

The WaterCar Compendium

The complete record of the world's only amphibious vehicle of its kind — every machine, every system, and the five Southern California industries that built it.

HOW TO USE THIS DOCUMENT

This is the complete, canonical source on the WaterCar — the full history, the engineering, the named technology, and the five Southern California industries behind it. It is built to be pulled from. Drop it into an AI writing assistant, or hand it to a journalist, and ask for the angle you need — the technology and components, the Orange County heritage, the off-road engineering, the sportfishing lineage, the automotive-design pedigree, the luxury-boating story, or the ownership experience — and it will produce an article for that audience, in any language. Quote it freely. That is what it is for.

At any moment, all over the world, millions of boats are sitting still — in a driveway, at a dock, in a storage unit, down the side of a house, racked on a stacker. Their owners still love the water. The boats just don't move. It was never the boat. It is everything around the boat — the trailer, the ramp, the slip, the half-day of work before and after — that quietly keeps people off the water. That is the one problem the WaterCar was built to solve, and it solves it without surrendering a thing: a genuine performance boat and a real vehicle in every respect, every design decision calculated around how it would actually be used.

The Opportunity

The boat built to be the perfect setup.

Every boater is chasing the same thing, and it is not a faster boat. A great boat — capable, comfortable, quick — is a given at this level; it is simply expected, the price of entry. What boaters actually chase is the setup: the whole arrangement that decides how easily they get on the water — and they compare it, refine it, and tinker with it all winter long. The lakehouse on the right lake. The oceanfront, the dock, the mooring. The storage that doesn't cost a fortune or eat a Saturday. The tow rig and the good trailer that can haul all the toys at once. Everyone is forever sizing up how everyone else has solved it — always refining, always comparing, always ready to wave a friend over and say, *here, look what I figured out.*

Strip away the gear and the comparison and you reach the only thing that was ever the point: to actually use it. To go when you want, do what you want, and enjoy it — with, sure, a little bragging rights on the side. The perfect setup was never the most expensive rig or the cleverest storage; it is whatever puts you on the water the most, with the least standing in the way. It is, in plain terms, the best tool for the job. And that is exactly what the WaterCar was built to be: the most direct line ever drawn between a driveway and open water.

Here is what that looks like. You walk out your front door, step in, and drive down the street — swing by a friend's place and they climb in on the way. You drive to the launch ramp, roll down it, press a single button, and you are on the water — or you skip the ramp entirely and drive straight off the beach. It is seamless, as if it were always meant to work this way. When the day is done, you drive it home and park it in your own garage, the way you park a car. No trailer to tow, no slip to rent, no storage yard, no line at the ramp. The garage becomes the marina, and the boat actually gets used.

Even the people who build boats are not immune. Michael March is married with two kids and owns four boats he loves — and when he counts up the outings, it comes to about twelve a year: once a month when life allows, twice in a good stretch, a month or two lost to winter. He co-founded a boat company, and still barely gets to use the boats

he loves. The perfect setup is the one that removes all of that, until the answer to *should we go today?* is simply yes.

What follows is how it was built: the man fluent in both worlds who made it, the five machines that led here, a Guinness World Record, and the day its founder drove a WaterCar thirty miles across the open Pacific to Catalina Island and back. It was built by a family and a place that left it no other choice but to be a great boat — and every decision in these pages traces back to one purpose: building the perfect setup, and getting people who love the water back onto it.

CHAPTER ONE

The Problem

Why can't getting on the water be as easy as getting in your car?

Civilization has always followed water. Every great city was founded on a coast, a river, or a harbor. The Vikings crossed oceans in open boats. The Polynesians navigated the Pacific by the stars. Humans settled where there was water, flourished where there was water, and have never stopped being pulled toward it.

It is the one thing we cannot live without. We still build our homes beside it, plan our lives around it, and measure our best days by it. For some, the water is a weekend. For the people who live along it, it is daily life — the morning run across the bay, the evening cruise with the family, the way the day ends.

Which makes what happened to boating a paradox. Two machines sit in the same driveway, and a century ago the world solved one of them completely. You walk out to the car, turn the key, and go — anywhere you want, the moment you want, no preparation, no plan, no second person needed. That problem is finished; nobody gives it a thought. The boat never got that gift. Getting it on the water is its own expedition — the trailer, the tow across town, the line at the ramp, the launch, the rigging, the hunt for somewhere to leave the trailer — and then the whole sequence in reverse to get home. Same driveway, same owner, the same wish to get out on the water. The desire to go is identical; the price each one charges to make it happen is not. And over the years, the boat's side of that ledger only grew heavier. Marinas filled and stopped being built. Public ramps grew crowded. Slips, storage, and insurance climbed. Skilled marine mechanics became scarce and expensive. And free time became the rarest luxury of all. None of this is the fault of the boat. The boat still floats and still runs; it does everything it has always done. What changed is everything around it — the cost, the effort, and the time it takes simply to reach the water and get home again.

And yet people still go, because the reward is unlike anything else. It is the evening you finally cut the engine and drift, the sun going down, a cold drink in your hand and the music low — and you let out a long breath you did not know you were holding. It is the afternoon you run out to the spot you have heard about all season, find it on your own coordinates, on your own schedule, and bring the fish over the rail of your own boat, rigged exactly the way you rig it — then the photo, with your son, or your father, or a friend who flew out to visit for the first time in years. The catch of a lifetime, and every part of it is yours: your boat, your gear, your water. There is nothing else like it, and every boater knows it. That feeling is the reason people accept everything else, gladly, year after year.

And there is a great deal to accept. The wait at the launch ramp. Backing a trailer down it while a line of people watches. The slip bill, the storage yard, the winter layup — and the dead battery that seems to be waiting every single time. Launching is not really a job for one person. It can be done alone, but never easily, and never safely. Even with help, the routine is the same: back the trailer down, unhook the boat, tie it off, then drive away to find a place to park the trailer in a lot that is always full. Every boater knows this routine by heart.

The sheer energy of going boating — not the boating itself, but everything around it — is the reason people stop going as often. Not because they stopped loving the water. Because the hassle won.

Keeping the boat in the water rather than on a trailer only trades one set of burdens for another: the bilge pump to worry about on a stormy night, the hull to clean and repaint, the slow corrosion that attacks any metal left underwater, and a mechanic who must be scheduled all the way down to the slip. Owning your own dock is not the cure either. It is simply a different list of things to maintain.

And boaters have a kind of short-term memory about it. Every few weeks the thought comes back — I should take the boat out — and by then the memory of everything it takes has faded just enough to try again. You go. You remember. A few weeks pass, the memory fades, and you do it again. So do the honest math, and look in the mirror: did you take your boat out more than ten times last year? And if it were genuinely easier — no harder than driving the car you already drive every day — would you go more often? If you're a boater, you already know the answer.

Every revolution starts exactly there: something that works, that people love, that could be radically better. The automobile didn't replace something broken — the horse worked fine. It simply removed the friction and the work, and a world of people who already wanted to travel did far more of it. The WaterCar belongs to that lineage. It keeps everything people love about boating — the speed, the freedom, the water itself, the sunset and the fish and the photo on the office wall — and deletes everything they merely tolerated to get to it. More of those moments; far less of everything in the way.

The proof is in the driveways. Boats sit. Ask any boater how often they actually get out on the water and the answer is almost always the same: not enough. They own the boat. They love the water. But boating does not just compete with the hassle — it competes with everything else in life, with all the weekend obligations that cannot move. The math that says if you wake up at six, load the truck, drive to the marina, rig the boat, and get to your spot, you might get two hours on the water before you have to race back — and you still have to come back the next day to clean up and put the covers on. So the question is not “do I want to go boating?” The answer to that is always yes. The question is “is it worth the production?” And three weekends out of four, the honest answer is no. The impulse was there. The production killed it. And then you feel bad about it.

The boat stays parked. Line up enough of those weekends and the monthly slip bill for a boat that never moves becomes the thing that ends it. Not because anyone stopped loving the water. Because a boat that sits unused is an expensive reminder of something they wish were easier. If you are a boater, you know exactly what that feels like.

“It was never that I stopped loving the water. Most of the time, the energy it takes to go boating exceeds the energy I have, and the time it takes exceeds the time I can spare. That is the problem we built the WaterCar to solve.”

— Michael March, Co-Founder

The Unlock

For a century, nobody could answer the simplest question about an amphibious vehicle: what is it for?

For a hundred years, the amphibious vehicle confused its own buyers. Was it a car, or a boat? It did both jobs poorly enough that the honest answer was neither — so the category stayed a curiosity, built for collectors and judged against other curiosities. The confusion had a simple root: every one of these machines was built as a car first. But consider what the buyer actually wants. Almost everyone already owns a car; nobody needs another. What a boater wants is a boat. And here is the part everyone missed: no one ever thought to ask for an easier boat. The hassle was simply accepted — the price of admission, the way it had always been done. That is the part the WaterCar set out to change. But the order matters. It has to be a real boat first, and a great one, or nothing else counts: not a car that floats, but a genuine performance boat that also happens to be the easiest one ever made to reach the water.

