TORCH BEARER

WITH HEAT, METAL, AND TWO HANDS, PHIL REMINGTON MADE THE THINGS THAT MADE AMERICAN MOTORSPORT.

by COLIN COMER
photographed by KEVIN ZACHER

SELF-TAUGHT, BRILLIANT, AND A TIRELESS WORKER, REMINGTON EMBODIED THE AMERICAN IDEAL.

The last tool Phil Remington made, after a lifetime of welding and grinding and fabricating things designed to go fast, was a tool to help himself get dressed.

Remington's hands, battered after decades of work, military service, and a brutal motorcycle accident, were no longer up to the task of putting on his clothes every morning. You need clothes to go to work, and Remington needed to work. He could work the metal; that was no problem. But zippers had become a formidable

obstacle. So he solved the problem the way he always did: He went out to the garage, grabbed a piece of welding rod, and made a tool. Hook on one end to snag zippers, ring on the other to go over his uncooperative finger. It helped him get dressed, which in turn let him go to work. And if Phil Remington was anything, besides a man who made tools and the great things that tools made possible, he was a man who loved to work.

One day last fall, zipper tool in his hip pocket, Remington walked out of his tidy Southern California house. He built that home in 1969, shortly after helping Ford win both the 24 Hours of Le Mans and the Daytona 500, and he lived there until his death in February. He was perhaps the single most important force in modern American motorsport, but he did not draw attention to himself. His former neighbors drive hybrids and likely have no idea who he was.

When he walked out of that house, Remington was just weeks away from his 92nd birthday. Almost 70 years earlier, he suffered a horrific motorcycle crash. A semi drove over him as he sat at a stoplight on his Triumph; the injuries left him in the hospital for a year, until the doctors decided to amputate his leg. Remington escaped from his room that night, his mother helping him get away because she knew that without two legs, her son wouldn't be able to live the life he wanted.

The crash and a lifetime of physically demanding work took their toll. Toward the end of his life, Remington referred to his body as "junk," and he took up the occasional, if reluctant, use of a walker.

REMINGTON'S DEMEANOR HAD NOTHING TO DO WITH LACK OF EGO. HE SIMPLY REGARDED ALL OF HIS EXPERIENCE AND ACHIEVEMENTS AS PART OF THE JOB.

Still, when he strolled out his front door, his eyes were as sharp as they'd ever been. When he climbed into the passenger seat of the 2013 Ford Shelby GT500 parked in his driveway, he had already had breakfast, read the newspaper, and checked the weather. As it rumbled through traffic, he looked around.

"They sure put a lot of spring rate in it, didn't they? When do you think Ford will put in the IRS they've been talking about? The Camaro has IRS."

A beat. "At light-throttle tip-in, it almost sounds like a flat crank. Seems really strong. Tall gears. They like to get that 0–60 in first gear. What's the final drive?"

He didn't mention, if he thought about it, that this car—indeed, the modern Shelby brand—would likely not exist without him. Remington's accomplishments could fill a book, but if ordinary gearheads know his name, it's probably because of the few years he spent working for the country's most famous former chicken farmer. Carroll Shelby was Shelby American's flamboyant chief, marketing powerhouse, and idea man. But Remington made his ideas work and made them great. And even as he settled into his 10th decade, his mind never stopped churning.

When he died, not long after I was able to spend this last day with him, it was because his body finally gave out. His mind and dignity remained intact. And his memorial celebration, held a month later at the Riverside International Automotive Museum, was a testament to how he turned great ideas into reality.

OPPOSITE: REMINGTON IN CALIFORNIA WITH THE AUTHOR AND A '64 289 COBRA, ONE OF THE CARS HE ENGINEERED.

At that memorial, men from the racing world tried to express how much his life had meant. They were more used to doing than talking, but they attempted to explain how much smaller their worlds would have been without him. I had the honor of calling Phil Remington a friend. But even I have a hard time taking it all in.

BORN IN SANTA MONICA IN 1921, REMINGTON WAS TAKING pre-engineering classes at Santa Monica Junior College by 1938. His first job was as a component inspector at Northrop Aircraft. During that time, he was a founding member of the legendary Santa Monica Low Flyers hot-rod club, a group that required each of its members to prove that his car could exceed 90 mph. The test was done on L.A.'s Sepulveda Boulevard and timed via light signals and a stopwatch. "I [occasionally] had to run through the bean fields when the police would show up," Remington said, "but I always got away."

