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This boat will sink - on purpose

EHT man takes 3,000 hours to create WWII-style sub

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EGG HARBOR TOWNSHIP - At least three friends and relatives have told Bill Gifford they want to go for the first ride in the new boat he's building.

But Gifford can't even start to count how many people say they want to go for the *second* ride in his new toy.

Because this former world-champion boat racer is building himself a submarine, a 32 1/2-footer that he says will be able to do its cruising at 300 feet underwater.

Gifford has spent more than 2,000 hours building his World War II-style sub, after putting at least 1,000 hours of research into how to make something that will go that deep - and more important, that will come back up to a few feet above the waterline with both people inside still breathing air.

This guy is no rookie when it comes to making boats work. He's building his sub in the marina he owns, Gifford Marine Inc., on the Margate Bridge road. And before he got into this business, Gifford owned and maintained 46 commercial clam boats, some of which he rebuilt from the bottom up.

That's the bottom of the ocean: Gifford sometimes bought wrecks and made them seaworthy again. He could do that partly because he started his working life as a steel-fabricator and welder, a skill he inherited from his father, also Bill.

"So I just had to learn how a submarine works," Gifford says, sitting in a second-floor office with one of the best views he can imagine - he has a window that looks down over his baby, the sub, sitting safely in the workshop below.

Yeah, that's all - figure out how a sub works, then build one that does. Gifford did that with a lot of help from the Internet, where he spent most of his 1,000-plus hours of research and design time. He found a Web site there created by members of the Personal Submersibles Organization, a group that shares the hobby of making their own underwater craft:

www.psubs.org/

But Gifford didn't want to just build a submersible, because they need "mother ships" - bigger boats to take them out and drop them off to do their diving. He wanted a full-fledged, full-powered submarine.

Specifically, he wanted one like several countries used in World War II, which is why he never tried to go to a working shipyard to see how they build submarines today.

As for why he wanted his own submarine, Gifford has three reasons:

He wants to go exploring underwater, everywhere from off the coast of Margate to

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whatever big lakes or exotic seas he can get to. He also wants to do research on fisheries, because he has friends who are fishermen, and others who are the state and federal regulators in charge of managing fish stocks.

Both those goals explain why he picked the name he did - the sub is the RV Needlefish, with the RV standing for "research vessel."

But Gifford acknowledges that he has a third, not-so-selfless reason for putting all that time and energy into his sub: He wants to use it to promote his business. He plans to start doing that with a boat show at the marina scheduled for May 30 to June 1, and he says his baby will be featured at a big boat show scheduled this fall in Atlantic City.

The sub project also shows up prominently on the business' Web site:

www.giffordmarineinc.com/

He's documented his two years of work there with hundreds of pictures, ongoing updates and many, many more technical details on the sub than a landlubber with a notebook could hope to fit into even the longest newspaper story.

But to be brief, the inside of the submarine looks amazingly like a propane tank - because that's exactly what it is. The captain and his first mate will sit, very snugly, in a 1,550-gallon steel tank that Gifford cut a hole in, then welded the ends of two other steel tanks onto and eventually built a reinforced steel frame around.

He got his most trusted fiberglass man, Angel Bermudez of Propatch, to coat the whole thing - about the only job on the Needlefish that Gifford didn't do.

Gifford just finished the building work last week, and now he's moving on to details like painting, electronics and the high-tech cameras that he says should let him see better from inside the sub than a diver with a mask could see outside.

He expects to knock all that off and have the diesel-electric powered submarine ready for its first underwater test - right in the bay outside his marina, with help from a forklift - sometime in July or August.

Assuming it does OK there, and on a second local safety check, Gifford will take the Needlefish out and start exploring.

But that's in the future. And before he gets there, Gifford likes to mention two historical footnotes to his project:

First, his office windows also look out onto Lakes Bay, which was named for Simon Lake - the local genius credited with inventing the first submarine.

And second, Gifford says a friend told him that the current Gifford Marine Inc. was once owned by a man who was determined to build his own submarine - but who died before he had the chance to do it.

Gifford just smiles when you ask if he thinks the older man left his spirit behind in the shop. But he's completely serious when he says he'll feel a whole lot safer in the Needlefish - even 300 feet down - than he did roaring along the surface at 100-plus miles per hour in his old racing days.

"I'm glad I got out of that," he says. "I'd much rather be in a submarine."

And most of his friends agree. Really. They'll just let somebody else try it on the first run, thanks.

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