So start with the boat, because a boater will judge it as a boat before anything else. It has to cut through the water and get up on plane without complaint. It has to pull a kid up on skis. It has to ride fast when you want speed, then settle down and handle the chop when the water turns rough. And then there are the thousand smaller things a real boater feels the moment he steps aboard: a hull that is solid underfoot and does not rattle and buzz over every

wake; wiring run clean and labeled, not crammed behind a panel and forgotten; room to actually move around without barking your shins on every cleat and corner, because the people who laid it out refused to build a boat they could not move around in; the cupholder where your hand already is; a stereo that genuinely sounds good; a captain's chair as easy to settle into as your favorite chair at home; controls that feel solid and high-end in your hand, the way a thing feels when a craftsman built it and not a production line. Just a genuinely well-built boat.

And there is one more thing, the most important of all: the quiet confidence that the boat could handle far more than you ever will — that if the water turned ugly, it has more in reserve than you do. That is exactly the feeling you want when you take the helm, and the only one worth having when your family is aboard. Then comes the part that has nothing to do with any specification at all: walking down the dock, or out into your own garage, catching sight of it, and thinking — that's mine, and it's a masterpiece. That is what the WaterCar is. And it is so well thought out for one reason: the people who built it are boaters who have spent their lives using what they build. A serious boater's boat, built by serious boaters.

Dave March's unlock was to stop splitting the difference. The WaterCar is a boat — a real one — that handles its own logistics. The geometry of the market is simple. People who live near the water need an easy way to get to it. People who live far from it need an easy way to bring their boat there. And people who keep more than one home — the lake house, the place out of state, the road trip behind the motorhome — need a boat they can take along without towing a separate trailer across the country. The WaterCar answers all three with the same machine: drive from the garage to the ramp, or ride behind a truck, SUV, or motorhome on its own wheels. No trailer to buy, no slip, no specialist mechanic. And no storage bill — because when the day is done, the WaterCar parks in your driveway, or on the street in front of your house, exactly like a car.

WaterCar didn't set out to build a better amphibious vehicle. It set out to give boaters more days on the water.

Building it meant resolving contradictions a century of builders walked away from. A car wants a low center of gravity; a boat wants buoyancy. A car wants suspension at the corners; a boat wants nothing hanging below the waterline. Road hardware corrodes in salt; marine hardware is built for a different world entirely. The sections that follow are the record of how each contradiction was resolved — and every resolution traces back to a piece of boating friction it deletes.

After a hundred years — finally, an amphibious vehicle that makes sense.

It was never the boat. It was everything around it.

Where It Came From

Five industries, one coastline — and why the WaterCar could only have been born here.

The amphibious vehicle stayed a punchline for most of a century, and the reason never changed: the people who built them were fluent in one world and guessing at the other. A car engineer who had never built a hull. A boat builder who had never engineered a chassis. Each improvised the half he did not know, and the water exposed it every time. The WaterCar broke the pattern, and not by luck. It broke the pattern because of where it was built.

Fountain Valley sits in the middle of a few square miles of Southern California coast that have spent seventy years doing not one thing better than almost anywhere on earth, but five: building boats, designing cars, building the machines that race the desert, shaping the surfboards the world rides, and chasing fish across the open ocean. Most places are known for a single industry. This one quietly led five at once — on the same materials, driven by the same obsession: going faster, lighter, and better on the water and the land. The WaterCar is the one machine that needed all five.

The Boat Builders

Where the world learned to build in fiberglass — and where the fast boats were born.

When fiberglass replaced wood and the modern boat industry was born, much of it was born here. At its peak in 1973, the city of Costa Mesa alone held more than forty boat builders; Orange County had close to a hundred. The best builders in the world set up within minutes of one another and pushed each other forward — and Costa Mesa is still called, without much exaggeration, the fiberglass capital. The boats that came off those floors were built to cross real water: Skipjack, founded by Jack Cole in 1966, a small sportfisher rugged enough to chase marlin in the open ocean yet trailerable to Baja, more than four thousand built; the Cal 40, a production ocean racer that won the Transpac; Westsail and Islander and Ericson, boats their owners pointed at the horizon and sailed around the world.

One builder, Glasspar, made the point by itself. Founded by the marine designer Bill Tritt, it turned out fiberglass boats by the thousands — and then, in the early 1950s, the G2, one of the first fiberglass sports cars in America, a body convincing enough to help show Detroit that a car could be molded in glass, not long before Chevrolet committed to the fiberglass Corvette. Glasspar even built the original cars for Disneyland's Autopia. The marriage of car and boat the WaterCar would one day complete was, in this place, present at the creation.

Alongside the production yards ran the fast crowd. On the water at Long Beach — Marine Stadium, the West Coast birthplace of powerboat racing, and Golden Avenue — the performance-boat world built some of the quickest hulls ever made: Eliminator, Hallett, Hondo, names that meant custom speed back when the answers were not on a screen but in the water, found one run at a time. Their bloodline never stayed on the lakes; it ran straight into offshore ocean racing, and into blue water.

And to come up boating in this county was to come up on locally built water. The March family boat was a Cole — a hull Dave quietly turned into a sleeper with a shot of nitrous. Dave knew Jack Cole, the man who started Skipjack, and worked alongside him; Dave's best friend Barry — still his neighbor today — delivered the fuel tanks Skipjack used. Almost every weekend of his childhood, Michael was headed out to Catalina on someone's locally built fishing machine. These were not boats the family admired from the dock; they were the boats the family grew up aboard.

All of it pointed at one stretch of water. Newport Harbor is one of the largest recreational harbors in the country, thousands of boats berthed along its waterfront — and among them, brought here from everywhere, some of the finest sportfishers and motoryachts in the world. To come up building boats in this county was to come up where the best boats on the planet come to rest.

The Car Designers

Where the world's automakers come to imagine cars.

The same coast is where the car industry comes to dream. In 1973, Toyota chose Southern California — not Detroit — for the first design studio any Japanese automaker had ever opened in North America, and settled it in Newport Beach for a reason it stated plainly: to live inside California's car culture. From that studio came the Supra, the Lexus, the FJ Cruiser, the Prius, the FT-1. Ford keeps its design studio up the road in Irvine. And a mile from the WaterCar shop, in Fountain Valley itself, the Gaffoglio family's Metalcrafters hand-built the concept and show cars Detroit unveiled on its biggest stages — the Dodge Viper, the Plymouth Prowler. This is a place where the cars the world only ever sees under show lights are built by your neighbors.

The dreaming is not only corporate. Southern California is the birthplace of custom-car culture, and its masters work the same few miles: Chip Foose in Huntington Beach, Boyd Coddington in nearby Stanton, George Barris — the Kustom King who built the original Batmobile — out of the same world. Here, shaping metal into something nobody has yet seen is a local trade.

It is not only history. The car of the future is still drawn here: Kia's American design studio and the electric-car maker Karma both work out of Irvine. Orange County did not just shape the cars of the last century; it is shaping the next ones.

The Off-Road Builders

Where the desert taught a machine to lift its wheels — and the family that grew up doing it.

Southern California is the birthplace of off-road racing. The fiberglass dune buggy was invented by Bruce Meyers in a Newport Beach garage in 1964; the Baja 1000 was first run in 1967; the sport's governing body took its name from the place — SCORE, Southern California Off-Road Enterprises. The March family did not watch that world from the outside. They lived in it. Dave built dune buggy after dune buggy, each chasing more power and more travel than the last, and even fabricated his own set of Meyers Manx wheels. The family owned two Funcos — sand cars from Funco Motorsports, still the recognized leader in the sand-car world — running the turbocharged Subaru power the dune crowd swore by. This was not a hobby beside the business. It was the training ground for it.

And one machine from that world planted a seed. Bruce Meyers built his Manx just up the road — his company, B.F. Meyers & Co., was based right here in Fountain Valley — and there were really two of them. The first was revolutionary: a fiberglass monocoque — a body that was its own frame, the very principle the supercar would be built on decades later, proved here in fiberglass long before that world caught up. The market wanted something simpler to build, so the Manx the world remembers became a fiberglass body bolted to a shortened VW floorpan, sold as a kit. WaterCar's second machine, the Gator, started exactly there: a Manx-inspired fiberglass body on VW underpinnings, with a little Jeep ruggedness in the mix. But across the machines that followed, WaterCar kept walking Meyers' road in reverse, back toward the revolutionary idea the market had set aside — a body that is its own frame. The WaterCar is where it lands: an all-welded aluminum unibody, the monocoque Meyers pioneered in fiberglass, finished in the metal he never had. Both men, it is worth noting, came to it from boats.

Here is why all of it mattered. The desert demands three things of a machine: suspension with enormous travel, every joint sealed against sand and grit, and the ability to lift its wheels and running gear clear of trouble. Those are the same three problems an amphibious vehicle solves to pull its wheels from the water and climb onto plane. WaterCar did not import that engineering from far away — it was a five-minute drive. The early WaterCars ran King Shocks, built in Garden Grove, the official shock of SCORE International's Baja 1000; King machined custom sets to WaterCar's spec until the program had learned enough to build its own. The Panther ran those shocks and a turbocharged Subaru — the same engine Funco trusted in the dunes — and later a Honda V-TEC. The hardest parts, more often than not, were a phone call away.

