

# **Metal Master: Steve Hogue**

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Cover: Ty Millford shot of the Gmünd SL at Rennsport Reunion. © Ty Millford at Rennfilms.com

This page: Drive Your 356 Day, 356 T1 coupe 'European' in the public parking in Winterthur just next to Zurich, Switzerland. Marcus Ellinger photo.

# Metal Master



By Sean Cridland

**S**teve Hogue thinks back to his early days of learning to work metal in the legendary Dave Dralle's shop in Torrance, California. He remembers that Dralle had simple rules for the kids working in his shop. "This is the deal: you do what I say, you never ask me why or how come; you never question what I tell you, or you're OUT of here. And, if you just keep your mouth shut and follow my directions, you'll learn something."

Hogue chuckles wistfully at the passage of time. These days Dralle will call him and say, "Come get this car and fix it." He'll start to tell Hogue what to do, then catch himself "...Oh, you guys know what to do." Hogue will remind him, "Remember Dave, we're older now than you were back then." Yet, despite Hogue being a mature craftsman and successful business man of 53, one look at him while he describes his trade reveals that he still has the curious spirit of a kid. Staying active with surfing and cycling helps that. But when you look at the vehicles lined up when I visited — early number 289 Cobra; one-of-a-kind 1949 Lancia Aprilia; Spyder RS61; and several pre-A coupes and a Speedster — you know some serious work takes place at the Hogue Enterprises shop.

## Background

Hogue grew up in Santa Monica, Venice and Culver City. He remembers his friends' dads coming to Little League games after work still wearing their Shelby shop clothes, so he had that influence early on. Hogue's dad had a landscaping business and in the summer he'd ride along to the jobs. He remembers seeing his first Maserati in Pacific Palisades and asking why it sounded so different from the Cobras and Mustangs. Even as a kid, he was fascinated with sports cars. Then, as a teen he started playing with his own cars. At the time, in the mid-'70s when the fuel crisis hit, muscle cars were cheap to buy and affordable for a young enthusiast, so that's how he started.

At first, he'd turn wrenches for anyone who would let him touch their cars. In his early 20s he moved over to the South Bay area and met a group of guys who worked at Dralle's and Mike McClusky's Cobra shop. Bruce and Colin Kimmins were also influences and mentors. These were the guys building all the bodies for the Cobras, both original and continuation. Seeing the bulbous, brutish shapes of those cars, says Hogue, "That's when I decided 'I've gotta do that!'"

Early on, he did a lot of Cobra and Shelby stuff, muscle cars, drag cars, off-road stuff, vintage racing cars, anything. Then, in the '90s the hot-rod market was strong, so he dove into hot-rods. The next phase took him to coach-built cars like the big Lincolns and Stutzes. Eventually that ran its course and for the last 6 or 7 years, he's been getting more and more into Porsche stuff.

An old 356 nose panel on Hogue's bench. This one has been replaced on the car but will be kept for reference.

Even though he had owned and driven Porsches, he initially stayed away from working on 356s because they were usually very rusty and weren't worth that much money (yet), though he says if he'd had the opportunity to work on a Spyder earlier he would have jumped at it. As 356 prices started to elevate, he started looking more carefully at them and taking them in. Our interview took place next to a RS61 and a 911R, and there were a couple of Pre-As in the rafters nearing completion along with a Speedster on the table in the very early stages of restoration. This car will be getting a new dash, new fenders, new nose, new door skin on one side and the other door repaired. Most of the back body of the car is good, though it'll need a little bit of skinning and some chassis work. It was a lucky find; a car that had a collision in 1971 and has been in a garage ever since. It's never been apart and there's nothing missing.

There's another 356, a coupe, stored up in the rafters. It just needs a few things done to the nose and it'll be ready to go off to the painter and be finished with interior and trim. Another 356 in the rafters is waiting for body panels. One particularly rare car sitting in the shop is a 1949 Lancia, the Geneva Auto Show car, bodied by Ghia - a one-of-one prototype Lancia Aprilia coupe.