His early years are filled with stories like that, the kind of stuff you see in movies but have a hard time believing actually happened. In 1940, when he was just 19, his mildly modified 1934 Ford tripped the lights on a California dry lake at just under 95 mph. Hooked, he built a modified-class lakes car in his parents' garage; it would eventually exceed 140 mph. When his friends all joined the Army Air Corps during World War II, Remington did too—left home alone, he thought, he would've had no one to race. Despite being too young (he lied about his age on the enlistment form) and color-blind (he memorized the test charts), he spent the war in the South Pacific as a B-24 flight engineer.

This is how he operated: extraordinary moments, described with no fanfare. (His favorite part of the war? "Getting out.") He spoke matter-of-factly of his friends from the lakes: future American Formula 1 champion Phil Hill; Jack Engle of Engle Racing Cams; Vic Edelbrock Sr.; Stu Hilborn; Eddie Meyer; Indy car builders Lujie Lesovsky and Emil Diedt; and Jim Travers and Frank Coon of Traco Engineering. He rattled off big names like they were everyone's buddies. His house was filled with embodiments of the same idea—engraved-brass timing tags from the Southern California Timing Association, for example, sat in a jar on his kitchen counter, gathering dust. His daughter Kati Blackledge says that there used to be more, but over the years, he handed them out to friends.

"It really wasn't a big deal," Remington said. "You just pointed the car straight, floored it, and closed your eyes."

Guys with nothing to prove always sound like this. In the modern world, where self-promotion is potent enough to underpin entire careers, that blend of self-confidence and humility is all but extinct. This is likely why Remington's name never made the papers. He was a talisman of American motorsport, but his fame in automotive circles came from others' enthusiastic praise.

HISTORIC PHOTOS COURTESY OF PHIL REMINGTON, SHELBY: ISC IMAGES & ARCHIVES VIA GETTY IMAGES

In retrospect, this makes sense. The more time you spent with him, the more you came to understand that Remington's demeanor had nothing to do with lack of ego. He simply regarded all of his experience and achievements as part of his job.

Remington later worked with many of his lakes friends, doing everything from building race cars to developing hydroplane parts and engine-swap kits. But his greatest accomplishments would come while working for a man he had never heard of.

FIFTY YEARS AGO, RACING WAS DIFFERENT. MONEY MATTERED, but much less than it does now, and you could climb to racing's top ranks with more talent than cash. Rich men still made things happen, but the scales were tilted more toward enthusiastic out-of-pocket playboys than titans of industry.

In the late 1950s, Remington was approached by Lance Reventlow, heir to the Woolworth fortune, son of Barbara Hutton, stepson of Cary Grant. Reventlow had been racing in Europe and wanted to build his own car, the Scarab. He set up shop in Marina del Rey and hired Remington as his chief engineer. The project was a success—in 1959, *R&T* called the Scarab "the most potent sports-racing car in the world"—but Reventlow wanted more; he wanted to build a Formula 1 car to race in Europe.

"It was a front-engine car, way down on power," Remington said. "We couldn't compete with the new rear-engine cars. We built a mid-engine [F1 car], but I think Lance ran into a little trouble with the IRS. They only allow you to call it a business loss for so long when you aren't really in business.

"We were shutting down Lance's place, and this fellow walks in I'd never seen before. Carroll Shelby. I didn't know who he was, but he seemed like a nice guy. He must have known me, because he offered me a job. He took over Lance's building and brought over the [first] Cobra he built at Dean Moon's shop. Just like that, I had a new job at the same place. Only thing that looked different was my paycheck."

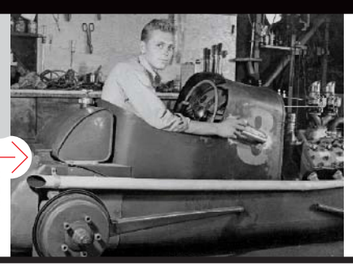
Remington was Shelby American's new chief engineer. The hire would change both men's lives.

REVENTLOW'S OLD SHOP, AND SHELBY'S NEW PLACE, WAS ON Princeton Drive in what was then considered Venice but is now Marina del Rey. As we exited the 405 en route to the site, Rem looked around. "All this

A Brief History of Rem

1921 Remington is born in Santa Monica, California. It will be the epicenter of American hot-rodding by the time he is a teenager.

1938 Deciding he needs to learn how to work with metal, Remington trades an old intake manifold for a battered welding rig.



1942 Rem swaps his 140-mph '34 Ford lakester and Low Flyers club jacket for an Army Air Corps uniform and the engineer's seat on a Ford-built B-24 Liberator.