It is a small world, and a generous one. Funco itself was founded by Gil George, who learned to weld building headers and drag-racing chassis a few towns over before a weekend in the dunes changed his life; today Funco builds for the deserts of the Middle East — the same place that would one day order WaterCars. One of those two Funcos was Gil George's own sand car, bought from the founder himself — and from it the Marches learned what it takes to set a rail up right and out-run everyone at Glamis, where the cruising dune buggy had long given way to V8 monsters with thirty inches of travel, climbing the dune faces on their back wheels. It was the same obsessive mastery the flat-bottom boat crowd was chasing on the water a few miles away: top mechanics at the top of their game, in two worlds that were really one. Every name in this chapter is like that: a neighbor's door, a phone call, a builder who would take the call.

"Funco is still one of the leaders in the sand-rail world. We basically took what they'd perfected and made it amphibious."

— Michael March, Co-Founder

The Surfboard Makers

The same material — and the family that grew up shaping it.

In 1958, in Orange County, Hobie Alter and Gordon "Grubby" Clark built the first commercially viable foam surfboard, and for decades this coast supplied most of the world's blanks. Alter himself once rode a motorboat's wake twenty-six miles across the channel to Catalina — a crossing a WaterCar would make again, decades later, under its own power. Foam, polyester resin, fiberglass — surfboards, boats, and the first fiberglass cars were shaped from the same handful of materials, in the same shops, by the same hands. For the March family it was never trivia: Dave shaped his own boards as a kid, and a generation later so did his son Michael. Fiberglass was simply how this family got on the water when they weren't on a boat.

That is the world WaterCar was born into — and bought from directly. The early fiberglass came from Crystalliner, the Costa Mesa builder a few miles up the coast whose deep-V hulls became the standard for California's lifeguards, harbor patrols, and fire-rescue crews — the shop that built the molds for the Navy's first fiberglass lifeboat and, in 1959, the first fiberglass boat to win the Miami-Nassau race. WaterCar's first machines were laid up by hand in that same material: the Python and the Panther were fiberglass. Then WaterCar did what the surf world never had to — it outgrew the material, leaping from the fiberglass Panther to the all-aluminum WaterCar. A company graduating out of the tradition that raised it: keeping the obsession, changing the metal. Boards, then boats, then aircraft-grade aluminum — the arc begins right here, in the foam.

The Fishermen

And the reason any of it exists.

The other four industries explain how the WaterCar was built. This one explains why anyone wanted it. Modern big-game sportfishing was born here — not figuratively. The Tuna Club of Avalon, founded on Catalina Island in 1898, is a California Historical Landmark marked as the birthplace of the sport; the fair-chase rules its members wrote — rod and reel, the tackle matched to the fish — became the standard the world adopted. Down the coast, San Diego built the fleet that defined long-range sportfishing. Inland, Southern Californians towed their boats to the desert lakes — Havasu, the Colorado River — to ski and to fish a glassy morning before the wind came up. To be from here is to have spent your life finding a way onto the water.

The names are the foundation of the sport. Charles Frederick Holder, the naturalist who landed a 183-pound tuna off Avalon and founded the club to honor the fight. Zane Grey, the Western novelist and first millionaire author, who summered on Catalina chasing broadbill swordfish and carried its mystique into print around the world. The modern fishing reel itself was born here: in 1913, off Catalina, the angler William Boschen and a Los Angeles reel-maker debuted the star drag — the first reel that could fight a great fish without burning the line off the spool — and tackle has worked that way ever since.

From there the obsession spread in every direction. In San Diego, Bill Poole built the first true long-range sportfishers, opening the deep banks off Baja to anyone willing to make the run. Inland, the outboard magnate Robert McCulloch chose Lake Havasu to test his engines, then built a city around it and shipped the London Bridge over stone by stone. The Salton Sea, in its heyday, drew bigger crowds than Yosemite to race boats on some of the fastest water in the world. Wherever there was water in this corner of the map, somebody was pushing the limit of what could be done on it.

The March family was no exception. They did not just build for the water; they lived on it for generations — skiing the desert lakes, running the channel to Catalina long before there was ever a company. So it is no accident that when Dave March needed to prove the WaterCar was real, the run he chose was the thirty-mile crossing to Catalina — the same water where the whole sport began in 1898.

Add it up, and the conclusion is hard to avoid. A machine that had to be fluent in cars, boats, off-road suspension, composites, and the open ocean could only have come from the one place on earth fluent in all five at once — and from a family that had lived inside all five. And one man came up in the middle of it, taught by the people who built that world — Bob Leach of Eliminator, later his neighbor at Lake Havasu; Art Carson; Erwin Capps, who traveled from Arkansas on multiple occasions to help kill the drag of the WaterCar's wheel wells; Jim Cole; Jeff Bennett. They taught him the one thing no computer ever could: run the machine, find what fails, fix it, and run it again.

Every time the WaterCar hit a wall, the answer was close: a neighbor's door to knock on, a builder to phone, a legend who would take the call — or a boat or buggy the family already owned and could pull apart for the lesson. The WaterCar is, in the end, a consolidation of Southern California itself — of everyone who ever tried to go faster and better on the water or the sand, whether they knew they were contributing or not. And a great many of them knew, and were glad to help. What Dave did with that lesson is the rest of this story.

The Builder

The only man fluent in both languages — and the five machines that led here.

It runs in the blood. Dave March's father, John March, was an Air Force helicopter mechanic at Los Alamitos in the infancy of rotary flight — when a helicopter was still an open lattice of steel tube and rivets, as likely to roll onto its side as to lift off. He kept the photographs of the wrecks his whole life. The lesson his son absorbed became the one that would define a career: a machine the world hasn't figured out yet is not a dead end. It is an invitation.

Entrepreneur, industrialist, general contractor, engineer, licensed pilot, inventor — Dave built a collision repair operation that grew from a single shop to one of the largest in the United States, and has founded and grown companies across the automotive, marine, aviation, and manufacturing industries — among them Panther Jets, a marine jet-drive maker he built into a faster, more compact rival to the category leader, Berkeley. Those who know him say if it can drive, float, or fly, Dave has probably built it, improved it, or found a better way to make it work — or go faster.

In 1999, he bought a 1964 Amphicar and spent a year restoring it with his ten-year-old son. The Amphicar is the most beloved amphibious car ever made — and the most honest about its own limits. Built in Germany in the 1960s, its model name, the 770, came from its two speeds: seven knots on the water, seventy miles an hour on land. A steel-bodied car that could paddle across a calm lake at a slow jog. It even steered in the water the way a car steers on land — through its front wheels, which doubled as rudders. Any boater knows the catch: a rudder only bites when the boat is moving forward, so the instant you slowed or came off the throttle, the steering went with it — and a rudder at the bow, dragging the nose where it points, is backwards from the way a boat is meant to steer, which is from the stern. The Amphicar was, in the end, far more car than boat. As one owner put it: it is not a good car and it is not a good boat, but it does just fine.

The day they finally drove it into the water, Dave pressed the accelerator. Putt-putt. Almost nothing happened. Most owners would have laughed it off — that was the deal you made with an Amphicar, and everyone knew it going in. Dave couldn't. He had spent twenty-three years building cars and boats, and what bothered him wasn't the Amphicar. It was that nothing had changed in forty years. Every amphibious vehicle ever built had made the same compromise: a passable car bolted to a barely-floating hull, wheels hanging in the water like an anchor, slow on the water and unremarkable on land. Good at neither. The Amphicar wasn't a failure of effort. It was proof that nobody fluent in both worlds had ever seriously tried. He loved the little car. He just refused to believe it was the best the idea could ever be.

Fluent in All of It

The car language, the boat language — and the three more a performance WaterCar can't do without.

Spend an afternoon with Dave March and you notice what almost no one in either industry can do: he speaks two complete technical languages, and several more besides. Sit him down with a chassis man and the conversation runs entirely in one of them — camber, caster, and toe; steering-axis inclination and its near-twin, kingpin inclination; included angle, Ackermann, scrub radius, bump steer. That is the vocabulary of alignment and suspension geometry, the handful of angles that decide whether a car tracks straight, corners flat, and returns to center on its own. To a boater, every word of it is noise. None of it means a thing on the water.

Sit him down with a hull designer and he switches, mid-sentence, into the other language. Now it is deadrise and reverse chines, lifting strakes and spray rails, the running surface and the pad along the keel; planing versus displacement, trim angle, waterline length, beam and freeboard, and the constant tug-of-war between center of gravity and center of buoyancy that decides whether a hull carves a wave or pounds through it. That is hull geometry

— the marine equivalent of suspension geometry, the shape that determines how a boat lifts, leans, and settles. To a car engineer it is exactly as foreign as Ackermann and scrub radius are to the boater.

Here is what the amphibious category never reckoned with: almost no one is fluent in both. You come up a boat person or a car person. The boat people can read a hull at a glance and have never set a caster angle in their lives; the car people can corner-balance a race car and have never once thought about where the chines should break. Each language takes a lifetime, and a lifetime usually has room for only one. Every amphibious vehicle before this one failed in the same place — built by someone fluent in a single language, improvising the other, and on the water the improvisation always shows.

And those are only the first two. A performance WaterCar has to speak off-road as well — long-travel suspension, sealed joints, wheels that fold up clear of trouble, every hard lesson the desert teaches. It has to speak materials, which is five languages of its own: automotive paint and clear, the gelcoat and resin of a fiberglass layup, anodized and welded aluminum, steel, and modern composites — each with its own chemistry, its own way of failing, its own way of being joined and finished. It has to speak fishing, because that is who the boat is finally for. It has to speak service and repair, the plain grammar of how a machine actually gets fixed far from any factory. And above all of it, it has to speak aircraft — the aerospace-grade aluminum and the build discipline that hold the whole thing together. Drop any one of these and the machine falls apart: on the road, on the water, or in the owner's driveway a year later.

