



#### The Latest News from AeroSouth - November 2021

# Vintage Sunfish restored with AeroSouth Speed Trio

Brian Miller of Austin, Texas is one of the latest purchasers of AeroSouth's Speed Trio of high-performance components. Taking up sailing again after a along break, he acquired a vintage Sunfish that needed some TLC. The image on the left shows before (middle) and after (bottom) images of the rudder and tiller. Brian asked if we could make a tiller from Sapele to match his new FS rudder and Sabre daggerboard. We thought about it for a moment and concluded "Why not?". Brian is the proud owner of the first Sapele tiller, which does look nice on his boat, matching his new rudder well.

More important though is how his 70s-era Sunfish now performs. As he describes: "Hi Kent, Just wanted you to know I finally got everything put together and took the boat out Saturday. The new rudder is great! Steering was effortless and very responsive. I had absolutely no weather helm. It was light air - around 4 knots - but it was fast and smooth sailing. The daggerboard worked well too - it passed the drop test:) I'm thinking of christening her Miss Guided."

Thanks Brian for the kind comments and for the inspiration behind the Sapele Tiller. Brian took advantage of a **limited time offer** - buy a Speed Trio before the end of 2021 and receive a free pair of **Breezy wind indicators**.

In stock and ships within 24 hours. Order yours now from the AeroSouth Store!





## Dinghy Bob gets a New Tail, and a Face

Sometimes a new product needs time to mature. While we were very pleased with the performance and acceptance of **Dinghy Bob** when we first introduced it this past summer, we felt it needed a better tailfin, necessary for its unique wind indicator feature to work correctly. The picture here shows what we settled on - a flexible EVA foam fin attached to the back of the float

with the help of a strong plastic U-channel. All new Dinghy Bobs are now shipped this way, and AeroSouth is mailing replacement tailfins to existing users this month, free of charge.

Just for fun, we used some of the 2mm thick, sticky-backed foam sheet to create eyes and a mouth, which adds fun and character to Dinghy Bob. Who says you can't have fun this way on your sailboat? We invite all Dinghy Bob users to **decorate their floats** this way (inexpensive, multicolored, sticky-backed foam sheets are available at **Hobby Lobby** and other craft stores). Send us your pictures and we will post them on our **Dinghy Bob Gallery**.



### Rudders and Daggerboards Re-Stocked and Ready for Shipping

After a busy summer which saw our production here in North Carolina running "flat out" to keep up with orders, we've recently increased our production capacity and now have all our products in stock and ready to ship. Unlike some distributors who do not make parts themselves, AeroSouth normally ships orders within 24 hours, and often on the day your order was received. All AeroSouth

products are proudly engineered and made in North Carolina, USA!

**Inflation? What's that?** We work hard every day to improve our productivity, keeping our prices affordable *and* predictable. **Supply chain problems? Not at AeroSouth!** What we can't make inhouse we get from suppliers located within an one-hour drive from our shop, a key criteria when choosing partners. At this time we do not plan on any price increases, which have been the same all year, despite rising inflation. **Order yours now from the AeroSouth Store** 



## AeroSouth Announces the Sapele Tiller

Our new wooden tiller is made from Sapele, the same beautiful mahogany species used in our high performance rudder blades and daggerboards. The dimensions of our sapele tiller are 43" long x 1" high x 3/4" wide, designed to fit standard Sunfish rudder attachment hardware used by a wide variety of small sailing craft. (Other sizes available upon request.)

In case you were wondering - it is strong! Sapele has the same modulus of elasticity (12GPa) and a somewhat higher modulus of rupture (110 MPa vs 103 MPa) compared to white ash, the most commonly used wood species for things like tillers, shovel and axe handles and baseball bats. According to the **Wood Database**, "Sapele is very durable in regard to decay resistance. Moderate insect/borer resistance." We finish our tillers with three coats of quality spar varnish and will drill mounting holes to your specification at no extra charge. And, as with our boards and blades, the AeroSouth Sapele Tiller is a thing of beauty that you could just as well display on the wall of your boat house, trophy room, den, boudoir or man-cave.

In stock and ships within 24 hours. Order yours now from the AeroSouth Store!