A Cobra in the shop was one of the original independent competition cars. It came from England with a cross member for a 260 V8, but immediately the engine mounting brackets were changed to install a 289 and it went off racing. That 1963 Cobra, a 260 car that raced with an American engine is essentially 289 number one, a piece of Cobra history. You don't get those kinds of jobs without a record for excellence.

## Not all pounding metal.

A lot of Hogue's work is, by necessity, in historical research. Some of his clients bring in extremely rare or even one-of-a-kind cars with only limited historical information available. Others have done their homework, and a significant amount of research already accompanies their car. No matter which, Hogue researches each car so he can know it inside out, from an engineering standpoint as well as for its historical context. His research takes many forms. Scouring the internet, he spends hours on the phone talking to other experts in the automotive community and goes to swap meets and yard sales in search of rare automotive books, shop manuals, and club newsletters. Occasionally he just gets lucky.

With the Lancia, the owners had already done a lot of research and nothing was missing except for the front and rear bumpers. The question was, what do these unique bumpers look like? There were plenty of photos of the car from the front, but none from the rear. Even after extensive searching, nothing could be found. But a friend had worked on a 1949 Ghia-bodied Ferrari that shared many design elements, including the bumpers. That provided a hint. Eventually, the friend found a shot of the rear bumper in an old Lancia club magazine - providing exactly what Hogue needed to finish the job.

Though it may seem tedious to some, Hogue says the research is half the fun. Delving into the shadows of automotive history is what keeps the job fun, interesting and challenging. He and his guys enjoy doing the research as much as doing the car. He says it would be dif-



Behind Steve Hogue is a 427 Cobra and a 911R, both with racing history. **Below:** 356 projects in progress are stored in the "rafters", but remain attached to their assembly plates so nothing can shift or twist as they are moved.



**Below:** Unless you knew what a Cobra frame looks like, there is little to indicate what this is. Only the curve of the hood sheet metal—here being test fitted—suggests the distinctive Cobra shape.





Steve holds the die that can be used for either shrinking or stretching. Below left is an English wheel, the traditional tool for creating compound curves. At right is the power hammer with an assortment of heads stored on its base for various specialized jobs.

difficult if they had to do the same car over and over again; different cars with interesting histories keeps them on their toes.

### Creative Tooling

Because Hogue works on so many old, rare and unique cars, he often requires a special set of tools, some of which are common industrial tools, but many of which are custom made in his shop to fit particular situations. He has all the jigs and bucks for the creation of panels and establishing the correct dimensions and mounting points for frames, door-mounting points and more. Looking to the rafters again he says, "When we're working on Speedsters we bring that down and make all of our panels to fit that. Over there is one for the 356 front fenders."

Of the more common body-tools found in the Hogue shop are wheeling machines, power-hammers, and a Pull-Max. Among the many dies are those for making various seams and beads, louvers and for shrinking aluminum and steel. Most are made of steel, though some are made of special hard polymers. Of course there

are sandbags, shotbags and dozens of hammers of all shapes, sizes, materials, and weights. And clamps; dozens and dozens of clamps.

### Beginning the Process: Cleaning

Hogue's is strictly a metal shop. They don't do any stripping of trim, interior or mechanicals. The cars come to his shop clear of all that and only get their metal work done there. Sometimes it's already been media blasted, other cars come in and Hogue's guys mount it to a fixture and send it out for blasting.

Once a car comes back from media blasting, the real evaluation takes place. Hogue and his team set it on the table for a comprehensive overview with the owner or restorer to take a look together and see what has to be done. He says, "That's when we get a true picture of what's there and what we're up against or hopefully NOT up against..."

### Forming the body

For a car that needs bodywork, but isn't horrendous, it's about a year to bring it back to shape. Other cars take longer or shorter depending on how extensive the damage may be - or in some cases, how much of the work the primary restorer can do. One car at Hogue's shop is there for chassis work, but once the panels are made the car will be reconstructed at a different shop. He builds the panels and then sends them along to be hung on the chassis. Some may require special materials or additional research, lengthening the process.