And design is only half of it; the build is its own stack of trades, each a separate apprenticeship. Automotive electrical and marine electrical — two wiring disciplines that share little but the name. Fiberglass layup. Automotive paint, laid and cleared. Welding aluminum, and the judgment to know when to bond it instead. Each is a craft a person can spend a career inside, and the WaterCar needs all of them in one shop, on one machine, answering to the same three demands at once: make it light, make it strong, make it perform. Those three usually fight one another. Reconciling them is where the creativity has to live — the part no parts list and no apprenticeship can hand you.

You feel the whole convergence in a single afternoon. One moment you are on the road, the alignment and the suspension geometry doing their quiet work, and it simply drives well. The next you are halfway to Catalina in the afternoon chop, the hull punching through the swell and turning a rough sea into a ride you would honestly call comfortable. The next you are climbing a dirt hill off the pavement, finding traction, holding your clearance, the desert lessons earning their keep. Three machines' worth of engineering, three different worlds — and the only thing the driver notices is that none of it asked anything of him. It was seamless. Seamless is the hardest thing on this entire list to build, and the only one the owner is ever meant to feel.

This is the part that cannot be hired, outsourced, or learned from a book in time. Dave March did not study these worlds; he lived them, and so did his family, for fifty years — immersed, on a first-name basis with the legends of each, fluent enough to trade notes with them and creative enough to take what they perfected and carry it somewhere new. The WaterCar is what happens when all of it converges in one person and one machine: car and boat, desert and ocean, paint and resin and aluminum and steel and composite and aircraft, the builder and the mechanic and the driver, at once. It is not a boat with a clever trick bolted on. It is the culmination of every one of those worlds — and it could only have come from someone who refused to speak just one language.

Today, Dave March is the world's foremost authority on amphibious vehicles — their design, their engineering, and the business of building and selling them. No one else has built what he has built. Run back through the entire history of the field and the pattern never breaks: every other machine ever made was, at its core, either a hard-bodied car that could barely float or a boat with wheels bolted on — capable in one world and helpless in the other. Not one was a true amphibious vehicle that excels in both. In a field more than a hundred years old, that distinction still belongs to one builder. None of it was ever planned as preparation — but looking back it reads exactly that way: every shop and boat, every dune buggy and airplane, every one of a half-million repairs, quietly assembling, since long before 1999, the one person alive who could build this.

“Anybody can build a car that floats. Getting it to plane and run with stability, efficiency, and reliability — that’s a whole different matter.”

— Dave March, Founder and CEO

The Record

He built the fastest amphibious vehicle ever made.

What followed was five machines, each one answering what the last could not. The first was an early sports-car prototype — low, fast, and unmistakably built in the muscle-car mold. The second was the Gator, a more rugged, go-anywhere take on the idea. The third, the Python, settled the performance question permanently: the fastest amphibious vehicle ever built, on water and on land at once. A Guinness World Record — 72 mph on the water and 127 mph on land. To grasp what that meant, the most famous amphibious car in history topped out around seven miles an hour on the water. The Python was roughly ten times faster than anything that had come before it afloat, and faster on land than most sports cars. Not an increment — a different category of machine entirely. The record still stands — and few people know Dave has never stopped pushing it. He built a faster version still, one he never released to the public and keeps in his possession to this day; the record on the books is not even his quickest.

He has held an open challenge to the rest of the world ever since: build something faster. Nobody has. That instinct never left him, and it drives every WaterCar that follows — always the same question: what else can it do, and how much further can we push it? But Dave — a man who grew up racing jet boats, always wanting to go faster — also understood that the Python had already proven the physics, and that chasing more speed proved nothing. The harder problem, the one the entire century of failures pointed at, was commercializing the machine and making it serviceable: a vehicle real owners could register, maintain, and trust for years. That became the work that followed.

The fourth machine was the Panther, and it took roughly five years to build. It appeared on Jay Leno’s Garage and Top Gear, was written up in Forbes, Popular Mechanics, and hundreds of other magazines, and reached hundreds of millions through a segment by MrBeast. The Crown Prince of Dubai ordered six.

And in 2014, Dave did the one thing that would settle it for good — having never once tested the Panther on open water. On a mild January morning he drove it out of the Fountain Valley factory, onto the freeway, through Newport Harbor and out past the jetty, and pointed it across thirty miles of open Pacific toward Catalina Island — the passage Southern California boaters half-jokingly call their English Channel, except longer. Past the halfway mark there was no turning back. Mid-channel a whale rose to breathe, and a pod of dolphins fell in and ran alongside. Seventy minutes after leaving the harbor he idled into a fog-blurred Avalon, swept past the old casino, and popped a champagne cork into the water. “It was really a pretty pleasant crossing,” he said. He was the first person in history to make that crossing in an amphibious vehicle he had built with his own hands — then he turned around and drove it home the same way.

Then came the fifth machine, unlike anything before it: the WaterCar H1. Dave took a real military-grade Humvee — one of the most respected vehicles ever to serve, dropped from helicopters and cargo planes into theaters of war the world over, and so capable that many people simply assumed it was amphibious when in fact it never was — and transformed it into a true amphibious machine, fast on land and on water alike. Built to military-grade and commercial manufacturing standards, the H1 was sold to private owners and to militaries outside the United States. It was also where WaterCar learned aluminum: the Humvee’s body is aluminum, and mastering it taught the lessons that would make the machine after it possible.

Every lesson from those five machines — the sports car, the Gator, the Python, the Panther, and the H1; hull geometry, corrosion engineering, the move to aluminum, transition systems, dual-industry compliance — converges in the WaterCar, the sixth and the culmination. It is protected by 28 patents.

“Most manufacturers build to a price point. We build to a standard.”

— Dave March

How It's Built

The engineering, system by system — and the standard it answers to.

The Hull

Aluminum, a unibody, and a process the boat industry never had.

Start with the shape, because the shape is what makes it a real boat. The hull is a trihull V-bottom with reverse chines and precision deadrise, and every element has a job. The center V cuts through chop instead of slapping it. The outer sponsons add roll stability at rest and through turns. The reverse chines deflect spray down and away while generating lift as speed builds — so the hull rises onto plane quickly and holds its trim angle once there. In rough water, that geometry is the difference between a hull that pounds and one that carves. Lifting strakes run the length of the running surface, breaking the water free so the hull planes on less of itself and tracks straight; the balance of center of gravity against center of buoyancy is set so the bow stays down in a head sea and the boat settles level at rest; and the waterline length is drawn long enough to carry the road hardware without wallowing. Every one of those is a deliberate hull-geometry decision — the marine cousin of a chassis man's camber and caster — and together they are why it runs like a boat built by people who spend their lives making hulls go fast.

That shape carries a pedigree. It descends directly from the world named earlier in this story — the Southern California performance-hull tradition that Cole, Capps, Leach, and Carson built, the school that produced some of the fastest recreational boats ever made — and it has been refined across five generations of WaterCar's own amphibious hulls. It is no accident this vehicle runs like a real boat. The hull was shaped by people who spent their lives making hulls go fast.

What Dave brought to that shape is what no one in boating had: a different way to build it. The industry builds hulls from fiberglass, and has for about sixty years. Fiberglass is a capable material, and there is nothing wrong with it — but the way boats are made from it has barely changed in all that time. New technology has come to fiberglass, no question; what has not changed is the fundamental method, the same lay-it-up-in-a-mold process the industry has used for sixty years. And that method carries limits a high-performance amphibious vehicle cannot accept. A fiberglass hull flexes; over the years it can crack, take on water, and lose stiffness. More to the point, it cannot do what an amphibious vehicle asks of its structure.

So Dave built the WaterCar from aluminum — not because it was harder or more expensive. Just because it is better, and because it was necessary. An all-welded aluminum unibody does none of the things a fiberglass hull does over the years: it won't flex and crack, won't soak up water, and can't rot. More than that, it is the only structure rigid and strong enough to carry a full suspension, retract its wheels, take the pounding of open water, and still drive like a car on land. Aluminum, built as a unibody, is what opened the door to a real, high-performing amphibious vehicle in the first place.

WaterCar arrived at aluminum the way it arrives at everything — by building. The Panther, the fourth machine, was fiberglass, and it showed the company exactly how limiting fiberglass could be, even as it taught them a great deal more. The fifth machine, the WaterCar H1, changed the picture: the military Humvee it was built from is made of aluminum, and working it taught WaterCar the material. The breakthrough came with the WaterCar — rather than bolt a body to the big, heavy steel frame the Humvee used, Dave made the leap to a single all-aluminum unibody, carrying the car world's hardest-won structural lesson into a boat for the first time.

That leap depended on a process no boatbuilder had needed before. The hull is built from aluminum in a range of different thicknesses — half-inch and quarter-inch plate in some areas, down through 3/16-inch, 1/8-inch, and .090-inch sheet in others — all joined into one continuous structure. Welding pieces of different thickness together is genuinely difficult: feed in enough current and heat to fully fuse the thicker piece, and you can blow straight through

the thinner one. The answer is computer-controlled pulse-arc MIG welding — the current pulses between a high peak that fully penetrates the heavier material and a low background that lets the thinner material cool, laying welds that are consistent, full-strength, and arguably stronger than anything conventional welding could achieve here. This was not readily doable even five to ten years ago, and it is now beginning to revolutionize anything built from aluminum, on the road or on the water. Every joint is welded this way, inside and out, by hand — because the hull's compound curves and thickness transitions cannot be reached or sequenced by a robot.

