

Old Cars Report PRESENTS
Car of the Week Weekend Extra!



It's a car! It's a boat! It's both, and it's perfectly restored.

Editor's note: Longtime readers will recall former Old Cars editor Keith Mathiowetz's editorials on his 1964 Amphicar 770 and its restoration. The vehicle was recently completed and we're very pleased to share the details of Keith's efforts into restoring the Amphicar into an award-winning example.

Keith Mathiowetz of Scandinavia, Wis., remembers the exact moment that he fell in love with the Amphicar 770, that quirky German automobile that doubles as a boat. As a kid standing on the shore of the Mississippi River in Red Wing, Minn., he witnessed the unique ability of the Amphicar unfold.

"In the late 1960s, in my hometown on the Mississippi River, our family was at a city park along the river and there was a white Amphicar getting ready to go in," Mathiowetz said. "And I just remember sitting there watching it. It finally went in and went upstream and I never forgot it.

"As a car-crazed kid, seeing one that could go in the water made me really want one when I was old enough." It would be more than a decade before Mathiowetz bought an Amphicar of his own, and another three and a half decades before he would be able to drive that car. Now when he does drive it, it's from the trailer to the show field — a much shorter path than the road to its purchase and its completion. It was

while he was in college when Mathiowetz first heard about a stash of Amphicars for sale in Hopkins, Minn. And it was one of Mathiowetz's other cars that started his path to Amphicar ownership.



It took Keith Mathiowetz about 12 years of regular work to restore his 1964 Amphicar. Note the red and green bow lamps and horn mounted on the front compartment lid to accommodate safe boating. At the rear, the exhaust pipe and bilge pump outlet (right) are positioned high above the water line. The license plate frame from the original selling dealer misspells the car's name; the stylized "Amphicar" script has led others to also misspell the car's name as "Ampficar."

"I was sitting in my uncle's body shop [in Sleepy Eye, Minn.] and my Met was parked outside," Mathiowetz said. "A guy stopped in to ask who owned that Metropolitan... that is when we got talking about Amphicars.

"We were talking about cars we would like to have, and I mentioned to him that I would like to have an Amphicar. He told me about a defunct dealership in Hopkins that still had some on their lot, and that's when I went to check it out. It was the summer of 1981 that I had that conversation with him.

"I went up there a little while after that conversation and found the little used car lot — it was a used car lot by that point — but it still had four or five Amphicars. The owner came out and explained that he was the distributor for Amphicars in the Twin Cities."



A 1983 picture of the Amphicar shortly after Mathiowetz purchased it only hints at the extensive rust hidden in the engine compartment.

The former Amphicar dealer had operated the oddly spelled Ampficar Co., located at 929 E. Excelsior Boulevard in Hopkins, as a subsidiary of Holt Auto Sales, Inc.. Some residents of the land of 10,000 lakes recall seeing dozens of new Amphicars for sale there during the mid 1960s, and even after Amphicar ceased as a company in 1967. Even as late as the early 1980s, when Mathiowetz stopped there, Richard Holt still had a few straggling Amphicars. One of the four or five remaining on the lot was a forlorn 1964 Amphicar painted Lagoon Blue. It had been sold new by Holt and thoroughly enjoyed by its first owner, who traded it in for a new 1967 Amphicar, the last model year for the marque. The Lagoon Blue Amphicar had been waiting for its next owner since 1967 and had considerably deteriorated in that time.

In his conversation with Holt, Mathiowetz learned that all of the remaining Amphicars on the lot were still available. However, they were out of Mathiowetz's price range.

"I think he wanted \$4000-\$5000 for them," he said. "But there was one in the back lot behind a chain link fence that was pretty deteriorated, and he said that one would be for sale. I forget how much he wanted, but even at that, I couldn't afford it."



Note the louvers in the engine cover to ventilate the rear-mounted four-cylinder. Mathiowetz is originally from Minnesota and dresses the car in plates from his home state and also his current state of Wisconsin.

The deteriorated Amphicar behind the chain link was the Lagoon Blue 1964 Amphicar. Although it was the most weathered of the bunch, its price was the closest to Mathiowetz's non-existent budget. While he still couldn't afford it, the idea of Amphicar ownership continued to float through Mathiowetz's mind.

A year later, with a few more bucks in his pocket, Mathiowetz returned to the Hopkins used car lot. The Amphicars were gone — relocated to another lot to make room for more modern used cars — but the lot was still being operated by Holt. Mathiowetz asked him where the Amphicars had gone and learned the weathered Lagoon Blue Amphicar had sold, but might be available again. It turns out the purchaser had never picked it up and it been relocated with the other Amphicars.

