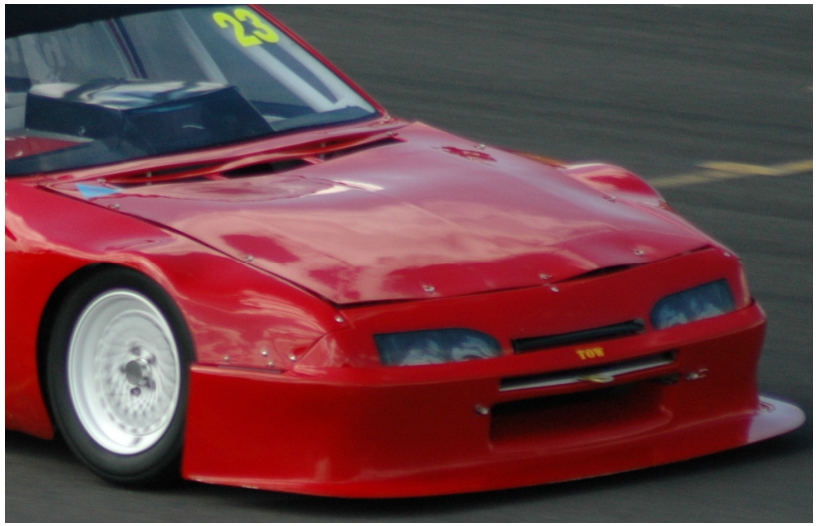
So we have elected to make components which are still light (maybe not quite as light as the examples below) but at the same time will hold their shape even under the highest wind loads – for which you can read speed.

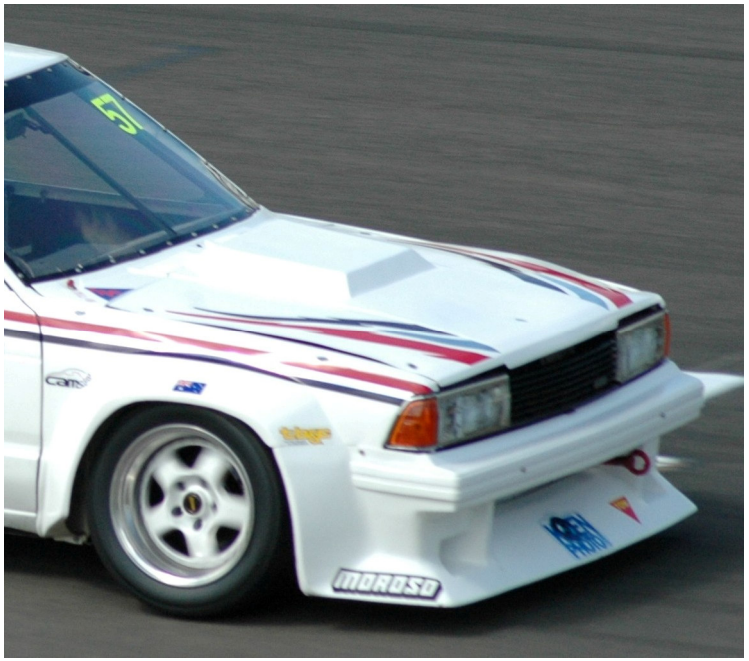
But we also want to keep the costs reasonable. We could use Carbon Fibre laminates which may be arguably slightly stronger and slightly lighter, but this solution requires a bigger budget. We have opted for Fibreglass with internal bracing (see Product Images). This gives us the best compromise in terms of strength, lightness and of course cost.

And you too can benefit from our experience and engineering expertise. This same high quality solution is available to you. And just to show you what we say is true, take a look at the photo gallery on the next pages.

And don’t let that happen to you!

Air Technology Australia





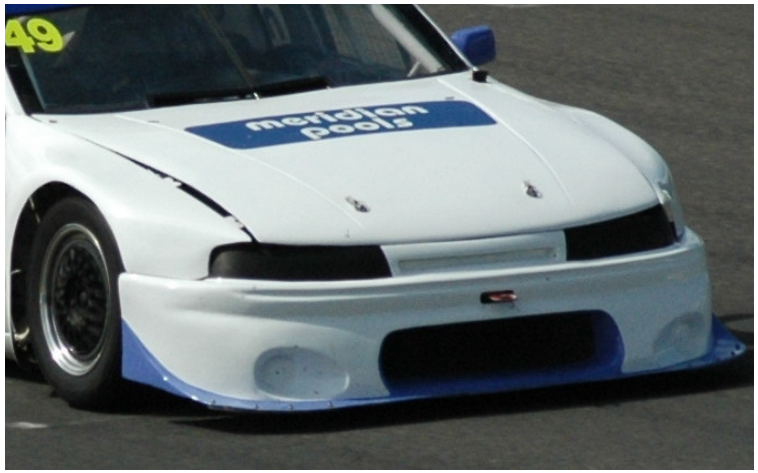
See the distortion around the edges and on the flat sections of the bonnets.