As the Scarab Remington i by a fast- chicken fa something cal

the chief engineer on nce Reventlow's beautifu t obsolete Scarabs, m gets his first taste of ropean racing.

stuff is new. These apartments weren't here. This is where we'd go test the race cars on the street—nobody seemed to care.

"Shelby had a building here, on Carter, where the guys assembled all of the street Cobras. Looks like it's gone now." We parked in front of the Princeton shop and Remington hustled inside, slowed a little by the walker he carried. The building was empty, recently purchased by an investment group, and the partner who met us asked Remington if he was one of Shelby's mechanics.

"I guess so," he said. "I fixed what needed fixing."

Moments later, he was off, full speed, to the back of the building. Remington's nickname at Shelby American was "STP"—Super-Twitchy Phil. He had a habit of delegating work, then instantly growing frustrated at either the quality or speed with which it was being done and jumping in to finish it himself. Age had mellowed him toward the end of his life, but ol' STP was still in there.

I asked how long ago he was last in Shelby's old building. "Well, let me think," he said. "Let's see . . . Shelby moved out in 1965. Yes, that's the last time I was here. 1965.

"Along this wall is where we built all the race cars. Over in that corner is where we painted cars for Ford at night—Shelby had a deal with them." He glanced up at the partial second floor. "That's where Shelby's office was. Did you ever hear how John Morton got to be a team driver? He walked in on [Shelby's right-hand man] Al Dowd doing something he shouldn't have with a female employee. They negotiated after that."

If Remington's meeting with Carroll Shelby had not happened, would Shelby American have been more than a flash in the pan?

"The Cobra needed a lot of work. It was okay. But we had to fix pretty much everything."

Shelby rightfully gets credit for the basic Cobra idea, but Remington's practical, often on-the-fly engineering made it a reality. In addition to being a potent street car, the Cobra became dominant in competition, a feat that Shelby later attributed to Remington, saying, "I couldn't have done anything without him."

The people who were there speak of Shelby's desire to keep focus on himself, the magician, rather than the man behind the curtain. If you know much about Shelby, that's no surprise; he was a talented driver and promoter, but his real strength was as a talent scout.

A few minutes later, our afternoon ride, a 1964 289 Cobra, showed up with its owner, an enthusiast named Chuck. Remington deconstructed the car with his eyes.

LEFT: THE TOOLBOX AND PARKING SPACE OF THE MASTER AT ALL AMERICAN RACERS, DAN GURNEY'S SHOP.

"Boy, she looks really nice. That's a real beauty." He looked under the hood. "A later car, isn't it? Did it come with the Webers?"

Remington always told me he never cared much for street Cobras, but he didn't let on then, likely out of respect. "Shelby wanted to give me one of these once, but what would I do with it? Guess I should have taken it." A smile.

He slid right into the cockpit, as if his joints were permanently programmed for getting into a Cobra. He grabbed the competition lap belt and clicked it shut in one fluid movement. The owner came over and told us to have fun.

"She really is beautiful, Chuck." Remington ran his finger along the edge of the dash, slowly, left to right. "The paint is beaut—"

His finger hit a rough spot. "Did the painter have to leave early?"

Even perfectionists have a sense of humor. The signature Remington placed on his blueprints at Shelby famously read, "Draftsman: Remington. Designer: Remington. Engineer: Remington. Approved by: Remington."

We headed out in the Cobra. The carburetion was off, and the car coughed and spit a little. I didn't need to point it out.

"How tall are the stacks on the carbs?" he said. "How much space between them and the hood?" And with that, we rolled away from Princeton Drive. After 47 years, it took just an hour in Shelby's old shop for him to grow restless.

Remington took the position with Shelby thinking the Cobra project could lead to Ford involvement, and he was right. Ford was watching, and when Dearborn realized that its new Lola-derived sports racer, a.k.a. GT40, wasn't going to beat Ferrari at Le Mans without help, it turned to Carroll Shelby. Shelby turned to his chief engineer.

"The GT wasn't too bad to start with," Remington said. "It needed brakes and the wire wheels had to go, but it just needed to be sorted out."

This is a typical Remington understatement. The car needed a ground-up rethink. Shelby American was soon under Ford's control, with Remington in charge. He claimed this project was his favorite, and it's easy to see why—Ford wanted to take down Ferrari regardless of cost, and a handful of firsts emerged from the Princeton shop, including quick-release brake calipers, floating rotors that made fast pad and rotor swaps possible, and the first curved rotor-cooling passages. ("We had problems with rotors cracking along the straight cooling passages. We figured out that if the vents were curved, it fixed the cracking. Wasn't anything fancy.")