### Complex Curves: Moving Molecules

Anyone who's not a metal worker may be mystified at how a flat sheet of metal can become a Porsche 356 or Spyder, a Ferrari, or a Cobra. Hogue says, "There are only five things you can do to a flat sheet of metal. You can cut it, you can bend it, you can weld it, you can shrink it and you can stretch it. That's it, those are the five principles." Though we think of metal as rigid, it's actually elastic. When it's stretching apart, it's thinning. When you're shrinking you're slipping together and thickening. It's all manipulation. Stretching is easy. Just hammer on it and you make it thinner. Gathering it together and shrinking it is trickier. It takes a lot more power and finesse. You can shrink in a lot of ways.

He shows me a shrinking/stretching machine with jaws that grip the metal and either push together or pull apart, depending on how it's set. The jaws (about the size of a half-dollar) clamp on the metal and pull together. It's all slipping of molecules. Shaping of metal sheets into curved body panels is not so much from "hitting" it as it is from pushing it around. So thought of in those terms, pushing metal around, that's really what you're doing.

### Materials

According to Hogue, in the last decade, the market place has become flooded with cheap raw materials from second or third grade foreign steel and alloy producers. He's had some projects that sat for as long as a year when he couldn't get the right materials and welding supplies. But now he has a stable supplier for the top-grade USA-produced steel and aluminum sheet metal. The steel is coming from North Carolina—where it's also supply-



Right: Many custom-made tools for stamping seams, beads and panel edges are kept in stock.



Master bucks for 356 fenders and panels are stored in the "rafters".

Below: An RS61 Spyder begins to be fitted with a new skin after extensive work has been done to the frame, including alignment of all components and sourcing or re-creation of several missing components.



What does a metalsmith do for relaxation? Among his other recreational pursuits, Steve still rides the waves up and down the Los Angeles coastline near his shop in Torrance.



ing the NASCAR builders—and the aluminum is coming from Wisconsin. Whereas in the past he would buy only to his current needs, now he buys supplies that will last a year or more. He recently sourced a lifetime's worth of aluminum welding rod and enough aluminum flux. Some of it he purchased out of an old aerospace stockroom. They came in with the aerospace stickers marked 1959!

### Modern versus traditional hand-formed

Contrasting traditionally hand-shaped car bodies with modern methods, Hogue notes that many modern production and custom cars use aluminum panels and unibody construction to save weight and increase stiffness. But, says Hogue, it makes them difficult and in many cases impossible to repair. Manufacturers use what's called stretch-molding, which makes the material really hard. What they do is grab the aluminum at its edges and stretch it as the die presses up into it to make the shape. It's done in an oil-filled environment to lubricate the die process. During this process the oil is impregnated into the metal, making welding nearly impossible. As the metal heats up, the oil seeps out and contaminates the weld. In addition, the heating and stretching process makes the metal hard and relatively brittle, with the heating and stretch molding changing the molecular bond of the material. It's very good at holding its shape when compared to a hand-formed car, but when it's damaged it's impossible to beat back into shape, meaning you can't fix dents. More than likely the metal will just crack. On most production cars that's not an issue, since they're formed of many panels which are all replaceable. But with unibody cars, it can often mean a complete re-body of the car.

### Originality

Working on older cars that had different standard of craftsmanship can be a challenge. Hogue points out the wrinkles in the floor section of a 356 and notes that they came that way from the factory. During restoration it's important to look at which parts of a car should be perfect and which should retain their original "character." "We have to consider how much wrinkling to leave so it looks original. If you make it look too nice, it doesn't look authentic." But it depends on the project and what they're after. Plus, when the car is all finished, many of those floor features are covered up with carpet, seats, etc. So even if it's a concours car, you don't see that.

Another area he pays more attention to is the tail: "In the tail light areas in split-screen cars, to make room for the lights, the guys at the factory just took a hammer and beat the inner engine panel out. When you look in there, it looks like a bag of walnuts. So when we make those, we do the same thing, so when it goes to the show and the engine lid gets opened up, it looks normal. If it's smooth, then they know it's been replaced and it could be points off." That kind of detailed work obviously comes from someone who has studied the cars and read the history carefully and compassionately.

### How Long?

He's a young 53 now, so when asked how much longer will he do it, Hogue demurs saying, "I think we're like jazz musicians. I think we'll do this stuff forever."