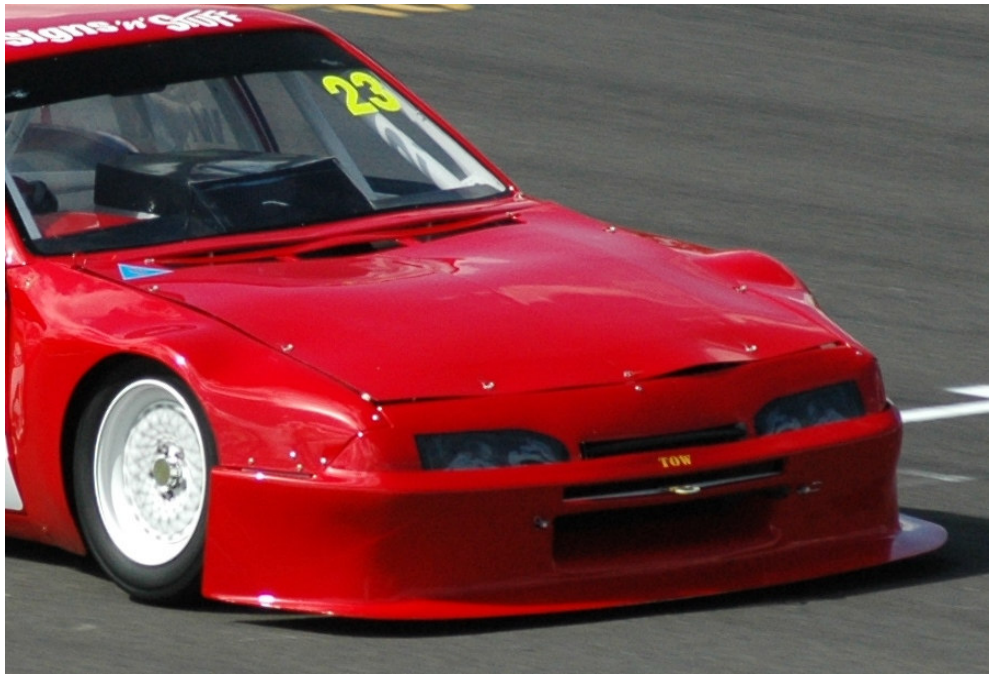
Just think what that does for your aerodynamic profile and drag coefficient.

Air Technology Australia

Toymax Racing

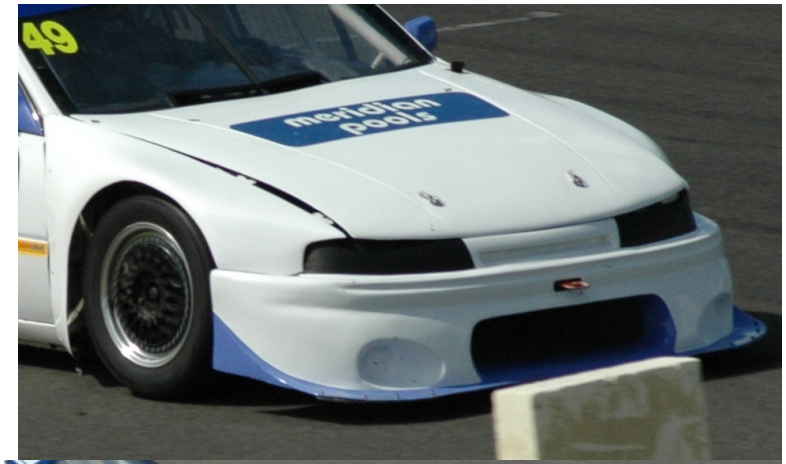
Take a close look – the distortion is very obvious on all these cars. Front lips lifting up and letting air in where air is not supposed to get in. Bonnet shape like a wave showing high and low pressure areas graphically.