As for not fancy, Remington never stood in the winner's circle. Not because his teams didn't win, but simply because he didn't care to be there. After Ford's famous 1-2-3 sweep at Le Mans in 1966, while everyone else was out partying, Remington returned to the garage to pack up. The job was done. Why hang around?

When the GT40 program ended in 1967, Shelby American was split up. Ford moved Shelby Mustang production to A. O. Smith in Michigan, essentially taking the car in-house. Shelby formed the Shelby Racing Company in Torrance, California, where Remington went and remained top dog. Here everything from Trans-Am efforts to the Shelby-Toyota 2000GT program fell under his watch. This included the 1968 Shelby Indy 500 turbine program, which Remington left after discovering that the cars were illegal. He had no desire to be associated with cheating. Shelby withdrew from the race, citing a need for "further development." Remington's only comment: "The car wasn't legal, and it wasn't safe."

The writing was on the wall. Ford was pulling back, and so was Carroll Shelby. Remington's résumé from his time at Shelby reads, "Developed competition Cobra, GT40, 427 Mk. II and Mk. IV race cars for Shelby and Ford. Won World Manufacturer's Title 1965, Le Mans 24 Hour 1966, 1967. Developed race versions of Toyota 2000GT, Mustang Trans-Am cars. Consulted at Yamaha, Lola, AC Cars, and Sunbeam in England and Japan as Chief Engineer." He moved on.

Remington knew NASCAR team owner John Holman from the GT40 program, and in 1968, he moved to North Carolina to work for Holman and Moody, overseeing its Ford-backed Talladega Grand National stock-car program. "We did a lot of sheetmetal work and development. I guess we got them working pretty well, because we won the Daytona 500 that year. But North Carolina wasn't for me. My wife didn't care much for it either, so I went back to California."

While Remington would never say as much, it's hard to not think there might have been other factors. Shelby American designer Peter Brock surmised that it simply wasn't a great fit: "Stock-car racing was a different world. To say Rem was overqualified for Holman and Moody is an understatement. They were a strong, well-established team that didn't need the leadership and innovation he was capable of. And Rem wouldn't have been happy as just another fabricator." After he returned to the West Coast, former F1 driver Dan Gurney hired him to run his All American Racers shop. Four decades later, the two men were still working together.

AT ALL AMERICAN RACERS, REMINGTON FOUND HIS HOME. THE MUTUAL RESPECT WAS OBVIOUS: GURNEY LET REM BE HIMSELF, AND REM MADE IT POSSIBLE FOR GURNEY TO BE GURNEY.

At All American Racers, Remington finally found a home. The mutual respect was obvious, and Gurney let Rem be himself. By doing that, Rem made it possible for Gurney to be Gurney. His talents allowed the latter's wide range of interests to be a strength, not a handicap.

Similarly, AAR let Rem influence a staggering array of machinery: Can-Am, Formula 1, Formula 5000, Indy 500, Trans-Am, GTP, and IMSA efforts; Gurney's Alligator motorcycles; and in more recent years, contract work for the aerospace industry. His most recent high-profile motorsport involvement was the 2012 construction of Ben Bowlby's revolutionary Nissan-powered DeltaWing race car, another AAR project. Asked what he did on the car, Remington responded, "Not too much. I built the oil and

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GURNEY: ISC IMAGES & ARCHIVES VIA GETTY IMAGES, GULLWING: DREW GIBSON/GETTY IMAGES

A Brief History of Rem

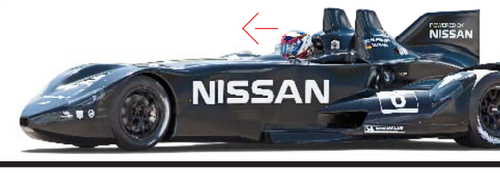
1964–1965 — Remington-built Cobras win Daytona, Sebring, and Le Mans, plus the '65 World Sportscar Championship.

1967 — The GT40 program ends, with Rem's cars having won Le Mans in '66 and '67.

1968 — After a brief stint with Holman and Moody, Rem lands at Dan Gurney's All American Racers shop, where he'll stay for 44 years.

1969–2011 — Remington works on everything from F1 to Can-Am cars to motorcycles, winning the Indy 500, two GTP titles, and countless races for AAR.

2012 — In his last big job with AAR, Remington works out the front suspension on the innovative Nissan



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water coolers, helped a little with some things."