### AeroSouth Developing Class Replica Daggerboard

Recently, one of the world's top Sunfish competitors contacted us, asking if we could supply so-called "Class replica" daggerboards as offered by others. We learned that, other than for the US Nationals and Worlds Championships, replicas were permitted in Class racing events, provided they meet dimensional requirements. We also learned that there is an ongoing shortage of



components such as daggerboards. After thoroughly researching this topic, we believe we can produce a replica at an affordable price and with the same market-leading quality found in our high-performance, **Extreme Sabre daggerboards**. The AeroSouth replica will include a few special benefits to sailors (competitive and recreational alike), while remaining within the constraints of the Class rules. And, being made from Sapele mahogany, it will be a thing of beauty, too! Watch for upcoming news as our first "Classic" board takes to the water.



#### **AeroSouth Products for the Phantom 14**

Bob Stewart of Athens, Ohio recently contacted us to see if our products might work on a **Phantom 14 sailboat** he was refurbishing. We did some research and found many similarities between it and the Sunfish. So far, Bob has installed a set of mainsheet hanger clips, which fit well onto the boom despite the use on the Phantom 14 of a sleeved sail. He also installed one of our new Breezy wind indicators on the top of the spar. Our **FS rudder blade** as well as our **Sabre daggerboard** should also work on the Phantom 14, given the similarity with the Sunfish for which they were originally developed.

Some 9000 of these nice sailboats, designed by Jack Howie, were built by Howmar Boats Inc. between 1977 and 1983. Recently Fulcrum Speedworks acquired the original molds for the Phantom 14 and used these as the basis for their new Fulcrum Rocket, another boat that benefits from AeroSouth's high-performance components.



As seen in the image here, we are making good progress on our first prototype daggerboard for the **Catalina Expo 12.5**, **ZUMA** and similar dinghies. For initial tests we have modified a Sabre vertical daggerboard, with its market-leading hydrodynamic performance, for the inclined trunk of these other boats. Production boards will be somewhat different but retaining our proprietary cross-section (profile) and planform as originally developed for the Sunfish. Sapele will be used for production boards, unlike the prototype here, made of poplar. Watch for upcoming news as our first tests are performed.

Have a special need for your small sailing craft not seen here? AeroSouth welcomes all inquiries - contact us here.



## The Science of Sailing #3 - Plastics for Small Sailboats

Hard to imagine, but there are those who advocate for an end to the use of plastics, one of man's greatest inventions of the past century. Chances are, your first experience with a (very) small boat was in the bathtub as a child, and it was probably made of plastic. We tallied up a list of all the various types of plastics used in our products and thought we'd share this with you.

Composites, typically a combination of a matrix of glass/carbon/aramid cloth and resin, a form of plastic such as polyester, vinyl ester, epoxy, and polyurethane. Typical protective coatings are epoxy or urethane. PETG (Polyethylene Terephthalate modified by Glycol) is what we mostly use for 3D printing, but sometimes also PLA (Polylactic acid) and ABS (Acrylonitrile Butadiene Styrene). PE (polyethylene) is what's best for Dinghy Bob floats. Its tailfin is a combination of flexible EVA (Ethylene-Vinyl Acetate) foam attached to a backbone U-channel extrusion of Styrene. Our stickers are made of a laminate of plastic made by 3M, the same tough, weather-resistant film used on highway signage. Gaskets are made from EVA foam and Neoprene, synthetic rubber produced by polymerization of chloroprene.

The wire connector caps on Breezy are made from heat-resistant, high-dielectric plastics. The thin film streamers on Breezy are made of Mylar, actually BoPET (Biaxially-oriented polyethylene terephthalate), a tough polymer film made from stretched PET, the same plastic used in water bottles, and the PETG we use for our 3D printed parts. The rubber stops that come installed on all our daggerboards are made from a mixture of natural and synthetic rubbers. All lines are made from synthetic (plastic) fibers. Paints and primers are made of polyurethane. Plastic protective guard caps on the ends of pipe clamps used to attach Dinghy Bob to a mast are made from an elastomer suitable for injection molding. Reusable Zip ties are a combination of Nylon and synthetic rubber.

We might have missed a few, but you probably get the picture. Without plastic, we'd be up the creek without a paddle. (Come to think of it, our fiberglass canoe is made of plastic composites and our paddle is made partly of plastic.)

Whenever possible, we select materials, coatings, fasteners, plastics and rubber that are UV, water,

and salt - resistant to provide our products with a long life in the harsh environments typical for sailboats.

Without plastics, boating as it is known today essentially ends. Plastics, of course, are derived from oil, the most renewable substance on Earth. Obviously the cost of oil plays a critical role in the cost of plastics, and ultimately to everything made from it, including the gasoline we need to get to the lake and enjoy our wonderful little sailboats.

#### SAIL FASTER - HAVE MORE FUN

**AeroSouth Technology LLC** 

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