Holt gave Mathiowetz the buyer's information and he followed up. Sure enough, the Amphicar could be bought, and Mathiowetz sealed the deal in 1983.

The car had about 14,000 land miles on it, which Mathiowetz said is about twice as many miles as most Amphicars he's seen. Those miles didn't account for the vehicle's time in the water, of course, and its use there as well as the deterioration from sitting outside for 15 years had taken their toll.

"You could roll it and steer it and that was it," he said. "The engine was seized, the brakes were non-existent. Rust consumed the whole rear half of the body. The top frame was bent and the interior was all deteriorated."



Lagoon Blue Amphicars were fitted with yellow-and-white upholstery. In addition to standard automotive gauges and switches, the Amphicar has switches for the boating lamps and the bilge pump.

Nevertheless, Mathiowetz was pleased with his purchase. The college student promptly moved it to his parents' garage where he would only begin to tear into its restoration. Mostly, it sat there for nearly a decade as Mathiowetz established a career following college. That path required a few address changes and in 1992, the Amphicar began floating from one garage to the next.

"I was just happy to say I had one," he said.

Amphicar lands ashore in America

With an Amphicar now in his small but growing car collection, Mathiowetz set out to learn as much as he could about the amphibious car's history. Although bodies were built in Italy and assembled at plants in Berlin and Lubeck, West Germany, the car was built for and marketed to North Americans by the German Quandt Group doing business as Amphicar Corp. So American was the car that it made its debut at the 1961 New York Auto Show. Plans were to sell 20,000 per year, but during the 1961-'67 lifespan of the Amphicar, just 3878 were built at prices ranging from \$2800-\$3300. Of those cars built, 3046 went to the United States. Sales to the United States ended when Amphicars could not meet new U.S. DOT and EPA standards for 1968, and since U.S. sales kept Amphicar afloat, the factory closed thereafter.



Note the locking handle on the lower right portion of the door sealing the vehicle for water entry.

Amphicar design and engineering was by Hans Trippel, who is also credited with the amphibious SG 6 Schwimmwagens used by Germany in World War II and the Mercedes-Benz 300SL's gullwing doors. The all-steel Amphicar "pontoon" body was only available as a convertible in one of just four colors: Beach White, Regatta Red, Lagoon Blue and Fjord Green. Its unitized construction incorporated a smooth floor pan that served as the hull; the frame was hidden between the floor pan and removable Masonite panel that served as the interior floor. Since the body had to be watertight, all body seams were fully welded or leaded rather than periodically spot welded as on landlocked cars. Each opening in the Amphicar body was sealed with rubber gaskets from the hood to the decklid to the doors to even the body openings for the lenses and lamps. In addition to latching in the standard fashion, each door had a latch at the bottom to fully secure it and seal out water. In the water, the Amphicar had a good 14 inches of freeboard, but in the event water was taken on in the hull, a bilge pump located in the engine compartment spit it back into the lake.



The rear-mounted engine is a four-cylinder displacing 1147cc.

To efficiently split waves, the Amphicar's hull featured many boat characteristics. In addition to the smooth floor pan, the bow was pointed and veed out to the passenger compartment. The headlamps and taillamps were mounted high to keep them above water when the Amphicar was afloat, and at the back, beneath the engine, the floor pan was formed with a large bulge to accommodate the engine. This bulge

was flanked by the two propellers, each shielded, on early Amphicars, by two thin metal panels at port and starboard sides.

Despite its boating function, the Amphicar had a pleasing design in step with the times. Above the round back-up lamps and vertically arranged taillamps were short fins that shouted late 1950s, the period in which the Amphicar was designed. The round headlamps were hooded, and the windshield was curved.

Amphicar performance on sea and street was lackluster, a fact admitted by its model name of "770" for its approximate 7 mph/7 knots capability on water and 70-plus-mph speed on land. Despite its shortcomings on land and sea, it remains the only mass-produced civilian vehicle capable of both.

Designing a car to function satisfactorily in water and on land was a momentous task, so when it came to its mechanical components, Amphicar Corp. didn't reinvent the wheel. Parts came from several European car companies. The rear-mounted engine was a 43 hp Triumph Herald four-cylinder displacing 1147cc. The special fully synchronized four-speed manual transmission and differential by Hermes was unique in that it turned the rear wheels as well as the nylon propellers. However, the unique land/water transmission borrowed some Porsche 356 internal components. Meanwhile, some suspension parts came from the Mercedes-Benz catalog.



Authenticity was key in Mathiowetz's restoration as seen here with NOS switches and labelling.

