



Case Study Bonneville Streamliner

ARC, the Best Kept Secret in Efficiency!

The **Bonneville Salt Flats** are about record **breaking speed** and speed at Bonneville is **found by reducing aerodynamic drag** and an efficient engine. The body shape of a streamliner race car must be very smooth and **avoid any shapes that can cause drag turbulence**. With top speed held for the entire run at Bonneville, even the slightest bit of turbulence will have an impact on top speed.

The **Brine Shrimp Streamliner team** needed a **flow visualization study** to help them understand their body design. Outdoor straight line aerodynamic testing had been done, but the weather was often unpredictable and didn't match the conditions found at Bonneville. Therefore, the Brine Shrimp team **turned to ARC to test in stable repeatable conditions** using the ARC wind tunnel.

Using wool tufting technique, the team was able to gather full car flow visualization. Testing showed the **design was near an optimum shape and pinpointed a single area that development was needed**. With test results, the Brine Shrimp team set out to increase efficiency of the design **in the quest for more speed**.