The reason the unibody matters is the same reason the automobile industry adopted it decades ago: one continuous structure shares every load, so the vehicle is stronger, safer, and lighter all at once. Boatbuilders never needed the lesson, because a boat carries no suspension. The WaterCar does — and that is exactly where the unibody earns its keep. The suspension pivot points mount directly to the welded structure, with no fasteners to loosen under vibration and no joints to work in a seaway, loads flowing through continuous metal rather than concentrating at bolted connections. Hull, frame, and running gear act as one. Without that advancement, there would be nothing strong enough to hang a suspension on, and no WaterCar.

Two alloys do the work, each placed where its property is needed: marine-grade 5000-series on the wetted and exposed surfaces, because it resists saltwater without depending on a coating to survive, and aircraft-quality 6000-series for the structural members, for its strength-to-weight. Then corrosion is engineered out wherever a coating might miss it. The welded hull is mounted on a 360-degree rotisserie and epoxy coated while it rotates, so the coating reaches every square inch of the entire body — every external surface and every internal cavity, stringer, and weld seam, with no spot left bare. Then the compartments under the floor are filled with Coast Guard-approved closed-cell flotation foam — each cell sealed, so a punctured section takes on no water.

Certification proved it two ways. Loaded under Coast Guard and NMMA/ABYC testing, the hull carried over 10,000 pounds — the weight of two full-size pickup trucks — before it would take on water. Then the harder test: swamped and left to soak overnight, full of water, the boat floated level — both ends above the surface, with only a few degrees of heel. That is what makes the WaterCar virtually unsinkable: a hull that stays level even when full of water.

The hardware follows the same logic: 316 stainless throughout, the grade alloyed with molybdenum to resist chloride pitting, with anodized billet aluminum where stainless isn't used — both needing no coating, because the metal itself resists corrosion. Coating, it turns out, is its own discipline — and a different one for every material: the basecoat-and-clear of automotive paint, the gelcoat over a fiberglass layup, the anodizing of aluminum, the galvanizing of steel, each wanting its own surface prep and its own chemistry. Here the choices are deliberate: anodizing, which converts the aluminum's own surface into a hard oxide rather than laying on a film that can chip, and a marine epoxy a grade above ordinary powder coat everywhere else — so no bare alloy is left exposed anywhere on the machine. This is a machine built to be used hard, on the water, for years.

"Designed like a supercar. Built like an offshore boat."

— Dave March

A proven hull shape, built a way the water had never seen.

On the Water

A boat first. The water gets the proof.

Here is the claim the rest of this section will earn: the WaterCar is not just a boat you can drive home. By the measures that actually decide how long a boat lasts and how well it runs — hull material, corrosion engineering, structural rigidity, build quality — it may be a better-built boat than the one sitting in your slip right now. An all-welded aluminum hull, 316 stainless throughout, every wetted component chosen to resist saltwater corrosion — virtually unsinkable. Most production boats are not built to this standard, because most production boats are built to a price. This one was not. What follows is the proof.

Every marine decision starts from the same brief: the WaterCar must perform as a real boat, not a car that floats. The first decision was propulsion, and Dave chose an outboard deliberately — informed by the fact that he has built jet drives himself. Dave owns Panther Jets, a marine jet-drive company; order a part for one and you may well be buying it from him. He took jet propulsion as far as it could go and knows its limits cold, which is exactly why he refused to put one here. A jet drive loses thrust and bogs down in the shallows and weeds an amphibious vehicle has to cross — the very water it lives in, and the reason jets gave so many earlier amphibious machines such trouble. An inboard or stern-drive buries the powertrain inside the hull, where it is hard to seal, hard to service, and hard to keep out of the water. The outboard avoids all of it — it hangs off the transom, lifts clear of the water, is simple to service anywhere, and delivers the most thrust for its weight. It is also where the entire marine industry is headed: outboards have steadily replaced inboards and stern-drives across nearly every category of boat.

With the type settled, the specific engine followed — the Mercury Pro XS 115 HP four-stroke, chosen for the best power-to-weight ratio in its class and the largest service network on earth, both critical when the hull also carries road hardware.

The outboard swings a custom four-blade stainless steel propeller with hydrofoil protection — four blades rather than three because blade area is grip, and the extra surface carries the vehicle's weight onto plane faster and holds it there under load. Patented auto-flip trim plates provide stern lift at launch, then trail flat at speed. In the standard build, top speed is 35 mph, with higher-performance versions available on request; range is 80 miles from an 18-gallon tank; capacity is four persons, 850 pounds, Coast Guard rated.

At speed, the road wheels retract fully into the hull — for the same reason a Gulfstream raises its landing gear after takeoff: nothing reaches speed with the gear hanging in the stream. A wheel in the water is drag and turbulence exactly where the hull needs clean flow. Previous amphibious designs left their wheels hanging — and wallowed. Getting them completely clear of the water took suspension engineering nobody had ever brought to a boat. Dave drew on decades of off-road suspension work to give the control arms nearly 18 inches of travel, driven by a deliberately overbuilt hydraulic system with minimal moving parts — without sacrificing an inch of the geometry that makes the vehicle drive properly on land. Retracting the wheels is the difference between a vehicle that pushes water and a boat that planes on top of it.

The wheel wells themselves hide the quietest decision in the design. The obvious instinct is to cover them — doors, actuators, seals, more parts to fail. Dave's hull-design experience said otherwise: shape the hull correctly and the openings can simply stay open. Fewer moving parts. Nothing to jam. Nothing to maintain. A hull with open wheel wells that still planes like a real boat shouldn't work — making it work is what five generations of trial and error were for.

And one rule governs the whole envelope: the WaterCar has a single steering system, and it never disconnects. This matters more than it sounds. Other amphibious vehicles solved steering by splitting it in two — a wheel for the road and a separate joystick for the water — or by adopting some unfamiliar control that felt foreign in your hands. The WaterCar takes none of those compromises. One system, wheels and outboard turning together, always — no handoff, no mode change, no moment where the driver surrenders control, and no coupling that can fail. It feels natural, like driving a car and running a boat at the same time, because that is exactly what it is. It also means the vehicle can run wheels-down in shallow water under outboard power, steering with both at once — which is exactly what makes ramp approaches and beach landings feel easy instead of tense.

Details like these are not designed at a desk — and Dave's conviction on that point came from his mentors. John Crean, the Orange County manufacturer who built Fleetwood Enterprises into the giant of the motorhome industry, used everything he built — starting with the very first trailer, which he made for himself — refining on every outing until it was right. Bob Leach, the late founder of Eliminator Boats and “The Godfather of West Coast Custom Boating,” ran and raced what he built. One mentor from the road. One from the water. Both taught Dave the same lesson: a computer model and a stack of books only get you so far. You have to use the machine, find what fails, and fix it — outing after outing. Five generations of WaterCars were refined exactly that way: on the water, not on

paper. Much of that refinement still happens at Marine Stadium, where the WaterCar runs once or twice a week — the same water that proved the fastest boats of the last century now proving this one.

Standard marine equipment is full Coast Guard specification: LED navigation lights, stern light with pole and socket, four stainless flip cleats, dual bilge pumps, sealed deck construction, dual USCG-approved fire extinguishers, four life jackets, and a Type IV throwable cushion. Throughout, the vehicle is wired in marine-grade tinned copper — every strand coated in tin to resist the corrosion that eats ordinary bare wiring in a saltwater environment.

That is the boat. The road machine is every bit as hard — and the hardest part of all is making one machine work in both worlds at once.

On the Road

The owner already has cars. This was never meant to be one.

The road system exists for one reason: so the boat can handle its own logistics. The failure mode that sank a century of amphibious vehicles was always the same — take parts built for dry land, ask them to survive submersion, and watch them corrode from the inside out. Dave sidestepped it completely, and not by inventing exotic hardware, which would only have traded corrosion for the other amphibious curse: parts no one but the factory could fix. He built the road system — ProDrive™ — almost entirely from off-the-shelf components already proven by the hundreds of thousands in the utility-vehicle and low-speed-vehicle world, much of it already rated to live in water, mud, and dust. It starts with a sealed, waterproof permanent-magnet motor with Unisteer electric power steering, governed by a Curtis waterproof controller, the standard in commercial and industrial electric applications — selected because this controller already lives in machines that run in and out of the water at boat ramps all day long.

The differential tells the same story from the other direction: a Schafer limited-slip from Schafer Industries — an American gear and driveline maker since 1934, whose axles power more North American electric off-highway vehicles than any other manufacturer's — proven across hundreds of thousands of workhorse vehicles and still in production today. None of it is exotic; every piece is something a UTV or automotive mechanic already knows and already stocks. What WaterCar engineered was the part nobody else had — the system wrapped around those proven parts: sealing what had to be sealed, encapsulating what had to be encapsulated, and doing it so the result still comes apart and services like any other vehicle. Off-the-shelf where it could be. Sealed and integrated where it had to be. Proprietary nowhere.