To aid the transition from water to land, the wheels and propellers could function in unison. The propellers could also move forward and backward via a floor-mounted handle located to the right of the gear shifter. The front wheels steered the Amphicar on land and lake. While Amphicar Corp. was honest about the car's performance in naming the vehicle, it was optimistic in marketing the vehicle as a sports car. A brochure said it had the "driving properties of a modern, sporty type car" and the "internal fittings" (interior) were "designed to please the sporty driver." However, the Amphicar had bench seats front and rear in vinyl (dubbed artificial leather by the factory) — hardly sporty by the measure of a bucket seat European sports car of the day. The Amphicar's tall stance with 10 inches of ground clearance was not necessarily conducive to handling, although it probably handled better than an enormous American car of the day. In reality, the Amphicar wasn't so much a performance sports car for the automotive sportsman as it was a recreational vehicle for the outdoor sportsman. That was certainly the case with the original owner of Mathiowetz's Amphicar.

"When I was trying to get some debris out of the convertible top well, I discovered a very water-damaged Amphicar sales brochure, and along with that was an empty 1960s Jitterbug fishing lure box, all of which I kept. From what I could tell, the original owner used the car for trolling while fishing. How many cars can do that? I think that is the best part of the story."

The road to restoration

The discovery of a fishing lure box, a brochure, and even faded 1966-'67 Minnesota boat registration stickers was just the beginning of Mathiowetz's journey with his Amphicar. Shortly after he purchased the car, Mathiowetz and a friend began tearing it apart.

"He was working at a NAPA dealer that had a machine shop," Mathiowetz recalled. "And so we took the engine apart, and the machine shop did a valve job on the head and cooked the block.

That is as far as we went, and it stayed that way for 20-some years."