"Oh, and figured out the suspension," he added. "And built the fixtures for it." Just "figuring out"—Rem-speak for reengineering—part of a car that made the world take notice.

Right up until the end, people called him to ask for advice. He claimed he was happy to help set up Cobras or GT40s, but those were puzzles he had already solved, and they obviously didn't excite him. The calls that got him worked up were the new projects. Even a mention of a new technology got his undivided attention. When we met in late 2012, he had just read my test of the McLaren MP4-12C Spider (*R&T*, January 2013); when I told him how McLaren pulled weight from the wiring harness by using octagonal wire for better packaging, he leaned forward and nodded. He wanted to know how the car worked without a limited-slip differential or sway bars.

Remington's failing health forced him to stop working full-time at AAR in June of 2012. When I saw him, he was frustrated at the "junk" parts on his chassis, but he refused to retire. Or more correctly, he couldn't retire, because something wouldn't let him. He remained a consultant for Gurney, returning as needed.

We headed to AAR after lunch at a Mexican restaurant a few blocks away. He had eaten there with Gurney's crew every Thursday for the last 15 years or so. One by one, the women who worked at the restaurant came out to give him a hero's welcome. His made a beeline for his regular table and sat where he always sat. He knew how that place worked, and those were his friends.

But when we dropped in at AAR, Rem showed a bit of reluctance. He had only recently stopped going there every day, and he obviously wanted to—felt he should—be working. He recoiled at anyone fussing over him. He was never happy without something to do, with not having a purpose.

That's not how they think about him at All American Racers. We parked in a spot under a sign reading REM PARKING ONLY. Kathy Weida, AAR's manager, rushed out to greet him. Walking through the building's photo-lined hall of fame, pushing his walker, Remington headed for the shop. He passed the boss's office without slowing down, but Gurney popped out and chased him down the hall, an 81-year-old legend running after a 91-year-old one. A crowd formed, everyone wanting to say hi and show off their recent work. Gurney stood back and watched.

"He's one of a kind," he said. "We call this place Rem University. Rem's tough, but he's a great teacher. Some don't make it through, but everybody here has and is better for it." Gurney wouldn't deny that his old chief was slowing down, but he wanted me to know that his mark is all over AAR.

Even now, Remington's workbench remains at the center of the action, as it has since 1968. When I visited, there weren't any fancy tools; one of his favorites was a slapper bar used for forming aluminum, made in 1940 from the leaf spring of a Ford Model A. When the guys pointed out a new tubing bender, Remington seemed skeptical; after all, he never needed it.

Watching the man in his element, at his bench, you could see that this stuff spoke to him. When he picked up a tool, the halting movements of a 91-year-old dropped away, replaced by the swift, steady hands of a master. It was mesmerizing. Long after our day at AAR ended, I'm left with the image of those hands, that bench, those motions. And I've come to the realization that Remington never wanted for anything at AAR. They always took care of him, and he of them.

After the hour drive back to his house, Remington sat down and kicked off his shoes. He looked tired but offered a drink, asked what else I'd like to talk about. We looked at more photos, anecdotes and stories pouring from him without hesitation. He needed to rest and had clearly had a long day, but had I asked, he would have kept helping until one of us passed out. That's how he was. That's what he was.

WHEN REMINGTON PASSED AWAY ONE Saturday last February, it was after a day of helping me with this story. Working to get things right, up until the last.

"He left us with all this great stuff," his daughter Kati said later, at his memorial. "A home full of beautiful furniture, cabinets, tools. He was the hardest-working person I've ever known. He had his hands all over everything. He just wanted everybody to have what they needed."

"He was taught to use his hands, back in the Thirties, by people who were there before the automobile age," Gurney said, speaking at the service. "Blacksmiths, people who knew how to do things with metal and heat. He was an engineer, an expert, and kind of a throwback, with gifted hands and an intense curiosity. And he used them to go everywhere, do everything. We could always go to Rem for a solution.

"You've probably heard of Murphy's Law. If something can go wrong, it will. And it often did. But we had Rem."

Each of the 350-odd people at the memorial, a roster that included some of the greatest names in motorsport, got a Remington-designed tool. It's a little loop of welding rod with a hook on one end. If you have gnarled, work-hardened hands, you might use it to get ready in the morning. Or maybe, if you want to remember the genius and determination of someone who worked wonders with hands like that, you might slip it over your finger and use it to get dressed the day after a memorial service.

I've been using mine ever since, though probably not as efficiently as its designer intended. But somehow, just having it in my pocket is a reminder to look at obstacles as opportunities. And that I should start the day and simply go to work.