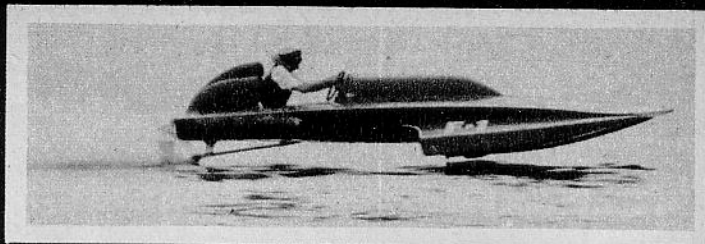


Complete Plans of "Alter Ego"



On the following pages appear the complete offsets for Paul Sawyer's *Alter Ego*, the world's fastest and limited hydroplane. This sensational 266 cu in. rocket ran 120.085 mph over the measured mile at Salt-on Sea and average 87.890 mph for five miles on the closed course at the same regatta late in 1951. The straightaway figure is ten miles an hour faster than any other boat of this class has ever recorded and both marks have been surpassed only by the big thundering Gold Cuppers and Unlimiteds with their tremendous aircraft engines.

Boat racing is heavily indebted to Paul Sawyer for his unselfish gesture in permitting the publication of his boat plans. Obviously it takes horse power expressed in terms of rpm to get speed, but no amount of horse power will make a poor hull go. In the final analysis speed is dependent on hull design and the 'combination'—a summation of planing angles, balance and propeller to go with the power plant. Champions guard these secrets which together with their driving ability represent their margin of supremacy over the rest of their class of boats.

These so called "speed secrets" represent unrecorded time spent in painstaking research—testing—trial runs . . . not to mention the factor of expense. Why should Paul Sawyer give away these secrets and risk the possible loss of his records and titles? His remarks tell the story: "Like the majority of racing men who have reaped years of enjoyment from the sport I have contributed little to its growth. There are many factors that play a part in the success of a racing class, but two stand out above the others as prerequisites for growth and popularity. The first of these is the necessity of having outfits evenly matched to provide good close competition, for the driver as well as the spectator soon tires of the 'big parade' where one or two outstanding outfits run away and hide from the rest of the field. Winning a race from good tough competition is a wonderful thrill, but the excitement isn't there when the race is a walk-away and class interest wanes rapidly when there is a margin of a number of mph between the leader and the tail-enders.

The second prerequisite to a successful class and a sure fire measure of its popularity is the size of the class registration. This is a direct corollary of our first requirement. The class with the large boat registration will invariably offer good close competition with new men coming in each season to challenge the leaders. It's the newcomer that needs the help. Give him a few pointers and the basic ingredients to work with and he will be an enthusiastic competitor. Many willing and hard working newcomers have given up the game—discouraged—and unable to get enough information to keep in the running at all. It is easy to say 'let them find out for themselves—that's what I had to do', but that attitude won't help to build the sport, or to furnish the top notchers with the new competition that keeps up their interest.

You can go out and buy or have built a top notch outfit that will put you right up with the leaders, but many of our drivers

have for reasons of economy to build their own. These are the men who need some accurate information and some help from the rest of the racing clan.

There is a third category of racing men. This is the chap that may or may not be perfectly capable of buying all the professional advice or completed equipment that he wants, but he has no desire to do so for his big thrill from the game comes from building every single inch of his outfit himself. This fellow is one of the biggest assets to American racing, and from his work often comes some of our greatest outfits. He needs some basic assistance too to put his talents to their best use. We must remember that it isn't the handful of champions and record holders that make up the great sport of American racing. It is the thousands of other fellows always in there pitching and more often than not with little chance of running out in front that make up our game. With a little assistance for these men we will have closer competition, better racing, more enjoyment out of our sport and new outfits to swell our ranks. There have been much to do about what effect the publication of plans will have on the business of the racing boat builders.

Obviously it isn't going to hurt their business for the man who buys his outfits complete and ready to go out and win races is going to go right on doing this same thing. The man who builds his own isn't a customer of the custom builder. His chances of building a first class outfit from his ideas and his observations of winning boats are pretty slim. There are already too many hit-and-miss hulls in the back yards now, whose owners gave up the unequal battle in disgust.

The publication of plans for successful front-running boats isn't going to immediately produce a flock of new champions, for even with a good sound prototype to follow, each man is going to have to arrive at his own 'combination' . . . and after he gets it he still will have to drive to win.

I hope that the publication of the offsets of *Alter Ego* in *Speed and Spray* will help to swell the ranks of the 225's and the 266's and will serve to make the competition closer and tougher. This in a small way is my contribution to the sport, a partial payment for all the enjoyment I have had from the greatest game on earth. It is my hope that other men in other classes, inboard and outboard alike, who have developed winning combinations will pass on a few of their "speed secrets" to the newcomers and the hard workers who make up such a big part of our game."

The reader will notice at once that the offsets are in the metric system. This is how it came about. At the end of Paul's European trip last year he submitted his boat to Prince Borromeo, President of the Italian Motor Boat Federation for measurement and gave his permission for the use of the measurement to further the Italians' development of their three point hulls. Paul didn't know who was to do the measuring or how thorough the job would be. In the due course of events he received the two rough sketches and tables reproduced here for his

approval, little realizing that the measurements (which was to result in the final detailed plans reproduced on the following pages) had been made by the great engine designer Mario Speluzzi. Paul added a few notes shown in the box at the bottom of one sketch. He didn't understand that these were just a "rough out" and that he would receive on his return to America two big three foot blueprints of *Alter Ego* accurate to 1 millimeter on every measurement, just as they appear in this issue of *Speed and Spray*. How accurate are the plans? Note stations 3, 4 and 5 where the bottom shows a minute concavity running from 1.5 to 5 mm at the crown. This is the section carrying the strut. How accurate? So accurate that the measurements recorded this slight warping at this point. If YOU build an outfit from these offsets, you can omit the sag—the section should be flat.

Editor's Note: We are deeply grateful to Paul Sawyer for the permission to reproduce these offsets. Photos of Alter Ego and of the engine installation, with a description of the power plant appeared in the June issue of Speed and Spray. It would be interesting to know how many of our readers intend to build or revise their outfits in accordance with these plans. Please drop a line to our Editorial Department. We would welcome the opportunity to publish any helpful material of this nature that any of our readers care to make available to the sport.—Ed.