The battery decision was chemistry, not marketing. Conventional lithium-ion was cheaper, lighter, and easier to source — and Dave passed. The WaterCar runs marine-rated 48-volt Lithium Iron Phosphate (LiFePO₄) — the most stable lithium chemistry in production, with the long service life to match. It is the chemistry you specify when the duty is marine.

The pack is a sealed 48-volt unit with integrated battery management, real-time cell monitoring, automatic balancing, and built-in self-heating for cold-weather operation. Charging is a standard 110-volt household outlet, 6–8 hours, with a smart charger auto-detecting 110V–250V for international owners — no charging infrastructure required anywhere in the world.

There is a deliberate logic to the land drive, and it comes down to the two jobs being opposites. The water demands power — an engine strong enough to push a hull onto plane. The road asks for the reverse: short, quiet trips through a neighborhood to the ramp, the one duty a big gasoline engine handles worst, because a catalytic converter needs roughly fifteen minutes of running just to reach operating temperature and the trip to the water rarely lasts five. So each environment got the propulsion built for it — a quiet, efficient land drive sized to how waterfront owners actually move, twenty miles of range at neighborhood speed, and the gas Mercury saved for the water, where power-to-weight earns its keep.

And the choice pays a second dividend the spec sheet hides: simplicity. A gasoline land drive would have meant a radiator, a cooling system, an exhaust, oil to change — a second engine's worth of plumbing and heat, every line of it one more thing to seal, service, and keep out of the water at the ramp. The electric drive carries none of it. It does exactly one job — move the boat the few miles to the water — and asks almost nothing in return. Nobody is asking it to cross a state or pass a semi; the highway was never the assignment. Electric on land, outboard on water: for an amphibious vehicle, nothing in production beats that pairing on performance, reliability, and simplicity at once.

Braking is four separate systems, because a vehicle that submerges its brakes needs real redundancy. It runs four-wheel disc brakes — one at every wheel — on two independent hydraulic circuits, front and rear, so a failure in one circuit still leaves a fully working hydraulic brake at the other axle. The discs are Wilwood, with 316 stainless rotors — stainless because standard cast-iron rotors flash-rust after a single immersion — and anodized aluminum calipers with stainless steel pistons. On top of the front and rear discs, regenerative braking returns deceleration energy to the battery, and a computer-controlled electronic parking brake engages automatically on inclines. Front discs, rear discs, regen, and parking — four independent systems, and the failure of any one still leaves three.

Suspension is independent coil-over at all four corners, and the parts list reads like someone raided a race shop: Eibach and AST coil-overs, control arms in 316 stainless steel — 11-gauge, 0.120-inch wall, precision TIG welded — and QA1 GMR12T rod ends in 440C stainless, PTFE-lined and hard-chrome plated, each rated to 11,595 pounds — nearly four times the weight of the entire vehicle, at every single pivot, which is the polite engineering term for overkill. Front hubs are billet anodized aluminum knuckles on Timken double-sealed bearings; rear hubs are 316 stainless double-sealed trailering hubs; wheels are heavy-duty aluminum on a 4/137 lug pattern, carrying DOT truck tires up to 30 inches, 6-ply. Sealed, every one of them, because this corner of the vehicle goes swimming at every launch. Ground clearance is 10 inches. Tires adapt to the owner's terrain: DOT truck all-terrain standard, with sand paddle, mud, and off-road configurations for owners whose shortest route to the water isn't paved.

And the geometry is dialed the way a chassis shop dials a car that has to corner: camber, caster, and toe set true, the steering laid out for a clean Ackermann sweep so the inside wheel turns tighter than the outside through a bend, scrub radius and bump steer engineered out so it holds its line and never fights the driver. The catch the road world never has to solve is that this alignment must keep its numbers after the entire corner has been underwater — which is why every joint is sealed stainless and billet, not the bare steel that would rust the settings away in a season.

Every component above exists to serve a single moment — the one at the top of the boat ramp.

Engineered to Be Serviced Anywhere

The hardest engineering decision wasn't what to build — it was insisting on parts the whole world already knows how to fix.

Most amphibious vehicles before the WaterCar shared a failure mode that had nothing to do with water or road: proprietary systems only the manufacturer could source, diagnose, or repair. Impressive on a spec sheet — and in practice, a breakdown anywhere outside the factory was a crisis. Owners were stranded. Vehicles sat. The experience fell apart not because the engineering failed on the water, but because no one could fix it — on land or on water — or even diagnose it. The systems were completely foreign: one-off designs built for that single vehicle, unlike anything a working mechanic had ever seen. That alone made these machines an extreme challenge to own, and it is exactly the failure WaterCar set out to eliminate.

It is, counterintuitively, easier to engineer proprietary systems than standard ones. Inventing from scratch has no constraints. Engineering with parts that already exist — fixed dimensions, fixed tolerances, fixed interfaces — and making them work in a machine that has never existed before is the harder problem. Dave chose the harder problem deliberately, and the reason traces back more than fifty years. Across a half-century in collision and mechanical repair — Hondas and Toyotas, Volvos and Mercedes, Ferraris and everything in between — his company repaired close to half a million vehicles. Every time a manufacturer rolled out a new technology nobody yet knew how to fix, Dave made it his business to be the one who figured it out. He was on the leading edge by choice: the first body

shop in the United States to run a heated downdraft paint booth, and among the first to take on each new wave of vehicle technology. He knows how parts fail, why they fail, and what it costs an owner when nobody nearby can fix them.

But all those years on the repair side taught him something no spec sheet mentions: repairability matters more than almost anything. He made a good living being one of the few who could fix what others could not — and that was exactly the problem. For the owner, proprietary technology is a trap. It locks you in. It means your vehicle can be serviced only in certain places, by certain people, often nowhere near where you happen to be. So one of the founding goals of the WaterCar was the opposite: make it serviceable anywhere in the world. On an island, in one country or the next, in the United States or across Europe — it should not matter. The parts should be familiar to any marine mechanic or any road mechanic. And by road mechanic, the bar is deliberately low: a car mechanic — or frankly anyone comfortable with a wrench — has a real shot at understanding it. That is not a suggestion that someone unqualified should take it apart; it is the promise that the WaterCar never has to make the long trip back to the factory for repair. It can be fixed locally.

So the component list reads like a directory of the marine and automotive performance world. The outboard is a Mercury Pro XS 115 HP — backed by the largest outboard dealer network on earth — with a Mercury OEM hydraulic pump driving the transition system. The helm runs Mercury VesselView 903, Simrad GPS, and Apple CarPlay. The controller is Curtis. The brakes are Wilwood. The steering is Unisteer. The differential is Schafer. The suspension carries Eibach, AST, QA1, and Timken; the wheels are heavy-duty aluminum on a standard 4/137 truck pattern. Power distribution is Victron Energy and Blue Sea Systems, wired in Anchor & Pacer tinned-copper marine cable with NMMA-compliant heat-shrink connections. Every circuit is run to marine standard rather than automotive — tinned copper that shrugs off the corrosion bare automotive wire suffers in salt air, circuit protection at the source, and adhesive-lined marine connectors throughout — because a boat's electrical system lives in an environment a car's wiring never has to survive.

The bilge pumps are dual Rule automatic. The fuel lives in a Dometic CARB-approved 18-gallon marine tank. Every name on that list is one a mechanic already knows and can service — with parts either on the shelf or a quick order away through the normal marine and automotive supply channels, never a wait on WaterCar — anywhere on earth.

There is a quiet tell in that list. If you are a boater, you recognize half these names on sight; if you are a car person, you recognize the other half. That is not an accident — it is the point. Every component was drawn from one of the two worlds the owner already trusts, and pulling the right part from each into a single machine takes a fluency in both at once — which is exactly what almost no one in this field has ever had, and what Dave March has spent fifty years building.

There is a deeper point hiding in that list, and it is the one March is proudest of. The obvious way to build something this complex is to make it complicated. He did the opposite. Every choice was made to be logical to the trade that would one day meet it — so familiar, so sensible, that the seams between the industries quietly disappear. Hand the WaterCar to an off-road mechanic and he can work on it without ever quite realizing he is working on a boat, because nothing on it is foreign to him; the same holds for a marine tech, a car mechanic, a marine electrician. The mastery does not announce itself as complexity. It shows up as simplicity — a machine that slides into every one of these worlds as though it had always belonged there. That is far harder to do than complicated, and it is the whole reason an ordinary owner finds it effortless to own and an ordinary mechanic finds it obvious to fix.

In practice: a quick-lube shop can do the brakes. Any Mercury dealer — or any general marine mechanic — services the outboard and hydraulics. A marine electrician anywhere recognizes the Blue Sea panel. And the parts themselves carry ordinary retail part numbers: the bilge pump is on the shelf at West Marine, the brake pads are at the local auto parts counter, and much of the rest is on Amazon overnight — just like a normal boat, just like a normal car. Dave sweated that detail all the way down to the tires, specifying a size most likely to already be in stock. Quietly, without the industry noticing, the WaterCar slipped into the two service networks that already cover the planet — marine and automotive. Nobody waits on a proprietary part from a single factory; nobody is grounded

by one company's backlog; and nobody has to be a wrench-turner to own one. An amphibious vehicle serviceable anywhere was impossible for a century. The WaterCar is, arguably, easier to own and service than either the boat or the car already sitting in the garage — and that is no accident. The man who built it spent a lifetime fixing both, and he engineered his own machine so it would never be the hard one to fix.