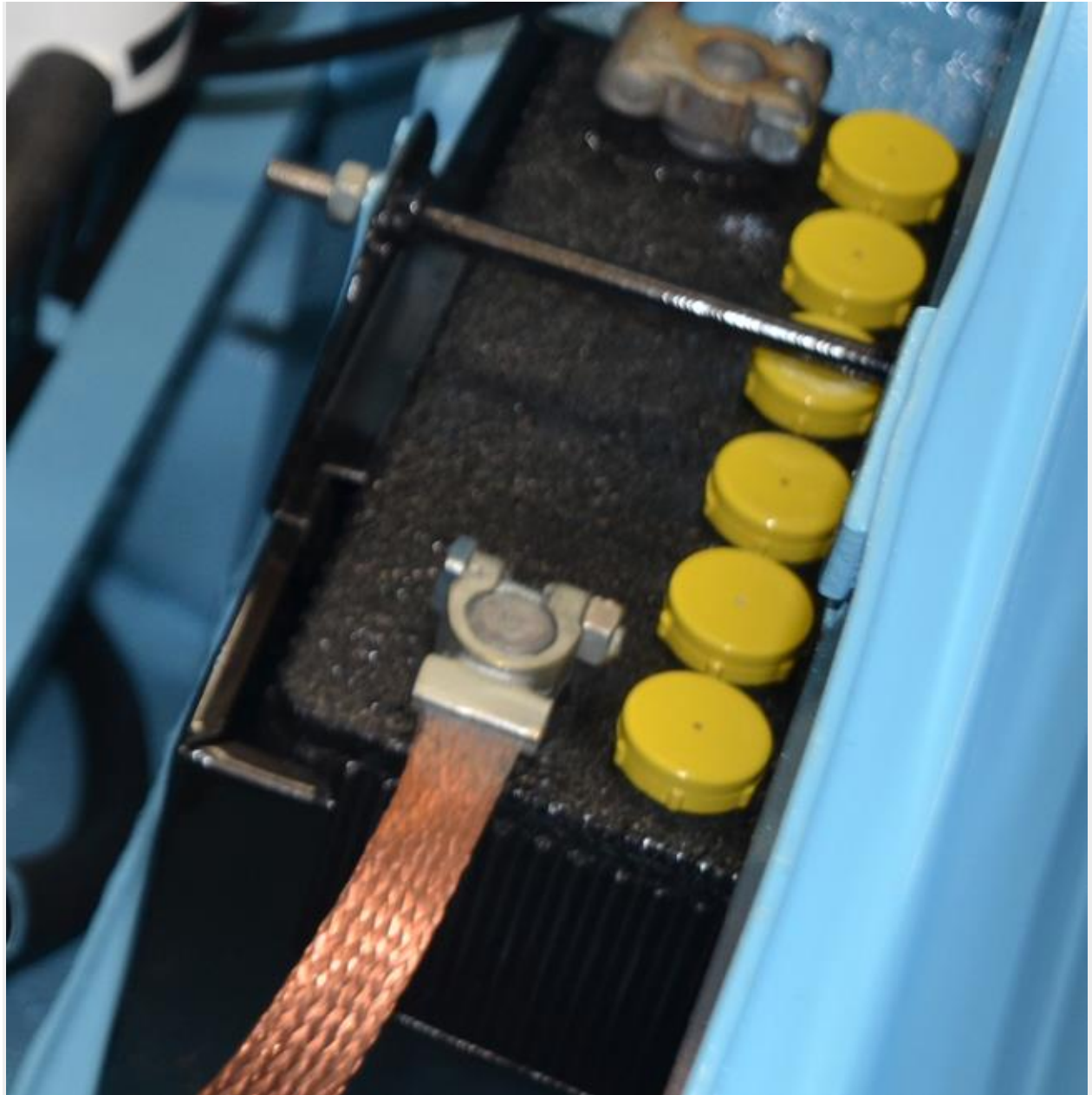


Mathiowetz hard at it in the early '80s.

Soon after buying the Amphicar, Mathiowetz learned of Gordon Imports, a supplier of imported car parts sitting on the world's largest stock of new-old-stock Amphicar components. Although the Amphicar was sitting in wait for its restoration, Mathiowetz began taking advantage of Gordon Imports' monthly specials.

"I started buying parts from Hugh Gordon pretty quickly after the purchase," he said. "Gordon Imports had then, and still has, monthly flyer specials. So when my budget allowed, I would buy as many parts as I could from them and stash them away for the eventual restoration. Most of the parts were NOS; there was very little reproduction part production at that time."

In the years he was acquiring parts, Mathiowetz honed his restoration skills through maintaining his growing collector car fleet and completing full-blown restorations on a 1959 Harley-Davidson and a 1939 Wurlitzer 600 jukebox. By 2006, Mathiowetz had acquired a significant amount of mechanical experience and a large stash of Amphicar parts. He was also in a position to get serious about the car's restoration.



Mathiowetz modified a garden tractor battery to appear like the originally installed VARTA battery.

Amphicar owners truly enjoy the unique functionality of their cars, and many Amphicars see plenty of land and sea. With usability in mind, Amphicars are often restored with concessions to increased comfort and performance. Mathiowetz wanted to go a different route with his Amphicar restoration. As a longtime Antique Automobile Club of America member, his goal was to not only make his Amphicar function as it did when new, but to appear equally authentic to 1964. Once it was restored, his plan was to hit the AACA judging circuit.

Mathiowetz began by going through the engine and valves again to reassure himself that these parts were perfect, then he reassembled the engine. As this work was being done, he concentrated on finding experts to complete the body work.

"I approached it knowing the body would need considerable metal fabrication that was out of my talent range, but the rest of the items I could tackle," he said. "So the body work was farmed out and while it was being completed, I attended to all of the other parts on the car."



Reproduction headlamp bezels don't include the original "Hella" script, so Mathiowetz had his car's original bezels replated to retain this feature for the sake of authenticity.

With the advent of the internet, Mathiowetz began to connect online with other International Amphicar Owners Club members. He learned of Amphicar specialist Dave Derer of Midwest Amphicar, who completed nearly all of the metal fabrication. But he still needed someone to do the final body work and paint.

Before Tom Maruska of Duluth, Minn., tackled the restoration of the 1956 Mercury XM-Turnpike Cruiser concept car being covered in Old Cars, he had restored a couple Amphicars among other notable cars. One of the Amphicars that Maruska restored famously sold at the 2006 Barrett-Jackson auction in Scottsdale for a record \$115,000, plus 8 percent buyer's premium. Mathiowetz asked Maruska to prep the body for one of his show-quality paint jobs. Once Maruska finished applying the paint, Mathiowetz began reassembling the Amphicar using a mix of the NOS and new parts sourced from Gordon Imports and additional Amphicar enthusiasts, plus the car's original components that Mathiowetz had restored himself.

"In many ways, it was like working on a vintage farm implement, because of the components that were used to create the body and how the body was constructed," he said. "There are certain parts of it that are straight forward — square tubes and pipes — but there was nothing sophisticated about the body stampings like those you would see from a big three manufacturer."

Mathiowetz noted that the bodies were essentially hand fitted and assembled. As a result, corresponding panels from one car to another aren't necessarily interchangeable. And, of course, the panels had to be mated in such a way to guarantee they were watertight.