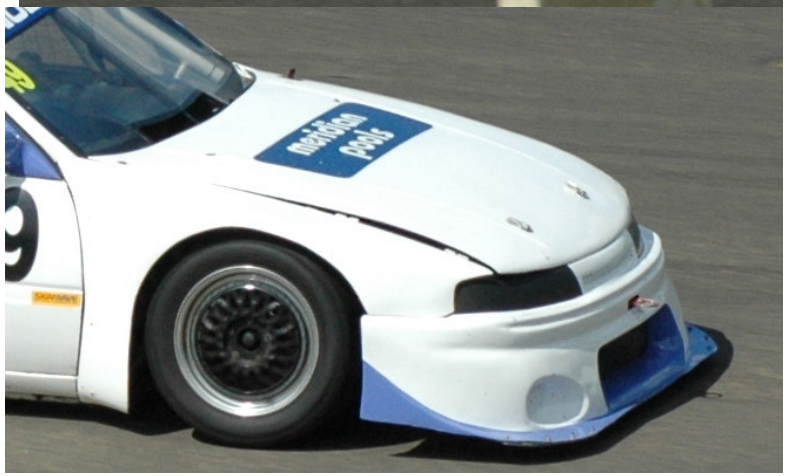


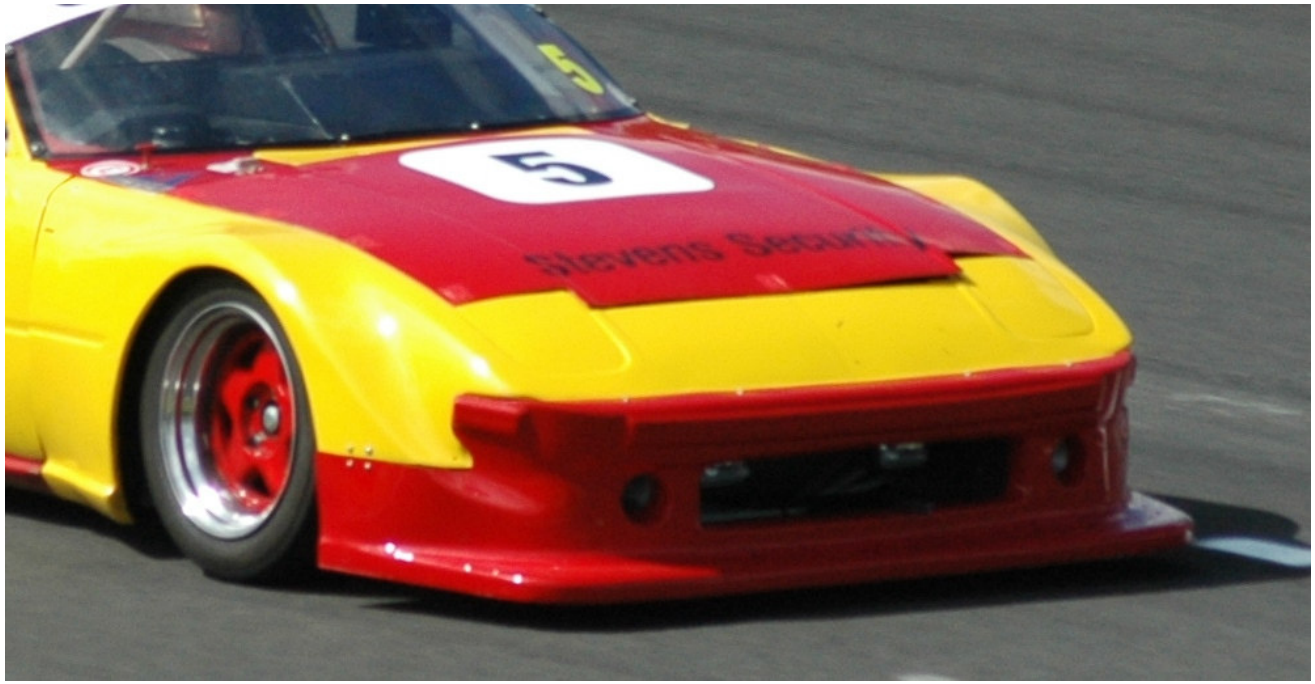


Air Technology Australia

Toymax Racing







Air Technology Australia

Toymax Racing

Check out the video that these stills came from as well. You will find a link to it on the Product Pages. As they say in the ads, Don't let this happen to you!