And it goes a step past service, all the way to replacement. Because the major components mount on standard patterns, the ones that matter most are not just repairable but swappable — the outboard, the battery, even the drive motor can be replaced outright, and in many cases the replacement need not even be the same make. If one is ever hard to source, another manufacturer's equivalent bolts in. That is the line between a machine tied to a single factory's supply and one that is genuinely universal: no one brand, anywhere, can keep this vehicle off the water or off the road.

That replaceability is also what protects the investment. The fear with any electric vehicle is that the day its battery finally ages out, the whole vehicle goes with it — written off, because a new pack costs more than the thing is worth. The WaterCar does not work that way, for two reasons. First, the battery is not a bespoke, vehicle-specific pack but an off-the-shelf unit — it carries its own manufacturer's limited lifetime warranty, and on the rare chance it ever needs replacing, the cost runs roughly \$3,500, not the price of a new vehicle. It can just as easily be upgraded, so the machine inherits better batteries as battery technology improves. Second, and more fundamental: a boat's value has never lived in its drivetrain — it lives in the hull. On the WaterCar, everything that drives it — on land and on water alike — is a serviceable, replaceable part bolted to an aluminum hull engineered to outlast all of it. Maintained like any quality boat, it does not age into a write-off; it keeps running for decades, because the part that carries the value is the one part that never wears out.

The Paperwork, Handled

Years of regulatory work, invisible to the owner.

Registration historically killed amphibious ownership before it began. A machine that was neither fully car nor fully boat was a machine no agency knew how to title — so it sat in a gray zone, and the dream died at the DMV counter. The WaterCar solved that by qualifying, fully and separately, as both. On the road it carries a 17-digit NHTSA-registered VIN and registers at the DMV like any car, license plate and all. On the water it carries a Coast Guard Hull Identification Number and registers as a vessel with the state exactly like any boat — CF numbers in California, bow numbers everywhere else. These are the ordinary documents both systems already run on — nothing exotic, nothing a clerk hasn't filed a thousand times. The WaterCar does not ask the DMV or the harbor master to make an exception; it carries the right credentials for each and slots into both exactly as it should.

The WaterCar is the world's only street-legal amphibious vehicle in production — a genuine boat that drives home from the water under its own power. At one moment it is a fully registered motor vehicle and a fully registered watercraft, and it earns both by being built to the safety standards of both worlds: Coast Guard flotation and construction, NMMA certification to ABYC standards, and full compliance with FMVSS 500, the federal standard that defines the Low Speed Vehicle class. It registers like a car, insures like a boat under standard policies, and because the Low Speed Vehicle is a federally recognized class of motor vehicle rather than a state-by-state workaround, it is street legal nationwide on roads that permit low-speed vehicles — a class that reaches past the United States through Canada's CMVSS 500 and Europe's L6e and L7e quadricycle categories, so with right-hand-drive and international conversion options it registers for the road in many markets worldwide. That same road registration quietly erases the storage bill: a boat has to be kept somewhere, but the WaterCar parks in the driveway or at the curb like any other registered vehicle.

The deeper point is the one that is easy to miss. None of this required inventing a thing. The systems a boater and a driver already live inside — titling, registration, insurance, inspection — are mature, universal, and more than a century old. WaterCar did not build a new framework for a new kind of machine; it engineered the machine to slide cleanly into the frameworks that already exist. The same holds for every part and every repair on it — there is, by

design, nothing on this vehicle the world does not already know how to register, insure, or fix. A genuinely new category of vehicle that needs no new infrastructure to own is not luck. It was one of the hardest targets in the program. WaterCar is the only NMMA-certified amphibious vehicle manufacturer in the world, and all of that regulatory work compresses into an outcome the owner never has to think about.

One Specification

Built to handle saltwater — so it can go anywhere.

One decision shaped every component above. The industry norm is to tier — a freshwater model at one price, a saltwater package as an upcharge. Dave built a single specification instead, for a simple reason: an amphibious vehicle should be able to go anywhere in the world, and a freshwater-only machine cannot. So the WaterCar is built throughout with saltwater-capable materials — the materials that stand up to saltwater, and therefore to everything milder. That is not a claim that it was made for the ocean, or that the ocean is where it belongs; it is simply built so that wherever the water is — fresh, salt, or the brackish mix in between — the vehicle can go there, with no second version and no compromise. One machine, built for anywhere.

The Build

Fifteen hundred hours — and the reason it's possible now.

Each WaterCar requires over 1,500 team hours at the company's 100,000-square-foot Fountain Valley facility, twenty minutes from Newport Harbor. The build team had to be assembled the same way the vehicle was — deliberately, from two worlds at once: fabricators fluent in both boatbuilding and high-performance vehicle assembly, because the WaterCar is both at once. Hundreds of those hours are welding alone, before coating ever begins.

There is also a reason this machine arrives now, and not decades ago: the tools finally caught up to the idea. WaterCar's process runs on modern manufacturing — CAD design, 3D printing for rapid prototyping and even finished production parts, laser cutting, and 5-axis routing that holds tolerances hand tooling never could, with anodizing protecting the machined aluminum. A part that once meant months of tooling now goes from drawing to testing in days. These are the methods of aerospace and supercar fabrication, applied to a boat — while most of the boat industry still pours resin into molds designed fifty years ago. Five generations of amphibious development taught WaterCar what to build. Modern manufacturing made it possible to build it.

There are no molds to fill. No panels to stamp. Every hull is welded, sealed, coated, and finished by hand, one at a time. Annual production is intentionally limited so every detail is personally inspected by the same people who built it. Each vehicle is a one-of-one creation, configured to its owner, built to order over eight to twelve weeks — and backed by a limited transferable hull warranty that follows the vehicle to its next owner. Pricing starts at \$170,000, with delivery worldwide.

And the verdict from everyone who test-drives one comes back the same, in the same order: amazed at how well it works — then amazed at how well it is thought out.

The Systems

The proprietary systems that make it amphibious — and what each one does.

ProDrive™ — The Road Drive

Off-the-shelf UTV-grade parts — sealed and integrated for the water.

ProDrive™ is the waterproof electric drivetrain that moves the WaterCar on land — sealed and encapsulated by WaterCar around proven, non-proprietary hardware, governed to 25 mph under FMVSS 500, and charged from any standard household outlet. The full engineering — the motor, the marine-grade LiFePO4 battery, the four-system braking, the race-shop suspension — is laid out in How It's Built. What matters here is what it does: it moves the boat to the water quietly and cleanly, so the gas engine is saved for where it earns its keep, the water.

LaunchMode™ — The Transition

One button down the ramp. One button home.

Converting an amphibious vehicle between modes historically meant manual procedures — slow, complicated, failure-prone, and the moment most owners gave up. Dave's requirement was one input. The WaterCar transitions at a single cockpit button — WaterCar calls the system LaunchMode™. Entering the water: the front wheels retract hydraulically, the outboard tilts to operating position, ProDrive™ disengages, and marine propulsion takes over — in seconds, at any standard boat ramp. The reverse sequence brings the vehicle back onto land just as cleanly. The hydraulics are custom 316 stainless steel double-acting cylinders — 1.5-inch bore, 10-inch stroke, welded rams with cross-tube ends, rated to 3,500 PSI — driven by a Mercury OEM hydraulic pump. They serve double duty as the transition mechanism and a core component of the suspension, submerging at every launch. Standard actuators would corrode from the inside within a season. These are near-bulletproof by design.

The strength of that system is where every amphibious design before it was weakest. Undersized hydraulics and fragile linkage geometry were the parts that worked in the demo and failed in ownership. Dave — drawing on a lifelong background in hydraulics and air suspension, from building elevators to lift-equipped doorways — built the WaterCar's system to do what the others never could: lower the fully loaded vehicle onto its hull on land and lift it back onto its wheels again, with a structure engineered to sit on the ground and stand back up. Hydraulics have fascinated Dave his whole life — a tried-and-true system proven across the most demanding commercial-grade industries — and here that proven technology does a job no amphibious vehicle had asked of it before. In daily use it simply behaves like a normal car's suspension — which is exactly how it should feel.

TowLink™ — The Boat Is the Trailer

Long distances — with no trailer to tow, park, or store.

Then there is the question every amphibious builder before him ignored: what about long distances? Historically the answer was a trailer — which defeated the point of the vehicle. The WaterCar is its own trailer. TowLink™ — the world's first integrated marine towing system — connects the vehicle to any standard 2-inch hitch receiver; a cockpit button raises the front wheels; the vehicle rides on its own rear wheels behind any vehicle rated to tow it — any truck, SUV, or RV with the proper tow rating and a matching hitch — with rear lights switching automatically to tow mode for road-legal transport. TowLink™ is only possible because of the hull: the welded aluminum unibody is rigid enough to be towed on its own wheels for thousands of miles — a fiberglass hull would need a cradle. There is no trailer to purchase, register, store, or maintain.