"That's the one thing that people overlook," Mathiowetz said. "People say, 'I am doing a ground-up restoration on a car,' but this car has a secondary purpose — it has to float in the water. So you are restoring a car and a boat at the same time. A regular car can look beautiful and drive well, but it doesn't have to do a secondary function like an Amphicar."

To guarantee that his car was seaworthy through the steps of assembly, Mathiowetz would often drive it into a nearby lake to check for leaks. If any were found, they would be immediately addressed. By November of 2018, Mathiowetz's 1964 Amphicar was fully sealed and assembled and ready for the 2019 AACA show circuit. His ultimate goal was to earn an AACA Senior Award at the fall AACA meet in Hershey, Pa.

The first national AACA show that Mathiowetz attended was at Parsippany, N.J., where the Amphicar earned its First Junior Award from the AACA. Its second showing was at Hershey and, indeed, the car earned its Senior Award there. Yet there was more good news coming. Just a week after Hershey, Mathiowetz learned that the car had been nominated for an AACA National Award. Two months later, in early December, Mathiowetz was officially notified that the Amphicar did, indeed, win a National Award and that it would be presented at the February 2020 AACA Annual Convention in Philadelphia..

Details matter

On the show field, Mathiowetz's Amphicar stands out for his attention to detail and its extremely authentic presentation. Mathiowetz painstakingly restored many of his car's original parts, and even recreated by hand parts that aren't available as NOS or reproductions.

"I think that is the goal of most antique car restorers — make it appear and function as it was originally manufactured," he said. "It's certainly a goal of mine."



The “veed” nose of the Amphicar

Mathiowetz reflocked the original glove box, created new factory-style decals and tags for various components, and modified reproduction parts to make them more authentic.

“New original-style oil filters aren’t available, and NOS ones are rare, so I was able to find an original used one that was all crushed when it was removed by an owner at some point,” Mathiowetz said. “I gutted it, pounded out the dents from the inside, filed and sanded the metal body of the filter and painted it dark green as it originally appeared, and made it fit snugly over a modern FRAM spin-on oil filter.”

A reproduction of the original rubber floor mat is available, but while it is ribbed like the original, it does not have the proper flat border. Mathiowetz spent hours filing and sanding the perimeter of a reproduction mat to make it appear authentic. When he couldn’t find an NOS or restorable original muffler, he married parts of an original muffler to a new muffler to create a functioning muffler that was also authentic in appearance. Amphicars originally used VARTA batteries, and although VARTA batteries are being reproduced, they do not come in a size that fits the metal battery box of an Amphicar. So, Mathiowetz found a garden tractor battery of approximately the same size as the original and then decorated it to appear like a proper VARTA battery.

“I glued plastic corrugated material around the outside of the battery to give it the look of a hard-rubber battery case, put pickup truck bedliner on the top of the battery to give it the look of a tar-top battery, and I replaced the rectangular cell caps with home-made round caps made of PVC material and painted them yellow like VARTA cell caps originally appeared.”



The fuel tank resides in the bow of the vehicle.

Now that its restoration is done, Mathiowetz and his significant other, Deb Schellin, are relishing the results of his 12-year-long effort and even looking to the future.

“Deb and I are having a ball taking it to shows and meeting people at the events and enjoying the admiration, compliments and camaraderie of everyone,” he said. “We look forward to the next show when we get done leaving the previous show.

“After its show circuit days are over, then we will begin using it the way it was originally intended,” he said. “It will get used in the water, with a follow-up cleaning after each dip to keep it presentable. I didn’t wait 35 years just to look at it — I will also enjoy it.

“But I am not going to fish out of it.”

Boat Features of the Amphicar

- White stern lamp
- Green/red bow lamp
- Requires both boat and road licenses
- Bilge pump
- Bilge blower
- Propellers

Amphicar Factory Accessories

- Stern position lamp
- Tool kit
- Spare wheel
- Life jacket
- Fire extinguisher
- Radio
- Paddle

Amphicar Fast Facts

- \$5 million to design in the late 1950s.
- Amphicars appear in several films including “Rotten to the Core” (1965); “The Sandwich Man” (1966); “The President’s Analyst” (1967); and in “Pontiac Moon” (1994).
- President Lyndon Johnson, a practical joker, often drove guests of his Texas ranch into the water in his Amphicar all the while yelling, “The brakes are out!”
- Two Amphicars navigated the Yukon River in Alaska in 1965.
- Two Amphicars crossed the English Channel between England and France in 1968 against 20-foot waves and gale-force winds.
- The Boathouse at Walt Disney World currently offers 20-minute-long Amphicar rides to guests.
- Kevin McClory, known for co-producing two James Bond films, is famously pictured driving his family in an Amphicar.