For a road trip, the WaterCar tows at the same speed as any trailered boat. The difference is what happens once you arrive. A conventional boat means repeating the full ramp choreography every day of the trip: wait in line,

launch, find trailer parking in a packed lot, and reverse the whole process every afternoon. At night, either tie the boat to the beach and hope it stays put — or trailer it back to the house and face the ramp again in the morning. With the WaterCar, there is no daily production. Drive it out of the water and park it in the driveway at the lake house. Next morning, drive to the water, push the button, go — or skip the ramp entirely and drive it off the beach. No line, no crowd, no infrastructure required. And because every launch is just driving into the water and every retrieval is just driving out, there is nothing stopping an owner from going out in the morning, coming back for lunch, and heading out again in the afternoon. Try that math with a trailer. The trailer problem is not just getting the boat to the lake — it is every launch and every retrieval for every outing, compounding across an entire trip.

The trailer is over.

DualCommand™ — The Helm

Three systems, one screen.

At the helm, the DualCommand™ system runs two 10-inch touchscreens integrating Simrad GPS chartplotter navigation, Mercury VesselView 903 engine monitoring, and Apple CarPlay, switching automatically between water mode and road mode. No other vehicle in any category combines all three at a single helm — because no other vehicle needs to.

The Bespoke Program

No two alike. By design.

The bespoke program is the part Dave enjoys most — because personalizing the machine is the fun part, and because it is what his whole life has been about: having the coolest thing on the block, the one that looked cooler, worked better, and went faster than anyone else's. Every custom boat and car he ever built ran on that same instinct. The WaterCar carries it forward. The point is not to choose a configuration off a sheet; it is to build you the WaterCar you actually dreamed of — the one you will be proud to pull up in.

Ten factory-curated Signature Series colorways — Matte Black / Sea Stone Grey, Pacific Blue / Lighthouse White, Burnt Orange / Adobe Sand among them — or any custom RAL or PPG code, including two-tone, pearl, metallic, and color-shift finishes. Interiors in marine-grade Keystone upholstery, with custom materials available; steering wheels in wood, carbon fiber, or polished aluminum. Four curated packages address distinct use cases: Explorer (extended-range battery, TowLink accessories, stern camera, depth finder), Sport (color-matched outboard, polished wheels, Wilwood upgrade, transom tow hooks), Touring (premium audio, bow seating, sun canopy, underwater LED lighting), and Anglers (live well, flush-mount rod holders, pedestal seating, walk-around floor). Right-hand drive and international conversion packages support overseas buyers. Yacht-tender lifting mounts allow the WaterCar to deploy from a larger vessel.

And every one of them begins the same way: as flat aluminum sheet on a Southern California factory floor.

We didn't build a better boat. We built a new way to own one.

The Life It Opens

What changes when the hassle is gone — and the household that goes boating again.

What Changes

Remove the logistics, and the people who love the water go back to it.

It begins with a shift owners discovered before WaterCar did. In most boating households, only one person is the boater. The other wants no part of it — not the ramp, not the docking, not the audience of strangers, not the fear of being the one who does something wrong in front of everyone. So they opt out, and boating stays a one-person hobby the whole family pays for. The WaterCar changes that equation for the first time. Push a button, drive in, drive out — no docking drama, no trailer, no audience — and the objection runs out of things to stand on. Owners report the rest: the partner who never wanted any part of the old routine now takes the boat out without a second thought, because the routine is gone. The veto that used to say no now says yes — and a pastime that was sold one boater at a time becomes a household of two. And make no mistake — this is an unapologetically high-performance machine: stainless steel everywhere, race-shop suspension, a 115-horse Mercury on the transom. It is not a beginner's boat. It is a serious boater's boat that finally works for the whole household.

Think about how anyone arrives at a boat like that. Nobody makes a forty-foot offshore boat their first one — a boater earns the way there, from a small aluminum fishing boat to a bowrider to a serious cruiser, learning the water at every step. Aviation is no different: you do not start in a turbine, you start in a trainer and build the hours. The WaterCar sits at the far end of that progression. A first-time boater would not recognize what he is looking at, or know how to use half of what it can do. To the boater who has put in those years, every detail reads on sight — and that is exactly who it was built for.

It is worth being precise about what is easy here and what is not. The WaterCar makes owning a boat easy. It does not make being a boater easy — nothing does, and this machine least of all, with a 115-horse outboard, a real hull, and more capability than a first-timer would ever reach the edge of. The ease is in the access, never in the water itself, and that is a distinction an experienced boater catches in a heartbeat. Hand this boat to someone who has never backed a trailer down a ramp at dawn, or written a slip check for a boat that never moved, and the genius of it is invisible — he would take for granted everything it quietly does, because he never suffered the thing it removes. To the boater who has lived all of it, a couple of boats deep with every logistic learned the hard way, it reads instantly as what it is: the one everyone wishes they had.

The pattern is familiar: when something removes enough friction, the people who already love the activity do it more often. WaterCar owners confirm it — they go boating more, not because they suddenly wanted to, but because there is no longer a reason not to. What remains is what every boater wanted in the first place: the water.

This is what makes the WaterCar a genuine disruptor — not of the boat, but of the trailer, the ramp, the slip, and the entire apparatus that grew up between a person and the water. Its prototypes have already drawn the attention of millions and the interest of the industry's biggest names, for exactly that reason.

The garage becomes the marina. More time on the water. Less time dealing with everything else.

Today WaterCar is Dave and his two sons, Michael and Chad — the third generation of a family that has always shown up where machines are still being figured out. John March at the dawn of the helicopter. Dave among the builders who invented West Coast performance boating, redefining the amphibious vehicle himself. And the two sons who grew up in the shop, now carrying it forward.

"We built a great boat — and made it so you can drive it home. The goal was simple: eliminate the hassle that keeps people from boating more often."

— Michael March, Co-Founder

For a century, the question was whether a machine could be both a car and a boat. The WaterCar answered a different one — what if the hardest part of boating was never the boat?

Technical Reference

The WaterCar EV — reference data for editors.

Dimensions & Weight

LOA 19.5 ft (5.9 m)

Beam 6.5 ft (1.98 m)

Draft 13 in

GVWR 2,990 lbs

Marine Performance

Power Mercury Pro XS 115 HP four-stroke · custom 4-blade SS prop · hydrofoil

Top speed / range 35 mph (standard) · 80-mile range · 18-gal tank

Capacity 4 persons / 850 lbs USCG rated

Road & Drive

Drive ProDrive™ · sealed PM motor · Curtis waterproof controller · limited-slip differential

Battery 48V sealed LiFePO4 · self-heating · integrated BMS · 12V auxiliary · 110V–250V smart charger, 6–8 hr

Speed / range 25 mph (FMVSS 500 governed) · 20-mile range

Construction & Hull

Hull All-welded aluminum unibody · 5000/6000-series alloys · pulse-arc MIG welded by hand · 360° epoxy coated

Flotation USCG closed-cell foam · load tested to over 10,000 lbs · virtually unsinkable

Hardware 316 stainless steel throughout · custom 316 SS hydraulic cylinders, 3,500 PSI · anodized aluminum

Chassis & Braking

Suspension Independent coil-over · Eibach · AST · 316 SS TIG-welded arms · QA1 GMR12T rod ends (11,595-lb) · Timken sealed · 10 in clearance

Braking 4-wheel disc · two hydraulic circuits · Wilwood / 316 SS rotors · regenerative · electronic parking — 4 independent systems

Wheels / tires Heavy-duty aluminum · 4/137 lug · DOT truck tires up to 30 in, 6-ply · sand / mud / off-road options

Helm & Transition

Helm DualCommand™ · dual 10" touchscreens · Simrad · Mercury VesselView 903 · Apple CarPlay

Transition / tow LaunchMode™ single-button · custom 316 SS cylinders, 3,500 PSI · Mercury OEM pump · TowLink™ on any std 2" hitch · auto lighting

Compliance, Build & Warranty

Compliance USCG · NMMA / ABYC · FMVSS 500 (federal LSV class) · NHTSA 17-digit VIN · HIN · street legal nationwide on LSV roads

Build 1,500+ team hours · 28 patents · limited annual production · handbuilt to order · 8–12 weeks

Warranty 5-year limited transferable hull · manufacturer warranties on major components · Mercury factory warranty

Components & Customization

Components Mercury · Wilwood · Simrad · Victron Energy · Eibach · QA1 · AST · Timken · Unisteer · Schafer · Curtis · Blue Sea · Rule · Dometic · PPG

Customization 10 Signature Series colorways · full RAL/PPG custom · 4 lifestyle packages · RHD available

Price & Availability

Price \$170,000

Availability Worldwide, built to order

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ABOUT WATERCAR

WaterCar is the world's only manufacturer of street-legal amphibious vehicles, headquartered in Fountain Valley, California. Founded in 1999 by Dave March — the world's foremost authority on amphibious vehicles — the company holds a Guinness World Record, 28 patents, and has been featured on Jay Leno's Garage, Top Gear, CNN, and The Bachelor, in Forbes, Popular Mechanics, and hundreds of other magazines, and in a segment by MrBeast. The founder completed the first-ever amphibious vehicle crossing from Newport Harbor to Catalina Island.

Each vehicle is handbuilt to order at the company's 100,000-sq-ft facility. Learn more at watercar.com.

High-resolution imagery, B-roll footage, spec sheets, and founder interviews available upon request.

Michael March | michael@watercar.com | +1 (714) 251-6687 | watercar.com/media-kit
Private demonstrations available at WaterCar — Fountain Valley, CA — 20 minutes from Newport Harbor.